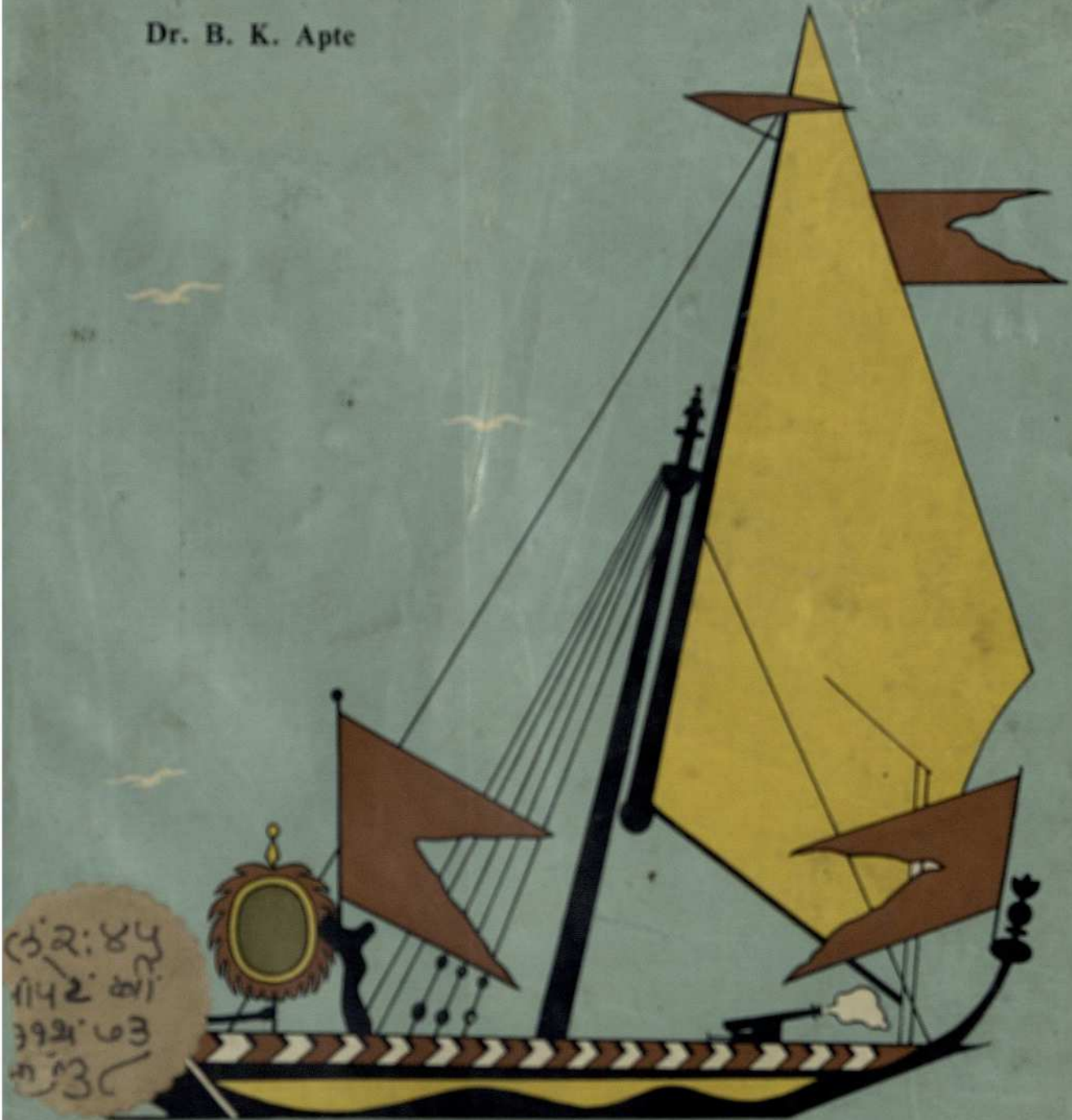
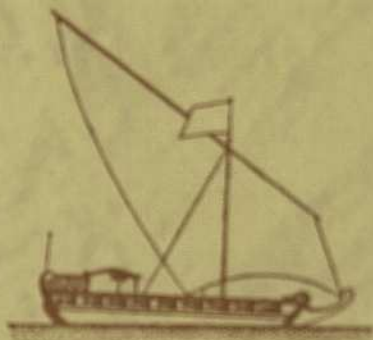
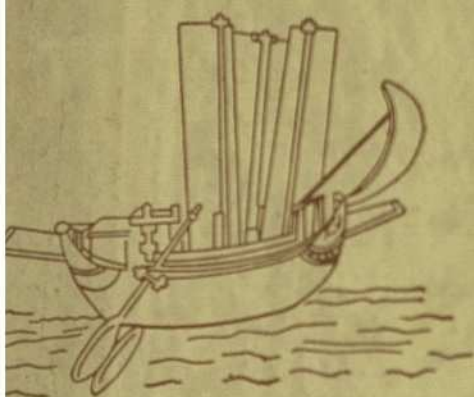
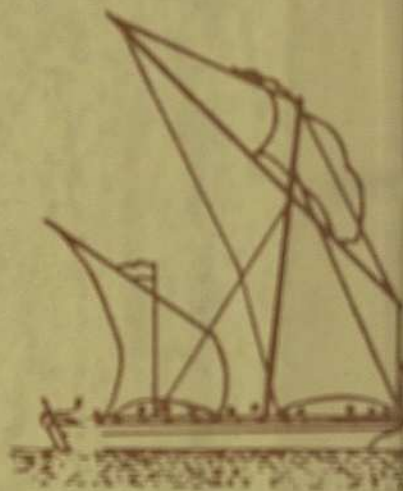
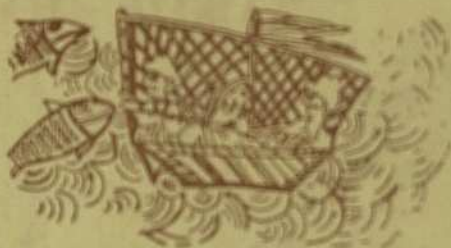
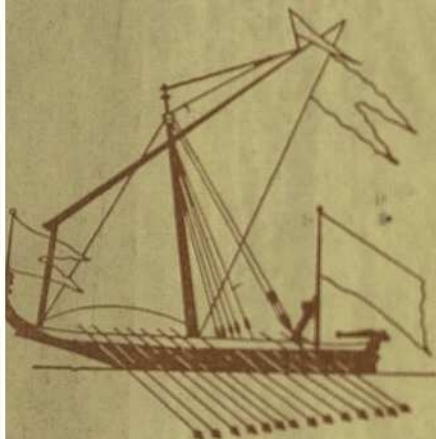
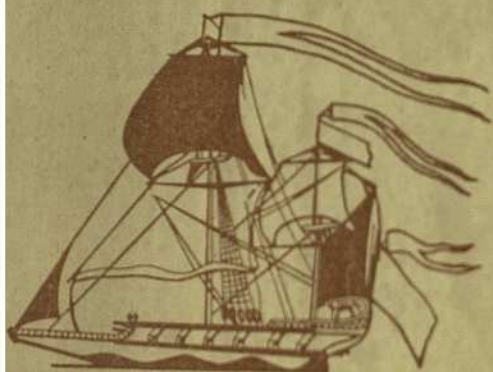
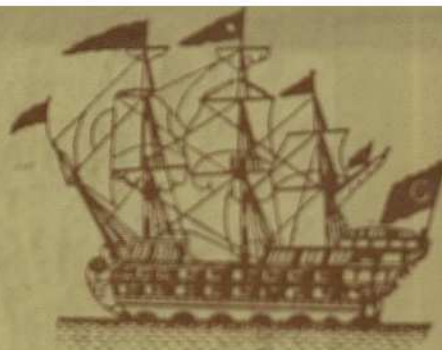
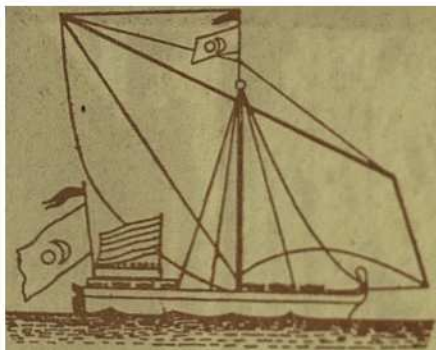


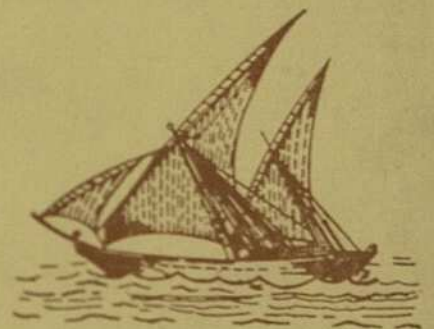
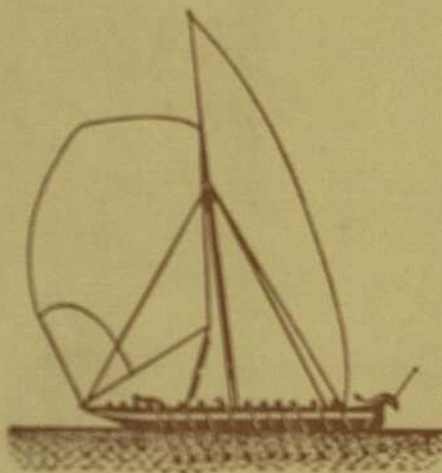
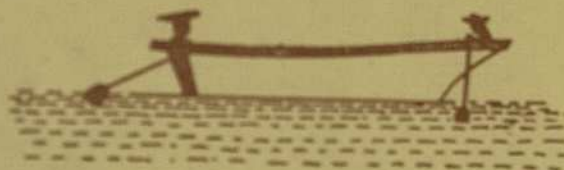
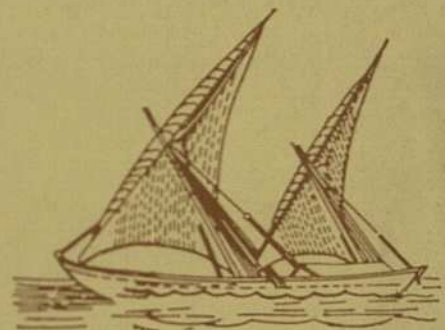
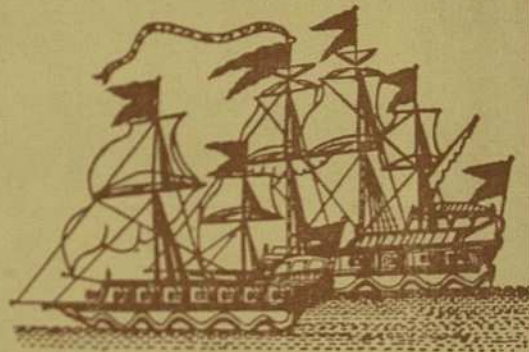
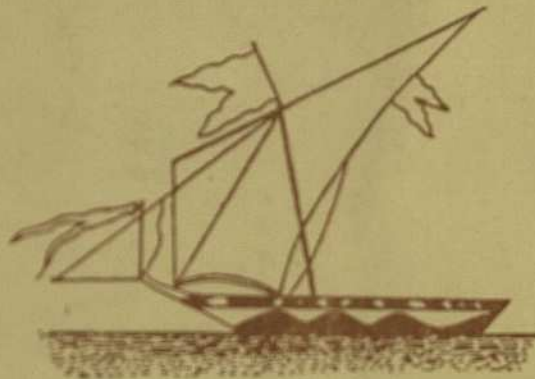
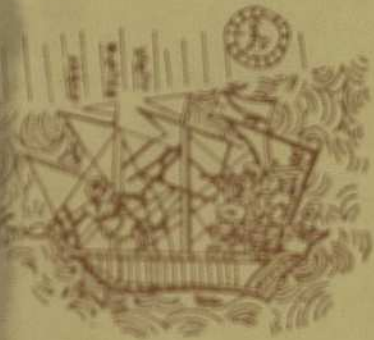
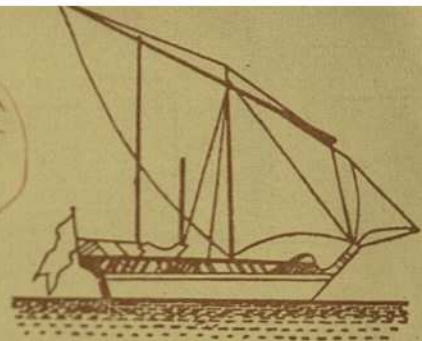
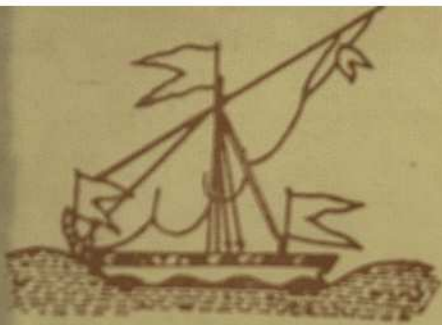


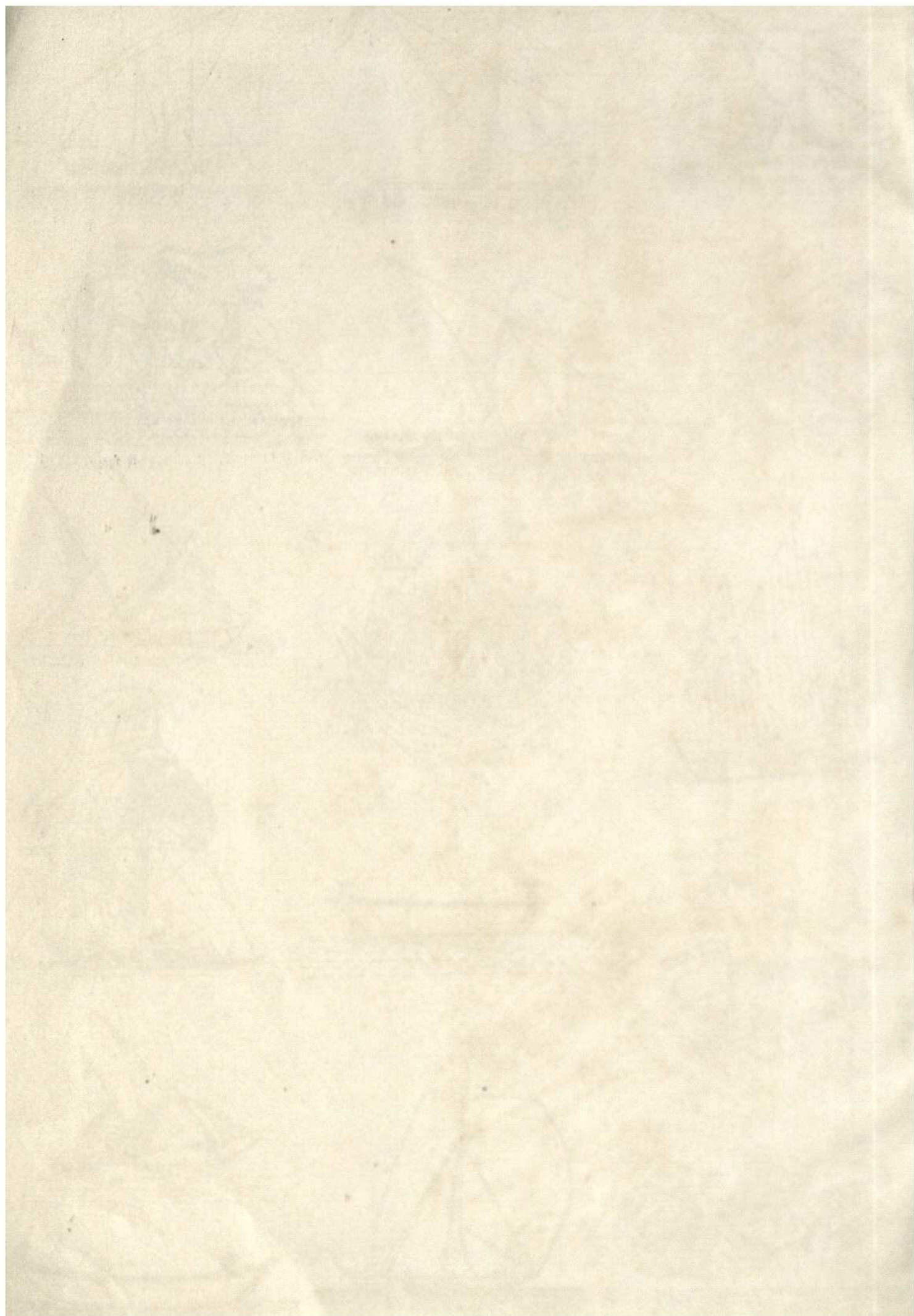
A HISTORY OF THE MARATHA NAVY AND MERCHANTSHIPS

Dr. B. K. Apte









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मराठी वाङमय कोश
१७२, नाथगाव कॉम रोड,
मुंबई - १४.

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महाराष्ट्र राज्य वाङमय-लेखणी मंडळ

१०१५१-१५१-७७

A HISTORY OF



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THE MARATHA NAVY AND MERCHANTSHIPS

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(UNIVERSITY OF BOMBAY), PANAJI, GOA

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Foreword. (I)

THOUGH intended to be 'A History of the Maratha Navy and Merchantships', the Author has covered a very much longer span of time than just the 'Maratha Period', as generally understood by historians. The vast field of bibliographical references used to collect facts and figures, no doubt, must have entailed tremendous amount of labour and time, which as the Author has stated has been a period of fifteen years todate.

The Author's claim that this is perhaps the first book of its kind is more than justified and those who wish to study and understand the maritime activities, traditions and people around the Indian sub-continent generally and along its west coast in particular will find this book most useful. The reader however will have to be a determined one with serious application if one is to fully understand and appreciate the interaction between facts of geography, advance of science, impact of religion and culture, effects of contact with seamen across the oceans etc. which all go to influence any nation, community or country to take to the sea the way it does.

B. S. SOMAN

Vice-Admiral (Retd.)

Bombay

Dated 1st November 1972

Foreword (II)

THE State Board for Literature and Culture has been set up by the Government of Maharashtra for the modernisation of the Marathi language and literature and for encouraging research and publication with a view to protecting the rich heritage Maharashtra has in the fields of literature, history, culture and fine arts. To attain this objective, the State Board has undertaken a manifold programme of literary activities, one of these being to initiate, assist or undertake schemes for editing, translating and publishing in Marathi, relevant important published or unpublished source material which will have a direct or indirect bearing on the history and culture of Maharashtra, as well as the scheme for the preparation and publication of the socio-political, cultural and literary history of Maharashtra.

The State Board has made a valuable contribution in this direction by publishing three worthy books, as its own publications, viz. (1) Professor N. R. Phatak's translation of 'Rise of the Maratha Power' by the late Justice M. G. Ranade; (2) 'Raigadachi Jeevan-katha' by the late Professor S. V. Avalaskar and (3) 'Portuguese Source Papers' relating to Maratha History, Volume I, translated by Shri S. S. Desai from the original Portuguese collections. Besides, taking into account the need of the modern emergent Maharashtra, in regard to a full history of Maharashtra in Marathi, the State Board has undertaken the work of compiling such a one, in five volumes (of 500 pages each) dealing with the ancient, medieval, Maratha, Peshwa and modern periods which are progressing with the concerned scholars.

The State Board now feels extremely gratified to publish, as its own publication, the present work 'A History of the Maratha Navy and Merchantships' by Dr. B. K. Apte, Professor and Head of the Department of History, Centre of Post-graduate Instruction and Research (University of Bombay), Panaji, Goa. It represents a valuable piece of research in the naval history of Maharashtra. The Author has collected and consulted the historical material from the *Peshwa Daftar* and from varied available English sources and documents which throw light on the history of Maharashtra's navy, especially the Maratha navy and merchantships, with great industry and patience. The book contains some rare and useful information about men, places and dates of ancient history of Indian navy especially Maharashtra, the traditions of navy and merchantships prevalent at that time, of the

nature of the Konkan coast, its geography, the naval trade of Konkan and the situation of oceanic forts on the Western coast of India; of the brief history of dynasties of the medieval period in Maharashtra, of the advent of Maratha power from the days of Shivaji, the establishment of naval power of the Marathas on the Western coast, its organisation, extent and scope and the struggle with the contemporary foreign powers of Portuguese, Siddis and English, as well as of the important naval movements of Kolhapurkars, Sawants, Angres, Dhulaps, Peshwas, Gaikwads etc.

There are some rare pieces of original work on the history of Maratha navy but no independent full-fledged work on this subject was so far available. Some chapters on the subject are found in the works of Sen and Sarkar, in the 'Siddis of Janjira' by Banaji 'Bombay Gazetteers', 'Kanhoji Angre' by Malgaonkar, 'Portuguese and Marathas' by Dr. P. S. Pisurlekar. Thus, the present book of Dr. Apte is the only one of its kind on the subject and is perhaps the first full-fledged research book written on the history of Maratha navy and merchantships. It is a definite and significant contribution to our knowledge of the history of Maharashtra in a field, hitherto almost neglected.

The State Board would like to acknowledge receipt of help and co-operation from and express its gratitude to, some institutions for their assistance and permission, especially to the Director, Prince of Wales Museum of Western India, Bombay, for giving permission to reproduce certain maps and drawings from the Museum and also to Shri G. H. Khare, Secretary, Bharata Itihasa Samshodhaka Mandala, Poona, for making available some drawings of ships for their production in this book.

Incidentally, I would also like to announce here that the State Board shortly proposes to publish the Marathi version of this book for the benefit of the Marathi readers of the history of Maharashtra.

LAXMANSHASTRI JOSHI

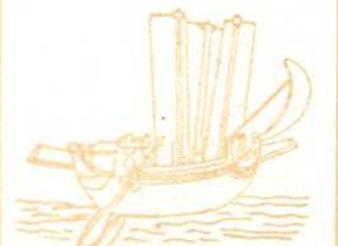
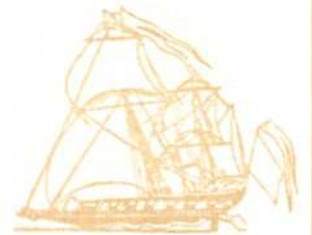
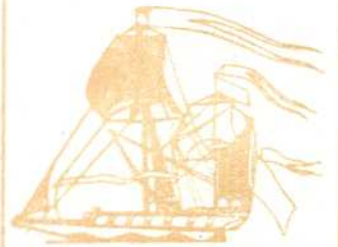
Chairman

State Board for Literature and Culture, Bombay

Bombay

Dated 29th December 1972

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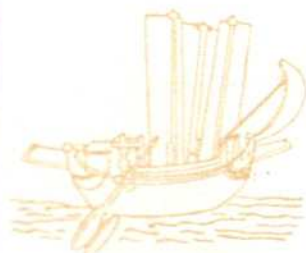
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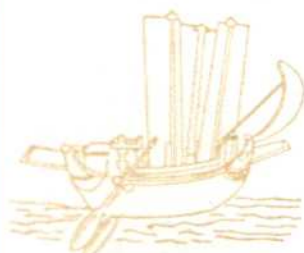
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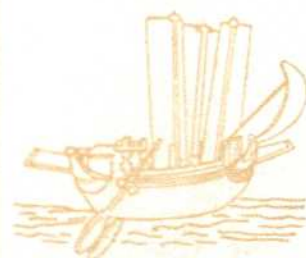


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Preface

I HAVE great pleasure in presenting to the public 'A History of the Maratha Navy and Merchantships'. This is perhaps the first book of its kind on Maratha navy. This was originally submitted for the M.A. degree of the University of Bombay in 1943. I was then a research scholar in the Department of Maratha History at the Deccan College Post-graduate and Research Institute, Poona, working under the late Professor T. S. Shejwalkar, Reader in Maratha History. Poona was then within the jurisdiction of the University of Bombay.

I was awarded the M.A. degree in 1944. The external referee of my thesis was the late Dr. K. M. Panikkar, the then Prime Minister of Bikaner State. In his report on my thesis he remarked, 'The work of Mr. B. K. Apte is of outstanding merit from every point of view. Had Mr. Apte submitted it for the Doctorate, I would have had no hesitation in recommending the award of that degree to him.'

In view of this recommendation the authorities of the Deccan College Post-graduate and Research Institute, Poona, referred my case back to the University of Bombay, requesting them to consider the grant of Ph.D. degree to me. The University of Bombay replied saying that they could not confer Ph.D. degree on me, as Professor Shejwalkar under whom I was working, was not yet recognised for guiding Ph.D. students. For this purely technical difficulty the question of granting me the Doctorate degree was shelved. However, very recently, the Bombay University Authorities were kind enough to allow me to submit this work with substantial additions in typescript for the Ph.D. degree. I did so and subsequently was awarded the Doctorate degree. The examiners have among other things remarked that the work is 'encyclopaedic'.

In 1945-46, I was at the Fergusson College, Poona, as Lecturer in History. For nearly two years I was at the Wilson College, Bombay. In 1948 I was selected for the Bombay Educational Service Class II, by the Public Service Commission, and was posted as Lecturer in History, at the Elphinstone College, Bombay. In 1957 I was sent on deputation from the Elphinstone College to the Deccan College Post-graduate and Research Institute, Poona. I worked there as Reader in Maratha History up to 1960. During my stay in Poona I availed myself of the excellent library facilities available at the Deccan College.

I also copied about 500 original unpublished *Modi* documents from the Alienation Office (*Peshwa Daftar*), pertaining to naval affairs. In the light of this newly acquired material, I thoroughly revised my thesis making several changes and additions. A number of ship-drawings obtained from the Prince of Wales Museum, Bombay, and the Bharata Itihasa Samshodhaka Mandala, Poona, have also gone into this work.

The first six chapters discuss the naval activities of the Marathas through the ancient and medieval periods, against the geographical background. At the end of the fifth chapter, a short treatise on ships, from the ancient Sanskrit work, the *Yuktikalpataru* is critically examined with a view to shedding light on the naval traditions which the Marathas inherited. On the basis of the information given in the *Yuktikalpataru* ship-drawings are prepared for a comparative study. The subsequent chapters give a brief account of the influence of the Portuguese and the English on the coast of Konkan. This is followed by a regular naval history of the Marathas beginning with the chapter, 'Socio-economic Conditions of Konkan' during the Maratha period.

The chapters on 'Warships' and 'Merchantships' discuss the Maratha ships in all their aspects with the help of the ship-drawings secured from the Bharata Itihasa Samshodhaka Mandala, Poona, and the Prince of Wales Museum, Bombay. A fisherman's family of Bankot, district Ratnagiri, was kind enough to offer me a few ship-drawings in its possession. The drawings have been utilised in this work. A detailed account of the Maratha ships is presented for the first time to the readers in chapters XIII and XIV.

The landward mentality of the Marathas which was mainly responsible for the neglect of navy, is discussed at relevant places. Renaissance or the scientific age dawned upon the Maratha country late in the nineteenth century, as upon the other parts of India. The Marathas who came in contact with the Portuguese, the English, the Dutch and the French were quite aware of their own shortcomings. Often, they borrowed naval equipment such as a good gun, a telescope (*nali*) and a compass from their European neighbours at Bombay and Goa. But borrowing could not carry them long in their competition with

the English and the Portuguese on the sea. Borrowed equipment and weapons, more often than not, are out of date and inadequate. In our own times countries borrowing latest war equipment from the scientifically advanced nations, find, that it is out of date by the time it is used in war. The fate of the borrowing nations has been the same from the days of the Marathas to our own times. On one or two occasions the Marathas are found to be extremely anxious to equip their navy with the latest device. For instance, in the latter part of the eighteenth century the Marathas had noticed that the sides of their ships were damaged in the loading and unloading operations, involving at the same time great loss of time, which, if saved, could be utilised for an expedition. The old loading-unloading method of the Marathas was cumbrous. To get rid of this, it was decided to have a sort of device called the *Topikar* (English) wheel. The estimated cost of this wheel was Rs. 4,000. The Marathas had seen how advantageously the English were using the wheel for loading and unloading operations. The Marathas were able to fit the wheel on some of their ships. In respect of the other scientific naval equipment such as a good gun, a compass, a telescope (*nali*), the Marathas had to borrow it from their European rivals. But neither borrowing nor just constructing a wheel were likely to solve the problems of the navy permanently. The manufacturing of the scientific naval equipment was the only solution that could have saved the Maratha navy from the doom it met later. But this in its own turn necessitated the knowledge of science. For instance, accurate cannon-aiming presupposed the knowledge of gravitation and the parallelogram of forces. Similarly, building of a telescope or construction of a wheel or crane take for granted knowledge of lens manufacturing and understanding of the principle of inclined plane, respectively. A time was when the Hindus of ancient times had made some advance in these matters. But in the Maratha period all this knowledge, it seems, had fallen into a state of oblivion. The Marathas could not catch up with the theoretical advance made by the Europeans in these matters. This point has been stressed at the end of the chapter, 'Naval Administration' and elsewhere, when needed.

The chapters 'Naval Warfare' and 'Coastal Wars and the Navy', bring home the war tactics of the Marathas. At the same time they show how the Marathas often avoided a naval war of the Trafalgar

type. To them navy was an adjunct of the land-forces. For a people interested in the landward expansion of power, profit by seaborne trade was something unusual. They could never grasp that commerce is the life-blood of a naval power. The seafaring communities of Konkan did not venture to cross the coastal waters. Religion prohibited the Brahmins and a few other higher intellectual castes from taking to a sea-career, as sea-voyage brought pollution and eventually loss of caste which was more dreadful than death. The seafaring communities were mostly illiterate and therefore, devoid of any theoretical knowledge about their own calling. In effect, the intellectual castes were divorced from the seafaring communities stunting the progress of the navy. This has been discussed in the chapter 'Socio-economic Conditions of Konkan'.

In spite of their drawbacks the Marathas established their supremacy on the Konkan coast, challenging the Portuguese, the English and the Siddis. They had their strongholds at Bassein, Kolaba, Suvarnadurg, Vijaydurg and Sindhudurg. For over a century beginning with A.D. 1657 they alone, among the indigenous coastal powers could be counted as a sea power.

The chapter on 'Ship-building' describes the traditional method of ship-building followed by the Marathas.

Appendix A furnishes a detailed account of the sailing of a ship depending upon sails, rudder and the wind.

The nautical terms in Marathi are to be found in appendixes B-1, B-2 and B-3, with an introduction. Attempt has been made to trace the terms to their source-languages. This might help in understanding the contribution of the Marathas to the nautical science. Linguists might find these appendixes useful. For cultural exchange—new ideas and goods—navy has always been an effective instrument.

Appendixes C-1, C-2 and C-3 are translations of the original documents in *Modi*, taken from the Alienation Office (*Peshwa Daftar*), Poona. They shed light on topics like the naval administration of the Marathas, equipment of the navy, construction of docks and ships, recruitment of the crew, permits, measures taken to check piratical activities, relation with friendly states, religious beliefs of the seafaring communities and accounts of the naval *Subha* of Vijaydurg.

Internationally accepted transliteration marks have been used in the key given for proper names and naval terms without changing their current spelling so that they could be pronounced exactly as in Marathi.

These sources literary as well as illustrative or pictorial, could be obtained only because of the facilities offered to me by the Deccan College Post-graduate and Research Institute, Poona. I had at my disposal a research assistant and a copyist. The first prepared notes from the published sources, while the latter transcribed from *Modi* into Marathi the material I selected from the *Peshwa Daftar*. I was also equipped with a fine piece of camera for photographing the ship-drawings. I am forever indebted to the Deccan College Authorities for all that they have done for the completion of this work.

I am equally indebted to the Poona University for their financial aid.

The Settlement Commissioner and Director of Land Records, Alienation Office, Poona, was kind enough to allow me to copy the original *Modi* documents from the *Peshwa Daftar*. I am thankful to him for granting me permission. I am also thankful to Dr. P. M. Joshi, ex-Director of Archives, Maharashtra State, Bombay, for placing the archival material at my disposal.

Dr. Moti Chand, Director, Prince of Wales Museum, Bombay, liberally allowed me to photograph and copy out ship-drawings and maps of sea-ports in the collection of the Museum. I am indebted to him personally and also to the Trustees of the Prince of Wales Museum, Bombay. I am grateful to the authorities of the Bharata Itihasa Samshodhaka Mandala, Poona, for allowing me to copy a few ship-drawings in their collection.

When the work was nearing completion I requested Vice-Admiral B. S. Soman, Chief of the Naval Staff (now retired), to write a foreword. He agreed, and his foreword which appears here has provided ballast to my work on the Maratha navy coming as it does from one who has spent his whole life in the navy occupying the highest position. Words are inadequate to express my indebtedness to Vice-Admiral B. S. Soman (Retd.) for the foreword he has penned.

It is my sacred duty to express my deep indebtedness to my Guru, the late Professor T. S. Shejwalkar, for his guidance. My late uncle D. V. Apte, Mathematician-Historian, initiated me into the realm of history. Should this work merit the attention of scholars, the credit must go to him. I am forever indebted to him.

This work on the Maratha Navy was ready in its present form, in type script, as early as 1957-58. It has however taken fifteen years to see the light of the day. The Deccan College Post-graduate and Research Institute, Poona, on which I have always looked as my *alma mater* could not do anything for the publication of this work. The University of Poona which gave me research grant for the preparation of this work, on its completion, offered Rs. 1,000 as publication grant. I gratefully accepted it as I considered it as a token of their recognition of my work. Subsequently this grant lapsed as it could not be utilised within the specified time-limit. My approaches to the Government of India for the publication of this work bore no fruit. Some reputed publishers who accepted this work did not bring it out on the plea of mounting production cost, as time passed, because of their own delay. The Nagpur University where I worked for twelve years poorly responded to my request for the publication of this work. Years ago, without giving up hope, I approached the State Board for Culture and Literature, Government of Maharashtra, Bombay. They accepted my work which is now seeing the light of the day. During this long period of waiting of more than a *tapa* when this work went abegging for publication, I often took solace in the words of the great poet Bhavabhuti, 'someone of my disposition will be born, because time is infinite and the earth is vast'. As years passed, I was afraid that my work on the Maratha Navy and Merchantships would suffer a shipwreck for want of a publisher. But fortunately it has been salvaged by the State Board for Literature and Culture. I am forever indebted to them.

I am particularly thankful to Tarkateertha Shri Laxmanshastri Joshi, the Chairman, and Shri D. Y. Rajadhyaksha, the Secretary of the Board, for launching this work into publication. Shri Rajadhyaksha has given me all the facilities from the time this work was accepted for publication to its completion. I am obliged both to Tarkateertha Shri Laxmanshastri and Shri Rajadhyaksha.

Shri S. A. Sapre, Manager, Government Central Press, Bombay, by his cordial co-operation always made me feel at home in the vast Government Press where one feels lost. His enlightened talks over a cup of tea offered by him created confidence in me that my work will come out soon, and relieved me of the tedium of press work. Shri B. W. Khadilkar, Director, Government Printing and Stationery, Bombay, gave me necessary directions from time to time. Shri C. P. Pais, Standards Officer, Shri P. G. Shirgaonkar and Shri A. R. Gokhale of the Art Section, have taken all the pains in making my book attractive. Shri V. K. Sawant Bhosale, the keen-eyed proof-reader, has been responsible for correcting the text. Shri S. M. Sawant always promptly attended to my difficulties. I am indebted to all these worthies, named and unnamed, of the Government Central Press, for their co-operation and help.

I am grateful to Mrs. S. G. Vaidya and Miss S. V. Kothekar for their help in correcting the page-proofs and in preparing the index. I am also thankful to my Research Assistant Shri S. R. Chakravarty for his help.

BHALCHANDRA KRISHNA APTE

Nagpur

Dated 19th December 1972

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Introduction

THE existence of navies dates back to very early times. Having learnt the 'elements of seacraft' in lagoons and creeks,¹ man embarked upon his first adventure on the sea probably from the mouths of the great rivers. The idea of sea-power was born when the sea was found useful as a means of transport or communication. This power involves the ability to control the seas or any part thereof, denying at the same time their use to an enemy who may either be a belligerent state, a pirate or a marauder.² Navalism originated among the Marathas for this very control of the sea, i.e., to check their neighbouring enemy the Siddi, who carried fire and sword along their coast and hampered their trade.

This idea of sea-power marks a later stage of development in the nautical history of the Hindus. In the earliest stage the Indian Ocean has been acknowledged by scholars as the first expanse of salt-water on which was launched the floating instrument devised by prehistoric man. In prehistoric times man moved where food was easily found. Naturally, he might have been driven to the sea teeming with fish from a rocky barren coast where food was scarce. Such conditions have been existing on the desert shores of Arabia and Persia facing the Indian Ocean. The primitive man in these regions might have been forced to look to the sea full of fish for fear of starvation in the midst of barren sand and rocks.³ The land just to the south-east of this part of the Persian coast once formed part of India, and geographically it is a continuation of the former. The dwellers of the north-western land projection of India, therefore, may claim a place among the first seagoing people of our world. Three different arguments in support of the view that deep water sailing began early on the Indian Ocean are put forward, on astronomical, geographical and meteorological grounds. Astronomically, the progenitors of the early civilization viz., the Egyptians and the Chaldeans were the earliest stargazers as they had a clear sky during the major part of the year. Their knowledge of the celestial bodies was of a very high order. Next to them, or on par with them, were the Indians whose knowledge of the heavenly bodies was well advanced. Their knowledge of heavenly bodies might have, in all probability, enabled them to take to a sea-career as early as the Egyptians or the Chaldeans. From the geographical point of view the Indian Ocean takes a gigantic bay-form enclosed on three sides by land. Land-routes

1. WOH. 185.

2. ESS. 310.

3. BRIO. 1.

existed along the coastline suggesting naval development when man could undertake it. Neither the Atlantic nor the Pacific have had these advantages. Meteorologically the knowledge of the periodical winds was the greatest incentive to deep, distant sailing.¹ A seaworthy floating instrument, acquaintance with the heavenly bodies, the knowledge of winds, a piece of canvas and adventurous spirit must have prompted the seaman of the Indian Ocean to take to navalism at an early date. The Pacific and the Atlantic Oceans do not have these facilities in their fulness. All these points of vantage are applicable to the Arabs as well as to the Indians.

Millenniums prior to the advent of the Marathas the inhabitants of India seem to have possessed a highly developed sea-culture which was as old as their Vedic civilization or may perhaps antedate it.²

The epics *Ramayana* and *Mahabharata* contain allusions to sea voyages. According to the recent studies of the *Mahabharata* it has been shown that a west coast sea-route had been in existence or was being developed by the forward Aryans. This conclusion has been arrived at on the basis of the far-separated places on the west coast given in *Dharmya's* list of holy places in the south. The spots mentioned from south to north are, Cape Comorin, Gokarna, Surparaka, Prabhasapattam in South Kathiawar and finally Dwaraka. The mention of these coastal places to the exclusion of others in between, indicates every possibility of a direct sea-communication along the west coast.³

The *Jatakas* dating as far back as 400 B.C. contain a number of maritime stories. The *Baberu-Jataka* is very significant in this respect. It points to a Tamil speaking people in sea communication with Babylon, trading in articles of luxury like peacocks and heavy commodities like teak. The Tamilians were to the Indian Ocean what the Phoenicians were to the Mediterranean.⁴ Other old *Jatakas* mention Bharukaccha (Broach) and Surparaka (Sopara). Surparaka is the only place of great antiquity on the coast of North Konkan mentioned in the *Jatakas*. These and other references prove the existence of sea-trade between Babylon and India which according to scholars goes back to the sixth century B.C. and possibly belongs to a still earlier date.⁵

A new and definite chapter was opened in the nautical history of India, when Skylax the admiral of Darius I, about 517 B.C. embarked on the Kabul river six miles above its confluence with the Indus, and after sailing down, went to Egypt.⁶ In 326 B.C. Alexander the Great on his return journey from India dispatched a large part of his army on the Punjab-built flotilla from the mouth of the Indus. A new sea-route was opened between India and the Persian Gulf ports by these voyages. They gave a tremendous push to the maritime activities of the Greeks who were already an enterprising seafaring people, and very soon they came out as the successful rivals of the Phoenicians in sea-trade. With the Roman occupation of Egypt, the Greeks again received an impetus hitherto unknown in their annals. This was the virtual beginning of the age of sea-commerce between Egypt and India. It languished with the decline of Rome. During Rome's

1. *BRIO*. 2, 3.

2. A. A. MACDONELL & A. B. KEITH, *Vedic Index of Names and Subjects*.

3. T. S. SHEJWALKAR, *The Mahabharata data for Aryan Expansion*, *BDCRI*. 5. 217.

4. JAMES HORNELL, *MASB*. VII. 207-8.

5. *MASB*. 208.

6. *SNHI*. 54.

supremacy the main bulk of the trade between the Egyptian ports and India was in the hands of the Greeks. With the fall of Rome it fell into the hands of the Arabs and the Indians. As time went by it was proved that the Arabs and not the Indians were to be the masters of the sea-trade between India and the Red Sea or the Persian Gulf.

The east coast people of India seem to be more enterprising than their west coast brethren and carried their trade overseas. This is seen from their colonizing movement in the first seven centuries of the Christian era which spread to the distant islands of Java and Sumatra. The sculptures of Boro-Budur bear witness to their colonizing aptitude in addition to their civilization and workmanship.¹ With the exception of this eastward expansion, the Hindus do not seem to have distinguished themselves as overseas traders as did the Arabs in the Indian Ocean. The Hindus have more often than not traded along their own coast. The aptitude for overseas trade was not so keen amongst Indians as it was among the Phoenicians or the Arabs. Among other things the main cause for this lethargic attitude of the Indians towards overseas trade was geographic. Their own coast, not less than 3,000 miles in length, was more than enough for their maritime activities and they were rarely impelled by the economic urge to quit their own coast. Practically all the rulers of India were often engaged in land-fights. They have very few outstanding naval engagements to their credit. Even for those who took interest in naval affairs the navy was never more than an adjunct of the land-forces. The colonizing movements towards Java and Sumatra in the Buddhistic period sprang up among other things for the spread of Buddhism. The colonizing activity and urge for sea-trade consequent upon the development of the navy seem to have been determined by the geographic factor. This interdependence of the two factors—human and geographic—can be adduced by taking a cursory survey of the maritime activities of the Western countries since the dawn of history. Moreover, such a survey is essential in order to ascertain the place of the Hindus and incidentally of the Marathas as a seafaring people in relation to their environment and in comparison with other people living under different or similar circumstances.

Seven thousand years before Christ, the Sumerians had ships on the waters of Tigris and Euphrates when they fell separately into the Persian Gulf.² Next to them are recorded the ships of the Nile in Egypt. On a vase found in Egypt a ship is drawn which according to experts dates between 6000 and 5000 B.C.³

The Cretans were the first seagoing people of our world. Their habitat was the small island of Crete in the Mediterranean. They launched their ships on the sea some 4,000 years before Christ. They enjoyed many centuries of peace and prosperity. Finally they attacked the barbarous Greeks, kidnapped their youths and damsels, and brought upon themselves their sword and flame which ruined them. So the first seagoing people of note were an insular people.

Like the Cretans, the Phoenicians too were great sea navigators. They settled around the Levant, originally migrating from the Persian Gulf. Their vessels were on the sea by 2000 B.C. Phoenicians were great seamen because they were great traders. Their trading ports grew into

1. *JNH*. 149.

2. *WOH*. 136.

3. *CRS*. 24.

colonies. Carthage grew out of one of these and outshone the mother country by the course of her resplendent history.¹

The Athenians, surrounded by powerful neighbours, grew into a strong sea-power after the Phoenicians, and established their colonies. Their fleet of galleys has left a name behind in the history of the ship.

The Romans in their days of territorial expansion felt the need of a navy for conquest and protection of trade. Egypt, Palestine, North Africa and England were under the sway of Rome and these could be approached and governed only by means of a strong state navy.² According to the author of the *Periplus*, when Rome ruled the world, Greek ships came to India for trade. With the fall of the Roman empire her navy also declined. The Venetians and the Genoese were the masters of the Mediterranean in the Crusade period.³ They maintained their prestige at sea by their navy.

Coming to modern times we see Portugal, Spain, Holland, France and England as the great maritime powers. Spain in the sixteenth century was the mistress of the sea, possessing ports on the Mediterranean and the Atlantic. Her position was particularly enviable when she had Gibraltar in her hands — the key to the Mediterranean. Her naval expansion has a lasting place on the pages of history. But the way in which Spain made fortune was destined to bring her fall. The gold and silver mines of Peru and Mexico brought her ruin. The Spaniards with the passage of time sought wealth neither by industry nor by trade but by simply digging the gold mines. This was the root-cause of Spain's downfall. Portugal built her commercial empire by controlling the trading ports outskirting the Indian Ocean along the coast of India and the countries of the Far East. Immense profits accrued from monopolised commerce and her people grew lazy and luxurious. This led both to her material and moral decline.⁴ Finally her compulsory union with Spain proved fatal to her interests, bringing her into inevitable conflict with the more efficient Dutch who overthrew them. Both Spain and Portugal found it difficult to maintain their far-flung overseas empires with their limited resources and manpower.

Geographically France was in a position similar to that of Spain having ports both in the Mediterranean and on the Atlantic necessitating the maintenance of two separate fleets, the junction of which became a problem at the critical juncture. The policy followed by the French Government was not wise on the whole, notwithstanding the attempts made by men like Colbert to strengthen the navy. Though France maintained an honourable position at sea, she was not strong enough to cope with the Dutch or the English. The French were industrious and frugal, but were bent more on honour than on profit from commerce. Moreover the climate of France was delightful and the soil fertile which attracted her people more than the sea. They had no inborn aptitude for sea or trade like the Dutch or the English. Inevitably they lagged behind in the competition.

The Dutch were driven to the sea for livelihood. They were the best seamen of the day, patient, enduring and equipped with thorough plans for colonization and trade. They were far

1. *WOH.* 189-91.

2. *ESS.* Navy.

3. *EB.* XX. 508.

4. *MISH.* 50-5.

ahead of England in trade and colonies. The early growth of the Dutch and the English was purely of a commercial character, a product of natural environment. Though the origin was the same the manner of growth was different. The Dutch were satisfied with commercial gains only and had limited political ambition. This stunted their growth.

England, as contrasted with these maritime powers, had a unique insular position. She has been immune from land attacks. Holland and France had to keep two frontiers, one on land and the other on the sea. This told on their resources and man-power. Nature has not been very bountiful in England so far as soil and produce are concerned. She was a poor country till her manufactures were developed. Her expansion began when she started a programme of sea-career for the sake of selling her finished goods.¹ Her trade flourished, colonies expanded and shipping became an inevitable link between these two. Thus England was drawn to the sea by her position. She was jeeringly called a nation of shopkeepers by Napoleon. But this very remark contains the clue to her greatness. As her empire expanded, the navy became her first line of defence.

Industrial Revolution gave England a unique place in the nautical history of the world. Increased population and decay of farming led to a change over to industries. Her dependencies and colonies as sources of raw material and assured markets for her finished products, fed her industries. Strong shipping was the bridge over which this activity passed. As an imperial power England may be compared with Rome, with this difference that Rome had no industrialisation. England like Rome has drawn her food-stuffs from foreign countries. This is her weak point inspite of her insular position.

Turkey in the fourteenth and fifteenth centuries, Spain in the sixteenth, France in the seventeenth and Germany in the nineteenth century had attained status as land-powers before they embarked upon a programme of navalism and developed it.² Land-bound Russia was poor as a naval power. To these powers navy was an adjunct of land forces.

In the Indian Ocean, the Arabs were leading as sea-traders. Their country situated between the East and the West served as an emporium whence the oriental articles found their way to the Western countries. Soon after the fall of Rome they became the masters of the Indian Ocean and maintained their trade-monopoly therein, till it was usurped by the Portuguese in the sixteenth century.³

The geographical condition of Arabia was such that her people were forced to quit their desert and rocks and rush to the sea for subsistence. To their natural aptitude for the sea was added the fanatical zeal of Islam after the Prophet's birth, pushing them on to a sea-career. These free traders of Arabia were not well-united. Their ships were inferior in equipment and therefore they fell a prey to the advanced Portuguese. However, their role in the Eastern theatre of the Ocean was noteworthy and its effects far-reaching. In modern times the rise of Japan as a first-rate naval power is perhaps without a parallel. The intense love of the Japanese for their motherland, their industry and the insular position of their country rapidly led to the development of the navy. Their great neighbour China on the other hand completely

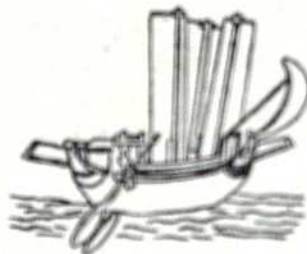
1. *MISH.* 57, 29, 36-7.

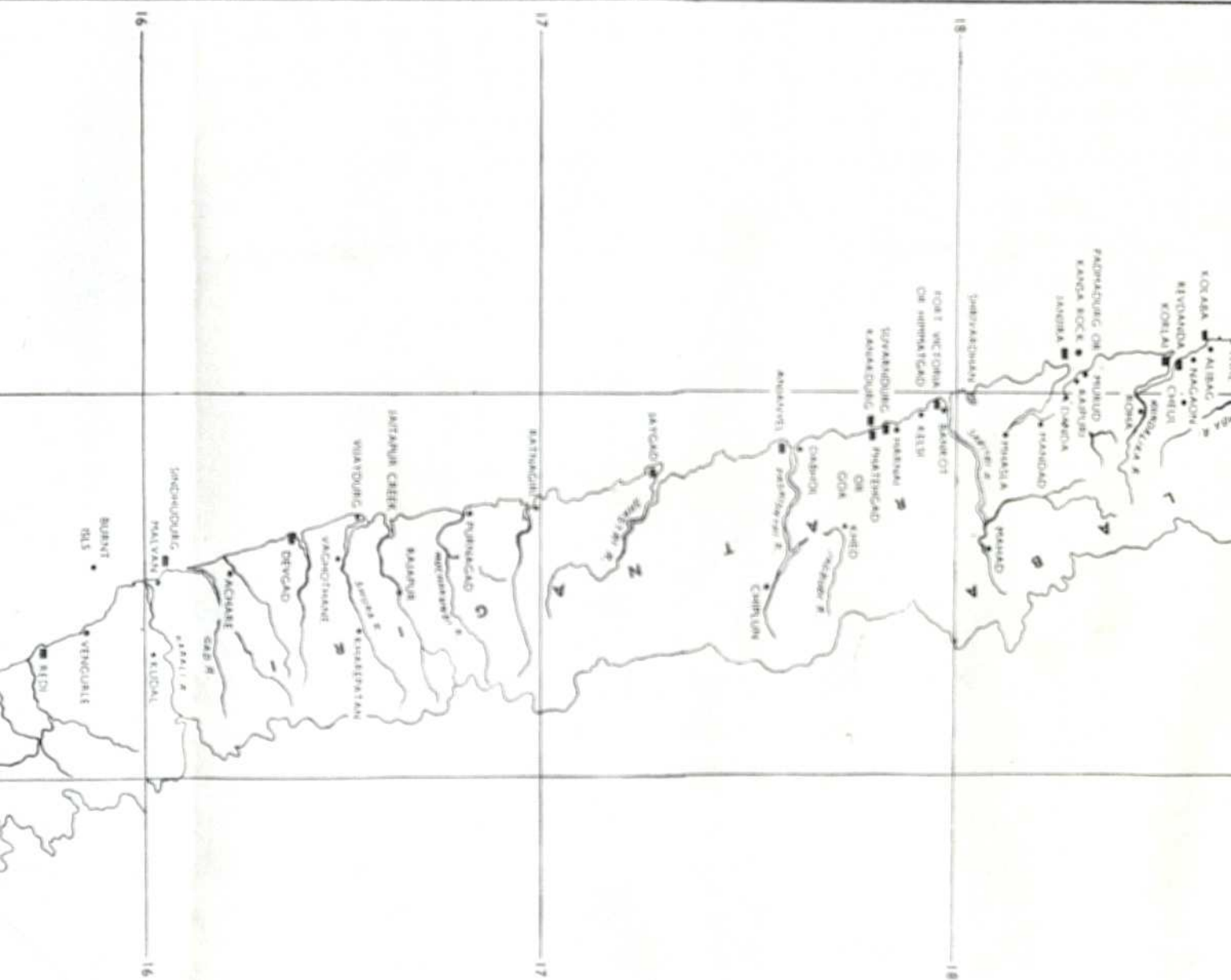
2. *ESS.* 311-2.

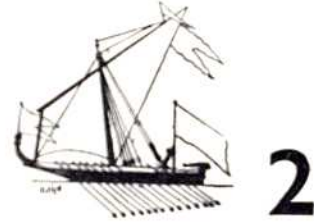
3. *MASB.* VII. 205.

neglected the navy as her main interest lay on the land. The landward mentality of the Chinese compares well with that of the Indians or the Marathas, being responsible for their failure to develop as a maritime power.

As already noticed, in olden times, Sopara was the only place known for its maritime activities on the coast of Konkan. This was so probably because the coastal region to the south of Sopara was not yet well-inhabited. But it seems that the ports of Gujarat and Malabar to the north and south of Konkan respectively, throbbed with sea-trade much earlier. Naval activities thus seem to have developed on the Konkan coast later than either in Gujarat or Malabar. When Shivaji first set afloat his navy, the underlying idea was to develop it as an instrument of war. Its economic aspect — sea-trade — was secondary, though he scrupulously encouraged it. Konkan though geographically separated from the upland or Desh by the range of Sahya mountains, has, throughout its history been subject to the influences of the political events of the latter. Shivaji in his early political career depended upon the forts in the Sahya mountains and Konkan for the defence of his nascent state. Major part of his kingdom in the early period lay in Konkan rather than on the Desh. He chose for his capital the inaccessible fort of Raigad near Mahad in Konkan. As he went on conquering the territory in Konkan he naturally came in contact with the sea-powers, namely the Siddis, the Portuguese, the English and the Dutch. For the defence of his new kingdom he paid as much attention to the development of the navy as he did for the perfection of the army. Under his grandson, Shahu, the coast of Konkan was defended by the Angre family. After his death the central land-power practically passed into the hands of the Peshwas who neglected the navy. The principal interest of the Peshwas lay in the vast continent of India for their territorial expansion. The Shindes and the Holkars were in no way different from the Peshwas in this regard. The Gayakwads who ruled over Gujarat bordering on the west coast and the Bhoales of Nagpur whose territory extended up to the coast of Orissa were indifferent to the development of the navy. All these powers like their predecessors of the pre-Maratha period have exhibited a peculiar landward mentality. This characteristic displayed by the Indian powers time and again, has been analysed in the following chapters in the light of the geographical, historical, economic and social factors.







Konkan—Land and the Sea

THE narrow strip of land called Konkan lies between the high Sahya mountains and the West Sea.¹ Throughout its length it is interspersed with numerous rivers, and channels of sweet and salt-water. Its mountainous tract was once covered with thick forest. Cultivation of rice has been possible mainly along the narrow margin of the coast where the soil is comparatively deep. On the mountain-slopes patches of land carved out for cultivation have to be preserved with difficulty. Strange as it may seem, this region which receives plentiful rainfall has often suffered from scarcity of food. The people, therefore, have been forced to eke out their living with fish. The West Sea teeming with fish must have tempted the early man of this region to set afloat a raft or a canoe for fishing. It was this want of food which drove man to the sea promoting navigation. Nevertheless, the possibility of a raft being pushed on the waves out of mere curiosity or fun giving rise to the art of navigation cannot be ruled out. The question, when did the early man do this, cannot be answered satisfactorily.

Ever since navigation first made its appearance on the shores of Konkan, climate, rainfall and topography have not changed considerably. Only the reckless felling of the forest has silted up the estuaries, and the sea at some places has encroached upon the land or has receded away from it. It shall be our purpose in this opening chapter to describe the geographic factor in so far as it has been responsible for the maritime activities of the people of Konkan.

BOUNDARIES OF KONKAN

The coast of Konkan stretches from Daman in the north and goes as far as Goa in the south. It comprises the three districts of Thana, Kolaba and Ratnagiri. The areas of the former princely states like Janjira and Sawantwadi have been merged recently in the adjoining territory.

The coastal strip between Daman and Goa stretches from 15·5 to 20·5 north latitude and spreads widthwise between 72·8 and 73·8 east longitude, i.e. the coastline from end to end gradually recedes just by one degree.

For the details of Konkan (see Fig. 1).

¹ West Sea stands for the Arabian Sea.

CLIMATE

The climate of the three districts is humid and varies but little from one district to another. The south-west monsoon breaks with great regularity in the early days of June and ends in the midst of October or at the close of September. At the beginning of June the atmosphere is charged with electricity and showers break with thunder and lightning. During July and August clouds heep upon clouds and rain pours in torrents. In the succeeding month and a half it slackens and dies away at the advent of autumn. The rainfall is heavier on the slopes of the Sahya mountains as the monsoon dashes there with all its fury. The rainfall averages between 90 and 100 inches in Konkan.¹

The Whole of Konkan presents a panoramic view in the *Sharad Ritu* or autumn. But unfortunately in the past, this was the worst season in the wooded and marshy parts of Thana, followed as it is by loathsome malaria. It was less severe in Kolaba and almost absent in the rocky region of the Ratnagiri district. The best season in Konkan is from December to February. After February the temperature rises, becoming very oppressive in April and May in the interior parts. But along the coast it is tolerable as the heat is wafted away by the cool sea-breeze during the day. The inland terra has almost close and suffocating nights. This condition prevails till fresh winds come again in June. At the beginning of June the sea gets rough and continues to be so for about four months, during which period, ships have got to be hauled up the shore. They are put to the sea again after the *Narali Purnima* (full moon day in *Shravan*).

Nature divides the whole littoral of Konkan into two parts near the northernmost point of Kolaba (at 18°33' in north latitude). The region north of this point has a better system of islands, deeper rivers and spacious backwaters facilitating navigation. The part of the coast south of this point, though indented with numerous rivulets, has no spacious backwater base, and the rivers run through rocky gorges navigable for large ships only at high-tides and over a short distance. According to the tradition current in Konkan, the coast is divided into two parts by the river Savitri. The region south of Savitri is called *Het*.

THE COAST OF THANA

The coast of Thana is divided into two parts by the river Vaitarana. At the extreme south, the great gulf stretches from the northernmost point of Kolaba and spreads inland as far as Thana. It was once the widest bight of Konkan, and large ships could reach Thana without difficulty. The present marshy shore of the Thana estuary was then under water. The half-baked swamps now seen near Kalyan and Bhiwandi were flooded in the past at high-tides. Salsette or Sashti was split into seven islands : Salsette, Turumbe, Juhu, Vesave, Marva, Dharavi and Raimurdha. Bombay proper, was a group of islands in the seventeenth century. Bassein and its neighbouring villages formed an isolated tract known as the island of Bassein. The creek of Bassein was navigable as far as Kalyan and Bhiwandi. It was at these places that Shivaji initially set afloat the keels of his navy. The silted channel on which Sopara and Bolinj stand today was navigable over a pretty long distance. Turumbe (Trombay) and Karanja islands were separated from the mainland by water.² These alterations have taken place due to the artificial reclamation helped in the main by the deposit brought by the rivers and streams.

1. See climate in *GBP*. XIII. i, X, XI.

2. *GBP*. XIII. i. 2, 3.

In the north, the broad estuary of Vaitarana opens up a scene of exquisite beauty by its green expansive waters. The estuary is shallower than the bight of Thana, and the small rivers north of Vaitarana are narrow and short. The coast is strewn with salty marsh patches presenting a dull isolated view.

RIVERS OF THANA

The water of this district is drained by the Vaitarana and the Ullhas rivers. The Vaitarna springs from the Trimbak hills and flowing past Igatpuri and Manor meets the sea at Arnala. Vessels of more than 25 tons used to ply beyond Manor. From here the river is pretty deep surrounded by a country of great beauty. In the vicinity of Manor the river meets the tidal wave. The Tansa is for many miles a tidal river navigable for some ten miles for vessels of about 12 tons.

THE ULHAS OR THE KALYAN RIVER

It starts in the neighbourhood of the Bor pass and goes nearly eighty miles in the north-west direction pouring into the sea near Bassein. Ulhas was navigable for sufficiently large vessels up to Kalyan, and its tributary Kalu for about ten miles as far as Pishebandar. An arm of the Ullhas forking as far as Bhiwandi could be used by smaller vessels.¹

MINOR RIVERS

Among the minor rivers, the Patalganga rises in the Bor pass and after taking a westerly course of 30 miles falls into the sea in the south-east corner of the Bombay harbour. Vessels of about 25 tons pass in this river for about six miles.

The larger of these minor rivers were navigable for vessels of about 12 tons at high-tides. Smaller vessels and boats could ply up and down the rivers leisurely at normal or mean-tides.

Besides these secondary rivers, Thana has many small creeks. Beginning from the north may be mentioned the creeks of Dahanu, Chinchani (between Chinchani and Tarapur), Uchali, Mahim (Kelave), Manori and Malad or Vesave. Some of these rivers, though broad at their mouths, are narrow, shoal and short in their upper courses. All the same, their estuaries afford good anchorage to small local crafts.

ISLANDS OF THANA

The sea-girt rock of Arnala stands at the mouth of the river Vaitarna crowned with a fort. It guards the entrance to the estuary.²

Sopara, a port of much importance during the Maratha period is in the process of silting up. A creek running between the mainland and Sopara separated them. The creek forms a southern branch of the Vaitarana estuary, running along Bolinj and Sopara till it joins the Kalyan-Bassein estuary on its north. In the seventeenth and eighteenth centuries this channel was navigable for small boats.³

1. *GBP*. XIII. I. 3, 8-10.

2. *Ibid.* 10-3. Vesave was the haven for ships. The English once coveted it as it was the best deep water port in the vicinity of Bombay. Even today it is a good harbour, though it has sunk into oblivion due to flourishing Bombay.

3. *SPD*. XVI. 32-4. The reference clearly states that Bussein was an island. It was cut off from the mainland by the creek on its eastern side. The Marathas could get access to the island only after crossing this creek.

The Thana creek was broad, deep and navigable throughout its course. The present marshes and salt pans were much smaller in dimension than what they are today. In the southern jaw of the Thana bight stand the islands of Hog, Gharapuri and Karanja or Uran.¹ The alluvial deposit brought down by the rivers during the last one hundred years or more has changed the region around Sopara and Salsette.

PORTS OF THANA

Thana and Bassein were the best of the Thana ports with deep and spacious waters for anchoring. Both were flourishing marts and Bassein in addition, was a ship-building centre.² The inland towns on the Bassein river, Kalyan and Bhivandi, were also known for the same calling.

Agashi was a ship-building centre and a great timber-mart. The Vaitarana, right from Manor, floated the timber in its neighbourhood down to the port of Agashi.

Mahim (Kelave), Shirgaon, Tarapur, Dahanu and Umbargaon were ports of secondary importance engaged in local traffic, and served as calling stations for ships on their voyage.

Vesave, to the west of Salsette island, was the best deep water port. Ships of considerable tonnage could anchor here. It was the best haven for ships.³

For Bombay and the adjoining territory as far as Arnala (*see* Fig. 2).

THE COAST OF KOLABA

As one proceeds to the south of Bombay along the coast, the whole terra changes its outlook. The number of marshes decreases and mud basins become fewer in Kolaba and disappear in Ratnagiri. The coastal strip recedes eastward and the country abounds in hillocks rough and rugged. The region being rocky has changed but little except the silting up of the river-beds, a process which is going on uninterruptedly.

The coastal strip of Kolaba from Revas to the river Savitri measures nearly sixty miles including the area of the former Janjira State. Along the coast there are numerous salt pans up to Cheul.

RIVERS OF KOLABA

Kolaba has two systems of rivers draining the water of the district, viz. those flowing northward and others flowing westward.

The river Amba sprouts in the Sahya hills near the Karanda pass and flows westward meeting the tidal wave north of Nagothane. From the sea up to Nagothane the river is navigable at high-tides for vessels of about 15 tons. Near Dharamtar the rocks disappear and the hill ranges draw back leaving a deep muddy channel from half a mile to one mile in breadth. The bank is swampy and has dangerous bogs at some places. As far as Dharamtar and some distance southward the river is navigable for vessels of about 65 tons. Beyond Dharamtar navigation for big vessels is difficult and well-nigh impossible at low-tides. At ordinary high-tides vessels of about 15 tons and at spring tides of about 25 tons go up to Nagothane.

1. *GBP.* XIII. i. 11.

2. *Ibid.* 31.

3. *GBP.* XIV. 380.

THE KUNDALIKA OR ROHA

Rising in the Sahyadri the Kundalika drains the central part of the district. After flowing for about 20 miles to the west it meets the tidal water near Roha and finally falls into the sea near Revadanda. The tidal course from Roha is navigable up to five or six miles from the sea for vessels of about 50 tons. On the northern bank of the river stands the well-known ancient port of Cheul.

Throughout its course the river has well-wooded hills which rise behind a belt of salt marshes and rice fields. The mouth of the river is picturesque, lined with palm groves and orchards.¹ On the southern side, the historic fort of Korlai projects into the sea.

The Savitri or Bankot is the main river of the district that drains the water of the southern region. Rising on the eastern side of the Mahabaleshwar hills, it flows nearly 12 miles in the north-west direction. From Poladpur it runs for about 8 miles to the north and taking a sharp turn towards the west meets the tidal waters near Mahad. From Mahad to Bankot the river is navigable for fairly large vessels at high-tides. As far as Dasgaon it is navigable for vessels drawing 10 feet water at high-tides. For small crafts the river is navigable at all tides.²

From the north, the main backwaters of Kolaba are the Nagaon creek (south of Alibag), Mandale-Borlai (south of Korlai), Nandgaon, Murud, Rajpuri (Danda-Rajpuri), Panchetan-Borlai and Shrivardhan.³

The Nagaon creek was an anchoring place for the light Maratha vessels, and the creek of Rajpuri for those of the Siddis. Most of the entrances of these rivers are rocky and some have sand-bars. Once these bars are crossed, the interior water is easily navigable. The sand-bars could be successfully avoided by pilots familiar with the waters.

THE RAJPURI CREEK

It runs inland from the sea-girt rock of Janjira, forking into two arms. One of the arms stretches south-eastward up to Mhasala about 17 miles from Janjira. The second arm goes up to Mandad in the north-east. Larger vessels could pass the Mhasala creek. The Mandad creek (Talkhadi) was navigable for vessels of about 12 tons at high-tides, and at springtides for vessels of more than 50 tons. It is the largest inlet on this coast and affords an excellent shelter to ships during the rough season. The Kuda caves of the Buddhist period near Mandad bear testimony to the latter being a fine port in ancient times.

ISLETS

The only islands on the Kolaba coast are the rocks of Khanderi and Underi (Kenneri and Henery), at about 3½ and 2 miles respectively from Thal. They are separated from one another by about two miles. The highest point on Khanderi is 91 feet above the sea and its dimensions are approximately one by three furlongs. The Underi island measures 2 × 2½ furlongs excluding its submerged outer rocky ring. Its highest point is 34 feet.⁴ These islands gained strategic importance since the occupation of Bombay by the English.

1. *GBP.* XI. 7-9.

2. *Ibid.* 10-1.

3. *Ibid.* 403.

4. *Ibid.* 11.

PORTS OF KOLABA

Cheul was a great mart where trade centred. It prospered during the palmy days of the Ahmadnagar kingdom¹ and later was an important outpost of the Portuguese till A.D. 1740.

Mahad was a good inland port throbbing with trade. The other ports of Kolaba were busy with local commerce.

THE RATNAGIRI COAST

The coast spreads from the Savitri river in the north to the Terekhol in the south, measuring about 165 miles. For the most part the coast is rocky and the rivers run through deep defiles without much alluvial deposit on their banks.

The extremely winding courses of the rivers present at many places a view of an enclosed lake. The mouths of these rivers terminate into promontories crowned with fortifications which were once the guarding stations of the coast. The estuaries of the rivers have sand-bars which make passage difficult for vessels. Many of the promontories and high hills projecting from the southern end of the estuaries provide excellent anchorage in the rough season. The scattered patches of fine white sand enhance the beauty of the coast at places like Ganapatipule. Behind the margin of the coast dark brown cliffs loom large upon the horizon presenting a grim grandeur. This region was the cradle and the home of the Maratha navy.

RIVERS OF RATNAGIRI

Vasisthi, the largest river of the coast, springs in the neighbourhood of the Tiwara pass and becomes tidal near Chiplun.² Past Chiplun it forks into two currents. The northern current cuts the Goval hill at its foot, and the southern, taking a long loop around the same hill from the southern side, rejoins the northern current near the Kalusta hills. The combined currents broaden as they join the sea at Anjanwel. The region round the Goval hills is rendered rich by the alluvial deposit yielding double crop a year. Up to Gowalkot, 30 miles from Dabhol, large vessels ply at high-tides. But for about 25 miles the river is navigable at all tides.

The Jagbudi, a tributary of the Vasisthi, is navigable for small crafts as far as Khed.

THE SHASTRI

Rising on the slopes of Prachitgad, the river meets the tidal wave at Sangameshwar. Vessels of good draught could go to Sangameshwar at high-tides. Sangameshwar was once an inland port but has ceased to be so in recent times. Nowadays vessels start from Phungus taking advantage of the tide. The mouth of the river is crowned with the fort of Jaygad.

The Bav river, a tributary of the Shastri, is navigable for small boats. The Gadandi is also navigable for small crafts as far as Makhajan.

THE RATNAGIRI OR BHATYA CREEK

The creek is pliable up to some distance beyond Harchiri. The projection of the hill on the north side of the Bhatya creek affords safe anchorage to small ships during the south-west monsoon. The Mirya Bandar just a mile and a half from Ratnagiri, is protected by a high hill to its south giving good shelter to vessels during the south-west monsoon.

1. *GBP.* XI. 276.

2. *Ibid.* X. 6, 7.

The Muchakundi rises in the vicinity of Prabhanvalli, a historic place, and empties into the sea at Purnagad. Small crafts could pass as far as Satavali, 2 miles from Purnagad.

THE JAYTAPUR CREEK

The bay of Jaytapur is about 25 miles south of Ratnagiri.

The river joining the sea at Jaytapur rises in the famous Anaskura pass. It travels a total distance of about 35 miles. In the bygone days Rajapur, an inland port, had factories of the English and the French. In those days the river must have been navigable as far as Rajapur. Jaytapur is a good harbour for vessels during the fair season. It rose to importance because of the town of Rajapur which flourished in trade in the Maratha period.¹

THE VIJAYDURG CREEK

The Vaghothane or Kharepatan river rising in the Kajirda pass glides south-west for about 15 miles and joins the tidal waters at Kharepatan. Past Kharepatan the river broadens rapidly, forming good quays on its banks meeting the sea at Vijaydurg. The Vijaydurg fort stands on the promontory on the southern side of the estuary. The promontory shields the inner harbour from the south-west gales. Split up into many backwaters and bays, the Vijaydurg river forms an excellent anchorage all the year round. Unlike other estuaries of the district, this is singularly free from a sand-bar at its mouth. Vijaydurg is the best harbour in South Konkan. Small crafts can ply up to Kharepatan, while vessels drawing more than 7 feet water can go up to Vaghothane. Vijaydurg was the seat of admiralty under the Angres.

SECONDARY CREEKS

South of Vijaydurg are the creeks of Deogad, Achare, Kalavali and Karli. These creeks are navigable for small vessels, about 8 to 10 miles from the sea. Of these, the Kalavali or Malonda was a well-known rendezvous of the Malvan pirates.

Among the minor creeks from north to south are Kelashi, Ada, Palshet, Borya, Ganapatipule, Karyat, Nevare, Ara, Kalabadevi, Pavas and Mumbari. At Malvan the backwater forms a small harbour very naughty due to the numerous submerged reefs.² The port of Vengurla attained importance when the Dutch established a factory there.³

PORTS OF RATNAGIRI

Dabhol was a centre of trade under the Shahas of Bijapur. It was known as the Mecca-port whence members of the royal family and lay Muslims sailed to the Holy Land—Mecca.

Rajapur was an inland port from where the imported articles passed to the interior.

Jaygad, Deogad, Ratnagiri and Vijaydurg were busy with local trade.

1. *GBP.* X. 6-9.

2. *Ibid.* 9-11.

3. *Ibid.* 377.

**3**

Coastal Forts

THE coast of Konkan is hemmed in with a network of forts. They are of three types — inland, headland and island. All along the coast from Daman to Goa the island forts are not more than half a dozen. The headland forts constitute a special feature of the Ratnagiri district where the coast is dotted with numerous promontories. Here, almost every promontory is crowned with a fort. The seaboard of Thana, on the other hand, is a plain strip. Its estuaries are guarded by forts and the interior parts of its rivers have small fortresses. Geographically, the coast of Kolaba is akin to that of Ratnagiri.

The coastal forts have played an important role in the history of Konkan. They were an adjunct of the navy. In times of war they served as supply depots and places of refuge to the navy. The warships replenished their resources from the fort-depots. Forts mounted with guns of good calibre could effectively repulse enemy ships from entering the rivers on which they stood. A well-defended estuary could thus help keep the enemy armada at bay. However, if the fort-guns failed, the armada of the land-power anchoring in the creek or the river was always in danger of being destroyed without action as it could not escape into the sea. Actually the armada of Tulaji Angre which was required to face a similar situation was destroyed without being brought into operation. Ships in the creeks and in the ports under the cover of fort-guns were always safe from an attack.

Every year during the rough season the Maratha navy anchored in some good port overlooked by a fort.

The headland forts, because of their natural height, could guard the coast over a long distance. Vijaydurg is the best example of such a fort with the additional advantage of specious backwaters.

The island forts like Arnala, Janjira, Kolaba, Khanderi and Sindhudurg, if properly defended, could defy the main power on the shore. The fort of Janjira challenged the Marathas because of its sea-girt situation.

The role of the coastal forts is well seen in the important campaigns of Bassein, Janjira and Khanderi.

FORTS OF THANA

Bassein (Fig. 3)—The fort of Bassein—the headquarters of the Portuguese 'General of the North'—was the largest habitation of the Portuguese next in importance to Goa. The Portuguese started reconstruction of the fort in 1590 and completed it by the turn of the century. It was one of the strongest forts on the west coast. It had eleven bastions and massive walls of stone with parapets and embrasures. The main openings were the land-gate and the sea-gate. Inside the fort was a small citadel. The fort was well-equipped with water-tanks, store-houses, magazine, etc. In addition, the fort had fields which could grow grains and vegetables. The fort had a moat to the landside which was filled by sea-water. The Marathas, when they conquered the fort, erected a *Hanuman* temple at the sea-gate. For a long time, Bassein must have served as a model to the Marathas for constructing sea-forts elsewhere.

Vesave (Vesava or Madh)—The fort of Vesave was important before the rise of Bombay. The Marathas repaired and strengthened its fortifications when they captured it in 1739. In the middle of the seventeenth century the English coveted the place as they were menaced by the growing power of the Dutch. The authorities at Surat wrote to their London Office that they should request the Portuguese Government to cede either Bombay or Versova. That just shows the importance of Vesave or Versova. The shore of Vesave had enough deep water to admit large vessels.

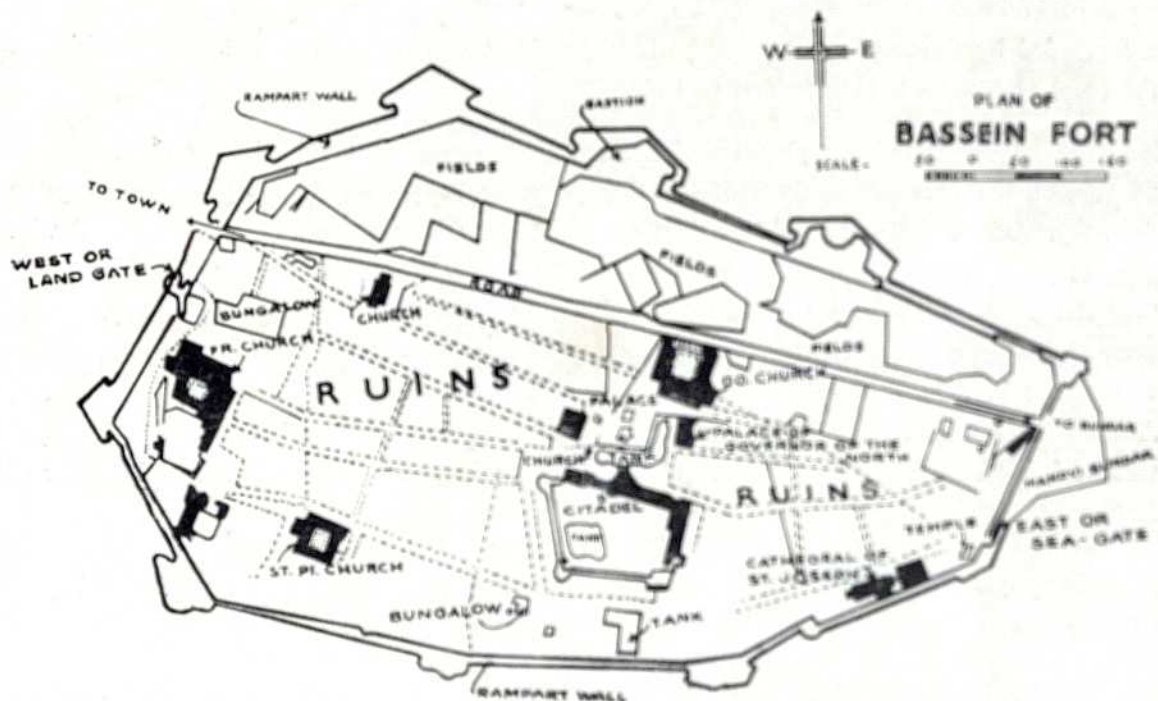


Fig. 3—Fort of Bassein

Arnala—Among the forts of North Konkan, Arnala was only next to the well-known fort of Bassein. Strategically, this sea-girt fort was important as it guarded the mouth of the river Vaitarana. Vessels of good tonnage could go up the river as far as Manor. By 1530, when the Portuguese took it from the Gujarat Muslims, it had Saracenic arches and domes. It was reconstructed by the Portuguese.

According to an inscription on the northern gateway the fort was re-built by Bajirao I under the supervision of the architect Baji Tulaji (1737). It seems that the oblong shape of the fort,

its massive walls, and other things of the Portuguese were probably retained. At present, there is no structure standing in the fort.¹

The forts of Dahanu, Tarapur, Shirgaon and Kelave (Mahim) were important mainly as guarding stations. They formed a second line of defence and supply-depots when the important forts were besieged by the enemy. These forts were captured by the Marathas between 1737 and 1739. The Marathas did not change the basic structure of these forts. However, they added residential and other quarters to suit their needs. The Portuguese churches in almost all these forts were razed to the ground, and temples of *Hanuman* or *Mahadeo* were constructed usually at the entrance.

FORTS OF KOLABA

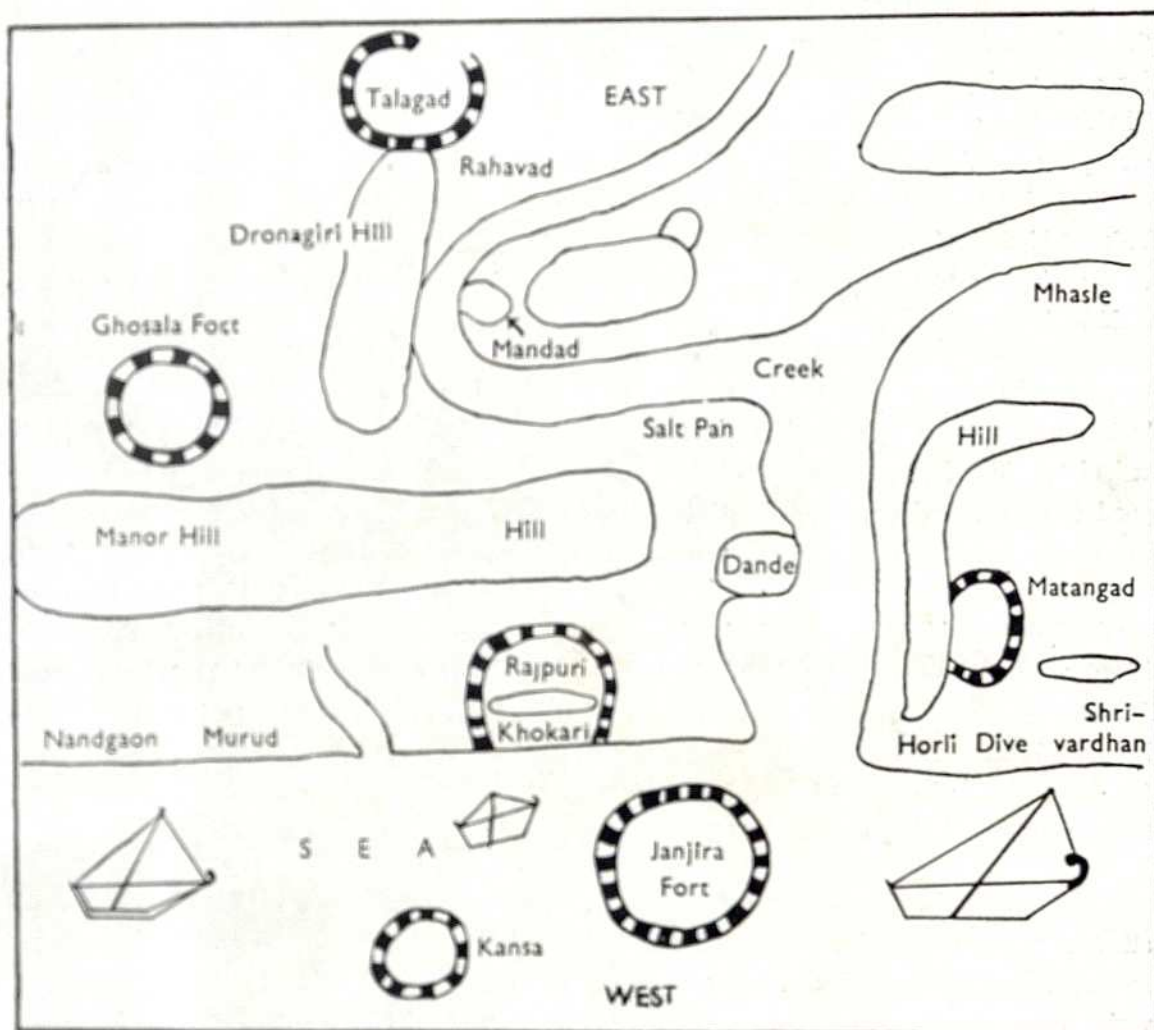


Fig. 4—Map of Janjira and the adjoining territory²

(By the courtesy of the Trustees of the Prince of Wales Museum, Bombay)

1. *GBP*. XIV, 10, 11.

2. This map of Janjira region probably belongs to the first quarter of the nineteenth century or the late eighteenth century. The entire region from Talagad in the east to the island fort of Janjira in the west, and from the hill of Manor in the north to Matangad in the south is duly mapped. Forts are indicated by dotted rings in black and white. The ships at the bottom are suggestive of the sea. All important places like Murud, Rajpuri and Dunda are properly shown.

Janjira (Fig. 4)—The fort of Janjira stands on a rock of irregular oval shape. Its main gate faces Rajpuri on the shore. It has a small postern gate looking on the open sea, used for escape in historic times when the fort was besieged. The fort has nineteen bastions all of which are quite intact to this day. The parapet work of the wall is indented. The bastions roughly measure 80 feet across and 30 feet deep. There are many guns of native and European make. One of the native guns called *Kallat Bangdi* is said to have been deserted by Peshwa Bajirao I when he left the main shore not being able to conquer Janjira. The European guns of Swedish, Spanish, Dutch and French make bear witness to the Siddis' dependence on foreigners for guns of good calibre. The construction of the fort was begun in 1694 and completed in 1707.

Janjira can be taken as the best specimen of the naval fort architecture of the Muslims. As the Siddis had to defend themselves from this sea-girt fort, it had all the equipment necessary for a township, viz. palace for the Siddis, quarters for officers, private houses, mosques, etc. The fort had an inner citadel overlooking the sea. It had also a magazine and other storing arrangement. At the entrance of the fort, on the left bastion, a tiger-like beast trampling upon elephants is carved in stone. This appears to be a common device used on many fort-gates. This emblem had probably some religious significance, or it assured victory to the person constructing the fort, though it is difficult to interpret its exact meaning. At Raigad, a similar emblem is carved on the stone-gate in front of the *Sabhamandap*—the main hall.¹

Khanderi and Underi—Khanderi has been mentioned as the island of Cheul, measuring 'a falcon shot long and arquebus shot broad'. The Portuguese had taken note of it by about 1538. It had two high hills. The north-east side of the island was protected from the wind affording good landing for ships. The island had good supply of firewood and fresh water. Shivaji constructed breastwork at the landing place when he occupied the island.² The island of Underi opposite to Thal was fortified by Siddi Kasim in 1680 and remained in his hands till 1700. Sambhaji landed his men on Underi. Later, Raghuji Angre captured it. Under the Angres the island was used as a state prison. Both the islands have been mentioned as 'Hunarey and Cunarey'—Underi Khanderi—by Friar in 1674. Both the places rose to importance when Bombay became an important centre of activity under the East India Company. Shivaji was forced to occupy Khanderi in order to keep control over the English. To counteract this, the Siddis occupied Underi and fortified it.³

Kolaba—The fort of Kolaba was constructed by Shivaji in the last year of his life, when all his attempts to conquer Janjira from the Siddis had failed. The fort stands on an island measuring roughly 900 ft. from north to south and 350 ft. from east to west. The height of the fort-wall varied from 20 to 28 feet at different places. The parapet at certain places was 20 'paces' broad surrounded by a curtain wall. The breadth of the wall at strategic places was 17 feet. The fort had in all seventeen towers which were used as watching points. The main gateway of the fort called the *Maha Darwaja*, which is now half-ruined is in the north-east corner. It was once super-imposed with a pointed arch with two towers on either side. The teak-doors had

1. *GBP*. XI. 462-3.

2. *Ibid.* 325.

3. *Ibid.* 395-6.

strong iron-spikes driven in them. At a short distance from the main gate is a small doorway as an extra defensive measure. The masonry of the fort is of large blocks of trap without mortar.

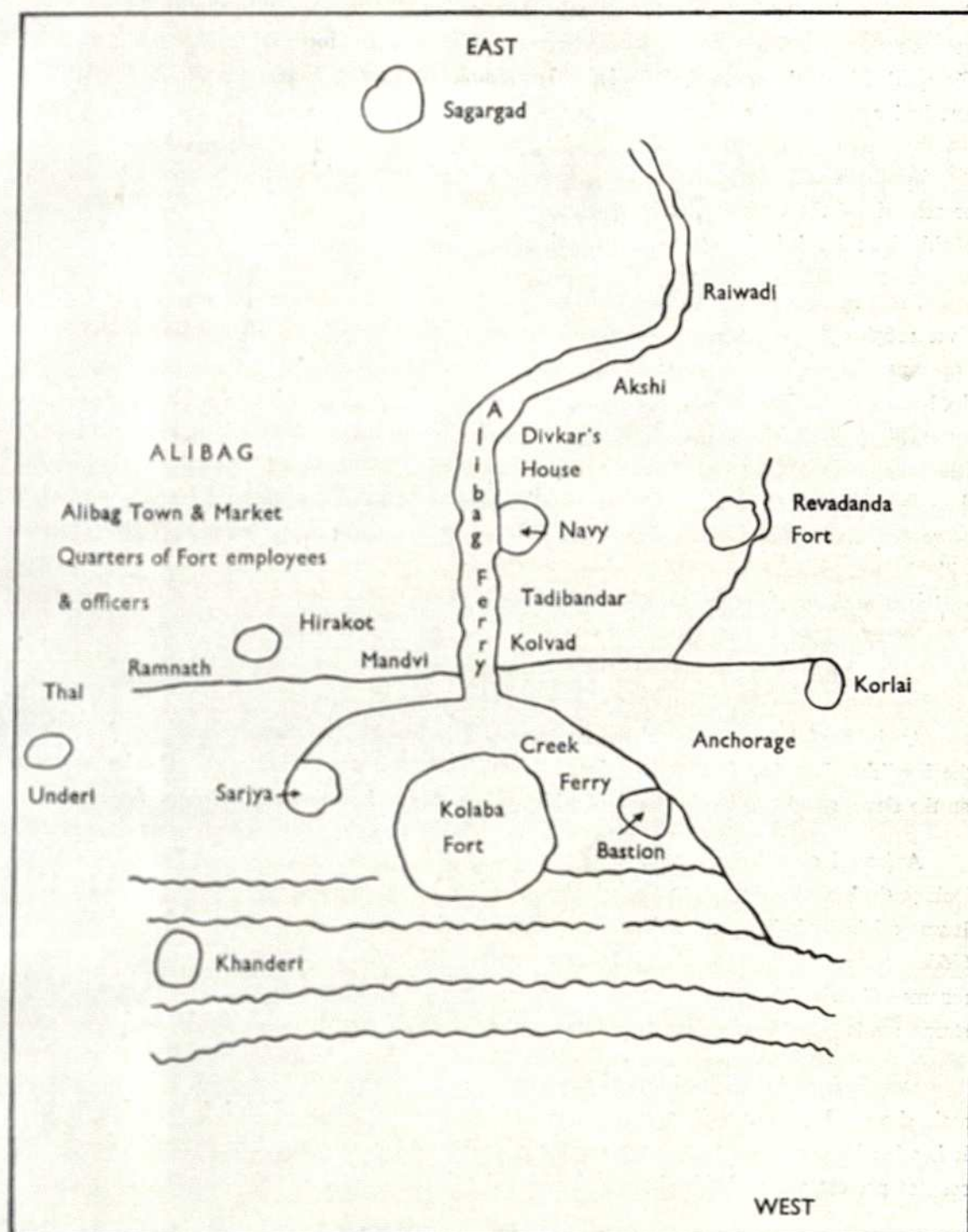


Fig. 5—Map of Kolaba and the adjoining territory
(By the courtesy of the Trustees of the Prince of Wales Museum, Bombay)

The Sariyakot to the north of the main fort was constructed to answer the artillery of Hirakot on the shore. Sariyakot and Hirakot stand facing each other.

The fort was well-equipped with storing arrangement for grain, oil, ghee, sugar and the other necessities. The magazine-house at the southern end of the fort was separated by a good distance from the granary etc., to avoid fire hazard. The fort attained importance under the Angres as their headquarters. It had palaces meant for the members of the Angre family, and houses for their officers. Among the important temples of the fort may be mentioned those of *Ganapati*, *Bhawani*, *Maruti* and *Gulbai*. The temple of *Ganpati* is yet in good condition. The fort had a cellar and a prison.

To the south of the fort was a ship-dock measuring 80×38 paces. At low-tide, the breastwork of the dock is clearly visible even now. It can be surmised from the construction of this dock that it had arrangements for shutting out the sea-water whenever necessary.

The map of Kolaba and the adjoining territory, probably of the Angre period (see Fig. 5), gives roughly the positions of the Kolaba fort, and other important neighbouring places. The upper part of the map is the east. The sea to the west is indicated by wavy lines surrounding the Kolaba fort. The Sarjakot to its north, and Hirakot opposite to it on the shore, are marked by small circles. The creek of Nagaon forking towards the south-east is correctly indicated. Other important places like Alibag, Underi, Khanderi, Revadanda and Korlai are shown with due consideration to their directions with respect to Kolaba. It appears that map-making, however rudimentary, was known to the Konkan people quite early because of their contact with the Europeans. The present map is not quite to the scale. The places where the armada anchored near the shore and in the Nagaon creek are indicated.

FORTS OF RATNAGIRI

At the northernmost point of the Ratnagiri district on the river Savitri stands fort Victoria of the English. The fort is now in ruins. Its original name was Himmatgad. Outside the fort, on the slope, stand two bastions, out of which one is said to have been built by the Angres.

Anjanwel occupies a commanding position on the southern shore of the Jog river. Overlooking the sea, the fort is surrounded on three sides by the sea and has a moat on the landside. It was originally built by the Bijapur kings and later improved and strengthened by Shivaji. The Siddis constructed the lower fort, or *Padakot*, when the main fort fell to them in 1699. It was renamed Gopalgad by Tulaji Angre when he conquered it in 1744. It was counted as one of the strong sea-forts. The fort has two doors, one to the east and the other to the west.

Suvarnadurg—The island fort of Suvarnadurg stands at a distance of a quarter mile from the main shore. Its strong walls are cut out of solid rock as a result of which it became impregnable. It has bastions, a postern gate, a place for magazine and reservoirs. The extensive foundations seen at present are probably the remains of old palaces.

The fort was probably built by the Bijapur kings in the sixteenth century and later strengthened by Shivaji. It was Kanhoji's stronghold in his early sea-career.

Kanakdurg, Phategad and Goa on the mainland are separated from Suvarnadurg by a narrow channel. The first two are important as outworks of the island fort and were built by Shahu. Phategad is in complete ruins, Kanakdurg has the sea on three sides.

The Goa fort was stronger than the two other land-forts, its southernmost part being 50 feet high above the sea level.¹

Jaygad stands on a gently rising hill. The upper fortress is constructed on the brow of the hill. The upper and the lower works were added by Shivaji. The main gate of the fort has a steeply rising flight of steps, making access difficult.

Ratnagiri—The vast fort of Ratnagiri is like a horse's hoof, being divided into two parts by two hills. The fort is very steep on the seaside and the citadel on the north-west is higher still. The main gate has iron-spikes to ward off the butting of an elephant. The protective towers on the south and on the Mirya hill on the north were built by Shivaji. The citadels were improved by the Angres and completed by the Peshwas. The landing place is protected by the *killa bandar*. The low north-shore defence walls were constructed by the Pratinidhis. The fortifications clearly show both the Muslim and Maratha influences.

At the north-east and south-west corners of the fort, scooped out portions in the rock are said to be connected with the main fort by an underground way.

South of Ratnagiri, Purnagad fort guards the mouth of the Muchakundi river, and Yeshwantgad that of Rajapur. Yeshwantgad protects the Jaytapur harbour inside the creek. It was once one of the chief ports of Konkan. The fort has seventeen bastions and a ditch to the north.²

Vijaydurg (Fig. 6)—Vijaydurg or Gheria, the 'Gibraltar of Konkan', successfully withstood the attacks of the Europeans and the Siddis for over half a century. It stands on a hill on the south shore of the river Vagothana. The oldest part of the fort was probably constructed by the Bijapur kings. Its triple fortification and enlargement are ascribed to Shivaji. All the other fine features of the fort belong to the Angres.

Cut out of solid rock on the water-side and strongly fortified, the fort is inaccessible except from the landside. Coupled with natural situation, the fort was well planned for defence and offence. The outermost wall had about seventeen towers, big and small.³ In some of them, ammunition was stored for feeding the batteries. The second defensive wall from outside had about ten towers. The fort had store-houses for manufacturing and drying powder and magazines. Strategic points had guard-rooms and some of the towers were two-storeyed, as observation posts. A ruined and double-storeyed tower is seen even today.

Figure 7 is a unique map of the fort of Vijaydurg secured from the Prince of Wales Museum, Bombay. It compares very well with the previous map (Fig. 6) which belongs to the year A.D. 1756. Both the maps tally well with each other over a number of details. This map seems to have been prepared by a Maratha artist on the European model. As it is similar in many respects to Figure 6, in all probability, it represents Vijaydurg at the height of its glory, under the Angres. Had it been otherwise, the two maps would not have compared well with each other as they do. It is, however, difficult to determine when exactly the map was prepared.

1. *GBP*. X. 318, 337.

2. *Ibid.* 341, 384.

3. *Ibid.* 380.

As is common to the maps of the Maratha period, the west is shown at the bottom. The creek running to the north of the fort surrounds it on its eastern side and taking a curve proceeds further. The creek is teeming with fish. At a short distance from the mouth of the creek is seen a row of *galbats* and *pals*, reaching as far as its southern end. The big vessels have broad-side guns and double-decked sterns. Their flags and sails are fluttering proudly as they enter the creek.

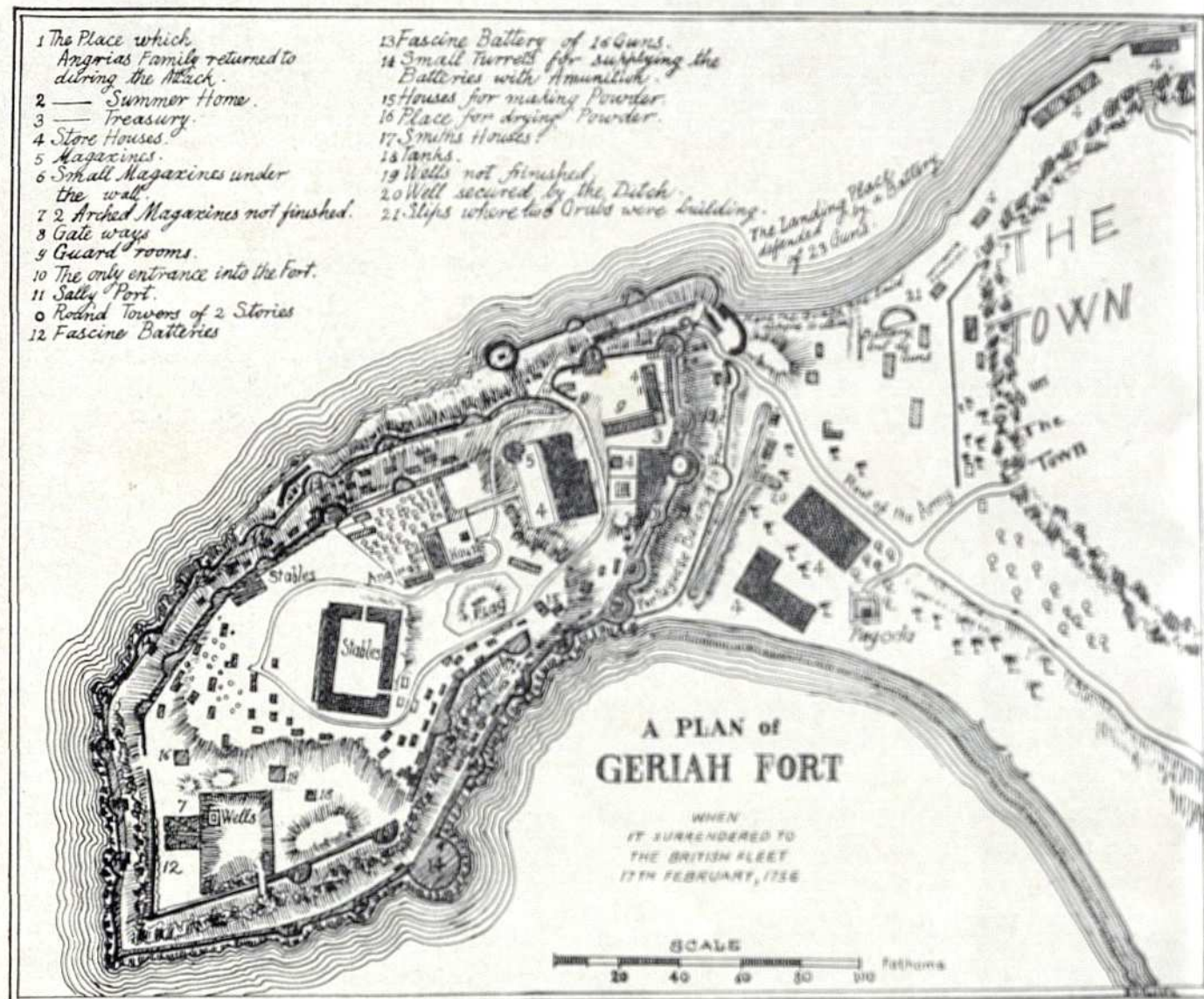


Fig. 6—A plan of Gheria Fort when it surrendered to the British Fleet in 1756

The fort has double fortification on its western and northern sides. Fortification of these sides has bastions mounted with guns. The *Ganesh* bastion mounted with a gun stands in the south-west. Going around the fort in the clockwise direction from this point, one meets the bastions — *Ram*, *Hanmant*, *Darya*, *Tutka*, *Sikhara*, and the *Sinde* — in succession. The *Ganesh* bastion is the first on the west side. It is named after that deity as it averts all evils if remembered at the commencement of any undertaking. The *Darya-buraj* 'the sea-bastion' is named significantly as it directly faces the open sea. The next bastion is named *Tutka* being



- 1 GANESH BASTI
- 2 RAMA BASTION
- 3 HANMANT BAS
- 4 DARYA (SEAWO
- 5 TUTKA BASTIO
- 6 SIKHARA BASTI
- 7 SINDE BASTION
- 8 SHAHA BASTIO
- 9 VYANKAT BAST
- 10 SARJYA BASTIO
- 11 SHIVAJI BASTIO
- 12 GAGAN BASTIO
- 13 MANARANJANA
- 14 GOVIND BASTIO
- 15 SADASHIV BASTI
- 16 KHUBLADHA NE
- 17 GHANCHI BASTI

half-broken. After the *Sinde* bastion inside the creek are *Shah*, *Vyankat*, *Sarja*, *Shivaji*, *Gagan*, *Manaranjan*, *Govind* and the *Sadashiv* bastions. The *Gagan* bastion was probably the 'sky-scraper' of the Maratha period. The *Manaranjan*, as its name suggests, gave a pleasing view of the creek and the yonder coast. All these bastions are mounted with guns to answer the enemy. The area around the *Sadashiv* bastion has triple fortification. The outermost wall mounted with guns is named 'the new *Khup Ladha*'. In times of war, the garrison gave a stiff resistance at this point, as the name suggests. Next to this comes the *Ghanachakkar* bastion with twelve guns. The remaining part of the fort from this point to the *Ganesh* bastion facing east and south has triple fortification. The entrance to the fort is from the landside. From the main gate at a short distance towards the east stands *Gibicha Darwaja*—the *Gibi* gate. The eastern gate crowned with a tower is separated from the *Gibi* gate by a curved path. From defence point of view, the three gates connected by a curved path made enemy advance difficult. In addition to this arrangement, the wall-guns were ever ready to repulse any inrush of the enemy.

The quay or *dhakka* is situated to the easternmost side. It is marked with a couple of towers and palm trees. To the right-hand side of the main gate i.e. to its west is the *Padakot* facing the land. This side being most vulnerable has naturally triple fortification. The entire fortification has guns on the bastions as also on the walls at suitable intervals. The stone-walls and the bastions are shown appropriately. The interior of the fort has residential quarters indicated by *Wada*—Palace, and *Madi*—a one-storeyed building. Some of the bastions are crowned with two-storeyed structures. They served as observation posts. The office buildings are situated, two at the centre and one in the north-east, named *Sadar*, *Pirachi Sadar* and *Kitta Sadar* respectively. The standard of the Angres' is proudly fluttering. The reservoir is shown in the north-west. It is interesting to observe the mariner's compass just above the *Sadar* by which the directions are indicated. The word '*Malami*' coming after '*Hoka*' stands for mariner's, and *Hoka* means a compass. The Angres had obviously known the compass.

On the landside facing the creek is the water bastion—*Pan-buruj*, alongside the naval store. To the south of the *Pan-buruj* is the dock meant for the repairing of ships. The creek going to the east from the dock is marked with small vessels.

The temple of *Shri Vijeshwar* to the south of *Ganesh-buruj* was probably the fort deity after which the fort of Vijaydurg was named.

Deogad—The fort of Deogad was built by Kanhoji Angre about A.D. 1705. The fort protects the harbour. The creek going eastward has no important places inside.

Bhagwantgad was built by the Bawadekars to checkmate the activities of their rivals, the Phond Sawants.

Sindhudurg—This fort was constructed by Shivaji at the southern end of the Ratnagiri district when all his attempts to take the island fort of Janjira proved futile.

Shivaji had invited Portuguese engineers from Goa for the construction of this fort. He is said to have worked personally when the construction of the fort was on. The fort was one of the greatest achievements of Shivaji. It has been described as the auspicious *Torana* of the *Swaraj* shining like a star in the sky.

Because of its extensiveness it was named Fort Augustus by the English when they captured it in 1765. Its ramparts are 30' high and 12' thick. It has 32 towers, the interval between them ranging from 40 to 130 yards. The towers are semi-circular with embrasures for firing. The entrance is in the north-east corner. Inside the fort is Shivaji's temple.

On the outer island stands the fort of Padmagad on a small rock. Within a mile from Malvan, and half a mile from the mainland, lies the island fort of Pandavgad. It was used for ship-building by Shivaji.

The mouth of the Malvan creek is guarded by Rajkot and Sarjekot. The former has the sea on three sides. Its walls are now in ruins. Sarjekot, about a couple of miles from Rajkot, is washed by the sea on its north side. Its other sides are rendered difficult of access by moats.

Reef-blocked Malvan has been a bad harbour. Shivaji seems to have chosen this place for Sindhudurg fort knowing full well its naughtiness. Even before him, Malvan was notorious as the nest of pirates. The strength of this place for defence lay in its weakness as a good harbour.



आपदेवी

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4

Maritime Activities— Ancient Period

GREATER periods of history shade into one another like the seasons of a year. Very often we do not know where one ends and the other begins, just as we find it difficult to draw a line of demarcation between the dying winter and the in-creeping spring. In order to bring definiteness to the ancient period one might begin with the reign of Ashoka (270 B.C. to 237 B.C.), which is the accepted sheet-anchor in the history of Konkan. The first phase in the naval activities begins in the dim period of the distant past and ends with the accession of Ashoka. The second starts with Ashoka and goes on till the appearance of Islam on the horizon of Konkan in A.D. 1318. The third phase covers the period from A.D. 1318 to the rise of the Maratha navy in or around 1660. The fourth commences in this year and ends with the fall of the Marathas. In the third phase the Portuguese made their way into Konkan and established their trading outposts all along the west coast. With their entry a new chapter was opened in the nautical history of Konkan as also of India having far-reaching consequences. The account of European aggression on Konkan occupies a unique place in its history. This has been discussed after the fall of the Islamic power. The year A.D. 1318 has been taken as a convenient landmark. In the long period from the days of Ashoka till A.D. 1318 Konkan was governed by the Hindu kings. In the latter half of this period the Arabs had established their supremacy all along the Arabian Sea coast. It has been referred to at relevant places in this narration.

The fate of Konkan, throughout its history, is seen closely bound with the great political events of the Deccan plateau or Maharashtra. The word Deccan was applied to the area between the upper Godavari and the Krishna. The easternmost parts of these rivers were naturally outside the Deccan. At one time the word Maharashtra, it seems, was applied to this very tract. The *Puranas* and other ancient works exclude (among many other provinces) *Aparanta* — North Konkan — and Konkan (probably South Konkan) from Maharashtra.¹ But the natural seaboard of Maharashtra or the Deccan has been the whole of Konkan.

The *Rigveda*, the *Mahabharata*, the *Jatakas*, the *Manusmriti*, the *Arthashastra* of Kautilya, the *Yuktikalpataru* and above all the recent excavations at Lothal forming part of the Indus Valley Civilization, yield rich evidence shedding light on the naval activities of the ancient period.

1. UPBCW. III. 5, 6.

PRE-ASHOKA PERIOD

The earliest references to the navigational activities of our people are to be found in the *Rigveda*. The words definitely indicative of these activities are *nau* (boat), *shataritram navam* (a hundred-oared boat), *samudra* (sea or expanse of water), and *navah samudriyah* (paths of the boats in the sea).¹ Terms for a stormy sea, for crossing the sea etc. are also not wanting. The reference to a hundred-oared ship presumes knowledge of ship-building and navigation. Macdonell and Keith in their *Vedic Index* explain the word *samudra* to mean a vast expanse of water connoting not necessarily the sea (*sam* plus *udra* = collection or expanse of water). Their conclusion is based on the assumption that the Aryans were not primarily a seafaring people like the Semites. The Aryans may not have known seafaring but it would be too presumptuous to state that they had not known the sea.

They used the word *samudra* for the vast expanse of water they came across in the region of the Seven Rivers — *Sapta Sindhu*. They might also have applied the word *samudra* for the extensive water they saw at the estuaries of the great rivers like the Sindhu. At any rate the *Rigvedic* Aryans cannot be denied the knowledge of ship-building and navigation whether the term *samudra* stands for sea or just for an expanse of water.²

Besides the *Rigveda*, the *Shatapatha Brahmana*, the *Mahabharata*, the *Ramayana*, the *Manusmriti* and the *Puranas* afford evidence regarding the maritime activities of our ancestors. The *sabhaparvan* of the *Mahabharata* mentions the conquest of kings residing on a sea-island by Sahadeva, and the *Adiparvan* refers to a boat that could stand bad weather and was equipped with mechanical devices. Similarly, references to sea-trade and sea-voyage are available in the *Mahabharata*.³ The *Manusmriti* (7-192) includes naval fights in the discussion on warfare in general.

The *Arthashastra* of Kautilya while describing the duties of the *navadhyakṣa* — the superintendent of ships — gives a brief yet systematic account of navigation. It was the duty of the superintendent of ships to inspect the accounts concerning navigation on the sea, the estuaries, the lakes natural as well as artificial, and the rivers. Varying duties were levied on different articles transported on board the ships. The fisheries and passengers had also to pay taxes. The large ships are called *mahanavah* and were provided with a *shataka* — captain — *Niyamaka* — steersman, and also with men who worked at the cordage and baled out water.

The word *datrarashmigrāhaka* means one who holds a cutter or a rope or a cord. The meaning of the word *datra* as sickle, given by Dr. R. Shamashastry is not significant nautically. However, if *datragrahaka* is taken to mean holder of the needle, it at once becomes meaningful nautically. If the compass was known in the time of Kautilya a needle-holder (a person operating at the compass) might have been appointed on board a ship. These nautical terms are indicative of the advanced state of navigation in the days of Kautilya.⁴ Pirate ships are called *himstrika*.

1. For these references see in order I-116-2; I-116-4; I-116-3; I-25-6. The Roman figure stands for the *Mandala*, the second figure for the *Sukta* and the third for the *Richs* of the *Rigveda*.

2. Viven de Saint Martin, mentioned by Macdonell and Keith in the *Vedic Index of Names and Subjects*, denies that the Aryans had known the sea.

3. *Hindusthanacha Sagarvikrama*, 31-2, by Dr. Bhaskar Mahadeo Tembe (1943), Yashwantrao Chavan Pratishthan, Mumbai.

4. Kautilya's *Arthashastra*, 139-42, by Dr. R. Shamashastry (Shri Raghunath Printing Press, Mysore, 1951).

A Sanskrit work titled *Abdhiyana* referred to by the late K. V. Vaze in one of his offprints 'Naukashastra'—Science of navigation—states four methods of propelling ships. One, by means of a long pole—*naukadandah*—, second by oars, third by oars fixed on a wheel with a handle—*chakrani putabhedah*—and the fourth by a sort of wooden screw coming out of the water—*bhrama jalanirgamah*. According to Vaze propulsion by means of a wheel with oars fixed on it is practised on the Ganga. Propulsion by a sort of wooden screw i.e. a *bhrama* is really remarkable. Unfortunately nothing is known about the date and the author of the *Abdhiyana*.

The *Abdhiyana* recommends that a ship should have one to four masts (*eka shringa* one mast, *chatuh shringa* four masts), and their ends should have a metal covering.

Equally or perhaps more important than all these literary references is the material evidence of a wharf unearthed in the Lothal area. The discovery of a dockyard bears testimony to the water-borne trade carried by the Lothal people. The dockyard has a trapezoid plan. Its eastern and western embankments measure 710 feet each, the northern 124 feet and the southern 116 feet. The greatest height of the embankment is 14 feet. From these measurements one can presume that large boats entered the dockyard for embarking and disembarking cargo at high-tide. A dwarf-wall at the entrance maintained the necessary water-level even at low-tide.¹ Lothal is taken to be related to the later phase of the Harappa Culture. The discovery of a dockyard is significant affording as it does direct objective evidence of great antiquity regarding the naval tradition on the west coast. In the absence of any evidence this tradition cannot be linked up with the maritime activities of ancient Konkan. However, the possibility of some relation between Lothal and Konkan cannot be ruled out as both are situated on the same coast-line.

The Jatakas—Like the *Vedas* and the *Mahabharata*, the Buddhist literature too yields interesting account of maritime activities. It contains among other things the *Jatakas* i.e. the stories of the previous lives of Gautama Buddha. Among the *Jatakas* the *Baveru Jataka* is well-known. It describes the adventures of some Indian merchants who took for the first time a peacock to Babylon by sea. The *Jataka* itself according to scholars, dates back to 400 B.C. but the maritime commerce between India and Babylon might go back to a still earlier period. This trade, it seems, was mainly carried on by the Dravidians as is evidenced by the words of Tamil origin used for Indian goods in the west i.e. Babylon. The words used for Indian goods have greater affinity with Tamil rather than with Sanskrit or Pali.

Ships from Broach and Sopara traded with Babylon (Baveru) from the eighth to the sixth century B.C. King Solomon is said to have sent a trade expedition to *Ophir* by sea with the help of the king of Phoenicia. The expedition was sent eastward probably to a great mart on the west coast of India. Most probably *Ophir* was on the west coast of India. It has been identified with Sopara. Some scholars, however, locate it at the mouth of the Persian Gulf. At any rate Sopara seems to have been a place of great antiquity known for its sea-trade.²

The history of Konkan of the pre-Ashoka period remains shrouded in mystery for want of sufficient material. It centres round Sopara near modern Bassein. The Buddhist writings mention

1. *Indian Archaeology*, 1958-59—A Review, 14. Photograph of the dockyard, Plate XV. Edited by A. GHOSH, Department of Archaeology, Government of India, New Delhi, 1959.

2. *MHISMA*, 88-9.

it as a great commercial centre and a royal seat. Arjuna, one of the principal characters of the *Mahabharata*, once visited this place then known as Shurparaka.¹

The legendary account of Purna of Sopara is full of wonders, a very common feature of the Buddhist tales. His sea-exploits are many and varied. This hero of Sopara embraced Buddhism and is said to have lived sometime between A.D. 100 and A.D. 400 and so, strictly speaking, does not belong to the Ashoka period. With all the legends spun round Sopara there is no doubt that it did attain importance in the pre-Ashoka period and after.²

KONKAN IN THE DAYS OF ASHOKA

The real history of Konkan begins in the reign of Ashoka the Great. The fragment of the eighth edict of Ashoka found near Sopara shows the extent of his kingdom on that side. *Aparanta* or North Konkan then enjoyed a sort of semi-independent position under the sovereign rule of Ashoka.³ This is the first definite reference in the history of Konkan.

Chandragupta Maurya, the grand-father of Ashoka, had a well-organised state navy. Under Ashoka, the Maurya Empire reached the zenith of its glory. The sea-boards of Gujarat and North Konkan or *Aparanta* were under his sway. His kingdom spread from sea to sea — from the Western Sea to the Eastern Sea. The ports on the coast of *Aparanta* and Gujarat might have been busy with foreign as well as coastal traffic by sea.⁴

NAVY UNDER THE SATAVAHANAS

After the Maurya rule Konkan was governed by the Satavahanas (from about 234 B.C. to A.D. 207).⁵ For sometime, these rulers were dislodged by the Shaka inroads.⁶ Usavadata, the son-in-law of Shaka, Ksaharata Nahapana, constructed rest houses and quadrangles at Broach and Sopara. Later, one of the Satavahana kings Gautamiputra Siri Satakarni wrested his ancestral dominions from the Ksaharatas. His kingdom extended to the southern parts of the Western Ghats. Among many other countries *Aparanta* — North Konkan⁷ — formed a part of his domain. South Konkan does not seem to have a separate designation during this time, and it probably fell under the Western Ghats which were attached to his territory. At its height the Satavahana kingdom spread from the Western Sea to the Eastern Sea.

Sea Ports under the Satavahanas — Barygaza i.e. modern Broach, throbbed with trade. Its imports and exports⁸ are graphically described by the author of 'The Periplus of the Erythraean Sea'. By this time Broach was a Shaka port.⁹

South of Broach was Sopara, a great seaport of the Satavahanas. Still southward Kalyan or *Calliene* of the *Periplus* was also a famous port. According to the author of the *Periplus of the Erythraean Sea*, in consequence of the keen contest between the Satavahanas and the Shakas,

1. *GBP.* XIII. ii. 404.

2. *UPBCW.* 22.

3. *Ibid.* 406.

4. *MHISMA.* 112.

5. *GEHAC.* 28-9.

6. *Ibid.* 49.

7. *Ibid.* 61-3.

8. *SPES.* 36.

9. *Ibid.* 43, 198.

Greek ships coming to the port of *Calliene* were in danger of being taken to Broach, the Shaka port. Probably, the Shakas were better at sea than their rivals the Satavahanas.

Among other ports given by the author of the *Periplus* may be mentioned, *Mandagora* which is modern Mandad situated on the Rajpuri creek near Kude, according to Dr. Bhandarkar. It has also been identified with Bankot at the mouth of the Savitri river by other scholars. *Palsepatmae* was probably Dabhol. *Melizagara* has been unmistakably identified with Jaygad. The latter part of this word *zagara* corresponds very well with Jaygad whatever the prefix *Meli* may mean. But unfortunately no remains of great antiquity have yet been found at Jaygad, supporting its past importance. *Simulla* is modern Cheul. *Hippokura*, not referred to by the author of the *Periplus*, has been identified with Goregaon in the Kolaba district and *Byzantion* with Vijaydurg at the mouth of the Vagothana or Kharepatan river.

Togarum, probably modern Deogad, and *Aurannobboas* a place near modern Malvan are mentioned by the author of the *Periplus* as ports of secondary importance. *Sesecrienae* mentioned by him are a group of rocky islands about three miles in length and nine miles out in the sea, from the sea-town of Vengurla.¹

When Rome ruled the western world, and the Satavahanas the Deccan, trade between India and Rome was brisk and voluminous. A number of Roman coins are found in the southern and the western parts of India, some of them bearing the stamp of Augustus Caesar.² Indians are reported to have sailed as far as Alexandria.³ They often visited the island of Socotra at the mouth of the Red Sea.⁴ Settlements of Indian traders are alluded to on this island.⁵ But it is well-nigh impossible to ascertain the part played by the merchants of Konkan in this overseas trade and also in the settlement on the Socotra island, if any. Greek ships came to the ports of Broach, Sopara and Kalyan.

Coins of Satavahana Pulumavi II with the impress of a two-masted ship have been found on the Coromandal coast. They bear witness to the maritime activities of the Satavahanas.⁶

Though a number of marts flourished during the Satavahana supremacy, piracy, it seems, was freely practised as it has been referred to by the foreign geographers. The Konkan coast, south of Malvan, was the nest of these pirates.⁷ It was so even a thousand years later. Piracy has always destroyed peaceful commerce so essential for the prosperity of a people. It has therefore been condemned universally. Yet, piracy by itself demands dexterity in manoeuvring ships, and high daring which indicate an advanced state of seamanship.

Trade, on the whole, seems to have been in a flourishing state under the Satavahanas.

1. *SPES.* 43-4.

2. *WCRI.* 41.

3. *Ibid.* Before the knowledge of the periodical winds—monsoon—A.D. 47, the presence of Indians in Alexandria was poor. Few came purely in pursuit of trade. But after A.D. 47 they began to frequent it.

4. *WCRI.* 65. The Indians sailed as far as Ocelis in the mouth of the Red Sea and not beyond.

5. *WCRI.* 13-4.

6. *GEHAC.* 3, Foot-note 13.

7. *SPES.* 44. The pirates mentioned by the author of the *Periplus* are also alluded to by Marco Polo in the thirteenth century. Then, as in the days of *Periplus*, piratical region was in the northern part of Malabar, Kanara and the part of Konkan adjacent to Kanara i.e. the portion south of the Ratnagiri coast.

THE DARK PERIOD

The history of the subsequent period i.e. between the extinction of the Satavahanas and the rise of the Chalukyas, is enveloped in darkness. During this period nothing more than the name of the Traikutaka family, which ruled over Maharashtra and a part of Gujarat, is on record.¹

This dark period ends with the rise of the Chalukyas. Since then, North Konkan and South Konkan formed their histories separately, in so far as they were governed by different rulers.

NORTH KONKAN UNDER THE EARLY CHALUKYAS OF VATAPIPURA

This family ruled from about A.D. 500 to A.D. 753 with its capital at Vatapipura i.e. modern Badami in the Bijapur district.² The rulers of this house aspired for the sovereignty of the Deccan. Practically no naval fights of their period are on record.

One of the rulers of this dynasty, Chalukya Kirtivarman (A.D. 567 to A.D. 591) subjugated the Mauryas who were the lords of North Konkan. Mangalisha, the brother of Kirtivarman, carried his conquest to the eastern and western seas. On the west coast, he conquered Revatidvipa or the island of Revati, which has been identified with Redi a few miles to the south of Vengurla, by the late Dr. Bhandarkar.³ Whether the conquest of Revatidvipa was achieved with the help of a navy is not known, though not improbable. Actually no naval war has been recorded till we come to Pulakesi II of this dynasty. He sent his forces against the Mauryas of Konkan. With a number of ships he attacked Puri the capital of the Mauryas which was 'the mistress of the Western Sea' and inflicted a crushing defeat on them.⁴

Under this king, Chalukya power reached its zenith. He subdued a number of countries bordering on the sea, the Mauryas, the Gurjaras, the Kadambas and the Keralas. Navy was utilised in subjugating the Mauryas. The Chalukyas might have used it for the conquest of the other littoral powers too, though we are short of evidence in making such a statement. The defeat of the *Tajikas* (the Arabs) by the Chalukyas is noteworthy. Inroads of Muhammad Kasim and his successors are well-known between the years 711 and 750.⁵

The fame of Pulakesi II spread beyond the ocean. The Persian Prince Chosroas II (A.D. 571 to A.D. 628) who was his contemporary sent an embassy to the court of Pulakesi II. In all probability, this embassy was sent by sea in view of the fact that the sea-route was shorter and easier than the land-route which passed through the territory of Harsha who coveted the kingdom of Pulakesi II. Harsha, under such circumstances, would not possibly allow a passage to an embassy to Pulakesi, nor would the Persian monarch hazard it, knowing the rivalry between Pulakesi and Harsha.⁶

Kirtivarman II was the last ruler of this house. His power was challenged and suppressed by Dantidurg of the Rashtrakuta clan, by A.D. 753. By A.D. 753 sovereignty of the Deccan passed

1. UPBCW. 204.

2. *Ibid.* 84. Bijapur is in modern Mysore State.

3. UPBCW. 68.

4. *Ibid.* 71. Puri was either Gharapuri (Elephanta) island near Bombay or Danda-Rajpuri of the former Janjira State.

5. UPBCW. 77.

6. HPN. 89.

to the Rashtrakutas.¹ Their capital was at Malkhed. Their sovereignty over the Deccan lasted from about A.D. 763 to A.D. 973. They never interfered with the internal affairs of Konkan once its rulers, the Silaharas recognized their overlordship. The Rashtrakutas, in their own turn were overthrown by Tailapa, a descendant of the earlier Chalukyas, by A.D. 973 and the sovereignty of the Deccan once more went into the hands of the old master.²

NORTH KONKAN UNDER THE SILAHARAS

When the keen contest for the sovereignty of the Deccan was going on between the two mighty houses, the Rashtrakutas and the Chalukyas, there arose in Western India a family of rulers called the Silaharas. There were three houses of this name ruling more or less at the same time at three different places, North Konkan, South Konkan and Kolhapur. We are concerned with the first two. The Silaharas had no imperial aims. All along they were feudatories acknowledging allegiance to the Rashtrakutas, the Chalukyas and the Kadambas till at last they succumbed to the might of the Yadavas of Devagiri.³

The Silaharas of North Konkan had established themselves by about A.D. 800 and ruled till about A.D. 1240.⁴ At first, they were very loyal feudatories of the Rashtrakutas. But by A.D. 973 they were forced to acknowledge the overlordship of the Chalukyas of Kalyan or the later Chalukyas. The principal powers with whom they had to wage wars were the South Konkan Silaharas, the Chalukyas, the Kadambas, and the Yadavas. Out of these dynasties, the South Konkan Silaharas and the Kadambas of Goa were maritime powers.

Aparajita Mriganka (A.D. 975 to c. A.D. 1010) of the Silahara family was the ruler of Konkan which comprised Thana and Kolaba. A crushing defeat was inflicted upon him by Satyashraya of the later Chalukyas, and being driven away from land, he was compelled to take refuge in his sea-girt capital for safety. The Kannada poet Ranna vividly describes this miserable condition of Aparajita: "Hemmed in by the ocean on one side and the sea of Satyasraya's army on the other, Aparajita trembled like an insect on a stick, both ends of which were on fire."⁵ The poetic exaggeration in this description need not prevent us from accepting the incident as a historical fact.

During the Silahara rule the Arabs or the *Tajikas* had trade relations with Konkan. Inscriptional evidence regarding this relation takes us back to A.D. 738. Several geographers of the period speak of the foreign traders as *Nawayats* who appear to be the *Nou-Vittakas* of the inscriptions. In the Kharepatan Plates of Silahara Anantapala, one *Nou-Vittaka*, *Va-said* is mentioned. *Va-said* is obviously *Ba-Said*, an Arab. *Nou-Vittaka* literally means one whose wealth consists of ships.⁶

KADAMBA INROADS INTO NORTH KONKAN

For over a century (A.D. 1025 to A.D. 1126) the Kadambas of Goa launched a series of attacks on North Konkan. Chittaraja Silahara of North Konkan (c. A.D. 1025 to c. A.D. 1040)

1. UPBCW. 81.

2. *Ibid.* 108-9.

3. *ASWI*. (Reprinted from *IC*) 393.

4. *Ibid.* 401.

5. *BDCRI*. IV. 382-3.

witnessed the beginning of Kadamba incursions into North Konkan. By this time the Silaharas of South Konkan had fallen a prey to the Chalukyas, and due to the ineffectual control of the latter, the Kadambas had wrested that province from them. After the annexation of South Konkan, the Kadambas turned their victorious arms towards North Konkan. They defeated Chittaraja Silahara but on his accepting their overlordship restored his kingdom to him.

Anantadeva Silahara (c. A.D. 1070 to c. A.D. 1110) rooted out the Kadamba rule from Konkan. He styled himself as the lord of the Western Ocean and claimed to be the ruler of the whole of Konkan.¹ A decisive battle was fought in the reign of Silahara Apararka I (c. A.D. 1110 to c. A.D. 1140) which settled the protracted wars between the North Konkan Silaharas and the Kadambas of Goa, in favour of the former. The victory freed Apararka from the Kadamba yoke and he retrieved his lost kingdom.

Mahananda Silahara, the father of Mallikarjuna, who ruled from c. A.D. 1155 to c. A.D. 1170 had his capital at Shatanandapura surrounded on all sides by sea. It was the Puri of the Silahara records.

When Kesiraja Silahara was ruling (c. A.D. 1195 to c. A.D. 1240) the power of the Yadavas of Devagiri was rapidly spreading over the Deccan and the Karnataka. He must have been compelled to acknowledge the supremacy of the Yadavas and his kingdom too, contracted in area.²

The story of the North Konkan Silaharas ended with the tragic death of Someshwara, its last ruler (c. A.D. 1240 to c. A.D. 1265). Mahadeva Yadava invaded North Konkan with a large army. Someshwara was vanquished on land, and in order to escape death took resort on board a ship. Mahadeva equipped himself with a navy and attacked Soma. In the naval fight that ensued, Soma was drowned. This fatal blow ended the career of the North Konkan Silahara house.

The *Viragala* stones near Borivali railway station (Eksar) are said to have been carved to perpetuate the memory of those who fell in the battle between Mahadeva Yadava and Someshwara Silahara. Some of these stones show the land-fight while others represent the naval fight. Rows of vessels are seen propelled by a number of oars in the stone depicting the naval fight. The ships are seen under bare poles, because during the course of an engagement the sails were furled. A complete description of these blurred carvings is given in the chapter on ships (*see* Plates 1, 2 & 3).

The extent of the North Konkan Silahara Kingdom—The kingdom of this house covered North Konkan—the district of Thana including the southern portion of the Surat district—and the districts of Kolaba and Ratnagiri. The last named came in their possession after the fall of the South Konkan Silaharas. Thana was their metropolis, and Puri a subsidiary capital. Puri has not been identified convincingly as yet. Some scholars place it on the island of Gharapuri, some locate it on the island of Salsette near Bombay and yet others identify it with Rajpuri near Cheul.³

1. *ASWI*. 409-11.

2. *Ibid.* 411-6.

3. *Ibid.* 417-8.

The North Konkan Silaharas came in contact with the South Konkan Silaharas and the Kadambas, who were maritime powers. Soma was drowned in a naval fight with the Yadava prince. These incidents point out that the navy often served as the last resort when the kings were hard pressed on land. This ancient method of taking refuge on board a ship is found resorted to by the later kings of the Deccan too. When Raigad was taken by Aurangzeb, Rajaram's family which escaped to Jinji covered a part of its journey by sea.

THE YADAVAS OF DEVAGIRI

Passing reference may be made to the Yadavas of Devagiri. The later Yadavas ruled from A.D. 1187 to A.D. 1318. There is only one reference to their naval fight — with Someshwara Silahara as described before — though they came in contact with the Kadambas and the Gurjaras whose territories bordered on the sea. The Yadavas were mainly a land-power. After the defeat of Someshwara they became the virtual rulers of Konkan and enjoyed sovereignty till their power was rudely shaken by Alla-ud-din Khilji and completely overthrown by his son Mubarik.¹ North Konkan then became an Islamic province.

A decade or so after A.D. 753 a Silahara house ruled over South Konkan from c. A.D. 765 to c. A.D. 1015 and claimed to be related with the rulers of Simhala. Simhala here is more probably Goa than Ceylon. The rule of this family seems to have depended upon the rise or fall of the rulers of Chandrapura near Goa. The help rendered by the founder of this family to the Rashtrakutas in their conquest of Konkan sounds logical only on the presumption that their habitat was Goa.

Chandrapura (Chandor near Goa) seems to have attracted the attention of many a ruler of the Silahara house. Aiyaparaja Silahara scored a victory over a local ruler of Chandor. His reign dates from c. A.D. 820 to c. A.D. 845. His grandson helped the kings of Chandrapura and Cheul. The help given to the latter was against the Thana Silaharas and was also meant for the expansion of his own kingdom. The Silahara king Bhima (c. A.D. 945 to c. A.D. 970) changed this policy and reduced to obeisance the Chandrapura rulers. By this time the Kadamba ruler Sasthadeva or his son Chaturbhuja ruling at Chandrapura was struggling to become a *mahamandaleshwara* — semi-independent feudatory.

The last ruler of this house Rattaraja (c. A.D. 995 to c. A.D. 1020) was compelled to recognize the supremacy of Chalukya Taila II of Kalyan. All the rulers of this house acquiesced in the sovereignty of the Rashtrakutas. Later, Rattaraja or his successor declared independence after the death of the Chalukya king Satyashraya. This insurgency was punished by Jayasimha Chalukya. Rattaraja or his successor received a condign defeat, and his kingdom was annexed. This defeat ended the career of the South Konkan Silahara house two hundred and fifty years after its foundation.

The activities of these rulers against Chandrapura and Cheul, the Kadambas, and the Thana Silaharas were restricted to the coast. Under the circumstance, rapid and easy movements could not have been facilitated without the aid of navy. The well-maintained harbours under the Silaharas also bear testimony to the existence of a state navy. They owned Chandrapura and

1. *CHI*, III, 121.

Cheul and built a fort at Vallipattam which was a good port on the west coast. Vallipattam remained as an important port for a long time. Two of the ministers of the Thana Silaharas hailed from this place.

The capital of the South Konkan Silaharas, though not named in the records, was probably at Goa for sometime and was later on shifted to a more central place in the neighbourhood of Ratnagiri or Kharepatan. Their kingdom embraced the modern territory of Goa, Sawantwadi and the district of Ratnagiri. Part of the Kolaba district was under their sway during the declining days of the North Konkan Silaharas.¹

MARITIME ACTIVITIES UNDER THE KADAMBAS OF GOA

The territory of Goa may very well be regarded as the southernmost part of Konkan, though it has its own independent history. Since its occupation by the Portuguese in A.D. 1510 its natural affinities with Konkan were severed. Goa has been a good harbour with a fine navigable river.

The family assuming the name Kadamba ruled at Banavasi (ten miles to the south-east of Sirasi, Sirasi Taluka, former North Kanara district) from A.D. 345 to A.D. 655. The power of this house practically came to an end when it was defeated by the great Chalukya monarch of Vatapi, Pulakesi II in A.D. 607.

THE KADAMBAS OF GOA

In the great political competition between the Chalukyas and the Rashtrakutas for the mastery of the Deccan, the power of the Kadambas was considerably undermined. However, they were not completely overthrown. An attempt was made by the Banavasi Kadambas to throw off the Rashtrakuta supremacy. It failed. The Chalukyas made a common cause with the Kadambas in subduing their age-old rivals, the Rashtrakutas.

The habitat of the Goa Kadambas was the country to the south of the island of Goa including a part of Salsette, and perhaps a strip of land extending towards the Western Ghats. Their capital was Chandrapura, i.e. modern Chandor (Salsette, Goa). This was one of the most ancient places in Konkan founded probably by Chandraditya, son of the Chalukya king Pulakesi II. Its geographical position enhanced its importance as a capital situated as it was on the left bank of the river Paroda leading straight to the sea. Throughout the history of the Kadambas, Chandrapura was their principal capital.

The history of this house is a long story of four centuries, i.e. from A.D. 940 to A.D. 1340. It had its heydays and days of doom. The power of this house was at its height during the reign of Jayakesi II (A.D. 1104 to A.D. 1147). Around A.D. 1345 we hear, for the first time, about the Chandrapura rulers when the last vestige of their power was wiped out by the Mohammedans.

The maritime activities of these Kadambas are manifold. Guhalladeva II (A.D. 980-1015) started from his capital Chandrapura on a pilgrimage to Somanatha in Surashtra on board a ship. Shipwrecked on the way he had to make sail to the nearest port for refuge. This was the port of Goa. He was helped there by a Mohammedan merchant. This obviously means that Goa was not under him then, but was probably under the South Konkan Silaharas. Arab traders seem to be well settled at Goa during this period.²

1. *ASWI*. 397-401.

2. *MKK*. 167-72.

The successor of this king Sasthadeva II, availing himself of the discord between the two Silahara houses, marched from his capital and annexed the Konkan (nine hundred), and pushing forward his conquests northward, subdued Kavadi-dvipa (North Konkan), the habitat of the North Konkan Silaharas. His naval exploits on this occasion are well described in the following words: "he (Sasthadeva II) took Kavadi-dvipa and many other regions, built a bridge of ships reaching as far as Lanka and claimed tribute among grim barbarians, exceedingly exalted was the dominion of the Kadamba sovereign which may be called a religious estate for the establishment (of the worship) of Rama". Lanka here, metaphorically alluded to is not Ceylon but the island of Goa. Like his father this king too sailed for Somanatha.

Jayakesi I (A.D. 1050-80), the son of Sasthadeva II had a powerful fleet ready at his call. He was himself at the head of his fleet. His fleet, says an inscription, "was ever ready with numberless fortified vessels to sail through the seas". This prince made Gopakapattana, Goa, the capital of his kingdom.¹

Guhalladeva III (A.D. 1080-1100) lost Kavadi-dvipa (North Konkan) annexed by his grandfather.

Under Jayakesi II (A.D. 1104 to A.D. 1148) the glory of the Kadambas reached its meridian. He styled himself as the Emperor of Konkan — Konkan *Chakravarti*. He assumed this title in order to establish his independence by casting off the yoke of the Chalukyas who were at this time waging a war with the Hoysals.

For sometime, before the second quarter of the twelfth century, the power of the Goa Kadambas suffered a setback at the hands of the aggressive Hoysals. However, the provinces lost to the latter were soon recovered by the Kadambas by about 1140.

The next heir of this dynasty Sivachitta, was a monarch of great activities. Freeing himself from the domination of the Chalukyas, he proclaimed himself as the Emperor of Konkan. He was styled as the lord of the Western Ocean, which can be regarded as the evidence of his supremacy at sea.

Under Tribhuvanmalla (A.D. 1216-38) the Kadamba power declined never to rise again. In the contest for the hegemony of the Deccan, the Yadavas emerged triumphant. Vichana, the viceroy of Singhana II who had already subjugated the Rattas, the Pandyas, the Hoysals, and other kings, also subdued the Kadambas. The battle was fought in A.D. 1237-38. The Kadamba kings were deprived of their kingdom and throne.² After a decade of hard struggle, Sasthadeva ascended his ancestral throne.

In A.D. 1310 Devagiri, the capital of the Yadavas, was invaded by Malik-Kafur, the general of Alla-ud-din Khilji, in the event of which they had to withdraw their army from Konkan. This made the Kadambas practically independent. But unfortunately their freedom was destined to be short-lived. Very soon, Malik-Kafur in his southern conquest overran Goa. Gopakapattana, the capital of Goa, was reduced to a dismal state by Malik's troops. The Kadambas immediately transferred their capital to Chandrapura (Chandor), a spot which afforded better protection. But in the second invasion by Muhammed Tughlak after A.D. 1327, Chandrapura was sacked and demolished. No sooner did the Sultan cross the Narmada on his homeward march to Delhi than

1. *MKK.* 174-88.

2. *Ibid.* 191-207.

the Kadambas declared their independence along with many other kings of the Deccan. Though the Kadamba country was no more attacked by the Delhi Sultans, it fell before the might of Nawab Jalal-ud-din of Honavar never to rise again. Jalal-ud-din with a fleet of 52 vessels arrived at Chandrapura and entered the river (*Zurin*). Early at dawn the Mohammedan fleet advanced towards the citadel. The soldiers of Islam equipped with swords and shields, swam the river. The Kadambas, it seems, could not oppose the naval advance of the enemy. A grim fight ensued in which many Kadamba soldiers were slain. They were defeated, and the city was captured by the Sultan.

The result of this war was equivocal. Nevertheless, it showed the weakness of the Kadamba navy. This fight, it may be asserted, was the last gasp of the Kadamba dynasty of Goa.

Sea-trade under the Kadambas—It would be interesting to have a brief account of the volume of trade and the flourishing ports under the Kadambas for a proper appreciation of their maritime activities.

The merchants of the Kadamba country traded in gold, silver, cotton-cloth, victuals, paddy, fruits, spices, camphor, perfumes, betel-leaves and such other articles. Among the countries they traded with may be mentioned Kerala, Gurjara, Chandrapura, Ledda, Konkan, Sangameshwar, Chiplun etc. Of these, Kerala, Sangameshwar, Konkan, Chiplun and Gurjara are obviously situated on the west coast. It can be presumed that a large portion of this trade went by sea, as transport by land was clumsy and more costly.

Before the time of Jayakesi I (A.D. 1050-80) the Arab traders who had settled on this coast (west coast) were busy transporting horses from Arabia and Persia for the kings of the Deccan. They carried a roaring trade. Frequent mentions are made of the *Turuskas*—the Arabs.

Gopakapattana was the best emporium. A Brahmin from this place is recorded to have imported horses, elephants and pearls by sea for sale. All these manifold activities bear evidence to the maritime activities of the Kadamba country.

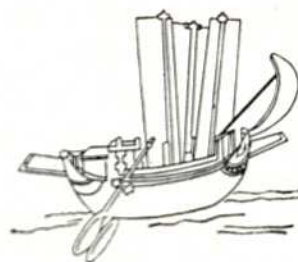
The imports and exports of the Deccan under the Rashtrakuta supremacy are given below with a view to shedding light on the sea-trade of those days.

The Chief Exports of the Deccan—Cotton-yarn and cloth both rough and fine, muslins, cocoanuts, sandal and teak-wood, sesame-oil, ivory, etc. were the main articles of export. Out of these, indigo, hides, perfume, cocoanuts and teak-wood were the products of Konkan. It could also export rice.

Kalyan was the chief port for the exports of northern Konkan. It traded in cloth, brass and black-wood. Cheul (*saimur*) was another important port frequented by foreign ships. Thana, Dabhol, Jaygad, Deogad and Malvan were mostly engaged in coastal trade.

In the time of Marco Polo, Thana used to import gold, silver and copper. Horses were imported in large numbers, as they were constantly demanded by the warring princes of the Deccan. No ship probably came from Arabia or the Persian Gulf to the ports of Konkan without horses.¹

1. ALTEKAR, *Rashtrakutas and their times*, 1934. 358-9.



5

Ancient Ships

THE story of the ships of Konkan though perhaps as old as its civilization suffers from paucity of material for a detailed narration. The literary evidence shedding light on the maritime activities of the ancient period, discussed in the previous chapter, is not sufficient in giving an exact idea of the contemporary boat-designs. The only sources available in this regard are the stone carvings of Borivali, Kanheri, Goa and the ship-drawings of the Ajanta frescoes. All these help us in visualizing the ships of ancient Konkan. They enable us to know the stage which the people of ancient Konkan had reached in the science of ship-building, forming at the same time the link in the evolution of the Maratha ships.

Borivali, Kanheri and Goa are on the coast of Maharashtra. Ajanta though in the interior was very near to Paithan or Pratisthana which was the capital of ancient Maharashtra. In fact important places like Devagiri, Ajanta and Paithan were the centres of civilization of ancient Maharashtra. Ships carved in stone at Borivali, Kanheri and Goa though limited in number are of great value in the study of the evolution of Maratha ships. The Ajanta frescoes were being done for centuries under Buddhist influence. However, they may be taken to represent the ships of ancient Maharashtra at least for two reasons : (1) Ajanta was at the heart of ancient Maharashtra, and (2) in all probability the ship-drawings of the frescoes were influenced by the local boat-designs. On this presumption let us proceed to discuss them.

Ajanta Ships—The Landing scene of Vijaya in Ceylon (Fig. 8).

Perhaps the ancient-most story depicted in the marine paintings of Ajanta is that of Vijaya's invasion of Ceylon. It is not a well-attested historical event but just a legend. The date assigned to Vijaya's landing is 543 B.C. There are two legends about Vijaya Simha. In one, he is described as coming from the South.¹ His mother's father was a king who hailed from South India. According to the Pali works *Mahawamso*, *Rajavalliya* etc. ; Vijaya was expelled from Bengal with all his followers.² He launched an attack on Ceylon and captured it. The island was named after Simha.

1. BBRWW. II. 236-48.

2. MHISMA. 42.

One of these legends about Vijaya locates his native place in Bengal¹ while the other traces it to South India. According to the Pali works, Vijaya was banished from Bengal.



Fig. 8—Vijaya's landing in Ceylon
(Copyright—Archaeological Survey of India)

The artists of Ajanta delineating the boats might have before them the ships of the neighbouring sea-board i.e. of the west coast of India — of Konkan — as models. Allowing sufficient scope for

1. *BBRWW*. II. 241, Foot-note 11.

"Dipavamsa brings Vijaya the son of Simha from Simhapura in Latta (Gujarat)." Gujarat is just to the north of the Deccan and the affinities between the Ajanta boats and those of Gujarat, may be better established if we take *Dipavamsa* as correct. Ajanta boats may have, very probably, some resemblance with the boats of Gujarat. But the accuracy of the account of *Dipavamsa* about Vijaya can be questioned as it is legendary in character.

In all the paintings of Ajanta it is to be noted that there is a difference of centuries between the stories they delineate and their actual depiction. For instance, the story of Purna of Surparaka is placed between A.D. 100 and A.D. 400 but the phenomenon of his sea-voyage was painted in the cave between A.D. 525-628. So, the marine paintings of Ajanta can be taken to represent the boat designs of the period of their depiction. Again, we must allow sufficient scope to the artist for conventionalism. The marine paintings we may say, are the product of the artist's imagination and his actual knowledge of boat designs.

So far as Vijaya's landing is concerned, the time-lag between the actual landing of Vijaya in Ceylon, and the depiction of the painting is of a thousand years. Vijaya's landing is dated at 543 B.C. and the date of the painting is placed in the sixth or seventh century A.D.

MHISMA. 44. The date of Vijaya's landing according to the legend is 543 B.C.

the conventionalism of art and the imagination of the artist, it could be concluded that the Ajanta ship-drawings represent the ships of contemporary Maharashtra — Konkan.

The boats representing Vijaya's landing in Ceylon with his followers are of simple build. But they are not dug-outs as could be judged from their hugeness.

The two boats from the left have two oars each having long blades on the starboard side. The larboard side too must have a couple of oars. The stem and the stern of the ships are not raised much higher than the waist-portion. Their stems have motifs of the heads of fierce animals, probably the *makara*. The long and terrible fangs of these animals are projecting forth from their mouths. The first boat from the left has three to four horses on its board while the second has two elephants. Boats carrying such huge animals are naturally of spacious and massive build. They are broad and low as is normally the case with boats used for transporting cattle. These boats have no decks. They are probably constructed and not dugouts as it is difficult to hollow out boats of such dimensions. The planking of these boats was in all probability secured by coir or some such fibrous material.

*The Purnavadana ship*¹—It is a seagoing vessel with three masts and as many sails. The sails are oblong in shape, the simplest form when marine science was not yet sufficiently advanced. The yards are not shown clearly but were probably of the breadth of the sails. The yards do not seem to have had any permanent fixing on the masts. All the masts are set in the forepart of the ship and are more or less of the same length (see Fig. 9).

The two foremasts incline forward. The necessity of fixing the masts in the fore-part of the ship seems to have arisen in order to spare enough space for the quarter paddles and the awning behind. By this arrangement, the quarter-oars could be worked without obstruction. Near the gunwale-line the starboard oar is fixed in a row-ring, but is free to move in a vertically semi-circular plane for rowing. The larboard oar is fixed in the same manner. The blades of the oars are pretty long and their shape is suitable for securing good speed. The jibsail is oblong in form as can be judged from its side view and is held up by a jib-boom projecting from a wooden structure in the bow of the ship.

The stem and the stern of the ship are higher than the middle portion. The vessel is decked. Rectangular boards project from the stem and the stern. This is a unique feature of the ship. The stem-head is decorated, being thicker than the stern-head. The stem has an eye which

1. For the painting of this ship, see YAZDANI'S 'Ajanta Plates', Vol. II, Plate XLII. For the legend of the sea-voyage *Purnavadana*, see YAZDANI, 'Ajanta Text', Vol. II, 45. The legend is interesting and may throw some light on the time of the incident. The legend runs as follows: "Purna whose mother was a slave-girl, was the youngest and favourite son of a rich merchant of Surparaka. After the father's death, he and his eldest brother Bhavila were deprived of their property by the two other brothers. But by dealing in sandalwood, Purna restored his lost fortune and became the chief merchant of the country. He made six sea-voyages and was inclined to rest content, but some merchants persuaded him to embark a seventh time. On the way he was filled with the desire to embrace Buddhism. On return he obtained permission of Bhavila to renounce the worldly life and received instructions from the Buddha at Sravasti. He then resided in the land of Sronaparantakas, a notorious, fierce and dangerous people, and converted many of them. Meanwhile, Bhavila had gone to sea and landed in a sandalwood country. His men proceeded to fell the trees, whereupon the Yaksha Mahesvara raised a hurricane of the kind which no ship could withstand. Being helpless Bhavila who was at this time back on his ship, prayed Purna for help. Purna appeared on the ship, the storm ceased and the Yaksha yielded. Upon his return to Surparaka Purna built a Vihara, and with the co-operation of his brothers and the king, prepared for the reception of the Buddha." The rest of the *Avadana* relates the miracles associated with the Buddha's journey from Sravasti to Surparaka.

GBP. XIII. ii. 406. In general, the period of the legends of Purna is placed between A.D. 100 and A.D. 400. So this incident of sea-voyage may be taken to belong to these centuries. But the date of the painting of this ship is placed between A.D. 525 and A.D. 650 (MHISMA. 39).

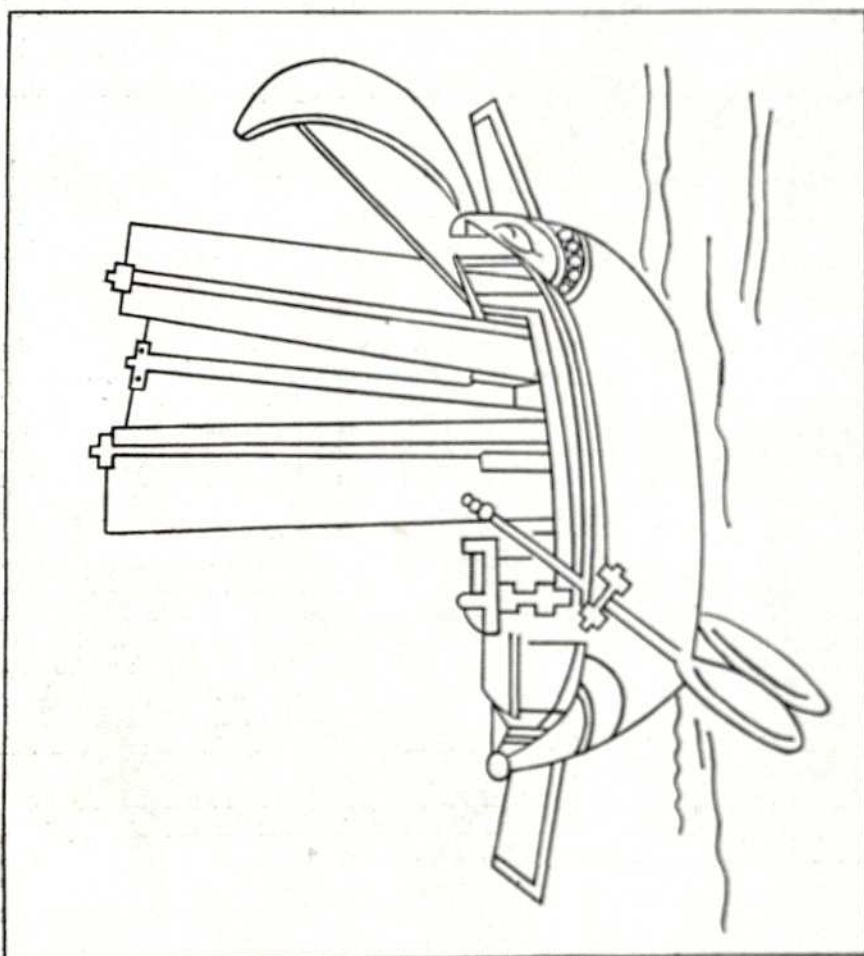


Fig. 9—Purnavadsina Ship (Ajanta)
(Copyright—Archaeological Survey of India)

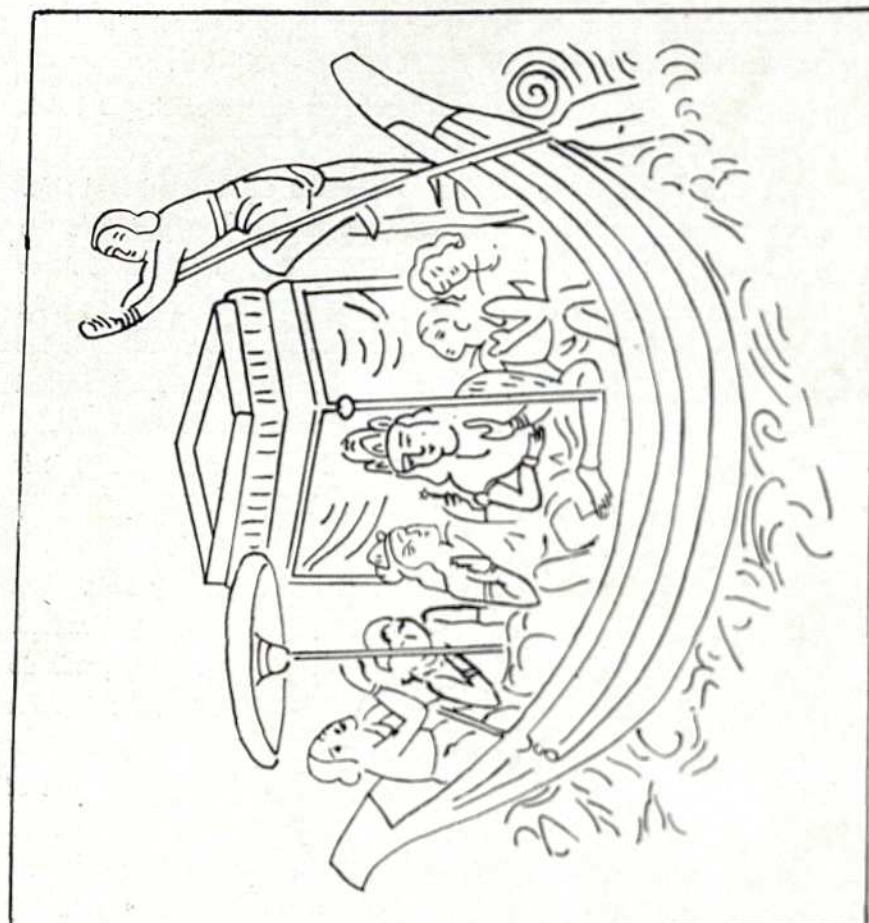


Fig. 10—Pleasure-boat (Mahajanaka Jataka)
(Copyright—Archaeological Survey of India)

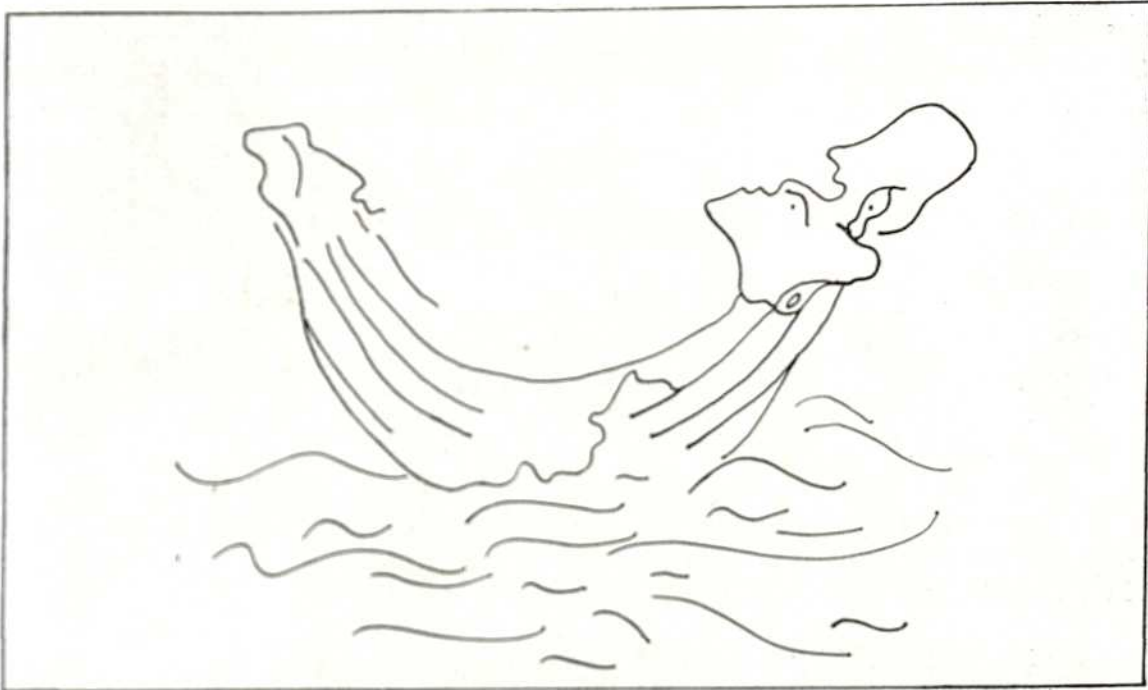


Fig. 11-A—Shipwreck Scene—Mahajanaka Jataka (Ajanta)
(Copyright—Archaeological Survey of India)



Fig. 11-B—Shipwreck Scene—Mahajanaka Jataka (Ajanta)
(Copyright—Archaeological Survey of India)

gives lively appearance to the ship. The three small rectangular openings in the hull below the gunwale-line are probably port-holes. They were meant either as peep-holes or holes for the ventilation of the bottom. The oars do not seem to have been worked through the port-holes. The round-build of the ship makes it a cargo carrier. The projecting board at the stem, and the stern, and the round shape make the ship extremely inconvenient for fighting purpose when ramming was one of the tactics of naval fighting.

The twelve pitchers (three in each of the four rows) are probably filled with fresh-water. But only nine are seen clearly. The pitchers are kept under the awning in the stern-bow. This may be taken to indicate the large number of the crew or may suggest that the vessel is bound for a long voyage. The wooden structure between the mainmast and the awning is meant for the steersman to regulate the steering.

The inner part near the gunwale-line of the larboard side probably shows a rope parallel to the gunwale, crossed by coir strings which are obviously the stitches by which the planking of the vessel is secured.

The hull of the vessel is painted in yellowish red.

The sea is represented conventionally with black curved lines which stand for the waves. The sea is tempestuous and is teeming with fishes (see Fig. 9).

Pleasure-boat—Mahajanaka Jataka (Fig. 10)—This is a pleasure-boat or a royal boat. The stem and the stern are highly raised and each is marked with an eye. The stem-head appears to be narrower than the stern-head. The curved plank-lines visible to the eye are four in number.

The boat is being steered hastily by two oars-men, one at the stern and the other at the stem. The oar in the stern is shorter than the stem-oar and is meant mainly to direct the course of the boat, as it facilitates easy movements by its shortness. The oar in the stem is pretty long — has a long handle — and is intended to secure good speed, as a long handle enables the oarsman to work at it with all his strength. The ladder-like construction in the stem is meant for manoeuvring the long sweep. Such a long oar requires a rowlock somewhere in the gunwale-line to effect good speed. But it is not shown in the painting. In the middle of the ship is a large cabin furnished with curtains and canopy, to ward off the sun and weather troubles. On board there are about seven persons. Two of them are boatmen and the rest the king and his retinue. The plank-line from the stern to the stem is made up of timber pieces. That is, each plank-line is not a single unit. The broadside construction of this ship with pieces of planks may be taken as an advanced step in the science of ship-building.

This boat is double-ended i.e. the difference between the stem and the stern is very little. It is a round-boat meant for merry-making.¹ According to the classification of the Yuktikalpataru, this boat belongs to the *Madhyamandira* type (one with a cabin in the middle).

The Shipwreck Scene—Mahajanaka Jataka—The boat in this scene (Fig. 11A) is similar to the pleasure-boat or royal barge in build, except that it has no cabin in the middle. The stem and the stern are highly raised. There are three to four lines of planking running from end to

1. YAP. Plate XIX.

end. The stempost has an animal's head giving the boat a lively appearance. The boat in Figure 11B is sinking, with its stem or stern being submerged under water. The stem or the stern is seen high above the water. The broadside shows four lines of planks made out of pieces.

These two boats are of round-build and of considerable size. These frescoes represent fifth century boats.

The Kanheri Cave Boats—The shipwreck scene in the Kanheri caves belongs to the second century A.D. i.e. the time of the Andhrabhrityas. In this scene two persons are seen helplessly crying for rescue. This is perhaps the oldest representation of a sea-voyage on the coast of Konkan.

Ship-carvings on the Virgal Stones at Borivali—The carvings on these stones belong to the thirteenth century. They in all probability represent the sea-fight between the Yadava prince Mahadeva and Someshwara Silahara. The date of this naval fight is about A.D. 1265. According to Dr. Moti Chandra these carvings belong to the eleventh century A.D.¹

Naval fights are depicted in the last two panels of the three virgal stones at Eksar, nearly a mile to the north-west of Borivali on the Western Railway. In panel three from the top two squadrons of ships are seen approaching each other from opposite directions, for an attack (see Plate 1). In the first squadron (from the left) are seen three to four longships having twelve to fifteen oars on their visible sides. Their boards are crowded with men. Their prows are projecting and sharp. They resemble the Roman galleys. In the second squadron from left, two or three small boats are being rowed. One of them has about six oars. They look somewhat like the pleasure boat of Ajanta in shape. The stem and the stern are sufficiently raised, the stem raking forward from the keel-line more than the stern. In the background, some eight masts are seen with their rigging. They are bare masts—without sails—which means that fighting was done under bare poles.

In the lower panel there are a number of ships with masts, oars and men. They are being rowed fast—from left to right—for an attack. All the ships have projecting sharp prows and stout masts with cords. The sails have been folded as is done when ships are in action.

In the upper panel of Plate No. 2, there are two boats. The stern-line of these boats rakes a little backward while their prows have a greater forward inclination. This type of construction definitely indicates a considerable advance in ship-building. The long and gradual projection of the prow facilitates speed as it can rush through the water with less friction, its surface of action being reduced. The two ships are approaching each other from opposite directions for an attack. Near the gunnel-line the oarsmen are seen rowing vigorously. The oars appear to be projecting through holes cut in the gunnel-line. This kind of arrangement has definite advantage in a fight as the rowers are protected from an attack being below the gunnel-line. The splashing oars, the crowded boards and the colliding ships of the carving successfully convey the idea of a naval fight. The lower panel presents five ships with high projecting prows. They are being worked by rowers sitting inside the gunnel-line. The ships are moving in the same direction. Their boards are

1. MOTI CHANDRA, *Sarthavaha* (Patna, 1953) 229. The year of the naval fight circa A.D. 1265 is given by ALTHEAR in *Indian Culture*, ii, 417.

noisy with the crew. The ship in the left corner has probably the captain or the king seated in the stern. Just behind the line of these five ships are seen five stout masts with their cordage. They may be compared with the masts of the Maratha ships discussed in the later chapter.

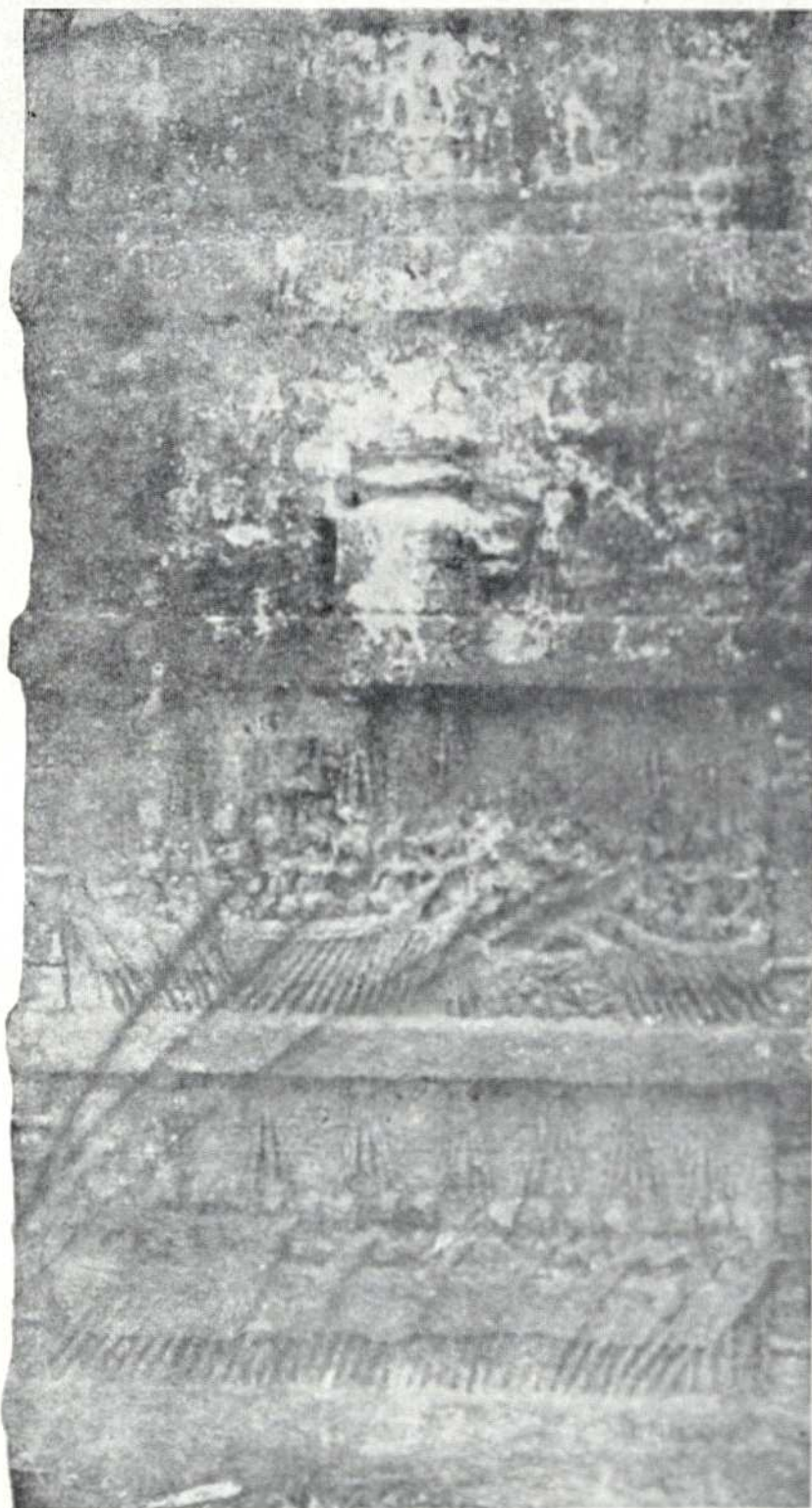


Plate 1—Borivali (Ekvar) Ship-carving
(Copyright — Archaeological Survey of India)

In the upper panel of Plate 3, nine to ten ships are proceeding in the same direction (left to right). Probably another row of ships is in the background.

The lower panel shows ships in the thick of fight. The construction of these ships is the same as found in the other *virgal* stones.¹

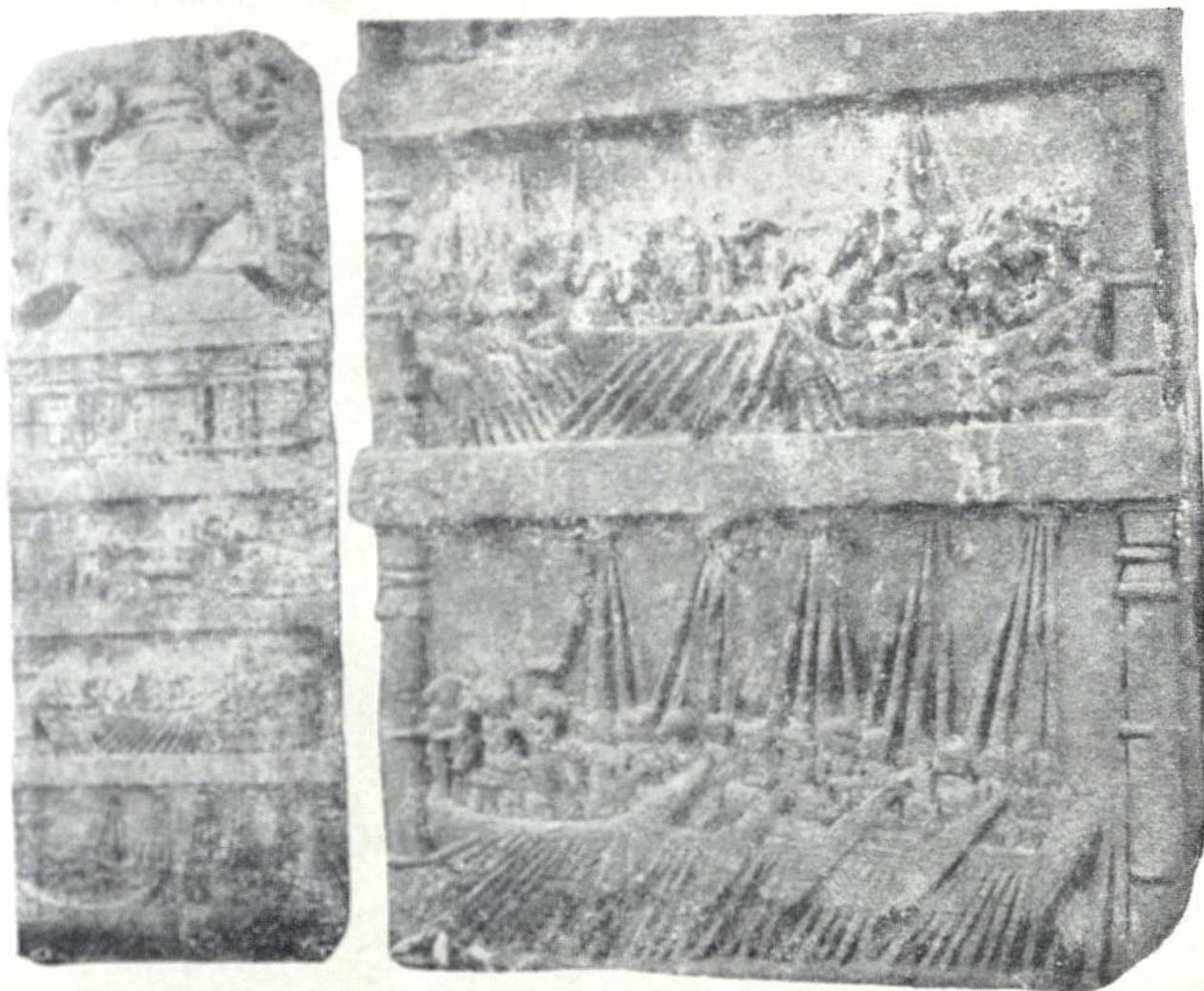


Plate 2—Borivali (Eksar) Ship-carving
(Copyright — Archaeological Survey of India)

Taking stock of these boat-designs we may divide them into two types, small and large. The larger ones are of long build, while the smaller ones are shorter in shape. The smaller boats might have been used for towing and as lifeboats, when larger ones were sunk or were about to be sunk. Probably both the parties had long and round ships which were utilised in fighting.

Each ship has at least one mast and a number of oars. The biggest has twenty oars on each side. These ships were decked. The seating arrangement of the paddlemen below the gunwale-line protects them from enemy attacks and at the same time allows free movements to the fighting crew. The principle of one oar one man was probably in vogue as the Hindu ships had no

slaves. The paddles in some ships seem to be worked through the port-holes cut just below the gunwale-line. Tholes are seen in the Ajanta boat for securing the oars.

The sails of the Borivali ships are not seen as they are tucked up at the time of engagement. The rudders of these ships are also not seen. We cannot say when exactly the rudder was invented and first used by the Indians on the west coast. Marco Polo observed at Ormuz the Arab ships with 'one mast one sail and one rudder'. So we might suppose that the boats of Konkan too slung one rudder in the thirteenth century as they were in contact with the Arabs much before. Actually the word *sukarna* (rudder) in Sanskrit takes us back to much earlier period (at least to the third century B.C.) indicating that it was invented by the Hindus themselves.

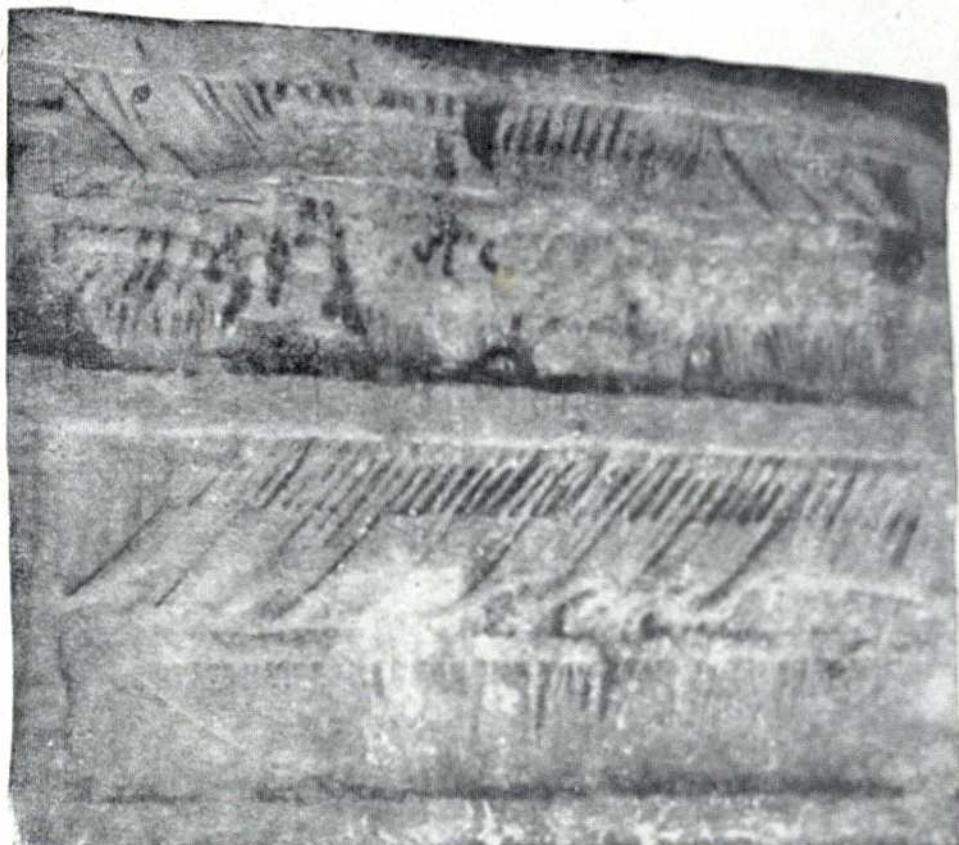


Plate 3—Borivali (Eksar) Ship-carving
(Copyright—Archaeological Survey of India)

Elephants and horses might have been embarked on board the ships at Borivali to effect a landing as is found in the landing scene of Vijaya in Ceylon. This necessitates the ships to have considerable size and massive structure.

Compared with the ships and boats of Ajanta, the Borivali ships show great advance in the science of ship-building. The simple double-ended build seems to have been replaced by what is termed as the stern and stem type, gradually, from the seventh century to the thirteenth century. That is, the two ends of the Borivali ships are shaped differently, while those of Ajanta are alike. The masts of the Ajanta ship are crude and do not seem to be firmly set in the hull. Those of Borivali are shapely and stout. The sails of the Ajanta ship are oblong and each sail appears to be made up of a single piece of canvas. As the ship gained in size, it required

a long and stout mast, and in consequence a large sail, to catch more wind for propulsion. The size of the Borivali ship, and the length of its mast are both greater than those of the Ajanta ship. The jib-sail was in vogue as early as the seventh century A.D. as is seen from the Ajanta ship.

The hull was secured by sewing the planks with coir. Rudder is absent in the Ajanta boats. In the seventh century, ships were steered by quarter-oars. The Arabs used one rudder at the time of Marco Polo. Nothing can be stated positively about the rudder from the much damaged Borivali (Eksar) sculptures.

A ship represented on a thirteenth century Virgal (memorial stone) of Old Goa (Fig. 12)— As is known from the history of the Kadambas, this carving probably represents a naval fight between the Kadambas and one of their unknown enemies. This scene may be taken to represent the form of ships of the thirteenth century on the Goa side, that is, southern Konkan and the adjoining coastal strip.



Fig. 12—Ship from a Goa memorial stone
(Copyright—Archaeological Survey of India)

A *virgal* was meant to commemorate the memory of those who fell in a battle fought either on land or the sea. The carving of this *virgal*, though blurred, most probably represents a naval battle in action.

Only one ship is seen with its board crowded with men ready to fight. In the background of this ship there is a big crowd in the thick of fight. Amidships is seated the king or the general with an umbrella overhead. He is busy with his bow darting shafts at the enemy. The arch of the bow is seen very clearly. On a raised rectangular frame in the stem is an attendant who is holding an umbrella.

The form of the ship is not simple as in the ships of the fourteenth century. The stem is streamlined and raised. The stern is straight, broad and perhaps rectangular or square. It

indicates an improvement in ship-building. On the starboard side the ship has six to seven oars of very crude shape. They are short and thick. No masts are seen. In the gunwale-line on the starboard side are seen the oarsmen. On the whole the carving is a good specimen of a well-built ship.¹

THE SHIPS OF YUKTIKALPATARU (Fig. 13)

The *Yuktikalpataru*, dedicated to king Bhoja or Dhar, contains a chapter on navigation. This is perhaps the only Sanskrit treatise which deals with navigation and therefore claims a very high place in the history of the Hindu nautical science. The nearest and natural sea-board for Dhar was the west coast of India just to the north of Konkan. In virtue of this fact the ships of *Yuktikalpataru* could be taken to represent the ancient ships of Konkan, at least to a certain extent.

The author of *Yuktikalpataru* first classifies the types of wood required for ship-building, according to their quality, into four categories² on the analogy of the four *varnas*. The author states that the ships built of Kshatriya wood bring happiness and wealth, while others recommend Kshatriya wood — *laghu* (short) and *sudridha* (stout) — for ships required to cross deep waters.

Further, ships built of different types of wood having contrary qualities are neither good nor comfortable, for they soon rot in water and are therefore likely to split and sink. The planks of a ship intended for the ocean should not be joined by iron as it is likely to be attracted and destroyed by a magnetic rock.

The work gives a detailed classification of the ships based on their size and function. The primary division is formed of two classes, ordinary (*samanya*) and special (*vishista*). The latter class was seagoing.

Ordinary Ships (Samanya)

Name of the class	Length in cubits	Breadth in cubits	Height in cubits
1. <i>Kshudra</i> ..	16	4	4
2. <i>Madhyama</i> ..	24	12	8
3. <i>Bhima</i> ..	40	20	20
4. <i>Chapala</i> ..	48	24	24
5. <i>Patala</i> ..	64	32	32
6. <i>Bhaya</i> ..	72	36	36
7. <i>Dirgha</i> ..	88	44	44
8. <i>Patraputa</i> ..	96	48	48
9. <i>Garbhara</i> ..	112	56	56
10. <i>Manthara</i> ..	120	60	60

Of these ten types of ordinary ships, the *Bhima*, *Bhaya* and *Garbhara* are liable to bring ill-luck perhaps because they were not well balanced on the water.

1. MKK. The human figures are blurred.

2. For the complete translation of the *Yuktikalpataru* see *MHISMA*, 20-6.

Ships of the special type were ocean-going and are sub-divided into two classes *Dirgha* (long) and *Unnata* (high). The longships or the *Dirgha* class had ten varieties and the *Unnata* five.

Special Ships (Dirgha or Long)

	Name of the ship	Length	Breadth	Height
1.	<i>Dirghika</i> ..	32	4	3·2
2.	<i>Tarani</i> ..	48	6	4·2
3.	<i>Lola</i> ..	64	8	6·4
4.	<i>Gatvara</i> ..	80	10	8
5.	<i>Gamini</i> ..	96	12	9·4
6.	<i>Tari</i> ..	112	14	11·2
7.	<i>Janghala</i> ..	128	16	12·8
8.	<i>Plavini</i> ..	144	18	14·4
9.	<i>Dharini</i> ..	160	20	16
10.	<i>Vegini</i> ..	176	22	17·6

Of these ten varieties of longships, those that bring ill-luck are *Lola*, *Gamini* and *Plavini*.

The Unnata or High Ships

	Name of the ship	Length	Breadth	Height
1.	<i>Urdhva</i> ..	32	16	16
2.	<i>Anurdhva</i> ..	48	24	24
3.	<i>Swarnamukhi</i> ..	64	32	32
4.	<i>Garbhini</i> ..	80	40	40
5.	<i>Manthara</i> ..	96	48	48

Of these five, *Anurdhva*, *Garbhini* and *Manthara* bring misfortune and *Urdhva* profit to kings.

Four kinds of metals are recommended for embellishing the ships, viz. gold, silver, copper and alloys of all these three. The colours prescribed for the four kinds of ships are as follows : four-masted ships were to be painted white, three-masted red, two-masted yellow and one-masted blue.

The prows of the ships have a great variety of fanciful shapes or forms. These comprise the heads of lion, buffalo, serpent, peahen or parrot, frog and man. Other elements of decorations are pearls and garlands of gold to be attached to, and hung from the beautifully shaped prows.

Cabins of the Ships—Three classes of ships are distinguished according to their lengths and the respective positions of their cabins. The *sarvamandira* was cabined from end to end, and was used for the transport of the royal treasure, horses and women. The *madhyamandira* or the middle-cabined was meant as a pleasure-boat and was suited for the rainy season. The *agramandira* with the cabin on the prow was eminently suited for long voyages and naval warfare. They may be called ships with fore-castles.

The classification of the ships into ordinary and special types seems to be based on the proportion of their length, breadth and height. The proportion of dimensions in the ordinary ship is 2 : 1 : 1 to length : breadth : height, except for the first two ships, and in that of the special — *Dirgha*-ship is roughly 8 : 1 : 1 to length : breadth : height. Roughly, because the height is slightly more than .75. For the sake of comparison, we may take three ships of the same length from the three classes ordinary, long and high. The *Patraputa* of the ordinary class, *Gamini* of the long or *Dirgha* and *Manthara* of the high type have all of them the same length, 96 cubits. But their respective breadths and heights are 48, 12, 48, and 48, 9.4 and 48 in cubits. *Gamini* of the long type which has the same length as the *Patraputa* of the ordinary class and *Manthara* of the high type, has a breadth of only 12 cubits. That is, its breadth is 36 cubits less than that of either the *Patraputa* or the *Manthara* of high type. *Gamini* is thus a longship. It is extremely slender and low-built than the ordinary type and facilitates speed. The exact meaning of length, however, is not clear in all this discussion. The longest ship of the *Dirgha* type is $176 \times 22 \times 17.6$, and that of the ordinary type $120 \times 60 \times 60$, all these measures being in cubits.

The third classification of ships under the *Unnatas* or the high-ships appears to be arbitrary. No differentiation is made between the 'high-ships' and the 'ordinary-ships' so far as their functions are concerned, except that the former are said to be ocean-going. The proportion of dimensions of these ships is the same i.e. 2 : 1 : 1. The *Chapala* ($48 \times 24 \times 24$), *Patala* ($64 \times 32 \times 32$), *Patraputa* ($98 \times 48 \times 48$), *Swarnamukhi* ($64 \times 32 \times 32$), *Anurdhva* ($48 \times 24 \times 24$) and *Manthara* ($96 \times 48 \times 48$) of the *Unnata* or the high type indicate no difference whatsoever except their names. The heading *Unnata* or high-ships is obviously intended to suggest a different type. But the *Chapala*, *Patala* and *Patraputa* belonging to the ordinary type have all respectively the same dimensions as the *Anurdhva*, *Swarnamukhi* and *Manthara* of the high type. The three ships of the ordinary type may be substituted for the three high types except for their difference in names. In fact the height of the *Swarnamukhi* or the high type is the same as that of the *Patala* of the ordinary. Because of this defective classification, one is forced to conclude that it is very arbitrary, unless one takes the type *Unnata* to mean ships with high prows which may have been absent in the ordinary kind.

Again, no scientific explanation is furnished as to why the *Bhima*, *Bhaya* and *Garbhara* of the ordinary type, and the *Lola*, *Gamini* and *Plavini* of the special type, and the *Anurdhva*, *Garbhini* and *Manthara* of the high type should bring ill-luck and not others. Actually the *Bhima*, *Bhaya* and *Garbhara* of the ordinary type, and *Anurdhva*, *Garbhini* and *Manthara* of the high type have no difference in their proportions. Perhaps the *Bhaya* (the dangerous), *Lola* (the unsteady), *Anurdhva* (the flat-built), and *Manthara* (the quivering or unsteady) may bring misfortune only if their names are supposed to indicate their demerits. One could understand if *Lola*, *Gamini* and *Plavini* of the long type bring ill-luck as they are longer in proportion to their breadth. But in that case all longships should bring ill-luck.

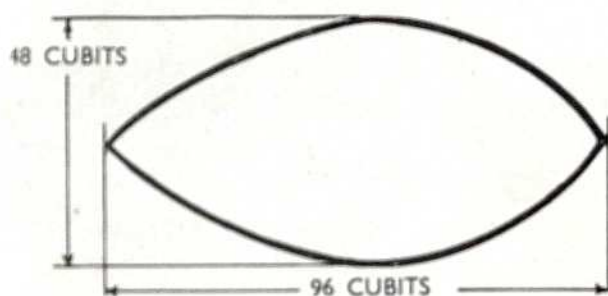
The recommendation of gold, silver and copper, and any alloy of these three for decoration of ships is conceivable as any one of these metals is not corroded by sea-water.¹ The prescription of colours and the choice of the stem-head figures is a matter of convention and liking rather than of much scientific value.

1. The precaution that iron should not be used in ships as they are likely to be attracted by the magnetic rocks and destroyed is highly suggestive. It means that iron was in use and magnetic rocks were known to the Hindus so early.

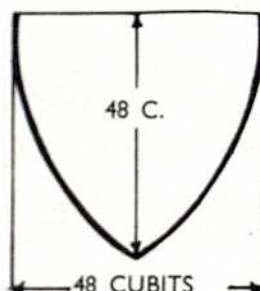
The proportion of the dimensions has scientific value for ship-building and may be compared with that given in the chapter on ship-building.

PATRAPUTA L B H
(ORDINARY TYPE) $96 \times 48 \times 48$ CUBITS

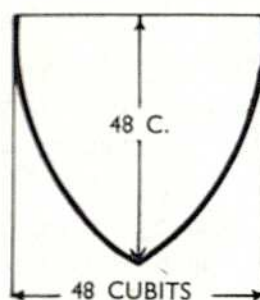
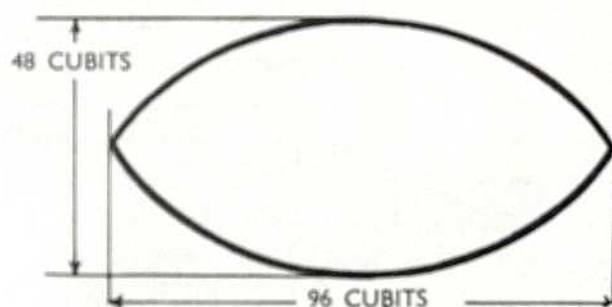
PLAN



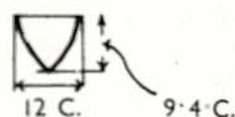
SECTION



MANTHARA L B H
(HIGH TYPE) $96 \times 48 \times 48$ CUBITS



GAMINI L B H
(LONG TYPE) $96 \times 12 \times 9.4$ CUBITS



VEGINI L B H
(LONG TYPE) $176 \times 22 \times 17.6$

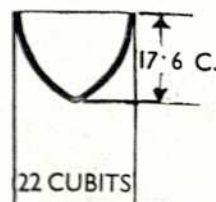
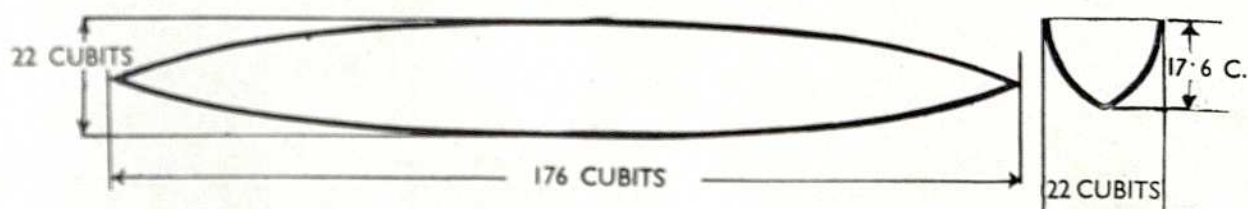
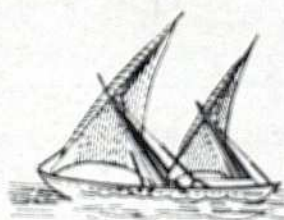


Fig. 13—Plans of the Ships of Yuktikalpataru

On the basis of the information given in the *Yuktikalpataru* plans of the ships *Patraputa*, *Manthara*, *Gamini* and *Vegini* are drawn (see Fig. 13).

■ ■ ■



6

Naval Activities— Islamic Period

(A.D. 1318 to A.D. 1660)

ISLAM's contest for the ports of Konkan began with the entry of Mubarik into the Deccan. Once the sovereign rulers of Konkan—the Yadavas—were subjugated, it was only a question of time for the Islamic rulers to bring the petty local chieftains to their knees. Their activities in Konkan waxed or waned according to the interest they took in the conquest of the coast or the hinterland. The Hindu element was suppressed, and clashes arose among the Mohammedan nobles who proclaimed their independence from the central power.

Alla-ud-din Khilji came from Gujarat as far as Sanjan and defeated the local king and the warlike Parsis who backed him (A.D. 1312 to A.D. 1318). Mubarik, his son, occupied Mahim near Bombay and Salsette. Muhammad Tughlak (A.D. 1325 to A.D. 1350) who held sway over North Konkan, does not seem to have taken any special interest in the activities of this province. Shortly after him the Bahamanis established themselves as independent rulers in 1347. They shifted their capital from Daulatabad to Gulburga, and their intercourse with North Konkan slackened. The only places of importance during this period were Navasari in the north, and Cheul in the south. In the closing years of the fourteenth century the whole appearance changed. Activities in Konkan were revived with the foundation of an independent dynasty in Gujarat by Muzaffar. By A.D. 1429 the Gujarat kings had out-posts at Mahim and Thana under the governorship of Kutb-Khan. All the coast from Gujarat to Mahim near Bombay was well under their control. They could move their armies through these provinces without any obstruction from the local chieftains who were more or less semi-independent.

Up to this time the kingdoms of Gujarat and Bahamani progressed side by side without encroaching on each other's territory in Konkan. But later Malik-ul-Tujar, the minister of the Bahamanis, led an army into Konkan and carried off immense booty. With this invasion the interests of the two kingdoms came into conflict. On the death of the Gujarat governor of Konkan, Kutb-Khan in A.D. 1429, Malik-ul-Tujar spread his master's power along the shore, and captured Mahim (near Bombay) and Salsette. Enraged at this, Ahmad Shah of Gujarat

collected a fleet of seventeen sail from Diu, Gogha and Cambay and dispatched it to Mahim. At the same time he sent by land a force to attack the disturber. Thana was attacked by land and sea, and the Deccan general retreated to Mahim. Here, he was joined by Alla-ud-din, the son of the Deccan Sultan. The Gujarat troops gathered their strength, and drove the enemy to his mainland. The Deccan forces repeated their attacks but failed.

In A.D. 1436, 1453 and 1469 expeditions were sent against Konkan from the Deccan by the Bahamani Sultans. They were mainly directed towards central and southern Konkan, i.e. the present districts of Kolaba and Ratnagiri. Permanent out-posts were established at Cheul and Dabhol.

The declining days of the Bahamani kingdom (A.D. 1485) witnessed a decentralization of its power. Bahadur Khan Gelani, son of the governor of Goa, declared himself as the king of the sea coast — *Daryabar*. In A.D. 1484 he threatened the harbours of Gujarat, and in 1490 ordered his slave Yakut, an Abyssinian, to destroy Mahim with a fleet of twenty ships. He captured many ships of Gujarat. The fleet sent by the Gujarat Sultan Mahmud Begada to stem the tide of invasion was unfortunately wrecked in a storm. Driven ashore by good-luck, he asked Mahmud Bahamani for help and begged permission for a passage through his territory. The leading nobles of Bahamani, Adil Khan and Nizam Shah, who were always jealous of Bahadur's attempt to bring Konkan under his sway, gladly joined hands with their overlord. Mahmud Begada and his allies defeated Bahadur Khan Gelani near Kolhapur in 1493. He was slain. Mahim and Gujarat ships were restored to Mahmud Begada.

During the reign of Mahmud Shah (A.D. 1482 to A.D. 1518), the last of the Bahamanis, the kingdom was split up. Adil Shah, began his independent rule at Bijapur in 1489, and Nizam Shah followed suit in 1490 at Ahmadnagar. The latter seized many a fort of Thana, and captured Danda-Rajpuri. Meanwhile Mahmud Begada strengthened his hold on North Konkan and extended his power to Bombay and Bassein and established a garrison at Nagothane. At this time when Gujarat power was at its zenith, Daman, Bassein and Bombay were under its control. The ports of Agashi, Mahim, Sopara, Bassein, Bhivandi, Kalyan, Bombay and Panvel were great sources of income to the Gujarat treasury.¹

Soon after the kingdoms of Bijapur and Ahmadnagar were established, the whole of South Konkan was parcelled between them. Approximately North Konkan (Kolaba) remained under the dominion of Nizam Shah, and South Konkan (Ratnagiri and Goa) under Adil Shah. This division of Konkan continued till the extinction of the two Shahis by the Imperial Mughals. In the chaotic period following the clash of the three powers Delhi, Bijapur and Ahmadnagar the nascent Marathas wrested the whole of South Konkan from the Bijapur kings under their able leader Shivaji. North Konkan — part of Thana and Kolaba — was seized by him soon after he assumed independence.

Prior to the Marathas, the Portuguese had captured many a stronghold on the coast of Konkan (North and South) at places like Bombay, Bassein, Thana, Revadanda and Goa. The last was the seat of their government on the west coast of India.

1. *GBP*. XIII. II. 438-43.

The Siddis of Janjira—When these Islamic kingdoms thrived and toppled down, an Abyssinian principality forged its way. Its central place of activity was at Janjira, an island-fort. The rulers of this house owed allegiance to the Shahas of Ahmadnagar, Bijapur and the Mughals as it suited their interest. Their policy was always to back the winning horse. But due credit must be given to their excellent seamanship and sturdiness by virtue of which they survived those days of great turmoil. In the seventeenth century the Siddis of Janjira attained eminence as a naval power. Their origin is obscure so far as their founder is concerned.¹ The Siddis with their stronghold at Janjira were a constant source of nuisance to the Marathas. On the sea they were a deadly enemy. Despite their immense resources and repeated attacks the boastful Marathas were never able to subdue this small maritime principality.

Sea-trade under the Mohammedans—The period of about 200 years from the conquest of Konkan by the Mohammedans till the arrival of the Portuguese is full of constant warfare and quick political changes. At first, the central authority of the Bahamanis was defied, then the Bahamani kingdom was split up followed by a shifting of the capital from Daulatabad to Gulburga with a corresponding deflection of trade from Cheul to Dabhol. All these incidents hampered trade in the period of transition.

During these 200 years trade centred in the ports of Thana, Mahim and Cheul. Next in importance was Dabhol. Sopara was already an ancient port. The other southern ports were of secondary importance engaged in local trade. By this time Persia was prosperous, and the Persian Gulf attracted much trade. Then, as in the bygone days, a constant demand for Arabian horses kept a close intercourse between Thana and Arabia. Trade with Zanzibar coast in Africa was considerable. The chief ports with which Thana traded were Ormuz in the Persian Gulf, Dhafar on the east coast of Arabia, and Aden, Jedda and Ethiopia in the Red Sea. Among the Indian ports, Thana had dealings with Quilon and Calicut on the Malabar coast, and Cambay in Gujarat.

Various articles were exported from Thana, the chief being rice, green ginger, sugar-cane and sesame oil. These were sent to the ports of Arabia and Africa. Wheat was exported to Arabia and Ormuz. Jack fruit, mangoes, cocoanuts, areca-nuts and betels grown on the Konkan coast were dispatched to Arabian ports and Ormuz. Spices-trade was a monopoly of the Malabar ports. Cotton cloth made in Thana was sent to Persia, Arabia, Africa and China. Diamonds, the best under heaven, were exported from India.

Among the imports, tools and earthenware came from China and probably went to the Deccan. Mirrors, arms, gold and silver ornaments, glass and other articles came from Venice.

The Indians themselves carried on some portion of the foreign trade and they were seen in the ports of Aden, Ormuz, Zanzibar and Malacca.² But there is no independent evidence to estimate the share borne by the merchants and ships of Konkan in this trade. Probably, the Gujarat people were ahead of the people of Konkan. But the major portion of the trade between the East and the West was in the hands of the Arabs. It was more or less an Arab monopoly. The stubborn opposition which the Portuguese received was, therefore, bound to come from the Arab traders, and not so much from the Indians.

1. *GBP*. XI. 435-7.

2. *Ibid*. XIII. ii. 444-6.



7

Portuguese in Konkan

THE occupation of Goa¹ by the Portuguese in A.D. 1510 marks a turning point in the history of the west coast of India. By planting their foot on the small island of Goa they laid the corner-stone of their magnificent commercial empire in the east. Goa became the seat of their government on the west coast. Almost every year squadrons of ships set sail from Goa for the occupation of trading-ports. Throughout the sixteenth century the sea-board of Konkan was quickly changing hands. South Konkan, i.e. the present district of Ratnagiri including Goa, was under the Bijapur Sultans, and North Konkan (Kolaba district plus the portion up to Thana) as far as Thana, was governed by the Ahmadnagar rulers. To the north, their territory touched the kingdom of the Gujarat Sultans. The Gujarat potentates fought among themselves, and against the Portuguese, changing alliances as the situation demanded. Their wars wrought havoc desolating the commercial ports. The sea was often a spectacle where keels were overturned, fleets burnt and sunk. Atrocious onslaughts on the Portuguese outposts by the Arabs were common, driven as they were to desperateness being deprived of commerce the principal means of their livelihood. In spite of this stubborn resistance from the Mohammedan potentates and the Arab traders, the Portuguese successfully held the places they had captured. By 1570, the Portuguese power on the west coast was firmly established.

They first visited Cheul in 1505 and about a decade later established a factory there, and in 1522 strongly fortified it. The volume of trade at Cheul must have tempted the Portuguese to select it as an outpost in the midst of odd opposition.

Past Cheul, northward, Salsette and Bassein were ceded to the Portuguese by the rulers of Gujarat in 1533. Conquest and annexation were unmistakably followed by fortifications for defence. In 1560, in return for the help rendered by the Portuguese, one of the leading nobles of Gujarat granted them the coastal belt from Vaitarana to Daman. Places like Bassein, Asheri, Tarapur, Mahim, Daman and Cheul were fortified prior to 1560. They guarded the entrances to their territories. South of Asheri and Manor, a line of forts along the coast of Vaitarana guarded Kelave (Mahim) from the raids of the Koli chiefs of Javar. The fort of Mandavi about 15 miles further north-east of Bassein, and Saivan, 5 miles east, protected the valuable lands of

1. CHI. V. 634.

Sopara and Bassein from attacks along the valley of the Tansa.¹ The chain of mountains running from Tungar to Kamandurg guarded the eastern part as far as the Bassein and Bhivandi rivers. The small fort of Santa Cruz on the river-bank was a watch-point on the Kalyan side. The commanding hill of Parsik guarded the land-entrance to the island of Salsette. So, by 1560 the Portuguese were the masters of the coast from Daman to Karanja possessing an inland strip 10 to 20 miles in width running parallel to the oceanic border.²

Though the power of the Portuguese in the East declined fast in the closing quarter of the sixteenth century, their possessions on the west coast of India remained intact till 1739, when the region between Daman and Karanja was wrested from them by the rising Marathas. The island of Bombay was ceded to the English in 1661 by the Portuguese as dowry to the King of England, Charles II.

Ships of Konkan from 1500 to 1670—This period of a century and a half contributed greatly to the art of ship-building and sea-trade. The rule of Islam had favoured sea-trade, and the Arabs under the protective arm of their co-religionists had become the sole masters of the trade between the ports of India and those of the Red Sea and the Persian Gulf. The tonnage of ships increased enormously to, as much as 1,600. Some ports on the west coast of India under the Mohammedan rulers were termed as Mecca ports whence ships embarked with hundreds of pilgrims bound for Mecca every year.

Side by side great influence was being exerted by the Portuguese both in commerce and ship-building. They deprived the Arabs of their trade monopoly which they had been enjoying for centuries. Their ships splashed the Indian waters like leviathans. They were different in build and rigging. Above all, their ships had new weapons — the guns — which decided everything in their favour. The gospel of the gun was never thoroughly grasped by the Brown man. He was, therefore, destined to fall a prey to this new fire-arm sooner than later.

During this period, the Thana coast was famous for ship-building. Large ships were built at Agashi and Bassein as their hinterland abounded in teak. The ships built at these places made voyages to Europe. In 1634 the English had four *pinnaces* built there for coastal trade.

The local boats in ordinary use were of two kinds, one which had the planking joined and sewn together with coir-thread, and the other whose planking was secured with thin nails having broad heads. They were rivetted inside with their broad heads fitted on. The coir-sewn ships had tapering bottoms. The nail-secured boats were flat-bottomed. In other respects, both were similar. The planks of the sides of a ship went as high as the cargo. Above this planking, was "cloth thicker than bed-sacking and pitched with bitumen mixed with fish oil and cocoanut oil." Above this cloth were cane-mats equal to the length of the ship. This matting was very strong and served as a protection against sea-water. There were no decks inside but chambers for cargo covered with dried and woven palm-leaves. The palm-roofing protected the ship from rain. It was stretched over with cane-mats over which men could walk. The crew were lodged above, and none had quarter below where the cargo was stored.

1. *GBP.* XIII. ii. 449-53. In 1570, the kings of Ahmadnagar, Bijapur, Calicut and Achin formed an alliance against the Portuguese. But the Portuguese by their skill in defence and courage defeated the allies. This at once enhanced their position politically and brought stability to their power.

2. *GBP.* XIII. ii. 455-7.

There was one large mast, and two ropes ran on its sides. One rope at the prow served as a stay, and two hillards that came to the stern helped to hold the mast. The yard was slung to the mast in such a way that one-third of its portion stretched in front of the mast and the rest behind. Similarly, the sail came two-third behind and one-third in front. The sail was made up of a single piece of cloth. The tack of the sail at the bow was made fast to the end of a sprit. The sprit was almost as large as the mast which enabled to bring the sail forward so that the ship could be steered close to the wind, as the sail could be set very flat. The ships had topmasts and one large sail.

The rudder was very large and made up of thin planks. It was hinged by ropes which were outside the ship. The anchors were of hard wood. Stones were fastened to the shanks for sinking. Water was stored in square and high tanks.

A description of the Gujarat and Calicut ships will help us in understanding the ships of Konkan.

The Gujarat Ships—The deep-sea-traders of Gujarat were of 100 to 150 tons. Besides these, in the sixteenth century there were vessels of 600 to 1,000 tons and in the seventeenth century in the pilgrim traffic between Surat and Mecca still larger ships were used which weighed 1,400 to 1,600 tons. These vessels could carry 1,700 passengers each.

Goa was also a ship-building centre. In 1508, the Portuguese found that the carpenters and caulkers of the Bijapur king had built ships and galleys after the Portuguese model, and in 1510, twelve large ships were constructed after the model of the *Flora da la Mar*.

The boats of Calicut, according to Varthema (1500) were open and of three or four hundred butts (butt equalled a wine or ale cask 108 to 140 gallons) in volume. They were constructed without *okum* as the planks were joined with great skill. The seams were pitched from outside. A great quantity of iron was used in building them.

The sails were made of cotton, and at the foot of each sail was a second sail to catch more wind.

The anchors were of stone suspended by ropes. One of the Calicut ships was of 140 tons with 56 crew, twenty for bailing out water, four for other purposes below, eight for the helm, four for the top and the yard work, and twenty boys to dress provisions. Very large boats traded with the Coromandal coast.

Some remarks regarding square rigging introduced by the Portuguese, the tonnage of ships, and the seamanship of the Mohammedan and the Hindus of this period are worth noting.

"The greatest change in the shipping of this period was the introduction of the square rigged Portuguese vessels. They caused great astonishment at Anjadiv, the people had never seen any ships like them. The vessels in Vasco da Gama's first fleet varied from 200 to 50 tons. The size was soon increased to 600 and 700 tons, a change which had the effect of forcing foreign trade to centre at one or two great ports.

Of smaller vessels the Portuguese had caravals and galleys. Before the close of the sixteenth century the size of the European East Indiamen had greatly increased. As early as 1590, the Portuguese had ships of 1,600 tons, in 1609 the Dutch had ships of 1,000 tons, and in 1615 there was an English ship of 1,293 tons. Hindu sailors and captains are mentioned, but the favourite seamen were the Arabs and the Abyssinians. A great advance had been made in navigation. The Musalmans of Mozambique (1496) used Genoese compasses, and regulated their voyages by quadrants and sea-charts, the Moors were so well instructed in so many arts of navigation that they yielded little to the Portuguese. Trade was still harassed by pirates, though they seem to have been less formidable than they had been in the fifteenth century or the seventeenth. Before the pirates were put down by the Portuguese, Bombay harbour, Goa, and Porke on the Calicut coast were noted centres of piracy.”¹

1. *GBP*. XIII. ii. 468-9.





English in Konkan

THE English came to the west coast of India more than a century after the arrival of the Portuguese. Like the other contemporary European powers they too started their career as traders, but they alone among them came out successful as empire-builders. This transition from tradesmanship to empire-building is not regarded now as the result of a blind act on the part of the East India Company, as observed by the late Professor Seely in his remarks: "our acquisition of India was made blindly. Nothing great that has ever been done by Englishmen was done so unintentionally, so accidentally as the conquest of India."¹ The Company first aimed at a commercial rather than a political ascendancy. But this does not mean that the Company acted blindly. With the passage of time from their first commercial settlements, the traders slowly yet keenly took interest in the political affairs of the country. They planned as they saw new opportunities coming out of the situation, they seized them and again planned. At a certain stage though late, it could be said that the East India Company visualised the empire it was going to have in this country. In other words, the traders were aware towards the end of the eighteenth century that they were soon going to be the political masters of this land.

On the coast of Konkan the East India Company started its career first at Rajapur and then at Bombay.

As early as 1588, by the defeat of the Spanish Armada, the English people were left free to undertake maritime enterprise in the Eastern waters. The East India Company was established in 1600. In 1602 the Company entered into a treaty with the chief of Acheen and in 1603 with the king of Bantam.² On the advice of the factors at Bantam it was decided to open trade with Surat which was then humming with trade. Thousands of Muslims left the coast of Surat every year for Mecca. Surat was thus a centre of trade and a pilgrim-port when the English coveted it. The Bantam factors sent Captain Best who fought a naval battle with the Portuguese at Swally and defeated them. By this, the English actually laid the foundation of the British Empire in Western India. A regular *farman* for trade and other concessions, at Surat, was finally obtained by Sir Thomas Roe in 1618, when a treaty was concluded between the East India Company and the Mughal Emperor Jahangir.³

1. *HHBI*. 4.

2. PHEROZ B. M. MALBARI, *Bombay in the Making* (1661-1726). 42.

3. *Ibid.* 54-60. Twelve miles from Surat on the coast stood its port Swally.

At Surat the Portuguese opposed the British and fought with them though their power was on the decline in the seventeenth century throughout the East. The Dutch were a real problem for the British as they opposed them tooth and nail in the entire area from Surat to Bantam in Java. In personal adventure and seamanship they were superior to the British. In 1622 the Dutch massacred the English at Amboyna in a very cruel manner, leaving a bitter memory in the mind of the English for a long time. This incident eventually led the British to concentrate their power in India rather than in the Spice Archipelago. Bantam the headquarters of the British in Java was declared subordinate to Surat in 1630.¹

Thus, the prospects of trade at Surat led the British to establish a factory there. However, it had its own difficulties. The Dutch and the Portuguese continued to harass the British. Very often the English factors suffered from the vagaries of the powerful local Mughal officers. The policy of the Mughal emperors was to set one *Phirangi* against the other, as they themselves were weak on the waves. Probably this situation at Surat might have impelled the English to try to seize Bombay as early as 1626, by force from the Portuguese. In 1652 the Surat Council had urged the Directors of the East India Company to purchase Bombay, and the latter in their turn brought to the notice of Cromwell "the excellence of the harbour and its natural isolation from attack by land." Actually Bombay was ceded to Charles II in 1661, as a result of the marriage treaty between him and the Infanta of Portugal. It may be noted that Bombay was granted not merely as a wedding-gift, but was meant to strengthen the friendship between England and Portugal, so that the East India Company should defend the Portuguese settlements in India from the Dutch depredations.² The English took charge of the port and the Island of Bombay in 1665, and in 1668 it was transferred from the Crown to the East India Company. It was then under the Surat headquarters. The fate of Surat, however, was sealed when in 1687 Bombay was made the seat of Government.

From this year Bombay received the attention of the East India Company directly. The real founder of modern Bombay was Gerald Aungier.³

The English who were well settled at Surat since 1613 and had taken Bombay in 1665, were bound to come in conflict with the rising Maratha power under Shivaji's leadership.

As early as 1657 Shivaji took Kalyan and Bhivandi in North Konkan which was then part of the Bijapur territory. Along with a number of important places he seized Cheul, an ancient port on the coast of Kolaba, and fortified it. He then toured the whole region of South Konkan. He started construction of the naval fort of Vijaydurg in 1653.

The murder of Afzal Khan in 1659, further facilitated Shivaji's conquest of South Konkan. Following this incident he quickly captured Panhala by routing the Bijapur army. In 1660 Panhala was seized by the Bijapur forces with the help of Siddi Johar of Karnool. Shivaji was himself in the fort conducting its defence. When the siege was on, Siddi Johar secured from the English factors at Rajapur ammunition and a gun. Revington, the chief of the factory with the help of Mingham and Gifford, trained the gun on the fort of Panhala rendering Shivaji's position precarious. Shivaji made his escape to Vishalgad on a dark rainy night with difficulty but never

1. *HHBI*. 39.

2. PHIROZ B. M. MALBARI, *Bombay in the Making*. 190.

3. *Imperial Gazetteer of India* (1908). VIII. 404.

forgot to wreak vengeance upon the English at the first available opportunity for the unnecessary provocation they had given him.¹

In March 1661 Shivaji arrived at Rajapur and sent for the English factors for a personal visit. Feigning ignorance of what had taken place in the siege of Panhala the factors came to see Shivaji. In the visit six of them were put under arrest and sent to different hill forts. Shivaji's officer Raoji Somnath took the possession of Rajapur and informed the English that their men would be released if they helped his Raja in his proposed campaign against the Siddis of Janjira, but if they failed to accept this offer they would be required to pay a ransom for the release of their men. This offer was rejected. In 1663 the prisoners were released and the English resumed their trade at Rajapur. Shivaji's Rajapur raid cost the English 24,000 *Hons* by way of the plunder, death of two factors and the detention of the rest for two years. Actually the factors at Rajapur were saved from being punished by Shivaji as early as 1660 through the mediation of Rustam-i-Zaman, when Shivaji had appeared at Rajapur to take possession of the vessels of Afzal Khan which were given shelter in the Rajapur creek.²

The activities of the English at Rajapur date back to 1637-38. During these years one Captain Weddell of Courten's Association with a letter from King Charles I came to the South Seas for a voyage of discovery. He sailed to Goa and from there made his headquarters at Rajapur. It has been described as a place which "lay up a long tidal creek, in the independent kingdom of Bijapur, about half way between Goa and the modern city of Bombay." Weddell then began to plant factories at Karwar and Baticala (Bhatkal) with the help of the Bijapur kings.³

Later, in the Mughal-Maratha strife the English had to abandon their factory at Rajapur, 1678-79.⁴

According to the account of the Bombay Gazetteer the English opened a factory at Rajapur for its cardamom and pepper trade in 1649. Vengurla in 1660 was a port of call for ships of Bantam, Japan and Ceylon on one side, and the Persian Gulf and the Red Sea on the other.⁵

In 1664 Shivaji's men looted Hubli and in the next year the English paid him £ 112 to save their factory at Karwar from being plundered.⁶

Surat was looted by Shivaji twice, 1664 and 1670.

Shivaji had differences with the English because they offered him resistance in his first sack of Surat and allowed the Siddi to anchor in the Bombay harbour from where he set sail after the rough season for his annual depredations of the Maratha coast. It was their policy to help the weak Siddi against the powerful Shivaji covertly or openly as the situation demanded. Shivaji knew well that he could strangle the landward trade of Bombay and cut off its firewood supply, and attack the English factories on the south coast almost at will. But he was always helpless in launching a naval attack on Bombay as the English were too strong for him on the waves.

1. *SNHM*. I. 123, 129, 138-40.

2. *Ibid.* 146-8.

3. *HHBI*. II. 65-6.

4. *Ibid.* 128.

5. *Bombay Gazetteer*. X. 175.

6. *SSHT*. 240, 277.

To counter the English-Siddi friendship and the Siddi's wintering in the Bombay harbour during the rough season, Shivaji set his heart on the fortification of the island of Khanderi. In 1679 he occupied it and started its fortification. Khanderi in the hands of Shivaji was a constant threat to Bombay. The English and the Siddis first opposed him but later withdrew following a few unsuccessful naval skirmishes.¹

The naval forts of Vijaydurg, Suvarnadurg, Sindhudurg and Kolaba were completed by Shivaji between 1653 and 1680.

In his Karnatak campaign Shivaji took Jinji in 1677, and ordered the English to send him talismans and antidotes against poisons. Madras was luckily saved from being his prey because of his reverses in Mysore.²

In 1679 Shivaji sent his men numbering 4,000 to Kalyan-Bhivandi with a view to landing them in Bombay via Thana. Bombay inhabitants were terribly alarmed at this. This threat to Bombay was a part of Shivaji's move to occupy Khanderi. Evidently it shows the growing rupture between the English and Shivaji towards the end of his career.³

Under the aegis of the English, Bombay developed into a fine harbour on the west coast. Its trade increased by leaps and bounds, and its population grew. In 1736 a great ship-builder of Surat, Lowji Nasarwanji Wadia came to Bombay as the Company's shipwright. Under his supervision the dockyards were extended and ships of high tonnage constructed for the Company.

By the defeat of the Marathas in 1817-18 the whole of the Deccan passed into the hands of the English. Bombay which was already a trading centre was transformed into the capital of a large province. The English, since their occupation of Bombay in 1665 to the fall of the Marathas in 1818 continuously exerted the influence of their civilization on Konkan as well as on the Maratha Country up the Sahyadris, through Bombay. The Marathas looked with awe at the new goods imported by the English. They admired their huge ships, some of them constructed in the Bombay docks, moving like leviathans. They were aware that their *gurabs* and *pals* were no match for the heavily gunned and scientifically equipped English ships. They tried to imitate the *Topikars* in order to maintain their supremacy on Sea and Land. But this imitation was superficial, horribly limited, and the Marathas were bound to lose ground in their competition with the *Topikars*.

1. SSHT. 240, 277.

2. HHBI. II. 234.

3. SSHT. 272, 274-8.





Socio-economic Conditions of Konkan

THE fourfold caste system divided into a number of sub-castes has been the predominant character of the Hindu society since ages. It had permeated the Konkan of the Maratha period as it did any other part of India. The division of society into different compartments based on the functional principle at the outset, crystallized itself into a hereditary system in course of time. Castes came to be recognized by descent and not by function or *Karma*. The functions of caste as decided by birth had relaxed in their rigidity in the period under consideration. Brahmins did not necessarily confine themselves to learning and matters relating to religion. The barriers of the caste system were broken centuries before the Maratha period in so far as its functional foundation was concerned. The theoretical water-tight compartments of castes which perhaps existed at one time do not seem to have been feasible. The natural aptitude of a boy born of Brahmin or artisan parents might incline him to take to the calling of a soldier, thus enabling him to change his vocation decided by the accident of birth. The Brahmin boy remained a Brahmin or the artisan's son an artisan by caste, though he changed his hereditary vocation. Such examples of changing the vocation and yet retaining the label of the caste stamped by birth abound in the Maratha period. It was rather the general rule of the society of the day. The Peshwas belonging to the *Chittapavan* Brahmin caste present an outstanding example of this sort in their epoch.

Brahmins—The Brahmins had cut their caste moorings, and begun to play an important role in the sphere of politics from very early times. They had in fact changed their function or *Karma* from Brahminhood to that of Kshatriyahood. The Brahmins in the Deccan along with the Marathas were leading as administrators and politicians under the first three Maratha princes prior to Shahu. Under Shahu, when a *Chittapavan*, Balaji Vishwanath Bhat, became the Peshwa, a very large number of persons of the *Chittapavan* community entered the political and military fields. His son, Bajirao, became the Peshwa, and for the next three generations the *de facto* sovereignty remained with his family, while Shahu and particularly his descendants remained as mere figure-heads of the State or *de jure* sovereigns.

Ratnagiri district was the habitat of the *Chittapavans*. They gradually became the leading intellectual and literate class of Ratnagiri and of Konkan in general.¹ Their number was less in the district of Kolaba and lesser still in Thana. Their northward move from the original place into the districts of Kolaba and Thana was the result of the conquest of these parts by the Peshwas. Especially in Thana they settled as government officials in lower and higher capacities for administrative purposes after A.D. 1740. In course of time they acquired land.

The *Karhada* Brahmins were found in the Ratnagiri district along with the *Chittapavans*. Rajapur seems to have been their centre as they were found there in greater number, than at any other town in Konkan. Their surnames like Desai, Sardesai, Deshmukh, Sardeshmukh, Phadnis etc., indicate the high posts they once held. The *Deshasthas* were seen mainly in Kolaba and were very few in Ratnagiri and Thana.²

Living between the Sahya mountains and the sea these intelligent classes were probably well acquainted with matters connected with the sea. From their very birth they heard the roaring of the sea and saw its vast expanse. The sea which was a mystery to many on the plateau was not so to them. Foreign commerce which is the life-blood of a maritime people rarely appealed to them. What they aspired for at the most was to establish as petty traders and money-lenders, locally. Commerce was not in their blood.

Poona, the centre of political activity attracted a *Chittapavan* where he could easily migrate and seek a fortune. His pen brought him office, and the sword if he could wield it, laurels and fortune. A Brahmin could become a clerk, a soldier, a banker, a trader, and a farmer who tilled his own farm. In so doing he never felt a paradox though his course of action could not be reconciled with the duties assigned to Brahminhood, nor did the society find any fault with him for infringing the laws of the caste system. The bonds of the caste system were loosened to this extent since long. Different castes came under the Maratha banner, and a Brahmin soldier rubbed shoulders with a Maratha or even a low caste soldier in fighting a common enemy. The ideal of the Maratha State had created a sort of brotherhood. But this does not mean that a Maratha and a Brahmin dined or drank water together in the routine life, not to speak of the other castes sitting at the same table. According to the time-honoured custom, different castes performed their personal duties separately. A Brahmin, though he could by choice become a soldier or a clerk, was certainly not free to take to the calling of a cobbler or a potter. It seems that he could neither become a sailor. Thus the intelligent class was tabooed from following the call of the sea.

The Prabhus were writers by calling, and provided the Maratha State with efficient penmen. They had little trade aptitude. The Saraswats were better at trade than the rest of the Brahmins.³

The Marathas had grown aristocratic in temper especially in the latter part of the Maratha period. The word Maratha had gained dignity and status in the society. He was fond of plunder and war. The ambition of a Maratha soldier was to become a mounted knight. He had

1. *GBP.* XI. 44; *GBP.* X. 111-2; *GBP.* XIII. i. 76. The census figures given in these books belong to the ninth decade of the nineteenth century. They may serve to indicate the general trend of the population during the Maratha period.

2. *GBP.* XI. 43-5; *GBP.* X. 114-5; *GBP.* XIII. i. 77-9.

3. *Ibid.* 46; *Ibid.* 118; *Ibid.* 87.

an inborn love for a horse. It appealed to his fancy and enhanced his status in the social scale. The trot of a horse attracted him more than the dull flutter of a ship's canvas. Mounted on a horse he brought wealth at the edge of his spear, and rarely thought of making fortune by peaceful commerce.

The State took no measures to promote commerce and seafaring worth the name. It was satisfied in issuing permits to ships and levying duties on imports and exports. Foreign commerce was not encouraged by any ruler except Shivaji and Peshwa Madhavrao I, who sent ships every year to the ports of Arabia and Persia. Peshwa Madhavrao I tried to improve maritime trade. But the cause which these leaders promoted died with them in the midst of general lethargy.

The house of the Angres — the House of Admiralty of the Maratha State — provided the best training school for seamanship. The Angres sought wealth by exercising their sovereignty over the sea rather than by commerce. Strangely enough the titles bestowed upon the members of the Angre family are not indicative of their relationship either with admiralty or the sea. The titles *Vijarat-Mava* (*Vazir*) and *Sarkhel* (Commander or Cavalry Officer) were fit for the *Sardars* on land rather than for the lords of the sea. The old titles *Navadhyaksha* of Sanskrit origin, and *Mir-behari* of Persian origin used by the then Muslim rulers seem to have gone out of vogue.

The Seafaring Castes — The Bhandaris,¹ Daldis,² Sonkolis, Gabits, Bhois and Kharvis³ were the main seafaring castes of Konkan. They supplied crew for the Maratha navy. The Sonkolis along the coast of Konkan subsisted mainly on fish and rice as they do even today. All these castes were well-trained for seamanship as they were amphibians from childhood. The sea was in their veins.

The Bhandaris engaged in extracting the palm juice as their hereditary profession supplied the nimble crew as they were experts in climbing the tall palms. The Kolis and Bhandaris were a daring people. Their knowledge of seafaring and fishing was handed down from father to son. The fisheries were the training schools for seamanship. They possessed practical knowledge required for sea voyages — the geography of the surrounding coast, the sunken reefs, the shallow banks, and other points of danger. But the sailor in general was an illiterate fellow. Even today most of the seafaring classes are illiterate. At night the sailors guided the course of their ship by stars, and they had a fair knowledge of the periodical (*mosami*) winds and also of the signs of a coming storm. The use of a compass was known to them.

The Hindu seafaring classes were, however, more conservative in character than their Mohammedan counterparts. They were quite content in hugging to their own coast, and normally did not venture a voyage to the countries beyond their own seas. They never enquired about the country of the whiteman (*Topikar*) who came to their coast from beyond the seven seas. In accordance with the then prevailing custom many a high caste Hindu did not cross the sea as it was considered to bring pollution.

1. GBP. X. 124; GBP. XIII. 149. The hereditary profession of the Bhandaris is extracting the palm juice. Many of them served as sailors and store-keepers on board the ships. Mai Nayak Bhandari was one of Shivaji's well-known naval officers. Even today many of the Bhandaris are employed as sailors.

2. GBP. X. 134; GBP. XI. 83. The Daldis are convert Mohammedans. They are less conservative than the Hindu sailors.

3. For other seafaring castes see GBP. XIII. i. 148 and GBP. XI. 68-9.

The Muslim sailors—The Daldis and the Kharvis of Gujarat on the other hand were more enterprising and ready to quit home wherever better remuneration was available. Many of them were employed as gunners in the navy.¹ They had fewer social taboos than the Hindus. The Mohammedans as a whole have always exhibited a keener aptitude for sea-trade than the Hindus.

Economic Conditions of Konkan—The occupation of India by the British, marks a turning point in the economic no less than in the political history of our nation. The industrial revolution following the conquest of India sounded the death knell of our indigenous industries. It soon brought a constant outflow of raw materials from India to Britain, and an inflow of finished articles in return. Britain had overseas possessions at her disposal producing rich and varied material which she could exploit at leisure, carry home, and bring the same back in the form of finished products. Britain had thus secured a store of raw materials and a sure market. The Indian market and the home industries of Britain were connected by the link of strong shipping. The new technique of production enabled Britain to place in the Indian market goods cheaper than those produced in India. This had disastrous effects on home industries, which unlike the British industries were run on hereditary principle. Unable to compete, and having no protection, the Indian industries began to decay fast. The small industries of Konkan were no exception to this decadence. With this as the starting point we shall turn back to the economic conditions of Konkan during the Maratha period.

Self-sufficiency² in the daily necessities of life was aimed at, as far as possible in all parts of the country. Village was the unit of the economic system. The means of transport were meagre and the roads insecure and bad. These difficulties isolated the economic units which, therefore, had to depend upon their own resources. The economic units—the villages of Konkan—were more isolated by nature because of the great barrier of the Sahya mountains separating them from the tableland. The few highways across the Ghats linking Konkan and the Deccan were not meant for carts. They could be trodden only by pack animals—bullocks and horses. This was the dependable means of communication between Maharashtra proper and Konkan. The violent bursting out of the monsoon rendered the passes impassable in the rainy season.

*Land*³—A large part of the land especially the hilly tract in the neighbourhood of the main range of the Sahya mountains, where rainfall is always heavier, was covered with rich and dense forest. Teak was of great value for ship-building and the forest of Thana abounded in it. The Kolaba and Ratnagiri forests produced inferior sort of teak but that of Bankot grown on the banks of the Savitri river was highly valued for its durability. It was mainly used for cross-beams in the ship. The teak grown in the rocky regions though less soft and not so tall as the Thana

1. At Harnai (Ratnagiri district) there are a number of families bearing the surname *Golundaj*. They are all Mohammedans. They tell that their forefathers were employed as gunners in the Angre's artillery on the fort of Suvarnadurg and hence their surname. The word *Golundaj* means an artillery-man.

2. G. B. JATHAR and S. G. BERI, *Indian Economics*, I (1939), 130.

3. See the portion under *Land*. *GBP*. X, XI, XIII. i.

teak, was harder in quality. The trunk of a big mango tree could be dug out into a canoe for plying in the creeks. There were many other trees useful for ship-building. The Maratha Government took care to tend the forest, appreciated its value and enacted rules for its preservation.

A considerable portion of the land was then under forest than is seen at present, the increase in the arable area being a matter of recent development due to the pressure of the increasing population.

Every village had its cultivable land around it from which it derived its food stuff. The peculiarity of the Konkan villages as seen even today was that every house had its own farm spread around it. Houses were thus separated from one another at least by a distance of a stone throw. This developed a habit of cleanliness and a sense of individualism among its inhabitants. The house-farm yielded grain, mainly rice, and the home-yard had its mango trees, jack trees, betel-nut and cocoanut palms. Vegetables and other requirements were produced on the farm. Betel-vines clustering round the palms supplied the need of the family. Shaded with palms and trees the Konkan villages presented a picturesque panorama in beautiful surroundings.

Rice was the staple produce and was cultivated in the best soil. Pulses and other coarse grains like *nachani*, *vari*, etc. were grown in the poorer soil known as *varkas* or *dongari*. Rent-free lands were offered in order to bring the salt-waste lands under plough. Thana and Kolaba had great scope for reclamation, as such land existed more in these two districts than in Ratnagiri. By putting dikes and bunds around the salt pans, the sea-water was stopped from entering them. Deposition levelled the pans, rain-water purged them of their salt, and after some years the land became fit for cultivation of rice. The *Chittapavans* seem to have specialized in land reclamation.

Life was indeed very hard in Konkan. The limitless expanse of rich soil which was found on the Deccan plateau was totally absent in Konkan. Land had to be brought under the plough in patches by struggling with the Sahyadri. The farmer had to toil hard throughout the rainy season. Before the advent of monsoon he had to bake his rice fields. A golden harvest with limited efforts enjoyed by the farmer on *Desha* was unknown to him. In the midst of evergreen, the Konkan husbandman felt the pinch of poverty. Of course, there were a few rich lands producing two crops a year in the valleys of the big creeks. Nevertheless, such lands were extremely limited.

The Sea—The sea served the people of Konkan in two ways as a source of livelihood. Salt and fish produced by its bounty were articles of consumption as well as of trade across the Ghats. The sea not only supplied salt to Konkan but also to *Desha* beyond. Fish was part of the diet of all but the Brahmins and few other castes. During the fair season the fishermen were engaged in fishing. It was also used as manure for rice and *ragi* plantation.

Trade—Trade centred in the port-towns where the articles of *Desha* poured in for export. Surat¹ was once the greatest emporium on the west coast of India. During the palmy days of the imperial Mughals it shone with the splendour of Venice. Cotton fabrics and many other articles flowed towards Surat, and it throbbed with trade. None of the Konkan ports could equal

1. GBP. II. 32-5.

it. By the repeated sack of Surat by Shivaji, and the fall of the Mughals after Aurangzeb, its trade languished fast. Bombay was slowly yet surely taking its place since its transfer to the East India Company.

The important places of trade on the coast of Thana were Agashi, Bassein and Thana. The chief commodities of export along the coast were rice, salt and garden produce.

Cheul on the coast of Kolaba was a famous emporium. It was to Konkan what Surat was to Gujarat. Ships from the Persian Gulf and Arabia cast their anchors in the waters of Cheul. Cocoanuts were exported in large quantities while horses and dates were imported in the sixteenth century. Trade along the coast was carried with Malabar and Goa to the south, and with Gujarat to the north. The weaving industries of Cheul in cotton fabrics and silk were unrivalled in quality. Its fame had reached the countries beyond the seas. Once at the height of its prosperity, this commercial town began to fade into insignificance in the declining days of the Portuguese, and totally lost its importance in the restless days of the strife between the Mughals and the Marathas.

Mahad was a rising port under the Marathas because of its nearness to Raigad, the capital of Shivaji. It had a large traffic with *Desha*. Pack bullocks came from *Desha* with grain and other commodities and returned with rice and salt.

The ports of Ratnagiri were poorer in trade than those of Thana or Kolaba, as the country could produce very little surplus. The only articles of export from Ratnagiri in the eighteenth century were cattle, hemp and timber of Bankot.

Rajapur was the only mart of any importance in Ratnagiri. It functioned as an exchange depot between the Deccan and Ratnagiri. Gram, cotton goods and other articles entered Ratnagiri *via* Chiplun and Sangameshwar. Kharepatan traded in salt and fish. Malonda which was of some importance in the south was being ousted by Vengurla.

Ship-building—Ship-building was one of the principal industries of Konkan. The country around Bassein producing ample and fine teak was specially suited for ship-building. In the sixteenth century Bassein constructed ships for the Portuguese navy. It was rightly called the '*Biscay of India*'. Among other places may be mentioned Thana, Kalyan, Bhivandi, Alibag, Vijaydurg and Malvan as the chief ship-building centres of the Maratha Government. At Alibag and Vijaydurg the Marathas had their own dockyards.

The shipwrights were mostly Hindus and their profession was transferred from father to son. The skill of the Indian ship-builders was highly praised even by the Europeans. Their power of imitation was marvellous. The Parsi Ship-builders¹ of Bombay constructed ships for the East India Company on the European model and of as much tonnage as the Company required. Their skill in ship-building was *par excellence*, and it had struck fear into the heart of the English shipwrights that their home industry might suffer as a result of the competition. The Parsis of Surat were equally famous as ship-builders. However, it is a sad fact that none of the

1. *Bombay Dockyard—A Forgotten Chapter* (a reprint from the *Journal of the Iranian Association*, 1921). This booklet of 20 pages gives the history of the Wadia family. The members of this family in succession served the East India Company by constructing ships for them. By their skill in ship-building they received the title "Master Ship-builders".

Hindus could secure a name as 'master shipwrights' along with the Parsis of Surat or Bombay. It was probably due to the caste system which kept aloof the intelligent classes — the Brahmins, the Prabhus etc. — from taking to professions like ship-building and other kindred industries. The Brahmins who devoted themselves to learning could alone have training in theoretical thinking but they rarely took to skilled works. The six systems of philosophy offered excellent facilities for higher intellectual training. Next to them were the commentaries on various subjects. Brahmins alone were specialised in all these branches of learning. The skilled workers by their caste had no access to these subjects and therefore had no training in theoretical thinking. Thus, the caste system divorced the head from the hand preventing the whole society from keeping pace with the march of time. We have, however, ground to believe that the Hindu carpenters had good powers of imitation and were masters in their profession as they formed the major body of the ship-builders — the actual workers. Even today, all along the coast of Konkan the ship-builders are exclusively Hindu except at Bassein where they are convert Christians.





10

Maratha Navy—Emanation and Achievements

THE small strip of land verging on the western border of the Poona district called Maval has been the cradle of the Maratha State. In his early career of independence Shivaji first became the master of this country. Immediately to the west of Maval spreads the present district of Kolaba. Wandering with his playmates Shivaji in his boyhood was acquainted with every hill and dale of Maval. It is easy to imagine that an inquisitive and ambitious boy of Shivaji's genius should have known a good deal about Konkan so near to Maval, about its people, the sea and the navy. A young man who could conceive the novel idea of independence might naturally have thought of a navy when his expanding kingdom came in contact with the powers bordering on the sea.

The incentive to the Maratha navy was political rather than economic.

When Shivaji began his career of independence the coast of Konkan was infested with alien powers. The Siddi was very powerful and a sworn enemy of the Maratha State. He carried fire and sword everywhere on the Maratha coast. He was a standing nuisance, "troublesome like a mouse in the house," as Sabhasad puts it.¹ The Portuguese had many a strong outpost all along the coast. The sovereignty of the Arabian sea rested with them. The English too had made their appearance.

The Siddi was a very dangerous enemy. To put him down large Maratha armies had to be employed now and then which deprived him of his hinterland and so of the resources. He was reduced to dire straits and had to subsist by boldly roving on the sea. To prevent his depredations on water and to starve him out, a navy was essential. This was the direct cause of the emanation of the Maratha navy.

The navy has been considered as an independent limb of the Maratha State by Amatya in his *Rajaniti*, a work on Maratha polity. Though a man of Shivaji's understanding might not have lost sight of the economic aspect of the navy, i.e. sea-trade, its precedent condition was the acquisition of sovereignty of the sea. It could be exercised only by an armed navy. Then, as

1. JSSB. 63. Sabhasad was a biographer of Shivaji.

at present, trade could prosper only under the shadow of armed protection. Sovereignty of the home seas, therefore, was the first objective of the Maratha navy and the economic factor was its corollary. But the corollary was not properly understood by the Marathas.

About the year 1657 the Imperial Mughals in their southern conquest had begun to cast their ominous shadows on the kingdom of Bijapur. Bijapur lost its most important fort Bidar¹ to the Mughals. Aurangzeb, the Mughal prince withdrew hastily from the theatre of war for more important matters in the north. The ill-success of Bijapur before the Mughals created confusion among its nobles. This baffling political situation offered an excellent opportunity for Shivaji. He crossed the Ghats and descended into North Konkan. The town of Kalyan² fell into his hands and Bhivandi followed suit. The fort of Mahuli was taken. Thus the Kalyan sub-division with some parts of the Thana district came under his power. He next proceeded southward in the district of Kolaba and conquered Surgad, Birwadi, Tala, Ghosalgad, Sudhagad, Kangori and Raigad. The last of these forts was chosen by him later as the seat of his capital. Mahad was not taken. By 1659 Shivaji became the master of North Konkan excluding the ports and the adjacent lands on the coast which belonged to the Siddis, the Bijapur kingdom and the Portuguese.

Between 1661 and 1663 in his conquest of South Konkan Shivaji attacked Dabhol, sacked Rajapur and brought the petty chieftains of Pallivana and Shringarpur³ to their knees. Almost the whole of Ratnagiri district came under his triumphant banner. But Kalyan was lost to the Mughals in spite of Shivaji's strenuous efforts to hold it and remained under them for nine more years.

When master of such a long coastal strip, he deemed it necessary to undertake the construction of a navy. Immediately after 1657 and sometime before 1659 Shivaji had set afloat the keel of his first ship in the creek of Kalyan. This was the early beginning of the Maratha navy.⁴

The first successful achievement in Shivaji's life after having built a small state navy, was the loot of Basrur, a place near Kundapur in South Kanara. In 1665 he attacked Basrur⁵ with 85 ships big and small and brought home immense booty. No naval engagement took place in this raid. However, this expedition stands as a landmark in the history of Shivaji's naval career as it proves the strength of the Maratha navy in the seventh year of its infancy.

Next, his expeditions against the island-fort of Janjira form a major part of his maritime activities. His land-forces could sweep the Siddi's territory and reach Danda-Rajpuri on the mainland opposite to the Janjira Fort without much difficulty. For a short period his army held the fort of Danda-Rajpuri.⁶ Here, his progress was as though stemmed by the waves. His battery every year bombarded the fort but to no purpose. His navy, it may be admitted, was not powerful enough to overpower the Siddis. In spite of his strenuous efforts the conquest of Janjira remained unaccomplished.⁷

1. S. R. SHARMA, *Mughal Empire in India*, II. 543.

2. *JSS*, 56.

3. *Ibid.* 84-5.

4. *BDCRI*, II. Nos. 2 & 3, 404-5.

5. *JSS*, 238.

6. When exactly Shivaji conquered Danda-Rajpuri is not known. However, the date when the Marathas lost it to the Siddis is February 1671. Also see *JSS*, 265.

7. For Shivaji's attacks on Janjira, see *JSS*, 262-72.

The last days of the Maratha chief witnessed a crowning naval success. In 1679 (October) Shivaji landed his men and material on the island of Khanderi. The fight lasted for five months. The quickness of the Maratha navy, their superior man-power and strategy won them the battle. The ships of their opponents, the English, were big and unsuited to quick movements in the shallow waters around Khanderi. However, their artillery was highly superior to that of the Marathas. Ultimately, the big number of the Maratha boats and their quickness prevailed and they got possession of the island of Khanderi. The Siddi who wintered in the harbour of Bombay every year by the permission of the English was henceforth forbidden to do so.¹

Shivaji's relations with the English on the whole were not amicable.² He looted Rajapur factory of the English as they had provided his enemy — Siddi Johar — with grenades when the latter had besieged him in the fort of Panhala. The ground of the factory was dug up in search of hidden treasure and prisoners were carried.³ They were released after a long time and the indemnity of the Rajapur factory loot was never fully paid. Their factory at Hubli also suffered at the hands of Shivaji. The promise of the English to help Shivaji in the capture of Danda-Rajpuri, which he needed most, turned hollow. It was given just to get the indemnity for the loot of Rajapur and the release of their men.⁴ The interest of the English came into real danger when Shivaji landed his men and material on the island of Khanderi. Khanderi in the hands of a powerful enemy like Shivaji was a dagger perpetually pointed at the heart of Bombay. The English opposed his design but they had to retire without success.

His relations with the Portuguese were not inimical as his main territory touched the Portuguese possessions only at a few points. They accepted his equality at sea.⁵ The other occasions of friction between the Portuguese and Shivaji are not important from the naval point of view. However, his petty engagements with the Portuguese and the English credit the Maratha navy with daring.

Shivaji had a regular May fleet trading in salt.⁶ He fitted three-masted vessels specially meant to trade with Muscat⁷ and Mocha.⁸ These and other activities point out how thoroughly Shivaji realized the importance of navy as an instrument of sea-trade. Navalism generally thrives under the shadow of trade. But unfortunately the successors of Shivaji do not seem to have realised the full meaning of the good beginning he had made.

1. *BDCRI*. 4. 1. 81-90. September 1942 (B. K. Apte. Capture of Kennerly Island by Shivaji).

2. The first breach between Shivaji and the English took place in January 1660. See *JSS*. 342.

3. *JSS*. 344.

4. *Ibid.* 349-50.

5. *Ibid.* 362-5.

6. *PERS.* i. Letter 189. Shivaji's salt fleet seen near Bombay was escorted by a ship of 250 tons and some frigates. For Shivaji's salt fleet see the following references:

PERS. i. Letters 189, 302, 385, 399 and Part ii. Letters 17, 277, 281-2.

7. Shivaji's trade with Muscat. See *PERS.* II Letter 11. The *Subhedar* of Kalyan was building a large vessel. At Rajapur he had 4 to 5 three-masted vessels which were to be employed in trade with Muscat and other places.

8. *PERS.* i. Letter 52^a (A.D. 1662-63). Shivaji was fitting two vessels of great tonnage at Rajapur for Mocha. For Shivaji's Mocha trade see the following references:

PERS. i. Letters 52-3, 63, 365, 374.

The numerical strength of Shivaji's navy has been estimated by scholars at 200¹ ships, big and small. But Sabhasad and Chitnis put the figure at 400, not an improbable figure if we are to take into consideration the mercantile marine too.

Daulat Khan and Mai Nayak Bhandari were the noted admirals of Shivaji.

Sambhaji—The career of Sambhaji though short was eventful. Personally he was more adventurous than his illustrious father.

Sambhaji had a moderate navy of 50 *gurabs* and 120 *galbats* mainly intended to curb the Siddi's marauding activities. He threatened to punish the Portuguese and the English as they observed neutrality towards him.

In July 1681 quarrels broke out with the Siddis regarding Khanderi and Underi. The latter was taken by the Siddis in 1679, when Khanderi was captured by Shivaji. Sambhaji attacked Underi but returned without success. He later retaliated this defeat by burning many a coastal town belonging to the Siddi.

In 1682, Sambhaji's fleet of 30 ships proceeded to obstruct the Mughal commander at Mazgaon in the Bombay harbour. The Siddis with 15 sail were waiting in readiness in the Thana river. Sambhaji's fleet was defeated and four of his ships including the flagship of the Maratha admiral were captured. Upon this, Sambhaji took the island of Elephanta and started fortification work with a view to checking the activities of the Siddis taking refuge in the Bombay harbour. But having learnt the Mughal plan to oust the English from Bombay he changed his design and sent his ambassador to Bombay for befriending the English. However, nothing came out of this.²

In 1682, the island of Janjira was besieged by Sambhaji. The seige lasted from January to August. The Marathas raised the siege without being able to conquer the island-fort. Two months later in a naval engagement near Bombay with the Siddis, the Maratha navy had to suffer a defeat.³

Sambhaji and the Portuguese—The breach between these two powers began by July 1682, when Sambhaji's admirals captured some merchantships belonging to the Portuguese subjects. Moreover, he had entered into an alliance with the Arabs and had admitted them in his service. The Arabs were the permanent enemies of the Portuguese, now only smarting under the sense of lost glory. Yet an alliance between Sambhaji and the Arabs was a great menace to the Portuguese. The allies captured Portuguese ships and divided the spoils. When complaints against these acts failed, the Portuguese arrested Maratha vessels on their way to Vengurla from Kanara in retaliation. Soon after, Sambhaji was engaged with the Mughals and the breach between him and the Portuguese had to go unnoticed.⁴

By April 1683, the last of the Mughal troops withdrew from Konkan and the hostilities with the Portuguese were resumed.

1. SMSM. 179.

2. LHIN. I. 70-1.

3. KVM. 26.

4. Ibid. 27.

On 15th April 1683, Sambhaji invaded the northern possessions of the Portuguese and laid the country waste. At Tarapur his army received stiff resistance and suffered a heavy loss.

Cheul was the next target of Sambhaji's attack which afterwards led to the battle of Phonda and the invasion of Goa by the Marathas.¹ These were all land operations. But the capture of Karanja and the occupation of St. Estevas for a short time were noteworthy successes. The details of these naval operations do not seem to have been recorded.

In the treaty concluded between Sambhaji and the Portuguese in 1684, mutual non-aggression at sea was conceded to, by both the parties. Thus, the right of equality on the sea was re-established by Sambhaji.²

With the execution of Sambhaji, ended the early part of the history of the Maratha navy. Under Rajaram no achievement was possible for the Maratha navy as a great catastrophe had befallen the country. It is noted that Rajaram's family, when hard-pressed by the Mughals, escaped from Rajapur by sea to some South Indian harbour in order to join him at Jinji.³

By 1680 the chief officers administering the Konkan posted at Khanderi, Sagargad, Rajkot, Kolaba were respectively Mankoji Marathe, Udaji Padval, Subhanji Kharade and Bhivaji Gujar, of whom the last one was the most noted.⁴

Kanhoji Angre—Kanhoji Angre deserves a high place among the first rate seamen of his times, both Indian and foreign. Among the Marathas themselves he was easily the best. In contrast with the Europeans who had settled on the Indian coast, his major shortcoming was lack of scientific knowledge in nautical matters. For instance, he never seems to have made any serious attempt to manufacture guns and scientific apparatus required for the navy. He was neither keen in undertaking a trans-oceanic voyage out of simple curiosity, nor eager to organise a mercantile marine which feeds a naval power. This was beyond the understanding of Kanhoji. He just shared this shortcoming with his countrymen who were medieval in their thought and action, when their European contemporaries were taking long strides in the scientific field. But in respect of personal courage, skill in organizing the navy, and knowledge of naval warfare, Kanhoji was as good as any seaman of his day.

By birth and training the sea was in Kanhoji's veins. As a young boy he must have heard of the sea exploits of his father Tukoji Angre. Tukoji was assisting Shahaji Bhosale in the battle of Cheul in 1640, when the latter was engaged in the conquest of Konkan. Later Tukoji entered the services of Shivaji and rose to the rank of a *Killedar*, keeper of the fort, of Suvarnadurg in 1659.⁵ Though information regarding Kanhoji's boyhood is not available one can imagine that the observation of ebb and neap-tides, and the sight of a wind-filled sail of a *gurab* gliding on the waves, must have created a liking for sea-career in the boy. Now and then he might have heard of a naval engagement with great curiosity or actually seen one from the fort of Suvarnadurg. On some occasions a foreign ship taken as a prize bringing fortune must have filled his mind with the ideas of sea romance.

1. *MJBU*. 11.4.31-3.

2. *KVM*. 31.

3. JAMES GRANT DUFF, *A History of the Marathas*. I. 314.

4. *DKA*. 20. These officers worked at their respective headquarters till they were forced to leave them during the Mughal invasion in 1689.

5. *DKA (Shakavali)*. 3.

If 1669 is to be taken as the year of Kanhoji's¹ birth it follows that Tukoji Angre must have died some time later. During the reign of Chhatrapati Sambhaji his officers in Konkan, Sambhaji Kharade — Rajkot, Mankoji Suryavamshi — Khanderi, Udaji Padval — Sagargad and Bhivaji Gujar — Kolaba, were assisted by Kanhoji Angre who was freely roving on the sea.² After Sambhaji's defeat by the Mughals, Cheul went under their rule and all the Konkan officers except Bhivaji Gujar took refuge in the fort of Prabalgad. Only Bhivaji Gujar and Kanhoji Angre stuck to their places — Kolaba and Khanderi respectively. In the political tangle following the tragic death of Sambhaji, Kanhoji Angre along with the Gujar defended the coast from the depredations of the Mughals and the Siddis. Later, when Sidhoji Gujar was called by Rajaram to Jinji, Kanhoji, it seems, was temporarily in command of the navy. In appreciation of his service, Rajaram after returning home was pleased to bestow upon Kanhoji the title of *Sarkhel*. It seems that by 1698 Sidhoji Gujar was dead.³ Some historians consider that *Sarkhelship* was granted to Kanhoji with Vijaydurg as his headquarters by Tarabai as early as 1694. They seem to forget that she could not possibly do so when Rajaram was yet alive.⁴ In a letter of 1699 quoted by Dhabu, Kanhoji Angre styles himself as *Sarkhel*.⁵ Kanhoji's career prior to 1693 cannot be detailed as original papers about him are scanty. In 1695, he was on a pilgrimage to Tryambakeshwar near Nasik. A register of pilgrims in the possession of a local priest mentions Kanhoji, the son of Tukoji, as *Subhedar* with his seat at Suvarnadurg.⁶ During the stormy times of Sambhaji and Rajaram, Kanhoji distinguished himself as an able seaman. At any rate, before the death of Rajaram, Kanhoji seems to have received the honorific title *Sarkhel*. Earlier Kanhoji made himself known in many a skirmish with the Siddis.

With Shahu's home-coming the Maratha country was faced with a new situation. The loyalty of the Maratha nobility was divided between the parties of Tarabai, the Queen dowager, and Shahu. By the law of primogeniture, the latter's claim to the Chhatrapati's *gadi* was legitimate. But Tarabai had actually ruled with her husband during Shahu's captivity. Moreover, by the time Shahu was released by the Mughals she had a seven-year old son named after the great Shivaji. It was but natural if she aspired to put her son on the ancestral throne. The question could be decided only by recourse to arms. When the matter came to a head, Kanhoji threw his lot with Tarabai. During the war of independence he had obeyed the orders of Ramchandrapant Amatya, at one time, the right-hand man of Tarabai. He had no affinities for Shahu who was a newcomer. Kanhoji, as Tarabai's man, took the forts of Rajmachi, Tunga-Tikona and Dhanagad, and threatened to march on Poona and Satara. Bahiropanth Pingale who was sent against Kanhoji was himself made a captive. The only person capable of facing the situation was Balaji Vishvanath Bhat. He was invested with the robes of Peshwaship and ordered to proceed against Kanhoji. He pitched his camp near Lohgad. Balaji and Kanhoji had known each other before. The former's general policy was to take the line of least resistance wherever possible. He tried to win over Kanhoji to Shahu's side by negotiations and was successful.⁶ Kanhoji was well-aware of Balaji's ability and wisdom. Besides, his own territory

1. *DKA (Shakavali)*, 8.

2. *RMIS*, III, 511.

3. *DKA (Shakavali)*, 5.

4. *Ibid.* Tarabai could not have bestowed the title.

5. *DKA (Shakavali)*, 13, 7.

6. *SCS*, 100-4.

at this time was threatened by the neighbouring sea-powers. The result was that these circumstances coupled with Balaji's persuasive powers brought Kanhoji into Shahu's camp without having to shed a drop of blood or fire a single shot. This was Balaji's greatest diplomatic feat. To the credit of Kanhoji it must be said that he grasped the age-old principle that Konkan was not safe unless backed by the main power on the hinterland. In the treaty concluded between Shahu and Kanhoji, the latter obtained ten sea-forts and sixteen land-forts. He was confirmed in *Sarkhelship* and accepted the overlordship of Chhatrapati Shahu. It was decided that every year in the fair season after *Dasara*, the Peshwa should descend into Konkan and exterminate the Siddi and the *Phirangis*. Kanhoji, by this treaty, received territory worth Rs. 34 lakhs revenue.¹ He was now free to deal with the sea-powers who often questioned the sovereignty of the Marathas over the sea.

As the admiral of the Chhatrapati, Kanhoji could use his own seal. Couched in the dignified Sanskrit, it read, "by the pleasure of King Shahu, the seal of Kanhoji *Sarkhel*, the son of Tukoji, is always victorious".¹

At this time the different sea-powers, among whom the coast of Konkan was divided, were, the Portuguese with their northern headquarters at Bassein, the English at Bombay, the Angres at Kolaba, the Siddis at Janjira, the Panhalkar Chhatrapati at Malvan, the Savants of Wadi, the Dutch at Vengurla, and again the Portuguese at their southern headquarters, Goa.² The ancient port of Cheul was also under the Portuguese.

Kanhoji had to deal with these powers severally or collectively as the situation demanded. Throughout his career scarcely a season, or a month passed without some naval engagement. Kanhoji Angre as the admiral of the Chhatrapati had every right to levy tariff, to force ships of all nations to purchase his passport, and to negotiate with any power he liked. But these rights had to be executed by the simple rule of might. Kanhoji Angre who had risen to the status of an admiral by the dint of his merit was justified in following this rule. If the Siddis, the *Phirangis* and the *Topikars* acquired territory, carried on trade, and ruled the waves on the authority of their distant sovereigns, how could Kanhoji's right in these matters be questioned when he had the sanction of the Chhatrapati. The English and the Portuguese in addressing Kanhoji as a pirate have simply betrayed their hatred for one who challenged their authority. One can understand this psychology but in view of the practice that was prevailing the remark becomes meaningless.

Kanhoji and the Siddis—After Sambhaji's death, the *Desha* — upland — as well as the Konkan were occupied by the Mughal forces. Sambhaji's wife and son were taken captives. Rajaram was obliged to flee to Jinji as a tactical move. This calamity which befell the Marathas was the proper opportunity for the Siddis to extend their sway over Konkan. They recovered a number of places which they had lost to Shivaji, and were put in charge of Raigad, the capital of the Marathas, Mandangad and Ratnagiri by the Mughal officers. Their occupation of the ports of Rewas and Thal impeded the movements of the Maratha ships at Kolaba and in the Pen river. In this dire hour it was Kanhoji Angre who by his daring exploits kept the Maratha flag flying over Kolaba and Khanderi. He forced the Siddis and the Mughal *subhedar* to share with him half the revenue of certain places which they had taken possession of.³

1. DKA. 16, 74.

2. SCS. 91.

3. DKA. 20.

In 1697 when Kanhoji shifted his headquarters to Kolaba, the Siddis as well as the English were very much disturbed. In fact it was a challenge to these powers to try their strength with the comparatively new adversary.

As early as 1698 the Siddis attacked Kolaba without being able to punish Kanhoji. Similarly, their attempt to take Kolaba and Khanderi in 1701 ended in a failure.¹ A concerted attack on the Angrian territory by the Portuguese, the Siddis and others was foiled by Balaji Vishwanath in 1714.² The treaty between Shahu and Kanhoji greatly disturbed the Siddis as it transferred a number of places belonging to the former to Kanhoji's jurisdiction. By experience Kanhoji had learnt that an attack on Janjira without the aid of the land-power was hazardous.

Kanhoji and the English—Ever since Kanhoji made Kolaba the main station of admiralty, the English were ill at ease. They became all the more restless when the island of Khanderi passed under his command. Kolaba and Khanderi were within a couple of hours' sail from Bombay in a favourable wind. Khanderi could easily keep a watch on the English vessels entering Bombay waters. Nearness of a daring seaman like Kanhoji when unfriendly, was bound to endanger trade and peace of Bombay.

It was the studied policy of the English to regard the enemies of Kanhoji as their friends. For the English the idea of crushing Kanhoji, single-handed, was not feasible. They were, therefore, determined to give all possible aid to the Siddis and to make use of them "as foil to the Angria".³ With regard to the practice of the English to allow their friends to fly their flags and thereby avoid the purchase of passports was never accepted by Kanhoji. He also contended that outside the ports — beyond some specified limit — he was free to deal with any vessel as he pleased. Viewed in this light, any treaty between the English and Kanhoji was destined to be null and void at the slightest disturbance of the balance of power.

In 1702, Kanhoji captured near Calicut a merchantship with its English crew, as it was without his passport. After four years i.e. in 1706 the Marathas and the Angres captured three English ships of which the *Diamond* had 12 guns.

In 1712 Kanhoji seized a yacht of the Bombay Governor along with the *Anne* of Karwar. The next year Kanhoji agreed to the terms proposed by the English and temporary peace was effected. The substance of the terms was as follows :

- (1) Kanhoji was to return to the English the ships which he had seized from them and their people.
- (2) He was neither to molest the English ships nor those of their merchants.
- (3) He was not to molest ships of any nationality entering into the English harbour or in sight of it i.e. between 'Mahim stakes and Cundry' (Khanderi).
- (4) Kanhoji was to allow the English merchants to come to his ports on payment of due customs.

1. DKA (Shakavali), 6.

2. DKA, 7.

3. BANAJI, *Bombay and the Siddis*, 55.

- (5) The English promised that they would not allow any ship to sail under their colour except that of their subjects.
- (6) The English granted Kanhoji the liberty to trade in their Bombay port on payment of regular customs.¹

These terms throw considerable light on the question of the sovereignty of the sea.

According to this treaty, Kanhoji returned the two English ships he had taken. The peace did not last long. The correspondence that passed between Governor Boon and Kanhoji shows how the former was smarting under his own incapacity to punish Kanhoji.

In 1717, the ship '*Success*' belonging to the English broker Govardhandas was captured by Kanhoji. When talks regarding its recovery were in progress another ship *Robert* fell a victim to Kanhoji's aggression. He refused to return the ship on the plea that it belonged to the Moors. Kanhoji was a pastmaster in matters of interpretation even if there was slight ambiguity. Within a couple of months from the *Robert* incident Kanhoji made prize of yet another ship the *Otter*. These excesses of his goaded the English to the point of desperation and they detained at Mahim a *shibar* belonging to Kanhoji. At last on 17th June 1718, war was declared against Kanhoji.² The English led expeditions against Khanderi, Kolaba and Gheria without success.³ In 1720 the English lost their ship *Charlotte* to Kanhoji, and the next year they entered into an alliance with the Portuguese against their common enemy. This joint attack failed miserably,⁴ Kanhoji's prestige was enhanced and he continued to make prize of the English ships whenever he could. The last three years of his life were spent comparatively in peace.

Kanhoji and the Portuguese—The lawlessness of the Siddi had greatly disturbed the Portuguese. Kanhoji also by the protracted struggle with the Siddi was very much perturbed. Driven to despair he asked the help of the Portuguese which was readily given. An alliance was formed between Kanhoji and the Portuguese against the Siddi in 1701. It was kept a close secret as the Siddi was the admiral of the Mughals with whom the Portuguese dared not break into open hostility. Till 1708 peace existed between Kanhoji and the Portuguese. But no sooner was the Mughal menace over than Kanhoji threw this friendship to the winds and started seizing Portuguese ships.

The consequence of this breach of friendship was intermittent warfare till 1722, between the two powers with varying success. In 1708 Kanhoji captured some Portuguese ships. In retaliation, the latter marched on Cheul but were defeated by the overwhelming number of the Marathas, 2,000 against 400 of their own.

In 1712, Portuguese merchant *flotilla* except for the flag-ship, going to the north, was captured by Kanhoji's people. But in the other naval engagements, one in 1713 near Cheul and the next in 1718 near Karwar, the Angrian fleet was defeated with heavy losses.⁵ The Angre's fleet no doubt pounced upon a singled out ship and sometimes upon a group of them, when

1. SMSM. 197-8.

2. Ibid. 200-2.

3. DKA (*Shakavali*). 10.

4. SMSM. 206-8.

5. MIBU. 37-42.

chances of success were better for them, by avoiding open sea-fight as far as possible. But more often than not their navy was defeated by the Portuguese. On the other hand Kanhoji proved his superiority on land when his coastal strongholds were attacked by the combined forces of the English and the Portuguese. Once in 1720 a loosely combined attack of the English and the Portuguese on Kolaba and Vijaydurg was repulsed. Again, in 1721 an Anglo-Portuguese union threatened Angres' territory. The combined army reached the gates of Kolaba on the 21st of September. Attempts to pound the walls by erecting batteries were foiled as the labourers were panic stricken by the Angrian army. At this stage a force of 6,000 horse under Bajirao I, sent by Shahu stopped the war. It would have been a sheer folly to fight with so vast an army and the Portuguese Viceroy concluded a treaty of peace with Bajirao on 12th January 1722.¹

Sekhoji alias Jaysing Angre—Sekhoji was invested with the robes of *Sarkhelship* within a few days after the death of his father. The robes were presented to him at Alibag by one Avuji Nilkanth on behalf of the Peshwa. Sekhoji was well-aware that the office of admiralty was not a bed of roses.² He had to struggle hard with the neighbouring sea-powers in order to maintain the prestige of his much dreaded father.

At the outset of his career the English formed an alliance against him first with the Savants of Wadi, and later with the Siddis of Janjira.³ They were not prepared to let go any opportunity to destroy the sons of Kanhoji. It seems that they were out to do what they could not, during Kanhoji's life-time.

The English ship *Rose* taken as a prize by Sekhoji was returned when their attitude towards him became temporarily amicable.

During his regime the relations between the Marathas and the Portuguese were strained on the question of the payment of *Sardeshmukhi*. The latter, in consequence, sent a fleet to assist their army in action at Kalyan. Under the stress of bad weather when the fleet sought refuge at Vijaydurg, Sekhoji attacked it. The Portuguese thereupon charged him of having violated the treaty of 1722. But Sekhoji could not help the situation as the Chhatrapati, his sovereign, had decided to ignore it. Once peace was broken Sekhoji boldly made prize of Portuguese ships. He captured two of their *pals* and one *galbat*. In 1733 Sekhoji's squadron of eleven *galbats* fearlessly obstructed free movements of ships in the Goa harbour.⁴

In the same year when Shahu and Bajirao led a campaign against the Siddis, Sekhoji helped them whole heartedly. In this campaign the English openly sided with the Siddis. They even went to the extent of appealing to the Mughal emperor for help, offering to protect his interests on the west coast, a task which the Siddi was unable to fulfil by himself. The Portuguese in their own way sent two ships to Janjira under the pretext of mediation. Bajirao with Sekhoji's assistance humbled the pride of the Siddis. The latter surrendered all important places, including Raigad with the exception of Janjira proper and Anjanwel. The cherished dream of Shahu was thus practically accomplished by the joint efforts of the central authority and its dependent coastal power — the Angres.

1. *MJB*, 42-5.

2. *DKA* (*Shakavali*), 5, 22.

3. *DKA*, 64-6.

4. *SMSM*, 215.

Sekhoji was equally successful in solving household problems. By his character and personality he was able to control the rivalry between his two brothers Sambhaji and Manaji. However, when his moderating influence was removed by death in 1734, the smouldering fire of family feud exploded shattering the unity of the Angre family.

The premature death of Sekhoji Angre was indeed a great loss to the Maratha navy.

Sambhaji Angre—The expected discord between Sambhaji and Manaji culminated in a bloody war immediately after Sekhoji's death. The English sided with Manaji, the weaker of the two, and Bajirao Peshwa also came to his assistance. Bajirao had to settle the difference between the two brothers by force. The Portuguese took up Sambhaji's side at first but finding his promises slippery, deserted him, and opened up negotiations with Manaji. In this internecine war Sambhaji's arms were victorious everywhere at the beginning, and Manaji was forced to flee for life from place to place. But by the Peshwa's timely mediation a treaty was concluded between the two brothers in February 1735. The coastal region was divided between Manaji and Sambhaji with their headquarters at Kolaba and Suvarnadurg respectively. The title '*Vajarat-mab*' was conferred upon Manaji, while Sambhaji continued to hold the hereditary title '*Sarkhel*'.¹

This patched up treaty was destined to be short-lived. In 1740 Sambhaji rushed into Manaji's territory, took Hirakot, including many other places, and threatened Kolaba itself. But for the Peshwa's assistance, Manaji would have been driven out of Konkan by his brother. Sambhaji was forced to retire in despair, when defeated by the Peshwa. The English had at this time come to the help of Manaji. Chhatrapati Shahu and the Peshwa helped Manaji and posted him at Kolaba as they felt that their interests in Konkan would remain safe under him than under Sambhaji.

Sambhaji's sea-exploits were as daring as those of his father. He continued to harass the English and make prize of their ships. In 1735 he inflicted a severe blow upon the English trade by attacking with his five *gurabs*, the *Derby*, a large East Indiaman. After a severe engagement the vessel was captured with large naval supplies on board. He also captured *Ann* and several other small vessels laden with valuable cargo. In 1738, thirteen *galbats* and nine *gurabs* belonging to Sambhaji ensued from the port of Gheria and sailed along the shore. Commodore Bagwell, who sighted the Angrian ships, chased them with his four cruisers. The Angrian ships lay at anchor in the Rajapur river and avoided an engagement. The chase ended in a failure. In the year 1739 Sambhaji boldly proposed that the Company's ships should provide themselves with his passports and pay him annually Rs. 20,00,000 for free navigation of the seas.² This proposal bears testimony to Sambhaji's growing power.

On January 9, 1739, Sambhaji singled out the English ship *Harrington* sailing along with *Pulteney*, *Cores* and *Halifax*. His fleet fired its bow-guns on the *Harrington* but finding it superior in tonnage and build, opened its broadside. After a contest of five hours Sambhaji's fleet sailed away. The next morning it again approached the *Harrington*. In the engagement that ensued the entire fleet of Sambhaji withdrew when the admiral's *gurab* was damaged. On 9th November of the same year, when some of the Company's ships were wrecked in a storm, Sambhaji boldly entered the Bombay harbour and carried away 14 fishing boats with a crew of 84 on board.³

1. DKA. 95.

2. DKA (*Shakavali*). 82-3.

3. LHIN. 115.

The English ketch *Salamander* captured by Sambhaji off Kolaba, was rescued by his brother Manaji. On another occasion seven *gurabs* and eight *galbats* of Sambhaji after engaging the *Montague* and *Warwick* took away five vessels of the Company and a Portuguese ketch.¹

Sambhaji's relations with the Portuguese were not very happy. He seized their vessels on every favourable occasion. In 1735 a Portuguese fleet was engaged by two *pals* of Sambhaji but the engagement was given up after a short time. In 1738 a Portuguese *pal* belonging to the port of Diu (Div) surrendered to Sambhaji's captain without a fight. The same year five *pals* and eleven *galbats* of Sambhaji captured the Portuguese *Pataxo* of war which had on board valuable merchandise belonging to the merchants of Goa. He also made prize of three *Paranges*, one of which was carrying cash of Rs. 40,000. Sambhaji at this time seized two Dutch ships and took them to Gheria. In order to avenge this, the Dutch, joined by the Portuguese, appeared before Gheria. The joint plan of attack ended in a failure and the fleet retired.²

In 1739, the Portuguese frigate *Nossa, Senhora, Da Victoria* with 47 *Paranges*, on its return journey to Goa, was sighted by Sambhaji's seven *galbats* and ten *pals* lying in wait. An engagement took place near Mangalore lasting for one full day. The Angre's fleet had to retire in the face of superior artillery of the enemy. Next year Sambhaji's fleet lowered the prestige of the Portuguese by capturing their grain-ships. His fleet met the Portuguese frigate *Oliviera* near Gheria but after some fighting left it and entered the port of Honavar. Sambhaji learned that the Portuguese grain-ships with a convoy of two *pals*, two *galbats*, two galleys and a *charrua* were passing by Honavar, and swiftly pounced upon them. After little resistance the Portuguese surrendered and the grain-ships were carried by Sambhaji within sight of Anjadiv.³

Though as an admiral Sambhaji was equal to his father, he lacked the latter's sagacity and wisdom in political matters. He ought to have realised that a divided house strengthened the hands of a third party. The unity of the Angre house sapped by family dissensions was never repaired. Sambhaji did not render any assistance to the Peshwas even when the whole Maratha country was engaged in a life and death struggle with the Portuguese for the emancipation of North Konkan during 1737-39. This attitude speaks for the separatist tendency among the leading Maratha noblemen.

Sambhaji died on 12th January 1742 after a short illness.

Manaji Angre—Manaji had the backing of the Peshwas against his brother Sambhaji. The title *Vijarat-Mab* was conferred upon him and he was posted at Kolaba. In the Bassein campaign Manaji helped the Peshwas.⁴ He, however, occupied the island of Karanja for himself. Once the struggle between Manaji and Sambhaji was settled the Peshwas gradually lost interest in Manaji. Moreover, the Peshwas coveted the mastery of Konkan especially after the capture of Bassein. When Manaji besieged the island of Karanja, Bajirao instructed his brother Chimaji to see that the possession of the island would come to them. Manaji had purposely avoided Peshwa's

1. *LHIN.* 119.

2. *SMSM.* 218-9.

3. *Ibid.* 229.

4. *DKA.* 137.

help in the conquest of Karanja. This rivalry between the Peshwas and Manaji is just an instance of how one Maratha nobleman coveted the territory of another.¹

Manaji's relations with the English were friendly in the beginning but later they seem to have deteriorated. Manaji, like his brother, preyed upon the vessels of the English and the Portuguese. In November 1739 Manaji hoisted his flag on the island of Elephanta or Gharapuri.² This was a serious threat to the English who were in possession of the neighbouring Butcher's island. Again when Manaji took Rewari on the river Pen, it created great anxiety for the English at Bombay. For, Manaji was now in a position to keep a watch over the movements of English ships in the Bombay harbour.

Manaji died in 1758.

Tulaji Angre—Tulaji became *Sarkhel* after the death of his brother Sambhaji, with his headquarters at Vijaydurg. Anjanwel which had successfully defied the Maratha arms so far, fell before Tulaji's might in 1745.³ It was one of the greatest achievements to the credit of Tulaji in the history of the Marathas for the liberation of Konkan. The fort was renamed Gopalgad.

Tulaji was perhaps the most dreaded buccaneer on the west coast by the mid-eighteenth century. Ships of all nationalities purchased his passport. He probably broke the record of his predecessors in making prize of foreign ships. Among some of the ships taken by him may be mentioned the *Charlotte* of Madras, the *William* of Bombay, the *Severn* of Bengal, the *Derby*, the *Restoration*, the *Pilot*, the *Augusta*, the *Dadabhoi* of Surat, the *Rose* of Mangalore, the *Ann*, the *Benjimalli* of Malabar and *Phate-daulat* of Muscat.⁴

Tulaji was completely defeated in the battle of Vijaydurg in 1756 by the Peshwa and the English. His armada was burnt and he was made a prisoner for life.

It is really a sad event in the naval history of the Marathas that an admiral of Tulaji's achievements should have been exterminated by the Peshwa with the help of the English. Tulaji was a terror to the alien sea-powers on the Konkan coast. His defeat first at Suvarnadurg (1755) and later at Vijaydurg (1756) by the combined armies of the Peshwa and the English practically put an end to the Maratha naval power. In consequence, this helped the English plant their power on the west coast. From the national point of view this proved to be disastrous. But a dispassionate view of the Peshwa-Tulaji affair would show that the root-cause of the latter's

1. *SPD*, XXXIV. Letter 179. Prior to this incident the relations between Shankarajipant Phadke and Manaji were not friendly either. The former was Peshwa's officer at Bassein. Manaji had captured a ship of a certain merchant by name Nathas, in whom Shankaraji was interested. As an answer to this move Shankaraji captured a ship of Kharepatan possessing Manaji's permit. Manaji demanded its release through Chimajiappa. But shrewd Shankaraji explained to Chimaji how it was a question of right rather than the mere release of a ship. See *KVM*, 105.

In 1744 Peshwa's men took the fort of Bhairavgad belonging to Manaji. To retaliate, the latter dispatched 3 *gurabs* and 30 *galbats* to Bassein to impede the Peshwa's armada. See *DKA (Samalochana)*, 85.

2. *DKA (Samalochana)*, 84.

3. *DKA*, 160.

4. *SMSM*, 229.

tragic end lay in the feudal system of the Marathas. In the mid-eighteenth century the whole coastal strip from Daman to Goa was divided among the Maratha noblemen — Peshwas at Bassein, Manaji Angre at Kolaba, Tulaji at Vijaydurg, Savants at Wadi, and Kolhapurkars at Malvan. Moreover, up the coast different forts and villages were under these and other feudal lords as settled by mutual treaties, entered into, on different occasions. The liege lord — the Chhatrapati — too had his own places in Konkan. In theory he was the ultimate sovereign, but in practice he had to compromise with his noblemen. Under these circumstances one nobleman often extended his territory at the cost of another, and when matters took a serious turn the Chhatrapati or the Peshwa or some other influential noblemen mediated bringing about a settlement. But on such occasions the mediating person demanded for himself some portions of the territory from the disputants. Thus, the Peshwa demanded for himself a few places when he settled the dispute between Sambhaji and Manaji. But this, in no way remedied the defects of feudalism. It actually complicated the issue. The Maratha noblemen, including the Chhatrapati, and the Peshwa, looked upon their territorial possessions as their private estates. Tulaji's defeat by the combined armies of the Peshwas and the English was just his misfortune. That was in no way considered as a national loss either by the Peshwa or the partisans of Tulaji. Had Tulaji been successful in this war, matters would not have changed fundamentally, though perhaps, the destruction of the Maratha navy would have been put off for the time being.

This war on Tulaji had its own causes. Tulaji had continuously defied the authority of the Peshwa. In fact the Peshwa and Tulaji were never on good terms. Tulaji had also invaded the territory of the Savants of Wadi, and had many enemies from among the Maratha noblemen. In making the Peshwa his enemy Tulaji completely ignored the principle which his father and brother had been scrupulously observing, viz. not to alienate the major land-power. He perhaps overestimated his own strength. He forgot that the resources of any power in Konkan were limited compared with those of the major land-power. Tulaji's fate was sealed when the Peshwa and the English decided to make a concerted attack on him. Invitation to the English from the Peshwa, for an alliance against Tulaji, was a god-sent opportunity they had been waiting for since long. Had Chhatrapati Shahu been alive, perhaps, the tragedy could have been averted.

It cannot be gainsaid that the destruction of Tulaji's navy was a great national loss. But neither the Peshwa nor Tulaji were fully aware of what they were doing while heading towards a war. The Peshwa had to take up arms against Tulaji who was defying his authority. Tulaji, too, was perhaps justified in considering himself as the Peshwa's equal as both were servants of the Chhatrapati. The relations between the Peshwa and the other noblemen were never well-defined. A clash between different noblemen trying to assert themselves was thus inevitable. The Peshwa in soliciting the help of the English never thought for a moment that his act was against the interest of the Maratha State. He had a feeling that he was simply taking the help of the English in order to put down a recalcitrant nobleman. Neither could Tulaji be said to have in mind a feeling that he was maintaining a navy for the service of the Maratha State.

Thus, it can be stated in conclusion that feudalism in the main, coupled with lack of foresight, led to this mutually destructive war between the Peshwa and Tulaji.

With Tulaji's defeat the glory of the Maratha navy faded away and the Marathas, though active on the sea, were reduced to a mere maritime community. The province of Vijaydurg

taken from Tulaji was placed under the admiralty of Anandrao Dhulap, and Suvarnadurg was made over to Ramaji Mahadeo. After Ramaji's death the charge of Suvarnadurg was given to Haripant Phadke.

Raghuji Angre—Raghuji succeeded Manaji at Kolaba. The combined navies of the Peshwa and Raghuji captured the island of Underi from the Siddi in 1760. Raghuji rendered help to the Peshwas in arresting the pretender Bhausahab in the years following the Third Battle of Panipat. In 1781, the records in the fort of Kolaba along with the other valuable material were consumed by a huge fire.¹

Raghuji's ships still rode the sea. But the glory of the Angrian navy had by this time become a mere myth.

The history of Raghuji's successors is an account of the family disputes in the Angre house without any notable naval events. After the subjugation of the last Peshwa, the Angre family became the feudatory of the English, and their small State was annexed to the neighbouring British territory in 1840 when the house had no direct male heir.²

The Navy under the Peshwas—The Peshwas established their independent naval *Subha* after the conquest of Bassein in 1739, and as seen before they had appointed their officers at Suvarnadurg and Vijaydurg, after Tulaji's defeat in 1756. They tried to establish their sovereignty by capturing foreign ships, and issuing permits.³

Madhavrao I landed his men in the harbour of Honavar by way of sea in his war with Haider Ali. The navy was then under the command of Rudraji Dhulap.⁴ In the first Anglo-Maratha War the performance of the Maratha navy was very poor.⁵ The Poona government desperately sought the help of the French in order to put a stop to the growing English aggression. They actually wanted the help of the French navy. But this does not seem to have come about.⁶ The last and most glorious achievement of the Peshwa's fleet was the occupation of the island of Ximpi in 1791.⁷

Before the Ximpi incident a notable victory had been gained by Anandrao Dhulap over the English in a naval engagement (8-4-1783).

The English ship *Ranger* accompanied by 3 *shibars* and a *batela*, with ammunition, men and seven captains of note on board, was sailing to Calicut from Bombay. Near Ratnagiri the

1. DKA. 229, 233-4, 240.

2. SMSM. 232.

3. Ibid. 233.

4. *Marathi Samrajyacha Uttarardha, Khanda Pahlia*, Y. V. KHARE. Rudraji Dhulap landed about 8 to 10 thousand soldiers at Honavar on board 200 to 300 *machavars* and some big ships, and occupied the surrounding territory. Haider Ali's fleet at Honavar could not oppose the Peshwa fleet.

5. G. S. SARDESAI, *Marathi Riyasat Uttar Vibhaga I* (1929). 22-7. The first attack on the Maratha State was launched by the English on 12th December 1774. The English attacked Sahsette by land and sea. They captured the fort of Thana, Karanja and a few other neighbouring islands. Orders were issued from Poona to the commanders to march on the English possessions simultaneously by land and sea. The Angres and the Dhulaps were ordered to sail with their navies. But the English had occupied the fort of Thana before the Maratha succour reached it. The only thing that the Maratha navy could do was the burning of an English ship at Bassein.

English squadron was attacked by the Maratha navy. The *Ranger* had 12 guns. The English ships were too strong for the Maratha navy. But the Marathas ultimately overpowered them by launching a series of attacks inspite of the terrific fire of the English ships. The Marathas boarded the English vessels and cut their crew in a stubborn melee. The English ships were captured with great loss of men to them. In great triumph Anandrao carried the trophy to Vijaydurg. But he had to return the prize after the treaty of Salbai.¹

THE NAVIES OF THE RAJAS OF KOLHAPUR, THE SAVANTS OF WADI AND THE GAYAKWADS

Feudalism was the principal feature of the Maratha State in the eighteenth century. The Maratha confederacy was divided into a number of States. These States on many occasions acted independently irrespective of the interest of the Central Government. In the absence of absolute and effective control from the central authority the component parts fought among themselves and on many occasions challenged the centre. This naturally rendered the task of foreigners easy. Feudalism which proved ruinous to the Maratha State was equally detrimental to the Maratha navy.

The department of navy was fully under the control of the central authority throughout the reign of Shivaji. Its control was undivided throughout the admiralty of Kanhoji Angre. After the death of his eldest son Sekhoji, the Angrian house was divided between Manaji and Sambhaji. Sambhaji was succeeded by Tulaji who was hostile to the Peshwa. The rupture between Tulaji and the Peshwa culminated in the destruction of Tulaji's fleet which in fact was the destruction of the Maratha navy.

After Tulaji's death the whole of the Ratnagiri district as already observed directly came under the control of the Peshwas. The charge of admiralty was given over to the Dhulap family. A branch of the Angrian house ruled at Kolaba. Again, north of Kolaba the district of Thana was under the Peshwas since 1739, and they had created there an independent *subha*.

The port of Malvan was under the rulers of Kolhapur since 1731, by the Treaty of Varna. The rulers of Kolhapur had probably a small navy of their own at Malvan. In those times the pirates of Malvan were notorious. They were a dread even to the European powers.

South of Malvan, the coast between Goa and Malvan belonged to the Savants of Wadi. They had their own navy, however small. Before the rise of Shivaji they were the feudatories of the Bijapur Shahas. When the victorious arms of Shivaji reached Kudal they paid allegiance to him. However, they were never fully loyal to the Maratha State and enjoyed a sort of semi-independent position. Wars between the Savants of Wadi and Tulaji are on record. In short the Savants of Wadi acted as independently as any other feudal lord of the Maratha State did. Under the circumstances it was not conceivable that the small navies of these coastal States should act together.

North of Thana, in Gujarat, the Gayakwads had their independent navy. Damaji Gayakwad had his own fleet. It had grown so bold and fearless as to attack the ships of the English and the Dutch factors at Surat. In 1757 an English boat was captured by Damaji's fleet and in the

1. SARDESAI, *Marathi Riyasat Uttar Vibhaga* I. 392-5.

same year in an engagement near Ganadevi with the English his fleet was successful. Again, in the same year the *galbat Shark*¹ of the English was taken by Damaji.

The Dutch and the English factors at Surat deemed it necessary to destroy Damaji's fleet by a concerted attack. Billimora,² it seems was the main port of Damaji.

One Appaji Gopal often referred to by the Dutch and the English factors alike, was well-known for his buccaneering on the shores of Surat by this time. He was a most intrepid pirate. He is addressed as Appajirao, Appaji Gopal and the Billimora Pandit. He was powerful enough to compel the English to think twice before they took an offensive against him in collaboration with the Dutch. The English were apprehensive of their strength as against Appajirao's.

The relation between Appaji Gopal the Billimora pirate and Damaji Gayakwad is not clear. The English in their cruising activities against Appaji Gopal issued orders to their admirals that they should be careful not to molest the ports of Damaji Gayakwad.³ The Dutch also refer that the fleet of "Billimora Pandit, Appaji Gopal", called Damaji's fleet, cruised against the latter's will. These references prove that Appaji Gopal was a pirate and had probably no connection with the fleet of Damaji.

In 1764 the admiral or the Commander-in-Chief of Damaji's fleet was one Jayaramrao Appaji. He refused to return to the English a *phatemar* driven to his shores under the stress of bad weather, on the plea that the English had formerly taken his vessel driven to the shore as wreckage.⁴ He pleaded well and pleaded boldly.

The fleet of the Gayakwads was in no way under the control of the Peshwas. The Gayakwads were supposed to obey the Peshwa as next in authority to the Chhatrapati. But in fact the Gayakwads defied the Peshwa's authority whenever they could. The navies of the two never acted in co-operation on critical occasions.

1. GBGB. I. 115.

2. *Ibid.* 168.

3. *Ibid.* 71.

4. *Ibid.* 168-9.





Naval Warfare

WARFARE is a complicated affair. It is an act of violence intended to compel the enemy to fulfil one's own desire. The desire might be permanent or temporary occupation of some territory belonging to the enemy, or driving him out from a certain place, or just his defeat in order to compel him to accept certain terms. In the extreme case for the fulfilment of one's own desire, complete destruction of the enemy's military power or his subjugation might be inevitable.

Warfare has to take into account the problems of defence and offence, tactics and strategy, combats and fights, armament and weapons, man-power and its discipline, generalship and the enemy, and above all the geography of the war theatre.

Wars are fought with the ultimate object of winning. This has to be attained by adopting different tactics and strategy from time to time. The formation of single combats in themselves is called tactics and the combination of them with one another is known as strategy. Both tactics and strategy change when new weapons come into operation, but the geography of the war theatre changes little depending as it does upon the *terra firma*. The basic factors in this analysis are man, his weapons and geography.

In the naval warfare the fighting qualities of the seafaring communities, the coast of Konkan including the sea, the weapons comprising guns and warships, and the sea-forts have been taken into account. The Marathas in their naval engagements with the Portuguese, the Siddis and the English relied on their numbers when they knew that their guns and warships were inferior to those of their enemies. The use of superior numbers by the Marathas is witnessed in their war with the Portuguese, A.D. 1737-39. In their wars with the Siddis the Marathas always took hold of the former's key positions on the coast and tried to wear them out. While launching an offensive they resorted to surprise attacks and night-raids. As a defensive measure they often retreated into their coastal forts. All along the coast a number of creeks with deep back waters served as anchorages, and the mouths of the creeks guarded by forts as at Bankot, Anjanvel, Jaygad, Vijaydurg and Sindhudurg formed excellent naval bases. Geographically, the strategy of the Marathas depended upon their coastal forts and naval bases. The light and broad Maratha ships were well suited for the shallow waters of the Konkan coast.

After defeating the Portuguese in A.D. 1739 the Marathas were in possession of almost the whole of Konkan coast to the exclusion of Bombay and the Janjira region. They were practically

in command of the entire coastal strip of Konkan together with its hinterland, and therefore, were rarely short of supplies or man-power in the event of an engagement. In fact it was in virtue of these points that the Marathas made good their other shortcomings in respect of the navy. An adequate mobile Maratha army in command of the coastal area and the sea-forts, rendered landing for the enemy almost impossible.

The weapons of the Marathas consisted of swords, spears, bows and arrows, guns, and artillery on board the ships. The build of the ship specially constructed for war was in itself a weapon par excellence.¹

In the centuries preceding the Maratha period, short-range weapons like the swords, spears, and daggers were used in a *melee* when the enemy ships were boarded. Bows and arrows were the only long-range weapons before the use of artillery was known. For instance, the landing scene of Vijaya, the memorial stones of Goa and Borivali show archers on board the ships. The naval fights carved in these memorial stones suggest the knowledge of butting for overturning enemy ships. The ancient Roman ships had stout iron pikes submerged under water projecting from the bow for piercing the enemy ships.² This kind of device does not seem to have been fitted on the Indian ships at any time.

The long-range weapons such as the bows and arrows and the projectiles became obsolete with the discovery of gunpowder. Artillery brought a revolutionary change in the science of warfare. Babur's artillery is supposed to have cast the first cannon ball by means of gunpowder on the battle-field of Hindusthan. It proved to be a turning point in the Medieval history of India in so far as it rendered out of date the traditional Rajput methods of warfare. Likewise, Vasco de Gama's artillery on board the ships changed the whole aspect of naval warfare. It easily destroyed the native ships of Malabar. Probably sometime before this event, fire arms of a very crude type were mounted on ships by the Indians through the instrumentality of the Arabs.

So far as evidence leads us, the Marathas seem to have learnt the method of mounting artillery on board their ships from the Mohammedans, and later improved upon it by imitating their European neighbours.

The details regarding the artillery on board the ships are discussed in the chapter on 'Warships'.

Analysis of some of the naval engagements of the Marathas done in the following pages reveals their merits as well as their demerits as a naval power. The entire discussion shows that the Marathas rarely ventured a war of the Trafalgar type.

THE CAPTURE OF KHANDERI ISLAND BY SHIVAJI (A.D. 1679)

The island of Janjira had taxed a great part of Shivaji's energy throughout his career. All his efforts to conquer it had failed. The Siddis had successfully withstood all the attacks on their island fort from the days of Shivaji to the end of the Maratha power. When all the attempts to conquer Janjira had proved futile, Shivaji as an alternative decided to have the island of Khanderi.

1. COW. See relevant chapters.

2. CRS. 38.

Khanderi lying in the mouth of the Bombay bay commanded a key position. To its north it could keep a watch on the movements of ships in the Bombay waters between the points of Malbar (Bombay) and Kolaba. To its south it could see as far as the forts of Korlai and Revadanda. The historic fort of Janjira is even now hidden from sight by the land projection between Mazagaon and Vihar of the former Janjira State. Things are, however, not clear beyond this point. The fort of Kolaba, the Angrian stronghold, is just five miles and a half from Khanderi. The Nagaon river which provided anchorage joins the sea at Kolaba.

Khanderi (north latitude $18^{\circ} 42' 8''$ and east longitude $72^{\circ} 48' 17''$) is a small island two miles and a half from the Kolaba mainland, and one and a half mile from its sister island Underi. From Underi it is separated by a channel which can be used only by small coasters. The island measures one and a half mile in length and half a mile in breadth, being considerably larger and elevated than the island of Underi. The soundings near Khanderi are very irregular and on the offside a vessel may pass within a quarter mile of the shore, in four fathoms, at half-tide. Off the north-east of the island, where the boats lie, is a reef dry at half-tide. It is five hundred yards from the island, there being a good harbour between the island and the reef. The whole space between this reef and Underi is foul ground and impassable for boats of any size.

Khanderi is formed of two oval-shaped masses of trap, each about 950 feet long by 450 feet wide. The one to the east is 100 feet and the other to the west 70 feet above the mean high water-level. The crests of the hills are about 500 feet apart, and between them is a valley at its highest part about 18 feet above high water.¹

Politically the whole coast-line from Bombay to Bankot was strewn with powers hostile to Shivaji. The Siddi was his age old enemy possessing the island of Janjira and the surrounding territory. The English had their stronghold at Bombay, and the Portuguese were powerful at Thana and its surrounding territory, and commanded the key-points of Revadanda and Korlai. The attitude of these European powers towards the Marathas was often hostile or indifferent as the then political situation demanded. They always tried to maintain the balance of power in their favour by siding with the weak. Particularly the English allowed the Siddis to anchor in their harbour under the pretext of neutrality, to the exasperation of Shivaji. To put a stop to this practice it was necessary for Shivaji to capture Khanderi.

Bombay as a developing emporium had a promising future for trade. Shivaji wanted to control it for his benefit if he could.

Thus the capture of Khanderi had a twofold aspect — political and economic. The latter was the corollary of the former. Khanderi in the hands of Shivaji was a dagger pointed at the heart of Bombay. Shivaji never molested the trade of Bombay as the English feared he would, even after the capture of Khanderi, as this would not have helped his own trade. Actually in one of the overtures of the treaty following the Khanderi war, it is stated that the inhabitants of the Raja's territory shall have free ingress to and egress from the dominion of the English to buy merchandize and to trade, similar facilities being granted to the English subjects in the Raja's dominions.

1. *GBP.* XI. 324-5 & *PERS.* II. Letter 418. The Nagaon creek is the present Sakhar creek.

CAPTURE OF KHANDERI (see Fig. 14)

As early as 22nd April 1672, the Surat factors reported to Bombay that Shivaji intended to fortify the island of Khanderi. The Bombay office replied saying that they had no such news, but if Shivaji would try to fortify Khanderi, they would certainly resist him.¹ Shortly after this the Marathas had started fortification work and it was incomplete as late as September. Upon

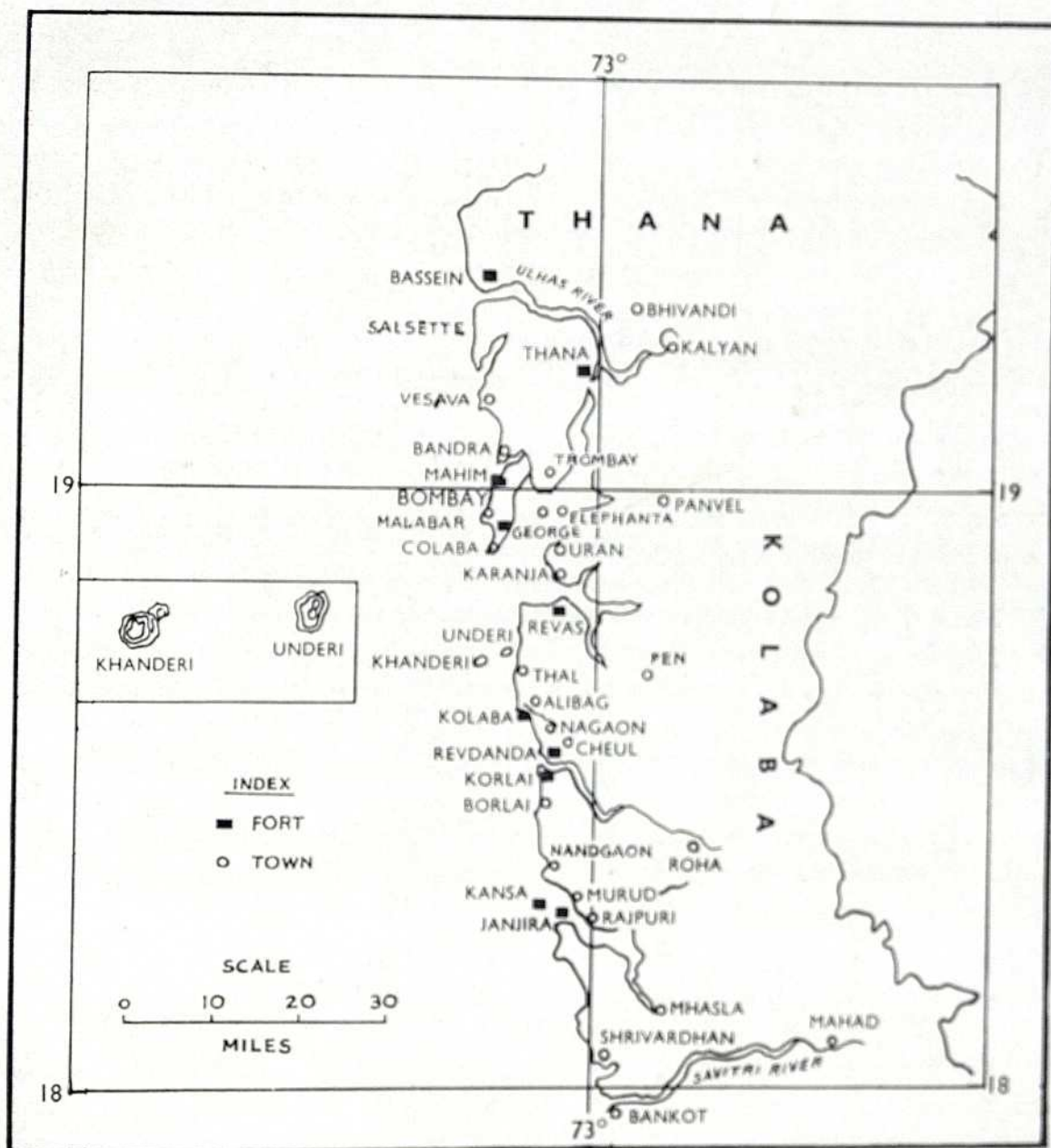


Fig. 14

this the English and the Siddi warned the Marathas to stop fortification immediately. Shivaji's admirals Daulat Khan and Mai Nayak Bhandari, withdrew their forces from the island finding themselves opposed by superior fleets.²

1. PERS. I. Letters 302-3.

2. SSHT. 293.

Seven years later, about 27th August 1679, definite intelligence reached Bombay that Shivaji was making all the necessary preparations for the fortification of Khanderi. Men and material were kept ready at Cheul for the execution of the design. The Bombay factors informed Surat about this activity.¹

On 2nd September, the Bombay factors came to know that men and material were being transported from Thal to Khanderi by Shivaji's men. As this seriously affected the position of the English in Bombay, Ensign Daniel Hughes was ordered to cruise between the main naval base of the Marathas and the island of Khanderi with three *shibars* having six files of soldiers.² On the 4th, Hughes came to an anchor at the required position and prevented two Maratha boats from going to the island. The island had already 400 men who had constructed a wall about a yard high of clay and stones. They had also six guns mounted in the valley, as big as those of the English on their boats. There were a few new carriages on the island.

The Deputy Governor of Bombay wrote to Mai Nayak Bhandari to quit the island, to which a civil and humble reply was sent, stating that it was not possible for him to do so without orders from his master. The English argued that Khanderi belonged to the Bombay island and hence they were its lawful masters. They further declared that the island belonged to the king of England and none could attempt to invade it without open breach of friendship. If this argument failed to have its effect, the English were free to use armed resistance. The frigate *Revenge* was fitted with men and ammunitions and ordered to join the three already working near Khanderi.

Fortunately for the Marathas on the 14th, 15th and 16th, rain poured in torrents for thirty hours continuously. Dark clouds obstructed the vision and violent gusts of south-west wind rendered the English helpless in obstructing the Marathas from going to the island. The Marathas took full advantage of nature's fury and provided the island with food and other requirements. Since the appearance of the three *shibars* under Captain Ensign Daniel Hughes, i.e. from 4th to 13th September, it seems that no provisions could reach the island. During the stormy weather the *shibars* were compelled to leave their positions, and the Marathas in groups of three and four boats relieved the stress of the blockade.

About the tenth of September it was rumoured that Daulat Khan was coming with eight to ten *gurabs* to help his people.

On the 19th instant an engagement took place on a small scale in which the Marathas beat the English. Lieutenant Thorpe in his tipsy mood made a rash attempt to land on the island. He was killed along with two other men, John Bradbury and Henry Welch. Several others were wounded and George Cole and others were taken prisoners. The Captain's ship was taken by the Marathas. This first defeat was a great set-back for the English and it encouraged the Marathas to continue their fortification with vigour. The English realised that landing on the island was by no means an easy task.

About the 20th of September, Captain Minchin tried to keep close to the island, but was not allowed a landing by the Marathas. The Marathas got two boats from the main base and sent them back.³ Throughout September the English were neither able to cut off the supplies of the Marathas nor land on the island.

1. *PERS.* II. Letter 364.

2. *Ibid.* Letters 365-70, 375.

3. *Ibid.* Letters 374, 380-1.

At the beginning of October, the English strengthened the blockade with fresh resources and additional fleet. Gape's *gurab* and Popjee Naik's *gurab* were hired for the war. Captain Richard Keigwin was appointed as the Admiral. The English fleet now numbered eight ships, the *frigate Revenge*, two *gurabs*, three *shibars* and two *manchuas*. The soldiers on board these ships numbered two hundred.¹

A sharp engagement took place on 18th October. At daybreak Shivaji's armada issued out of the Nagaon creek, rowing towards the English keeping close to the shore. Fresh land-breeze blew from the east. The Marathas rowed up as far as Thal abreast of the enemy, and all of a sudden pounced upon them with wind and oars scarcely giving them any time to utilise their guns. The English lying aft were forced to cut and loose sails. The *shibars* and *manchuas* kept themselves so far from Captain Keigwin and Mr. Gape's *gurab* that they could not aid them. The topsail and ensign of Gape's *gurab* were struck and Captain Keigwin and Minchin were left alone, the rest of the fleet having fled away. Both of them fought gallantly with the odd number of the Maratha ships, 24 *gurabs* and some *galbats*, all numbering 40 sail. They were mute till the Marathas approached them and when within gun shot showered round shots and cartridges on them and scared them away. The Marathas were brought by the lee and compelled to run away. They escaped into the Nagaon river. In the engagement five boats and the Gape's *gurab* were captured.

During the short period of this struggle Shivaji frightened his enemy — the English — by all possible ways. He mobilized a vast force at Kalyan to invade Bombay by way of Thana. But to the good luck of the English, the Portuguese denied him a passage *via* Thana, and they were therefore saved. The inhabitants of Bombay were panic stricken by the daily news of its invasion by Shivaji. The stories of Shivaji's sack of Surat had not yet faded away from their memories. By the 22nd of October the Bombay factors wrote to Surat that Shivaji had concentrated an army of four thousand at Panvel for landing on Bombay. The English guarded the three vulnerable points of Bombay island, Karanja, Trombay and Sion. Actually Shivaji did not invade Bombay, but the very threat of his invasion scared the English. About the 22nd instant the English sunk three Maratha *gurabs* and killed 300 men, leaving 100 wounded.

After the second engagement on 18th October, the English added to their fleet the *Fortune* and two *shibars*. The *Fortune* had eight guns, four chamber pieces, gunpowder and shots, five files of *Topasses*, thirty *laskars* and fourteen English men. The *shibars* had two guns each. The Captain of this extra squadron was Aderton. In spite of this additional fleet the English were miserably fizzled out and the Marathas carried supplies to their men on Khanderi.² Under the cover of night twelve *galbats* on the 22nd and seven small boats on the 25th escaped to Khanderi. Again on the 28th sixteen to seventeen *galbats* relieved the island by supplies. To be sure the sons of the Ocean — the English — were unable to cut effectively the supplies coming to the island from the main depot. They were under the false impression that shortage of food and water would bring the Marathas to their knees. The English soon realised that if this lingering and ineffective blockade continued, Shivaji would fortify the island and they would be compelled to raise the siege at the advent of monsoon. The heavy war expenditure and the drain on the manpower of Bombay weakened its position, when it was daily under threat of an invasion from

1. *PERS.* II. Letters 386-8.

2. *Ibid.* Letters 399, 402, 405. 490.

the hinterland. A withdrawal or retreat at the same time would have meant loss of political prestige for the English. Under the circumstance the English were eagerly looking out for an honourable though in fact a patched up treaty. Such an honourable treaty could be brought about through the mediation of either the Portuguese or the Siddi. The latter was too eager to fish in the troubled waters.¹ The English first welcomed him but later found that his presence created problems rather than offering any solution.

When the English were in this state of anxiety, a letter from Shivaji brought by the Rajapur factors gave them some solace. In the consultations held at Surat on 31st October it was decided to send a civil reply to the Raja. The Deputy Governor of Bombay was instructed to study how the Raja should be approached for negotiations. In his letter the Governor was to mention how the English were put to great loss by Shivaji's occupation of the Khanderi island. His letter, it seems had no effect, and on 1st November at dawn some Maratha boats slipped into the Nagaon river from the island so quickly that the English could hardly give chase. They fitted out a frigate named *Hunter* under the command of Norgrave. The Siddi arrived on the scene, and on the 16th went round the island estimating the Maratha force at five hundred; three hundred soldiers and two hundred workers. He expressed his plan of landing on the island by a joint attack. The Marathas and the Siddi exchanged some shots without hampering the progress of either. In the meanwhile a white flag was shown on the morning of 21st. The Marathas on Khanderi island erected a white flag.² The English sent a boat, with a Portuguese and a Dutch on board in order to know the meaning of the white flag. On approach they told the Marathas that if they surrendered they would protect them from the enemies. Upon this the Marathas gave them a clear understanding that even if the English remained in their position for the whole year they would not surrender. Again on the 22nd instant under the cover of night a Maratha boat sailed to the island. The Siddi took this action as the result of negligence on the part of the English.³ He suspected their honesty because he smelt a possible treaty between the Marathas and the English.

At the end of November a renegade coming to the Siddi from Khanderi gave a minute account of its supplies, condition of the beleagured and Shivaji's strict orders not to surrender under any circumstance. According to him the islanders had six candy of powder and thousand balls, twelve guns, two hundred fire-arms, three hundred swords and five hundred and sixty men. The island had four wells about to go dry. The men on the island were war-weary, but held on as Shivaji threatened them with capital punishment and further declared that he would cut off the heads of their wives if they surrendered without his orders. On the 17th, Bombay received a letter from the Peshwa, sent with a messenger. The English replied that the island should be given over to them and they would leave it uninhabited as before as soon as the Siddi returned. On the 27th instant Bombay received an answer contrary to expectation. The Raja was resolved to fight at all costs.

The month of November passed with little prospects for the English, the Siddi being their new ally. His man-power was from 500 to 700. December dawned and the whole situation for sometime went from bad to worse. Siddi's men landed on Shivaji's territory opposite to

1. *PERS. II.* Letters 418, 421.

2. *Ibid.* Letters 427, 431, 435-6, 442.

3. *Ibid.* Letters 442, 446-7.

Bombay and burnt some four villages, plundering and carrying many captives. Daulat Khan chafed with anger and held the English responsible for this cruel act of the Siddi. The English felt that they were being made scapegoats. The Siddi on his part suspected the integrity of the English. The English found themselves caught between the devil and the deep sea. The perseverance of the beleaguered, the escape of the Maratha boats with daily new tricks and the fear of the monsoon that was not far away, put the English in anxiety. The growing expenditure rendered their economic position precarious.¹ Thus ended the month of December.

Some formal letters passed between the Marathas and the English. About the 29th December Bombay received a letter from Shivaji. He acknowledged the two letters sent from Bombay but took no notice of the one sent from Surat. By the 2nd of January the small craft were not able to withstand the force of the north-east monsoon and went under Underi for refuge. The Marathas mounted big guns on the Thal coast and fired at their enemy.²

The oscillatory condition created by the conciliatory letters on both the sides, ended once for all. By the 8th of January 1680 Shivaji's minister demanded from the Deputy Governor of Bombay, a reasonable and full text of the proposals of peace, which the Marathas would take into consideration, and send their own terms to the English within a short period. Ram Shenvi was deputed by the English to discuss with the *Subhedar* of Cheul and Annaji Pandit.

Following were the proposals, made by John Child, the Deputy Governor of the Bombay island and his Council to the Ministers of the Raja, to be confirmed by him for concluding a peace between the English and the Raja :

- (1) The English demanded the money due to the Company payable from Shivaji's country and also the money due to their inhabitants.
- (2) All the war-material, guns, balls, powder, *gurabs*, sails, swords, etc. captured by the Marathas was to be restored to the English and their men were to be released.
- (3) All the vessels coming to and going out of the Bombay port were free to go to any other port if they informed that they belonged to Bombay. Shivaji was not to stop or hinder such vessels, and if a vessel (coming from or going to Bombay) weather-beaten and damaged touched his coast he was to return it to the Bombay port with its goods and other things unmolested.
- (4) Shivaji's people had landed on Khanderi without previous intimation and had brought their fleet there. The English fleet which had gone there (to Khanderi) just to know their design was attacked without provocation. Therefore Shivaji was to pay the charges of the fleet the English were forced to keep.
- (5) The English factors were free to trade during their pleasure and no restraint was to be laid on their coming to, staying in and going out of the Raja's dominions. If any of the factors was called out from the Raja's dominions as the occasion demanded the English were free to substitute the absentee or absentees by servants native or otherwise and such servant or servants could freely enjoy the possession of the house or houses etc. left to them by the English without any disturbance. On the return of the absentee factor or factors, they were to have freedom to trade as before.

1. *PERS.* II. Letter 447.

2. *Ibid.* Letters 469-70.

- (6) Formerly there was a treaty made in writing between the English and Shivaji. This treaty likewise was to be observed if the Ministers swore by *Mahadeo*. The Ministers were to make a new treaty, sealed and signed by Shivaji Raja for himself and his successors and then the English and their successors would observe the same.¹

These points of the treaty were drafted on the 8th of January 1680, in the consultations held at Bombay. Annaji Pandit sent his proposals to the Deputy Governor of Bombay on 16th January with a promise to get all the terms confirmed by the Raja. They ran thus :

- (1) What was due to the Company by Shivaji and by his inhabitants to the Company's merchants would be immediately ordered to be paid.
- (2) The English were to keep friendship with the Raja and in future there was to be no difference between them. The English prisoners, vessels and other things in the Maratha custody, would be ordered to be delivered to the English.
- (3) Proposal No. 5 of the English would be granted.
- (4) Proposal No. 3 of the English would be conceded to.
- (5) Proposal No. 6 of the English would be observed. The English were to do the same.
- (6) The Marathas promised to observe all the above written articles in future. Therefore the English were to withdraw their fleet from Khanderi. Siddi Kasim had come to Underi, at the instigation of the English and had landed there. To him the English were to speak in a fair way and command him to leave the said Underi. The English factors were to be treated in compliance with these terms. The English were not to give any assistance to the enemies of the Marathas and were to keep friendship with the Marathas. If the English violated any of these terms they were not to blame the Marathas for doing the same.

A copy of these proposals was sent by the *Subhedar* of Cheul to the Deputy Governor of Bombay. He also promised the confirmation of the proposals on oath.

The Marathas promised to release the English prisoners as early as possible. The English on their part were to withdraw their fleet. In the consultation at Bombay on the 27th it was unanimously agreed to order the fleet to return to Bombay. The fleet actually came to Bombay to an anchor on the 30th.² Thus ended the struggle for Khanderi after five months.

WHY DID THE MARATHAS SUCCEED ?

When the blockade of Khanderi was begun the English did not have sufficient warships to strangle their enemies. Their armada numbered eight ships at the start. After the second engagement on the 18th of October which ended in favour of the Marathas, the English added to their former force, three more ships, the frigate *Fortune* and two more *shibars*. The crew on board the eight ships was two hundred and by the coming of the three ships, five files of *Topasses* and thirty *Laskars* were added. Meanwhile the frigate *Hunter* was also ordered to join the fleet. So, when the struggle came to its head the English had twelve battle-ships with guns and ammunitions. The Maratha fleet under Daulat Khan numbered 40 sail excluding the boats that were already engaged between Khanderi and the main base. The maximum number of Maratha

1. *PERS.* II. Letter 471.

2. *Ibid.* Letters 479, 481.

warships operating, was approximately between 50 and 60. The crew of the Marathas numbered between 440 and 550. The English navy was superior to the Maratha warships in every respect. The slimly built Maratha ships were no match for a single massively built English frigate, with big and long-range guns. The Marathas knowing full well their inferiority in navy never encountered the English battle-ships on the open sea. Often they made their appearance at the mouth of Nagaon creek, and when the English ships chased them they were waylaid, and other Maratha boats escaped to the island or returned to the base. Escaping to the island and slipping back into the Nagaon river, under the cover of night was the most effective method of relieving the island of its supply shortage, which the Marathas adopted. The heavy English ships watched these enemy tricks idly and could not stop them. Neither had they light boats, for which they clamoured, to cope with the Marathas. The Maratha light boats had definite advantage over their enemy ships. They escaped into the narrow creeks with the speed of lightning. The shallowness of the sea, the soundings near Khanderi and the nature of the coast were peculiarly suited to the movements of lightly built Maratha boats. The only convenient anchorage for the English ships was to the north-east of Khanderi, five hundred yards from it where there was a reef dry at half-tide, the space between this reef and the Underi island being impassable for boats of any size.

When the Siddi alighted into the arena he added some more ships to the English fleet. In spite of this force the Marathas held on. Instead of chalking out a joint programme of attack the Siddi and the English mistrusted each other and continued the strife half-heartedly. An onslaught on the island was planned by the Siddi but the English did not deem it expedient and the idea was given up. The English were thinking of ending the struggle in an honourable manner by some patched-up treaty to keep the prestige of the Company. The Siddi scented this intrigue, which he had never expected. The English were afraid that if the Siddi occupied Khanderi he would be more troublesome than the Marathas, and scrupulously avoided to co-operate with him. This situation of distrust rendered the idea of combined attack impracticable.

The English had no sufficient man-power to force a landing independently, whereas the Maratha man-power on Khanderi was 500 (300 soldiers and 200 coolies). The latter could be used as soldiers in the event of an emergency. An offensive against this number would have required a force of 700 to 800 soldiers of resolute will. This was impossible especially when Bombay was daily under the dread of an invasion. A concentration of 4,000 contingent at Kalyan by Shivaji was more than enough to put the English into deep despair. The very news of it distracted their attention though it did not divert their force near Khanderi.

The supply depots of the Marathas were nearer, Alibag and Thal, while the English boats had to come from distant Bombay. The other supply base of the Marathas was at Cheul away from the influence of the English navy. The English had no such base near Cheul to counteract. Moreover, the whole coast of present Alibag Taluka was under Shivaji's sway.

The extra expenditure of war the English had to bear amounted to 5,000 *Seraphins* per month.¹ The Company had no economic stability to continue this costly game when other circumstances were adverse.

1. Asiatics serving as soldiers were named as *Topasses* and East Indian seamen as *Laskars*.

Xerapheen or *Seraphin* was a silver coin worth about 1 s. 5 d. The original Arabic name is *sharifi*.

Nature also seemed to side with Shivaji. At the outbreak of the struggle the English were obstructed by heavy rain-fall. At the beginning of January the north-east monsoon had begun to show its signs, and the fear of its violent gusts in the succeeding months loomed large upon the English. In consideration of all these unfavourable factors the English came to terms.

THE BATTLE OF SUVARNADURG (12-4-1755)

Next to the capture of Khanderi island by Shivaji in A.D. 1679, it is the campaign against Tulaji Angre jointly undertaken by the Peshwa Balaji Bajirao and the English which merits our attention in the analysis of the naval wars. The campaign falls into two parts, the battle of Suvarnadurg in A.D. 1755 and the battle of Vijaydurg in A.D. 1756. Both the Peshwa and the English had long-standing grievances against Tulaji Angre, and they joined hands in destroying his naval power in A.D. 1755. Actually there was no love lost between the Peshwa and the English but they came together as neither of them could suppress Tulaji single-handed.

After the death of Sambhaji Angre in 1742, his two younger brothers Manaji and Tulaji fought among themselves bitterly for *Sarkhelship* — Admiralty. Shahu as the Chhatrapati or the sovereign lord and the Peshwa as the next in authority had to mediate in the Angrian family dispute in the larger interest of the Maratha State. As a way out of this family feud Shahu declared that he would confer the hereditary title of *Sarkhel* on one who would capture from the Siddis Anjanvel and Govalkot which had so far proved unconquerable. Tulaji at once took up the bet and marched upon the Siddi's outposts. He was helped in this task by Shahu with money and men. Tulaji invested the places with military thoroughness and reduced them on 25th January 1745. Shahu and his noblemen were astounded at this feat of valour. Tulaji was made the *Sarkhel* and posted at Vijaydurg, and his elder brother Manaji continued to rule at Kolaba for whom the title of *Wazarat Maab* was invented earlier.¹ The two brothers though apparently reconciled, continued to be rancorous at heart against each other.

Tulaji who was never on good terms with Peshwa Balaji Bajirao was naturally in a challenging mood as a result of his success at Anjanvel and Govalkot. Tulaji, it seems, was never prepared to accept the authority of Balaji Bajirao as the Peshwa — Prime Minister. He considered that himself as a servant of the Chhatrapati, the sovereign, he was in no way next in authority to the Peshwa. The Peshwa's authority was supposed to be next to that of the Chhatrapati. But in practice it was defied by the Dabhades, the Bhosales of Nagpur and others. The Angres were no exception to this. So long as Shahu was alive disputes between the Peshwa and the other Maratha noblemen were often solved before they proved destructive to the interests of the Maratha State. But once this good natured mediatorial hand was removed by death, the different Maratha noblemen quarreled among themselves for territory and tried to be as independent of the central authority as possible. The Peshwa as the first minister was trying to have central control in his own hands as the successor of Shahu was totally devoid of any capacity. In the ultimate analysis the root-cause of the differences between Balaji Bajirao the Peshwa, and Tulaji Angre the *Sarkhel*, has to be traced to this situation which was slowly developing during the life-time of Shahu and went from bad to worse after his death.

As early as 1748 at the instance of the Peshwa, his officer at Kalyan, Ramaji Mahadeo, took the fort of Manikgad from Manaji Angre. The Peshwa, however, had to give it back

1. *SNHM*. II. 247.

because of the mediation of Shahu's queen Sagunabai. By this time Tulaji had openly started his depredations in the Peshwa's territory. At the end of 1747 he captured Mudagad atop the Sahya mountains near the Kajirda pass, a little south of the historic fort of Vishalgad, and carried further his depredations into the territories of the Pratinidhi, the Amatya, the ruler of Kolhapur and the Savant of Wadi. All these mighty Maratha noblemen joined hands against Tulaji and recaptured Mudagad from him.¹ Even one of Tulaji's brothers Yesaji *alias* Appaji was against him in the Mudagad affair. Tulaji appealed to Shahu for mediation but Shahu incapacitated by failing health and harassed by succession dispute had neither the necessary mental poise nor enough time to attend to Tulaji's request.

After the death of Chhatrapati Shahu in 1749, the relations between the Peshwa and Tulaji deteriorated further. Tarabai who was always opposed to the Peshwas was very unhappy to find that Ramraja, her grandson, who succeeded to the Chhatrapati's *gadi* was not prepared to share control with her. As he was friendly towards the Peshwa, Tarabai put him in confinement and at the same time instigated the Portuguese and Tulaji against the Peshwa. Blinded by feud she went to the extent of promising to the Portuguese that she would return the Bassein territory to them, conquered by the Marathas in 1739 at great sacrifice, if they would help her in putting down the Peshwa Balaji Bajirao. To meet this dangerous situation developing against him the Peshwa desperately sought the help of the English with a view to punishing Tulaji.² By 1750 the English and the French were struggling hard for the control of the east coast of India. In order to strengthen their position on the west coast the English were eager to destroy Tulaji's power. Tulaji's presence to the south of Bombay was a permanent challenge to their naval power and a great handicap to their trade. He often made prize of English ships sailing without his passport. In this situation when the Peshwa Balaji Bajirao asked the English for their help against Tulaji, they simply jumped at the opportunity which they had been seeking since long.

It is against this political background shadowed by the black clouds of internal feud, and overcast with foreign intervention that we have to study the military part of the war between Tulaji and Peshwa Balaji.

THE BATTLE OF SUVARNADURG (12-4-1755)

In February and the early part of March, 1755, the Peshwa sent three letters to Governor Bouchier of Bombay for his help. The latter placed them for the consideration of the Council and through Ramaji Mahadeo, the English and the Peshwa agreed to the following terms before proceeding against Tulaji (19-3-1755) :

1. The combined navy of the Peshwa and the English should be under the command of the latter.
2. Ships captured from Tulaji Angre should be divided in the proportion of half to half between the Peshwa and the English.
3. After Tulaji's reduction the Peshwa should cede to the English Bankot and fort Himmatgad together with five neighbouring villages. The villages should be exempt from taxes.

1. SNHM. II. 247-8.

2. *Ibid.* 343.

4. The English were to undertake an all-out naval expedition, but for the time being they were to confine their activities to Suvarnadurg, Anjanvel and Vijaydurg.
5. Whatever treasure, ammunition, guns or supplies would be captured or found in the forts or places belonging to the Marathas, should be shared equally by both the parties.
6. If the English and the Peshwa attacked jointly Manaji Angre, the island of Khanderi should be ceded to the former.¹

The plan of the English and the Peshwa was to attack Suvarnadurg simultaneously by land and sea. The combined Maratha-English fleets were to blockade Suvarnadurg from the sea-side and the Peshwa's army was to besiege the fort by land. Accordingly, Commodore William James, the Commander-in-Chief of the Company's marine force in India who led the expedition against Tulaji, made sail for Suvarnadurg from the Bombay harbour on the 22nd of March 1755, with the *Protector* of 44 guns, a ketch of 16 guns and two bomb-vessels. Three days after this, the Maratha fleet consisting of seven *gurabs* and sixty *galbats* with 10,000 men on board sailed out of the Cheul creek. The fleets united there and sailed to Kumbhara bay where the Marathas cast anchor for meals. The next point of anchorage was fifteen miles to the north of Suvarnadurg, whence Ramajipant proceeded by land with his army.

Commodore James then contemplated an attack on the Angrias fleet which was lying in the harbour of Suvarnadurg. This plan was readily backed by the Peshwa's men. But the Angrias admiral receiving intelligence of this plan cut the cables and slipped from the Suvarnadurg harbour southward. The Maratha ships had always sailed better than the English because of their skill at the oars. The English fleet in its chase lagged behind as it was terribly afraid of the Angrian fleet. The *Protector* alone chased the Maratha fleet to a long distance and then returned giving it up.²

The dexterity of the Angre's sailors, in rowing fast and manoeuvring the ships was indeed admirable. Fleeing away from the combined fleets of the Peshwa and the English, was the correct action at such a juncture for two reasons: (1) the united fleets were superior in number and equipment as they consisted of the heavy English battle-ships; (2) the harbour of Suvarnadurg by its openness did not admit of defensive action particularly when it was threatened by a large army from the land-side. An open encounter with the allied fleets in this situation, would have meant nothing short of rushing into the jaws of death. The skill of the Angrian sailors cannot be put in better words than those of the author of the *War in India*. He writes, "the chase continued from break of day till the afternoon, and it was observable that our friends the Marathas, who being light, and built floaty for sailing large, and in light gales, and who had during all the preceding days, sailed better than any one of our vessels, were now all astern, while their countrymen (the Angrias) showed a dexterity in their flight, which we could not but admire. They threw out every thing to lighten their vessels with amazing industry and readiness, and spreading all the sails they could crowd on the yards. They fastened to the flag-staves their garments, quilts, and even their turbans extended to catch every breath of air. By this manoeuvre they gained their point and drew the Commodore so far from his station, that he was obliged to give over the chase and return to Suvarnadurg."³

1. *SNHM*. II. 344-5.

2. GEORGE W. FOREST, *Selections from the Bombay Secretariat, Maratha Series*, Vol. I (1854). 91.

3. *CWI*. 94-5.

As the Angrian fleet withdrew there was no naval engagement. The *Protector* then approached the fort of Suvarnadurg and bombarded it from the western side which was cut out of solid rock and was impregnable to the battery. So the *Protector* changed its position to the north-eastern bastion which was comparatively weaker as it had no solid rock, and opened its broadside battery. The bastion on this side was broken after bombardment. One of the bomb-vessels dropped a shell on a thatched house inside the fort. It caught flames. The fire spread and reached the powder-stock. The magazine was blown up. To escape the flames some of the garrison with their families embarked on boats and in their attempt to escape to the shore were arrested by the English ketches. For sometime the *Protector* opened fire on the fort of Goa which soon surrendered. Firing was again resumed on Suvarnadurg and soldiers were landed on the rock on which the fort stood, under the cover of guns. The landed army rushed to the gates and cut them open with axes, whereupon the garrison surrendered.¹ In the meantime, the Maratha army belonging to the Peshwa had captured the other two forts, Fatehgad and Kanakdurg, on the main shore and opposite the fort of Suvarnadurg. The capture of Suvarnadurg and the other land forts was completed by 6th April. On the 8th, Commodore James anchored off Bankot and took it.²

Thus the first part of the campaign against Tulaji was over in April 1755.

THE BATTLE OF VIJAYDURG (14-2-1756)

Vijaydurg was one of the strongest forts of the Angres. Since the time of Kanhoji it had successfully repulsed the attacks of the Portuguese, the Dutch and the English, severally and jointly. It was, therefore, rightly named by the Europeans as the Gibraltar of Konkan. It maintained its fame till its fall in 1756. After the fall of Suvarnadurg the forces of the Peshwa and the English converged upon Vijaydurg for its reduction. Now was the test of its invincibility.

As early as November 1755, Commodore William James sailed on board the *Protector* to sound the sea near Vijaydurg, completed the task and returned to Bombay. Tulaji obviously could not stop such a survey of his home-waters by the enemy. Between the fall of Suvarnadurg, 12th April 1755 and the attack on Vijaydurg, 11th February 1756, Tulaji was in a precarious state of affairs. For mere survival he had either to surrender to the Peshwa or be prepared for a war in which the chances of success were extremely dim. Tulaji chose the latter course. He desperately made an effort to secure the help of the Portuguese. The English reported Tulaji's condition after the fall of Suvarnadurg, "It being rumoured that Angria at the great preparation to attack him had in a fit of despondency resolved to invite the Portuguese to take possession of Gheria and to hoist the flag of that nation in the fortress, the Admiral sent also his own first lieutenant."³ An agreement between the Portuguese and Tulaji, dated 5th November 1755, states, that the Portuguese Viceroy Conde De Alva being convinced that Tulaji was really repentant for his past evil acts towards the Portuguese, decided to help him with five hundred men on the condition that these were not to be used against the English. This last hour effort to have an ally did not serve Tulaji's purpose. A number of key-posts of Tulaji like Ratnagiri, Anjanvel and Govaikot were captured by the Peshwa's army before the attack on Vijaydurg was launched.

1. FSBS. 92-3.

2. CWI. 96.

3. DKA. 207.

In the month of October 1755, some troops under Captain Clive and a naval squadron under Admiral Watson had arrived at Madras from England. At the request of the Governor of Bombay this force was sent there from Madras for the war to be undertaken against Tulaji. Governor Bouchier ordered his men to observe the following instructions :

1. After the fall of Vijaydurg Tulaji should be brought to Bombay.
2. The Bombay force should co-operate with that of the Peshwa in capturing other forts (other than Vijaydurg) and places.
3. Vijaydurg should not be handed over to the Peshwa till Bankot and the surrounding villages are delivered to the English.
4. Effort should be made to secure all such places which are useful to the English.
5. Tulaji being a wicked person should not be trusted.

With these instructions fourteen British warships with 800 English soldiers and a thousand Indians set sail on 7th February 1756, under Captain Clive and Admiral Watson, for Vijaydurg. When the English ships were sailing towards Vijaydurg they were joined by the Peshwa's navy consisting of 40 to 50 ships. The Peshwa's army had already surrounded the fort on its landward side.¹ The strength of the Peshwa's army under Ramaji Mahadeo totalled 2,100. Eminent leaders present at Vijaydurg on behalf of the Peshwa were, Naro Trimbak, Raghoji Angre, Rudraji Dhulap, Bakaji Chandrarao, Annaji Belose, Moraji Shinde, Krishnaji Mahadeo, Khandoji Mankar, Javajibaba Gauli and Samsheer Bahaddur. Khandoji Mankar and Javajibaba Gauli were of opinion that settlement should be brought about between Tulaji and the Peshwa in spite of the opposition from the English. But their efforts in this direction were set aside by Ramaji Mahadeo, the leading figure in the war against Tulaji.

The English armada which had set sail from Bombay on 7th February 1756, anchored near Gheria on the 11th. Admiral Watson sent a word into the fort for handing it over to him. Quickly came the reply that "the garrison were well apprized of the force he (Admiral) brought with him but if agreeable to the summons he sent he was resolved to be master of the fort he must take it by force for they (beleaguered) were resolved to defend themselves to the last extremity." Upon this the engagement started at 2 O'clock on the 12th when the Angrian ships opened fire on *King's Fisher* (see Fig. 15). The fire was returned by the *King's Fisher* and the *Revenge*, facing Tulaji's navy.²

The admiral then started bombarding the ramparts of the fort, but finding that the shots fell short, ordered the firing to be stopped. To the good luck of the English soon after this, a shell from their armada hit the *Restoration gurab* which had long ago been taken by Tulaji as a prize, it caught fire, was driven into the line of Tulaji's ships, which as a result, were soon in flames. Whether the *Restoration* when in flames ran into Tulaji's ships just by chance or by treachery is not known.

The English had closed the Vijaydurg creek with military thoroughness. Both the sides of the estuary were lined with battle-ships. Opposite to Tulaji's armada stood the *King's Fisher*, the *Revenge*, the *Grab* and the *Guardian*. To the west of these battle-ships on the northern side

1. SNHM. II. 345-7.

2. DKA. 195-6, 208.

of the creek stood five bomb-ketches. The southern side of the creek on which the fort Gheria stood was lined by *Bridgewater*, *Tiger*, *Kent*, *Cumberland*, *Salisbury* and the *Protector* (see Fig. 15).

In this arrangement Tulaji's navy had no chance of escaping into the open sea as it had at Suvarnadurg, unless it was prepared to face complete destruction. Only two alternatives were open to Tulaji's navy: (1) to rush through the lines of the English battle-ships standing on both the sides of the creek without caring for the consequences, or (2) to run the armada up the river in the south-east direction. But none of these alternatives seems to have been resorted to by Tulaji's navy in the desperate hour. Instead, it succumbed to the fire spreading from the restoration, without any action. The cause of the annihilation of Tulaji's armada in this state is attributed to treachery. This explanation stands to reason because Tulaji so far was known as a desperado and would not have hesitated to run the risk of carrying his navy through the lines of the English battle-ships, when the choice before him was destruction by action or annihilation without action. For the positions taken by English ships and their attack on Tulaji's armada (see Fig. 15).

The fire from the navy soon spread to a few other ships under construction on the shore near the fort. It was transmitted to the fort magazine and the town. Both the fort and the town were scenes of huge fire throughout the night of 12th February.

The next day Colonel Clive landed his men outside the fort. On the 13th the fort surrendered and on the 14th at daybreak Clive and his men entered it in triumph. The English flag was hoisted on the fort. On the 15th the Maratha flag was flown alongside the English. The English who were mainly responsible for leading the attack from the sea-side, were also the first to enter the fort.¹ Before the fort was actually surrendered the English army had for sometime taken position between the fort and the Peshwa's army outside, as the English suspected that Tulaji and Peshwa's men were negotiating for peace by keeping them out. The English seized Rs. 10,00,000 in cash and other valuables worth four thousand pounds, all for themselves. The Peshwa did not get a pie from this huge booty, though it was to be shared equally between him and the English, according to the agreement.²

Tulaji had left the fort a couple of days before its surrender. He was made a prisoner and was moved in captivity from fort to fort till he breathed his last on the fort of Vandan in 1786.

The English did not hand over Gheria to the Peshwa immediately after they had captured it, arguing that (1) the villages around Bankot had not been given to them by the Peshwa as agreed to when Suvarnadurg was attacked and taken from Tulaji; (2) the Peshwa was freely allowing the Dutch in the port of Bassein, which was contrary to their mutual understanding; (3) Tulaji was not given over to them.

The English, once they were the masters of the situation, held Gheria at ransom and wrung from the Peshwa concessions (1) and (2). They agreed to leave Tulaji with the Peshwa, and Gheria came to Maratha hands as late as June or July, 1756. The English thus scored a full success leaving into the Peshwa's hands the empty fort of Gheria.³

1. DKA. 211-3.

2. SNHM. II. 347.

3. DKA. 198, 216.

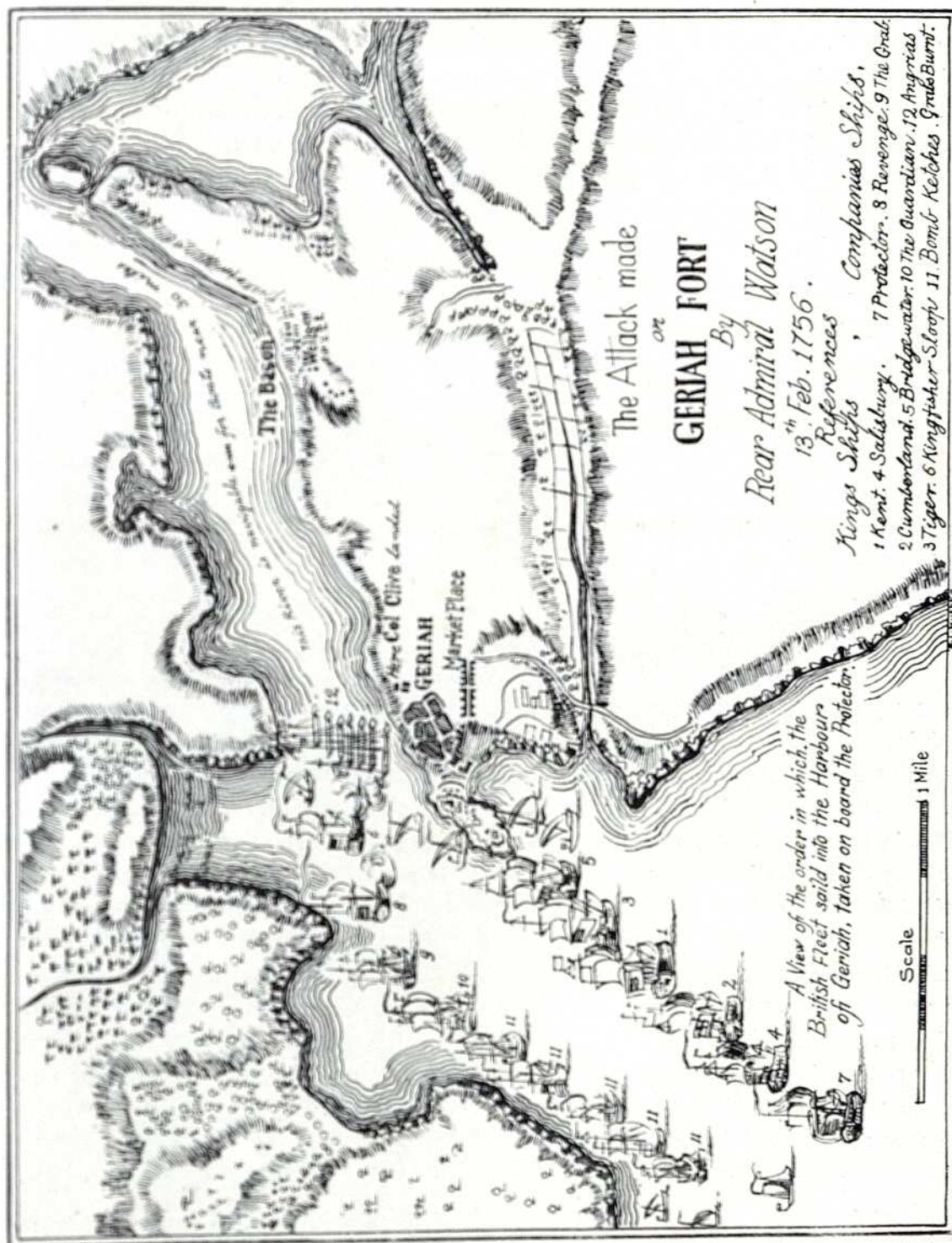


Fig. 15—Attack on Gheria fort by Rear Admiral Watson in 1756

Tulaji's armada which was consumed by fire was estimated as follows :

One *gurab* with 74 guns.

Eight *gurabs* of 20 to 30 guns.

Sixty *galbats*.

In addition to this number Tulaji had captured from the English (1) *Charlotte* bound for China, (2) *William* of Bengal, (3) the *Severn*, a Bengal freight-ship bound for Bussorah valued at 9 to 10 lacks of rupees, (4) the *Derby* with *grab Restoration* valued at Rs. 5,22,743-4-6, (5) the *Pilot*, (6) the *Augusta*, (7) the *Dadabhoy* from Surat, (8) *Rose* from Mangalore, (9) *Anne* from Gombroom, (10) *Bengimolloy* from Malbar coast and (11) *Fatte Daulat*.¹

This just shows why Tulaji was the most dreaded Admiral on the west coast. Once he was humbled, his house at Kolaba and the Dhulaps appointed by the Peshwa at Vijaydurg, were reduced to a mere maritime community.

The Peshwa could not save Tulaji's armada from being destroyed. Tulaji was too rash. He made many enemies at one and the same time and was sandwiched between the Peshwa's army from land and the combined navy of the English and the Peshwa from the sea-side. The year 1756 was one in which the Seven Years' War between the English and the French had started for trade, colonies and empire in Canada, America and India. It was, therefore, bound to be a turning point in the history of India and the Maratha country. It was beyond the vision of the Peshwa to grasp this situation. He was satisfied that he had destroyed Tulaji who constantly disobeyed him.

In all these wars, the capture of Khanderi, Suvarnadurg and Vijaydurg, the Angres avoided an open encounter with the Europeans because their guns were of shorter range and their ships of lesser tonnage than those of their rivals. They always aimed at the sterns of the enemy ships where guns were few, and avoided the broadside which had many. They could easily do this as their ships were light and could be manoeuvred quickly. As to their method of attack and boarding the enemy-ship a graphic account is given by Orme. "Eight or ten *grabs* and forty or fifty *gallivats* crowded with men generally composed Angria's principal fleet destined to attack ships of war or cargo. The vessels no sooner came in sight of the port or bay where the fleet was lying than they slipped their cables and put out to sea, if the wind blew, their construction enabled them to sail almost as fast as the wind, and if it was calm the *gallivats* rowing towed the *grabs*, when within cannon shot of the chase they generally assembled in their stern, and the *grabs* attacked her at a distance with their prow guns, firing first at the masts, and taking aim when the three masts of the vessels just opened all together to their view, by which means the shot would probably strike one or other of the three. As soon as the chase was dismasted, they came nearer and attacked her on all sides untill she struck, and if the defence was obstinate, they sent a number of *gallivats* with two or three hundred men in each, who boarded sword in hand from all quarters in the same instant."

Yet another description of the Angrian method of fighting provides interesting details. "Their manner of fighting a ship is as follows : "Their *grabs* and *gallivats* be there never so many in number, always keep astern of our ships (of the English) or any other they may engage and so close that there is no danger of their missing you when they fire their prow guns, which were

1. DKA. 215. The value of the restoration seems to be too high.

six-pounders. They tack and give you a side, and so shear off and load again. But in the meantime another grab comes up, and fires on us in the same manner, and so goes off, that the next may come up. This is the method they adopt till they have all fired round, when the first comes up again. As to their gallivate, they run in between the grabs, and keep constantly firing at you. Their grabs are the oldest built vessels you ever saw, they have a very long prow, which is almost even with the surface of the water, and very high sterned. They carry 16 guns each, and 150 men, all in arms proper for boarding any vessels. But in time of engagement, they are all, excepting the gunners who manage their guns, under deck, where there is little danger of killing them with our guns. These vessels are built purposely for fighting and they manage them with so much dexterity, that they can attack you any way in a moment, and always keep their grabs astern, so that we shall not be able to bring a broadside to bear on them. As to their gallivate, they carry six guns each and sixty armed men, and are always ready to supply their grabs with ammunition and men, in case of any accident."

The Marathas knew very well their short-comings in artillery, and made them good by striking at the weak points of the enemy with their light vessels. Construction of the warships and war-tactics change with a corresponding change in the armaments. So long as the Marathas were not the masters of artillery, which they were never in fact, it was unwise to expect them to change the construction of their ships. That is, the build of their *gurabs*, *gallivats* and *pals* was perfectly in keeping with their knowledge of artillery. That the age of science was yet to dawn upon the Marathas, as upon the whole of India, was a fact. In consequence, the Marathas were destined to receive a death-blow, sooner or later at the hands of the Europeans who were highly advanced in scientific knowledge and were in particular superior in artillery.

Under these circumstances, the role of the Maratha ships depending mainly upon the oar-power was limited, as compared with the heavily gunned European ships. But it had its points of vantage in the days of wood and canvas which must not be lost sight of. When the wind failed, the *galbat* or *gurab* could master the situation as it could be rowed fast. A clam day was often a day of victory for the Marathas when their opponents having heavy fighters were forced into inaction.

The Marathas preferred the weather-gauge in engagements and knew how to take advantage of the same. By putting the enemy on the lee side one could fight at one's own will as the enemy was in the least offensive position. When themselves on the lee side, the Marathas escaped with their oars and canvas. Though their strategy depended upon the oars, they were equally well skilled in handling the sail. In the battle of Suvarnadurg the Maratha navy sailed off before the English ships could move, using every patch of cloth and catching every breath of wind. The fact was that they could not rely upon canvas alone but had to utilise the oars when envisaged by the heavily armed European ships in order to escape their terrific fire. It was the superiority of the European guns that rendered the Maratha ship and sail impotent rather than their lack of skill in handling them or their backwardness therein.

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Coastal Wars and the Navy

A NUMBER of factors both social and geographic seem to have hindered the full growth of the Maratha naval power. A commendable beginning was made by Shivaji by establishing a state navy. But his successors neglected it as their major interest lay in landward expansion of their power. This landward mentality was a product of the geographic factor. True, that man's greatness lies in overcoming the geographic or the natural impediments. Nevertheless, his actions are commonly found to have been determined by geography. The naval power of the Marathas did not develop beyond a certain point as a result of the geographic factor and their landward mentality.

Nature has so designed the coast of Konkan or more correctly the whole west coast of India, that it has no chain of islands as seen in the Mediterranean and the seas around, which were constantly the scenes of naval activities since very early times. Navies have existed in India since the dawn of history. The littoral inhabitants were practically amphibians and well acquainted with the sea. They fished and traded along the coast by means of boats and might have carried piratical operations when need arose. These inhabitants, however skilful in sea-affairs, neither organised themselves into a power nor were they backed by any political organisation on the land by which they would be encouraged to take to a sea-career till at a later period of history. Actually when political organisations had well-developed on land, they were not commonly impelled to start a programme of navalism for overseas commerce or for war as the coast-line was very long and devoid of islands. Trade was carried along the coast and the kingdoms that sprang up on the hinterland, though occasionally involved themselves in naval skirmishes were not required to keep navies on a large scale for the conquest of the sea-board. A mighty land force could conquer the coastal region to its limiting borders where it touched the sea, without a navy, as the region had practically no big islands separated from the mainland.

This was a natural drawback of a continental people from the naval point of view. Guided inherently by this tendency the Marathas sent large armies into Konkan against the Siddi from time to time and also against the Portuguese for its conquest. The Maratha armies that broke into Konkan from behind the Sahyadri, occupied the Siddi's possessions on land without much difficulty. But when they appeared before Janjira, their progress was brought to a stand-still in the absence of an efficient navy. The drawbacks of the Marathas as a naval power are nowhere

seen so clearly as in their operations against the Siddis and the Portuguese. Particularly in their war against the latter, from 1737 to 1739, they had no planned naval movements which would certainly have saved them their men, material and time. In that great conflict they used their navy as an adjunct of the land-forces. On the contrary, the Siddi and the Portuguese mainly depended upon their navies whether for defence or offence.

Campaigns of Janjira—The Siddis of Janjira in Konkan were a constant source of nuisance to Shivaji's kingdom. They, whenever possible, plundered the Maratha territory, desecrated the Hindu temples and kidnapped their women. Terror, from first to last, was the technique of their power. All the Maratha inroads into the Siddis' territory were mainly directed to check these disturbances. Shivaji emptied his coffers and staked his men for the possession of the island fort, Janjira. His battery bombarded the ramparts of the fort almost every year. But the conquest of Janjira remained an unaccomplished dream throughout the history of the Marathas.

After Sambhaji's execution when the whole Maratha country was engaged in a life and death struggle against Aurangzeb, the Siddis' marauding operations once again spread like wild fire and they occupied many a stronghold in Konkan. The difficulty of the Marathas was their opportunity. Aurangzeb's death terminated the Maratha war of independence, and Shahu, the Maratha prince, was released by the Mughal noblemen. He came home and after many factious fights stabilized his seat at Satara. This brought him to the end of the year 1731-32, when he was free to tackle the problem of Janjira.

The immediate occasion that led Shahu to take up arms against the Siddis was the sack of the holy temple of Parashuram by Siddi Sat on the 8th of February 1727, the auspicious day of Mahashivaratra. Brahmendra Swami, a *Sadhu* who lived there was highly enraged at this.¹ He wielded great influence with Shahu and his courtiers. His righteous indignation could not be appeased unless Siddi, the *yavana*, was adequately punished. He urged Shahu and the Peshwa Bajirao I to take up the project. The political reason was the restoration of Raigad, the ancestral seat of government, which was in the possession of the Siddi since 1690.

As early as 1732 Bajirao and Sekhoji Angre had met at Kolaba and discussed the Janjira affair. By February 1733, Siddi Rasul, the ruler of Janjira, expired and the State fell into disorder due to the disputes among his many sons who competed for the office. Sheikh Yakub, a convert Mohammedan, brave and influential at the Siddi's court, was tempted by Shahu's men and brought into their fold. He promised to help the Peshwa in his undertaking on the understanding to have in return some territory and high rank after the accomplishment of victory. This disunion among the sons and the noblemen of the Siddi eased the Peshwa's difficulty.

Bajirao descended the Ghats in the month of April 1733 and entered Siddi's territory. At a stretch he captured Rajpuri, Khokari, Tale, Ghosale and many other places. Bakaji Naik, the commandant of Suvarnadurg reduced the forts of Mandangad and Bankot. The Pratinidhi allowed the Peshwa to enter into Konkan and himself won the historic fort, Raigad, on the 8th of June.² This surprising victory scored by the Pratinidhi through diplomacy rather than by sword won him laurels from Shahu, but unfortunately provoked Bajirao's jealousy.

1. *SCS*. 213-5.

2. *Ibid.* 214-8.

An all-round offensive was launched on the strongholds of the Siddi. Bajirao's idea was to storm the fort of Janjira when the enemy was in a baffled condition. Sekhoji Angre, the admiral of Konkan, who had agreed to work in collaboration with Bajirao, did not approve of this idea, as he was not prepared to risk his armada in the boisterous monsoon. Bajirao was not an expert in naval warfare, and readily agreed upon the new plan suggested by Sekhoji. The new plan was that Bajirao should encamp at Rajpuri during the rains and stop all supplies reaching Janjira from that side; Pratinidhi should attack Anjanvel, and Sekhoji should strike at Underi, Revas and Thal, thus reducing the Siddi to starvation. This blockade was to continue till the end of the rainy season when Sekhoji would join Bajirao at Rajpuri. This done, the Marathas were to fall upon the weakened enemy and his navy. Anjanvel and Underi were the two arms of Janjira and served the Siddi as supply depots. The strategic importance of these points was rightly recognised by Sekhoji and the Peshwa. During the rainy season the Marathas captured almost all the strategic points except Janjira, Anjanvel, Govalkot and Underi.¹

The plan of blockade, though perfect, fell through because Sekhoji's navy had not the pluck to attack Janjira in the monsoon. The English, apprehensive of Angre's power in the neighbourhood of Bombay when the latter took Revas, occupied Underi and hoisted their flag. In the month of September, they dispatched some warships to the rescue of the Siddi. Siddi Masan from Surat dispatched supplies to Janjira by ships. Dabhade and Gayakwad, Shahu's representatives in Gujarat, did not stop the supplies coming from Surat inspite of his orders to that effect, chiefly on the score of their personal enmity with Bajirao. Sambhaji Angre who was managing affairs at Vijaydurg also continued to be inactive. Pratinidhi who was to invade Anjanvel, tried to win the Siddi by foolishly wasting time in negotiations. Bajirao instigated Bankaji Naik against Pratinidhi and secretly sent a word to the Siddi that he would not oust him. Sheikh Yakub, the renegade began to play fast and loose as his expectations could not be fulfilled by Bajirao. Finally, Sekhoji's unexpected death on the 28th of August 1733 made confusion worse confounded. Bajirao patched up a provisional treaty with the Siddi in December 1733, and went to Satara. With this the first part of the campaign ended.

Shahu was bent upon continuing the fight till Anjanvel and Govalkot were conquered. He issued orders to that effect to Sambhaji Angre. The fight was carried on for two years even in the midst of family dissensions between the two Angre brothers, Sambhaji and Manaji. Siddi, taking advantage of this disorder, landed his men in the harbour of Revas and attacked Sagargad. Shahu saw no prospect of saving the situation and sent Pilaji Jadhav at the beginning of 1736 into Konkan. Many skirmishes took place between the Marathas and the Siddi's army. Manaji Angre was wounded in the chest. Chimaji Appa appeared on the scene on the 20th of March 1736. In a fierce battle near Charai one valiant soldier Nanajirao Surve killed Siddi Sat on the 19th of April 1736. Chimaji Appa was highly complimented for this capital stroke of victory. But this was all a land operation and Janjira, Govalkot, Anjanvel and Underi remained unconquered as though defying the power of the Maratha navy.²

The failure of the blockade was partly due to the weakness of the Maratha navy and partly due to personal jealousy among the nobles. In appointing Bajirao and Pratinidhi on one and

1. SCS. 218-20.

2. *Ibid.* 229-30.

the same campaign Shahu overlooked the military principle that one bad general is better than two good ones. Sekhoji's inability to blockade Janjira fort effectively was inexcusable. A naval attack on Janjira was not launched even after the rainy season. Sekhoji died in August. The English took possession of Underi and helped Janjira. This became possible because Sakhoji could not blockade successfully the provisions coming from Bombay. He was also not able to occupy Underi before the English took it, though the adjoining island of Khanderi, was already in the hands of the Marathas. Provisions also reached Janjira from Surat brought by the navy, unobstructed. All this proved the incompetency of the Maratha navy before the English and the Siddis.

The war was, however, won by Shahu by sending large forces against the Siddi by land. But the vanquished no less than the victors deserve praise for their tenacity and excellent seamanship.

The Bassein Campaign of 1737—The expeditions against the Siddis of Janjira were undertaken mainly to redress the wrong done by them to the Hindus. In the Bassein campaign too, the Peshwas were motivated by the same religious zeal to punish the sacrilegious Portuguese.

Since the occupation of North Konkan the Portuguese had been carrying on their proselytizing activities unabated. Their extreme fanaticism would not allow the Hindus to lead an honourable and unmolested life in their own land. No one could openly celebrate a marriage, a thread ceremony or any other religious rite. The tax levied upon the tuft of hair preserved by the Hindus according to their custom outdid the *Jaziya* of Aurangzeb¹ in fanaticism. So long as the whole of the Deccan was under the yoke of Islam the Hindus had no saviour who could effectively pay heed to their grievances. The rise of Shivaji on the political horizon, wedded to the cause of liberation of the Hindus from Islamic domination, changed the spectacle. The Maratha war of independence crippled the designs of Aurangzeb to conquer the Deccan, once for all. Shahu came home and stabilized his kingdom. Now the sufferers under the intolerant rule of the Portuguese were in a position to appeal to Shahu and the Peshwa for emancipation. For days together before 1737, leading men from North Konkan had been urging Shahu and the Peshwa to take up an offensive against the Portuguese and to deliver the Hindus from the religious persecution of the *Phirangis*.² The project was planned but had to be dropped as the Peshwa was called upon to tackle other matters of greater urgency.

The Bassein campaign is mistakenly styled by some scholars as a naval expedition. In fact it was a coastal expedition, though there was immense scope for the use of the navy.

As usual the Marathas drove a vast army into North Konkan and stamped out the Portuguese. There was no pre-planning for the equipment of a navy, though it was essential. The Marathas relied upon their numbers and their strategy of simultaneous attacks, while the Portuguese depended upon their guns and navy.

A critical examination of the Bassein campaign brings to light how the actions of the Marathas were foiled by the Portuguese ships and guns. To face them the Marathas had to stake their men, being deficient both in ships and good guns.

1. KVM. I. 71-5.

2. SC3. 344.

As already observed, the geography of Konkan presents a strategy which is peculiar to itself. Bombay though by definition an island, was easily vulnerable by land.

The strategy adopted by the Marathas for the conquest of such a region, bordering on the sea could be known by analysing the battles fought thereon. The strength of the Marathas as a land-power in contrast with their weakness in navy and firearms is very well-seen in their fights with the Portuguese.

Fortified coastal positions, sea-girt rocks and a strong navy have been the sinews of war of the coastal powers, and in the case of the Europeans superior fire-arms was an additional and decisive factor, but a colossal land-army could cut the sinews by its superior number and simultaneous attacks.

The plan of the campaign was simply to invade the island of Salsette and the Bassein territory at one and the same time.¹ The idea was that simultaneous attacks on the portuguese strongholds would diffuse their force and enable the Marathas to isolate them to the point of starvation. So far, the general plan was understandable. But it was a fatal mistake on the part of the Marathas neither to have systematically planned any naval action on a large scale nor to have commanded one from the Angres, which would doubtless have saved them, their men and time.

The Bassein campaign from March 1737 to the end of April 1739 falls into three phases. In the first phase, from March 1737 to the end of October of the same year, the Marathas succeeded wherever they launched attacks. In the second phase from November 1737 to March 1738, there was a general setback and their onslaughts on places like Tarapur, Shirgaon, Mahim, Dahanu and Asheri completely failed, and their camps were routed. Vesave and Bandra remained unconquered, and Dharavi which was a dagger pointed at the heart of Bassein was taken back from the Marathas by the Portuguese. Their repeated attacks on Bassein proved fruitless. In the third phase of the battle from March 1738 to the end of April 1739, things again looked brighter for the Marathas. The Marathas now poured into the northern-most possession of the Portuguese, the territory of Daman, and laid it waste. Goa, the heart of the Portuguese region on the west coast was struck and their power paralysed. Point after point fell prey to the Maratha hordes, and Bassein, which gave stubborn resistance from first to last, by its surrender at the end crowned the Marathas with memorable success.²

The First Phase of the Campaign (March 1737 to October 1737)—It was decided to invade Salsette and Bassein simultaneously. The army was divided into two sections, one was to start secretly from the Rajmachi fort and enter Salsette, and the other was to steal into Bassein after camping near the fort of Mahuli. The Rajmachi army rushed into Salsette *en route* the corridor near Thana, and took the fort of Thana at the threshold of Salsette. The Marathas took possession of 44 guns, big and small.¹ They then divided their troops into two, one to guard the entrance of Salsette and the other to storm the places on the coast.

The fort of Belapur was besieged by the Marathas which surrendered after three weeks. The besieging army numbered 4,000. After a couple of setbacks the Marathas deprived the garrison of its water supply which was outside the fort. Meanwhile the Portuguese received aid

1. KVM. ii. 7.

2. BSL. 47.

by way of ships numbering nine, dispatched from Uran, and from another squadron of 15 ships. The Marathas had no ships to face the Portuguese squadrons. Seeing that the fort was about to be stormed by the Marathas, and having been already deprived of the water-supply, the captain of the fort came to terms and delivered the fort to the Marathas.

Parsik, Phirangi-pada, Santacruze, and Santa Marya, one after another fell into the hands of the Marathas.¹ Vesave, a key point on the Salsette coast, the haven for ships, long coveted by the Peshwas was attacked thrice without success, from March to June. In the last attack on June 20, the Marathas were 2,000 strong. They cut the water-supply of the fort and tried to scale the walls by ladders, but constant fire from the fort repelled the Marathas and they retired in despair.²

The despondent army of Vesave soon joined the camp near Bandra. Capture of Bandra was not an impossible feat for the Marathas. The Portuguese were helped by the English with 350 men, and their navy consisting of nearly 125 vessels foiled the plan of the Marathas. They also received some 300 men from the Siddi. Thus the Portuguese and their allies had in all a force of 4,000. The Marathas could have stopped this succour if they had a well-equipped navy at their command.³

The Marathas break into Bassein—The Second Maratha contingent was to march from the fort of Mahuli to Bassein. Bassein island was surrounded by water on all sides except the east which had a narrow arm of the sea. Comparatively, it was easier to cross this eastern creek. Shankarajipant, the controller of the Bassein field, thought of entering Bassein by taking the few guarding stations on the eastern creek by surprise. The enemy was vigilant and Shankarajipant had to adopt different tactics. The bridge of Gokharave was well-guarded and the enemy was on the lookout. Shankaraji had scrupulously arranged for a ship to cross the creek. It carried about 150 select soldiers to the other shore. But this number was insufficient. Some 250 men jumped and swam the river, and about 150 more crossed it on rafts. The first batch that crossed the river near Rajavali put the 30 guards to sword, routed the station of Gokharave and made the land-route clear for the winged cavalry that was waiting outside. It rushed in, spread all over Bassein and encamped near Bahaddarpura.⁴ Soon after, Sopara was taken.⁵ Bassein was a hard nut to crack, hence the Marathas wanted to bring it into pincers by occupying other strategic posts, and at the same time cutting its supplies. With this plan in view the Marathas directed their forces towards Arnala,⁶ Jivandhan, Mandavi, Takmak,⁷ Sayavan⁸ and Manor, and these places fell into their hands one by one. The last of them was the most important point on the Vaitarana river. It fell after resisting for about ten days. On the day of its conquest 29 *galbats* and 6 *shibars* with men and ammunition were dispatched by the Portuguese from Bassein to redress Manor. But Manor had fallen before succour reached it, and the ships had to sail back. The Portuguese could sail as far as Manor with little obstruction as the Marathas had no navy to contend with.

1. *KVM.* ii. 26-36.

2. *Ibid.* 21-3.

3. *Ibid.* 23-6.

4. *SPD.* XXXIV. 14-5.

5. *Ibid.* Letters 40, 50.

6. *SPD.* XVI. Letter 32.

7. *KVM.* ii. 36-8.

8. *DPI.* II. 405.

The total strength of the Maratha army spreading between Agashi and Bassein was 2,200, but the estimated need for the conquest of the Bassein territory was from 10 to 12 thousand.

Dharavi opposite to Bassein was a much contested place. It guarded the Bassein river from the south and served as a supply depot to the Portuguese when the hinter-land of Bassein was under the Marathas. Its occupation was deemed equally necessary by the Marathas, to starve Bassein.¹ From Dharavi, Bassein was within the range of artillery.² Between March and April of 1737, the Marathas with 700 men had pitched a camp on the hill of Dharavi but in the month of May they were compelled to retreat from that place when desperately attacked by the Portuguese. Probably, the Portuguese effected a landing at Dharavi with the help of a navy. Though dislodged from Dharavi, the Marathas were resolved to have it again, and concentrated their force in Bayanel in the neighbourhood of Dharavi. An enemy force near Dharavi was a sword hanging over the Portuguese station at Bassein. Puffed up with their success of May, the Portuguese thought of ousting the Marathas from Bayanel. Accordingly, they marched upon the Maratha camp. The Marathas allowed them to approach and then suddenly let loose their cavalry, causing 500 casualties. This attack on the Portuguese took place shortly after the 12th of July 1737.

The Second Phase of the Campaign—From the beginning of the campaign, Bassein proper was a constant scene of battles. The first attempt of the Marathas on the 30th of May 1737, to scale the walls being repulsed, they thought of one more onslaught about the 28th of June, when rain poured in torrents all over Konkan.³ An offensive in the rains alleviated the heat of the Portuguese cannonade by some degree, and the fury of the monsoon stopped all resources reaching Bassein. Contemplating an escalade in the midst of rain the Marathas started from Bahaddarpura with ladders. The Maratha wall-scalers and others counted 4,000. But alas! the ladders could not get a firm footing in the slippery ground, and the terrible fire ensuing from the ramparts burnt down the Marathas. With heavy losses the Marathas retired. A third attempt was made in September with 3,000 men to climb the walls, surrounded by a ring of another 3,000 men with orders to put to sword those fleeing away. This time the Portuguese fire again repelled the Marathas with many dead.⁴

Thrice defeated at Bassein and once at Dharavi, the spirit of the Marathas was cowed down, and the deadly fire of the Portuguese guns had struck terror into their heart. From October 1737 onward, till March 1738, the tables turned on the Marathas. The Maratha offensives failed everywhere, the important station of Dharavi was wrested from them, their retreating armies were seen all along the coast. This terrible setback offers excellent data for an analysis of the shortcomings of the Marathas from the military point of view, and their method of offensive.

From October 1737 to the end of February 1738, the Marathas failed in their onslaughts on Mahim, Shirgaon and Dahanu along the coast, lost Dharavi which they held so long inspite of the repeated enemy attacks, and their siege at Asheri was repulsed.

1. *SPD*. XXXIV. Letters 16, 25.

2. *Ibid*. XVI. Letters 27, 55.

3. *KVM*. ii. 39-49.

4. *Ibid*. 49-50.

At Mahim and Shirgaon, the same methods were applied. The strength of the Maratha army at Mahim was 3,250,¹ and when the forces of Mahim and Shirgaon were combined they numbered 3,500.

Defeatism had entered the Maratha army as it had lost heart before the enemy. To avoid this, strict orders were issued to behead the cowards escaping from the army. Stockades were erected to mount guns at a distance from which the ramparts could be bruised. The number of guns to breach the walls at the disposal of the Marathas was too poor. Only two guns were brought from Arnala to bombard the fort of Mahim. Ditches were dug between the stockades and the forts so that the enemy should not pounce upon them with ease. By lengthening the trench to the foot of the fortification attempts were made to blow the walls by mines. Of course, all this work was to be conducted under constant fire from the enemy and their sorties. At the same time escalade was also tried.

The guns brought from Arnala to demolish the walls of Mahim made no effect. Except on the seaside, the fort was surrounded by the Marathas. About this time thirty-five *galbats* and one *pal* came to the aid of the Portuguese. The *pal* by its big size could not enter the creek of Mahim, but the rest of the *galbats* approached the fort. To stop the supplies brought by the ships, the Marathas directed a gun towards the squadron which they had previously employed against the fort. However, 12 of the *galbats* could effect a landing and the supplies reached the fort.² Some skirmishes took place with little loss to either party. For the second time 44 ships consisting of *shibars* and 2 *pals* anchored between Kelave and Mahim equipped with men and material. At this time, a batch of soldiers came forth from the fort and safely carried the men and material in. This was the opportune moment for the Marathas to fall upon the enemy but somehow the attack was not launched. A third squadron of ten *galbats* came from Bassein to Mahim. It had the valiant captain of the Portuguese Pedro de Mello, a man of high military qualities and undaunted spirit. He defeated the besieging Maratha army.

The inability of the Marathas to stop the supplies transported by ships was a deplorable fact. They had no guns to guard the mouth of the creek nor did they guard the coast in the vicinity of Mahim where an enemy landing was not unexpected.

The beleaguered Portuguese strength was not less than 3,000. Under the cover of their fort-guns the Portuguese made a strong sally. The fort-guns blew off the Maratha stockades, and the following army massacred the Marathas. Successful retreat was not possible at the eleventh hour as the enemy was sufficiently strong in number and equipment. Many a Maratha veteran fell on the field and the Marathas retreated to Shirgaon.³

The same sorry tale was repeated at Shirgaon. Overgrown with cocoanuts and other palm trees the surrounding area of Shirgaon was best suited for constructing offensive points. The fort of Shirgaon had creeks on both sides, north and south. In front of the castle-gate the Marathas mounted two guns recently brought from Mahim. When fired, one of them burst and killed the artillery men and a few others. At this time the mouth of the creek was guarded by 2 or 3 guns. The situation of the fort was desperate and it was about to be reduced. But to the good luck of

1. *SPD*. XVI. 105-6.

2. *Ibid.* Letter 28.

3. *KVM*. II. 60-5.

the beleaguered, Pedro de Mello came in the nick of time with ships, landed his men and rushed on the Marathas.¹ In the general scramble many were killed and wounded, and the rest of the Marathas withdrew. Here, again, the Maratha artillery was inefficient and they had no navy to stop the Portuguese ships from entering the creek.

Dharavi—After the capture of Dharavi which had often changed hands the Marathas had erected a fortification on the hill. Such a place in the Maratha hands was a constant dread to Bassein. On the 15th of February 1738, Pedro de Mello started for the occupation of Dharavi with 300 grenadiers and 1,440 native soldiers. He embarked them all on board the twelve ships, and landed near Dharavi. On the morning of the day of attack the whole land was veiled under thick fog. Taking advantage of this, the Portuguese marched on the Maratha cavalry that had camped on the ground at the foot of the hill and defeated it. They then straight way approached the fort, scaled the walls and took it.² The Marathas were rendered helpless by the Portuguese fire.

The Third Phase of the Campaign—After February 1738 till about the end of the same year, the Marathas were mainly busy with the reorganisation of their forces, construction of the strategic posts like Thana and Ghodbandar, erection of stockades at Bahaddarpura, and planning a new offensive.³

Chimajiappa had entered Konkan sometime in March 1738. He sojourned at Thana and supervised the construction of its fort. By the end of May he went to Poona to recoup his health pulled down by incessant activity and the climate of Konkan disagreeable to his constitution.

During the rainy season the Marathas constructed a new fort about a mile and a half from Kelave as an attacking station. At the beginning of December they repelled an attack on Thana by the Portuguese who were well-equipped with ships, men and ammunitions. The General of the North, Pedro de Mello, was accidentally shot dead and this was an irreparable loss to the Portuguese.

During his respite at Poona, Chimajiappa discussed matters regarding the winter offensive to be taken afresh. By the beginning of November 1738, Shankaraji Phadke invaded the territory of Daman with 1,000 foot and 10,000 horse, conquered Khattalwadi, Umbergaon, Nargol, Dahanu and devastated the whole country. By the end of December, Chimajiappa arrived in the *Kataba* of Mahim, and Shankaraji joined him. The combined forces of Shankaraji and Chimaji were estimated at 16,000 horse and 24,000 foot. The Marathas had now veterans like Chimajiappa, Pilaji Jadhav, Malharrao Holkar, Baji Bhivarao, and many others of good name. This time the Marathas were resolved upon retrieving the lost field.⁴ From the sad lesson of the previous year at Mahim, Shirgaon and Tarapur, the Marathas had learnt to compensate their shortcomings.

Mahim was besieged with a vast army under Chimaji. The surrounding palm trees were cut, and five strong stockades were created each mounted with five guns. The biggest one named *Divalatod* (the wall-pounder) shattered the rampart at many points, but the Portuguese readily rebuilt the demolished parts. The mouth of Mahim river was barred by a flotilla to foil the

1. KVM. ii. 70-4.

2. *Ibid.* 86-7.

3. *Ibid.* 95-9.

4. *Ibid.* 114, 119-20, 125-6.

Portuguese endeavours to land. To relieve this tight grip, a company of Portuguese soldiers and 200 natives embarked upon two *pals*, two *machavas* and seven *galbats*, were dispatched from Bassein. They could not effect a landing as the entrance was blocked by the Maratha ships. After waiting for three days the relieving Portuguese detachment forced a landing by boats, and got into the fort pressing through the Maratha hordes with utmost efforts. Under the fire of their stockade guns the Marathas laid mines at the foot of the walls. They were about to light the mines when in fear of the bastion being blown up, the Portuguese capitulated. They were put to shame for surrendering without fight. The Marathas got many captives, and started the next day for Kelave. The magazine in the fort of Kelave exploded, and the garrison was blown off. Kelave was captured and Shirgaon followed suit.¹

The Marathas then turned towards Tarapur. The place was very strong, encircled with a deep ditch. The besieging Marathas busied themselves with the usual methods of reduction. Thirty guns were mounted on stockades, and their cannonade broke the walls at many places. But the Portuguese filled in the breaches. Mines were laid at five different spots and on the morning of 24th January the mines were to be lit, and in the general scramble an attack was to be carried to different quarters. Accordingly, the army was divided into different groups. Ladders were kept ready to scale the walls.

The mines were lighted on the appointed day. Malharrao Holkar's mine made a big breach by blowing up a bastion while those of others effected smaller ones. The attacking army dashed through, and the scalers hastened to the walls. The first man to scale was shot dead and fell to the ground, his successor met the same fate, and for a while the ladder remained vacant. The gap was again filled in, and many reached the top of the wall. The fort-artillery showered balls, but the Marathas poured in such numbers that they outdid the fire and put the Portuguese to sword. The fort was taken. The loss in dead on the Maratha side was considerable. Baji Bhivarao, a valiant and trustworthy servant of the Peshwas, fell on the field. The captives numbered 3,000, and the Marathas captured 500 horse.

The capture of Tarapur was a memorable incident in the Bassein campaign. It indicates how the Marathas improved their artillery, and shows the Maratha soldier at his best.

On the third of February, Asheri was given over to the Marathas without resistance. Vesave surrendered after a grim fight, and Madh was vacated by the garrison under the cover of night. The conquest of Dharavi, a much contested place, was a notable victory.² It fell into the Maratha hands on 6th March 1739. For sometime, the affairs at Dharavi were delayed as the Marathas could not stop the Portuguese ships from approaching the fort. The conquest of Dharavi was a stepping stone to the capture of Bassein.

The Island of Karanja—When Chimaji was busy at Bassein, Manaji Angre on the 7th of March marched on Karanja, a place long coveted by him, with an embarkation of 2,000 men on 40 *galbats*. It afforded an excellent naval base. It fell after a fight of five days. Had Manaji rendered naval help from time to time, the success of the Bassein campaign would have been quickened with lesser loss of life and property. But this was not possible when jealousy existed between the Angres and the Peshwas. Manaji was jealous of the Peshwa's power spreading over

1. KFM. 126-9.

2. *Ibid.* 130-45.

the coast as it meant a check on his ambitions. Apprehensive of this, he kept himself aloof from the Bassein affair. The Peshwas on their part probably avoided Manaji's help, for, had it come in time it would have been incumbent upon them to part with some portion of the newly conquered territory for Manaji. They kept him aside in order to have the whole prize for themselves.

When more or less all the places except the fort of Bassein were conquered, the invasion of Goa was executed in accordance with the previous plan of the battle — simultaneous attacks on all the Portuguese possessions.¹ Moreover, the idea in marching on Goa was, that if Goa, the heart of Portuguese territory was struck, the other parts or limbs would languish automatically.

This task was assigned to Venkatrao Ghorpade, Bajirao's brother-in-law, assisted by one Govind Ram Thakur, an astute diplomat, conversant with the affairs of Goa. The Savant of Wadi joined in this project as an ally. Venkatrao entered Sashti, and at once took the fort of Madgaon on 15th January 1739. His next target was Bori, a fort bordering on the coast. By stealth and trick 500 men were embarked on board a ship and the enemy men who had anchored nearby were massacred when asleep. Thus, Bori was taken, and a garrison of 100 horse and 500 foot was placed there for defence.

By the 28th of January the Marathas arrived at the fort of Rachol, the gate of Goa. The besieging Maratha army then consisted of 7,000 horse and the same number of foot. Barricades were put in the river at Rachol, and stockades were erected for guns. Finding the Maratha determination to take the fort the Portuguese opened negotiations.

The Savant of Wadi broke into Bardes on the 22nd of February and took the fort of Tivi. Goa, already denuded of forces by the call of North Konkan, was brought into a tight corner. In view of the impending disaster, the Portuguese having played fast and loose with the Marathas for a while, at last came to terms.²

The capture of Bassein forms the most spectacular event in this campaign. The flower of the Maratha army had clustered round Bassein for its reduction. Right from the beginning of the campaign to its termination, the Maratha army was present at the gates of Bassein. From the 30th of May 1737 to the 4th September of the same year, three Maratha attempts to take the fort by storm had proved fruitless. So, Chimajiappa after the conquest of almost all the places save Bassein, arrived there with his enormous army on the 6th of February 1739.

On the 19th of March 1738, Shankarajipant had laid the foundation of a stone-stockade 360 by 262 feet with a bastion on each corner. The height of this work was to be 21 feet. Near the ground mines were laid on three sides where attacks were possible. Chimaji at once started constructing small earthworks for mounting guns. All this work was carried out by the Marathas in the midst of terrific fire from the fort. The guns directed against the ramparts numbered 27, while the Portuguese had 110 guns of longer range on the fort-walls. Five wooden stockades were erected at different places, two of them being as high as the fort-walls, to cast fire in the fort. The plan was to carry the mines to the foundation of the fort under the protection of the guns, and to cast fire missiles from the wooden stockade. The enemy, in order to destroy the gun-barricades, fired from the ships anchored near the fort, probably to its south and east. Marathas

1. KVM. ii. 142-51.

2. *Ibid.* 152, 156, 160-2, 187.

tried their utmost to silence the cannonade ensuing from ships by directing some guns from Dharavi. But their guns being of shorter range, their balls could not hit the Portuguese ships, and their attempt proved fruitless.¹

Having mounted guns and constructed stockades, the Marathas engaged themselves in sinking mines. But they encountered great difficulty in laying them as the land was sandy. By its softness the sand offered least reaction to mines when they were exploded, and proved ineffectual. This difficulty was overcome by burying wood in the earth for the mines. With Herculean efforts twelve mines were carried to the base of the walls in the month of April. A day was fixed for the onrush, 1st of May, points were allotted to dart in when breaches were made, and the scalers were kept ready with ladders.

On the day of the general assault the mines were lit. They opened up a breach wide enough to allow in twenty men abreast. The Marathas poured in. The enemy showered fire and darted all sorts of missiles at the Marathas. A hand to hand fight ensued. Meanwhile, another mine exploded and created a still wider breach. From 7 O'clock in the morning till 3 O'clock in the noon the Marathas made eight assaults at the two breaches, but in vain. Their ladders were toppled down and not a man could get on the wall. By evening the Marathas retreated to their camp broken-hearted.²

Chimajiappa was a man of adamant will and undaunted courage. Though the field was lost once, for him all was not lost. He infused new energy into his people by offering presents and grants, and purged the Marathas of their despairing mood. On the second day of May the assailing army was to follow the same methods of attack. In the breaches, the enemy had kept a huge fire ablaze, as it was impossible to repair them. Mines were ignited and one of them demolished half part of a bastion. The Marathas rushed on, swarms after swarms. In the grim fight countless fell.

But the Marathas could not get access into the fort as the enemy had constructed inside the walls a new stockade of wood and palm. At night the Marathas stuck to their position and thought of burning the stockade.

The garrison at night gathered to think over the situation of the fort. Their strength had been reduced to a poor number, ammunitions exhausted, and expecting a relieving force from Goa was hoping against hope. And the news that the Marathas had three more mines to be lighted left no alternative but to surrender. On the 4th of May in the morning when the Maratha troops moved in the direction of the fort, to their great surprise they saw a white flag in the breach of a *Sabastium* (a bastion). Thus ended the long drawn siege and the campaign of Bassein.³

The capture of Bassein has immortalised the name of the Marathas in the pages of Indian history. It proved that a colossal land-army of the Marathas could humble the pride of the white man — the *Phirangis* — in spite of its shortcomings in navy and artillery. Militarily, it best illustrates the peculiar stratagem adopted by the Marathas for the conquest of the coastal region.

1. *KFM*. II. 192-4 & *SPD*. XXXIV. Letter 161.

2. *KFM*. 197-201.

3. *KFM*. II. 202-3 & *SPD*. XVI. 162.

Review—The expeditions against Janjira and Bassein were conducted for the emancipation of the Hindus from the intolerance of Islam and Christianity. The goal was achieved. In their nature, therefore, they were like crusades. Chimajiappa was the central figure in all these campaigns. He killed Siddi Sat with the zest of a true emancipator, and with equal vehemence fell upon Bassein. His word was a spell that conjured up the Marathas to offer their lives for the glory of their country and religion, *Maharashtra Dharma*. He was an embodiment of true Maratha leadership. But in the momentous fervour of victory the eminent politicians of the day forgot the importance of the navy founded by Shivaji.

The Peshwas became the masters of north Konkan. They secured a number of good ports. Their economic resources were increased considerably. But the naval *subha* which they created was not able to cope with the new situation. The Bassein campaign should have brought home to the Marathas the fact that for meeting the Europeans on the sea reorganisation of the navy on the latter's model was an absolute and immediate need. The magnitude of this national need was not grasped because the Marathas relied too much upon their land-forces, and had no trans-oceanic ambition. They lacked that instinct of foreign commerce which is absolutely necessary for the prosperity of a maritime people.





13

Warships

AFTER the Borivali carvings of ships in stone, no ship drawings of the subsequent times are available till we come to the Maratha period. Fortunately, for this period information regarding the Maratha ships and their maritime activities is amply furnished by the European travellers and distinguished historians like Orme and Low. We have also the contemporary Maratha records, now preserved in the Alienation office or the Peshwa Daftar, Poona, giving details of the maritime activities of the Marathas, i.e. of their ships, naval equipment, crew, docks, *dastaks* or permits, naval skirmishes, operations against the pirates etc.

The *Bakhars*¹ on Shivaji devote a page or two to his naval activities and consequently mention the type of ships which he constructed for war. Details in this matter have to be searched for in the original papers. They are of immense value for a complete study of the Maratha navy.

Seagoing vessels are generally classified on the basis of their structure and function. Round-ships or ships having a round build are better suited for carrying cargo. It is their rotundity i.e. structure, which more or less decides their function. Similarly, longships which easily gather speed because of their narrowness or streamlined shape are more war-worthy than the round-ships. The terms 'round-ship' and 'longship' were more or less equivalent to 'cargo-vessel' and 'war-vessel' respectively, in the period under consideration. However, at times round-ships were utilised for war. Contemporary European ships were classified on the same principle. European vessels that came to India for trade in the seventeenth and eighteenth centuries were good cargo-carriers as well as fighters. Yet, there were vessels which were exclusively meant for war, like the bomb-ketch and the man-of-war. Likewise, ships which were broader in proportion to their length were often used as merchant-vessels. This distinction is not to be taken too theoretically. For, a merchantship had to arm itself well to keep the pirates at bay, and a warship had to keep some cargo as provision for its crew. With the advancement of scientific knowledge or more correctly from the industrial revolution onward, the two types came to be differentiated more sharply. The difference between them in modern times is so marked that the cargo carriers require a war-fleet to escort them.

1. The *Bakhars* are historiographical writings of the Marathas written in the eighteenth and nineteenth centuries.

The classification of secondary or small ships as merchantships and warships was never hard and fast. Merchantships could be easily converted into warships and *vice versa*. A classification of the Maratha ships on the basis of their structure and function might be attempted here.

Writing about Shivaji's navy, Krishnaji Anant Sabhasad,¹ his biographer, presents a list of vessels which his master constructed, viz. *gurab*, *tarande*, *taru*, *galbat*, *shibad*, *pagar* and others. Malhar Ramrao Chitnis, another biographer of Shivaji, adds the names *machava*, *bathor*, *tirakati* and *pal* to the former list. The names given by these writers cannot be treated exclusively as those of war-vessels. From the original Marathi papers like the Selections from the Peshwa Daftar, *Itihasa-Sangraha* and *Marathyanchnya Itihasachi Sadhane*, we are able to get some details of the Maratha navy.

As we pass from Shivaji's time to the later Maratha period, we find some new types of ships coming into use. A continuous increase in the boat-names is noticeable in the later period because of the availability of source-material in greater quantity. Shivaji's biographers give only a bare list of boat-names. The naval power of the Marathas reached its high water-mark under the Angres. So far as tonnage and construction are concerned, there is a marked difference between the ships of Shivaji's period and those of the Angres. Bigger ships constructed by the Angres were more seaworthy than the light ships of Shivaji.

One of the servants of the East India Company, Robert Orme, who distinguished himself as a historian in the latter part of his life, has given a brief yet accurate account of the Angre's warships. By his early education at Harrow and love for writing he was splendidly suited to undertake works like '*Historical Fragments*' and '*History of Indostan*'. These books remain as valuable source-material to this day.

Writing about the Angre's fleet he states that it consisted of '*grabs* and *galibats*' which were well-suited to the Malabar coast. The *gurabs* had usually not more than two masts, although some had three. The capacity of the three-masted *gurabs* was about 300 tons, and that of the smaller ones about 150 tons. According to Orme, they were built to draw very little water, as they were broader in proportion to their length, narrowing from the middle portion to the end. At the end, they had a prow instead of bows projecting like that of the Mediterranean galley. It was covered with a strong deck which was on the same level as that of the main-deck of the vessel. It was separated from the main-deck by a bulk-head which terminated in the fore-castle. This construction enabled the *gurab* to pitch violently while sailing against a 'head sea'.

The deck of the prow was without side enclosures, so that the sea-water which dashed against it passed off uninterrupted. On the main-deck under the fore-castle there were two pieces of cannon from nine to twelve pounders pointing forward through the portholes cut in the bulk-head. They fired over the prow. The cannon in the broadside ranged from six to nine pounders.

The *galbats* were larger row boats, built like the *gurabs*, but of smaller dimensions. They rarely exceeded seventy tons. They had two masts of which the mizzen was very slight. The mainmast had one large triangular sail. When hoisted, its peak went much higher than the mast itself. The *galbats* were usually covered with a spar-deck, made up of split bamboos for

1. JSSB. 65. Shivaji constructed various kinds of ships, viz. *gurab*, *taru*, *tarande*, *galbat*, *shibad*, *pagar*, and appointed *Daryasarang* a Muslim and *Mai Nayak* a Bhandari as *subhedary*. Two hundred ships constituted a *subha*. Krishnaji Anant Sabhasad was Shivaji's biographer.

lightness. They carried only '*patteraroes*' which were mounted with six or eight pieces of cannon ranging from two to four pounders. They were rowed by forty or fifty stout oars at a speed of four miles per hour.¹

Another account of the Angre's warships states that his fleet consisted of *gurabs* and *galbats* ranging from 150 to 200 tons. The *gurabs* carried broadsides of six and nine pounder guns. On their main-deck were mounted two, nine or twelve pounders, pointing forward through the port-holes cut in the bulk-head in such a manner that they could be fired over the bows.

The *galbats* carried light guns fixed on swivels, and some of them had six or eight pieces of cannon from two to four pounders. They were propelled by forty to fifty stout oars.²

This description of the Angre's ships is in conformity with that given by Robert Orme.

The warships were equipped with a military band in order to inspire the crew with the spirit of war. Dr. Ives gives an interesting account of the military band. He writes, "They (the Angre's ships) are not unlike the Tartans of the Mediterranean, only a great deal lower, they carry two guns in the bow and vast number of men. Their music is a plain brass tube, shaped like a trumpet at both ends and about 10 feet long and a drum called a tom tom, a skin stretched on a large shallow brass pan, on which they strike with two large sticks and make an amazing noise. Among them are two ketches which they call grabs."

"Several of the gallivats had blue or green or white pendants like the Portuguese at the mast head, and one had a white flag with a red cross in the middle."³

The *gurabs* and the *galbats* had all the essential features of warships. A long projecting streamlined prow easily cut its way through the water. The area of contact with water of the front part of such a prow being small, the resistance of water was less, consequently securing good speed. As these vessels were broader in proportion to their length, they naturally obtained greater buoyancy. As already observed, they had forty to fifty oars, and steering was effected by a rudder slung to the stern-post. The quarter oar had by this time become out-of-date. The seating arrangement was inside and near the gunwale-line. Every oar had a row-lock or a thole which made propulsion easy. Generally, one oarsman was employed for an oar.⁴ However, if situation demanded, two men worked at each oar to secure good speed.

The hull of a warship was secured by iron bolts though sewn-planking was commonly practised. Even today, sewn-planking is popular on the Konkan and the Malabar coasts. The build of these vessels was what is technically called '*clinker-build*', in which the planks overlap each other. This was a cheaper method of securing the hull when iron was costly and difficult to obtain. The greatest defect of the *clinker-build* is that it renders repairing rather a difficult job.

1. OHH. I. 408.

2. GBP. XI. 147.

3. *Ibid.* 153. While on tour in the district of Thana, the author has seen a painting of a ship at Arnala about 12 miles north of Bassein in a tomb known after one Baji Belose. The tomb was probably erected in memory of Baji Belose who fell in the battle of Bassein (A.D. 1739). Inside the tomb on the right-hand wall there is a scene of a fort probably that of Arnala. A ship is seen approaching the fort having on board a military band of the description given by Dr. Ives. The ship is sailing towards the fort in triumph after it was taken possession of by the Marathas in the Bassein campaign of A.D. 1739.

4. GOH. 187. Oars as the principal means of propulsion developed in the Mediterranean as the sailors there had to depend upon the oars and not upon the wind. In the Arabian sea the case was altogether different. The sailors could depend upon the regular periodical winds which did not necessitate to exert much at the oar. So, in general one oar one man was the principle for rowing in the Indian seas. If it was a calm two men might have been applied to each oar to secure good speed during the Maratha period.

Teak being the king of timber was best suited for warships. The keel, the outer planks, and such other parts exposed to the effects of sea-water were made up of teak. The most important quality of teak is that it neither shrinks nor corrodes iron. The ribs and the beams in the upper structure of the hull were made up of jack, mango or *undal*. Teak as well as *punaya* were used for the mast as a long and straight piece of wood could be obtained from these trees.

The hull of the vessel was generally secured by cocoanut coir. The *phatemar* of the late nineteenth century had iron bolts in its structure. Coir was commonly used in the *machava* and the *hodi*. *Undi-nut* oil or fish-oil was used for the hull.

The cordage mainly consisted of cocoanut coir. The cables too were woven of the same material. The use of pulleys and stays was quite common in the Maratha period.

With regard to the sails, the necessary details are not available from the account given by Orme. For instance, it is not known whether each mast carried one or more sails. Nothing is mentioned about the jib. However, from other authentic sources, we can state that the *galbat* had square topsails and topgallantsails. The *gurab* being larger than the *galbat* was equipped with topsails and topgallantsails.¹

The original round sterns of the Konkan ships were replaced by the square-sterns of the European ships with the continued contact of the Europeans. Ships of the early nineteenth century like the *phatemar*, had adopted the square stern of the Europeans. We may suppose that sometime after the Portuguese had established their power on the west coast of India, the indigenous round stern was replaced by the square stern of the Europeans. Probably, large vessels were the first to adopt the new square stern.

The attribute '*grab-built*' applied to the vessels of the nineteenth century is very significant. It indicates the build of a ship constructed after the *gurab* of the eighteenth century, as described by Robert Orme. By '*grab-built*' is understood, a ship in which the keel and the prow-stem are of the same length.

On an average, a *galbat* carried hundred men on board, and a *gurab* 150 to 200 men.²

The *gurabs* and *galbats* of the Marathas had pretty names. Some of the *gurabs* were named as *Dattaprasad*, *Shivaprasad*, *Anandiprasad*, *Ramprasad* and *Sahebsadar* while the *galbats* were called *Sawai Raghunath*, *Narnag*, etc. The ship-names of the Marathas will be discussed in detail in one of the following chapters.

MARATHA GRABS AND GALLIVATS ATTACKING AN ENGLISH SHIP (Plate 4)

The Marathas had adopted the European build in some of their ships. Especially, during the Angrian supremacy a number of fighting ships were constructed on the English model. Such ships were more sea-worthy and could meet their European rivals on more or less equal terms. The number of these ships may have been limited as they were costly.

From a couple of fascimiles of Maratha ships which are after the European style we can study their details. One of the fascimiles is from *The Pirates of Malabar*³ taken from a picture

1. *GBP*. X. 350.

2. *SPD*. XXXIV. 15. One thousand men were carried on 12 *galbats*, the average coming to 83 men per *galbat*. About the *gurabs* see *SPD*. XXIV. 255 & XXXIV. 90. The two *gurabs* of the Portuguese coming from Kelave (Mahim) had three masts and 400 men on their board. So the average comes to 200 men per *gurab*. Such other authentic references can be multiplied.

3. *BPM*.

in the possession of Sir Ernst Robinson. The other is from an eighteenth century book.¹ The title in the first fascimile is '*Maratha Grabs and Gallivats attacking an English Ship*'. The title obviously means that the Maratha ships are attacking an English war-vessel. The picture actually shows a three-masted English ship unfurling the Union Jack from its stern. It is surrounded by Maratha warships.

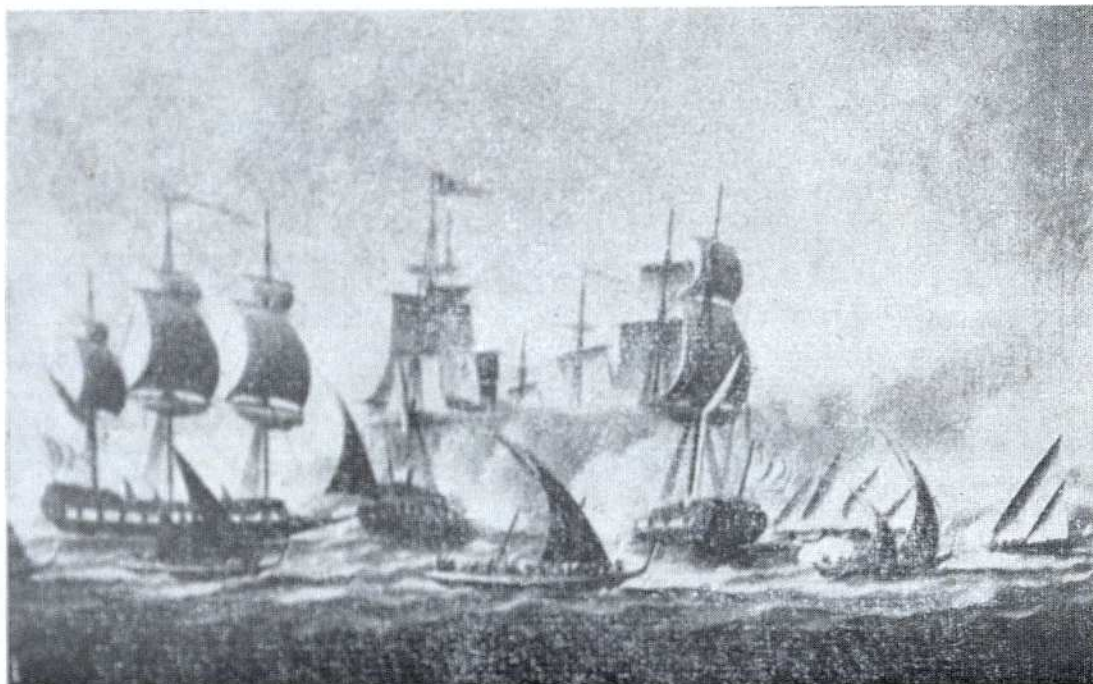


Plate 4—Maratha Grabs and Gallivats attacking an English Ship

The low built Maratha *galbats* having two masts and two lateen sails are seen going from left to right towards the English ship. Their wind-filled sails also indicate the direction in which they are sailing. Their masts are raking forward. They are not being propelled by oars. All are flying a flag from a staff in the stem. Some of them have long narrow ensigns fluttering from the main or the mizzen-mast. The low built vessels are crowded with men ready to board the enemy ship. In the right-hand corner three or four two-masted vessels are seen moving in the direction of the English ship. These two-masted ships with lateen sails, and having a low build, fit in with the description of the '*gallibats*' (*galbats*) given by Robert Orme. They can, therefore, be taken as the *galbats* of the Marathas. They are not leading the attack but are surrounding the English ship for due action.

There are some three-masted ships to the left-hand side of the English vessel. One, which is nearer to the English ships, seems to have opened its broadside artillery. A screen of smoke spreads between the English vessel and the charging Maratha warship. It can be said to be a Maratha ship from its stern-flag. The other three-masted vessel is seen in the left-hand corner. About eight guns are peeping out through the portholes in its right side. It has three masts each having three square sails. The topsail and the topgallant are wind-filled. The lowest sails of the three masts are tucked up, as is commonly done in action. The prow carries a jib. The masts are perpendicular to the hull of the ship. They are not raking forward as in the two-masted vessels. Because, a forward rake in a three-masted ship may upset its balance.

1. CWI.

These three-masted vessels were, in all probability, the *gurabs* and the *pals* of the Marathas. From authentic documents, we gather that there were *tirkati gurabs* and *tirkati pals*, meaning three-masted *gurabs* or *pals*. The word *gurab*, if taken in its generic sense, will include a three-masted *pal*. The long projecting prow of the three-masted ship in the left-hand corner, the guns peeping through its broadside, and its low build show that it has all the essential features of a *gurab* — a Maratha warship. The tapering flags waved by the mizzen-masts of the three-masted Maratha warships correspond well with the description given by Dr. Ives.

The three-masted Maratha ship which has opened its broadside artillery on the English vessel has a square stern. Rectangular sails, perpendicularity of the masts to the hull, the square stern, rigging and perhaps the jib were the European features adopted by the Marathas.

TULAJI'S SHIPS UNDER ATTACK

A sketch of the war between the English and Tulaji at Gheria prepared before 1761 gives us sufficient idea of the Angre's ships. In Figure 15, the English ships under Rear Admiral Watson have taken positions in the Vijaydurg creek. All of them have blockaded Tulaji's navy inside the creek. About eight ships of Tulaji are seen arranged in a line, exchanging fire with the English

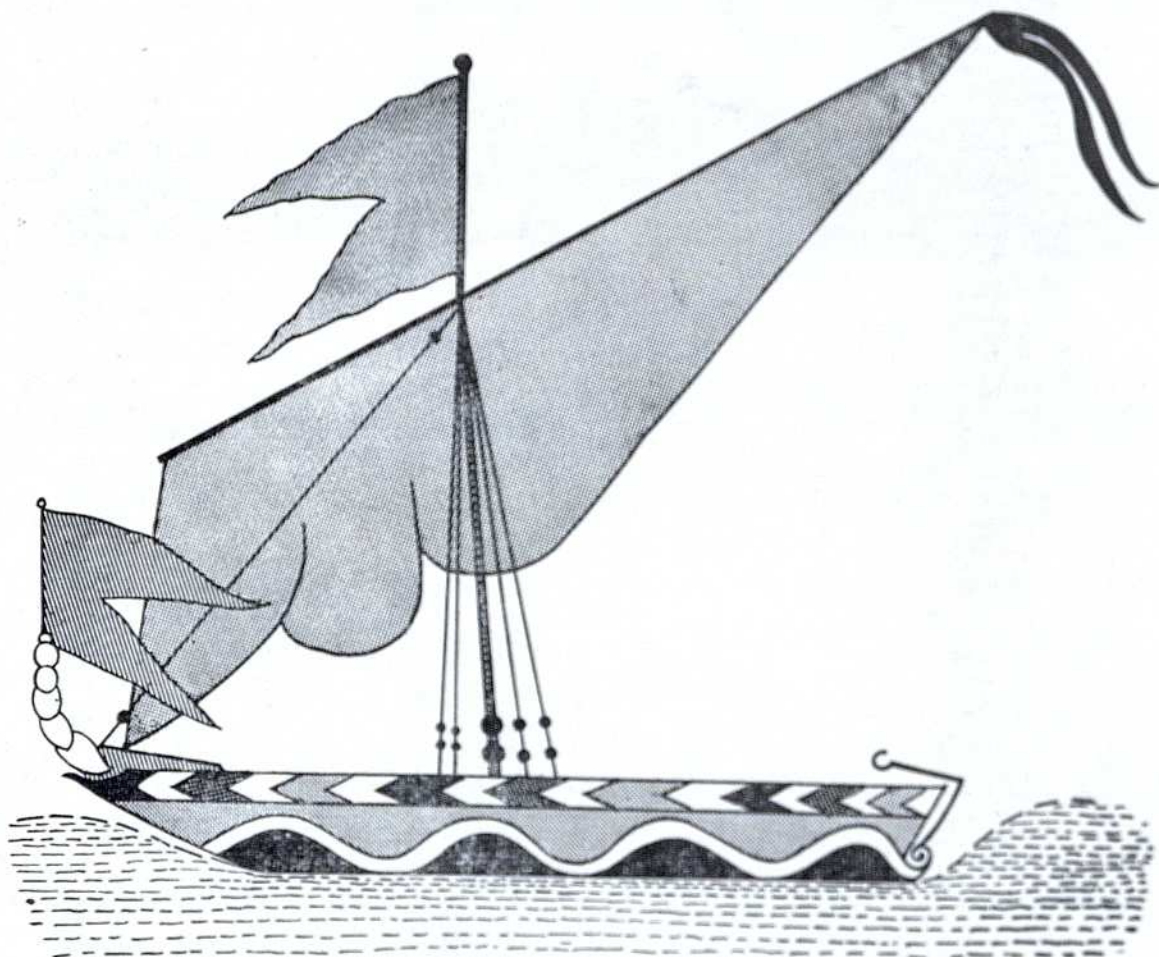


Fig. 16—Galbat

ships. They are of low build and have projecting prows, portholes for guns, and three masts each. The masts are perpendicular to the hull. The ships in Figure 15 are either three-masted *gurabs* or the *pals* of the Angres.

THE GALBATS¹ (Fig. 16 & 17)

These are one masted ships with a vast lateen sail spreading along the yard. The sails are half-set. The cordage is secured by pulleys to the right-hand side of the mast. In one of the

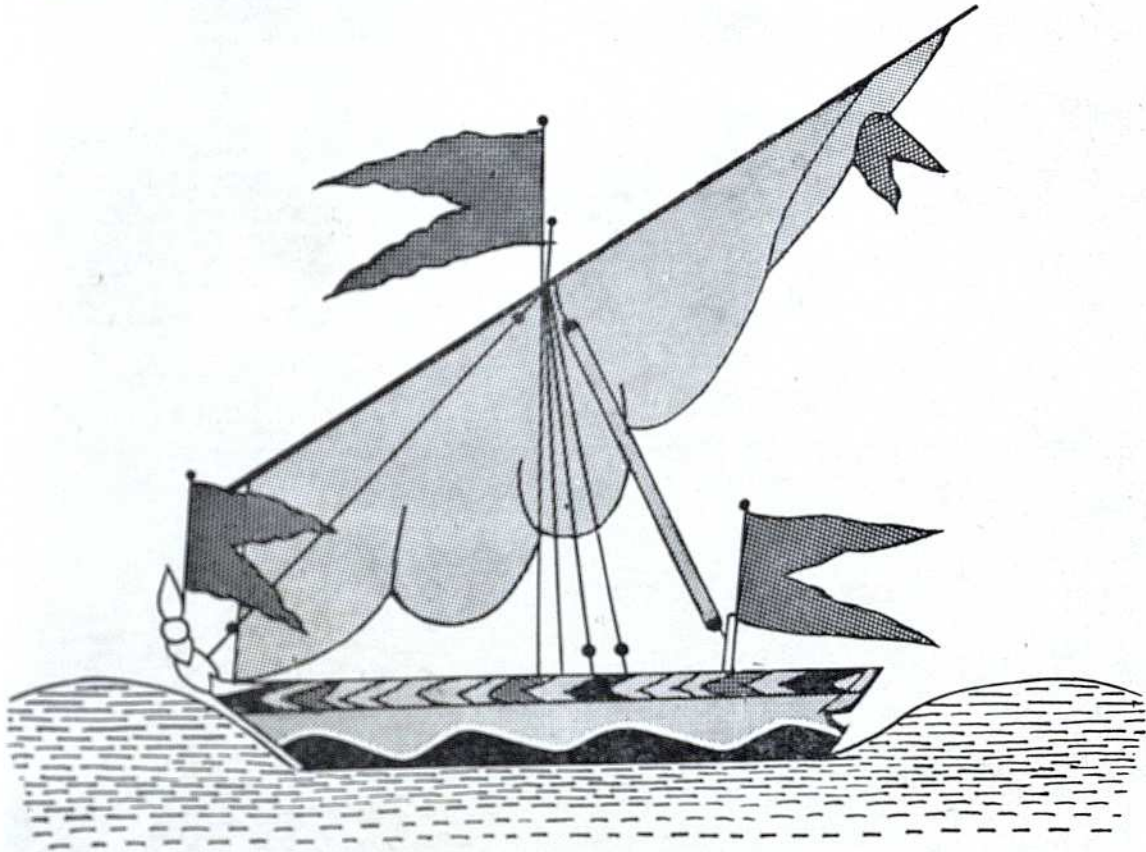


Fig. 17—Galbat

galbats the rudder handle is taken astern. The upper rim of the hull has a beautiful arrow-shaped design in white and black. The lowest part of the hull touching the water surface has

1. The drawings of ships described here and in the next chapter—Merchantships—are taken from the Prince of Wales Museum, Bombay, and the Bharata Itihasa Samshodhaka Mandala, Poona.

There are two charts of ship-drawings in the Prince of Wales Museum, Bombay, containing ships of the Marathas, the Arabs and the English.

The names of the ships are given in the *Modi* script. There is no indication of date in the chart. However, from a similar chart of ship-drawings of the Angres it can be said that the Maratha ship-drawings of the Prince of Wales Museum belong to the eighteenth century.

One of the charts shows a Maratha *pal*, a *gurab*, three *galbats*, two *phatamaris* and a galley.

The Bharata Itihasa Samshodhaka Mandala, Poona, have got a chart of coloured ship-drawings of the Angres in their collection. It is a unique find of its kind representing Maratha warships. The chart delineates about thirty ship-drawings of which three are English and the rest of the Angres. At the bottom of almost every drawing a brief description of the ship is given in *Devanagari* interspersed with *Modi* in some cases. The ships of the Angres are in engagement with those of the English. The scene of action is near the fort of Kolaba-Alibag. The drawing of the Kolaba fort is at the centre of the chart.

It is very significant to notice that some of the ship-names of this chart tally with those included in the naval list of the Angres. For instance, the *galbats* *Rajahams*, *Naranag*, *Samsher* and *Sadashiv* of the chart are found in the naval list of the Angres (DHABU, *Kulabkar Angre*, 390-1). This corroboration leaves no doubt regarding the authenticity of the chart. It was secured by the Mandala from one Nimbalkar family of Ropale (district Sholapur) distantly related to the Angres.

The most interesting drawings in the chart are *galbat* *Sadashiv* of Sekhoji Angre, *galbat* *Sayai-sadar* of Manaji Angre and *gurab* *Mira-daulat* of Dhondji Angre.

a wavelike design. The curved prow rising above the water-surface ends in a round-head with a pointed tip. In one case, the curved prow with a round upon a round resembles a scorpion's tail.

The artist has shown the flags on the masts and at the stem fluttering in opposite directions.

GALBATS RAJAHAMS AND NARANAG (Plates 5 & 6)

These ships are remarkably similar to the *galbat Sadashiv* of Sekhoji Angre. Of course, the *abdagir* or the umbrella — the mark of admiralty — is absent in them.

Both are carrying large lateen sails : *Rajahams* yellow coloured and *Naranag* slate. The flags and the gunwale are in burnt sienna. The hull and the prow in slate cannot be easily distinguished from the bluish sea-water.

The flag staff of the *Rajahams* is supported by an odd wooden piece. The well-designed rudder is carried over the stern by a handle for easy manipulation.

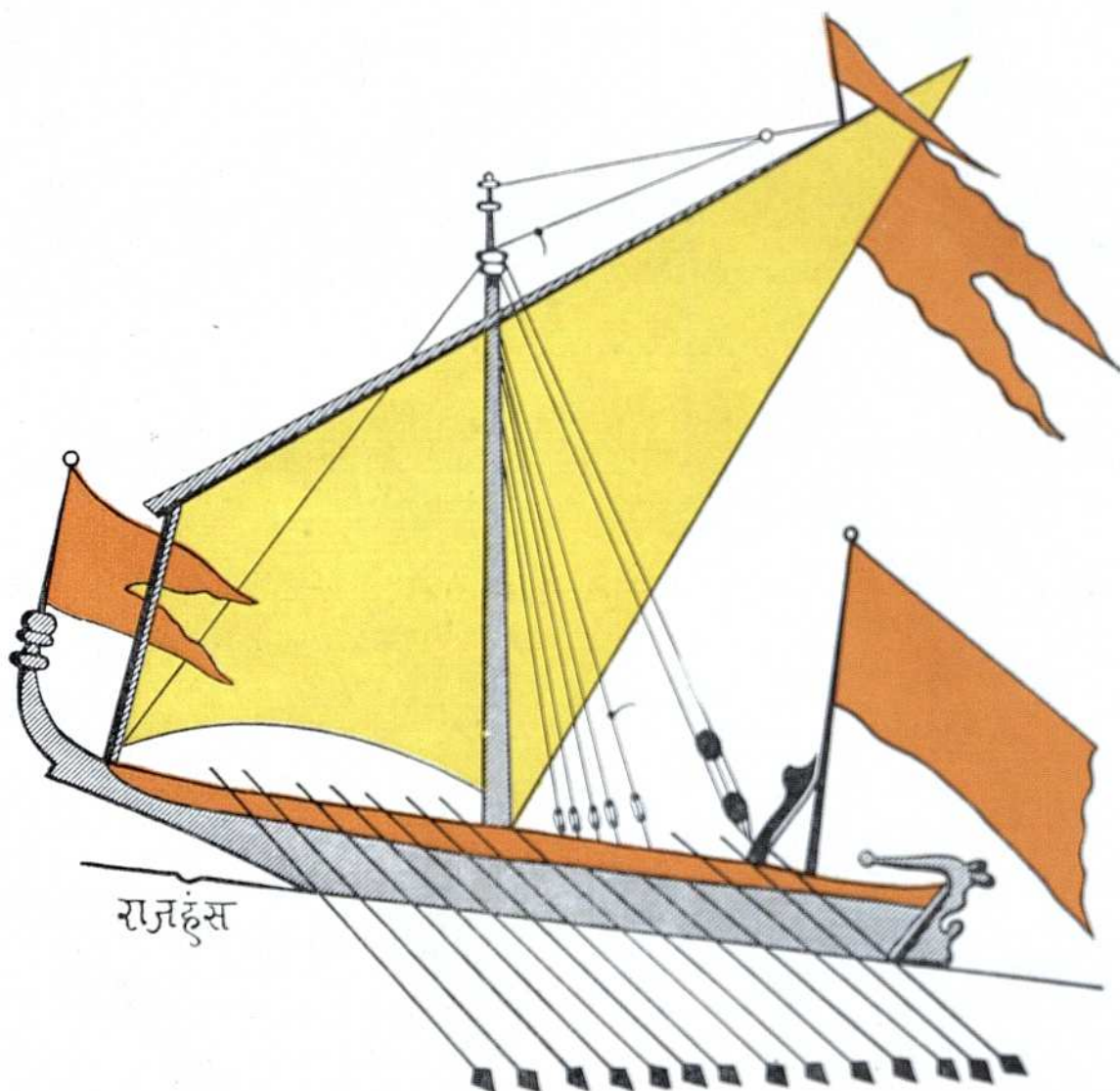


Plate 5—Galbat Rajahams

(By the courtesy of the Bharata Itihasa Samshodhaka Mandala, Poona)

The sails stretched along the yard are tacked at the mast-foot and the stem. The oars splashing in the water are on the port in order to balance the lateen sail on the star-board.

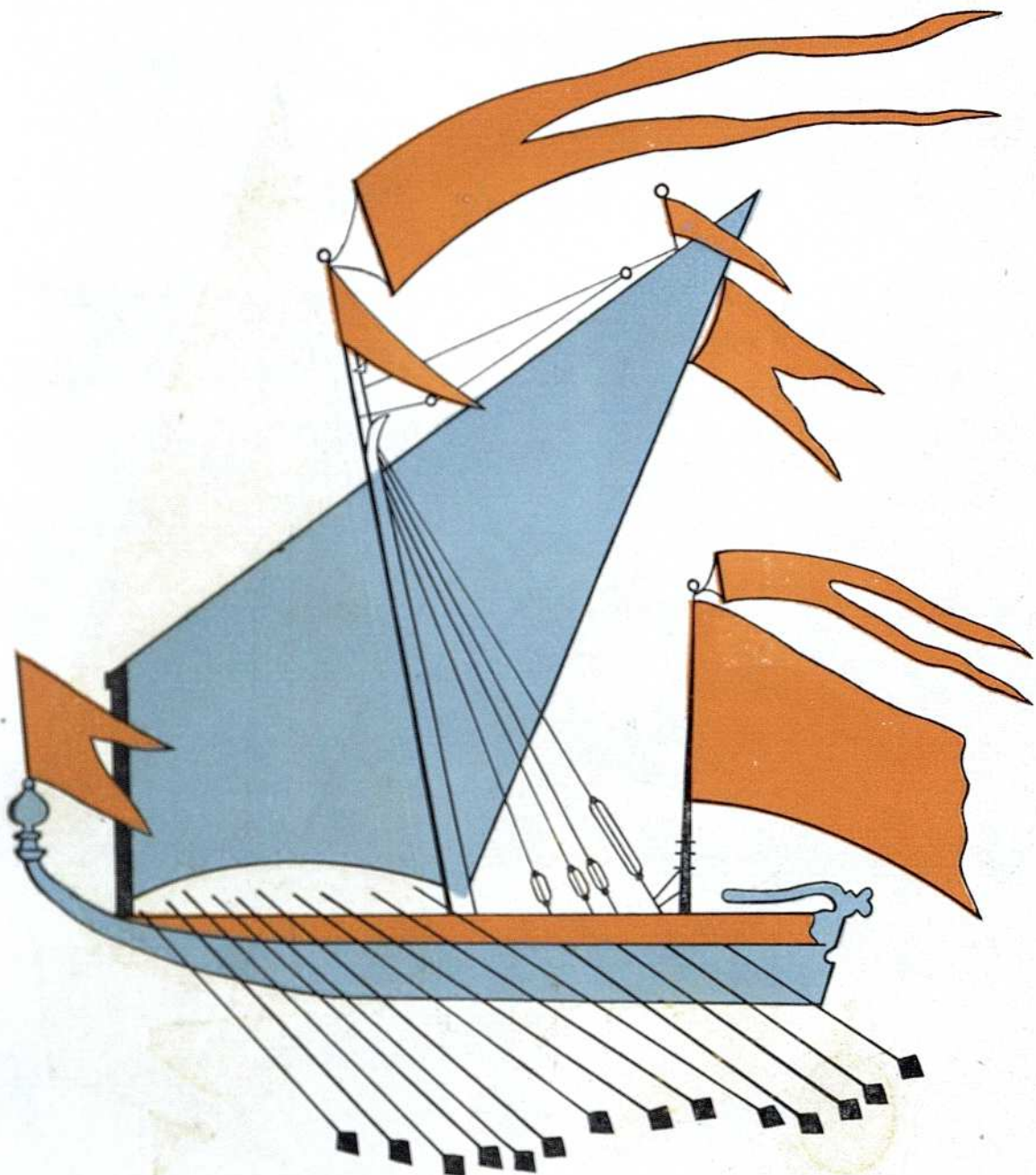


Plate 6—Galbat Naranag

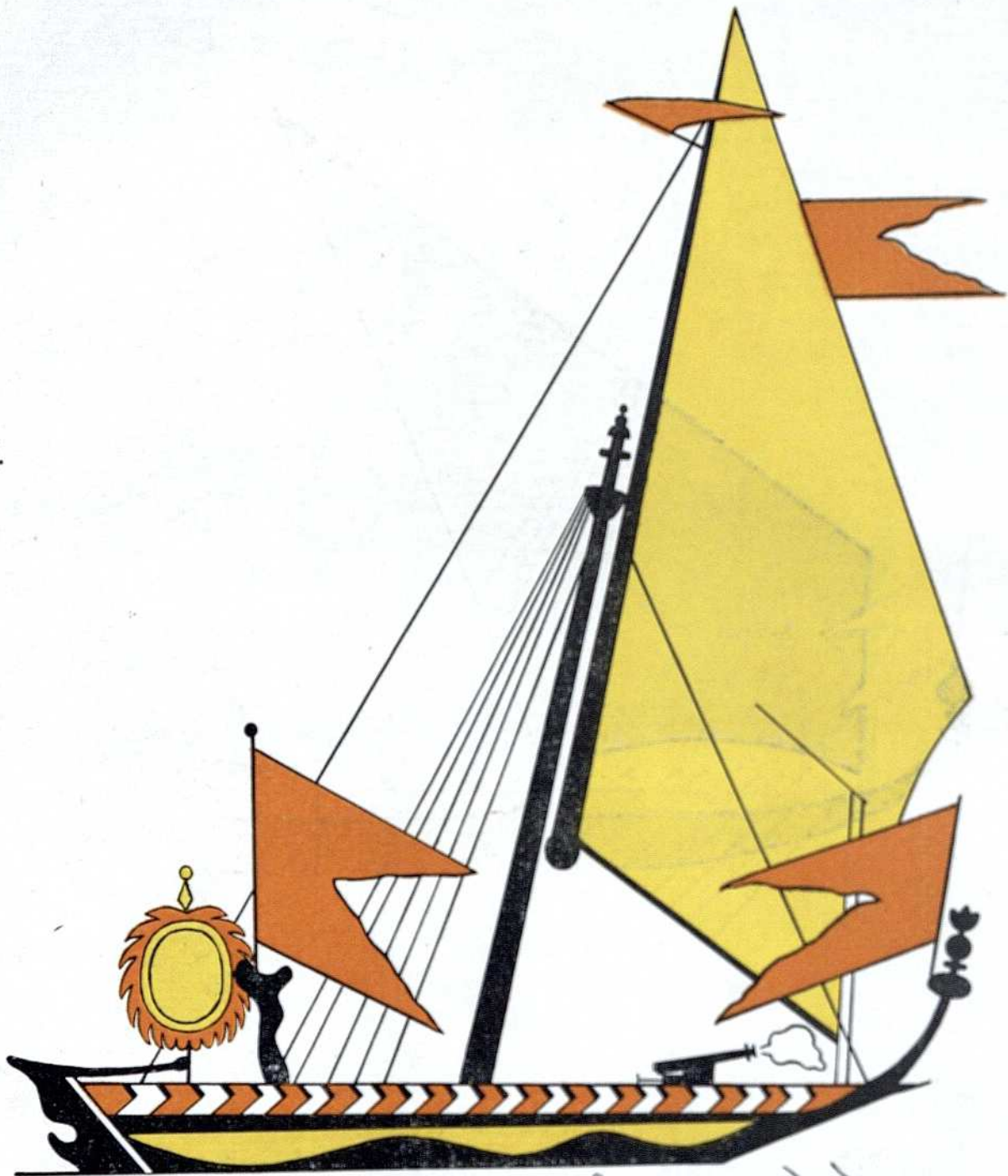
(By the courtesy of the Bharata Itihasa Samshodhaka Mandala, Poona)

GALBAT SADASHIV (Plate 7)

This is Sekhoji Angre's warship. He succeeded to *Sarkhelship* (admiralty) after the death of his father Kanhoji.

The *abdagir* or the umbrella at the stern can be taken as an emblem of the admiral's ship. In modern language, *galbat Sadashiv* can be called as the admiral's flag-ship. The velvet piece at the centre of the *abdagir* is bluish green with a yellow band around. The hem-plates are burnt-umber.

The stout dark mast gracefully rakes forward. The yellow lateen sail is unfurled. The yard slung across the mast looks parallel to the latter though its lower butt-end should have been shortened as it actually recedes from view. We must excuse the artist for this shortcoming as perspective is almost absent in the Maratha paintings.



गलबत सदी सीव खासा सेखो
जो बाका ये स्वारिचें ॥

Plate 7—Galbat Sadashiv

(By the courtesy of the Bharata Itihasa Samshodhaka Mandala, Poona)

The black bottom of the hull is relieved by the overhead yellow. The gunwale is beautified with an arrow-motif in white and burnt-umber. The slender prow projecting from the stem ends in a flowerlike design with a couple of bulbs below. The handle of the shapely rudder is carried astern as far as the umbrella.

The hull painted in contrasting colours, the slender prow, the fluttering flags and the royal *abdagiri* lend stately appearance to the *galbat Sadashiv*. The ship under canvas suggests that it is gliding over the waves in a favourable wind.

The prow-gun has just fired a shot.

THE GURAB (Fig. 18-A)

The *gurab* has two masts carrying square topsails. The lateen sail of the mainmast is half-folded. One of its end is secured on a small boom. The stern and the masts are flying the usual type of flags. The pulleys and the cordage are shown very accurately. The stern has a small comfortable deck. The broadside has seven guns. The wavy decoration of the hull gives it a camouflaging effect.

The wind-filled sails and the fluttering flags of both the *pal* and the *gurab* are suggestive of their motion.

GURAB MIRA-DAULAT (Plate 8)

Mira-daulat belonged to Sardar Dhondji Angre, one of the sons of Kanhoji. It is a full-rigged ship with two masts. The pulleys, the cordage and the square-sails show how the Angres had adopted the scientific equipment of the Europeans in their navy. However, they did not change the low build either of their *galbats* or *gurabs* as it was best suited to the shoal waters of Konkan.

The streamlined prow rising gradually breaks through the waves without hampering the speed of the *gurab*. It has the usual arrow-design in white and burnt-sienna. Above the gunwale dark fearful guns peep through the portholes of the deck. The portholes in white and burnt-sienna, with a yellow broadside create an impression of dread. The high stern-deck has a trellis-design. Guns booming from the stem and the stern are vomiting flames and smoke.

Except the jib, all the sails are square. The topsails are in slate and the lower in yellow-ochre. The masts are made up of two pieces. The lower rises from the hold and ends in a small platform just above the lower sail. The platform was used to scan the sea for distant ships and also for conveniently operating the rigging. The second piece of the mast is secured on the platform.

From the mainmast a long ensign flutters reaching as far as the stern-flag. It has the same design as the gunwale.

The *Mira-daulat* has a crew of 45 seamen and 60 soldiers.

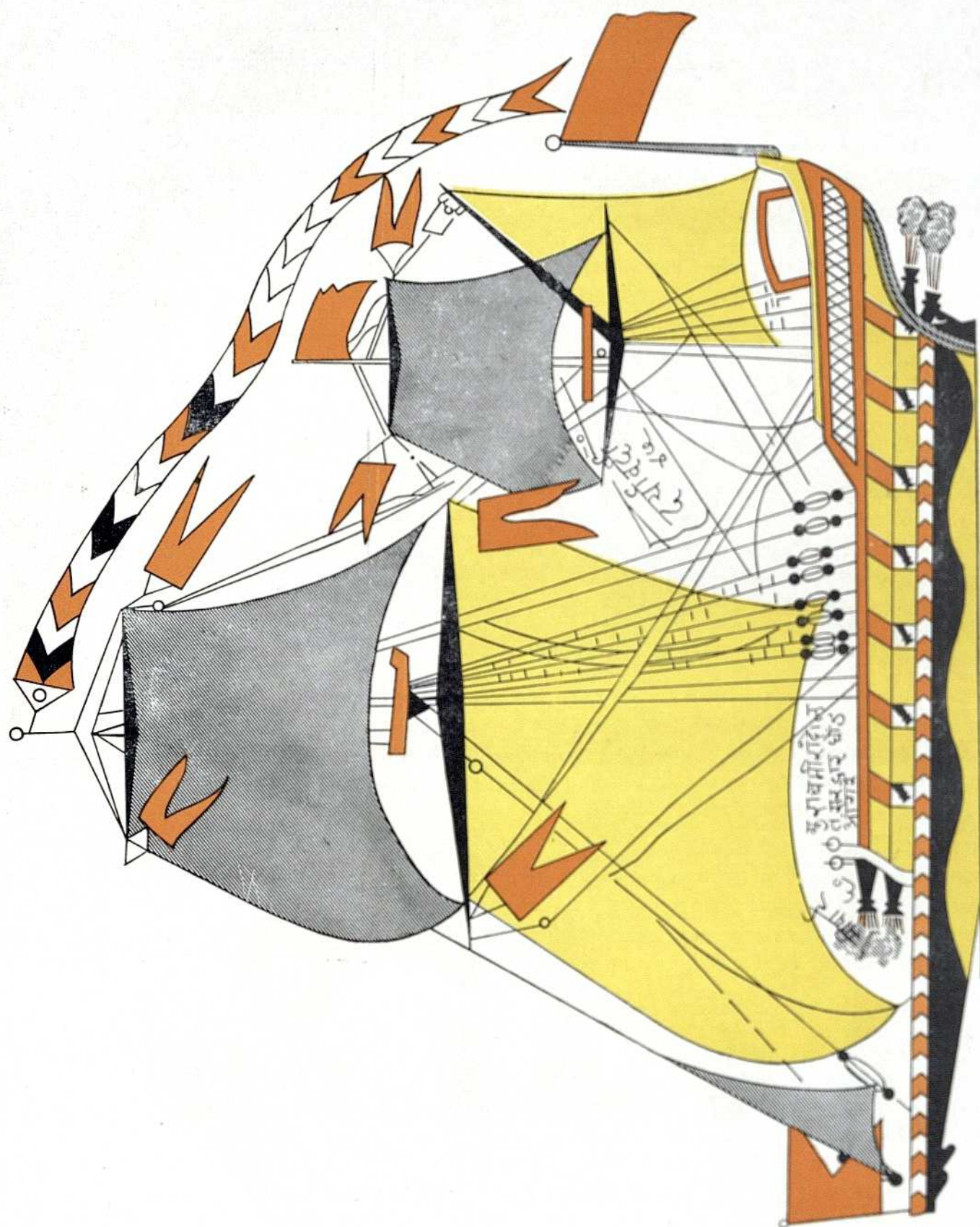


Plate 8—Gharab Miradast of Dhoondji Angre
(By the courtesy of the Bharata Itihas Samshodhak Mandal, Poona)

GURAB BHAVANIPRASAD (Plate 9)

While fighting with an English galley, the sails of *Bhavaniprasad* caught fire. It was then towed to the fort of Kolaba (Alibag) by Dattaji Vichare (*vide* the inscription in Plate 9).

The crew on board the *Bhavaniprasad* consisted of 60 soldiers and 40 sailors. The colour-scheme, rigging and the arrangement of guns are the same as that of the *gurab Mira-daulat*.

The aft-mast and the stern carry large flags. The stripped ensigns are in burnt-sienna.

Each mast has two platforms for observation, one at mid-mast and the other at the top.

The cordage is in black.

THE PAL (Fig. 18-B)

The *pal* was the biggest fighter of the Marathas.

The *pal* has three masts perpendicular to the hull. They are made up of two pieces joined together just below the square sails. The mizzen-mast is carrying a square sail at the top and a lateen sail below tucked up on a yard. Only half the portion of this sail is visible.

The main or the middle-mast is carrying a large square sail. The fore-mast too has a square topsail and a lower sail secured on the yard. The folded sail is shown artistically. The prow has a triangular jib-sail. From the top of the masts are fluttering the typical Maratha banners. The stern too carries a similar flag. The mast has a narrow ensign with an arrow-motif done in black and Indian red.

The black dots seen at the bottom of the cordage obviously stand for the pulleys. The entire rigging of this *pal* is done in the European style.

The stern of the *pal* is square and has a spacious decorated deck. This is meant for the captain. The broadside of the *pal* that is visible has four guns peeping through the port-holes. The peeping guns make the *pal* fearful.

We have some interesting information regarding the *pals* under the command of Anandrao Dhulap at Vijaydurg. Among other warships, he had three big *pals* *Mahadeo*, *Samsherjang* and *Phatehjang*. The crew of these *pals* ranged from 275 to 369. Of the 275 on board the *Mahadeo pal*, 153 were seamen, 14 gunners and 108 soldiers.¹

The *pals* were too big to enter the creek of Mahim.

For the repairs of the *pals* *Samsherjang* and *Phatehjang*, the estimated cost was Rs. 10,000. But they required the construction of a new dock for repairs, as they could not be accommodated in the old one.

Later, when the *pal* *Samsherjang* was fitted out for an expedition, it had 200 men on board — soldiers and seamen.²

Such big *pals* required small boats for towing them and landing the crew.

1. PDU. Rumal 490.

2. Appendix C-1. Extract 20.

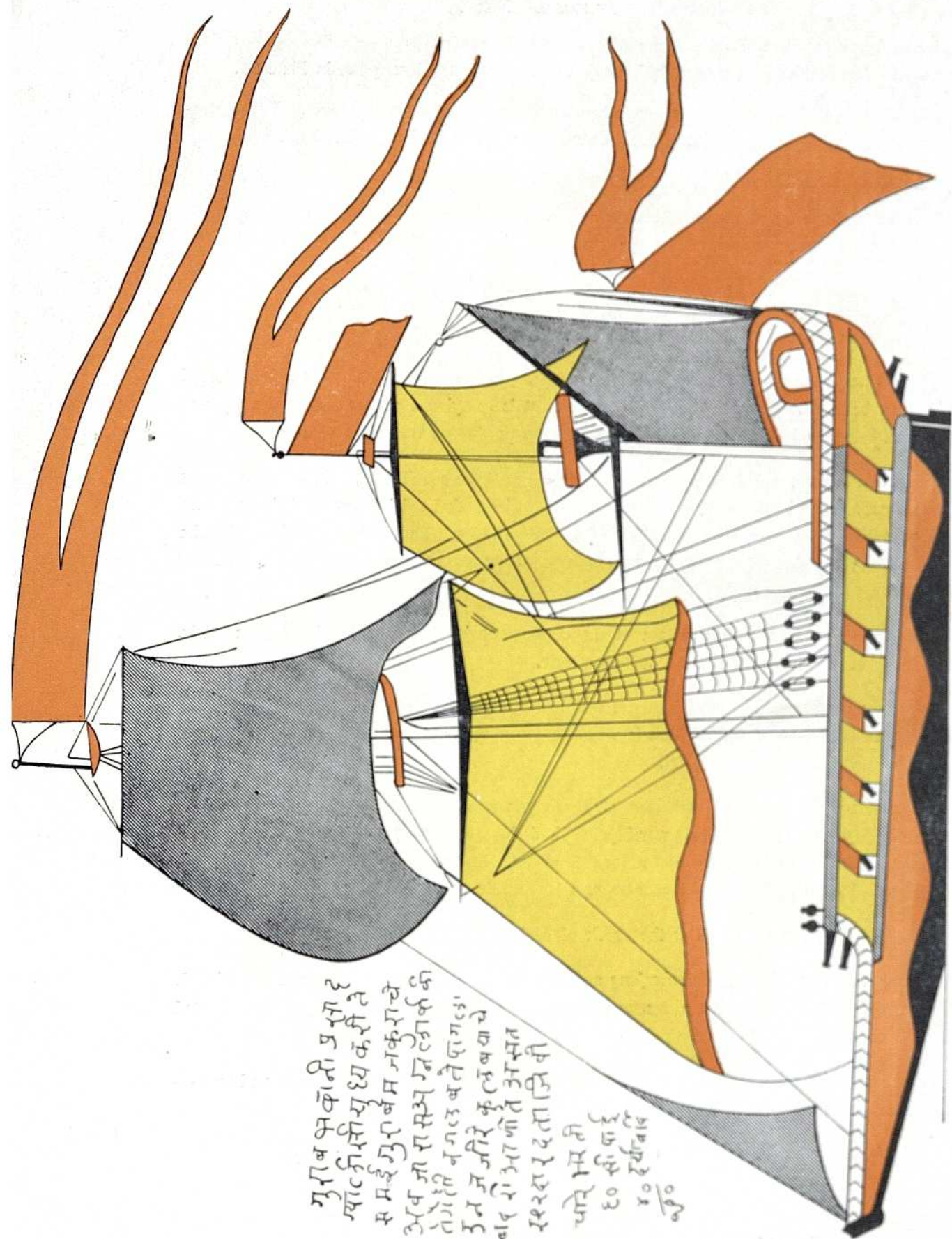


Plate 9—Gurrab Bhavaniprasad

(By the courtesy of the Bharata Itihasa Samithodhaka Mandala, Poona)

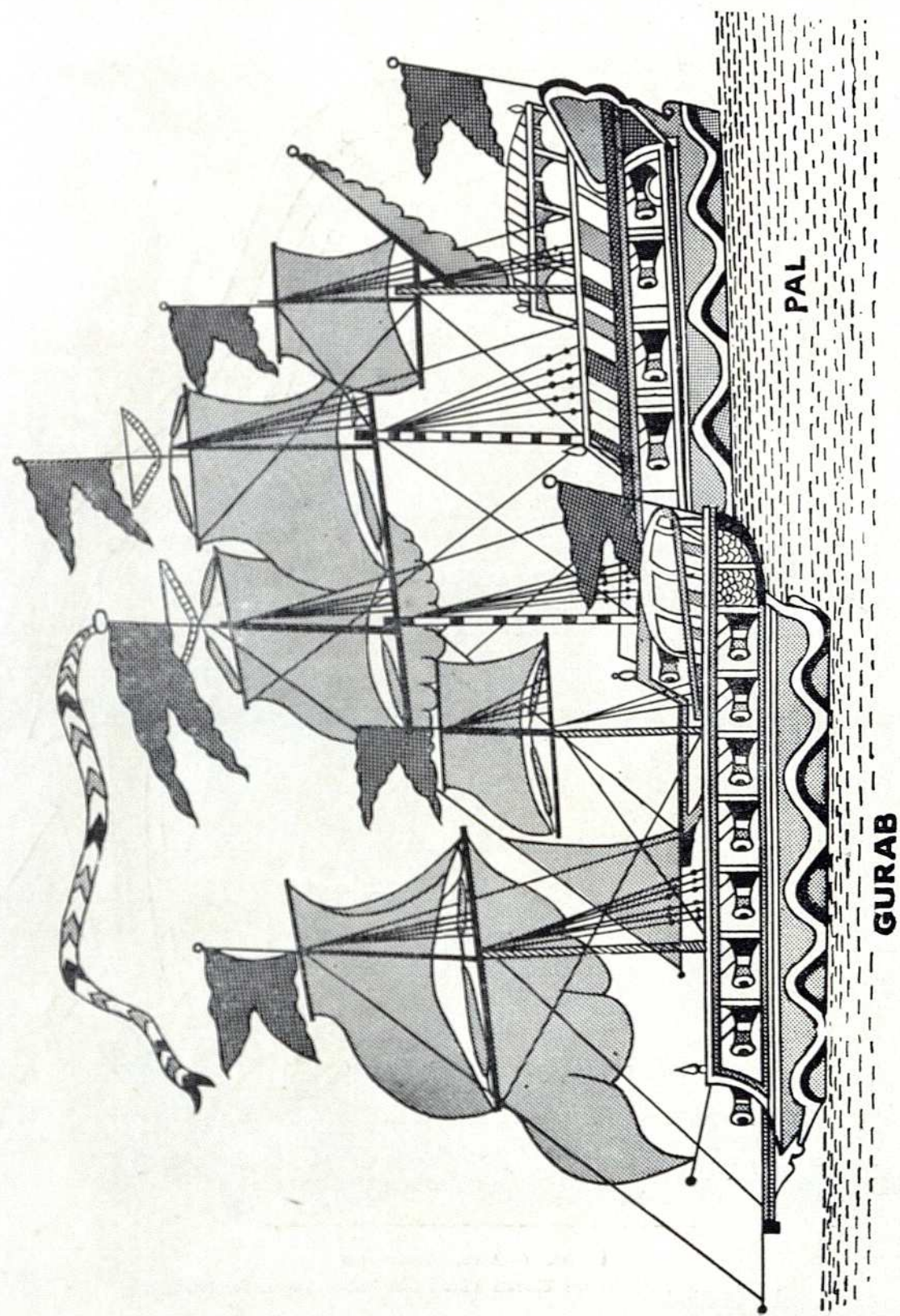


Fig. 18-B

Fig. 18-A

A FULL-RIGGED GURAB (Plate 10)

The *gurab* is well-equipped with cordage pulleys and square sails. The masts are perpendicular to the hull and have two pieces. The fore-mast has a graceful ensign flowing from its top, so favourite with the Marathas.

The sails are done in yellow and slate colours.

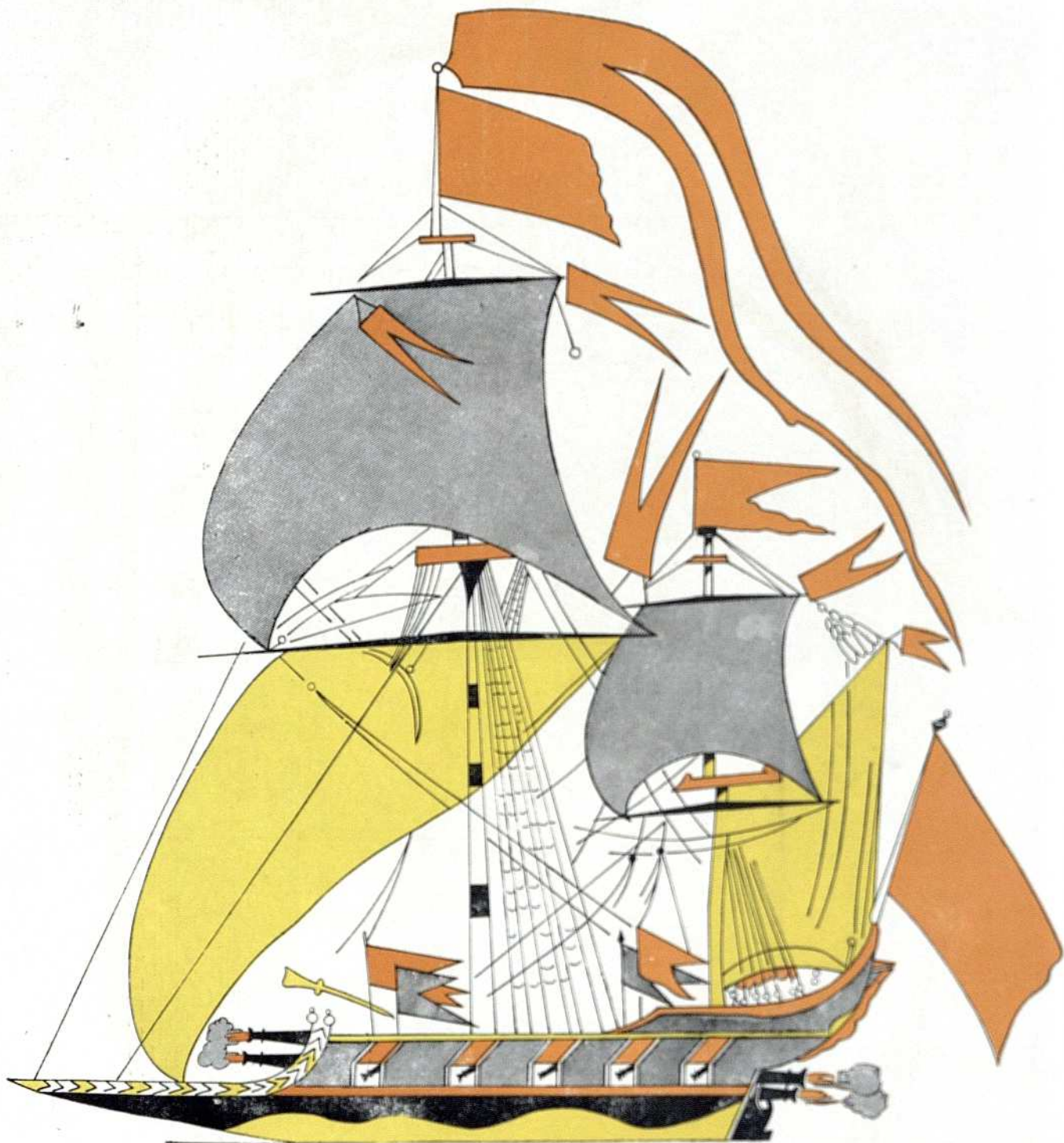


Plate 10—A Full-rigged Gurab

(By the courtesy of the Bharata Itihasa Samshodhaka Mandala, Poona)

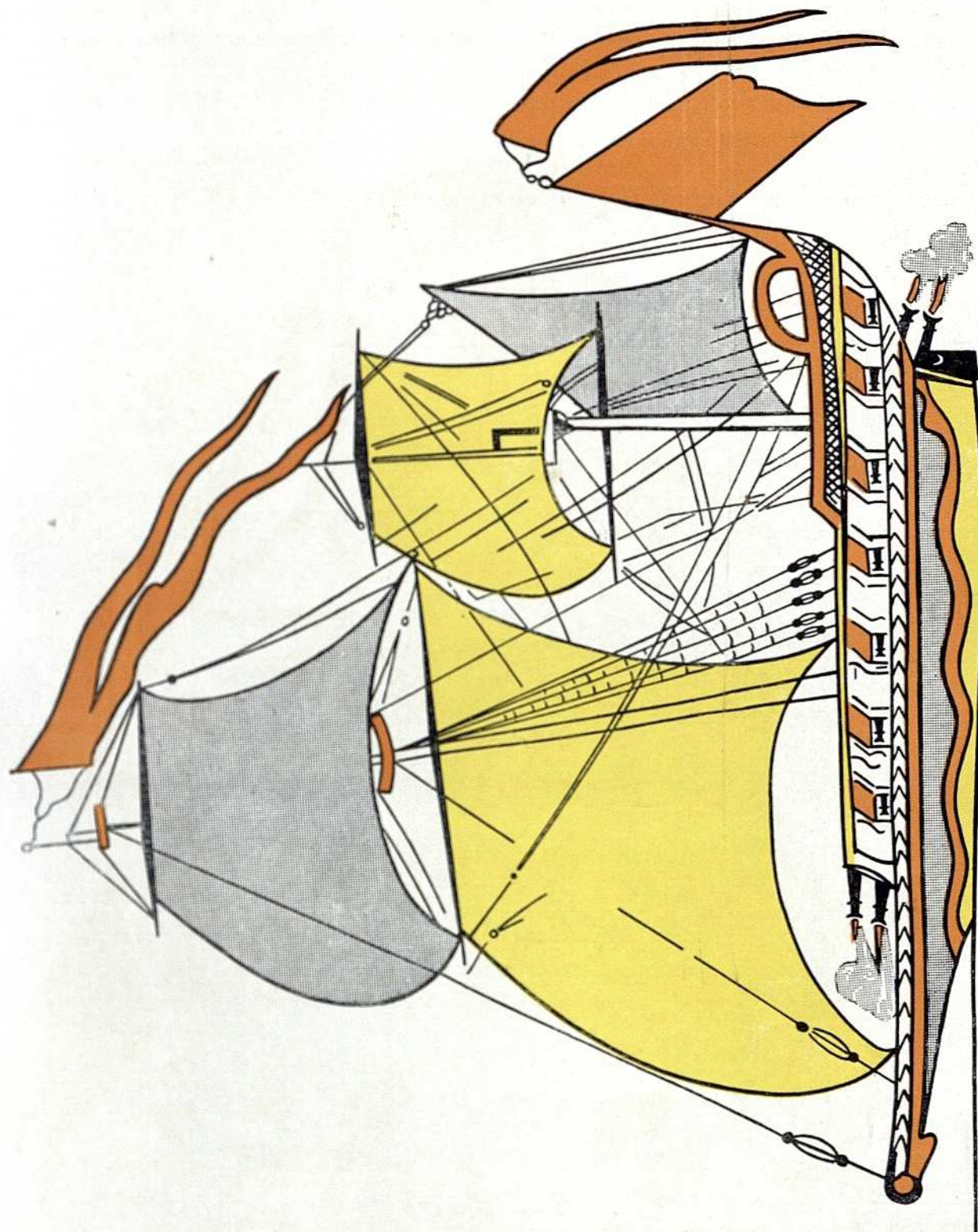


Plate 11—The Gurab Sawai-sadar
(By the courtesy of the Bharata Itihasa Samshodhaka Mandala, Poona)

There are five guns in the left broadside. The guns in the prow and stern are vomiting fire and smoke.

The prow is open and low as is described by Orme, and the water washes it as it rushes through the sea.

The arrow-design decorates the prow, and the bold yellow-black wavy pattern the broadside.

A small hand-gun is shown in the stem without any visible support.

THE GURAB SAWAI-SADAR (Plate 11)

The *gurab Sawai-sadar* belonged to Manaji Angre. The description of this ship given in the map is "*gurab Sawai-sadar of Sardar Manaji*".

The *gurab* is a two-masted vessel of low build. The seven broadside guns and those in the prow and stern—two each—are done in black. The usual arrow-design in black and white beautifies the gunwale-line.

All the sails are shown square. The cordage has pulleys for easy working.

The *geruva*-coloured flag and the stripped ensigns are dancing with the wind.



Plate 12—The Vijaydurg Pal

THE VIJAYDURG PAL (Plate 12)

This is an enlargement from the map of Vijaydurg. This is yet another specimen of a full-rigged *pal*. The *pal* is sailing towards the dock which was situated to the south-east of the fort (see Map of Vijaydurg Fort, Fig. 7).

The outer part of the hull touching the sea has a wavy design mostly done in black which easily camouflaged the ship. This was a favourite design with the Marathas.

The *pal* is a double-decker. The uppermost deck has a beautiful gallery useful for observation and rest. Above the gunwale-line are two rows of guns one above the other. The lower row has four guns peeping from the port-holes and the upper row, three. The stem terminates in an animal-head probably a tiger — looking upon the sea.

The jib-sail is square having a jib-boom. It has been secured on a small yard running across the jib-boom. All the sails are square. The lowest sails of the fore and middle-masts are tucked up.

The masts seem to be made up of two pieces. All the masts have rope-ladders for climbing. The stern of the *pal* is square with a fine rudder shown in black. A large flag is fluttering from the deck.

THE VIJAYDURG GURAB AND GALBAT (Plate 13)

These two warships are near the *Khuba-ladha* rampart of the Vijaydurg fort (see Fig. 7).

The ship to the left is either a *pal* or a *gurab*. It is low built with two decks. Six guns are in the broadside and two in the prow.

It has two jib-sails. All the other sails on the three masts are square. The masts appear to have a slight forward rake.

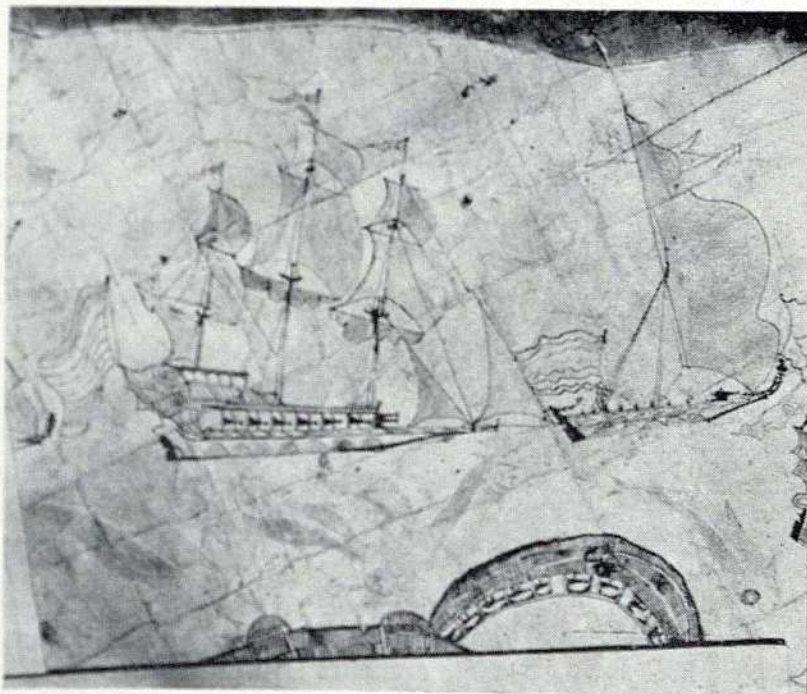


Plate 13—Vijaydurg Gurab and a Galbat

(By the courtesy of the Trustees of the Prince of Wales Museum, Bombay)

The second ship from the left is a *galbat*. Its single mast has a large lateen sail supported by a very long yard. The rudder handle is taken astern.

The prow is provided with a gun and ends in a scorpion-tail design.

A BOMB-KETCH (Fig. 19)

The bomb-ketch has two guns in its fore-part. It has a lateen sail, a square topsail and two jib-sails. It is difficult to decide the nationality of the ship as part of the *Modi* inscription below the drawing has disappeared. However, it may be noted that the Marathas had ships which were meant for carrying bombs or *garnalis*. The ship in question had on board 30 seamen and 40 soldiers, as is noted in *Modi* script in the original map.

Figure 20 is an Arabic war *Dow* (or *Daw*) of the Angre period. It has nine guns in its visible broadside. Its long prow ends in a sort of bird's head. It has a large lateen sail, the tack of which is secured at the prow-head. Its crew consisted of 40 sailors and 50 soldiers.

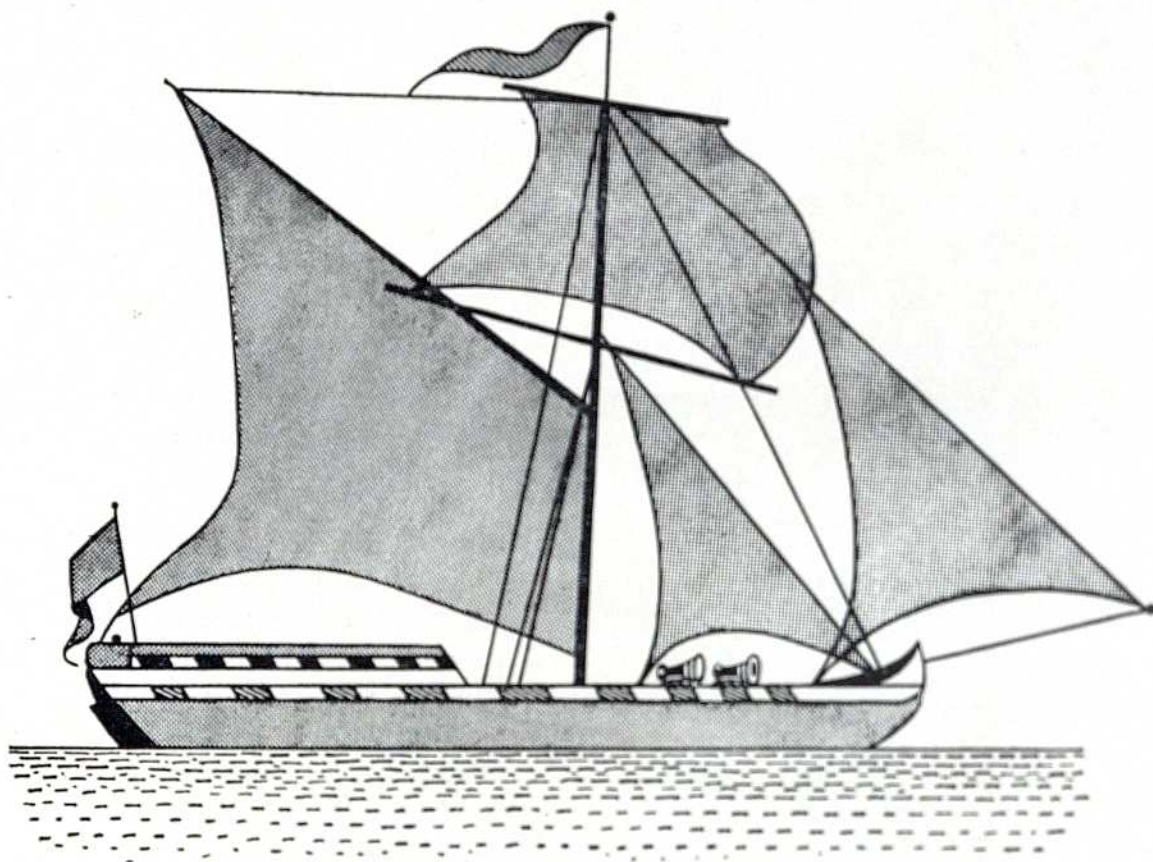


Fig. 19—Bomb-ketch

THE GALLEY (Fig. 21)

This is probably a European galley taken as a prize by the Marathas. Its broadside displays two rows of guns projecting through the portholes. The high square stern, the straight masts, the square sails and the entire rigging is on the European style. The motif at the stern is that of a Maratha soldier with a shield. Often captured ships were renamed by the Marathas after repairing them and changing their motifs in their own fashion. It is possible that the galley in question is one constructed by the Marathas after the European model. The motif at the stern strongly suggests that the galley is of Maratha make.

Before ending the chapter on warships a brief description of the ocean sailors of the *Topikars* — the English, the *Valandej* — the Dutch, and the *Phirangi* — the Portuguese, would help completing this comparative study.

The British ships of the late eighteenth century had three masts. The guns in their broadside were arranged in three rows one above the other. Ships of this type could easily cross the high seas. They could come near the shore in the deep waters of the harbours like Bombay. A single ship of this kind could easily put to flight the mightiest of the Maratha *pals*.

Similarly, the Dutch East Indiaman moved confidently in the hurricane latitudes. For eighty years it was the premier type that held sway over the Indian Ocean. The possibility for the Marathas of holding their own position on the west coast of India depended upon their ability to imitate such a type.

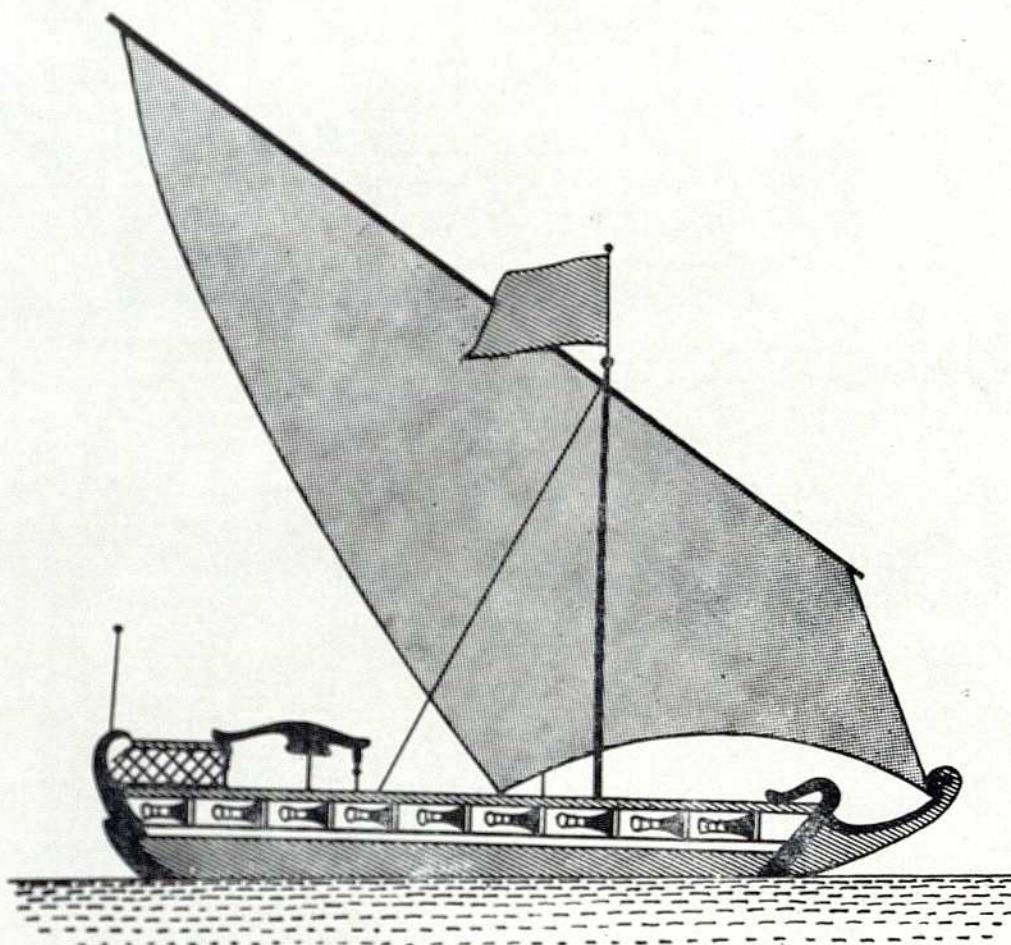


Fig. 20—Arabic Dow

The East Indiaman of the Dutch was a strongly constructed vessel. It had three rows of guns. The lowest sails were set, but the top and topmost sails were usually furled. The masts were at right angles to the hull—plane.

The portuguese *caravel* was a fast-sailing vessel (Fig. 22). The Maratha *gurabs* were in no way inferior to it. The model of the Portuguese ship — *Galeao* — shows its strong build and sea-worthiness. Its high decks and raised construction could keep it above the tempestuous sea.

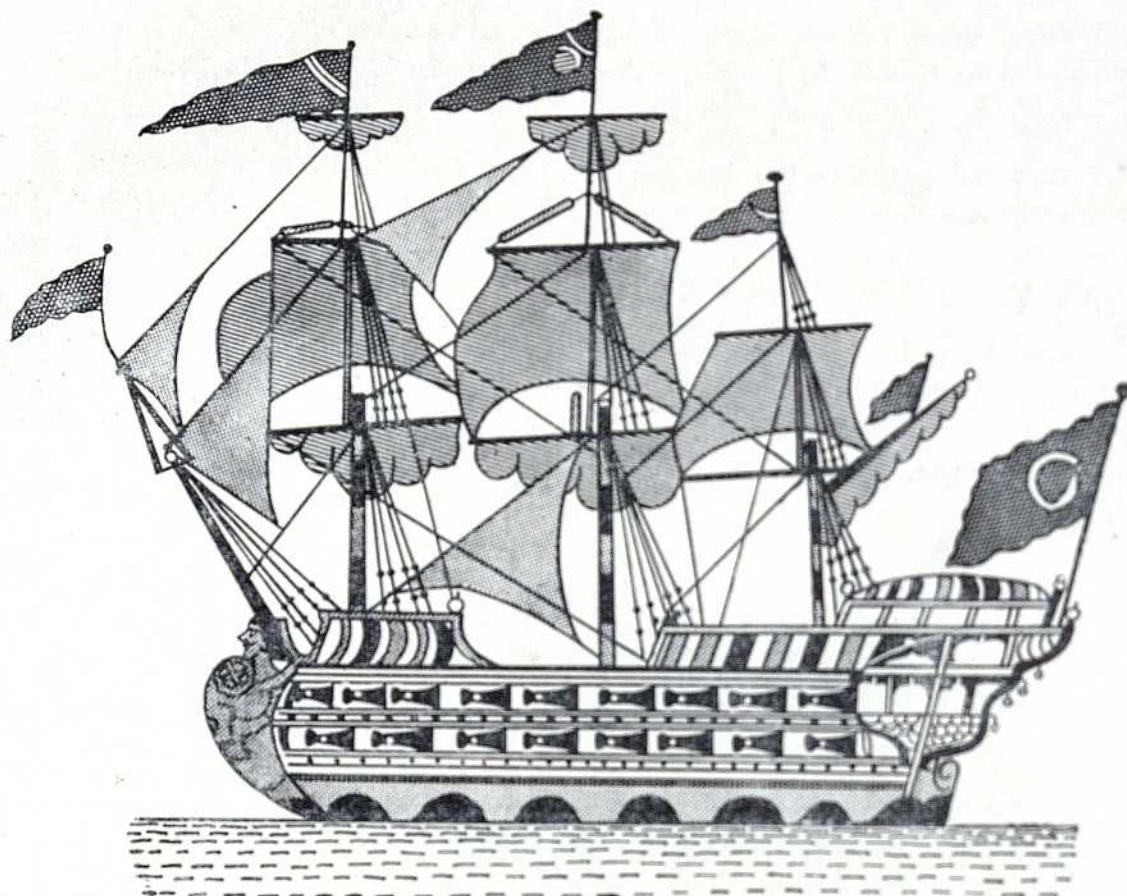
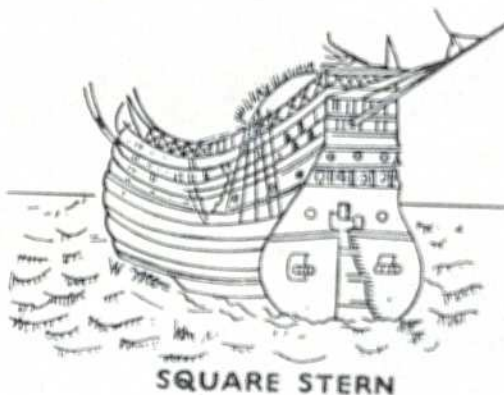


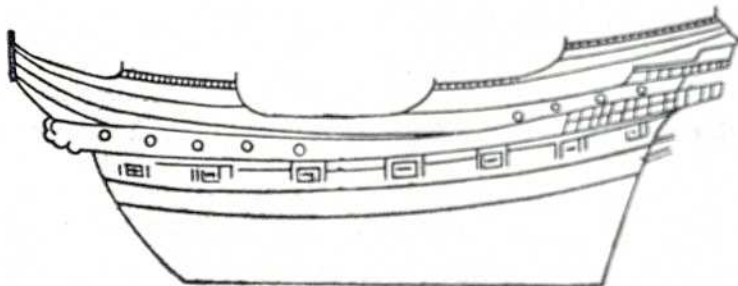
Fig. 21—A Galley



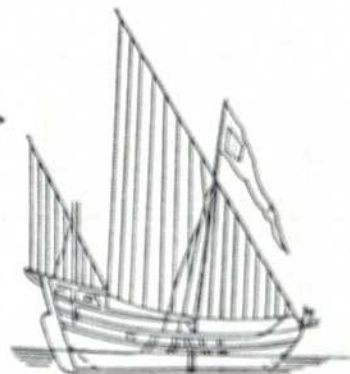
ROUND STERN



SQUARE STERN

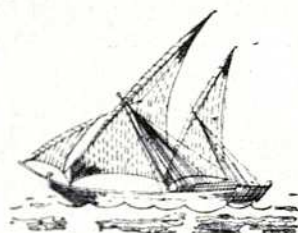


MODEL OF GALEAO - 400 TONS



CARAVEL

Fig. 22—A Portuguese Caravel, Square Stern, Round Stern and a Galeao



14

Merchantships

AS any ship that was armed or equipped with a gun could be termed as a warship in the Maratha period, there was no hard and fast distinction between a warship and a merchantman. The latter was designed to carry cargo and as such was mostly round in build. For self-protection or defence it had to be equipped with a few guns. Its speed was however hampered by its rotundity compared to a longship constructed specially to gain speed in war.

In the source-material of the Maratha period a merchantman is often called *Sahukari tarande*. *Sahukari* means a merchant and *tarande* a vessel. Similarly, *machava*, *jahaj*, *batela*, *taru*, *shibad* and *mahagiri* generally denoted merchantships.

In the nineteenth century the *phatemari* attained eminence as a cargo-carrier on the Konkan coast.

The merchantships described in the following pages are arranged in alphabetical order.

THE BALAV OR BALLYAVA¹

It was a small fishing-craft peculiar to the Konkan coast. Its description merits our attention as it was more or less free from foreign influence.

In build it was similar to the *machava* but was lighter. Its cost varied from Rs. 500 to Rs. 1,000. Its overall length was about 35 feet, depth of hold 4 to 5 feet, and tonnage 20 to 32 *khandis*. Its stern was round and the stern-post slanted forward at an angle of 15 to 20 degrees. The whole vessel was open to facilitate the casting of nets, except for a small roofing at the stern.

It had one mast set about mid-ship measuring 25 feet and raking forward at an angle of about 70°. A single lateen sail was stretched over a yard of 45 to 50 feet. The sail looked much larger in proportion to the size of the vessel like all lateen-rigged crafts. The *balav* used to wear in tacking. Its rudder was unshipped when it was not under weigh. The *balav* went for deep fishing all the year round except in the stormy monsoon. The crew, on an average, numbered 15.¹

1. GBP. XIII. I. 344.

THE BATELA (Fig. 23)

This is a merchant *batela* with 30 crew. For storing the cargo more than half the *batela* has roofing. It has a high deck with a flag fluttering from its backside. No guns are seen in the drawing. The *batela* carries a large lateen sail and a jib-sail supported by a boom. The nationality of the *batela* is not known.

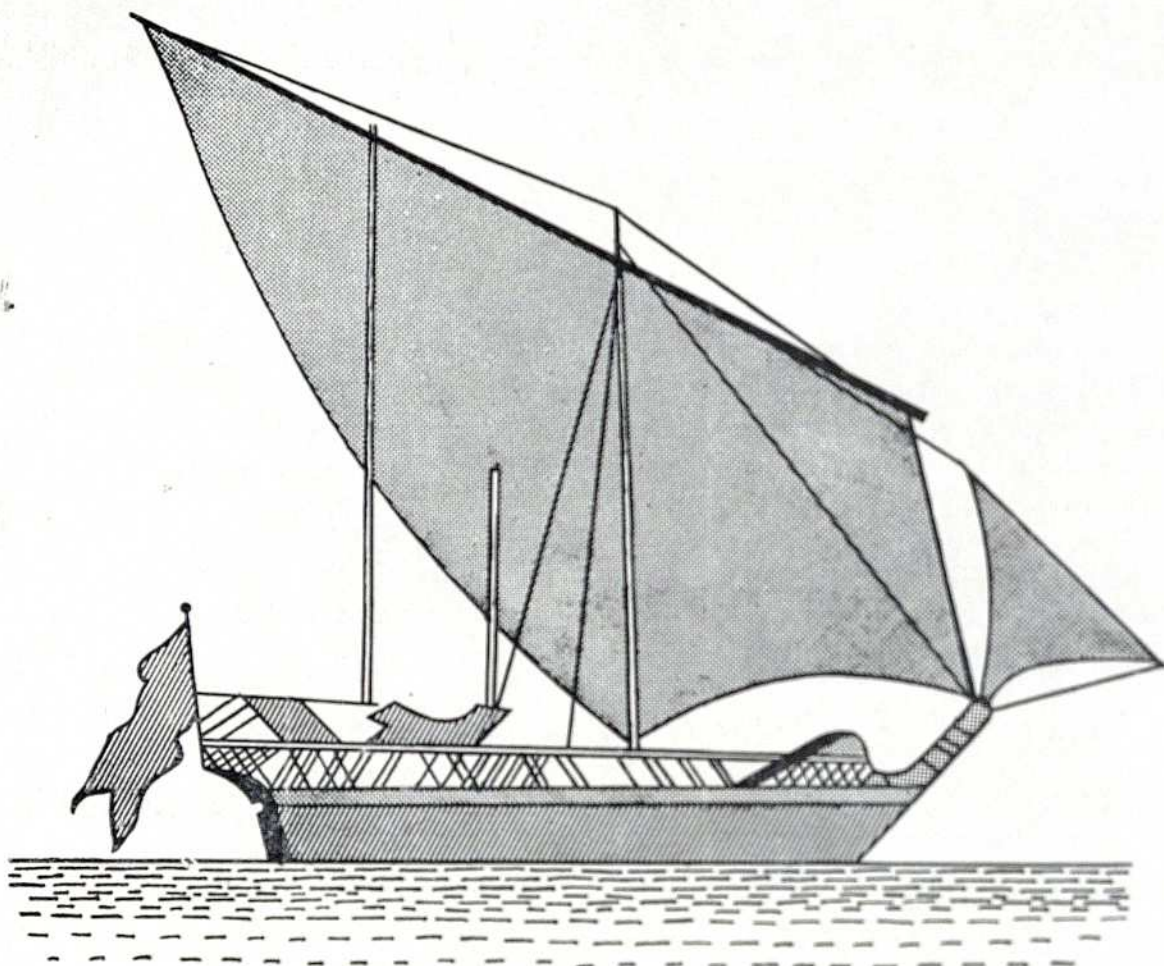


Fig. 23—Batela

THE HODI (CANOE) (Fig. 24)

The canoe is being propelled by two men, one at the stern and the other at the stem. It is without an outrigger.

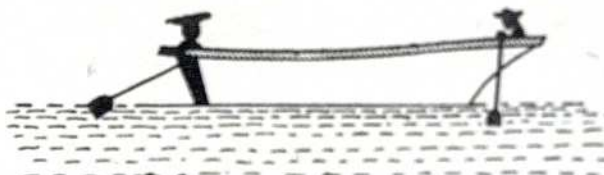


Fig. 24—Canoe

THE KOTHAYA (Fig. 25)

It was a sharp straight-keeled vessel with two masts. Its tonnage varied from 100 to 400 *khandis*,¹ rarely exceeding 800 *khandis*. Its overall length was about 60 feet, breadth of beam 45 feet and depth of hold about 10 feet. The stern was upright and rose about 15 feet from the keel. From the stern-post the gunwale-line went forward about 20 feet, forming a poop which ran a little in front of the mizzen-mast. On the top of the poop was a small steering wheel 30 inches across. In front of the poop, the gunwale-line was about 10 feet from the keel, and rose in a long curve to the bow which ended in a round point. The stem was drawn back about

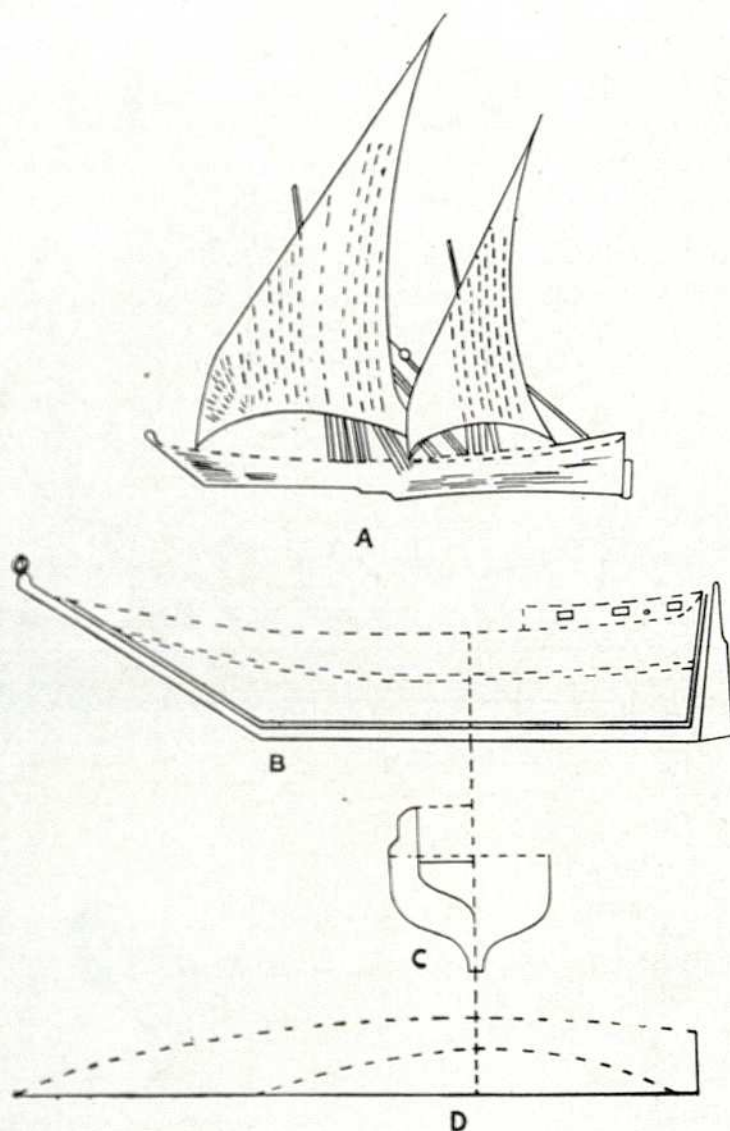


Fig. 25: A—Kothaya B—Broadside Plan C—Plan of the Hold D—Cross Section

20 feet meeting the keel about 10 feet in front of the mainmast. The *kothaya* was usually decked and had two masts. Sometimes it had a small third mast. It had neither a bow-sprit nor a jib-boom. The mainmast which came up 40 feet above the gunwale was planted about mid-ship with a forward inclination of 75 degrees. The mizzen-mast which stood about 25 feet from

1. One *khandi* = 1,600 lb (approximately).

the stern, rose 25 feet from the poop. It had the same forward inclination as that of the main-mast. The masts carried lateen sails. The yard of the mainmast was about 55 feet and that of the mizzen about 35 feet. The third mast when used was at the stern carrying a small lateen sail. But this mast was meant for show rather than for use. *Kothayas* carried a small square sail which they used while moving about the port.

The *kothayas* were painted above the water-line. They were secured with nails whose rusty heads gave them a dotted appearance. They cost Rs. 4,000-5,000. They were built and owned by the merchants of Cutch. A good number of them are built at present at Baypore near Calicut (A.D. 1942).

The *kothaya* had a crew of 12 to 16 men who were either Hindu *Kharavas* or Muslims or both. The captains belonged to the ports of Kathiawar. The sailors were skilful and adventurous, and crossed the Indian Ocean westward to Zanzibar, Mozambique, Seychellas Islands and southward to Lakhadiv and eastward to Nicobar Islands and Chittagong. Along the west coast, the *kothaya* covered the whole strip from Karachi to Cape Camorin.

Rich owners plated their *kothayas* with copper sheets, while others applied lime and grease mixture to the part under water.¹ The *Kothayas* frequently visited the Konkan coast.

THE MACHAVA (Figs. 26 & 27)

The *machava* of the Maratha period seems to have changed its function according to its size. The smallest *machava* was employed for fishing and was known as *Kola* or *Koli machava*. The biggest one with guns on board could be turned into a warship. In 1739, the *machava* is

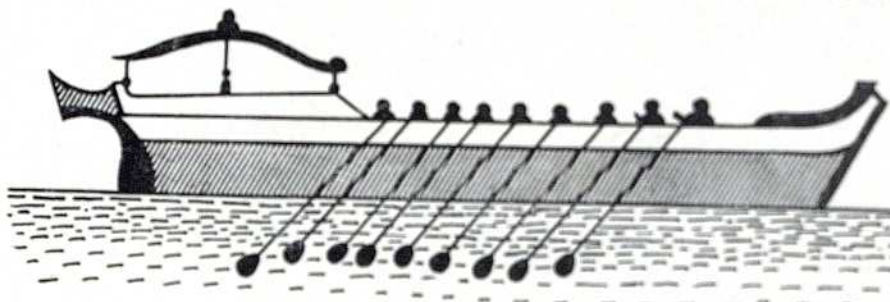


Fig. 26—Machava

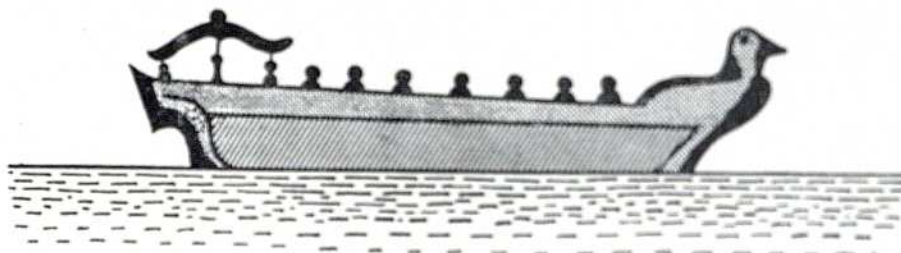


Fig. 27—Machava

described to have six guns and powder in its stock. It could carry 50 men. With the passage of time, the *machava* fell into disuse as a fighting vessel. Its tonnage varied from 10 to 12 *khandis* (2½ to 3 tons).²

1. *GBP*. XIII. 350.

2. From the following reference it seems that the *machava* had two guns. *SPD*. XVI. 47.

By the turn of the nineteenth century the *machava* (Fig. 28) was a round-built two-masted craft of 3 to 4½ tons. It cost Rs. 700 to Rs. 1,500. Its overall length was about 50 feet, breadth of beam 14 feet, length of the keel about 35 feet, and the depth of hold about 7 feet. The gunwale-line slanted down slightly from the stern to the middle of the ship and again curved up about 5 feet reaching the bow. The stem was drawn back about 20 feet in a sharp angle, and was about 5 feet from the mainmast. The depth of this point measured about 7 feet from the

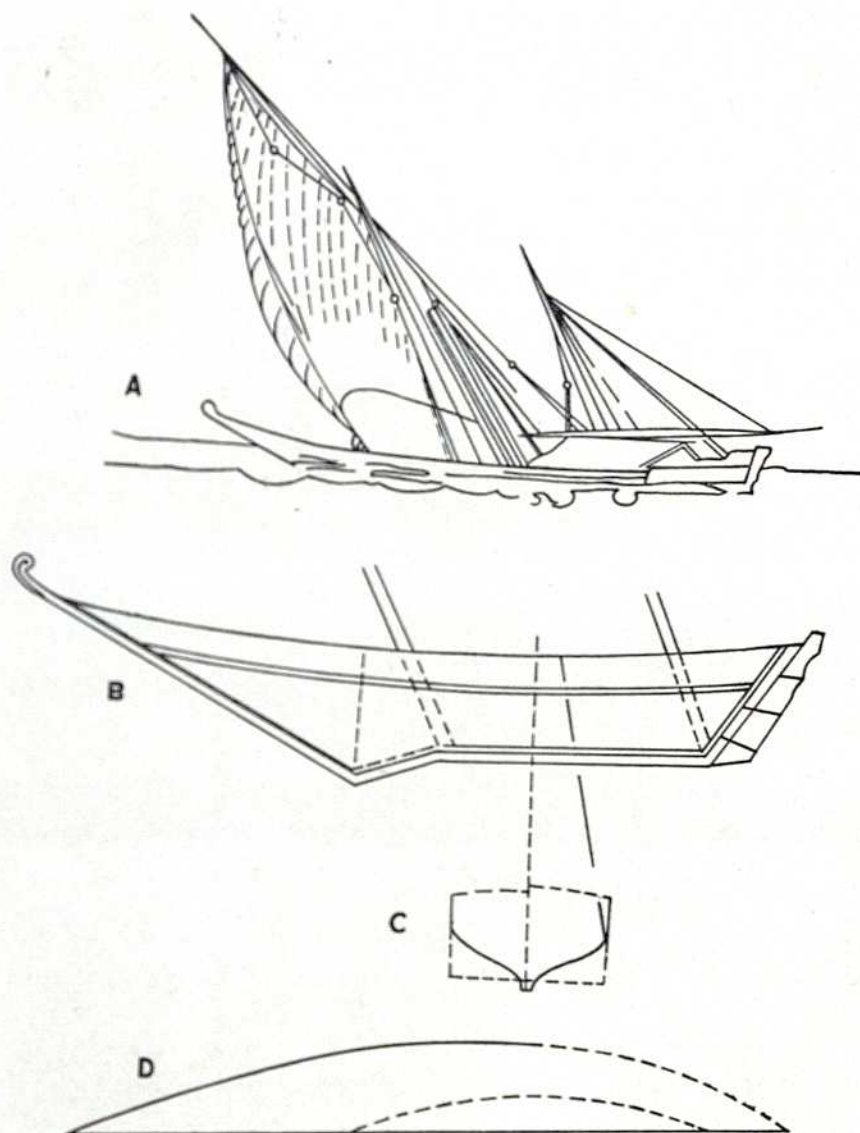


Fig. 28

A—Machava B—Broadside Plan C—Plan of the Hold D—Cross Section

gunwale-line. The keel rose up with a sharp curve from this point reaching the mainmast at a distance of 5 feet. From the foot of the mainmast the keel went straight meeting the stern-post. The deck was open except for a small peak-roofed shelter made of cloth and matting. The roof stretched on either side of the mast for about 5 feet.

The *machava* had one large mast and one small mizzen-mast. The mainmast was fixed nearly at the middle of the ship and rose to a height of 28 feet from the deck, making an angle of

about 60° with the hull-level. The mizzen-mast which was planted at a distance of about 25 feet behind the main had a lesser forward inclination than the latter. Its height from the deck varied from 18 to 20 feet. The yard of the mainmast measured 50 feet. When the sail was set, one-third of the yard fell in front of the mainmast and was elevated behind the mast in a high peak carrying a lateen sail, whose tack, when in wind, was made fast at the bow, and the sheet was fastened a few feet behind the mainmast. The rigging of the mizzen-mast was similar to that of the main. Its sail was seldom used except in light winds. Like all lateen-rigged vessels, the *machava* wore in tacking. It sailed well as it was lightly built. It carried passengers and commodities, going as far as Goa. Its crew was recruited from the Hindu *Kolis* and Muslims of Ratnagiri.¹

The *machava* (Fig. 26) is a longship. It is being rowed by 9 oarsmen sitting with their backs to the stem. One may presume that an equal number of men is rowing from the other side. The long sweeps splashing in the sea are arranged paralleled to one another. The stem of the *machava* has a spacious cabin. It is meant for the captain. The *machava* ends in a simple prow. In Figure 27, seven oarsmen are seen in the left side of the *machava*. Its prow terminates in a fine bird's head overlooking the sea. The stern has a small cabin.

THE MAHAGIRI OR MAHANGIRI

The term *mahagiri* includes both the warships and the cargo-ships of the Maratha period. It functioned as a mail-carrier and ferried the creeks. It transported building material like mortar, sand, bricks and stone. It sometimes surveyed the sea i.e. sounded the sea.

The *mahangiri* was a large cotton boat of 20 to 35 tons. Its cost varied from Rs. 1,500 to 2,500.

The overall length of the vessel was about 60 feet, length of the keel about 40 feet, breadth of beam about 15 feet and the depth of hold about 8 feet. The prow was high and the stern sharp.

It generally carried a mizzen-mast. It differed from the *padav* in being strengthened by thwarts. The *mahangiris*, in the later period, transported building material from Panvel to Bombay.²

Figure 29 is a *mahagiri* of the earlier period. Unlike its successor, its prow is low.

The *mahagiri* has sails as well as sweeps. Oarsmen working at the sweep are seen in the left side of the *mahagiri*. Its fore part has a gun. This *mahagiri* is a news-carrier or a scout.

In times of emergency, the *mahagiris*, with armed men on board,³ accompanied the warships like the *galbat* or the *gurab*. Smaller *mahagiris* were used for towing large ships; because of their build they could easily enter narrow creeks.

1. GBP. XIII. i. 345.

2. Ibid. 346.

3. SPD. XXIV. 211. The reference illustrates how the *mahagiri* was used as an auxiliary warship with a *jamburā* (a light gun) on board. SPD. XXIX. 192 & SPD. III. 76, state that *mahagiris* laden with fire-wood and water were dispatched.

A MANJI (Fig. 30)

The *manji* belongs to a merchant of Camorin. It is obviously a merchantship. Its construction makes it sea-worthy. It carries a large lateen sail. The stern has a thatched roof made for rest. This might help us in giving some idea of a Maratha *manji*.

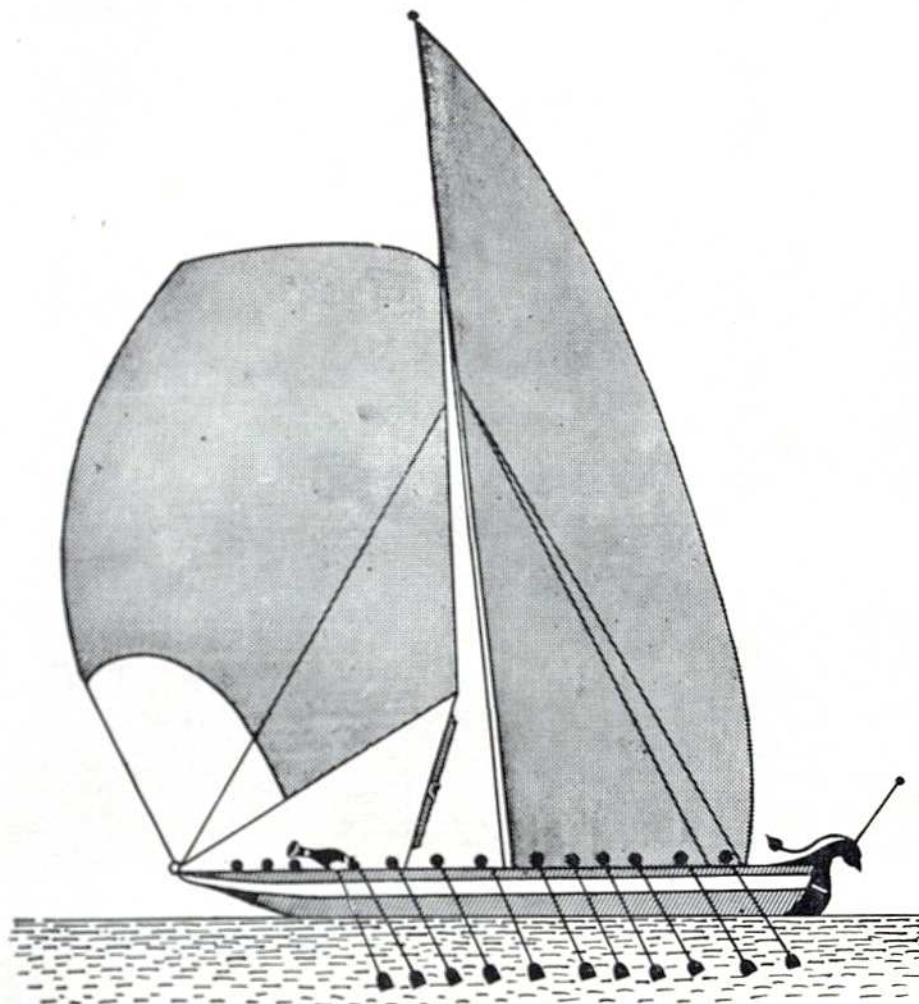


Fig. 29—Mahagiri

THE PADAV (Fig. 31)

From a few references the *padav* in the Maratha period seems to have been engaged as a cargo-carrier. Small *padavs* plied between big vessels like the *Shibadi* and the coast, for loading and unloading the cargo. As late as 1883, the *padav* does not seem to have undergone any considerable change.

The *padav* was generally known as the cotton boat or the cotton-prow, frequenting the Bombay harbour. It was a low, broad-built vessel of 40 to 120 *khandis*, with an overall length of about 40 feet. The keel was twenty-five to thirty feet long, the beam fourteen feet, and the hold about five feet. It cost Rs. 1,000 to 2,000. The stern was rounded, and the stern-post slanted back at an angle of 15 to 20 degrees rising about six feet from the keel. From the stern-post the gunwale-line stretched straight for about twenty-five feet and then rose with a slight

curve about three feet to the prow which ended in a plain-point. The streamlined stem was drawn back twenty feet and was about ten feet in front of the mast. The point where it met the keel was about eight feet from the gunwale-line. From the lower end of the stem, the keel curved up to a distance of about five feet and then went straight reaching the stern-post. This ship was open except at the prow, midship, and at the stern. The crew generally kept their earthen water-pots under the stern-deck ; their clothes, food and water-tank under the middle-deck, and their spare gear under the fore-deck.

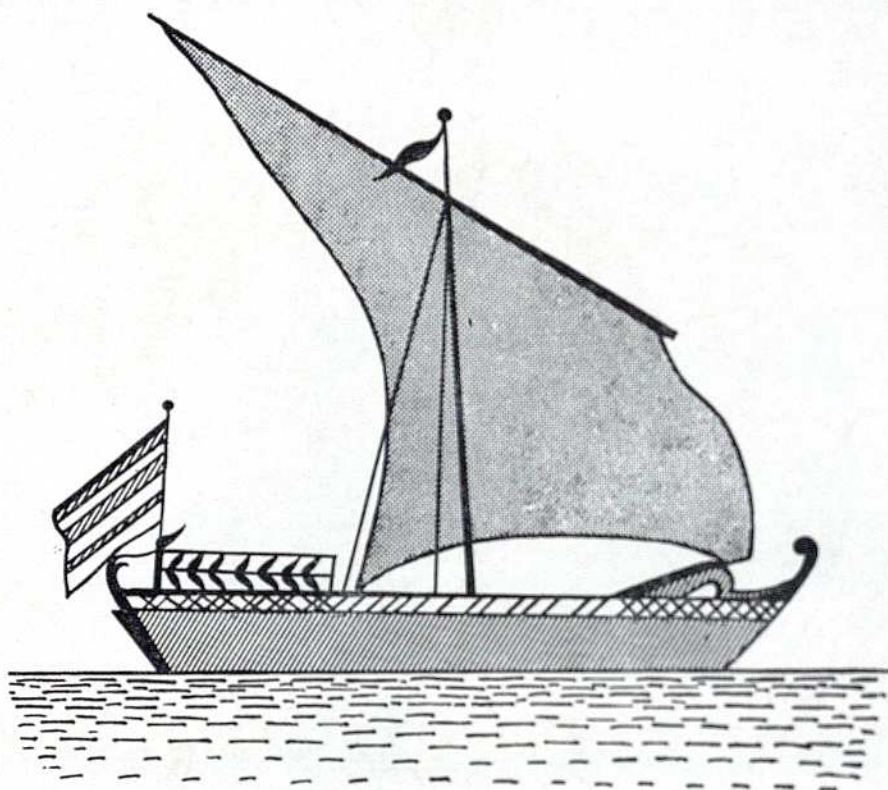


Fig. 30—Manji

The *padav* had one mast planted about twenty-five feet from the bow. It measured about thirty feet and inclined forward at an angle of 75 degrees. It carried a single lateen sail stretched from a yard of about fifty feet. While sailing in a wind the tack was fastened at the bow and the sheet was secured about five feet behind the mast. The *padav* was remarkably quick in going round. Its rudder was un-shipped except when it was under weigh.

PADHAGI OR PADHAGU

Padhagya, the plural of *padhagi*, occurs in the Maratha papers under the general heading 'navy' and is often qualified by the adjective '*savakari*' meaning thereby a merchantship. This word *savakari-padhagi* is found associated more often with the European vessels and only sometimes with those of the Marathas. The *padhagi* had on board men named '*dhone*' and it was also used as an auxiliary warship.¹

1. SPD. XXXIV. Letter 101. The English fleet consisted of two frigates, seventeen *padhagis*, two *paks* and three *gurabs*. For the meaning of other terms see relevant appendix.

The *pagar* in Figure 32, is longish in shape. Its stem and stern are curved. It ends in a beautiful rounded head. The *pagar* is being propelled by two oarsmen. The *pagar* is without an outrigger.

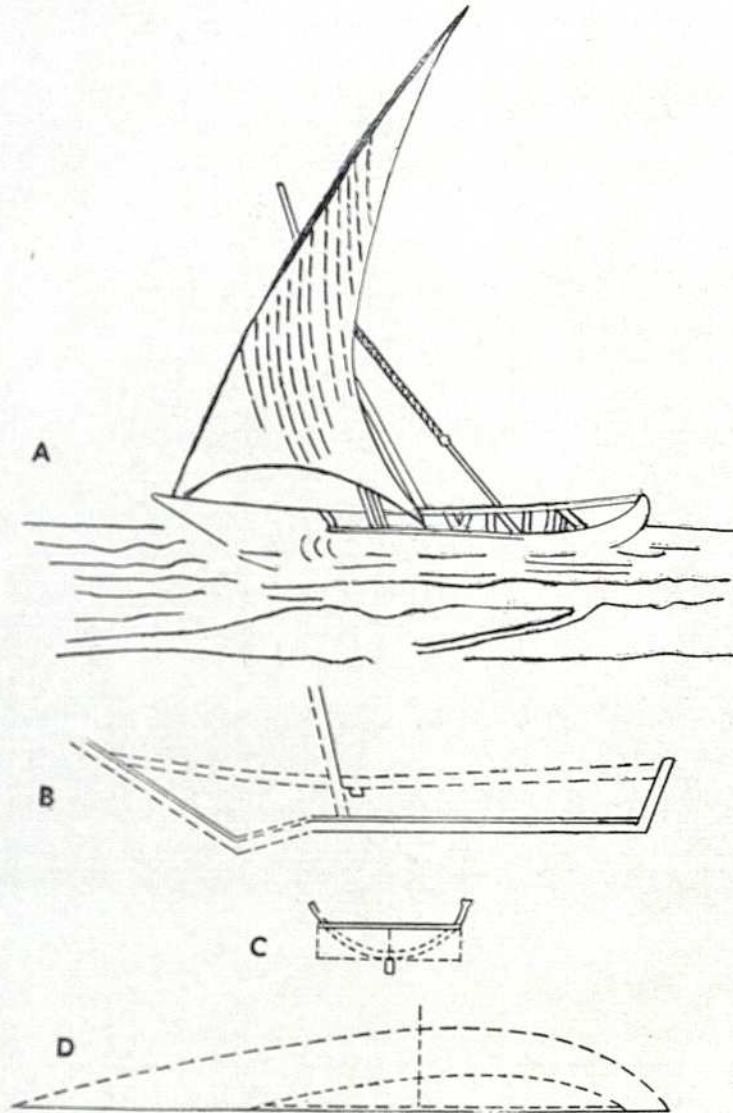


Fig. 31 : A—Padav B—Broadside Plan C—Plan of the Hold D—Cross Section

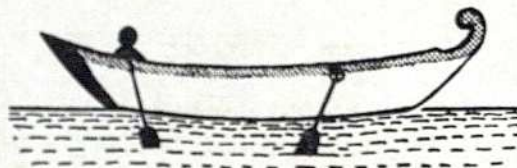


Fig. 32—Pagar

THE PHATEMAR OR PHATEMARI

The term *phatemar* is not commonly found in the early Marathi records. It is used as a mail-carrier. It attained importance as a cargo-carrier in the early decades of the nineteenth century. Since then it has maintained its supremacy as the best freight-vessel on the Konkan

coast (Fig. 33). As early as A.D. 1833 the *phatemar* is described as the best type of vessel on the Indian coast. It sailed well and carried a good amount of cargo. It was owned by the merchants of Bombay and carried the whole trade of the coast. As of old it was 'grab-built' i.e. with a prow-stem which was of the same length as that of the keel. The dimensions of the largest *phatemar* were 76 feet (overall length) by 21 feet (breadth of the beam) with a hold of 11 feet 9 inches in depth. Its tonnage was 200. The planking was of teak fitted on a jungle-wood frame. The *phatemar* was a pretty vessel fitted in the European style with bolts, nails, etc. Its bottom was sheathed with inch-board and a layer of lime mixed with cocoanut oil and country-resin. This mixture was a good preservative and saved the planking from being eaten up by sea-worms.

The smaller *phatemar* was of about 60 tons with coir-sewn planking. It had one mast, the larger having two with lateen sails. The foremast inclined forward to keep the unwieldy yard clear in the raising and lowering operations. The yard was slung at one-third of its length and the tack of the sail was brought to the stern-head through a fixed block, the sheet being hauled behind at the side. The haul-yard was a pendant and a treble-block from the mast-head often extended to the middle of the ship. This served as a back-stay for securing the mast together with a pair of shrouds.

This vessel generally exported salt from Bombay to the other places along the coast and brought home coir, rice, cocoanuts, copra, oil, timber, pepper, sandle-wood and such other articles produced on the coast. It was skilfully navigated by the *Moplas* and other native Muslims. The crew on board was about 12 in number, excluding the '*tandel*' (captain). The captain was a good pilot having sound knowledge of navigation.¹

Even after fifty years the *phatemar* did not change very much. It is interesting to note its detailed account of about A.D. 1883.

At this time, the *phatemar* was a narrow, sharp and low-built vessel with two masts and a jib-boom. Its prow was high-pointed, and its keel was peaked. Its overall length was about 75 feet, breadth of beam about 20 feet, length of keel about 40 feet, and the depth of the hold 7 feet. Its tonnage varied from 25 to 100, and its cost from Rs. 1,000 to 8,000 (£ 100 to 800).

The stern-post inclined backward and a large rudder was slung to it and was carried above the deck to the height of the bulwark. The bulwark was light and removable, and about 2½ feet above the level of the deck. From the stern the gunwale-line stretched with a slight rise to the bow, which ended in a round-post. From the bow the jib-boom stretched out about 15 feet. The stem went back about 30 feet, meeting the keel in a sharp point about 8 feet from the mainmast. From this point the keel curved about three feet up to the mainmast and then went straight up to the stern. The stern was usually square but sometimes round.

The mainmast was planted about 30 feet from the prow and rose from the gunwale-line about 60 feet with a great forward inclination. The mizzen-mast was fixed about 25 feet behind the main, and had the same inclination as that of the latter. It was about 35 feet in length from the gunwale-line. The yard of the mast was about 70 feet and that of the mizzen about 45 feet. In addition to the main and mizzen-sails, the *phatemar* carried a jib-sail. Like other lateen-rigged crafts, the vessel never stayed in going about but always wore.

Its deck was made up of split bamboos which were woven together, and could be rolled up like a mat. This facilitated the disembarking of cargo at any point over the side. On the hind

1. JRASI. I. 10.

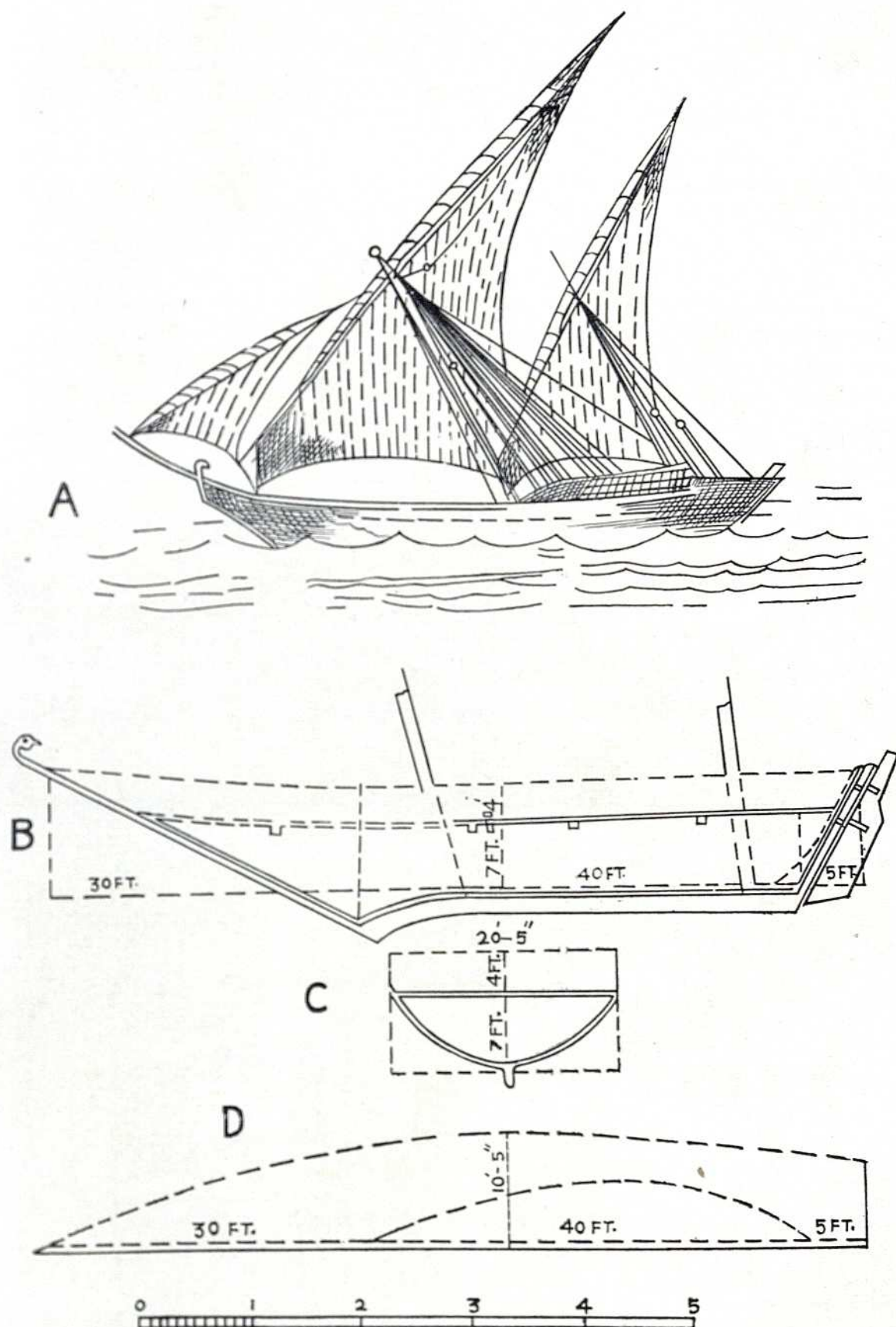


Fig. 33 : A—Phatemar B—Broadside Plan C—Plan of the Hold D—Cross Section

part of this deck was a peaked-roof which could be lifted up while disembarking the cargo. This roof was used as a cabin by the crew. The roof was made up of light or strong material according to the journey which the *phatemar* undertook. If she went for a trip of 3 weeks or a month to Cochin or Alleppey the roof was made up of areca palm. But for a shorter voyage of 7 to 10 days, to Ratnagiri or Goa, it was generally of split bamboos.

The *phatemar* was built at Bombay, Thana and the Ratnagiri ports. It was manned by Hindu, Muslim and Christian seamen.¹

The peculiarity of the *phatemar* was the forward inclination of its masts, and the greater length of the after-mast compared to that of other vessels. In the larger *phatemars* foreign influence was seen in their square-stern, short raised poops, bolt-secured hull, and the plain-oil treatment given to them. The genuine native type was to be found in the smaller *phatemar* with round stern and the palm-thatched cabin.

The *phatemar* did not have the fine finish of the Arab ships. No carving adorned its poop. Neither was its hull painted with gaudy colours. Usually, a coating of dull red was applied above the water-line with a black gunwale, and sometimes a white ribbon fore and aft made its appearance. Occasionally some crude ornamental painting like the stars was attempted.²

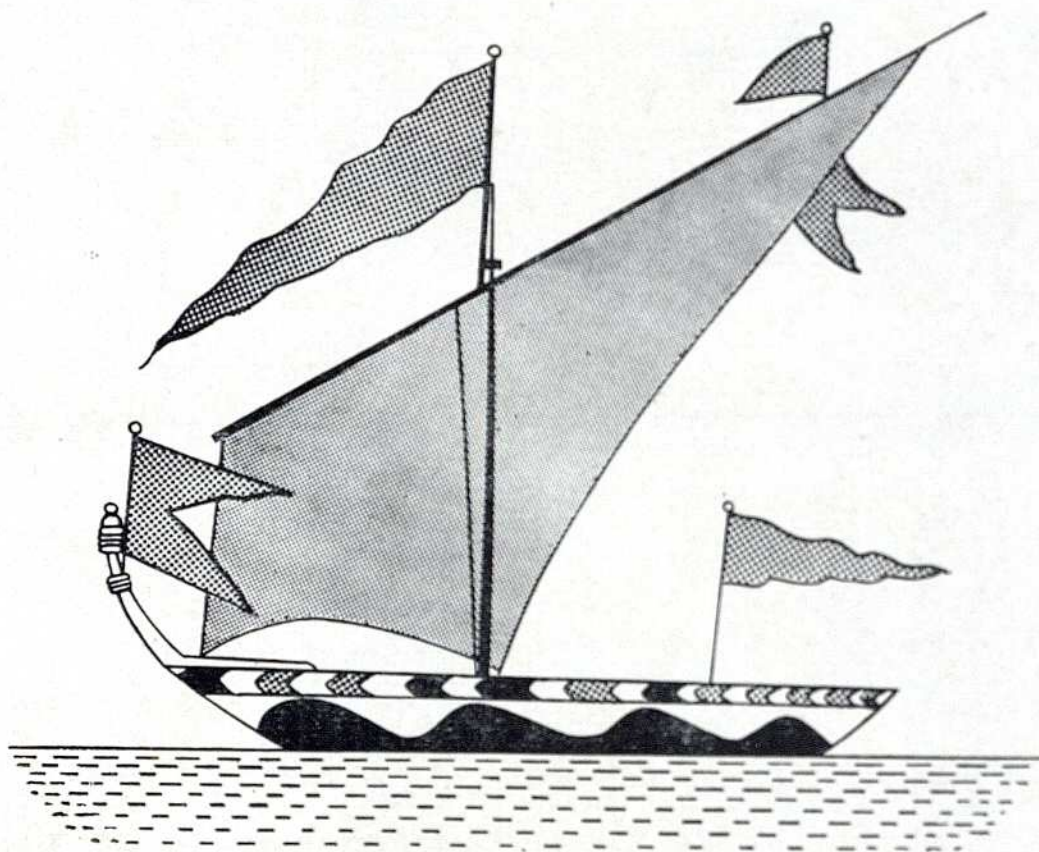


Fig. 34—Phatemar

THE PHATEMARIS (Figs. 34 & 35)

The *phatemaris* look narrow and sharp. The curved prow of one of the *phatemaris* ends in a round-head design (Fig. 34). It is carrying a lateen sail which is fully set.

1. GBP. XIII. i. 347.

2. Mem. of Asiatic Society of Bengal. VII. 146-7.

The other *phatemari* (Fig. 35) carries a lateen sail and a jib. It has a serpent-tongued ensign on its prow. Its mast is raking forward as in the case of many other *phatemaris*.

The keels of the *phatemaris* are shown straight though they are usually curved below the stem. May be that the curved keels have not been shown as they are under water. Guns are absent in these *phatemaris*.

The *phatemaris* came into prominence in the Angre period. They are often associated with the words *Phirangi* (Portuguese) and *Topikar* (English). They accompanied the warships.

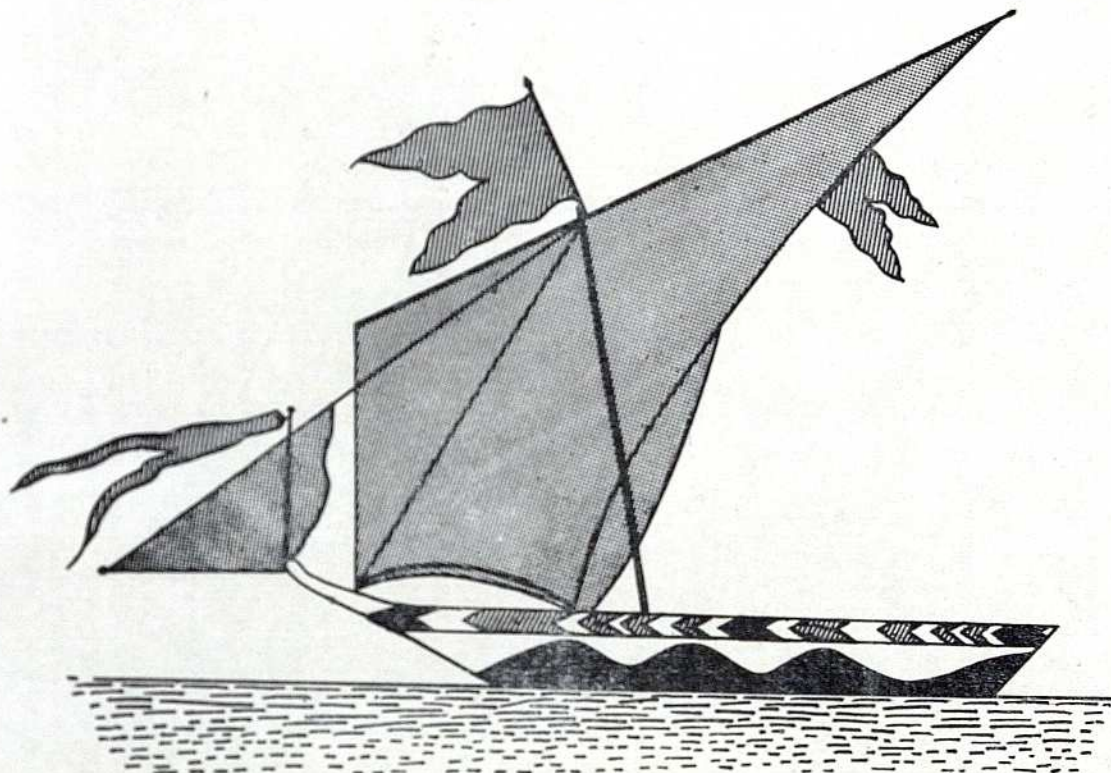


Fig. 35—Phatemar

AN ENGLISH PHATEMARI (Fig. 36)

The *phatemari* may be compared with the previous *phatemaris*. The mainmast of the *phatemari* has a lateen sail and a small square topsail. The mizzen-mast has only a lateen sail. Eleven sailors are seen in the right side of the ship. The ship carries a gun.

The longish shape of the vessel, and the mainmast inclining forward compare well with those of the Maratha *phatemaris*.

The rudder is fixed quite close to the stern having a long handle.

THE SIBADI

It was a very broad-built vessel. During the Maratha period it accompanied the warships with a great number of men on board. Its broad and spacious build was very well suited to

carry heavy commodities. A number of references show that it transported bamboos, cattle, salt, paddy, etc. from port to port. It had two masts and sails but no deck. Its tonnage averaged 150.¹

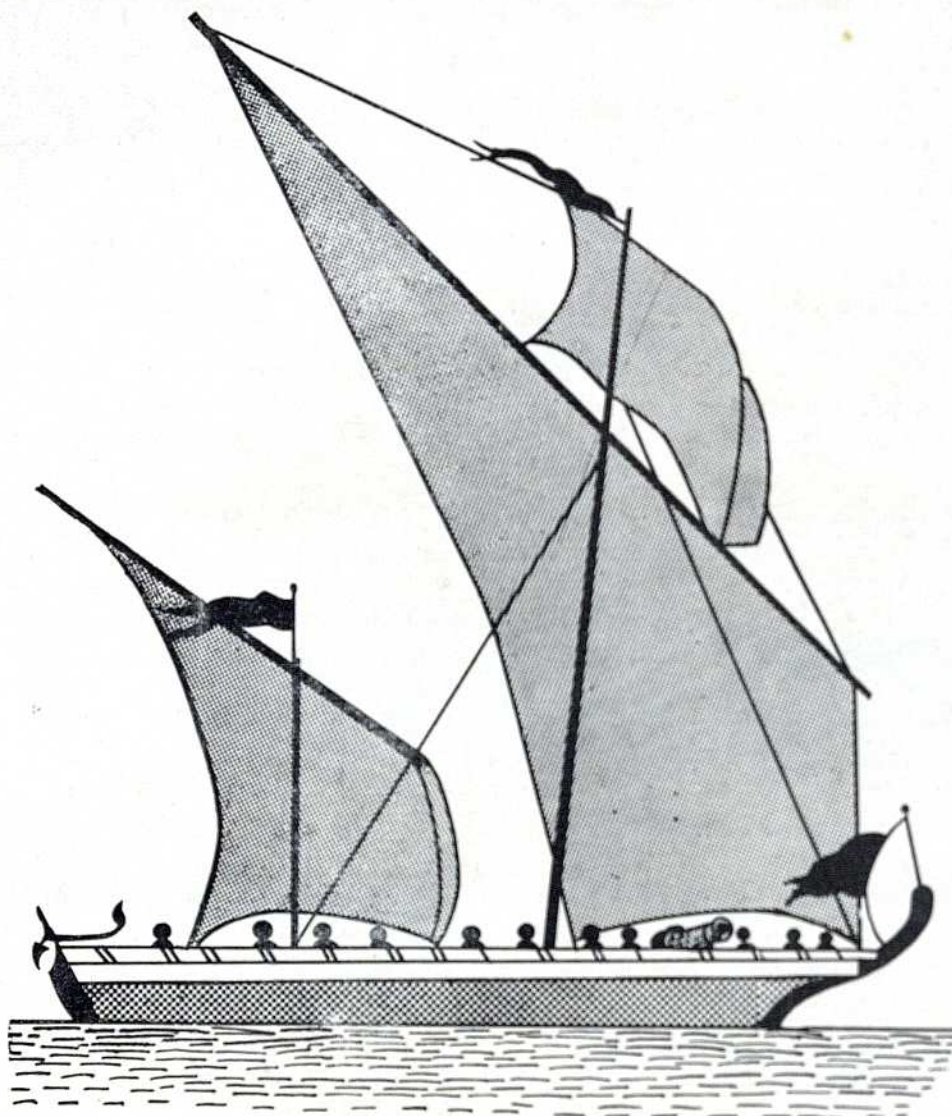


Fig. 36—English Phatemar

In 1883, it is described that it was like a large *phatemar*. Its tonnage sometimes reaching upto 250. The overall length of a large *sibadi* was about a hundred feet, breadth of beam twenty-five feet, length of keel sixty feet and depth of hold about 12 feet. Its stern was square and its build was not so narrow as that of a *phatemar*. It was a flat-bottomed vessel.

It carried two masts and a jib-boom with two lateen sails on the masts and a triangular one on the jib-boom. Like its ancestor of the Maratha period, it had no deck. It had one open poop, resembling one in a *batela*, and a small open fore-castle, which was used as a kitchen. In

1. SPD. XXIV. 124. This reference states that the *sibad* was used for transporting salt, cattle, bamboos etc.

the largest *sibadi* the mainmast was about 60 feet long, with a circumference of 6½ feet. The length of the main yard was about 80 feet, the yard being made of three pieces. The mazenmast was about 40 feet long with a circumference of about four feet. Its yard measured 60 feet. Its bulwarks were permanent, measuring 5 feet in height. The *sibadis* were built at Jaygad and Vijaydurg. Their crew which numbered from 25 to 30 was drawn from the Bhandaris and Muslims of Konkan. They sailed between Bombay and Malabar ports carrying goods from Konkan and returning loaded with timber. For their return journey they sometimes took two months. They seldom made more than two trips in any year and during the rainy season took shelter in the ports of Ratnagiri. They steered by landmarks without making use of a compass and chart. The crew was paid both in kind and cash.

In its flat-build and decklessness and in transporting timber, it maintained its ancestral features.

The *sibads* of the Maratha period had two masts. The after-mast and the bow-sprit were very short. It had no topsails, no deck and no rigging. The *sibads* sailed well in fine weather. They accompanied the *pals* and the *gurabs* for action with light armaments.¹

The ship-drawings of Deogad and Malvan have been secured from the Bharata Itihasa Samshodhaka Mandala, Poona. Ships which are shown in the neighbourhood of Deogad and Malvan are named after these places. These drawings are quite simple therefore, can be taken to be realistic. Malvan ships are shown against the background of the forts of Sindhudurg and Yeshwantgad. In both the drawings—Deogad and Malvan—the west is shown at the bottom and the east at the top according to the Maratha convention.

SHIPS OF DEOGAD (Plates 14-A, 14-B, 14-C & 14-D)

There are four ships in this drawing. Plate 14-A has three masts, the middle one being higher than the fore and the mizzen-masts. The middle-mast has two sails, whereas the other two have one each. From the small size of the sails, they appear to be tucked up. The masts are painted in blue, and the sails and the flags are in Indian red. The cordage is in blue and the hull in red. The ship has a simple crescent shape.

Plate 14-B is a crescent-shaped longship. The colour scheme is the same as in the previous drawing.

Plate 14-C is a three-masted ship carrying three sails on the middle-mast, and two each on the fore and mizzen-masts. The stem and the stern are projecting from the hull inclining in the opposite directions. The gunwale-line is shown distinctly. Triangular flags are fluttering from the masts.

Plate 14-D is a ship, the stem of which curves gradually ending in a sharp point. The stern rises up suddenly from the water-line. The colour scheme of the ship does not differ from that of the previous ones.

The sea is represented in the conventional manner with curved lines which stand for waves. The water is interspersed with fish.

1. *SPD*. XXIV, Letter 100. This reference states that one white *sibad* and two *galbats* belonging to Bassein had arrived in the creek of Karli.



14. A

14. B



14. C

14. D

Plates 14-A, 14-B, 14-C & 14-D—Ships of Deogad

(By the courtesy of the Bharata Itihasa Samshodhaka Mandala, Poona)

SHIP OF MALVAN (Plate 15)

It is a Maratha pleasure-boat or a Maratha royal-barge. The smile on the lady's lips seated amidship and the gay atmosphere strongly suggests that it is a Maratha pleasure-boat.



Plate 15—Ship of Malvan

(By the courtesy of the Bharata Itihasa Samshodhaka Mandala, Poona)

A Maratha *Sardar* is sitting in the stern in an easy posture engaged in light conversation probably with his wife.

The hull is painted in blue and red colours and the gunwale-line in blue only. The keel is peaked, a peculiar feature of the Maratha ships. The stem and the stern slant more or less with the same angle. Just above the peaked keel, in the ship, is seated an attendant with the usual Maratha costume with an oar in his hand. He is about to splash the oar in the water to propel the ship.

The ship has one mast and a large square sail made picturesque by the cross-lines. The square sail is a speciality of this ship. The mast carries a triangulated flag.

SHIP OF MALVAN (Plate 16)

This is a one-masted ship carrying a large lateen sail. The sail is painted in red squares while the shrouds of the mast are shown in bold blue lines. The stem rises gradually and ends in a curved-prow. The stern is upright and is peaked where it meets the keel. The pointed triangle at the stern is probably a portion of the mainsail. It cannot be a jib-sail as it is at the stern. The man in the stem is in a hurry and is engaged with the sail. The man in the stern is stretching some rope of the sail or of the yard. Perhaps, both of them want to furl the sail. They are wearing a sailor's costume. The entire colour-scheme of the painting is in red and blue.

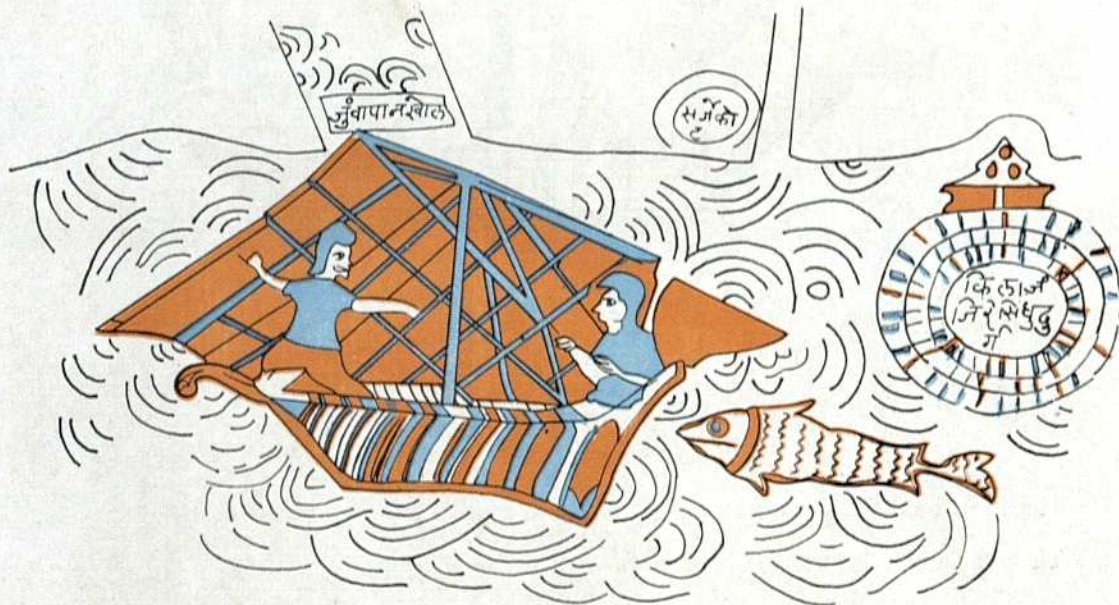


Plate 16—Ship of Malvan

(By the courtesy of the Bharata Itihasa Samshodhaka Mandala, Poona)

SHIP OF MALVAN (Plate 17)

This is a full-rigged ship. It has three masts, every mast carrying a lateen sail. It has also a jib-sail. The sails are painted in faint yellow colour. All the sails are set fully. The cordage is seen very clearly. Each mast has a triangular flag. The masts are shown in red and blue.

The stem has a gradual rise and ends in a curved prow-head. The stern curving inside rises suddenly. The hull is painted in red and blue straps. The man at the stern is probably the helmsman, though the rudder is not shown. The man at the stem is busy with the sails. On the stern-deck is seated a Maratha *Sardar*, probably the admiral or captain of the ship, observing some distant object by means of a telescope. The admiral is wearing a sailor's cap. Behind him is standing an attendant.



Plate 17—Ship of Malvan

(By the courtesy of the Bharata Itihasa Samshodhaka Mandala, Poona)

The keels of these ships are peaked, a characteristic of the Maratha ships.

These paintings belong to the first quarter of the nineteenth century.

THE BAGGALA OR BUDGEROW (Fig. 37)

This was one of the most ancient vessels navigating the Indian seas from the Gulf of Cutch. The peculiarity of its form and its extraordinary equipment are said to have remained unchanged since the days of Alexander the Great. A brief account of such an ancient craft might prove helpful in the study of the Maratha ships.

This vessel measured from end to end 70 feet, its breadth was 25 feet and the depth of its hold was $11\frac{1}{2}$ feet. Its tonnage was about 150. It was armed with two guns on the aft-part or right-aft of the stern, for defence. It had its poop-deck with a round stern. This was an ancient

feature maintained by the *baggala*. A number of Maratha ships too had round sterns. The *baggala* was very broad in proportion to its length reminding one of the *grab-built* vessels of the Marathas. It had a sharp rising floor. The stem was straight and its inclination was the same as that of the stern-post. In this respect the *baggala* differed from the Maratha ships as the latter had long streamlined prow.

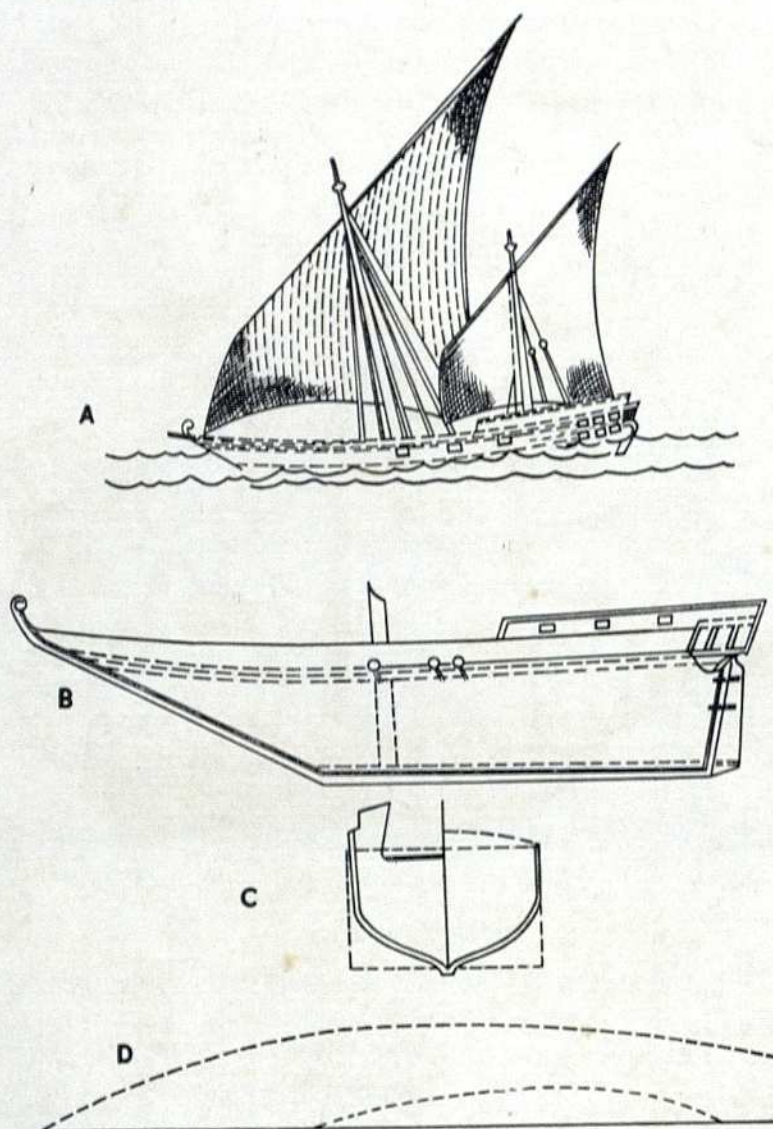


Fig. 37

A—Baggala B—Broadside Plan C—Plan of the Hold D—Cross Section

This vessel was constructed with timber and planks which were secured by nails. This was again an old method of securing a vessel. The finish of the *baggala* was very rough. The top-side above the deck was barricaded with mats on the outside of the timbers which stretched up to a height of 8 feet from the deck. This barricade was removed when the vessel had no cargo. This method of extending the sides was adopted in some Maratha ships.

The *baggala* had one or two masts with a huge yard which was made up of two spars, the ends of which were fished together. It carried a lateen sail, the tack of which was taken to the stern-head. Like the *dow*, it braved the distant seas and was navigated by the Arabs and the

sailors of Cutch. This crude looking vessel was peculiarly adopted to the coast of Arabia and the Red Sea subject to the periodical winds.¹

ARABIC BARGE (Fig. 38-A)

This is a fine specimen of an Arabic barge. The actual words in Modi below the original drawing are '*Arabi Taraju*'. The second word '*Taraju*' conveys no meaning in the present context even in Persian. The normal meaning of the word is 'a balance'. However, the reading of the term as 'barge' instead of '*Taraju*' becomes quite meaningful. Like all barges, the ship in question has a stately appearance. It carries a large lateen sail.

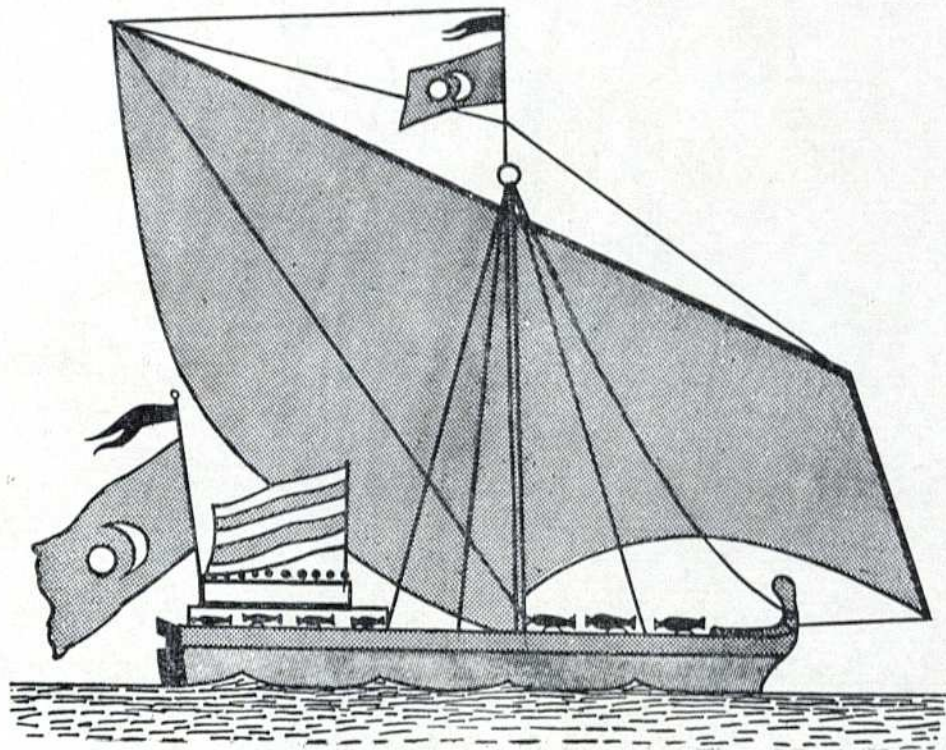


Fig. 38-A—Arabic Barge

The sun and the moon on the flags make the ship lively. This is the most common emblem used by the Muslims on their ship-flags. The barge carries seven guns. It has a small deck at the stern.

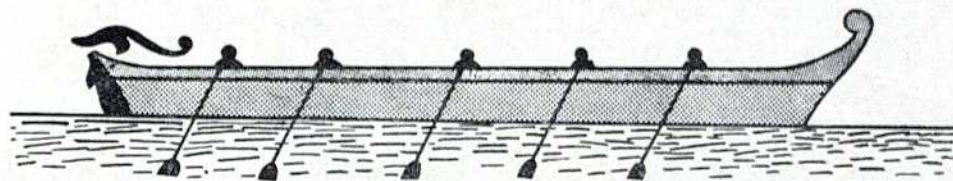


Fig. 38-B—Portuguese Boat

PORTUGUESE BOAT (Fig. 38-B)

This is a long rowing-boat of the Portuguese. The rudder, the sweeps and the fine curved prow are shown very accurately. This may be compared with the Maratha boats.

1. *JRAS.* I. 12-3.

THE DANGI (Fig. 39)

Dangis from Muskat coming to the Konkan coast for trade were sometimes captured by the Marathas. A *dangi* named *Laksmiprasad* owned by one Kanji Jivan of Veraval was seized by the Marathas as it was sailing in their waters without their permit.¹ One can infer from the name of this *dangi* that it was either captured from the Arabs or was constructed on the Indian coast itself by the owner. Yet another reference states that a *dangi* called *Kalyanprasad* owned

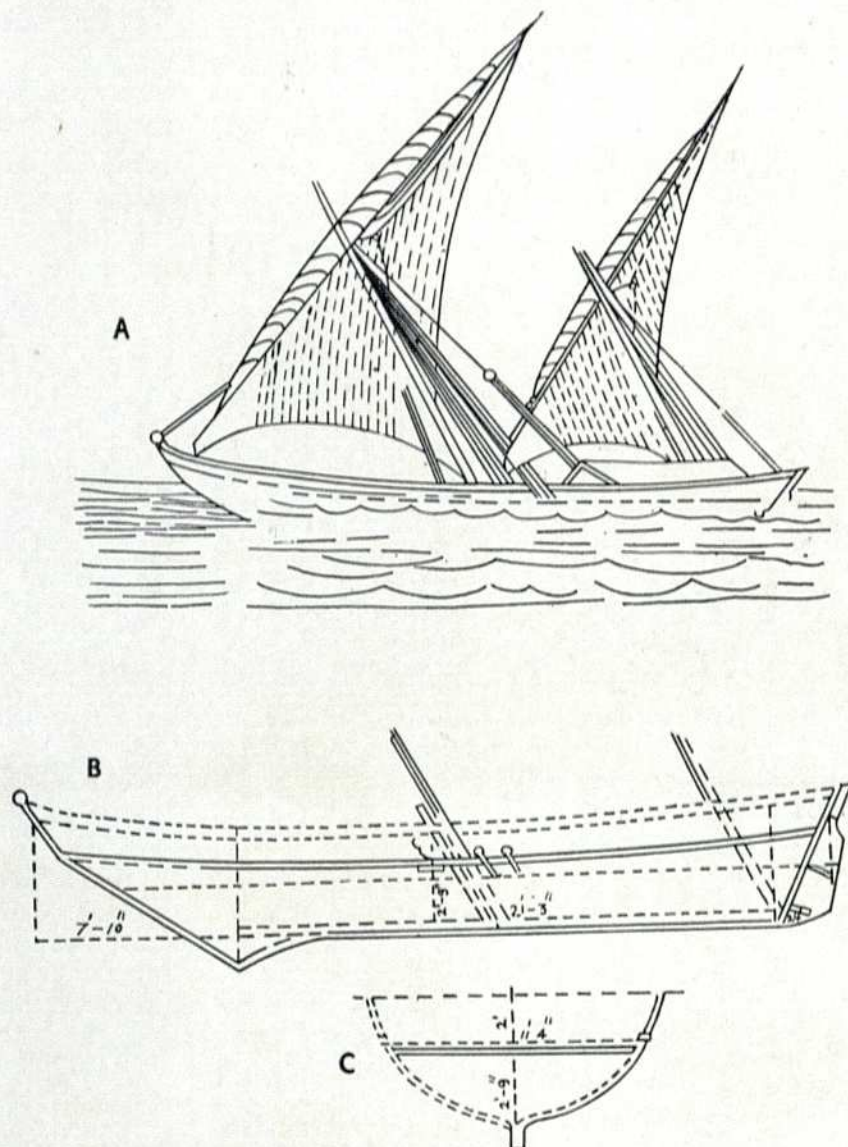


Fig. 39

A—Dangi B—Broadside Plan C—Plan of the Hold

by one Govind Purushottam was taken possession of by the Marathas as it was without a permit.² The name of the owner, Govind Purushottam, as also of the *dangi*, *Kalyanprasad* suggest that the Marathas in all probability constructed some *dangis* of their own as they were very good ocean-tramps.

1. Appendix C-2. Extract 8.

2. *Ibid.* Extract 22.

The *dangi* was a two-masted vessel carrying large lateen sails. As in a *phatemar*, its masts had a forward inclination, and a peaked-keel. Other details of construction and rigging are clear from the drawing.

Among the foreign vessels other than those of Europe, the *dow* of Arabia and the *kothaya* of Gujarat often called at the ports of Konkan. The Arabs were the masters of the Indian Ocean before the advent of the Portuguese. Their ships were more sea-worthy. The Marathas had much to learn from them in ship-building and marine equipment. Actually, a number of nautical terms were borrowed by the Marathas from the Arabs. In many respects, the Maratha ships resembled those of the Arabs. As seafaring people, they were far ahead of the Marathas. A description of the Arab *dow*, therefore, would be helpful for a comparative study.

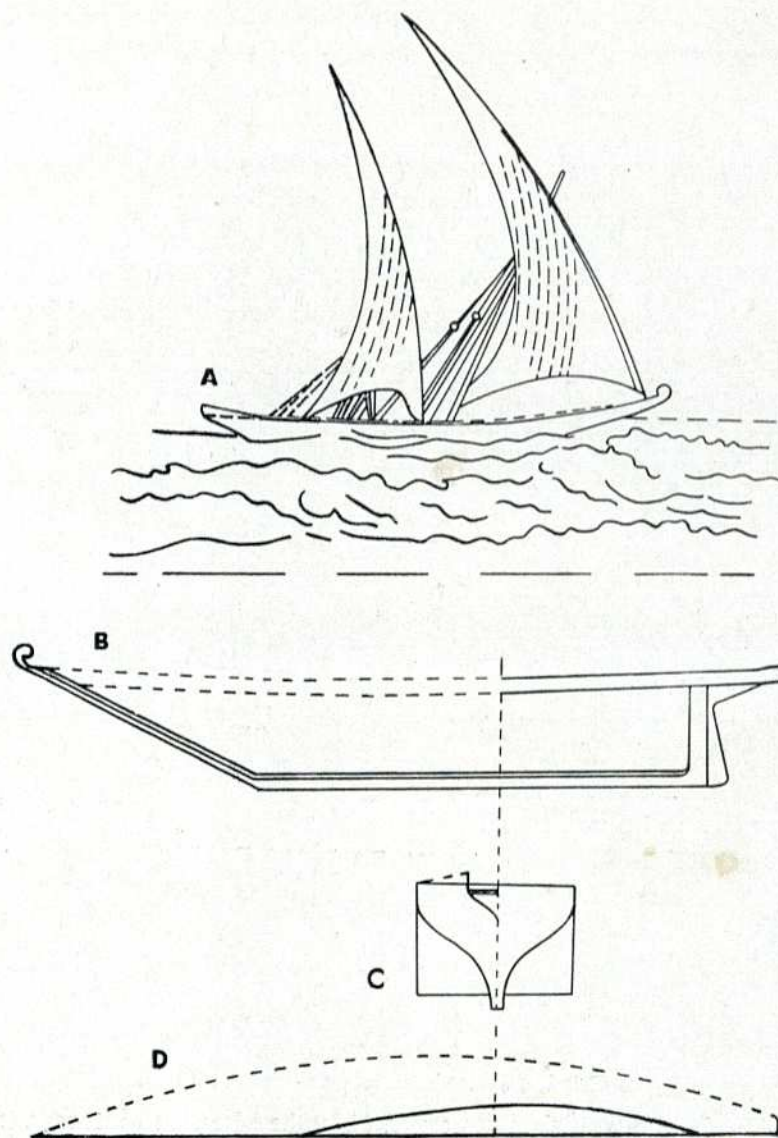


Fig. 40

A—Arab Dow B—Broadside Plan C—Plan of the Hold D—Cross Section

THE ARAB DOW (Fig. 40)

The *dow* was a *grab-built* vessel. Its tonnage varied from 150 to 250. It was about 85 feet long from stem to stern, about 25 feet broad and $11\frac{1}{2}$ feet deep. These vessels were built at

Cochin, most perfectly on the European style. They had a great rise of floor and were constructed for sailing with small cargo. They were fully equipped with decks, hatchways, ports, poop-decks, etc.

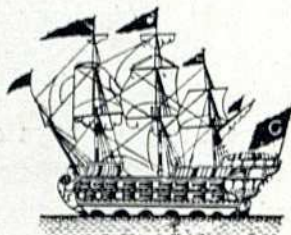
These vessels were sheathed on $2\frac{1}{2}$ inch plank bottoms, with 1 inch board and a preparation of lime and oil inserted between the planks and the sheathing-board. This made the vessel water-proof and prevented its bottom from being eaten up by sea-worms. The outside of the sheathing board had a whitewash coating. This was renewed every season before the vessel was put on sea.

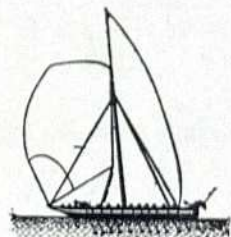
The *dows* had generally one mast and a lateen sail, the yard being equal to the length of the vessel from above. The mast had a considerable forward inclination which kept the long yard clear in the hoisting and lowering operations. The tack of the sail was brought to the stern-head and the sheets were taken behind. The haul-yards were taken to the taffrail having a pendant and a treble purchase-block which served as a back-stay supporting the mast when the sail was set. Together with three pairs of shrouds, this arrangement completed the rigging. The rigging was very simple, being made up of coir.

Several other vessels were fitted as brigs and armed by the Arabs for cruising in the Red Sea and the Arabian Gulf. Tipu Sultan's navy at Honavar consisted of the *dows*. When armed, these vessels were a good match for the Bombay marine-brigs. The large *dows* generally made one voyage in the season to the countries south of Arabia depending upon the north-east monsoon and returned with the south-west monsoon. They generally brought dates, fruits, wine and horses, and carried back rice, coir, canvas, cocoanuts, oil, timber, resin, etc. The trading range of these vessels extended from Alleppey to Bombay.¹

Some of the *dows* had two masts which raked forward for the easy handling of the yards. They carried large lateen sails. In equipment they did not differ from the one-masted *dows* described earlier.

1. *JRAS.* I. 11-2.





15

Nomenclature of Maratha Ships

THE names ascribed by a people to their ships present an interesting psychological study. They give us an insight into their character. At the same time they reveal the valued traditions of the people bestowing them, their religious beliefs, their warlike nature, and above all their aesthetic sense.

The sea and the ship have always attracted the attention of man. They have exerted a peculiar pull over the imaginative mind of a poet and a painter. It is everybody's experience how time seems to lose its sense while watching the open sea from a lonely rock or a breach. A full-rigged ship with its white sails gliding over the blue sea of Konkan is a thing of beauty *par excellence*. Man has yet another attraction for the ship. Ever since its discovery it has enabled him to conquer the most dreaded element, the sea. From beyond the seven seas it has brought him wonderful goods and new ideas. No wonder that man should have been tempted to name it variously and fancifully.

The Marathas have been called a warlike and pragmatic people. It would be interesting to see how far these characteristics are revealed in their boat-names. The names may be classified according to their significance i.e. religious, poetic, qualitative and so on.

The deep-rooted religious sentiment was predominant among the Marathas as among the people of other provinces, in the age of faith. Ship names conveying this sentiment may, therefore, be given preference over others at the start. A good number of the boat-names is expressive of this group. *Galbat-Bhavani* was named after the favourite and inspiring goddess *Bhavani*. Goddess *Bhavani* came into prominence during the reign of Chhatrapati Shivaji. On critical occasions such as Shivaji's meeting with Afzal Khan, his attack on the camp of Shasta Khan at Poona and his escape from Aurangzeb's court at Agra, the goddess was believed to have saved him from impending dangers. Very often Shivaji had premonitions of the things to come. This was the belief prevailing among the Marathas. No wonder that they should choose to name some of their ships as *Bhavani*. *Galbats* named after other gods and spirits are—*Bhaskar* and *Martand* (the Sun), *Raghunath* (Rama), *Sawai-Raghunath* (*Raghunath* II), *Sambhu* (god *Shiva*),

Narayan (god *Vishnu*), *Garud* (the Great Eagle, vehicle of *Vishnu*), *Hanuman* and *Sugriv* (the great monkeys of *Ramayana*), and the spirits or ghosts *Vetal* and *Sawai-Vetal*. The ship *Vetal-prasad* means the boon of *Vetal*, and *Sawai-Vetal*, *Vetal II*.

The words *Narayan*, *Garud*, *Hanuman*, *Sugriv* and *Raghunath* are obviously chosen from the great Epic *Ramayana*.

The *galbat Khandarav* is named after the popular god of the Maratha Country. *Khandoba* of Jejuri near Poona is a famous god. *Khandarav* and *Sitabarav* are indicative of the manliness of the Marathas.

Galbat Shekha or *Sekha* means *galbat Saint*. The word *Sekha* or *Seikh* is of Arabic origin.

The names of the *galbats* *Saradari* (the Noble), *Yesavanti* (the *Victory*), *Daulat* (Wealth), *Accha-Saradari* (the Good Noble), and *Shahatir* (the Royal Arrow) have about them dignity, grace and a poetic sense. A Maratha nobleman was called a *Saradar*. The Royal Arrow probably suggests the speed or slinness of the vessel.

The ship names ending in 'rav' were after the well-known names assumed by the Maratha noblemen like *Prataprav*, *Subhanrav*, *Bajirav*, *Bhujangarav* etc. The suffix *rav* has a dignified sense with an aristocratic tinge much loved by a Maratha. It means a king or chief. *Machava Ajabarav* and *galbat Patangarav* may be freely translated as *machava* the Wonderful and *galbat* the Kite. The word kite probably indicated the lightness and speed of the *galbat* concerned. The words *Bhaskar* and *Martand* combine in them brilliance and grace. They inspire awe. The *galbats* *Naranag* (Elephant or Cobra), and *Sarjya* (the Lion—Persian origin) named after these animals suggest grace and awe. Elephant is also indicative of the massiveness of the vessel.

The warlike character of the Marathas is reflected in the names *Samsher* (the Sword), *Phateh-Lashkar* (Victory of the Army) and *Ranakandan* (Destroyer in war). The word *Sawai-Samsher* (the Second Sword) also belongs to the same category. *Samshir* in Persian means a sword and *Phateh* in Arabic stands for victory.

Vasai-Samsher (the Sword of Bassein), and *Sawai-Underi* are obviously named after the port of Bassein to the north of Bombay and the island Underi to its south. Bassein was taken by the Marathas in 1739.

Among the most poetic names of the *galbats* are *Rajahams* (the Royal Swan), *Vavadi* (the Kite), *Asman* (the Sky), *Havai* (Wind or Air), *Punav* (the Full Moon Day), *Navaratan* (the New Jewel), *Para* (Mercury), *Hirakani* (Diamond), and *Darya-Mauj* (Joy of the Ocean or Ocean Wave). The words *Punav* and *Darya-Mauj* have their own beauty in Marathi which cannot be duly conveyed in English for want of single terms. These and such other names remove the misunderstanding that the warlike Marathas were lacking in poetic imagination. *Para* and *Hirakani* are named after the elements mercury and diamond. The name *Beheri* taken from the original Arabic *beher*, meaning the Ocean or Ocean-worthy is equally poetic. *Beheri* may also mean of the Ocean or Ocean-born.

Among other names of the *galbats* may be mentioned *Ruparel*, *Sadak* and *Sher-Sah*.

Equally interesting are the names of the *gurabs* which were bigger than the *galbats*. Names ending in the word '*prasad*' stand for so many boons or blessings given by different deities. *Gurabs Anandi-prasad, Datta-prasad, Maharaja-prasad, Siva-prasad, Rama-prasad, Ganesh-prasad* and *Laksmi-prasad* were so many boons from the gods *Datta, Shiva, Rama, Ganesh* and goddess *Laksmi*. *Anandi-prasad* may be translated as boon of the Joyous Mother. *Gurab Khandesvari* was named after the goddess *Khandesvari*. The *gurabs Sahebasadar* and *Phatte-aulat* mean the Exalted Highness and the Victory of Fortune or Wealth, respectively. These terms of Persian and Arabic extraction had become permanent members of the Marathi language enriching it with their vigour and grace. One of the *gurabs* was named *Jivaji*.

The influence of Arabic and Persian is obvious in the names like *Samsherjang, Phattejang, Daryadaulat, Salamati, Beheri* and *Havai*. Most of the names given after the gods are free from alien or Islamic influence.

The *pals* were the biggest of the Maratha warships. They were named as *Mahadev-pal, Samsherjang-pal* and *Phattejang-pal*.

Some of the *machavas* were called *Khabar-prasad* and *Ajabarav*. One of the *mahagiris* was known as *Salamati*. Captured ships, it seems, were renamed by the Marathas. Some *dangis* of Gujarat and Arabia when taken as prize were renamed *Sambhu-prasad, Sekhai* and *Rahamani*.

Naming the ships after the deities was the common practice with the Marathas. Next to the deities rank the ordinary or secular names. This category betrays the typical character of the Marathas who were more pragmatic in their outlook on life rather than being imaginative.

It would be interesting to go through a few Bengali boat-names as a matter of comparison. They are highly poetic. It is a natural product of their imaginative faculty. But they too like the Marathas seem to give first preference to divine names while christening their ships. The favourite divinities after whom they named their ships were *Kedara, Durgavara* (Boon of Durga), *Ganga-prasad* (Boon of the Ganga), and *Kali-prasad*. Names like *Sarva-dhara* (the All container or the Hold All), *Mahakaya* (the Titanic), and *Ajayaispatatala* (the Invincible Steel Bottomed) are all qualitative. While names like the *Ranajaya* (Victorious in War), *Ranabhima* (Terrible in War), and *Bhimaksha* (Fierce eyed) are suggestive of terror. Among the most poetic names were the *Udayagiri* (the Mountain of the Rising Sun), *Udayatara* (the Rising or Morning Star), *Sagarafena* (the Sea Foam), *Kajjalorekha* (Collyrium Lined), and the *Dhavala* (the White). Some were named after the birds like *Pakshiraja* (King of Birds), *Hamsakhala* (the Royal Swan). The word *Madhukar* (Bee) is also highly poetic.¹ These names have certainly an artistic sense and elegance about them comparable with those given by the Marathas.

The Marathas it may be said loved names which inspired their war-spirit while the Bengalis appear to have liked fanciful names. The words *Phattejang, Samsherjang* and *Naranag* have in them the ennobling qualities of a Maratha warrior. *Saradari, Daryadaulat, Yesayanti* have the magnificence of a Maratha courtier. And *Patangrav* and *Ajabarav* are good specimens of the simplicity of the Marathas with a tinge of fancy in them. The words *Patang* and *Ajab* may

1. For the Bengali boat-names see *Journal of The Department of Letters*. 10 (1923).

be taken to be poetic but the suffix 'rao' or *rav* makes them robust in the Maratha manner. Perhaps they are a good example of awkward combination of fancy and might.¹

Among the Europeans the English are well-known for their conservatism. Out of their love for tradition they have perpetuated the names of the famous historical vessels. For big ships names consistent with their size and dignity are chosen, viz. *Royal*, *Sovereign*, *Valiant*, *Indomitable*, *Irresistible* and *Inflexible*.

The American navy tends to follow its democratic tradition by using the names of states and cities for its battleships and cruisers respectively. Her destroyers have the names of men famous in her history.

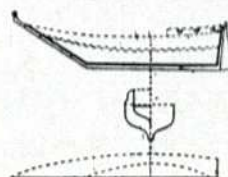
The French are fond of adjectival terms and words connoting virtues. The Germans love to name their ships after their heroes of the early days of the Nazi struggle.

The most poetic of all the warship names are of the Japanese. Literal translation of some of the names comes to mean the Beautiful. Of course, the names of delicate flowers and perfumes used by the Japanese for deadly destroyers present a vivid contrast.²

1. For the Maratha boat-names see *Kulabkar Angre* by D. G. DHABU, 390-1. Also see *Appendix C-1*, *Appendix C-2* and also opening pages of "Recruitment, Pay and Allowances" of Chapter XVII—*Naval Administration*.

2. For the European and Japanese boat-names see A. C. HARDY—*Warships At Work*, 10-12 ; and MITCHELL C.—*A Book of Ships* (The King Penguin Books).





16

Ship-building

SHIP-BUILDING is mostly a Hindu calling on the coast of Konkan. Only at few places like Bassein, Daman and Goa it is in the hands of the native Christians. They were originally Hindu shipwrights converted to Christianity by the Portuguese. The art of ship-building has been handed down from the father to the son for several centuries. It is practically a monopoly of a class of people known as *Sutars* or the carpenters. They form a caste by themselves, having taboos in marriage, food and other matters as in the case of the other vocational Hindu castes. Their knowledge of ship-building being hereditary has not undergone revolutionary changes during the last two or three hundred years. The only new things with which they have equipped their ships today are a telescope, a compass, a time-piece, sounding instruments and charts. All ships carrying coastal trade between Quilon and Kutch are practically constructed after the traditional model. They now freely use iron in the construction which their ancestors could not, because of its comparative scarcity. Thus, for all practical purposes the shipwrights of present day Konkan could be taken to be following the ancestral profession of the Maratha period.

The Site Selected—During the Maratha period the famous ship-building centres were Kalyan, Bhivandi, Bassein and Thana on the coast of Thana. Alibag, Bankot were on the Kolaba coast, and Vijaydurg, Malvan and Goa formed part of the Ratnagiri coast-line. Bassein, Thana, Vijaydurg and Goa had excellent deep waters, convenient for the construction of ships of high tonnage. Particularly Bassein, Thana and Bankot were ideal ship-building centres as their hinterland abounded in teak, in addition to the other favourable factors they possessed. At other places on the coast, ship-building activity went on depending upon the local need for smaller crafts.

The site selected for ship-building is usually at a sufficiently long distance from the river or creek where the daily rise of the tides cannot reach. But at the same time the site is well approachable by the spring-tide so that the ship could be floated down the river on its completion. The place is usually protected from the tempestuous south-west monsoon either by a hill or a promontory to enable the shipwrights to carry on the work even in the rough season. From the remains of the Angre's docks at Alibag and those of the Dhulap's at Vijaydurg it is obvious that the Marathas had full knowledge of dock-construction and also of keeping them dry when required.

The keel of a ship is laid on an auspicious day selected after consulting a Brahmin astrologer. Cocoanuts are broken to ward off evil spirits. Sometimes a goat is sacrificed. Betel and nut are

distributed to the gathering present on this occasion. When the keel-laying ceremony takes place all the material necessary for ship-building like beams, planks, coir, nails etc. ; is kept in readiness.

At both the ends of the keel are joined the two beams known as the stern and stem posts. The stern-post is joined in such a manner that the angle which it makes with the water surface when the ship is afloat, is greater than the angle between the stem-post and the water surface.

The keel is covered by a beam which is secured to the keel by nails. The next procedure is to fix small beams in the beam covering the keel. The shape of these first beams i.e. their curvature, is a matter depending upon the shape that is intended for the bottom of the ship. For a flat bottom slightly curved beams are used whereas for a curved bottom sharply curved beams are required. The beams fixed in the long-beam covering the keel are short and thick. They are extended by fixing similar beams at their ends. These short-beams are crossed from inside by a set of beams that run in an arched fashion from the stern to the stem on both sides of the ship. As the beams crossing the one that covers the keel are extended, the vessel broadens. The breadth of the vessel varies according to its intended depth. Upon this kind of criss-cross construction of bare beams planks are fixed from outside.

Planking—There are two methods of planking the vessel. In one, the planks are laid edge to edge, and in the other they overlap. The former is known as the *caraval-build* and the latter the *clinker-build*. In the latter, planks are fixed in one another by cutting grooves so that they overlap one another at the joint. This method makes the vessel more watertight than that of the *caraval-build*. The people of Konkan have traditionally preferred the *clinker-build*. Though this method has the advantage of making the vessel watertight, it renders repairing a difficult job.

The planks on either side of a ship are held together from inside by the beams rising from the keel. These beams are again crossed by other beams that run from stem to stern. These beams in their own turn are planked from inside.

When the first short-beams are fixed in the beam covering the keel, the structure looks like a spine with ribs on either side. The keel is covered by a long stout beam from end to end in which the superstructure rises, leaving the keel undamaged by constructional fixtures, such as the outermost planks, the cross-beams and the inner planks. This, in nutshell, is the principle of ship-building. For the sake of illustration, if the keel could be called the backbone, the cross-beams would be the ribs with their ends fixed in the backbone, and the outermost planking the skin. The hull of a ship has thus a close resemblance with the frame of a fish.

The lesser the width of the planks the greater is the strength of the vessel. Normally the width is 12 inches but never less than 9 inches.

As the structure of the ship develops it is supported on both sides by thick wooden stumps. Arrangement is made by means of scaffolding to work at the planks when the structure gets sufficiently high. Horizontal planks are placed on the scaffolding to carry on the work.

The Shaping of Planks—The longitudinal-lengthwise planks of a ship's side are arch-shaped. The process of moulding the planks is very simple and cheap. The plank to be moulded or shaped in an arched fashion is besmeared with a lair of wet earth. For sometime it is kept in the same condition so that it should absorb the moisture from the mud. Then it is kept flat on two wooden

logs at the ends. Hay and wooden filings are placed below the plank and lit. The plank is heated till the mud gives out steam. Care is taken to see that the plank does not burn. The steam passes through the body of the plank making it elastic. The plank then becomes ready for moulding.

One end of the plank is then inserted into a long vertical slit cut in a thick wooden stump. The stump itself is secured in the earth. With one end of the plank in the slit, the other end is fastened by a strong rope tied to a big stone or tree. At the middle of the plank is placed a stout pole fixed in the ground. The middle portion of the plank rests against this pole. The rope at one end of the plank and the pole at the centre are on the same side of the plank. The middle pole, however, slants towards the other side. The roped end of the plank is pulled according to the curve needed. The slanting position of the middle pole is important as it helps in bending the plank to the required shape of the hull. One of its lengthwise edges is more curved than the other so that it exactly conforms with the shape of the ship.

The plank is taken off from the mould when perfectly dry so that it retains the newly acquired shape. It then becomes ready to be worked upon by the carpenter for final cutting and fitting.

Before the hull is fitted with iron nails, it is secured by coir running through holes at the joint of the planks.

The ship-wrights of Konkan were mostly illiterate. Their knowledge of ship-building is handed down from father to son, practically to this day. They cannot put on paper the plan of the ship to be built though they can copy a model to its minutest details. They have some rough formulæ regarding the proportion between the different parts of a ship which is worth noting.

The dimensions of the different parts of a ship vary in accordance with the length of the keel. The stem-post is always equal to the length of the keel, and the stern-post roughly ten units less than the keel. Some figures actually collected from Deogad in the district of Ratnagiri are illustrative.

If the keel is 19 cubits (the cubit is the usual measure adopted; it is the distance measured from the elbow to the tip of the middle finger. One cubit is approximately $1\frac{1}{2}$ feet), the stem-post is also 19 cubits, the stern-post 9.5 cubits and the depth of the vessel 5.25 cubits.

There are in all 8 beams in a ship set breadthwise. Three of them are fixed in the uppermost part of a ship and the rest five below them. A ship of the above measure would require beams of the following length.

The three beams in the upper part of the hull are set as follows: One is set midship, it is 11.5 cubits in length, the beam between this (middle beam), and the stem is 11 cubits, and the beam between the middle-beam and the stern is 10.5 cubits.

The five beams below these three are: the longest 10 cubits in length is set midship. The mainmast rises up resting against this beam. The two beams behind this i.e. on the side of the stern are respectively 10.24 and 9 cubits in length. The two fore-beams i.e. the beams between the middle one and the stem are respectively 9 and 3.75 cubits. The last i.e. one measuring 3.75 cubits, is the foremost beam in the bow of the ship. If from the middle of the beam measuring 9 cubits in length a perpendicular is dropped, it should meet the end of the keel.

The length of the rudder post is 10·5 cubits and that of the helm 5·5. The fore or mainmast is 34 cubits and the aftermast 24 cubits. The bowsprit is always equal to the keel, i.e. 19 cubits. The aftermost mast known as *nijama* or *porke* is 8 cubits.

The length of the yard on the foremast is 44 cubits, the rough formula being, yard on the foremast = the distance between the stern and stem = 44 cubits. The length of the yard of the aftermast or mast No. 2 is 35 cubits, the formula being, the yard of the aftermast + yard of the foremast = 9 cubits, roughly.

The Sails—A three-masted ship which has the foremast or the mainmast 52 feet in length and 11·5 in circumference, requires 29 pieces of cloth, each piece being 40 yards in length. The cloth is cut into pieces having uniform breadth of 9 inches. These pieces long and short roughly count 90. The sail is triangular in shape. The side of the sail fixed on the yard is 125 feet and that which is horizontal is 90. It is easy to calculate the third side formed by the longest strip of the longitudinal section of the sail, if the sail is more or less a right-angled triangle.

If the mizzen-mast is 41 feet long with 11·5 circumference, it requires a sail 80 feet in length on the yard, the horizontal side being 60 feet. The third or aftermast if 48 feet in length by 11·5 feet in circumference, needs, a sail 95 feet in length on the yard with a horizontal side of 25 feet. The sail on the bowsprit of 31·5 feet by 11·5 feet circumference has its longest side 44 feet and the shortest 16 feet.¹

The masts are set in the ship when the hull is floated in the water. It is not possible to set them when the hull is on the shore for fear of its capsizing. The other paraphernalia of the masts, the yards and the sails come when the masts are set.

When the hull of the ship is complete, an auspicious day is selected for setting it afloat. Brahmins and the village gentry are invited. The *mantras* are recited by the former. Cocoanuts, betel-nut and flowers are distributed and the ship is named.

The timber utilised in ship-building—Teak is always preferred for ship-building. It is highly prized because of its durability and great buoyancy. A ship built of complete teak is the lightest and the best. The keel is usually of teak. Sometimes *undala* — *calophyllum inophyllum*, *bhendi* — *thespesia populnea*, *ovala* — *mimusops elengi*, are also used in the keel. *Bhendi* is very light, and *undala* because of its bitterness is not eaten up by sea-worms. *Heda* — *terminalia tomentosa*, *nana* — *logerstroemia lanceolata* and *aina* are freely used in all parts of the ship. Preference is given to these when teak is not available. None of these varieties of wood is corroded by salt-water and is therefore used for ship-building, especially for parts which are constantly under water. The speciality of teak in addition to its durability and buoyancy is that it does not corrode iron.

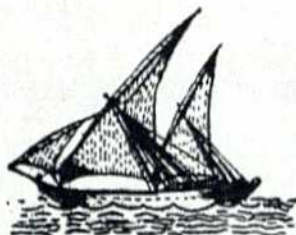
Mango and jack trees were ubiquitous in Konkan in the Maratha period. In case of emergency or non-availability of teak, jack and mango are used. Canoes were scooped out of the mango and jack trunks for ordinary use. Mango and jack can be put only in the upper part of the ship where the sea-water cannot reach.

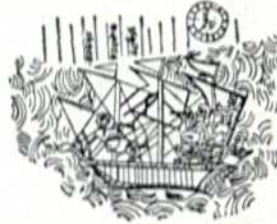
1. The author has collected these measurements from ship-wrights near Deogad and Ratnagiri where ships were actually under construction (1942-43).

The masts are generally made up of teak. In some cases they are of *punaya*.

Due to continuous deforestation for the last 150 years big trees are becoming rare in Konkan. The Maratha Government tended the forest with great care. During the British rule it was cut down recklessly. The present Government is indifferent to forestry. With the cultivation of graft-mango fetching lucrative price, big mango trees have received a tremendous set-back in our own times.

Oiling—Oiling the ship, when it is complete, is an important work. Cocoanut oil or sweet oil mixed with resin in half to half proportion and boiled is applied to the hull. It increases the elasticity of the vessel and in consequence its durability. Resin is applied to the outer side of the bottom which is constantly under water. It is proof against sea-worms.





Naval Administration

ORGANIZATION OF THE NAVY

THE navy under Shivaji does not seem to have an independent place in the eighteen departments or *Karkhanas* of the state as it has not been mentioned in the *Kanun Jabata*. However, from *Sabhasad* it can be gathered that a naval *subha* consisted of 200 ships. The officer in-charge of a *subha* was the *Subhedar*. Many more details regarding the naval administration are furnished by the *Ajnapatra*.¹

It rightly considers the navy to be an independent limb of the state. Just as the landward expansion of a state depends upon the strength of its cavalry, similarly, its command over the sea is determined by its naval force. The state should, therefore, organise its own navy. The navy should have *gurabs* of medium size and also *galbats*. Normally large ships requiring wind for their propulsion should not be constructed. However, if one or two such ships are built in order to maintain the prestige of the state, the entire navy along with the large ships should be manned by dauntless sailors and well-equipped with artillery, light-guns, hand-grenades,² guns and ammunition. The navy should have suitable *subhas*, each consisting of five *gurabs* and fifteen *galbats*. All *subhas* together should form a *sarsubha*.

Land should be assigned for the maintenance of the navy. Normally, its cost of maintenance should not be defrayed from other sources of income. If the income from customs is allotted to the navy there is every fear of the burden of taxation falling upon the merchant community. Eventually, this might ruin capital, bringing trade to a stand-still. The ports have to be maintained, and rare goods are obtained only if they are imported from outside. Any disorder caused by a wrong policy is disgraceful to the state. Besides, income from customs would be lost to the state. The poor would be totally ruined and lawlessness might prevail. The men of the navy jobless and unbridled, would act at random. Such a possible chaotic state could be easily avoided by assigning land revenue for the maintenance of the navy. Enough revenue from land may not be available for the navy all at once. Its construction, therefore, should be limited to the availability of the income. Investment of capital should be encouraged with a view to increasing

1. *JA*. 40-4.

2. *Hoke* plural of *hoka* in the *Ajnapatra* stands for hand-grenade.

the income from customs. The expansion of the navy should not exceed its means. In short, its construction and expansion should proceed slowly and steadily.

The naval men should patrol the seas and keep a watch on the enemy. They should always replenish the supplies and ammunition of the naval forts. Complaints from the keepers of the naval forts should not be taken straight to the central authority — the King. The activities of the enemy should be watched, their hiding places be traced and their territory conquered.

The fishermen and merchants should be given all the necessary facilities for free movements on the sea. They should not be disturbed in any way. Any one trying to molest them should be severely dealt with. Foreign vessels other than those of the enemy, without a permit should not be allowed to pass unnoticed. They should be brought to the port by persuasion and if it fails, by force, without damaging in the least any property thereon. The men on board the vessels should be conciliated by the captain of the ship and the officers of the province. They should be allowed to take fuel and water; and other goods like cocoanuts which they need, should be made available for purchase, by levying nominal taxes. A respectable merchant should be entertained according to his status on behalf of the Diwan, the expenditure being met from the Diwan's treasury. Thus, foreign merchants should be given every possible encouragement to maintain friendly relations and carry on trade with one's own country. Merchantships of the enemy should be captured and brought to the port. The merchandise on board should be confiscated without any misappropriation, and the clerks of the *mahal* and the naval officers should report the matter to government.

This discussion of the *Ajnapatra* enunciates the policy of the State in respect of the organisation of the navy and sea-trade. The statements that *gurabs* of medium size should be constructed and land should be assigned for the maintenance of the navy are good precautionary measures for a state wanting to start a navy. Again, the instructions that the expansion of the navy should proceed gradually is based on a sound principle, viz., the naval expansion should not outrun the resources of the state. In the initial stage the navy had to be maintained from land assignment. But for the future growth of the Maratha navy this was not a sound policy. Portugal, Holland, England and France prospered because of their overseas trade. Their navies were not only self-sufficient economically, but contributed to the national wealth. Trade was the life-blood of these navies. The *Ajnapatra* expresses concern that the navy if not maintained from land assignments would have to be fed from custom dues, finally leading to the ruin of trade and its resulting consequences. This was a typical narrow view of a land-power which was required to organise a navy for political purposes i.e. as a means of defence. But it lacks foresight and does not grasp the importance of the economic enterprise contained in the growth and expansion of the navy. The fear expressed in the *Ajnapatra* that increase of custom rates at one's own port might divert trade to another port is correct. But it did not realise that the prosperity of the Arabs, the Portuguese and the English depended upon the bulk of the trade they carried, making navy not only self-sufficient but also a source of income.

The construction of medium sized *gurabs* recommended by the *Ajnapatra* was well-suited to the shallow waters of Konkan. But when called upon to face the heavy, well-equipped European ships, they were bound to be sunk like lead. This was actually the fate they met with. The

principle that navy should be maintained from the land revenue and the recommendation that medium sized *gurabs* should be constructed, indicate the limitations of the wisdom of the *Ajnapatra*.

Regarding a naval fight the *Ajnapatra* instructs that in the event of an engagement all should gather together and put the enemy on the windward side. If, however, one is forced to be on the windward side, unable to proceed against the wind, one should avoid an engagement with the enemy, and take refuge in a nearby naval fort. One's own ships along with the crew should be kept safe while capturing the enemy. If the enemy on the windward side surrenders, he should not be captured all of a sudden. He should be surrounded from a safe distance and fired at. For, a treacherous enemy pretending to surrender may do harm by fire. Therefore, the enemy, when he actually surrenders need not be trusted, but should be asked to send his officers on board his own ship. The enemy ships should then be boarded. In case this does not come about, the enemy ships should be battered without caring for the goods thereon, creating terror in the heart of the enemy.

As to the stationing of the navy, the *Ajnapatra* instructs that the naval camp should be pitched at least a fortnight before the sea gets tempestuous. The camp should neither be pitched in one and the same harbour every year nor in the open sea. Because, the sailors who are generally unruly are likely to cause damage to the same place every year in spite of strict orders to maintain discipline. If the navy is camped in the open sea, it has to be hauled ashore in the rainy season, the main camp actually remaining on land. The distance between the navy and the main camp on the shore might afford an opportunity to the enemy to set fire to the entire armada. This situation must be avoided at any cost. In case the navy is camped in a harbour with a fort, the men of the navy who are by nature impudent and rascally, might pick up a quarrel and injure men on land. The possibility of a sabotage is also not ruled out. This is not desirable. The naval camp, therefore, should be had every year at a different harbour with a strategic fort guarding the mouth of the creek. Preferably, the camp should be in the creek itself. Care should be taken not to concentrate the navy at one place. It should be scattered over a wider area. At night the navy should be patrolled both by land and sea. The *Subhedar* should reside at the camping station with his family for a couple of months and manage the naval affairs. He should obtain the necessary supplies by securing government sanction and should in no way disturb the local administration.

The navy requires planks, beams and poles for the mast. Suitable wood should be secured from the government forest abounding in teak, with due permission, and any additional supply required should be imported. Trees like mango and jack from the kingdom are also useful for the navy. They should not be cut recklessly as they are not grown in an year or two. The peasants have planted them and tended them like their own offsprings for years together. If they are felled they would cause limitless affliction to the peasants. Indulgence in any act for one's own benefit, at the cost of others, is destined to have a short-lived effect. Moreover, the government itself would be liable to be blamed for causing grief to the subjects. Therefore, reckless felling of the trees should not be allowed. Even a tree which is worn-out and useless should be cut with the permission of its owner after paying him the due price. Force should not be used in any case.¹

Shivaji was very strict in the execution of his orders. In the naval battle of Khanderi in 1679 against the English, he threatened his men on the island that he would behead their wives if they surrendered against his orders. This may give us an idea of his strict naval discipline.

For precise knowledge of the internal administration of the navy we have better details of the Peshwa period. The *Subhedar* was the military head of the navy i.e. the admiral. The personal salary of the admiral was Rs. 1,000 per annum in cash, and an allowance of Rs. 90 was sanctioned for the upkeep of his horse and Rs. 96 per annum for his servants, during the reign of Balaji Bajirao Peshwa.¹ In addition to the pay and the allowance the admiral was given 16½ maunds of paddy, and oil for lighting.

The pay and allowances of a *Sartandel*, a *Tandel* and a sailor in cash and kind by 1754 were as follows. By this time the pay and allowances were increased on account of an emergency, probably arising out of the conflict between Balaji Bajirao Peshwa and Tulaji Angre.

To the sailors on warships

						Pay in cash per month Rs.
<i>Sartandel</i>	..	..	..	..	..	10-0-0
<i>Tandel</i>	..	..	..	..	..	7-8-0
Sailor	..	..	..	..	..	4-8-0 to 5-0-0

To men on warships in kind per month²

Designation	Kind		Maunds	Paylis	Sheers
<i>Sartandel</i>	Rice	..	2	10	..
	Pulse	..	..	1	..
	Salt	..	..	..	1
	Ghee	..	..	..	6
<i>Tandel</i>	Rice	..	2	1	..
	Pulse	..	..	1	..
	Salt	..	..	..	1
	Ghee	..	..	..	4
Sailor	Rice	..	1	5	..
	Pulse	1	..
	Salt	1
	Ghee	3

For men on merchantship per month

<i>Tandel</i> or Sailor	..	Rice	..	1	5	..
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Under Peshwa Madhavrao I, the revenue of some *mahals* and the customs of some *tarfs* were assigned to meet the expenses of the navy.³

By 1765-66, the *Darakhdars* in whom the civil administration of the navy was vested, were not able to run it properly. The administrative control of the navy was not in one hand. The Europeans were hostile at sea and the navy was in a weakened state. With a view to restoring

1. *PD* (Balaji Bajirao). III. 185.

2. *Ibid.* 186.

3. *PD* (Madhavrao I). IX. 339.

order in the naval department Madhavrao I issued orders to Anandrao Dhulap to appoint Jagannath Narayan, an experienced man as the head of the civil administration of the navy. Balaji Hari who was formerly appointed as *Amin* was inexperienced and was asked to act as an *Amin* under Dhulap. The salary of Jagannath Narayan was fixed as follows :

Rs.	
1,100-0-0	Personal pay (Rs. 1,000 + Rs. 100 cloth etc.)
231-0-0	Boys, torch and umbrella holders, in all for three persons.
22-8-0	Oil for lighting.
190-0-0	For the upkeep of a horse etc.
333-8-0	Mess charges etc.
123-0-0	Cook, water-boy, in all for two persons.
2,000-0-0	Total per annum.

This sum of Rs. 2,000 which was formerly allotted to the fort of Simhagad was now allotted to the navy to meet the expenses.

The duties of Balaji Hari who was appointed as the *Amin* under Dhulap are defined as follows¹:

1. The *Amin* should sign the daily sheet prepared by the Phadnis and *Karkhanis*, and totalled by the *Mujumdar*.
2. The *Amin* should sign the daily muster roll totalled by the *Hashamnis*.
3. All the orders pertaining to leave and return from leave should not have finality unless signed by the *Amin*.
4. The list of new recruits should be signed by the *Amin*.
5. All the *Darakhdars* should assemble every morning for their duties ; if anybody be absent his work should be done by the *Amin* ; the sailors' payment should be made in the presence of all and should be accounted for every day.
6. All the sales and purchases should be made by the *Amin* in consultation with the *Karkuns*.
7. At the commencement of the year the *Amin* should inspect the seamen and report their efficiency to the *Huzur* (the Peshwa).

In 1763 rules were framed for the efficient administration of the navy by Madhavrao I, and orders were sent to Anandrao Dhulap for their execution. They are more general than those mentioned above. Yet, they are worth noting. Orders were issued to Anandrao Dhulap of the *Subha-amar* (admiral) of Vijaydurg as follows²:

1. At the beginning of the year recruits should be called in and 2,000 men should be selected therefrom as decided, and no extra force should be kept.

1. PD. IX. 340-3.

2. BISMQ. 17.2. 39-40.

2. Efficient men should be rewarded according to their work but *jagirs* should not be granted. Reward should be granted by an agreement and according to the work done. It should be recorded and the record taken to the *sarsubha* at the closing of the year for explanation and clearing the accounts.
3. Experienced men should be continued in service and new employees should not be granted high wages. At the closing of the year the accounts of the new employees should be explained to the *sarsubha*.
4. Men useful for the navy, well-versed in the sea-affairs should alone be employed.
5. Advances to the new employees either in cash or kind should be made after enquiry. Moreover, grain should not be advanced without recording. As soon as the sailors join duty their names should be enlisted.
6. Regarding the storing of the grains, as soon as they arrive in the port they should be checked and their account properly maintained by the *Darakhdar* and then put into the store. A copy of the list should be sent to the *sarsubha*. Extra goods should not be kept. A daily account sheet of the store should be prepared, it should be checked and signatures of the *Subhedar* and the *Divan* should be obtained on it.
7. Men well acquainted with the sea-affairs should alone be employed in the port for repairing purposes and as guards.
8. Every day enquiries should be made of those who are present at the port. Nobody should be excused for absence and enquiries should be made regarding the absentees through an extra *Darakh* or clerk.
9. Every month the muster-roll should be prepared of every *mahal*, the signature (thumb impression) or signature of every person being entered therein. The administrative work should by no means be delayed.
10. The sailors should be paid in cash and kind and the payment should be settled as soon as an agreement is made with them. It should not be put off to a future date.
11. The goods to be embarked on board the ships should be given in writing to the *Phadnis* department (Account Department). Sepoys should be appointed with the witness of the *Sarang* and the *Tandel*. The account of each naval expedition should be entered, failing which the *Phadnis* should be required to give an explanation.
12. A three-masted ship, an ordinary vessel or a fighting-ship are very useful. They should not be sold if they could be turned into fighting-ships by spending a small amount for repairs.
13. Every *Darakhdar* should execute his own duty.
14. The *Darakhdars* should serve the government loyally and should not quarrel among themselves.

Madhavrao I tried his best to make the administration of the navy as efficient as possible. He was not negligent in appreciating the good service rendered by sailors. Amongst the officers and sailors Rs. 4,250 were distributed, according to their rank and work for their services in the war against Haider Ali, by way of rewards. Damaji Naik, Kuweskar, Shivajirao Surve, Vithoji

Naik Bamkar and Balaji Hari Phadnis, the officers of the navy received Rs. 300, Rs. 250, Rs. 200, and Rs. 500 respectively. Rs. 3,000 were distributed among the *Sarangs* and the sailors according to their rank and the services rendered by them.¹

At some *talukas* of Konkan persons were appointed with a small squadron of navy at their disposal. In 1765 Annaji Naik was appointed as the commandant of five ships at Ratnagiri.²

Some details of the pay given to the sailors and the sepoys on board the ship during the reign of Sawai Madhavrao Peshwa may be compared with those of Madhavrao I's period.

In 1782-83 a new warship named 'Mahadev' was constructed for the *Taluka* Suvarnadurg. It was manned by 30 sepoys, 30 sailors and one gunner. Rs. 1,950 were spent for 30 sepoys, So, each sepoy got Rs. 65 per annum which included his pay in cash, clothing allowance and ration charges. The sailors were paid a bit less, i.e. every sailor was given Rs. 61-8-0 (cash and kind) per annum. The gunner was paid slightly higher than the sepoys or the fighting men, i.e. Rs. 67-8-0 per year. The total expenditure on account of the ship was Rs. 3,862-8-0.

In times of emergency fishermen who were recruited by government were given subsistence allowance for five to six months to compensate for the loss of their trade, and were also provided for the monsoon by granting five *khandis* of paddy for each of the *mahagiris*.

The Bhandaris of Agar, Bassein, Agashi and Kelave, who worked on the *chaukis* (guarding posts) were exempted from paying half the house-tax.³

In 1781-82 the relations between Anandrao Dhulap, the commander of the Peshwa's naval forces and other officials and *Darakhdars* were strained. The governmental interests suffered as a result. In order to avoid the consequences the officers concerned were called back and the administration of the navy was handed over to Anandrao. He then became solely responsible for the maintenance and discipline of the navy. One Krishnaji Narayan was appointed as a clerk in place of the *Darakhdars* and was to act according to Dhulap's instructions. Dhulap was granted Rs. 2,000 in addition to the revenues of Saundal *Mahal* and Kolvan. He was ordered to fit out 19 warships and go on an expedition. He was informed that he would be paid more if he would be sent against the English. He was also empowered to utilize the services of the carpenters, black-smiths, and the cobblers of the districts under his control.⁴

To give a complete idea of the naval department in a nut-shell, the *subha-arnar* i.e. the admiral was the military head of the navy. He was in charge of the royal navy of one *subha* (coastal district). His duty was to protect the coast from invasion, to check piracy and to safeguard the maritime trade. He granted passports to ships sailing within his waters and was empowered to capture those sailing without them. He could fight with the enemy ships. But he could not make peace with or declare war against a maritime State. Such powers rested with the central government.

Sometimes, for the civil administration of the navy, persons were appointed directly from the central government. They were to act in co-operation with the admiral and their duties were

1. PD. IX. 344.

2. Ibid. 340.

3. PD. VI. 194-7.

4. Ibid. 195-6.

expressly stated. The central government was the supreme authority in both civil and military matters. The central government could order the admiral to restore a ship, taken by him as a prize for sailing without a passport, to its original owner. They could also order him to return the cargo of a wrecked-ship drifted ashore, to its owner. All such special powers lay with the central government.

At the different *talukas* of Konkan on the coastal strip persons were appointed with a small squadron of navy at their disposal to guard the coast ; they were probably directly responsible to the central government.

The office of admiralty was hereditary in the later period of the Maratha State. It was not so under Shivaji. The admirals in addition to the pay they received, were granted *inam* lands.

The Maratha navy was not self-supporting. Ramachandrapant Amatya, a leading man of the post-Shivaji period, thought that the naval department should not be run from the money collected by way of export and import duties. He was apprehensive that this would lead to loss of trade. So his dictum was that navy should be maintained from the general revenues of the State. This principle was followed by the Peshwas too. The revenues of certain *mahals* and districts, were assigned for the upkeep of the navy.

RECRUITMENT, PAY AND ALLOWANCES OF THE CREW

The original documents in *Modi* regarding the estimated expenditure of a naval *subha* and the money sanctioned for its maintenance provide useful information about the recruitment of the crew, its pay, allowances, as also the repairs of docks and ships. The documents are mostly of the time of Peshwa Madhavrao I and after. Some of them show how the naval officers wanted to equip their ships with the new mechanical devices used by the English vessels. The religious beliefs and practices of the crew are also reflected in these papers. It is for the first time that these details are made available.

The estimated expenditure for the year 1773 of the *Subha* Vijaydurg, under Anandrao Dhulap furnishes all the details regarding the crew on different vessels :

<i>Pals</i>				<i>Soldiers</i>	<i>Gunners</i>	<i>Sailors</i>	<i>Total crew</i>
<i>Mahadeo Pal</i>	..	..	..	108	14	153	275
<i>Samsherjang Pal</i>	..	..	..	229	15	125	369
<i>Phatehjang Pal</i>	..	..	..	229	15	125	369
<i>Narayan Pal</i>	..	..	..	150	10	80	240
<i>Gurabs</i>							
<i>Shivaprasad</i>	..	..	..	57	4	49	110
<i>Ramprasad</i>	..	..	..	57	4	49	110
<i>Ganeshprasad</i>	..	..	..	35	4	39	78

<i>Galbats for war</i>				<i>Soldiers</i>	<i>Gunners</i>	<i>Sailors</i>	<i>Total crew</i>
<i>Sawai Raghunath</i>	..	..	..	22	2	24	48
<i>Naranag</i>	..	..	..	25	2	29	56
<i>Phatehlashkar</i>	..	..	..	25	2	29	56
<i>Sambhu</i>	..	..	..	25	2	34	61
<i>Sardari of Underi</i>	..	..	..	22	2	25	49
<i>Shahtira</i>	..	..	..	22	2	20	44
<i>Yeshvanti</i>	..	..	..	17	2	20	39
<i>Sawai-samsher</i>	..	..	..	22	2	25	49
<i>Bahiri</i>	..	..	..	22	2	24	48
<i>Yeshwantrao</i>	..	..	..	12	2	20	34
<i>Ramban</i>	..	..	..	22	2	24	48
<i>Pavan</i>	..	..	..	17	2	15	34
<i>Vasai-samsher</i>	..	..	..	15	2	27	44
<i>Acchasaradari</i>	..	..	..	7	2	20	29
<i>Navaratan</i>	..	..	..	7	2	20	29
<i>Sugriva</i>	..	..	..	7	2	20	29
<i>Hanumant</i>	..	..	..	7	2	11	20
<i>Daulati</i>	..	..	..	....	....	10	10
<i>Vavadi</i>	..	..	..	....	....	9	9
Total for 26 ships				1,161	100	1,026	2,287

The *pals* were the biggest of the Maratha war-vessels. The *Samsherjang-pal* and the *Phatehjang-pal* (second and third from the list) had a total crew of 369 each, of which 229 were soldiers, 15 gunners and 125 sailors. This division of the crew into the fighting-men, the gunmen and the sailors, was absolutely necessary on a warship to avoid confusion in the event of an engagement.

The last two vessels in the list, the *Daulati* and the *Vavadi* had 10 and 9 sailors on board, respectively. They were not provided either with gunners or soldiers as they were meant for plying in the Vijaydurg creek transporting goods.¹

The total crew on board the 26 ships was 2,287.

On the civil side, in the different departments of the navy, personnel of the following description was appointed at the port.

Jamdarkhana or the department of cloth and valuables. It had one officer (*Jamdar*) and two soldiers.

The stores department had eight store-keepers and two soldiers.

For the office, the port, and the dock there were two, five and four guards respectively. This obviously means that separate establishments for the office, the port and the dock were sanctioned.

1. PDU. Rumlal 490. All these extracts have been taken from the Peshwa Daftar (Alienation Office, Poona), unpublished papers, Rumlal 490.

The different officers — *darakhbars* — at the port were (1) the Chief Officer — the *Divan*, (2) Revenue Officer — *Majumdar*, (3) Accountant — *Phadnis*, (4) Head Clerk for the soldiers — *Hashamnīs* and (5) Accountant for the soldiers — *Hasham Phadnis*. All these officers had 69 clerks to help them.

Artisans employed for the maintenance of the navy were blacksmiths 8, sawyers 8, carpenters 20, carders 2 and caulkers 4. As many as 20 carpenters were required for repairs and other work in the navy.

The *Laksmi gurab* anchoring in the port had 15 sailors on board for patrolling. In addition, 40 men were employed for various purposes.

Janrao Dhulap was given for his service five soldiers, one groom and one umbrella-holder.

Thus, the total crew employed on board the 26 ships was 2,287, and the persons in the different civil departments — the Department of Cloth and Valuables, Stores Department, Chief Office, Revenue Office, Accounts Office, the Port and Dock etc. — including the clerks, guards and the artisans numbered 207. Both the civil and military departments had in their service 328 boys.

1. Crew on board the 26 ships	..	..	..	..	2,287
2. Persons in the Civil Departments of the navy	..	..	..	..	207
3. Boys in the service of (1) and (2)	..	..	..	..	328
					<hr/>
Total					.. 2,822

It was standing instruction of the government that the services of these employees should be utilised diligently and economically.

The total amount sanctioned for the naval establishment at Vijaydurg was Rs. 1,39,877-7-0. Out of this, Rs. 1,29,019-6-0 were to be spent for the payment of 2,287 crew, 207 persons in the civil establishment of the navy and 328 boys :

Total amount sanctioned	..	Rs. 1,39,877-7-0
To be spent for the payments of :	}	
1. 2,287 crew		
2. 207 civil employees		
3. 328 boys		
<hr/>		
2,822 Total	Rs. 1,29,019-6-0	

The sum of Rs. 1,29,019-6-0 was disbursed under different heads as *tainat*, *rojamara*, *moin*, cloth and *mokasa* village.¹ It was paid to the soldiers, the artisans and the sailors :

					Employees	Annual payment
						Rs.
Soldiers	..	..	..	..	1,683	75,293-10-0
Artisans	..	..	..	..	51	5,037-0-0
Sailors	..	..	..	..	1,088	48,688-12-0
Total					2,822	1,29,019-6-0

The total figure of 2,822 persons employed included 328 boys in the service.

Officers in the permanent service were sanctioned, in addition to the fixed annual salary, allowances for their personal attendants, umbrella-holders, grooms, a horse and a palanquine, depending upon their status. They were also given cloth in measures known as *amkha*. It is not clear whether the cloth was meant for the uniform.

The total emoluments sanctioned for Anandrao Dhulap in charge of the naval *Subha* of Vijaydurg presents a complete picture of how an officer of the highest status was paid :

*Anandrao Dhulap (Admiral)*¹

	Rs.
Annual salary for Anandrao Dhulap and 10 boys in his service ..	400-0-0
Cash for the maintenance of a palanquine	800-0-0
<i>Mokasa</i> of the village Phanasgaon in the <i>taluka</i> Kharepatan ..	1,295-3-0
Cloth, 700 <i>amkhas</i> @ Re. 1 for 3 <i>amkhas</i>	233-5-0
Total ..	2,728-8-0 annually

In addition to the money payment, allowances in kind of the following description were given :

1. Corn.
2. Gram for the horse.
3. Salt.
4. Ghee.
5. Tobacco.
6. Betel-nut and betel.
7. Condiments.
8. Oil for torch light.

1. PDU. Rupal 490.

Out of the total annual cash payment, Rs. 2,728-8-0, a sum of Rs. 27-12-0 was deducted under the heads :

	Rs.
1. Fortnight salary from the total sum of Rs. 400 sanctioned to Anandrao Dhulap.	16-12-0
2. <i>Hashamnishi</i> (probably for the clerk maintaining the account of the soldiers).	11-0-0
Total ..	27-12-0

Thus, the annual cash payment received by Anandrao Dhulap after deducting the maintenance charges of Rs. 27-12-0 was Rs. 2,700-12-0 (Rs. 2,728-8-0 — 27-12-0 = Rs. 2,700-12-0).

In addition to this cash payment, Anandrao Dhulap was allowed to have articles like corn, ghee, tobacco, betel-nuts, betel, oil for the torch, and gram for the maintenance of a horse.

Another officer, Janrao Dhulap, was paid in cash Rs. 1,866-10-0 annually¹ :

	Rs.
For Janrao, boys and torch bearers	900-0-0
For a palanquine	800-0-0
Cloth 500 <i>amkhas</i> @ Re. 1 for 3 <i>amkhas</i>	166-10-0
Total ..	1,866-10-0

Besides cash payment, Janrao Dhulap had the services of five umbrella-holders, five grooms, and a horse.

He was also sanctioned 10 *khandis* of corn per year and other articles like ghee, tobacco, betel-nuts, condiments, oil for torch and 2,000 betel were provided for, on monthly basis.

The various items for which sanction was given fell mainly under four categories :

1. Cash payment — *aina nakta* — as annual salary,
2. Annual services—*tainat*,
3. Payment in kind per month, and
4. Corn for annual use—*salina galla*.

Out of the total cash payment of Rs. 1,866-10-0 Rs. 37-8-0 were deducted as 'fortnightly' and Rs. 9-0-0, as *Hashamnishi* charges. Janrao Dhulap, thus, got Rs. 1,820-2-0 net, in cash, annually.

It is interesting to note how other higher officers next to the members of the Dhulap family — the house of admiralty — were employed in the navy.

1. PDU. Rupal 490.

Balwantrao Jivaji the *Majumdar* (Revenue Officer) was paid :

Rs.

700-0-0 for self.

122-0-0 for torch-bearers and umbrella-holders.

66-10-0 for cloth.

Total .. 888-10-0 annually.¹

Krishnaji Narayan the *Phadnis*² or the Chief Accountant was sanctioned:

Rs.

1,000-0-0 for self and servants.

40-0-0 for cloth.

Total .. 1,040-0-0

Baburao Ballal, the *Hashamnīs* or the clerk in-charge of soldiers was paid Rs. 300 annually.

Naro Anant, the *Hasham Phadnis*, or the Accountant for the soldiers received Rs. 200 annually.

Mahadaji Laksman Chitnis got Rs. 142-12-0 per annum.

The annual salaries of the clerical staff varied from Rs. 118 to Rs. 200 depending upon their efficiency and seniority.¹

The artisans employed at the naval *Subha* numbered 51, out of which 20 were carpenters, eight blacksmiths, eight sawyers, two carders, nine storekeepers for the granary, four caulkers and one boy. Some of them were engaged for a period of eleven months and others for twelve. The total annual pay of the 51 artisans and one boy was Rs. 5,037. The average monthly pay of the different artisans inclusive of all allowances worked at—

	Rs.
Carpenter	11-0-0
Blacksmith	9-0-0
Carder ³	6-4-0
Sawyer	8-8-0
Caulker ⁴	5-0-0

The sailor received Rs. 6 per month exclusive of the allowances when on active duty. Out of 980 sailors, 41 were employed for twelve months, 100 for ten months and 839 for eight months. Skilled persons like the *Sarang* and the *Tandel* were paid a higher salary. The *Sarang*, the

1. *PDU*. Rūmal 490.

2. *Ibid*. In the year A.D. 1771 Balaji Hari was the *Phadnis* (Accountant) at the Vijaydurg *Subha*. He was given for his personal use a horse and a pony. Rs. 125 were sanctioned for their maintenance. Out of this amount a portion was deducted as maintenance charges.

3. *PDU*. Rūmal 4. The rate of carding cotton was 1 anna and 3 pies per pucca *seer* (2 lb).

4. The caulker had to apply hot tar to render the tanks on the *gurabs* water-tight. As an antidote against the foul tar-smoke the caulkers were supplied with fresh copra for chewing when the work was on.

Tandel and other skilled persons recruited on the *Mahadeo-pal* were given Rs. 10 each. When on war-duty the crew was provided with ghee, tobacco and betel-nut, besides the regular pay.¹ Those employed for the whole year form a small part of the total number. Their services were necessary even when the armada anchored in the port during the rainy season. Sailors employed for eight or ten months were dispensed with during the rainy season. During the inactive months of the rainy season the sailors of the rolling staff busied themselves with cultivation.

The *Samsherjang-pal* sent on an expedition had on its board 100 soldiers and 100 sailors. This crew on active duty was paid at the rate of Rs. 57-3-6 per soldier and Rs. 64-8-0 per sailor inclusive of the cash payment and all allowances in kind.²

Rs. 700 were paid to the 14 skilled gunners and the *Kalim* on board the *Mahadeo-pal*, i.e. each gunner received Rs. 50 annually.¹

The big *gurabs* and the *pals* sent on an expedition could not anchor very close to the shore because of their hugeness and the shallowness of the seas. They were, therefore, equipped with *machavas* to ply between them and the shore.³ The *machavas* were also used as couriers.

In appreciation of any notable service rendered by the sailors and soldiers on war-duty, the government awarded suitable prizes. Similarly, the maimed, and the survivors of those who died on government duty were given due compensation.

In the year 1771-72, the men of the armada waged three battles with the Portuguese ships within a period of one week. In these encounters, about a hundred men were wounded and nearly twenty lost their lives. However, the brave sailors captured a Portuguese warship—the *sarai*. The total crew numbering 2,000 was awarded Rs. 5,000 in all. Not satisfied with this the crew demanded more rewards. The Government promised that they would distribute Rs. 10,000 if the crew secured booty in thousands in the next campaign.⁴

Anandrao Dhulap who made prize of English ships was given a special award of Rs. 1,700.

One Laksmnrao Pote was wounded by a bullet in the thigh in an encounter with the English. Within a couple of months he died of his wounds. The government was pleased to sanction a pension of Rs. 75 to his widow. Similarly one Kanoji Mayekar fractured his thigh while launching the ship *Narnag* into the sea and later succumbed to the injury. His wife and children were sanctioned a sum of Rs. 20 per annum for maintenance.⁵ Fifty-seven widows of those who died on war were granted a pension of Rs. 153 per year. One Bhagwantrao Jadhav was appointed in place of his father Kedarji who died in an engagement with the Portuguese. Baburao Ballal, the *Hashamnis* at Vijaydurg, was known for his loyal services to the government. It was recommended that a balance of Rs. 15-8-0 which he owed to the government should be written off as an award for his loyalty.¹ For the extra services rendered, allowances in kind like cocoanut, tobacco and betel-nut were granted. The sick and the injured received ghee, pepper and *liguisticum ajwaen* or Bishop's seed.

1. *PDU*. Rumal 490.

2. *Appendix C-I*. Extract 20.

3. *Ibid*. Extract 18. Rs. 2,000 were sanctioned for the construction of five *machavas*, each costing Rs. 400.

4. *Ibid*. Extract 5.

5. *Ibid*. Extract 25.

It is interesting to note that the names of many sailors in South Konkan end in the suffix *nak*, viz. Malnak, Yesnak, Babnak, Krishnanak, Bhikanak, Ganganak, Balnak etc. One of Shivaji's naval officers was Maynak. The suffix *nak* is probably a diminutive of the word *nayak* or *naik*, meaning a leader or chief.

Patrolling the Coast—Till the middle of the nineteenth century the west coast of India was infested with pirates. They had their rendezvous at inaccessible spots all over the Arabian sea. They were a source of danger to sea-trade as also to the coastal towns. Their resorts were outside the jurisdiction of the established maritime states. The Marathas, like other sea-powers, had to guard their trade and sea-board against the adventurous pirates. This was an important part of the duty of the navy. Patrolling squads were stationed at the important ports. Merchantships were equipped with fighting men and guns to defend themselves against piratical attacks. They were also escorted by warships.

We have many instances of how the pirates were driven back by the Maratha ships on several occasions.

In the creek of Satapati near the fort of Shirgaon under *Prant Bassein*, three pirate ships were seen anchoring. At nightfall they started approaching the coast. The coastal guards reported the matter to the station, when ships were dispatched against them. The pirates escaped into the sea when cannonaded.¹

On one occasion pirates from Jafarabad with 15 ships and one thousand men attacked the *Mahadeo* bastion of the Bassein fort. Under the cover of ship-guns the pirates landed on the shore. When they learnt that the Marathas had exhausted their ammunition, they broke open the doors of the bastion and tried to force an entry. They were, however, beaten back by one Khanvilkar stationed at the *Mahadeo* bastion.

A merchantship from Navasari had come to the port Mahim. After shipping cocoanuts and other goods it started back for its homeward journey. It was attacked by some pirate ships outside the Mahim port. To escape the chasing pirates the ship entered the Satapati creek. The coast-guards fired signal shots and aid was sent to the merchantship. But overwhelmed by the pirates the coastal guards returned ashore and the merchantship was carried away.¹

From the Bassein port when one Visaji Keshav was the officer in charge, the *mahagiri Yeshvanti*, the *galbat Ramprasad* along with other warships were sent on an expedition. The squadron met with some pirate ships, an engagement took place and one of the enemy ships was captured. It was brought into the Bassein port. On enquiry it was found that the ship belonged to a merchant who was a subject of the Maratha Government. It was returned to him on payment of Rs. 80 which the government had spent for its restoration.²

The *galbat Nagin* which was on patrol duty—*Chhabina*—at the Bassein port, was overpowered by about five pirate ships and carried away. An entry was made in the account book on the debit-side showing the loss of articles on board the ship along with the ship itself.³

A regular account of the money spent to defend the coast was maintained at different ports.

1. Appendix C-2. Extract 23.

2. *Ibid.* Extract 30.

3. *Ibid.* Extract 25.

MAINTENANCE OF THE NAVY AND REPAIRS

During the monsoon the ships had to be hauled ashore and protected from the heavy down-pour. A good part of the crew was dispensed with during this season. This was the best period to undertake repair-work as and when the rains allowed. At any rate the repair-work received attention towards the end of the rainy season to keep the navy fit for seagoing in the fair weather. In the calm waters of the ports where the navy was anchored, during rains, a regular account of its maintenance, repairs etc. was kept. The necessary money for this was sanctioned at the beginning of the financial year.

Thatching formed an important item in the upkeep of the navy. The ships had to be protected from the down-pour of the rain. Particularly, the holds had to be roofed for fear of being filled up by rain-water. Thatching was done on a ridge-pole over the hull running parallel to the keel of the ship. The material used was coco-boughs easily available in Konkan.

At Vijaydurg under the admiralty of Anandrao Dhulap 34,629 coco-boughs were used for roofing the vessels in the port.

<i>Vessels</i>			<i>Coco-boughs</i>
1. <i>Gurab Shivaprasad</i>	..	..	2,500
2. <i>Gurab Ramaprasad</i>	..	..	2,500
3. <i>Gurab Laksmiprasad</i>	..	..	1,500
4. <i>Gurab Ganeshprasad</i>	..	..	1,300
5. <i>Gurab Dattaprasad</i>	..	..	2,700
6. <i>Gurab Sawai</i>	..	..	3,450
7. <i>Gurab Sahebsadar</i>	..	..	2,000
8. <i>Gurab Anandi</i>	..	..	2,550
9. <i>Galbat Sawai-samsher</i>	..	..	800
10. <i>Galbat Saradari</i>	..	..	425
11. <i>Dangi and its Manji</i>	..	..	700
12. <i>Galbat Vasai-samsher</i>	..	..	800
13. <i>Galbat Shahtir</i>	..	..	500
14. <i>Galbat Sugriva</i>	..	..	500
15. <i>Galbat Saradari Underi</i>	..	..	550
16. <i>Galbat Navaratan</i>	..	..	400
17. <i>Galbat Yeshwanti</i>	..	..	700
18. <i>Galbat Yeshwantrao</i>	..	..	600
19. <i>Galbat Bahiri</i>	..	..	600
20. <i>Mahangiri Sikara</i>	..	..	80
21. <i>Galbat Garud</i>	..	..	350

	Vessels			Coco-boughs	
22.	<i>Galbat Shershah</i>	..	..	..	1,000
23.	<i>Galbat Naranag</i>	..	..	..	700
24.	<i>Galbat Sambhu</i>	..	..	..	100
25.	<i>Galbat Sadak</i>	..	..	..	900
26.	<i>Noubandist Waghi</i>	..	..	..	400
27.	<i>Galbat Phatehlashkar</i>	..	..	..	800
28.	<i>Galbat Pavan</i>	..	..	..	150
29.	<i>Galbat Daulati</i>	..	..	..	140
30.	<i>Galbat Havai</i>	..	..	..	325
31.	<i>Galbat Vavadi</i>	..	..	..	350
32.	<i>Galbat Hirakani</i>	..	..	..	625
33.	<i>Galbat Hanamant</i>	..	..	..	400
34.	<i>Lang bota</i>	..	..	..	200
Total coco-boughs for the 34 vessels ..					21,595

The *gurab Bhavani* of the Malvan port anchoring at Vijaydurg had 500 coco-boughs for roofing. In addition, the guarding-posts, the masts and the rudders required 2,534 boughs.¹

It is interesting to observe that even the rudders and the masts were protected from the rains by the profuse use of coco-branches covering them.

A huge quantity of coir was utilised for various purposes like cordage, thatching, securing, fastening etc. Coir-cordage was manufactured locally, but coir from the Maldiv island was highly prized for its better quality.² The *pals* and *gurabs* required for their repairs coir from Maldiv island weighing 75 *khandis*.

The account papers at Vijaydurg when Naro Tryambak was the *Subhedar*, state that *Agari* coir was utilised for the yard, the jib-sail, the bowsprit, the sail and the rudder of the *galbat Samsher*. Coir was utilised as corking material in the guns for firing.³

Coir-cushions were hung outside the hull as buffers to save the ships from being damaged if they struck against a rock or collided against one another.

For securing the planking of the hull coir was freely used when iron was not easily available in the pre-industrial period.

Oil—A good quantity of oil was required for various purposes. Oil had to be liberally utilised in order to keep the hull strong and elastic. Bitter oil of *Undi*-nut and fish oil protected

1. Appendix C-1. Extract 40.

2. *Ibid.* Extracts 7, 39, 49.

3. *PDU*. Rumal 490.

the wood from being eaten up by sea-worms. Cocoanut and other kind of sweet oil was purchased for lighting. Oil formed an important ingredient in colouring the ships. The pulleys, blocks, yards and mast-ends were greased to reduce friction. Rupee one was spent for red-lead in colouring the *dhabusha* (outer part of the hull) of the *galbat Ramprasad*.

The guns on board the war-ships were kept rustfree by constantly oiling them.¹

It is quite interesting to note that the *galbat Samsher* of Vijaydurg port required ghee for its masts. The masts had to be carefully attended to as they formed an important part of the ship.

Wooden material—The wooden outfitting of a ship which had to be constantly taken care of and repaired in time, included masts, yards, bowsprits, rudders, oars, beams, pulleys, keels and planks. Teak was highly prized for repair-works as for ship-building itself. Planks of mango, jack and *undal* wood were cheaper than teak, and therefore, went into the repair-works in great quantity. The *punaya* wood because of its good length was excellently suited for masts and yards.²

For the eight *gurabs* at the port of Vijaydurg under Anandrao Dhulap, viz.:

- (i) *Dattaprasad*,
- (ii) *Sawai*,
- (iii) *Anandiprasad*,
- (iv) *Shivaprasad*,
- (v) *Sahebsadar*,
- (vi) *Ramprasad*,
- (vii) *Ganeshprasad*, and
- (viii) *Laksmi*.

The total number of wooden articles required is put at 251 and a half. The articles consisted of poles, planks and timber angles.³

The *pal Dattaprasad* had become old. A new keel was fitted on and ribs on both the sides of the bow to the extent of 32 were replaced. It was thus rendered sea-worthy.⁴

The ends of the yards and the bowsprits which were subject to constant friction i.e. their working ends, had leather coverings. They had to be repaired when worn out.⁵ This device naturally prolonged the life of the wooden articles.

For repairing a yard, a carpenter from Chinchani (near Tarapur) was paid Rs. 1-4-0 at the rate of As. 2 per day, exclusive of the allowance in kind.⁶

It seems that for the repairs of the navy at Vijaydurg under Anandrao Dhulap, teak was supplied from the Bassein region — *Prant Bassein*. By about 1767, this supply could not be

1. PDU. Rumal 490. Also see Appendix C-I. Extract 65.

2. Appendix C-I. Extract 34. For *punaya* see last part of Appendix C-I. Extract 39.

3. Appendix C-I. Extract 39.

4. Ibid. Extract 67.

5. PDU. Rumal 461. Folio 1514.

6. Ibid. Rumal 1615. Folio 2001.

met from the government stock. It was, therefore, decided to purchase teak-poles from Kalyan, Sasti or Bassein ports in consultation with the local *mamlatdars*. Rs. 3,500 were sanctioned for the purchase of 700 teak-poles. Thus, the cost of a teak-pole, though its dimensions are not mentioned, was Rs. 5.¹

Similarly, one Muhammad Satari who had laid the keel of a vessel had asked the permission of the government to cut nearly 500 teak poles from the forest near Bassein for the construction of a ship. The total cost of the poles was Rs. 2,000 at the rate of Rs. 4 per pole.

Muhammad Satari was exempted from the payment of *tijai* charged for wood-cutting.²

In the account papers of the Ratnagiri port, in charge of one Moraji Shinde, it is noted that 5 cocoanuts were broken when teak-cutting commenced and 5 more were offered to god when the teak was floated down the river to the port.³

The forests, it seems, were owned by the State till the introduction of the *Khoti* system in Konkan.

THE SAILS AND OTHER ARTICLES OF CLOTH

Lateen, square and triangular sails were prepared by sewing together long pieces of *Khadi* (coarse cloth) or *Kintan* (jute cloth). The pieces rendered the sails strong and also facilitated their repairing.

The sails were regularly washed and whitened before they were set on the yards at the commencement of the fair season. Some of them were dyed red, yellow or blue.

The *galbat Navaratan* was stationed at the port of *Deogad* for its defence. Rs. 29-4-0 were spent for repairing its sails, for washing them and also for its ensigns.

One complete unit of *Khadi* cloth cost Rs. 2-4-0.⁴ Sometimes the masts of the ship were covered with cloth. For covering the mast of the *gurab Shivaprasad*, 7½ units of cloth were utilised.⁵

Jute-string used for sewing the sails was smoothened by applying wax. The hem of the sail was made strong by the jute-string which ran through its border.

The material for colouring the flags of the navy consisted of husked rice, alum, *terminaliya chebula* (country galls) and carbonate of soda.⁶

A good quantity of waste-cloth was required for oiling the guns and various parts of a ship, and for polishing the masts and yards. Torches for lighting were manufactured from cloth-pieces.

1. Appendix C-1. Extract 4.

2. Appendix C-2. Extract 19. *Tijai* was a tax to be paid for wood-cutting.

3. PDU. Rumal 4. Folio 687.

4. Ibid. Rumal 604. Folio 505.

5. Appendix C-1. Extract 68.

6. Ibid. Extracts 53, 55.

It may be observed that when a send off was given to the parting crew, it received, among other things, presents in the form of money for the *sari* and *choli* (bodice) of the *gurab*.¹ A *gurab* that set sail at the commencement of the fair season or went on an expedition was often treated like a bride who started for her in-laws' house, and therefore was given a money gift for *sari* and *choli*.

Docks—The references to the docks in the account papers of Vijaydurg port furnish us with information regarding their construction and repairs.

Docks were constructed at Kolaba and Vijaydurg. Probably the Port of Bassein, too, was provided with a dock after it was captured by the Marathas from the Portuguese.

A new dock was constructed to accommodate the *pal* Phatehjang at Vijaydurg, Giryia or Gheria port. Its total crew numbered 369. For the construction of the dock and other repairs a total amount of Rs. 10,704-8-0 was spent.²

For filling up the entrance of the dock with earth it is stated that 80 buckets were utilised by the workers. Similarly, in order to prevent the docks from silting up during the rainy season 8 persons had to be employed for dredging. They were given a special food allowance to keep up the required body temperature.³

New ships were constructed at Anjanwel and Ratnagiri for the navy. This obviously means that these ports were provided with docks.⁴

Repairing of Ships—The *pals* Phatehjang and Samsherjang were first-rate ships in the Vijaydurg navy. Their iron and wooden material required refitting. The repairing cost was estimated at Rs. 10,000.⁵

Later, when the Phatehjang *pal* was found to be too old for further repairs it was decided to disjoint it and utilise its wood for the repairs of the other *pals* and *gurabs*. Its iron material was to be credited to the Stores Department.⁶

The Mahadev *Pal* while coming out of the Vijaydurg Port dashed against the foundation of the fort and broke. The crew of the ship had, therefore, to be provided for elsewhere.⁶

The *gurab* Sahebsadar was on the shore. Its construction was left half-done under the supervision of one Gangadhar Govind. In order to complete the construction a sum of Rs. 10,000 was sanctioned.⁷

To stock the material required for the armada, a sum of Rs. 500 was sanctioned for the construction of three new storehouses in place of the old ones.⁸ For building a large and strong

1. Appendix C-1. Extract 4. Rs. 500 were awarded as *sari* and *choli* (bodice) money for a *gurab*. The *gurab* was treated like a bride going to her in-laws house and was given cash for a *sari* and *choli*, when it set out for an expedition.

2. Appendix C-1. Extract 9.

3. *Ibid.* Extracts 51, 58.

4. *Ibid.* Extract 15.

5. *Ibid.* Extract 31.

6. *Ibid.* Extract 12.

7. *Ibid.* Extract 17.

8. *Ibid.* Extract 16.

storehouse a total amount of Rs. 1,000 was sanctioned, out of which Rs. 400 was paid in cash and the remaining amount was asked from government as the work was in progress.¹

An English ship had run aground in the sands of the Ratnagiri Port. As it could not be refloated, it was disjointed and its iron weighing 20 *khandis* was given to Anandrao Dhulap of Vijaydurg. The officer at Ratnagiri was ordered to hand over any extra quantity of iron that would be extracted from the English ship, to Dhulap, and secure a receipt.²

Thus, ships were repaired in time and when completely out of order their material was extracted and utilised. As iron was not easily available, it was taken out from ruined and unrepairable ships, for reuse.

Construction of new ships—A few references from the account papers of Vijaydurg and Bassein give us some idea regarding the cost of ships.

In the year 1794, the port of Bassein had in all ten ships consisting of a *gurab*, two *sadaks* and the rest *galbats*. The coast was constantly threatened by pirates. It was, therefore, proposed that a *gurab* and a *galbat* be constructed to strengthen the navy. The estimated cost was:

				Rs.
1. <i>Gurab</i>	..	..	..	33,157-0-0
2. <i>Galbat</i>	..	..	..	7,852-4-0
			Total ..	41,009-4-0

With a view to commencing the construction work an advance of Rs. 15,000 was asked from government.³ Similarly for a small boat called *waghi* Rs. 1,000 were sanctioned.

The *machavas* were small boats required for plying between the coast proper and the ships anchoring in a port. The construction cost of five *machavas* was estimated at Rs. 2,000 i.e. Rs. 400 a *machava*.⁴

Sometimes, big vessels were dismantled and new ships were built out of their material. A large *batela* was purchased for Rs. 2,000 and converted into a *gurab*. The conversion cost was estimated at Rs. 5,000, the total amount involved being Rs. 7,000.⁵ An English boat taken as a prize was turned into a *gurab* at an estimated expenditure of Rs. 5,000.⁶

A Portuguese vessel of the *sarai*-type was captured by the Marathas. Its price was estimated at Rs. 1,00,000. The English were not prepared to buy it as it belonged to their European friend. A merchant of Vengurla Port offered only Rs. 15,000 for the vessel. It was therefore decided to find out whether a better offer could be had. It was ordered that the vessel should be sold to the highest bidder and the money credited to the *Sarsubha*, Vijaydurg.⁷

1. Appendix C-1. Extract 21.

2. Ibid. Extract 33.

3. Appendix C-2. Extract 26.

4. Appendix C-1. Extract 18.

5. Ibid. Extract 26.

6. Ibid. Extract 27.

7. Ibid. Extract 11.

Guns—The guns on board the warships had to be oiled and stuffed with cotton-*mau* to keep them free from oxidization. They were also covered with cotton bags. Wax, too, was used as an antirust material. Sometimes the guns were unshipped during the rains and then oiled and stuffed with cotton. For the guns on the *pals*, the *gurabs* and the *galbats* at Vijaydurg, two *khandis* of cotton was used, costing Rs. 10.¹ Sweet oil was applied to guns:

				<i>Guns</i>
1. <i>Gurab Ganeshprasad</i>	..	..	..	12
2. <i>Gurab Dattaprasad</i>	..	..	..	22
3. <i>Gurab Ramprasad</i>	..	..	..	16
Total ..				50

These guns required more than two *maunds* of oil.

The rings of the guns were wrapped with jute string probably to prevent them from oxidization.²

The fire-arms on warships were, big cannon pieces, ordinary small guns, *jamburas* and hand-grenades. An account of the ammunition spent by the ships on expedition was maintained.

Cannon balls for the mounted guns were of stone, lead and cast-iron.³ Smaller shots used are described as *jamburi*, *bukhi*, *dandi*, *garbhachhata* and *rejagiri*.⁴

Coir was the principal packing material used in firing the cannon balls.

Fire salutes—Fire salutes were offered to high officials, respectable allies and to various gods and *pirs*.

A gun was sent booming when Bajirao arrived in the port of Bassein.⁵ Guns were fired from the *Ganesh* and *Vetal* bastions when Naro Trimbak and Rudraji Dhulap along with the armada arrived into the port of Vijaydurg.⁶ Specific orders were sent by the Peshwa for this welcome. Similarly guns were fired when the happy news reached Bassein that Raghunathrao Peshwa after his successful attack on Kumbheri of the Jats, proceeded to Delhi and seated a new emperor on the throne.⁷ On the occasion of a visit to a *gurab* by the *Subhedar* of Vijaydurg, Bachyajipant, and by one Gopal Mahadeo of Poona, five shots were sent off for each. A shot was fired when Anandrao Dhulap set his foot on board a *gurab*.⁸

The English and the Portuguese when on friendly terms with the Marathas were given a welcome by fire as they met the Maratha ships on the sea. A merchant on board a Chinese

1. *Appendix C-1*. Extract 65.

2. *PDU*. Rumal 2896.

3. *Ibid*. Rumal 1829.

4. *Ibid*. Rumal 436. Folio 2107.

5. *Ibid*. Rumal 1547. Folio 1472.

6. *Appendix C-2*. Extract 13.

7. *PDU*. Rumal 1561. Folio 1942.

8. *Appendix C-1*. Extract 43.

junk (*Chinai tarande*) probably belonging to the Portuguese visited the Marathas near Calicut. Five guns were fired in his honour.¹

The armada was sent on an expedition either southward (*het Prant*) or northward (*upar Prant*). As the armada weighed anchor and passed by the coast guns were discharged in salutation to the various gods. It would be interesting to note such places on the Konkan coast.

The *gurab* Dattaprasad went on an expedition under the command of Janrao Dhulap with one Ibrahim as the *sarang*. Account of the shots fired by the *gurab* on its voyage:

<i>Shots</i>	<i>In honour of</i>
1	As the ship weighed anchor
2	Rameshwar of Vijaydurg
1	Bhavani of Ratnagiri
1	Karadeshwar
1	When the <i>Subhedar</i> boarded the <i>gurab</i>
1	The <i>Pir</i> of Purnagad
1	Ganapati of Pule

Expedition under the command of one Krishnaji Naik Jaitapurkar sailed northward.

<i>Shots</i>	<i>In honour of</i>
1	<i>Pir</i> of Purnagad
1	Ganapati of Pule
1	<i>Pir</i> of Kelashi
1	Rameshwar
1	Bhavani of Ratnagiri
1	Hareshwar
1	Pacha <i>Pir</i> of Rajpuri

When Janrao Dhulap voyaged to the south, shots were fired :

<i>Shots</i>	<i>In honour of</i>
1	Malvan (Rameshwar)
1	Reddi (Fort)
1	Gokarna (Mahabaleshwar)
1	Goa
1	Mangalore
1	Kadwad
1	Ankole
1	Kalikat (Calicut)

At the port Achare, Janrao landed and offered prayers to the local god.² All these names show how the Maratha sailors were well acquainted with the holy places and ports between Daman and Calicut or the Maldiv Islands.

1. *Appendix C-1*. Extract 46.

2. *Ibid.* Extract 42.

Festivals and Religious beliefs—On the occasion of the festivals presents were given to the crew :

Festival	Money distributed
	Rs.
1. Full moon day of <i>Shravana</i>	10
2. <i>Janmashtami</i> (Birth day of Lord Krishna)	7
3. <i>Ganesh-chaturthi</i> (Fourth day of the first fortnight of <i>Bhadrapada</i>)	1
4. <i>Dasara</i> (<i>Vijayadasami</i>) for worshipping the <i>gurabs</i>	15
5. <i>Sarang</i> and others	50
6. <i>Kartika Dwadasi</i>	1
7. <i>Hutashani</i> or Full moon day of <i>Phalguna</i> ¹	100

Goats were sacrificed in order to appease the local deities.

While laying the keel of a ship, fixing a sail, or for floating the ship for the first time or hauling it ashore, goats were offered and alms distributed.

Some deities were well-known for their efficacious blessings. They were, therefore, given special offerings. It was believed that the *Darga* of Pir Husen of Vijaydurg fulfilled the desires of his devotees. Rs. 25 were sanctioned for his worship per annum.²

A Brahmin called Krishnaji Telang was offering prayers for about six months to the god Siddeshwar at Bahadarpura (Bassein), with the object of securing a bride. The local officer Shankarajipant called the Brahmin and told him that he would get a present of Rs. 300 as provision for his marriage, if the armada which was on an expedition would return with a booty of Rs. 1,00,000. The Brahmin replied that he would pray god to that effect. As good luck would have it, within a couple of days after this the armada under one Bajirao Belose sailed home with a three-masted ship of Surat taken as a prize. The Brahmin was given Rs. 300 for his marriage.³

The saint of Dhavadashi, Brahmendraswami, often offered special prayers to his favourite god *Parashuram* that his devotees, the Angres, should secure a prize on the seas worth Rs. 9 lakhs. He was to be amply rewarded if his prayers came true. He sometimes prayed for the success of the Angres against the Peshwas and *vice versa*.

In the age of faith even the high-saint did not feel any contrast in securing blessings for one disciple against the other, or for his disciples against their enemy from the just and impartial Almighty.

Presents to respectable allies—Presents were given to honourable friends when the Maratha ships sailed into their ports. Friendly relations had to be maintained with the distant coastal states for the replenishment of food and fresh water supply, and also for securing the necessary naval equipment when the ships went on a long voyage.

1. *Appendix C-1*. Extract 1.

2. *Ibid*. Extract 6.

3. *Appendix C-2*. Extract 6.

From the *Jamdarkhana* of Vijaydurg Anandrao Dhulap presented fine cloth pieces to Ajam-Ali of Kannur and his officers, to Ravi Varma of Kolatri and Mana Varma of Kadatnad,¹ as they were on friendly terms with the Marathas.

On one occasion the Maratha officer at Bassein appealed to the Portuguese Governor of Daman for help in order to drive away the 15 pirate ships which had appeared in the port of Umbargaon. The Governor readily complied with the request and dispatched 70 soldiers under captain Manual Farrera. The pirates made off before the help arrived. The Maratha officer arranged a banquet for the Portuguese officers and soldiers for their friendly succour.²

Equipment of a ship—A ship that sailed for a distant voyage had its own food and water supply. It was provided with water-tanks which were repaired from time to time. The stores department on board the ship maintained the account of the material that was used.

The kitchen equipment included utensils for cooking, fuel, preferably char-coal, millstone etc. Some fishing was done as the ship proceeded on its journey.

A warship had cannon pieces, guns, *jamburas* and grenades and short-range weapons like the spears, swords and knives. It had a magazine along with the requisite charging material.

Every ship had a sort of tool-box consisting of saws, hammers, axes, spades, scythes, iron nails and caulking material. Bambu-poles, planks and a good quantity of coir were stored to meet any emergency repairs on the way.

For the sick, black pepper, Bishop's seeds, ginger, mustard and garlic served as medicines.

The use of a compass was known and probably every ship had one on its board. The sailors were familiar with the coast-line ranging from Cutch to Calicut. The use of a telescope was known and probably a well-equipped ship possessed it for observation. Sea-charts were unknown though in the latter part of the eighteenth century fort-maps were prepared in imitation to the Portuguese and the English.

* Soundings were taken for anchorage probably by casting a stone-anchor or by sinking a long bambu pole into the water. But beyond the coastal waters everything was a fathomless deep blue. It seems that soundings of the sea near the coast were taken though no records regarding the same are available in the naval papers.

Pulleys and blocks were fixed in the rigging for their mechanical advantage. But till late in the eighteenth century it seems that a wheel with pulleys and blocks was not fitted on board a ship for embarking and disembarking goods. The Maratha officers who saw their English neighbours using it with advantage requested their Government to fit it on their own ships. Actually they complained that in embarking the artillery and other heavy equipment one full month was wasted, delaying any proposed expedition and its timely homeward return. The old clumsy loading operation considerably injured the sides of a ship. It was brought to the notice of the government that both time and ships would be saved if an English (*Topikar*) wheel would be utilised for loading and unloading operations. The contrivance has been described as

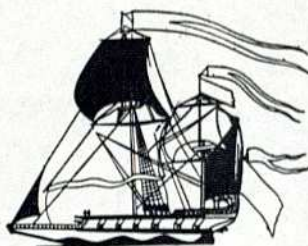
1. Appendix C-1. Extract 36.

2. Appendix C-2. Extract 14.

"*Topikarache kalasicha rahat*" a sort of wheel. The estimated cost of the wheel was Rs. 4,000.¹ The Marathas appreciated the mechanical instruments of their European neighbours. But their minds were not yet ripe to grasp the full import of the European civilization. They were eager to know new things but slow to learn them and slower still to master them.

The use of a good gun, a compass, a telescope (*nali*), a wheel (cranelike instrument) — *kalasicha rahat* — had actually brought home to the Marathas the age of science. The message of this age for those who understood it was that one who mastered the new science mastered the world. The Marathas admired the utility of these wonderful instruments supplied to them by their European neighbours. But that was not enough. To meet the Europeans on terms of equality either on sea or on land it was absolutely necessary to master the knowledge of the new science. But the Marathas like all others in India failed to achieve this.

1. *Appendix C-1*. Extract 10.





Sovereignty of the Sea

SINCE the dawn of history the question of supremacy over the sea has existed in some form or the other. In the Vedic literature *Varuna* has been addressed as the Sea God. The *Mahabharata* and the *Puranas*, which speak of the states bordering on the sea, do not enlighten us on the point of sea-supremacy. But in all probability, the coastal powers had the right to levy tax on imports and exports in their ports, on sea-fishing and on ferries crossing the creeks.

Traditionally, the king is said to be the lord of water, land, wood and stone — *jala*, *sthala*, *kashta* and *pashana*. The meaning of the word water, if liberally interpreted, might extend the king's sway over the sea.

In the historic times Ashoka Maurya had his empire on the west coast as far as Saurashtra and in the region of Sopara in North Konkan. The *Arthashastra* of Kautilya refers to the foreigners whose activities were controlled by a special board appointed for that purpose.¹ The Mauryas had a navy. The admiral was called the *Navadhyaksha*. His sway extended over the ocean, the mouths of the rivers and the lakes.²

The Satavahanas of the Deccan who were the overlords of part of Konkan had to fight with the Shakas on the sea. Both the Shakas and the Satavahanas had supremacy over the west coast and waged wars on the sea to safeguard their interests.³

The Rashtrakutas and the Silaharas gave concessions to the Arab traders on their coast. They must have levied customs on the imports and exports passing through their ports. The Arabs were the masters of the Indian Ocean till the appearance of the Portuguese on the scene. Their trade mostly centred in the ports of Malabar. Some of the Malabar kings extended their sway over the interior land as a result of the fine horses regularly supplied to them by the Arabs. The Arabs were the *de facto* sovereigns of the Indian Ocean but they do not seem to have questioned the *de jure* sovereignty of the Hindu kings on their coastal waters. They also abstained from interfering with the internal affairs of these kings. This policy easily enabled them to enjoy the monopoly of trade between India and the western world for several centuries. The Zamorin

1. *The Age of Imperial Unity* (Bharatiya Vidya Bhavan, Bombay), 63.

2. R. SHAMASHASTRI, *Kautilya's Arthashastra* (1915), 156.

3. *The Age of Imperial Unity* (Bharatiya Vidya Bhavan, Bombay), 199-200.

of Calicut who had become powerful and wealthy by the support of the Moorish-Arab-traders, styled himself as the Lord of the Hills and the Sea. His navy scoured the coast from Gujarat to Ceylon.¹ This means that the Arabs did not dispute his supremacy on the sea or at least his equality *vis-a-vis* their own.

The Portuguese leader, Vasco de Gama, on the other hand, refused to pay customs at Calicut as required under the port regulations in his first visit. The strange concept of the Portuguese regarding their sovereignty of the sea is well expressed in the words of Barroes : "It is true that there does exist a common right to all to navigate the seas and in Europe we acknowledge the rights which others hold against us ; but this right does not extend beyond Europe ; and therefore the Portuguese as Lords of the Sea are justified in confiscating the goods of all those who navigate the seas without their permission."² This brought them into conflict with the Zamorin of Calicut, his friends the Arabs, as also a number of other powers on the west coast. The logic of the Portuguese was untenable. They acknowledged the right of other powers to navigate the seas in Europe, but beyond that asserted their exclusive sovereignty by force of arms. The only answer to this sort of behaviour was to meet their force by counterforce.

Shivaji, the Founder of the Maratha Kingdom, was required to assert his equality at sea in order to safeguard the political and economic interests of his nascent state. The Sahya mountain formed the backbone of his state. Its western side (sea-side) was threatened by the Siddis, the Portuguese and the English. The Siddi was like a mouse in the house, a perpetual nuisance. Shivaji organised a navy in order to checkmate his activities. In other words, he 'saddled' the sea.³ He was fully convinced that he who possessed an armada ruled the waves. To establish his maritime rights, he was perpetually at war with the Siddis.

Shivaji's interests clashed with those of the English because (1) they gave aid to the Siddis, and (2) refused to supply him war-material in the war against the Siddis. As early as 1660, Shivaji had looted the English factory at Rajapur. His policy towards the Europeans in general and the *Topikars* (English) in particular, was pre-planned.⁴ As stated in the *Ajnapatra*, he had given the English a place at Rajapur for a factory, which was quite inside the creek and away from the seashore. This enabled him to keep them under control and safeguard his supremacy at sea.⁵

Of all the sea-powers, it were the Portuguese who claimed exclusive sovereignty over the sea and compelled all Asiatic vessels sailing in the Indian seas to purchase their passports. Shivaji was not prepared to accept this claim. His first few ships constructed at Kalyan, Bhivandi and Pen were probably required to buy Portuguese passports to obtain an exit from the sea at Bassein. However, with the growth of his naval power they assumed a more friendly attitude towards him, acceding in consequence to his equality at sea.⁶

In the treaty concluded between Shivaji and the Portuguese in 1670 A.D. it is significant to note that the Portuguese granted Shivaji's vessels passes on the payment of customary dues which

1. *PMP*. 17.

2. *Ibid.* 41.

3. *VSB*. 62-4.

4. *JSS*. 342-3, 350.

5. *JA*. 25.

6. *JSS*. 362-6.

they had been taking also from the Mughal ships. The small Maratha coasters were not required to buy passes. Shivaji in his own way agreed not to overtax the trade passing between Goa and the upcountry.¹

Kanhoji Angre, following Shivaji's policy, boldly rode the sea capturing ships which sailed without his passes. By the treaty with Chhatrapati Shahu the eastern front of his possessions was free from any major attack, and he was in a position to concentrate his forces on the sea front. The Portuguese and the Siddis had to respect his rights on the sea. The terms of treaty proposed by the English to Kanhoji in 1713 which he later accepted, are useful in shedding light on the question of sovereignty of the sea. Kanhoji agreed not to interfere with the English ships, and those belonging to their merchants. Ships coming into or going out of the Bombay harbour when within Mahim stakes and Khanderi were not to suffer at Kanhoji's hands. This gives us some idea of the jurisdiction of a sea-power from its coast. In modern times, this jurisdiction extends upto 12 miles or more from the coast. Recently our Country has extended its sovereignty up to 12 miles from the coast following the practice of other nations.

Kanhoji allowed English ships to enter his ports on payment of the usual customs. This term speaks for his equality at sea. What often led to heated controversy and war was the granting of a flag by the English to ships which did not belong to them or to their subjects. By this treaty, 1713, the English were to stop this nefarious practice.

Kanhoji's successors continued to exercise similar rights on the sea.

The Portuguese, after their defeat in the Bassein war (1739) entered into a treaty with the Peshwas, in 1740. It was decided that the Peshwas' ships or those of their merchants bringing dates and horses from Muskat should not be molested by the Portuguese and likewise the ships of the latter or of their merchants sailing on the seas for trade should not suffer at the hands of the former.

Again, the Peshwas' ships under construction in the port of Asolani were to be allowed to move out on their completion, unmolested.²

Some of the terms of the treaty concluded between these very powers in A.D. 1777 are interesting (Peshwas and the Portuguese):

- (1) In case the armada of the Peshwas met the Portuguese armada on the sea, or if a single ship of one government came across the armada of the other, both the governments were to behave in a friendly manner.
- (2) If the armada of one government meeting that of the other on the sea was short of water, fuel or supplies the armada of the other was to provide the needy with these articles, if it could spare. The needy party was to pay cash for the supplies it purchased.
- (3) Ships belonging to the Portuguese ports in the Chinese territory laden with goods, sailing on the seas were not to be molested by the Peshwas, and the Peshwas' ships going to the Chinese ports were in no way to be obstructed by the Portuguese.

1. *JSS.* 362-6.

2. *MPTES.* 31-2.

- (4) Merchantships of the Portuguese coming into the Peshwas' ports were to be allowed to trade on paying the customs, and the Peshwas' merchantships going to the Portuguese ports for similar purpose were to be given the necessary facilities after paying the customs.
- (5) None of the governments was to capture a merchantship of the other for want of a permit. The armada of one government was to rescue a ship of the other in the event of its being taken away by an enemy.
- (6) The Portuguese were neither to allow merchantships of ports other than their own to accompany their fleet nor were to allow them to fly their flag.

According to another treaty, concluded between the Peshwas and the Portuguese in 1780, the Portuguese were not to construct a new permanent trading post in the territory of the Peshwas, in Gujarat or Kathewad or Sorath (Saurashtra) or at any other place.

It was also agreed that a merchantship of one government wrecked on the sea and driven to the port of the other was to be returned along with the cargo. Similarly, a ship of one of the parties menaced by an enemy, seeking refuge in the port of the other was not to be hindered.¹

These terms of the treaties concluded between the Peshwas and the Portuguese at different times indicate how the Peshwas safeguarded the maritime interest of the Maratha State in respect of (1) customs, (2) passport, (3) wreckage, (4) overseas trade, (5) construction of new trading outposts, and (6) free movements on the high-seas.

In the treaties settled between the Peshwas and the Siddis of Janjira on different occasions the Peshwas forced the Siddis to accept their rights and equality at sea. In one of the treaties between these two powers it was decided that excluding the ferry-charges for transporting persons across the creek between Rajpuri and Harvit, customs were to be divided equally. This term shows how a subject of constant trouble between two coastal powers separated by a creek was settled.²

In 1730, a treaty of mutual friendship formed between Savantwadikar and the English mentions how both the parties were to respect each other's rights on the sea. According to one clause, ships of the two parties meeting on the sea were to disclose their identity by sending a small flag-ship and then allow each other's fleet to pass by peacefully.

Another clause states that a ship of one party driven by tempest or by any other reason to the coast of the other was to be given all the necessary aid and allowed to sail to its destination along with the cargo according to the convenience of the distressed party. On such occasions, customs and other dues were not to be collected from the distressed.³

These and other similar treaties make it clear that the powers which exercised their rights on the sea were also required to respect the rights of others. Coastal as well as overseas trade could not be carried on without this understanding. In times of war the question of normal understanding did not exist.

All sea-powers on the west coast issued their own passes. They were of two types — a *dastak* and a *kaul*. A *dastak* was a pass permitting the ship possessing it to sail within the

1. *MPTES*. 36-40.

2. *Ibid.* 109.

3. *DKA*. 64-5.

jurisdiction of the issuing power. *Kaul*, on the other hand, allowed the holder to move on all the seas, on the authority of the issuing government. The *kaul* enabled to identify the nationality of the ship. It seems that a ship possessing a *kaul* was not necessarily exempt from purchasing a *dastak* of a foreign government. However, exemption from holding a *kaul* or *dastak* was granted if the governments concerned had entered into an agreement to that effect.

Sometimes a *kaul* was granted to a ship on the express understanding that it was to trade only in a particular commodity mentioned therein. For instance, the *kaul* or the permit issued by the authority of the Ratnagiri port in 1783 states that the merchants (*Savakars*) and the *Kolis* (fishermen) transporting salt from Bombay, Uran, etc. to Ratnagiri were allowed to trade only in that commodity. In the event of their failing to observe this condition their ships, i.e. *shibads* or *mahagiris*, were liable to be confiscated along with their cargo. Letters to this effect were dispatched to Bombay, Rajpuri, to the *Kolis* of Thana and Kolaba.¹

A ship using an expired permit (*kaul*) was liable to confiscation. The *galbat Mahadeoprasad* owned by one Vita Bhavanidas, and under the command of the captain (*Tandel*) Ransod of port Viraval, was captured by Sardar Sekh Hasan Underkar who was on patrol duty on board the *galbat Sitabao*. The *galbat Mahadeoprasad* was sighted by Sekh Hasan near Vesave. The former tried to escape when Sekh Hasan asked its captain to show the permit. The *galbat* was chased and finally forced to show the *kaul* which, on inspection, was found to be of expired date. *Mahadeoprasad* was confiscated. It had on board a cash of Rs. 1,664-8-0 and commodities like cotton, wool, *dhotis*, cloth, etc worth about Rs. 296-8-0.²

A ship possessing a *kaul* was not necessarily free from confiscation if it met the ships of a government which was not at peace with the government to which it belonged. The *gurab Phatehdaulat* of port Daman, owned by one Sham Thakar and possessing a Portuguese *kaul* was confiscated by the Peshwa's navy as the Portuguese on former occasions had captured five ships of the Peshwas violating the agreement.

The ship had on board goods worth Rs. 13,082-11-6.³

A *dastak* of the year 1761 gives us an idea of the form and language in which it was couched.

"*Dastak* issued by the government, from port Ratnagiri, for ships sailing from the said port to Maskat, in the year 1761. Under this *dastak* the *dangi Yeshwanti* owned by Mathuradas and piloted by Haji Musa, sailing from Maskat with cargo on board bound for port Jaygad should be allowed to sail unobstructed. The *kaul* will be renewed in the following year. Dated Cha. 7, Rajab."

The *dastak* is marked with a circular seal at the right-hand top and with the *mortab* at the end.

The collection of escort-money within the jurisdiction of one's own waters was the right of the sea-power concerned. The Peshwa's navy escorting merchantships and *galbats* to different harbours collected a total amount of Rs. 2,254 at the naval headquarters, probably Bassein.⁴

1. Appendix C-1. Extract 32.

2. Appendix C-2. Extract 11.

3. PDU. Ruml 490.

4. Appendix C-2. Extract 30. For permits also see Appendix C-2. Extracts 2, 11, 20, 22, 24.

Among other things, it may be mentioned that the Marathas collected a tax called *Khutav* at the island of Khanderi for allowing ships to pass by safely.¹ This speaks for the ability of the Marathas to exercise their rights on the sea.

One of the most important duties of the state navy was to protect the coast from piratical raids.²

In the light of this discussion, it can be safely concluded that the Angres, the Dhulaps and the Peshwas followed the practice that was current in respect of their maritime rights. In their own waters, they had every right to establish their equality along with the Europeans. The attribute 'pirate' applied by the Europeans to the Angres in particular was simply abusive. As representatives of their sovereign power, the Angres were fully justified in exercising their maritime rights which in no way could be questioned at least by the Europeans who came from beyond the seven seas, and did not belong to this country.

1. *DKA (Samalochana)*. 134.

2. For action taken by government against the pirates, see *Appendix C-2*. Extracts 14-7, 21, 23-4, 27, 30, 31.



APPENDIX A

THE SAILING OF A SHIP

THE principles which determine the sailing of a ship have always been the same. What has undergone change, is, the means employed by man for propelling his floating instrument. With the progress of his scientific knowledge man replaced a long pole by oars, and the oars by sails for imparting motion to his dug-out or ship. A long pole was of no use in deeper waters for pushing a raft or a canoe. The pole or the oars were worked by muscular power. However, the motive power that filled the sails was wind. Thus, the means of propulsion improved as a raft gave way to a dug-out, and a dug-out to a ship.

The forces that act upon a ship are the motion of waves and the wind. Availing himself of these forces man steers his ship in the desired direction by means of a rudder.

The sailing of a ship is conditioned by the motion of waves (more correctly by the direction of the water-current), the direction of the wind, and the corresponding position of the rudder. Sails are always set according to the direction of the wind. Normally the wind and the waves move in the same direction as motion is imparted to the waves by wind. However, on some occasions they may act in different directions exerting their forces on the ship. These factors have been taken into account in the following discussion :

In order to study the sailing of a ship under all possible sets of circumstances, it is necessary to decide the number of combinations of the forces—

- (1) The sailing of a ship along the current and with the wind i.e. the wind blowing from stern to the stem.
- (2) The sailing of a ship along the current and close to the wind i.e. exactly opposite to the wind.
- (3) The sailing of a ship against the current and with the wind.
- (4) The sailing of a ship against the current and close to the wind.
- (5) The sailing of a ship along the current and with the wind on the starboard or larboard side.
- (6) The sailing of a ship against the current and with the wind on the starboard or larboard side.
- (7) The sailing of a ship along the wind and with the current on the starboard or larboard side.
- (8) The sailing of a ship against the wind and with the current on the starboard or larboard side.

Combination No. 1—Notations used : S_1, S_2, S_3 are the positions of the ship. OS is the direction in which the wind and the water current are moving. These forces are acting in the same direction and are denoted by W and C respectively. The small rectangle narrowing at one end is the ship.

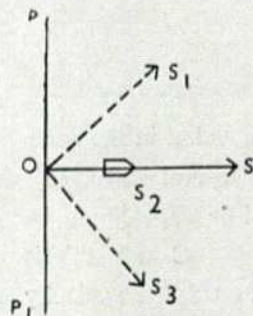


Illustration 1

The forces of wind and the water are acting in the direction OS. A ship sailing exactly in the same direction will have the force of $W + C$. If the rudder-blade is kept exactly perpendicular to the stern, the ship will sail with a force of $W + C$, and in the direction OS.

If the ship wants to sail in the direction OS_1 , the direction of the wind and the water current being constant, the rudder-blade will have to be

brought closer to the left-hand side of the stern. (By left and right-hand sides is meant the left and right-hand sides of a man standing on the stern and looking at the stem of the ship. The rudder is supposed to be the middle point). The ship can sail in the direction of OS_3 by bringing the rudder-blade closer to the right-hand side of the stern.

The limiting positions of changing the direction on either side of OS will be OP and OP_1 . The following will be the paths described by ships when the wind and the water current are acting in the same direction.

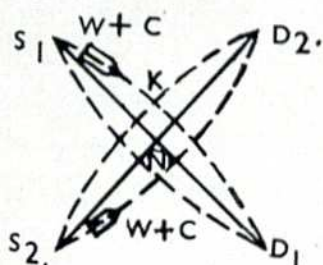


Illustration 2

Two ships S_1 and S_2 are starting for their respective destinations D_1 and D_2 when the wind and the current are acting in the same direction and are represented by $W+C$.

The ship S_1 will describe the path S_1KD_1 by turning its rudder-blade to the right-hand side of the stern.

In the case of the ship S_2 the position of the rudder-blade will have to be reversed from the right-hand side of the stern to the left-hand side. It will describe the path S_2ND_2 .

Combination No. 2—The sailing of a ship along the current and close to the wind, i.e. opposite to the wind. W the force of the wind is acting at O and that of the current C exactly in the opposite direction.

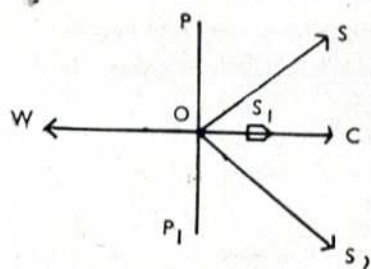


Illustration 3

The ship will be sailing in the direction OC if $C > W$ i.e. $C-W$ is a positive quantity. Now the ship S_1 sailing in the direction OC will have a force $C-W$. If it keeps its rudder-blade perpendicular to the stern it sails along OC . But if it wants to sail in the direction OS or OS_2 , it will have to turn its rudder-blade to the left-hand side or the right-hand side of the stern respectively.

Combination No. 3—The sailing of a ship against the current and with the wind.

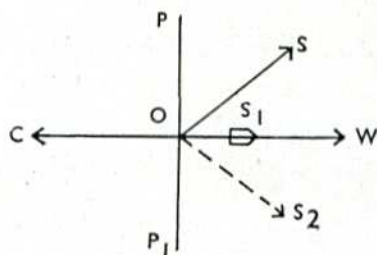


Illustration 4

Here the conditions are the same as in Illustration 3 except that the ship S_1 is sailing in the direction OW and $W-C$ is a positive quantity.

Combination No. 4—The sailing of a ship against the current and close to the wind.

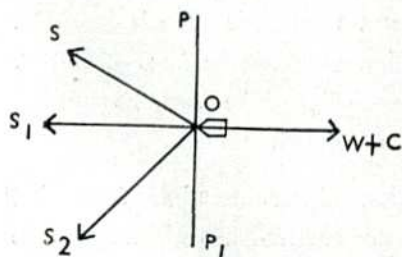


Illustration 5

The forces of wind and current are acting in the same direction, and the ship is trying to sail against them. This is purely a mathematical consideration. The ship will not be able to make way against the forces $W+C$ unless it is rowed. Obviously it can be rowed along OS_1 if its velocity is greater than $W+C$. The ship can take the courses OS and OS_2 by changing its rudder-blade as needed (Illustration 5).

Combination No. 5—The sailing of a ship along the current and with the wind on the starboard or larboard side. OC is the direction of the current of water, and OW the direction of the wind coming from the starboard side of the ship. The limiting positions of the wind striking the starboard side of the ship will be OP and OP_1 .

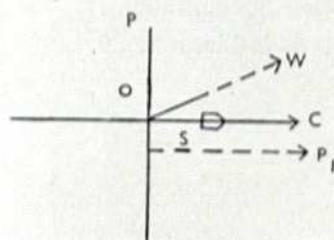


Illustration 6

The two forces W(wind) and C(current) are acting at O in the directions OW and OC. The course of the ship will be determined by the law of parallelogram of forces. The ship can make some shiftings by its rudder. The ship will be able to sail nearer to OC or OW according to the magnitude of these forces.

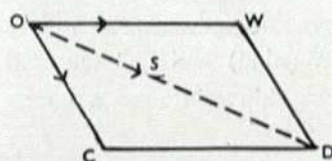


Illustration 7

If W and C are represented in magnitude and direction (see Illustration 7) by the two sides OW and OC of the parallelogram OWDC, the ship S will take the diagonal course OD. In this case the position of the rudder-blade will be at right angles to the stern. By changing the rudder it will change its direction.

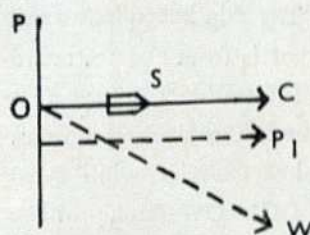


Illustration 8

If the wind comes from the larboard side, the forces will be as represented in Illustration 8. The notations and other things are the same as in Illustration 6.

Combination No. 6—The sailing of a ship against the current and with the wind on the larboard side or starboard side. OC is the current, OW the wind. The ship S is starting from the point O where all the forces are acting.

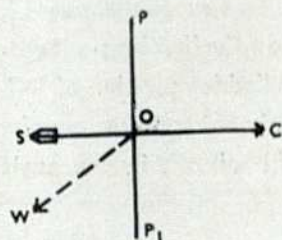


Illustration 9

The ship S will be able to take a course within the angle WOC nearer to OW if $OW > OC$. If $OC > OW$ and the ship wants to sail nearer to OW, then by shifting its rudder-blade very close to the right-hand side of the stern it will be able to take its intended course. By constantly pulling the rudder in this manner the ship S will describe a path something like SD as shown in

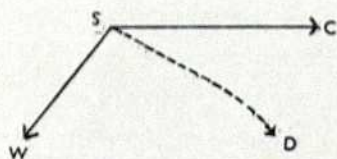


Illustration 10

Illustration 10. In the case of the wind coming from the larboard side, the forces will be as shown below in Illustration 11. The notations and the forces are the same as in Illustration 9.

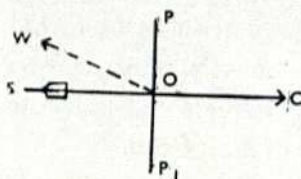


Illustration 11

Combination No. 7—The sailing of a ship along the wind and with the current on the starboard or larboard side. The forces may be represented as follows

when the current is on the larboard side. Other things will be as shown in Illustration 6. Only OW (wind) and OC (current) have inter-changed their places. The ship will take a course (OS_1) within the angle WOC.

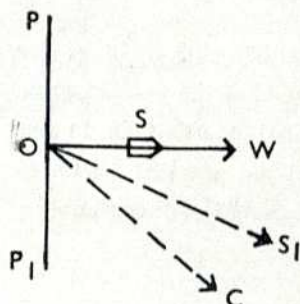


Illustration 12

Combination No. 8—The sailing of a ship against the wind and with the current on the larboard or starboard side (see Illustration 13). The ship S is trying to sail

against the wind OW when the current is from the starboard side. Conditions are the same as in Illustration 9, except that the forces, wind and current, have interchanged their positions. The capacity of the ship S to sail against the wind will depend upon the magnitude of the current. If $OC > OW$ the ship will be able to sail closer to OC; if $OC < OW$ the ship will be able to go away from OW by a constant pull on the rudder-blade to the right-hand side of the stern. If $OC = OW$ then the ship will

have convenient shiftings. OP and OP_1 are the limiting positions of the current. The ship will take a course within the angle COW, say OS_1 .

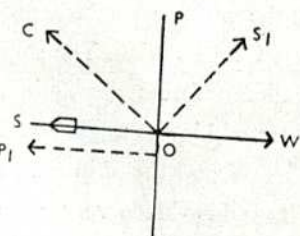


Illustration 14

If the current is from the larboard side, other things remaining the same, the forces will be as in Illustration 14. Throughout the discussion P and P_1 show the limiting positions. In Illustration 14, OP may indicate the limiting position of OC, that is of the wind coming from the larboard and not opposite to the course of the ship. The ship will sail within the angle WOC, say OS_1 .

APPENDIX B

NAUTICAL TERMS IN MARATHI

(GENERAL OBSERVATIONS)

AN exhaustive glossary of the nautical terms in Marathi is attempted in this appendix. The nautical terms of the Maratha period and those that are in use at present are taken together. Most of the terms of the Maratha period are in vogue even today. In the Maratha period itself no attempt seems to have been made to cull the nautical terms. There is neither any treatise on navigation. What the *Bakhar* writers like Sabhasad and Chitnis did was to refer to a number of ship-names in the course of narrating the maritime activities of Shivaji. A complete survey of the nautical terms, both past and present, is essential for their scientific study. Citations from the historical records illustrate how current terms were used and understood in the past. The historical terms do not seem to have undergone a radical change during the last two hundred years. They are, therefore, not treated separately.

The terms are divided under three different heads for the sake of convenience and clarity: (1) boat-names, (2) terms regarding the equipment of a ship, and (3) terms regarding the sea, the winds, crew, etc.

The boat-names have been illustrated with quotations from the past Marathi records with a view to shedding light on their exact and actual use. But in the case of terms other than the boat-names appropriate quotations could not be cited for want of adequate nautical references. The source-language of every term has been traced as far as possible. It would help show the contribution of the loan-words to the Marathi language, as also to the Maratha nautical science, if it is found that these words do not have their equivalents in Marathi.

The infiltration of foreign words and vocables into Marathi vividly indicates the influence of the foreigners on Konkan from epoch to epoch. A free intercourse between the people of Konkan and the foreigners who came for trade was not the only cause of this infiltration. The process was speeded up by the foreigners who actually ruled Konkan or had their trading centres along the coast. Foremost among the foreigners who have pressed the signet of their language eternally on Marathi are the Mohammedans. The Arabs were the masters of naval highway especially after their Islamisation. Six hundred years after Christ the light of Islam dawned upon them and they had their great days. The Arab arms were successful from Egypt to Spain. They controlled the sea-trade with India till the advent of the Portuguese in A.D. 1498. We cannot, however, say with certainty to what extent the Arabic words found their way into Marathi before the Islamisation of the Arabs.

Before the rise of the Marathas the whole of the Konkan coast was divided between the kingdoms of Bijapur and Ahmadnagar, from Bassein in the north to Honavar in the south. The territory to the north of Bassein was under the Mughals. The influence of Persian on Marathi during the palmy days of these two Deccani Shahis was wide and deep, as it was the court

language. The influx of the Persian words into Marathi continued during the Mughal supremacy over the Deccan. Later, when the Deccan passed into the hands of the Marathas, Persian did not lose its historic status all of a sudden. It held its position quite for sometime, though its importance was diminishing. Thanks to the singular attempt of Shivaji to stamp out the alien (*Yavani*) words from Marathi, his learned courtier Raghunathpant Hanamante compiled the *Rajyavyavaharakosha* giving Marathi equivalents for foreign words. It was a most significant national movement which was totally neglected by his successors. This national movement aimed at the extermination of *Yavani* words—words from the enemy's language—which had found their way into Marathi. The voluminous political and private correspondence, and the *Bakhar* literature of the Peshwa period, when the Maratha power had reached its zenith are imbued with Persian and Arabic words. For a fuller understanding of this influence, one might profitably go through the Persian-Marathi Dictionary composed by the late M. T. PATWARDHAN. Therein the author states that numerous Arabic words came into Marathi *via* the Persian as it was the court language of all the Mohammedan rulers of India from first to last. The intercourse between the Persian and the Arabic having taken place much earlier, the Persian introduced here was already impregnated with Arabic words. We shall examine here how far the general rule that the Arabic words came into the Marathi language *via* the Persian, and not directly from the Arabic, can be applied to the study of the nautical terms.

Centuries before the inrush of the Mohammedans into India through the north-western mountain passes, the Arabs had been frequenting the west coast of India as traders. In the light of this historic fact it can be stated that at least some of the nautical terms in Marathi might have come from the Arabic directly i.e. without the mediation of Persian as the court language in India. The truth of this statement can be corroborated if either of the two following alternatives is found to exist: (1) a word in Marathi should be only of Arabic extraction, i.e. having no existence in the Persian; (2) the exact period when a nautical word of Arabic origin was introduced into the Marathi and also the period of its introduction into the Persian must be known. The first alternative can hardly be found to exist as not a single nautical term has been obtained which exists in the Arabic but is absent in the Persian. Regarding the second alternative, there are difficulties of a different nature. In the first place, there are no dictionaries either in Marathi or Persian based on historical principles. Such dictionaries alone would have enabled us to say when exactly a word of Arabic extraction came into the Marathi and the Persian, and to conclude further that a certain word came into the Marathi language directly from the Arabic. In the absence of such dictionaries, we cannot continue our research on the lines just indicated.

The nautical terms of the Silahara period are not known. They would have been of great use indeed. The only writing available on a nautical subject as such is the *Yuktikalpataru*. A number of boat-names given in it are rather proper names and not qualitative and, therefore, do not serve our purpose.

Among the foreigners who came to Konkan the Portuguese have exerted tremendous influence over the life and language of its people. The influence of their language on Marathi began from the early years of the sixteenth century. Goa was taken by them in A.D. 1510. The influence of the English language on Marathi will in itself form an independent topic, and is outside the scope of our subject.

There are many terms in Marathi of purely Persian origin. They have come into Marathi either through the Muslim rulers of India who used Persian as the court language, or through direct intercourse between Persia and India. It is difficult to say which of these nautical terms came into Marathi as a result of direct intercourse between the two countries.

The Boat-names—There are about sixty-four boat-names out of which nearly thirty seem to be of non-Sanskrit and non-Marathi origin. The words *kaphala*, *karval*, *ghurab*, *jahaj*, *dangi*, *dav*, *barjo*, *manja*, and *sambuk* seem to be of Arabic origin, and *kasti*, *ganj*, *galbat*, *chhabina*, *barkas* and *mahegiri* of Persian. The words *phattemar* and *bagala* may belong to the Arabic. One might wonder at the intrusion of as many as thirty foreign boat-names in the Marathi language, but on reflection it would be found that a large number of them just stand for different types of Arabic and Persian ships, i.e. they have been adopted in Marathi with a slight change in a manner that suits its own character, whenever necessary, just for the foreign vessels. For instance, the words *dangi*, *dav*, *ganj*, and *barjo* in Marathi denote foreign vessels. They cannot be taken to have made any new contribution to Marathi in virtue of their contribution to Marathi nautical science. On the other hand, the words, *kaphala*, *galbat*, *ghurab*, *chhabina*, *jahaj*, and *phattemar*, seem to have been permanently adopted in the Marathi language. The *galbat* and *ghurab* were the famous war vessels of the Marathas, and the *phattemar* their cargo ship. The word *jahaj* came to mean in Marathi a ship with sails, and is used in this generic sense.

The words *armar*, *barakin*, *bot*, *batela* are of Portuguese extraction. The words *armar* and *bot* have become more or less life-members of the Marathi language. The word *armar*, a collective noun, indicating the whole of fighting-ships, was commonly used by the Marathas, there being no synonymous word in Marathi for it, except the Sanskrit word *naukadala*. But this Sanskrit word was rarely used by the Marathas. The word *machava* is claimed both by the Portuguese and the Sanskrit. Scholars are inclined to trace its origin to the Sanskrit rather than to the Portuguese. The terms *gyali*, *phargat* and *manvar* are corruptions of the original words, galley, frigate, and the man-of-war, respectively. The term *karval* is claimed by the Tulu and Arabic, and *padav*, by Tulu and Sanskrit. The term *toni* or *doni* is considered to be of Kanarese origin. It is very interesting to note the origin of the word *katur*. It is claimed by a number of languages of the East and the West alike.

The meaning of the terms *gape* and *bhauvani* is not to be found in the *Maharashtra Shabda Kosha*. What we can state is that they denote certain type of ships. *Gape* is accompanied by the adjective *sahukar* (merchant), meaning thereby that the *gape* was a cargo-ship, and the term *bhauvani* is qualified by *phirangyanchi* which means that the *bhauvani* belonged to the *Phirangis*, i.e. the Portuguese.

*Words regarding the equipment of a ship*¹—The terms regarding the fittings are numerous. The origin of these terms has been traced to their source languages as far as possible. We shall

1. *GBP*. ii. 722. "Of eight names of parts of a vessel, three are Sanskrit Hindu origin, three of which one is doubtful un-Sanskrit Hindu, and two of which one is doubtful European. The keel is sometimes called *ade* an un-Sanskrit Hindu word and sometimes *pathan*, a Sanskrit word. The bow is *nal*, a Sanskrit word, and a piece of wood at the bow is called *bhurda*, perhaps the English board as the word is used in the

discuss here only the foreign terms which penetrated into the Marathi language. If it is found that some of the foreign terms have no substitutes in Marathi then it may mean that those terms have made new contribution to the nautical science of the Marathas.

The terms *alat*, *kabila* (a large chain or fetter), *sukanu*, Kalabi (from the middle or centre of anything) are said to be Arabic, and *avajar*, *ghos*, *daman*, and *barakat* Persian. The words worth discussing are *sukanu*, *ghos*, and *daman*. The term *sukanu* in Marathi has in all probability come from the word *sukarna* of Sanskrit origin which means a tiller or helm. It may also be taken to mean the blade of a rudder or the rudder as a whole. *Sukanu* and not *sukarna* was in vogue in Marathi. It was an invention of great importance in the days of sail and wood. It is a device attached to a ship by means of which it is steered in the desired direction. When exactly this word came into the Marathi language we cannot say. But if the word helm is also taken to mean the rudder, the Arabic cannot be said to have contributed the word rudder to Marathi. The word in Sanskrit for helmsman is *karnadhara*. It is for the philologists to decide whether *sukanu* in Marathi came from *sukkan* of Arabic origin or from the Sanskrit *sukarna*. It is quite possible that the word *sukkan* of the Arabic is itself from the Sanskrit *sukarna*.

The terms *daman* and *ghos* are traceable both to the Sanskrit and the Persian. *Daman* in Sanskrit means a rope. The words '*daman ghe*' and '*ghos ghe*' in the vocative in Marathi are current among the seafaring classes of Konkan. These terms are used in changing the tack of a sail according to the direction of the wind. Whether this method of changing the tack came from Persia as the words indicate, we cannot say with certainty from this limited evidence. Again, the word *daman* in Sanskrit means a rope. It is difficult to state whether the corrupt form *daman* in Marathi came from Sanskrit or Persian as the last two languages belong to one and the same group—Indo-European.

Bombay harbour in the phrase *bord-par* on the board. The stern is *vare* also *varam*, perhaps un-Sanskrit Hindu from *var* meaning the high part. The cross beams or thwarts are *vak*, the ordinary Sanskrit Marathi across or a thwart. The long beams are *durmedh*, an un-Sanskrit Hindu word for shaft or post. The side timbers are *perchi*, perhaps from the Sanskrit *per* a joint or a space between joints.

Of fourteen words for the fittings of a vessel seven are un-Sanskrit Hindu, three Sanskrit, two European, two Arab and one Hindustani. The rudder or *sukan* is the Arabic *sukkan*. The mast is *dolkathi*, the moving or swaying post apparently Hindu, the *dol* being un-Sanskrit and the *kathi* or post Sanskrit. The yard, *parman* or *parban*, is said to be Hindustani. For sails there are four words. The main sail is *shid*, a Hindu word, apparently un-Sanskrit. The stern sail is *Kahebi* of unknown origin. The bow-sail is *bom* apparently from the European boom and that from the German *baum* or tree, that is pole because it is fastened to a boom or loose bowsprit. Mr. Whitworth notices that the Gujarat sailors use the word *bom* and *jib* more correctly than the Konkan sailors, using *bom* for the loose bowsprit and *jib* for the *jib-sail*. The storm sail is *burkas*, apparently the Arabic *burka*, a veil. The sheet is *nade*, apparently un-Sanskrit Hindu. The pulley is *kappi* and the pulley-rope is *idali*, both apparently Hindu words. The hole pin is *dole* apparently un-Sanskrit. The oar is *valhe*, apparently un-Sanskrit Hindu, *halisa* among the Musalmans or *phalati* properly the steering paddle perhaps, the European float. The anchor is *nangar*, commonly called *langar*, apparently the Sanskrit *langal* meaning a plough."

"The two sea terms in commonest use, *ghos* and *daman*, are Persian. *Ghos* from *goshah*, apparently in the sense of corner or point, means the lower end of the sail-yard, the tack. As, in going in a wind, the tack is always fastened on the windward or weather side, the order to the helmsman, *ghos* or *ghos kar* means luff or go into the wind, *Daman*, from the Persian and Sanskrit *Daman* in the sense of brow or fringe, means the sheet of the sail, and, as in sailing into a wind, the sheet is always made fast on the lee side, *daman* means leeward, and the order to the helmsman, *daman* or *daman kar*, means ease off the wind."

The word *burakat*, a storm-sail, has no parallel in Marathi. The word *sid* is considered to be of un-Sanskrit origin.¹ The *Maharashtra Shabda Kosha* traces its origin to the Sanskrit word *sita* + *pata*, the ultimate form of which in Marathi becomes *sid*. The suffix *mhal* from the word *mhal-adhi* is perhaps of Arabic origin. *Mhal* in Arabic means a large pulley for drawing water or a plank or scaffold on which a plasterer stands. The suffix is here used in the adjectival sense while in Arabic it has only the sense of a noun, and hence, the uncertainty of its Arabic origin. *Bodad* in Marathi is obviously from broadside.

The word *para(ba)bhan* comes from Hindi. In Persian it means a kind of painted China silk. The Marathi has no other word for *parabhan*. So *parabhan*, a yard may have been taken from the Hindi by the Marathi. The suffix *dol* is obviously from the Sanskrit *dola* meaning a swing. The word *daphara* may be of Tulu origin or more correctly is the corruption of the English word fender. The word *kappi* is taken to be of Telugu origin and if so, it shows that the invention of *kappi* (pulley) of the Telugu-speaking people was borrowed by the seafaring people of Konkan. There is no other word for a *kappi* in Marathi.

The terms *kedati* and *bond* appear to be of Kanarese origin, and the word *bomb* meaning bow presents an interesting account. The concise Oxford Dictionary traces its etymology to Dutch *boeg*, Danish *boug*. However, if the Marathi *bomb* has come from bough, its etymology is traced to Dutch *boeg* or Sanskrit *bahus*, shoulder or bow.

From the last group, words regarding the sea, the winds, the crew, etc. *kiblenuma*, *kaul*, *matalai*, *malim*, *mauj*, seem to be Arabic, while *kinara*, *khalasi*, *tuphan*, *darya*, *nakhava*, *bandar*, and *sarang* are of Persian origin. These words seem to have occupied a permanent place into the inner core of the Marathi language. Almost all of these words are current in Konkan today, except the word *kiblenuma* (compass). The compass now is known by the word *hokayantra* in Marathi.

During the Maratha times the word *kiblenuma* was probably in use. The *Rajyavyavaharakosha* suggests the Sanskrit word *dishayantram* for *kiblenuma*. This may mean that the Arabic word was current then. The old Sanskrit word for a compass is said to be *matsyayantra*. We cannot say when this word was ousted by the Arabic *kiblenuma*, if it is to be supposed that the word *dishayantram* was used at least for sometime by the Marathi-speaking people.

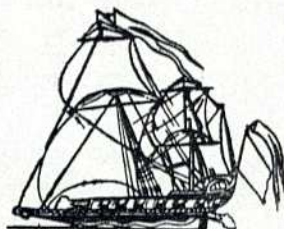
The words *kintan* (canvas for sails made up of jute), *bhurakhat* or *bhurakas* (storm-sail) and *kalaphati* (caulker) are of Arabic origin. The word *kalim* used for the cook on board a ship is from the Arabic *qali*.

The words *kapitan* (captain), *galas* (glass) and *kebina* (cabin) are from the English.

1. *GBP*. XIII. ii. 724. Lateen sail : " Another bond of connection between the east and the west is the lateen sail. The ancient sailors of the Mediterranean, the Phoenicians, Greeks and the Romans seem to have used square sails only. In late Roman times (A.D. 100-200) a triangular sail was introduced. It was called *Suppara*, word which is very seldom mentioned and is of unknown origin. The word lateen or Latin shows that the knowledge of the triangular sail came to West Europe from the Mediterranean. The Arab word for a lateen sail *shilad-fankani* literally topsail, seems to show that they borrowed the knowledge and use of the lateen spread from the west coast of India."

It is difficult to trace the origin of the words *kari* (resin), *gabadi* (a hole or chink) and *daura* (a contrivance to weigh the anchor). The word *siphar-karane* means to polish. Its origin remains unknown though it may have come from *saph karana* in Hindi. Similarly, the origin of *dhada* and *nast* meaning shore or coast cannot be traced.

The nautical terms in this and the following appendixes have been discussed historically. It is for the philologist to decide their etymology and transformation from one language to another. However, it is expected that this treatment of the nautical terms might help in understanding how new ideas and inventions travel from coast to coast in the nautical world.



APPENDIX B-1

BOAT-NAMES IN MARATHI

THE nautical terms in Appendixes B-1, B-2 and B-3 are arranged according to the Marathi alphabetical order. The letter into the brackets following the term stands for its gender in Marathi, (M) for masculine, (F) for feminine, and (N) for neuter. For the proper pronunciation of the Marathi terms standard transliteration marks have been used as explained in 'Transliteration Marks' (see Contents).

For the abbreviations used in these appendixes, see 'Bibliography with Abbreviations'.

Armar (N)

Armada, a fleet of war-vessels. A collective noun for war-vessels.

IPAL. In Marathi *aramar*, also signifies a war-vessel. *Aramari* (adj), meaning, relating to an armada or a war-vessel. In Marathi, the final a being silent, d assimilated itself to r. Again, there was oscillation between a long and a short.

JSSB. 65. The reference states that armada was fitted with two hundred ships in each *subha* — a naval unit.

Historically, *aramar* from the original Spanish *armada*, came into Marathi through the Portuguese (*COD*. Sp).

Katur

A small and swift Indian rowing vessel.

IPAL. Angl-Ind. and English cutter. It is traced to the Arabic *katireh*, a small craft, or to the Persian *katur*, a small ship armed in times of war. But it is not certain whether such terms exist in Arabic and Persian. The real origin appears to be the Malayal *kattiri* or the Neo-Aryan *katar*, from the Sanskrit *kartari*, 'a scissors', literally 'a cutter', from the verb *krit*, to cut. The distinguishing feature of this craft was its narrow shape, especially at the prow, which enabled it to cut through the water with ease. This fact was noticed by the Portuguese chroniclers. This term is employed in various metaphorical senses. For instance, in Konkani, a *katar* is used to denote 'a cross piece of timber to hold fast beams, a pyramidal structure in an obelisk'. The word was current in Malbar and Konkan when the Portuguese arrived there. Today it is not in use, because similar crafts do not exist. The Oxford English Dictionary regards cutter as an English

word from 'to cut'; though this view does not agree with the one which would have 'cutter' indebted to the Portuguese *catur*.

GBP. XIII. ii. 723. *A New English Historical Dictionary*, 'catur obscure'. The identity with Arab *katireh*, a small craft, seems phonetically unlikely. Moreover the *catur* of Calicut is identified with the Arab *Almadia*. Some see in the *catur* the source of cutter, a light rowing vessel used on the coast of Malbar in the early days of the Portuguese. The craft was 60 to 65 feet long, sharp at both ends and curving back having sails and oars.

Under the name *katur*, the special craft of the pirates of Porka on the Malbar coast was famous during the sixteenth and seventeenth centuries. There appear to be more than one *katur*. VARTHEMA (1503; *Badger's Edition*, 154) makes the *chatur* a narrow sharp canoe; BARBOSA (1510; *Stanley's Edition* 157) makes it a small vessel like a brigantine; in the chronicles of *Albuquerque* (1510; II. 236), it appears as a small man-of-war, and in 1536 (*Kerr's Voyages*, VI. 238) the barge of king Bahadur Shah of Gujarat is called a *katur*. As the word *katur* has been adopted into Portuguese as a small war-vessel, it seems probable that the broad and short English man-of-war's cutter is called after the Indian *katur*. The quick-sailing sloops with running bowsprits, known as cutters, are more likely to get their names from their speed. But they may possibly be named after the other or Malay variety of *katur*.

DKA. 379, includes the word *katur* in the general list of ships of the Marathas. It is not known when exactly the word was first used in Marathi. It does not seem to be in vogue in the Maratha period.

The origin of the word appears to be Sanskrit *krit*, to cut.

Kaphala (M)

MMED. A group of vessels, a fleet. PPMK. They loot several fleets (*kaphalas*). Arabic, *kafilat* meaning a caravan, a body of travellers, a *coffle*.

Karval

A small light, fast-sailing ship.

IPAL. According to the Portuguese Dictionary *Contemporaneo*, the derivation of the word is uncertain. Because of its swiftness its affinity with the Turki *karwal*, 'a scout, an outpost, a van-guard' is suggested. The Oxford English Dictionary states that the word is probably the diminutive of the Spanish *caraba*.

DKA gives the word in the general list of the Maratha ships. The actual use of the word in Marathi is not known.

Kothaya or *Kothava* (M)

A ship commonly found on the Gujarat coast. It is manned by the *Kharavi* Mohammedans of Gujarat. The difference between this ship and the Maratha *galbat* is that the second mast together with the sail of the *kothaya* is shorter.

MSK. *Skt. kosta*; *Pkt. kotta, kottya*.

GBP. XIII. ii. 719. *Kothia* is a large ship belonging to Cutch and Kathiawar. The origin of the word is doubtful. It is given in the *Periplus* (A.D. 250) under the form *kotimba*, as one of the local vessels that piloted Greek ships to the Narmada. It means something hollowed, akin to a *kothar* i.e. a granary.

Kolmachava (M)

A fishing canoe.

Khapata (M)

MSK. A small boat meant for plying between the coast and a ship anchoring in the deep sea.

Khisti or *Kisti* (F)

A boat, a canoe.

PPMK. Persian *kasti*, a boat, a ship.

Ganj (M)

A large storing vessel. From this original meaning comes, a vessel carrying store or treasure.

CPS. The word is included in the general list of ships though it is not known when the word was first used in Marathi.

Persian, *ganj* meaning a store, a hoard, a hidden store.

Galbat (N)

MSK. The famous war-vessel of the Marathas (*MSK. galabata* + *bota* = *galibata*). A vessel having a mast.

JSSB. A war-vessel fitted out by Shivaji.

ROBERT ORME, *History of Hindostan*, I. 408: "The gallivats were large row-boats built like the grabs but of smaller dimensions, the largest rarely exceeds 70 tons. They had two masts of which the mizzan was very slight; the mainmast bearing only one large triangular sail."

IPAL. *Galiun* and *galiuta* are Turkish words. Sir. J. Campbell in GBP. XIII. ii. 417, states that *galbat*, a form of *gallevat*, was in use in Bombay to denote large foreign vessels, such as English ships and steamers, and he refers *galbat* to *jalba*, a word for small boats in the Red Sea. The correct Arabic form however, is *jibla*, and it is met with among the early Portuguese chroniclers as *gelba* and *gelva*. Yule does not look with favour upon Campbell's derivation of *gallevat* and is more inclined to trace it directly to the Portuguese *galeota*.

Galbat in Persian means a large boat. Whatever the origin of the word *galbat*, it is certain that it is not of Marathi derivation. Historically the word seems to have come into Marathi from the Portuguese *galeota* rather than from the Persian *galbat* as the Portuguese influence on Konkan was long and continuous.

Gape (F)

A kind of merchantship.

SPD. XXIV. 8. Merchantships (*gape*) would follow.

Ghurab (F)

The famous Maratha war-vessel of the seventeenth and eighteenth centuries.

Robert Orme in his *History of Hindostan* describes the *grabs* as vessels of two or three masts, very broad in proportion to their length and of three hundred tons.

Arabic, *ghurab*, is a crow, a raven, a kind of ship. Obviously the word seems to be of Arabic origin.

Gyali (F)

Corruption of the word galley.

Itihasa Sangraha, Angre Yanchi Hakikata, p. 8. Two galleys were sent with Vitthal Mahadeva. He brought them to Khanderi.

COD. Latin *galea* or Greek *gale*, or Old French *galie*, Etymology doubtful.

Chhabina (M)

MMED. A watch or patrol boat.

CPS gives the term in the general list of ships.

From the historical references there is no doubt that the boat was meant for patrolling.

PPMK. Persian, *shabina*, a night patrol.

Jahaj (N)

A generic term for vessels.

JSSB. 65. Vessels of various types were fitted out.

MSK. Arabic, *jahaz*, a ship.

Toni (F)

A small boat.

MSK. A log of wood, Kannada, *tonni* or *donni*.

Dangi (F)

MSK. A vessel narrowing at both the ends. A fast moving Arabic or African vessel.

GBP. XIII. i. 350. Two masted, 170 tons, excellent sailing vessel, undecked and open throughout. It belongs to the Sindh and Makran coasts.

In Arabic, *dankalat* means a sea-gull, a sea-mew. The meaning of this word, *dankalat*, has close resemblance with the *dangi*. The sea-gull is an unfledged bird, and the *dangi* is undecked and open throughout, i.e. barren. It seems natural that such a vessel looking dull, devoid of a deck, should be named after the bird without plumage.

SPD. XXIV. 216. Dangis were found belonging to Maskat, near Tarapur coast.

Dav (M)

MSK. An Arabic vessel.

GBP. XIII. ii. 718. The origin of the *Dhau* is the Red Sea. The word is used vaguely and is applied also to the *baghlas*. It appears in *Nikitin's travels* (1470) as *tavs* in which people sailed from Persia to India.

GBP. XIII. i. 353 & *JRAS.* I. The Arab *Dhau*, formerly the best known of the Arab crafts, is falling into disuse. It is 150 to 250 tons. It is calculated for sailing with small cargoes, and is fully prepared for defence. It has one mast.

Arabic, *dav* means, a kind of ship.

Dubaka (M)

MSK. A small boat without an out-rigger.

Doni (F)

MSK. A dug-out. At one time *doni* was used to denote an indigenous boat, and the word *jahaj* for a European boat. From *Skt. Drona*, a hollow.

Tar (F)

MSK. any small boat. From *Skt. tr*, *tar* to float.

Tarande (N)

MSK. A big boat, a *galbat*. From *Skt. Taranda*.

JSSB. 65, mentions of *tarande* as a vessel constructed by Shivaji along with the other war-vessels.

The term is more frequently used in the generic sense as *jahaj*.

SPD. XXXIV. 51. Two *tarandis* (vessels) big in size and with three masts, anchored near Shirgaon.

From *Skt. tr*, to float.

Tarapha (M)

CPS. A low, broad boat plying on the shallow waters, meant for passengers only.

GBP. XIII. ii. 720. *Tarappa* is a ferry-boat, the use being confined to the double raft-like ferry-boats meant for transporting horses and carts. It appears in the *Periplus* (A.D. 250) as the *trappaga*, one of the local boats that piloted Greek ships up the Cambay Gulf. The *taraph* or *taforea* was a favourite vessel with the Portuguese. The word seems connected with the Arab and Persian *tranki*, a vessel not now in use. HAMMILTON (1700), *New Account*, I.56, described the *tranki* as an undecked bark, and GROSE (1750, *Voyage*, I.18) speaks of it as an uncouth vessel of from 70 to 100 tons. VALENTIA (1800, *Travells*, II.379) describes it as a big *dow* used in India and Yemen.

The word is of *Skt.* origin.

MSK. A wooden platform built on two boats. Origin not known.

SPD. XVI. 33. After collecting material from the town of Rajavali a raft (*tapha*) was built.

The origin of *tarapha* is traced to one of the Sanskrit words: *taralu*, *tarandhu*, *tarani*, *tari*, from *tr*, *tar*, to cross.

Tari (F)

MSK. A boat, a dug-out. *Skt. tari*, from *tr* to float. *Tariya* is used in the vocative.

Taru (N)

A vessel, a ship, having three to five masts ; an instrument for floating.

MSK. *Skt. tr*, *tar* to float.

Sastichi Bakhar. 12. One Mahadaji after anchoring 15 vessels (*tarus*) in the port of Umela, appeared at Kandol khind (pass).

Tavada (M)

A vessel.

SPD. XXXIV. 134. Three tavadas (vessels) belonging to the Portuguese were captured.

Tirakat (N)

A three-masted ship.

MSK. *Skt. tri* plus *kastha* ; Marathi, *tira* plus *kathi*, meaning three-masted.

SPD. XXXIV. 51. A couple of three-masted *tarandis* (vessels) anchored at a distance of about six miles from Shirgaon.

Tirakati is an adjective from *tirakat*. Shivaji had three-masted vessels in his navy.

Dubare (N)

PMA. A Maratha ship.

Nav (F)

A canoe, any vessel. *Skt. nau* ; *Pkt. nava*.

Pagar (F)

MMED. MSK. A canoe without an out-rigger, a dug-out. Origin not known.

Padav (M)

A cargo boat of five to ten tons.

MSK. from *Skt. plav*, to float ; kannada, *padagu*, a boat.

GBP. XIII. ii. 720. *Padav* is a small trading vessel. It is apparently of Dravidian origin, as the word seems to mean undecked from *pad*, open, opposed to the *kapal* or decked boat. *Parao* is one of the Malay words for a boat. The word may be compared with the Greek *propra*, a boat, and with the English prow or forepart of a boat.

Padhagi (F)

A kind of war vessel often associated with the word *Phirangi*-Portuguese.

SPD. III. 161. About 25 *padhagis* (ships) of the Portuguese came to Bassein from Surat.

MMED. *Padagi-ghi*, the base or stand of a vessel.

Palav

See *pal*.

Pal (N)

A Maratha warship having two to three masts.

MSK. a warship.

SPD. XVI. 83. Forty *sibads* and two *pals* came to Mahim as succour.

The *pals* were the biggest of the Maratha warship. Original word from *Skt. plu*, *plav* to float.

Panaval (F)

GBP. XIII. ii. 720. *Panval* is used of small fast sailing *patimars* from Cheul which bring fruit and vegetables to Bombay. The name probably comes from *pan* or betel-leaf.

Vala in Marathi is used as a noun of agency ; when suffixed to *pan*, it means a dealer in betel-leaf, or carrier of betel-leaf.

Phani (F)

GBP. XIII. ii. 720. *Phani* is a small coastal trader of Indian origin. Its odd wedge-shaped prow suggests similarity with *phani*, a wedge. *Skt. phani*.

Phattema (r) *ri* (F)

GBP. XIII. ii. 720. "*Patimar* is a fast sailer and coaster south of Bombay, apparently from the Hindi *path-mar*, messenger. The Musalmans have twisted the word into *phatemari* to make the Arabic snake (*mar*) of victory (*phateh*). The Portuguese (1520, *Commentaries of Albuquerque*, 2.78) found it on the Malbar coast. The name was used by the people of Malbar coast, who perhaps adopted it from the *path-mars* or Brahman couriers from the north who were high in favour with the Nair women. These Brahmans are said to have come from Gujarat. They seem to have played the same part as the Chittapavans played, who before the Peshwas rose to power, were chiefly known as *harakars* or spies. Dr. Da Cunha states that *patamar* has been adopted by the Portuguese as a vessel carrying advices, and in ADMIRAL SMYTH'S *Sailor's Word Book*, *Patamar* appears as an excellent old class of advice boat. Mr. Whitworth finds it known in Gujarat as a Malbar boat, too sharp and deep for the Gujarat rivers".

In addition to the above interpretation of '*Patamar*', a messenger, a letter-carrier, the *IPAL* gives another interpretation of it as *pathmar* — a road killer. According to it, *pathmar* perhaps is merely a variant of *vat-mar*; *v* being interchangeable for *p*.

The word occurs in *SPD*. XVI. and XXXIV, as *pattemari* and *phattemari*. It is not mentioned by *Sabhasad* and *Chitnis*, Shivaji's historians of the Maratha period. It seems that it was not a warship but a cargo carrier with two masts.

Phateh in Arabic means conquest or victory, and in Persian *mar* means a serpent or to beat, to strike. So, *phatemari* may mean a serpent of victory or beating, striking of victory. In Arabic, *mar* means a lord or a saint. The word *phateh* plus *mar*, or *phateh* plus *mari* may therefore mean, a lord of victory or saint of victory.

The word is obviously not of Marathi origin.

MMED. *Patemari*, a swift sailing vessel.

Pharagat (N)

Corrupt form of the word frigate.

Bagala (M)

MSK. A kind of Arabic vessel.

GBP. XIII. ii. 718. "*Baghla* is a large deep-sea going vessel of Arab or Red Sea origin. The name is generally derived from the Arabic *baghla*, a mule, because of its carrying power.

A later derivation seems to be from *baghahat* a slow trading vessel, opposed to *sambuk*, a passenger-boat apparently from *sabk* fast or outstripping. The shape of the *baghla* is said to have remained unchanged since the early Egyptian times. *Ganj*, the name of a large *baghla* with a figure-head is of doubtful origin”.

JRAS. 1st December 1834. “The peculiarity of form and extraordinary equipment of these vessels (*Baggla* or *Budgerow*) is said to have been the same from the period of Alexander the Great. They generally trade like *Dows*, and are navigated by Arabs and the people of Cutch.

This singular and rude vessel, as well as the Arab *Dow*, is peculiarly adapted to the coasts of Arabia and Red Sea, which are subject to the periodical winds, during which these vessels are navigated with much ease.”

It is not known when this word first came into Marathi. The corruption of the Arabic *baghla*, as *bagla* is very natural, as the word *bagla* (a crane) is originally Marathi.

Batela (M)

MSK. A vessel of 50 to 500 *khandis* used by *Kachis* and *Kharvis* of Gujarat. Portuguese, *batela*. *Sashtichi Bakhar*. 11. The Portuguese went on board a *batela*-ship.

IPAL. “Batel (little boat). Konkani, Gujarati, Sindhi, *batelo*, Marathi, *batela*. Mathew points to the Sanskrit *vahitra* as the source word.”

GBP. XIII. ii. 718. “Botel is a large vessel found both on the Arab coast and in the Persian Gulf. According to Dr. G. Da Cunha, the word, like the Gujarat *batila*, and the Suaheli or Zanzibar coast *batilla* comes from Portuguese *batel*, a boat. This derivation is confirmed by Captain Low, who, without noticing the similarity of name, says, ‘The batil has more of the European form than any other Indian vessel. The after part shows the origin to have been Portuguese; they are said to be of the same shape as the vessel in which Vasco da Gama came to India.’ The Portuguese *batel* is the same as the French *bateau* and the Celtic *bat*. The word seems to belong to the east as well as to the west as it appears in the *bahita* of Java.”

GBP. XIII. ii. 719. It is a small fighting-vessel. It is a Gujarat boat. Like the Arab *botel* the word seems to be of Portuguese origin.

Barakani, Barakat, Barakin

MSK. A small boat, a pleasure boat. Portuguese, *barquinha*.

Bala (lya) v (N)

GBP. XIII. ii. 719. "Balav or Balyav is the Konkan fishing or racing boat. The word is apparently Indian — the same as the *balam*, a canoe."

MSK. A boat larger than *kodabi* (Portuguese origin?).

A *kodabi* is a big boat having an out-rigger.

Bathor

A Maratha ship (*Chitnisi Bakhar*).

Barakas, Bharakas (F)

MSK. A large cargo ship, a *mahagiri*.

✓ GBP. XIII. ii. 717. "Barkas is in general use in Thana in the sense of coasting craft. It includes such small vessels as the *machva* to which the term *galbat* is not applied. On the other hand, it does not include canoes; a *hodi* is not a *barkas*. According to Wagh or Head Patil of the Alibag kolis, a canoe or *hodi* is called a *barkin*. The origin of the words *barkas* and *barkin* is doubtful. The early Portuguese (1500-1510) in the straits of Babelmandeb found *barkas* applied to small boats attached to ships. In Europe also the *bark* was originally a small boat. As *barca* in Portuguese means a great boat and *barquinha* a little boat, the use of *barkin* near Cheul favours the view that the word came to India from the Portuguese. But as is noticed later, *bark* seems to be one of the boat names which the East and the West have common. *Barca* is used in the Latin writers of the 15th century, and two or three hundred years later *barga* and *barka* are the names of the Danish and Norman pirates boats."

The MSK traces the origin to the Persian *barkas*, *bar-kas* in Persian means a carriage or means of conveyance. The term in the last sense can be applied to a boat; anything that carries load or cargo. The word could be traced to *Skt. bhara*, load and *kas* from *Krs*, to drag.

Barajo

MSK. A boat. In Malavan this word is used for a boat with a red lantern. The origin is English, *barge*.

GBP. XIII. ii. 723. "The late Professor Dowson held that the English word *barge* came from the Arab *baraij*, a large vessel of war. He shows that unlike its modern representative, the old English *barge* was a vessel of trade and of war. As *barge* is the form which appears in several West European languages, the proof of borrowing by the West from the East is perhaps doubtful. But the fact of common possession remains."

Shorter English Dictionary on Historical Principles (1936) —
Barge (1) A small sea-going vessel with sails, specifically, one

next in size above a Balinger. Now used historically. (2) A flat-bottomed freight-boat or lighter, chiefly for canal and river navigation.

Arabic *barz*, originally an asse's saddle, thing upon which one rides.

Bot (F)

MSK. A small *galbat* or canoe, origin — *bote* Konkani ; *bota* Marathi ; *bote* Siamese ; *bot* Malay.

Arabic *Barz*, meaning originally an asse's saddle, thing which one rides.

IPAL. "In Konkani, as in Marathi *agabota* (lit. 'fire-vessel') signifies 'a steamship'. The cerebral *t* leads one to suspect that the original of the word is the English, 'boat', pronounced in the same way as the Portuguese *bote*. As Malay and Siamese have no cerebral *t* it is also possible that *bote* and *bot* are derived from the same English source."

It is a historic fact that the Portuguese were in contact with the Konkan coast for nearly a century before the arrival of the English. The Portuguese occupied Goa in A.D. 1510 and Bassein with its territories, islands and seas, was ceded to the Portuguese in 1534. So it is not improbable that the word *bot* should have come from the Portuguese *bote*.

Bhauvani (F)

A kind of ship often associated with the Portuguese.

SPD. XXIV. 55. A Portuguese *bhauvani* was proceeding from Goa towards the armada.

Machava (M)

MSK. A kind of small ship, a boat bigger than a *balav*. The Portuguese word is *manchua*.

IPAL. "(*Manchua*, a single masted vessel employed in the coasting trade of Malbar). Anglo-Indian, *Manchua*."

The origin of the Portuguese word is the Tamil-Malayal, *manji*. The Portuguese carried the word with them to different parts of Asia, and also used it of vessels other than those used in the Malbar trade. At Goa, for instance, it was used to designate a *gondola*, rowed however, and not pushed.

Sir Richard Temple in a note on the passage from Mundy quoted below says: "The term *manchua* has apparently been transferred to the far East by the Portuguese to represent the Cantonese term *man-ship*, a sea-going trading vessel."

Yule also lists *muchwa* in *Hobson-Jobson*, and assigns it to Marathi *machwa*, Hindustani *machua*, *machwa*, and gives it the

meaning of 'a kind of boat or barge in use about Bombay.' There can scarcely be any doubt that etymologically *manchua* and *muchwa* are the same words and have a common origin."

GBP. XIII. ii. 719. "*Machva* is of Sanskrit origin, as if *matsyavaha* or fish carrier. Except in Uran the Konkan *machva* is used not for fishing but in the coasting trade. The Gujarat *machwa*, a differently built boat from the Konkan *machva*, is used for fishing. *Machva* is also a general term in Gujarat for small craft of one and a half to ten tons (5.30 *khandis*)."

During the Maratha period the *machava* was a small war-vessel. JSSB. does not mention it in the list of war-vessels of Shivaji, however, Chitnis mentions it. *Skt. matsya* and *vaha*, a fishing craft.

SPD. XVI. 40. Seven *mahagiris* and two *machavas* belonging to the Portuguese, came from Uran. The *machavas* had two guns each on board.

Machhimari (F)

A fishing boat. *Machhimar* means fishing.

Manavar (N)

Corrupt form of man-of-war, used mostly for the European man-of-war.

Manja-ji (M-F) ✓

A kind of ship akin to a *machava*.

SPD. XXXV. 10. Four *manjis* belonging to the Government armada were carried away.

GBP. XIII. ii. 719. "*Manja* is said to be the same as *machawa*. The word is of doubtful origin, but apparently Indian. Mr. Whitworth states that the Gujarat *manja* is an undecked craft of the same shape bow and stern, and from thirty to seventy tons. (100-200) *khandis*, in capacity. The word is perhaps connected with *manji* a *hod*, in the sense of a load carrier."

Manja in Arabic means, any high place where one escapes a flood. It may therefore mean a ship of high gunwale.

MSK. *Manji* is a kind of *galbat*.

Mand

Probably a slow going vessel, from the adjective *mand* meaning slow, dull, of languid motion.

Mambad

Meaning of the word is not clear, though it is associated with the term *boat*.

Mahagiri (F)

GBP. XIII. ii. 719. "This is a larger *machava*. The origin is doubtful. According to MOLESWORTH (*Marathi Dictionary*), it

is the Sanskrit *mahagiri* that is a great hill, so called because of its bulk. This seems unlikely. Perhaps the word may be the Persian *mahi* fish and *giri* catch. The same word seems to appear in the class of Mangela fishermen who are found in Dahanu and in Salsette ; like the *machva*, the Thana *mahagiri* is a coasting trader not a fishing boat."

SPD. XVI. 40. Seven *mahagiris* and two *machavas* belonging to the Portuguese, came from Uran, smaller *mahagiris* had entered the creek.

From these quotations, and other references it seems that the word *mahagiri* or *mahamgiri* was applied to foreign as well as native vessels. Small *mahagiris* plied in the narrow creeks. Though the word means a fishing craft, it is not exclusively used in this sense.

In Persian *mih*, is great and *giri* is a mountain. *Mahagiri*, therefore, means a great mountain ; a ship looking like a great mountain, because of its bulk. Again, *mah* plus *gir* or *mah* plus *giri* may mean that catching or carrying a good deal of cargo.

Gir, the noun of agency suffixed to *mah*, means a doer of great things. In the case of a ship it means one dealing in great quantity of cargo. *Mah* plus *giri* from *girftan* to catch, meaning, a ship catching a great quantity of cargo, sounds reasonable. Also *mahigir* means a fishing craft, from *mahi* a fish and *gir*, to catch.

Mum

GBP. XIII. ii. 720. "*Mum* is of doubtful origin. It is apparently un-Sanskrit Hindu. *Mum* is used of a water vessel. The word suggests a connection with Mumbe or Bombay, Mumbe and Trumbe, Bombay and Trombay, forming one of the popular jingling name couplets. Molesworth notices a *mumbdā* or greater *mum*."

Mumba

A kind of galbat. MSK.

Vaghi (F)

A fast-sailing ship.

SPD. XXIV. 140. In all thirteen ships, 12 *galbats* and one small *vaghi*, were captured.

Sileposa-galbat (N)

An armed *galbat*. Arabic *Silah* + *posa*.

Sadak (F)

A kind of ship. May be from *Skt. Sarala*, straight.

SPD. III. 70. A *sadak* from Revadanda.

Sambuk

A small boat. GBP. XIII. ii. 721. "*Sambuk* is used in Kolaba as the small boat of a *patimar*. The word is also applied

to low-lying *baghlas* from Yemen. It is the Arab *sonbuk* or *sanbik*, perhaps, as opposed to the low *baghala*, from the Arab *sabk* fast or out-stripping. In Barbosa (1500, Stanley's ed. 5, 64-8, 171) *sanbucs* and *sambucos* are generally small vessels of the Malbar country. It occurs frequently in Vasco da Gama's three voyages (79, 80, 109, 246, 333). Early in the sixteenth century Varthema (Badger's ed. 154) described the *sambuchi* of Kalikat a flat-bottomed and Albuquerque (1510, Com. I. 108) described it as a Moorish boat. In the seventeenth century, this word was introduced by the Arabs into Spain, and has been adopted as *Xabeque* into several European languages. (TAYLOR'S *words and places*. 443)."

Sambuka in Arabic means a small boat, a pinnace, and in Persian a small ship. So, either of these words, seems to be the ancestor of the Marathi *sambuk*.

Sibad (F)

A ship often associated with the Portuguese. *SPD*. XXXV. 13. The Portuguese have kept ready four *sarais* and some *palav galbats*.

Sibad (F)

MSK. A kind of vessel, a big *machava*, a boat bigger than a *suval*.

JSSB. mentions the word in the general list of Shivaji's armada.

SPD. XVI. 83. As for the news on this side, forty *sibads* and two *pals* reached as succour to Mahim. From these and other references, it can be concluded that *sibad* was a cargo ship, though often armed like a merchantship of the Marathas for defence.

GBP. XIII. ii. 720. "*Shybar*, apparently the Persian royal carrier, *shahibar* is a great *patimar*. The Gujarat form is *chibar*."

✓ *Suva* (I) *la*

MMED. *Suval*, a vessel of 100 to 150 *Khandis* burden, slightly different from a *patimar*.

GBP. XIII. ii. 720. "*Suval* is said to be a south Konkan name for the *machava*. The word is apparently Indian."

MSK. The flat part of the stern.

Hodaki, Hodake, Hodage
(F or N)

MSK. A canoe, a boat having 3 to 5 masts. *Skt. hod*, to go; *hodi*, a canoe.

Hodaga is an Alibag name for a *patimar*. The word is of Kannada origin. For the discussion of this word see *GBP*. XIII. ii. 719.

■ ■ ■

APPENDIX B-2

WORDS REGARDING THE EQUIPMENT OF A SHIP

(MASTS, SAILS, YARDS ETC.)

<i>Akat-avadan</i> (N)	Heavy goods or material on board a ship.
<i>Adavani</i> (F)	MSK. A plank joining together two other planks.
<i>Adavan</i> (F)	Weather boarding (collected from Deogad Taluka, Ratnagiri District).
<i>Adavani</i> (F)	See <i>adavan</i> .
<i>Adaras</i> (M)	A rope passing through a block to hoist the mainsail ; a rope used for the mainsail.
<i>Alat</i> (N)	MSK. Blade of an oar ; a rope to drag vessels ashore. <i>Skt. aritra. Pkt. alitta. Arabic alat.</i>
<i>Alath</i> (M)	MSK. A cable.
<i>Avajar</i> (N)	MSK. The main lateen sail. Arabic, <i>auzar</i> .
<i>Avadar</i> (N)	See <i>avajar</i> .
<i>Avale</i> (N)	MSK. An oar, <i>Skt. a + val. Pkt. avallaya, avallaka.</i>
<i>Asaman</i> (N)	See <i>astaman</i> .
<i>Astaman</i> (N)	MSK. The lowest timber in the centre of a ship in which the mainmast is fixed. <i>Skt. a + stambhana.</i>
<i>Akada</i> (M)	MSK. A hook.
<i>Ade</i> (N)	MSK. A big beam in the middle of a ship supporting the mast, the keel. <i>Skt. atta, kannada adda.</i>
<i>Adhi</i> (F)	Small wooden beams nailed on either side of a ship to tighten the planking. (DDM. May 1940).
<i>Adhe</i> (N)	MSK. A long beam used for ceiling. It is at the middle of the roof.
<i>Araye-Karane</i>	To furl, or fold the sail (DDW. May 1940).
<i>Arasa</i> (M)	An oblong rope (Bankot).
<i>Avadi</i> (F)	MSK. Helm, tiller. <i>Skt. avrt. Pkt. avatta</i> to turn.

<i>Ikhali-yari</i> (F)	A rope to hoist the sail.
<i>Idali</i> (F)	Pulley-rope.
<i>Idarus</i> (M)	A rope to hoist the mainsail running through blocks. (DDM. Jan. 1941). A rope tied to the yard and passing through a block.
<i>Idarus-yari</i> (F)	A rope to support a mast, a rope to hoist a sail.
<i>Idalis</i> (F)	A cord.
<i>Idalis-haza</i> (M)	See <i>ikhali-yari</i> .
<i>Indrus-yari</i> (F)	MSK. A rope to hoist a sail, to support a mast.
<i>Ubhe</i> (N)	A thowl in the bow (collected from Bankot).
<i>Ulandi</i> (F)	MSK. An outrigger. <i>Skt.</i> <i>ut + lunth</i> <i>Pkt.</i> <i>ullund</i> , or <i>Skt.</i> <i>ut + lut.</i> <i>Pkt.</i> <i>ulluta</i> .
<i>Kachi</i> (F)	Bamboos supporting the weather boarding on either side of a ship. (DDM. March 1941).
<i>Kappi</i> (F)	MSK. A pulley. <i>Tel.</i> <i>kappi</i> = wheel.
<i>Kabila</i> (M)	MSK. A long iron nail used for fixing the cross beam in the keel. (DDM. March 1941).
<i>Kalabi, Kalambi, Kalambi</i> (F)	MSK. The aftermost sail. Arabic. <i>Kalb</i> = middle ?
<i>Kalabi-gavi</i> (F)	The aft-sail.
<i>Kalabu-kānde</i> (N)	The sail on the middle mast.
<i>Kalami</i> (F)	MSK. The mast behind the main or the aft-sail.
<i>Kalaphati</i> (M)	Caulker.
<i>Kahebi</i>	Stern-sail.
<i>Kalaskathi</i> (F)	The main or the fore-mast (DDM. May 1940).
<i>Kantali</i> (F)	Edge or rim (DDM. Sept. 1940).
<i>Kand</i> (N)	MSK. A rope to hoist the sail, a rope tied to the yard, a rope supporting the mainmast. It runs through blocks and pulleys. A rope to hoist the yard on the mainmast.
<i>Kandi</i> (F)	MSK. A beam joining the stern and stem posts ; the first planks are set in this beam.
<i>Kataran</i> (N)	Saw dust applied to the masts and yards.
<i>Kari</i> (F)	MSK. Resin. MMED. Gum copal, gum anime mixed with oil.

<i>Kintan</i> (N)	Jute canvas for sails. Arabic <i>Katana</i> , <i>Kitana</i> .
<i>Kuchar</i>	To entwine the two ends of a string or a rope. (DDM. Jan. 1941).
<i>Kunaye</i> (N)	Place in the gunwale-line for the shrouds. (DDM. Jan. 1941).
<i>Kurava</i> (N)	MSK. Supporting V shaped angles of timber in the bow.
<i>Kuravak</i> (M)	See <i>kurava</i> .
<i>Kuryo</i> (F)	Angular beams in the bow (DDM. March 1941). The foremost angular beam in the bow.
<i>Kud</i> (M)	MSK. Awning <i>Skt. kudya</i> , <i>Pkt. kudda</i> .
<i>Kedali</i> (F) or <i>Kedati</i>	A semi-circular pulley-like instrument to keep the yard close to the mast.
<i>Kavar</i> (F)	A wedge or nail.
<i>Kevin</i> (N)	Cabin.
<i>Khatara</i> (M)	Frame of a ship.
<i>Khambauti</i> (F)	A strong rope to suspend the anchor when weighed (DDM. Jan. 1941).
<i>Khar</i> (F)	Inner bottom of a ship (DDM. Jan. 1941). MSK. Strewn wooden pieces in the hold to protect the cargo from water.
<i>Kharamal</i> (F)	MSK. Place where the rope of a sail is fastened. A movable beam.
<i>Khaj</i> (F)	Holes in the gunwale-line for thowls (DDM. Sept. 40).
<i>Khadya</i> (F)	Canvas.
<i>Khanda</i> (M)	MSK. Beams extending the stem and stern-posts. <i>Skt. skandha</i> , <i>Pkt. khandha</i> .
<i>Khap</i> (F)	A semi-circular groove in the main beam of a ship (DDM. May 1940).
<i>Khamb-pinjari</i> (F)	Supporting timbers on either side of the aftermost mast.
<i>Khur (ra) m (alat)</i> (M)	MSK. Cable.
<i>Khopa</i> (M)	Joint of the keel and the stem-post (DDM. March 41).
<i>Khor</i> (M)	Joint of the keel and the stern-post (DDM. March 41).

<i>Gai</i> (F)	A rope to secure the sail on the yard after furling it.
<i>Gachi</i>	The act of furling (<i>DDM</i> . May 1940).
<i>Gamat</i> (N)	<i>MSK</i> . Place where the sea-water oozing through the planks accumulates in a ship.
<i>Gamat-karane</i>	To admit water through the planks.
<i>Gay</i> (F)	A cord on the mizzen-mast to tie the mainsail after furling it. (<i>DDM</i> . Jan. 1941).
<i>Gabadi</i> (F)	<i>MSK</i> . A hole, a chink in the ship.
<i>Gala</i> (M)	A groove just below the tip of a mast for fixing a pulley (<i>DDM</i> . May 1940).
<i>Gavi</i> (F)	A rope on the yard to secure the sail when furled. <i>MSK</i> . Top-most sail of the mainmast, sky-sail.
<i>Gudadi</i> (F)	A rope by which the rudder is slung to the ship (<i>DDM</i> . Sept. 1940).
<i>Ghamat</i> (N)	See <i>gamat</i> .
<i>Ghodi</i> (F)	A wooden board hung outside the ship used as a latrin. Place of the flag-staff on board a ship (<i>DDM</i> . Jan. 1941). <i>MSK</i> . An arch in the stern supporting the aftermost mast.
<i>Ghos</i> (M)	<i>MSK</i> . Portion of the sail near the bow-end, and of the yard near the bow which is thicker than the other one. To set sail in the lee-ward direction. <i>Skt. ghosa. Per, gusa</i> . A cord to tighten the end of a sail on the bow-sprit. In a lateen-rigged sail, the yard is hoisted obliquely and one end of it comes down. The edge of the sail below this lower end is known as <i>ghos</i> (<i>DDM</i> . May 1940).
<i>Chavata</i> (M)	Canvas.
<i>Chaut</i> (F)	A rope or cord (<i>DDM</i> . March 1941).
<i>Chapane</i>	To hoist the sail, to set sail (<i>DDM</i> . May 1940).
<i>Charani</i> (F)	Rope or cable for small anchors.
<i>Chalani</i>	See <i>charani</i> .
<i>Chumbal</i> (F)	A cord to suspend the oar by the thowl (<i>DDM</i> . Sept.)
<i>Chulait</i> (N)	<i>MSK</i> . A thowl to suspend the oar.

<i>Chuladan</i>	<i>MSK.</i> Hearth on board a ship (<i>Cula + dana</i> , Persian).
<i>Chauk</i> (M)	Rectangular frame of the outrigger (<i>DDM</i> , May 40).
<i>Jigha</i> (F)	A string passing through the sewn portion of two longitudinal sections of a lateen sail (<i>DDM</i> , May 40).
<i>Jibhanaja</i>	A rope to hoist the jib. Used at Bankot.
<i>Jibhange</i> (N)	<i>MSK.</i> A piece of canvas.
<i>Jibh</i> (F)	Jib-sail.
<i>Jerip</i> (M)	Kelson.
<i>Zadi</i> (F)	<i>DDM</i> , Jan. 1941. A beam running over the cross-beams. <i>MSK.</i> A small beam joining the extended portion of a cross-beam and the side of a ship. A plank running over the cross-beams.
<i>Zap</i> (M)	Palm-matting used for awning.
<i>Zelati</i> (F)	<i>MSK.</i> A cord or rope by which the edge of a sail is fastened to the side of a ship.
<i>Tangare</i> or <i>tangul</i>	See <i>tangali</i> .
<i>Tapar</i> (M)	<i>MSK.</i> Weather-boarding on either side of a ship to protect it from the sea-water (<i>tapa</i>).
<i>Takani</i> (F)	<i>MSK. DDM</i> , Sept. 1940. A kind of small anchor ; the act of going against the wind by the use of an anchor and a rope. The anchor is taken on board a rowing boat against the wind. The anchor is tied by a rope, the other end of which remains on the ship. The ship then can go against the wind by pulling the rope.
<i>Take</i> (N)	Water tank. <i>Skt.</i> tank to build ; English, tank.
<i>Tangali</i> (F)	A small stick inserted in the rope to keep it twisted (<i>DDM</i> , May 1940).
<i>Daphara</i> (M)	Circular bundle of cords used as a spring or buffer hung on both sides of a ship.
<i>Dalaka</i> (M)	See <i>tangali</i> .
<i>Dere</i> (M)	Planks parallel to the keel to strengthen the ship. Obtuse angled cross-beams put in the bow. (Collected from Deogad).

<i>Delake</i> (N)	A peg to fasten the sail.
<i>Dol</i> (F)	<i>MSK.</i> The mainmast. <i>Hin. dola. Skt. dola.</i> A small net for fishing.
<i>Dol-kathi</i> (F)	A mast.
<i>Dolachi</i> (F)	A small triangular sail.
<i>Dol-javasa</i> (M)	The jib-sail (<i>DKA.</i> p. 394).
<i>Dole</i>	Hole pin.
<i>Daur</i> (M)	<i>MSK.</i> A wheel or contrivance to weigh the anchor. Outer part of a ship.
<i>Takta</i> (M)	A plank.
<i>Tani</i> (F)	A cord tied to the helm.
<i>Tabak</i> (N)	Deck.
<i>Taj</i> (M. F.)	<i>MSK.</i> A bamboo pole for propelling a ship in shallow waters when the sail is of no use.
<i>Tadache</i> (V)	<i>MSK.</i> To row.
<i>Tadani</i> (F)	A cord.
<i>Tarani-pipa</i> (N)	A buoy.
<i>Tivada</i> (M)	A beam parallel to the keel and resting on the timbers supporting the two masts. Timbers supporting the masts.
<i>Daman</i> (N)	<i>MSK.</i> A brail, a sail, part of the sail coming near the mast, the leegage. <i>Skt. dama,</i> a rope. <i>Per. daman.</i> A rope to fasten the end of a sail near the mast. The lower edge of the last longitudinal section of a sail — this section is verticle.
<i>Dastur</i> (F)	<i>DDM.</i> Jan. 1941. A cord to tighten the sail. This comes near the rudder.
<i>Data</i> (M)	<i>MSK.</i> A platform in the bow. Cooking is done under this ; thowl.
<i>Danda</i> (M)	<i>MSK.</i> Rectangular or circular wooden rim nailed to the outer side of a ship below the gunwale-line and running from end to end. <i>Skt. danda,</i> Hindi, <i>danda, danda.</i> A sand-bar at the mouth of a creek.

<i>Dudavak</i> (N)	<i>MSK.</i> A short cross-beam.
<i>Durabinit</i> (N)	See <i>Durmin</i> .
<i>Duramin</i> (F)	<i>MSK.</i> Thick planks fixed above the cross-beams.
<i>Durabhed</i> (dh) (F)	A long beam.
<i>Duramit</i> (F)	See <i>Duramin</i> .
<i>Duramedh</i> (F)	A long beam.
<i>Nangar</i> (M)	Anchor.
<i>Nade</i> (N)	Sheet.
<i>Nal</i> (F)	<i>MSK.</i> Bow. <i>Skt.</i> <i>nala</i> .
<i>Nirim</i> (M.N.)	<i>MSK.</i> Ballast.
<i>Nilim</i>	See <i>nirim</i> .
<i>Nisan</i> (N)	Ensign.
<i>Nisan-ekajbhi</i> (<i>dujibhi</i>) (N)	Ensign having one or two strips.
<i>Patan</i> (N)	A beam at the bottom of a ship, the keel.
<i>Patari</i> (F)	<i>MSK.</i> A plank. <i>Skt.</i> <i>pattika</i> .
<i>Patali</i> (F)	Planks for the gangway.
<i>Pathan</i> (N)	The keel.
<i>Pathar</i> (N)	<i>MSK.</i> Bottom of a ship.
<i>Patinga</i> (M)	<i>MSK.</i> A stout or long oar.
<i>Paranal</i> (F)	Rectangular groove cut in the stern-post to fix the rudder.
<i>Paranalika</i> (F)	See <i>paranal</i> .
<i>Paraba</i> (<i>bha</i>) <i>na</i>	<i>MSK.</i> A yard. Hindi <i>parabana</i> ; <i>Per Parban</i> , painted China silk.
<i>Paraban-gavi</i> (N)	Top sail of the mainmast.
<i>Paka</i> (<i>ka</i>) <i>r</i> (M)	<i>MSK.</i> and <i>DDM.</i> May, 1940. A lengthwise section of a sail usually 9 to 12 inches in length.
<i>Pag</i> (M)	A rope for towing a canoe.
<i>Pat</i> (M)	Upper edge of a yard when obliquely set, blade of an oar. <i>Skt.</i> <i>patra</i> .
<i>Par</i> (M)	<i>MSK.</i> A timber in the bottom of a ship in which the mast is set. Part of a rock submerged under the sea.

<i>Parapo</i> (M)	Rafts supporting the weather-boarding.
<i>Pavada</i> (M)	<i>MSK.</i> An anchor.
<i>Pavade</i> (N)	A beam in the bow. (<i>DDM.</i> Sept. 1940).
<i>Pinjari</i> (F)	Rectangular frame for fixing the flag-staff.
<i>Peracha-ja</i>	Planks supporting the weather-boarding.
<i>Perachi</i> (F)	Side timber. <i>Skt. per.</i>
<i>Peraj</i> (F)	<i>MSK.</i> Rectangular strip of planks on the gunwale-line.
<i>Pev</i> (F)	<i>DDM.</i> March 1941. Pegs supporting the weather boarding.
<i>Porke-kya</i> (N)	<i>MSK.</i> A small mast or sail behind the mizzen and near the rudder. This is third in order.
<i>Phalati</i> (F)	Steering paddle.
<i>Phugav</i>	<i>DDM.</i> Sept. 1940. Dining room on board a ship.
<i>Phurar</i>	<i>DDM.</i> Jan. 1941. Lacing of a rope at particular points by a thin string so that it should not be worn out by friction at such points.
<i>Pheni</i> (F)	<i>DDM.</i> May 1940. A prop in the framework of an outrigger.
<i>Phogi</i> (F)	A bow-room (used at Bankot). <i>MSK.</i> A jib-sail.
<i>Phor</i> (M)	<i>DDM.</i> March 1941. A beam supporting the keel. <i>MSK.</i> Beam supporting the stem and stern posts.
<i>Batan</i> (N)	<i>MSK.</i> Wooden pieces to fill up the cavity between the first planks above the keel and the cross-beams.
<i>Batena</i> (M)	A beam above the keel.
<i>Baras</i> (N)	<i>DDM.</i> May 1940. A rope to secure the end of a yard.
<i>Badadi</i> (F)	<i>MSK.</i> A cord to suspend an oar by the thowl.
<i>Bap</i> (M)	A rope.
<i>Bavakan</i> (M)	<i>DDM.</i> May 1940. Arched arms of an out-rigger.
<i>Bavakand</i> (N)	See <i>bavakan</i> .
<i>Budhadha</i> (N)	A rectangular sail which is always set breadthwise, that is, its breadth is verticle when set. The uppermost sail on the main-mast. It is set in a storm. A storm-sail.

- Burka* or *Burkhat* (N) Storm-sail (Arabic, *Burkha* a veil).
- Buranda* (M) See *budhadha* (DDM. January 1941).
- Bulir* (F) MSK. A rope fastened to the lower end of a yard for its movements.
- Buleti* (F) MSK. A thowl.
- Bodad* (N) Broadside.
- Bond* (N) DDM. May 1940. Short and thick end of a sail.
MSK. End of a sail below the lower end of a yard.
- Bond-yari* (F) MSK. A cord tied to the corner of a sail in order to set it.
A pulley in the tip of a yard.
- Bomb* (N) A jib-sail, a bow-sprit.
OID. *Skt.* bahuṣ. *Du.* boeg. *Da* boug.
- Bomb (bom) patali* (F) MSK. A beam in the bow to fix the bow-sprit.
- Bomb-batali* (F.M.) A rope to hoist the jib, it passes over the pulley in the tip of the mast. See *jibhanaja*.
- Bomb-haja* (M) A rope on the bow-sprit.
- Bheraye* (F) A spare rope (DDM. September 1940).
- Bhal* (F) A beam.
MSK. Space between two cross-beams near the mast.
DDM. January 1941. Space at the bottom of a ship where the sea-water accumulates.
- Bhurada* (M) MSK. Prow-head. A pulley fixed in the prow to weigh the anchor. A piece of wood in the bow.
- Bhoy* (M) MSK. Beams supporting the masts, they are three for the three masts.
Also buoy.
- Materi-li* (F) MSK. A rope for the jib.
A rope for the yard of the mainmast.
DDM. May 1940. A rope to keep the yard oblique when the sail is set.
- Mayal* (F) MSK. A beam.
- Mayas* A beam for the cabin.

<i>Marakh</i>	A rope on the yard. A rope on the yard to hoist the flag. A cord to stretch the edge of a sail. (Collected from Bankot).
<i>Masturi</i> (F)	DDM. March 1941. Jute cord to tighten the planking before it is finally bolted. This cord passes through the holes made in the planks.
<i>Mastur</i> (F)	MSK. A jute cord. One end of this is thicker than the other.
<i>Mastul</i>	MSK. A mast.
<i>Mach</i> (M)	DDM. January 1941. A crane. Shrouds of the mainmast (Bankot).
<i>Machan</i> (F)	MSK. The act of changing the sail to change the direction of a ship.
<i>Mach-dene-ghene</i>	MSK. To steer the ship against the wind in a zigzag manner.
<i>Mandi</i> (F)	Timber joining the stern or stem-post to the keel. (Collected from Deogad).
<i>Mulaki</i> (F)	MSK. The first planks above the keel.
<i>Medhi-dhe</i> (FN)	MSK. A stump supporting a beam.
<i>Mhal-adhi</i> (F)	DDM. May 1940. The main beam set in the middle of a ship.
<i>Yari</i> (F)	MSK. A crane.
<i>Ramajan</i>	DDM. January 1941. A small pulley fixed at the middle of the mainmast.
<i>Roja</i> (N)	Stem and stern posts. They are set in the keel.
<i>Roza</i> (N)	DDM. May 1940. A pulley below the tip of the mainmast.
<i>Royali</i> (F)	MSK. A small anchor. It has five curved hooks.
<i>Lakhalakhi</i> (F)	DDM. May 1940. The last longitudinal section of a sail running between the upper end of the yard and the lower end of the sail.
<i>Latadani</i> (F)	See <i>latarani</i> .
<i>Latarani</i> (F)	MSK. A rope to hoist the jib-boom.
<i>Labaran</i> (N)	MSK. Shrouds of a mast.
<i>Lais</i>	DDM. January 1941. Brails of the jib-sail.
<i>Lais karane</i>	To row against the direction in which the ship is sailing.

<i>Loi(ya)li</i> (F)	<i>MSK.</i> A kind of small anchor.
<i>Lhanja</i>	The tip of a bow-sprit.
<i>Vara</i> (M)	<i>MSK.</i> The stern.
<i>Varama</i> (N)	The stern.
<i>Vari</i> (F)	<i>MSK.</i> A cord tied to the anchor along with the cable, for emergency.
<i>Vare</i> (N)	<i>MSK.</i> Stern.
<i>Vale-lhe</i> (N)	<i>MSK.</i> An oar, a sweep. (<i>Skt. vol</i>).
<i>Volan</i> (N)	<i>DDM.</i> May 1940. A three-stringed rope used in the frame of the outrigger.
<i>Vak</i> (N)	<i>MSK.</i> A cross-beam, a thwart.
<i>Vat-dharane</i>	<i>DDM.</i> May 1940. To furl the sail.
<i>Vasaru</i> (N)	A short wooden stick tied to the rope of a sail.
<i>Vasa</i> (M)	<i>MSK.</i> A bamboo-pole. <i>Skt. vamsa</i> .
<i>Siki</i> (F)	Brails (<i>DDM.</i> May 1940). <i>MSK.</i> A rope to bind the sail when folded.
<i>Shivaji</i> (M)	<i>DDM.</i> May 1940. A rope to secure the rudder to a ship. <i>MSK.</i> A rope to secure a yard to the mast. A short thick rope tied to the side of a ship and to the bow-sprit. It is used for lifting up load aboard a ship.
<i>Shid</i> (N)	<i>MSK.</i> A sail. <i>Skt. Sita + pata</i> .
<i>Sakati</i> (F)	<i>MSK.</i> A bamboo pole.
<i>Sati</i> (F)	<i>MSK.</i> Bamboo matting.
<i>Sadi</i> (F)	<i>MSK.</i> A pillar supporting the mast at the bottom.
<i>Sabai</i> (F)	Fore-stay of the mainmast.
<i>Sar</i>	A rope of the block.
<i>Sar-kand</i> (N)	<i>MSK.</i> A string securing the sail on the yard.
<i>Sar-dupai</i> (F)	A rope to make the yard steady.
<i>Sar-dupai-yari</i> (F)	Pullies of the yard-rope.
<i>Sara-vara-odhane</i> (Verb)	<i>DDM.</i> May 1940. To wrap the sail round the yard.
<i>Sid</i> (N)	A sail.

<i>Sid-kalabiche</i> (N)	Sails of the second mast in a three-masted ship. This mast has two sails, the lower and the upper. The lower is called <i>dolaci</i> and the upper <i>kalabi</i> .
<i>Sidakand</i> (N)	A rope of the yard passing over the wheel in the tip of the mast.
<i>Sida-kambi</i> (N)	Sail of the bow-sprit.
<i>Sida-dupetane</i> (Verb)	To furl the sail.
<i>Sida-pan</i> (N)	Sail of the mizzen-mast or mizzen-sail.
<i>Sida-phogi</i> (N)	Jib-sail.
<i>Sida-bamb</i> (N)	Jib-sail.
<i>Sukanu</i> (N)	The rudder. <i>Skt. sukarna</i> ; Arabic <i>sukkan</i> .
<i>Sukanu-bave</i> (N)	Helm, tiller.
<i>Sera</i> (M)	A rope for towing.
<i>Selane</i> (N)	DDM. September 1940. A cylindrical wooden pot of bamboo for bailing out water accumulated in the bottom.
<i>Sora</i> (M)	MSK. A wooden cork, stopper to fill up a whole.
<i>Sola</i> (M)	MSK. A strong rope.
<i>Harasa</i>	A circular rope or string.
<i>Halis</i> (M)	Streeing paddle.
<i>Halesa</i> (M)	MSK. An oar.
<i>Halensi marane</i>	To row a ship in a particular manner.
<i>Hakane</i>	To set sail.
<i>Hanja</i> (M)	MSK and DDM. January 1941. A rope passing through the hole at the tip of the bow-sprit for hoisting the jib.
<i>Handi</i> (F)	MSK. Part of the stern above water.
<i>Het</i> (F)	MSK. South.
<i>Heti</i> (F)	A thick rope.
<i>Hodar</i>	MSK. Act of tightening a rope.

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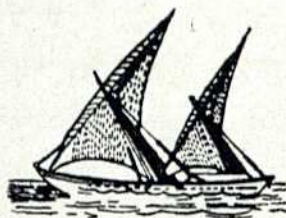
APPENDIX B-3

TERMS REGARDING THE SEA, THE WIND, CREW ETC.

<i>Avakhanda</i> (M)	Sea-breeze.
<i>Atala-vara</i> (M)	The east-wind ; coming from the east.
<i>Utar-bandar</i>	Harbour for unloading.
<i>Utaracha-vara</i>	Favourable wind ; wind coming from the north.
<i>Udhan</i> (N)	Full-tide on the full moon day as well as on the new moon day. <i>Skt. Utthana ; Pkt. Uttana ; Sindhi Udhanu.</i>
<i>Uparacha-vara</i> (M)	Periodical wind, wind coming from the north.
<i>Kapitan</i> (M)	Captain of a ship (Eng. Captain).
<i>Kagaricha-vara</i> (M)	South-west wind.
<i>Kadani</i> (M)	Stolen property on board a ship. (DDM. March 1941).
<i>Kata</i> (M)	MSK. Rock submerged under water either in the sea or a river.
<i>Kalim</i> (M)	Cook on board a ship. Arabic.
<i>Kinara</i> (M)	MSK. Shore, coast, sea-board. Persian.
<i>Kiblenuma</i> (M)	A mariner's compass (Arabic <i>Kiblenuma</i>).
<i>Kutra</i> (M)	A strong circular rope with iron hooks to lift heavy objects.
<i>Kaul</i> (M)	A permit.
<i>Kaulavan</i> (F)	MSK. Shipping charges ; permit for sailing.
<i>Khala (sh) si</i> (M)	A sailor, a seaman.
<i>Khambya</i> (M)	An expert who climbs the mast for setting or furling the sail.
<i>Chota-ti-te</i> (M.F.N.)	MSK. Reflux of tide or ebbing. <i>Skt. ava + ghata ; Pkt. ohatta, otu.</i>
<i>Dhada</i> (M)	MSK. A roofed place for a ship on the shore.
<i>Nast</i> (N)	MSK. A line of hilly land washed by the sea ; a sand-bar at the mouth of a creek ; passage from a creek to the sea.

<i>Nad</i> (F)	<i>MSK.</i> A rope (<i>DDM.</i> January 1941). A cylindrical bamboo pot.
<i>Nahat-hone</i>	To go, to sail.
<i>Nikhar</i> (F)	Neap-tide.
<i>Nivat</i> (F)	<i>MSK.</i> A calm at sea. <i>Skt. nirvata.</i>
<i>Nor</i> (M)	<i>MSK.</i> Freight.
<i>Pagar</i> (F)	A canoe for towing, or a fishing a boat.
<i>Pathacha-vara</i> (M)	Favourable wind, wind coming from the stern.
<i>Pani-jokhane.</i>	To sound the sea.
<i>Pelani</i> (F)	Bamboo spars.
<i>Poyasicha-vara</i> (M)	<i>MSK.</i> North-west wind.
<i>Bandar</i> (N)	<i>MSK.</i> A port, a landing place. Persian <i>Bandar.</i>
<i>Bara</i>	Space opposite or contiguous to the mouth of a harbour or any portion of the coast.
<i>Baheracha-vara</i> (M)	West-wind.
<i>Bhandari</i> (M)	<i>MSK.</i> Cook on board a ship ; a sailor.
<i>Bharati</i> (F)	<i>MSK.</i> Full-tide (<i>Skt. bhr.</i>).
<i>Bhang</i> (M)	<i>MSK.</i> Ebb-tide on the eighth day of the bright and dark fortnights. <i>Skt. bhanga.</i>
<i>Matalai-ya</i> (F)	<i>MSK.</i> The east wind. This wind usually blows in the morning on the Konkan coast from the land towards the sea. Land-breeze.
<i>Matsya-yantra</i> (N)	An instrument of olden-times indicating directions ; a compass.
<i>Matan</i> (F)	<i>DDM.</i> May 1940. Wind-ward side. <i>MSK.</i> To change the direction of the sail.
<i>Malim</i> (M)	Captain of a ship, helmsman.
<i>Mudat</i> (N)	<i>MSK.</i> A led ball for sounding the sea. <i>DDM.</i> January 1941. A flask for measuring water.
<i>Mauj-ja</i> (F.M.)	<i>MSK.</i> A wave, billow, surge (Arabic <i>mauja</i>).
<i>Renol</i> (F)	A hybrid race employed in the Portuguese navy.
<i>Lat</i> (F)	<i>MSK.</i> A wave.

<i>Lanj</i> (F)	Shore.
<i>Lesā</i> (Adj.)	Fully equipped ; used for a well-equipped ship.
<i>Vasād</i> (M)	<i>MSK.</i> Spray created by the dashing of waves. <i>Skt. utsr, utsara.</i>
<i>Shakarane</i>	To cover a ship during the rainy season.
<i>Satami</i> (F)	<i>MSK.</i> A permit, a certificate showing that the articles on board a ship have been inspected.
<i>Sama</i> (F)	<i>MSK.</i> The time of full-tide ; the motionless state of the sea for some 12 minutes when the moon is at its zenith.
<i>Sataras</i> (M)	<i>MSK.</i> North-east wind. <i>Skt. Saptarsi.</i>
<i>Sat-var</i> (F)	<i>MSK.</i> A particular wave. The Indian sailors take it as the seventh wave counted from the first, which pushes the water to the highest point every time it neaps.
<i>Sarang</i> (M)	<i>MSK.</i> Captain of a ship, a sailor. <i>Per. saranga.</i>
<i>Siphar</i>	Polish
<i>Hisadi</i> (da) (For M)	Surging of a wave.
<i>Het</i> (F)	<i>MSK.</i> The south ; southern Konkan, or the part south of the river Savitri in Konkan. <i>Pkt. heththa ; Guj. hetha ; Skt. Adhastha.</i>
<i>Hetacha-vara</i> (M)	South wind.
<i>Hodi-mandane</i>	To have a favourable wind. <i>Skt. Hod, to go.</i>



APPENDIX C-1

A NUMBER of interesting items pertaining to the naval *subha* of Vijaydurg in charge of Anandrao Dhulap are given in this appendix. It contains abstracts from the budgets sanctioned for A.D. 1764, A.D. 1767 and a few subsequent years of the said *subha*. In addition, this appendix includes relevant extracts taken from the account papers called '*zadati*', yielding details of naval administration.

The opening pages of this appendix inform us about the sums sanctioned for the widows and orphans of those who died on duty at sea, money distributed to the crew as presents on the occasion of public festivals such as the full moon day of *Shravan*, *Janmashtami* (birth day of Lord Krishna), *Ganesh Chaturthi* (fourth day of the bright fortnight of *Bhadrapad*), the *Dasara* and the *Holi*. When a *gurab* or a *galbat* was launched into the sea after the rains, cocoanuts were cracked and goats sacrificed to appease the deity supposed to be governing the boisterous sea.

The *Pir Husen Darga* of Vijaydurg found very propitious was given a special sanction of Rs. 25. The Maratha Government freely sanctioned money for the Muslim *Pir*.

The *pals* were the biggest of the Maratha battle-ships. For the repairs of the *pals* *Samsherjang* and *Phatejang* of the Vijaydurg port a sum of Rs. 10,000 was sanctioned. In order to carry out the repairs a new dock was to be constructed at *Girya* i.e. the famous *Gheria*. For the construction of a new *vaghi* (a kind of fast-sailing boat) Rs. 1,000 were sanctioned. A *batela* was purchased for Rs. 2,000 and converted into a *gurab*, costing Rs. 5,000. The material of old ships such as wood and iron, was taken out and reutilised in the construction of new ones.

Among other items of repairs appear, the naval stores, the masts, the hulls of ships dragged ashore, sails and beams of teak.

A large quantity of palm branches was required to protect the navy taken ashore, from rains during the monsoon.

Guns boomed from board the ships as they sailed along the coast to appease the various well-known deities. Costly presents were given by the Maratha ships to the friendly powers when they sailed into their (the latter's) ports.

The construction of a crane or a wheel called '*Topikarache kalasicha rahat*' i.e. a kind of crane or wheel utilised by the English (*Topikar*), undertaken by the Marathas shows their eagerness to fit it on their ships. The estimated cost of this device was Rs. 4,000, and it was expected to save time wasted otherwise in the act of loading and unloading goods. It also helped keeping the broadsides undamaged. The Marathas were eager to have the scientific devices of the English for the improvement of their navy.

Other important items are also given hereunder. It may be observed that a number of letters in this appendix could not be dated accurately though they belong to the period between A.D. 1764 and A.D. 1780.

All these extracts are taken from the unpublished documents in the *Peshwa Daftar* or the Alienation Office, Poona. The abbreviation R. No. stands for the *Rumal* number or the bundle number. The first figure following R. No. naturally stands for the *Rumal* number i.e. the bundle number, and the second figure after the oblique line wherever given, for the folio number.

At the right-hand side of the extracts in this appendix, their numbers are given for ready reference.

R. No. 490

[Extract 1]

Rs.

- | | | |
|-----|----|--|
| 329 | .. | Amount sanctioned for the widows and the orphans of those who died in the attack on the island of Underi and Kasa. |
| 500 | .. | For the medical treatment of those who sustained injuries in action. |

Money distributed on the occasion of festivals :

Rs.

- | | | |
|-----|----|--|
| 125 | .. | Alms given. |
| 10 | .. | Presents given on the full moon day of <i>Shravan</i> . |
| 7 | .. | Presents given on the birth day of Lord Krishna— <i>Janmashtami</i> . |
| 1 | .. | <i>Ganesh Chaturthi</i> festival. |
| 15 | .. | Amount spent for purchasing goats offered while worshipping the <i>gurabs</i> on the <i>Dasara</i> festival. |
| 30 | .. | Expenditure for distributing beitel etc. |
| 25 | .. | Money spent for pushing the <i>gurabs</i> and the <i>galbats</i> into the sea. |
| 50 | .. | Sanction for the purchase of goats for the <i>sarang</i> (captain) and others. |
| 25 | .. | For the <i>Pir</i> of <i>Kandori</i> . |
| 50 | .. | For god <i>Sarangadhara</i> (Vishnu). |

These items of expenditure are given in the budget sanctioned for the year A.D. 1764 for the naval *subha* of Vijaydurg under Anandrao Dhulap.

Among other items of expenditure sanctioned may be mentioned :

Rs.

- | | | |
|--------|----|--|
| 3,000 | .. | For freight i.e. for transporting paddy from the province of Bassein to different places. |
| 35,000 | .. | For the purchase of cloth and for equipping the navy with the necessary material as it had been damaged by a tempest at sea. |

* * * * *

Budget sanctioned for the naval *subha* under Anandrao Dhulap, Taluka Vijaydurg, for the year A.D. 1767 : [Extract 2]

<i>Gurabs</i>				<i>Crew recruited</i>
<i>Gurab Dattaprasad</i>	..	..	..	190
<i>Gurab Anandiprasad</i>	..	..	..	170
<i>Gurab Shivaprasad</i>	..	..	..	115
<i>Gurab Ramaprasad</i>	..	..	..	115
<i>Gurab Ganeshprasad</i>	..	..	..	80
<i>Gurab Sahebsadar</i>	..	..	..	130
Total ..				800

* * * * *

Rs. 237 .. While launching an attack on the island of Underi and in an engagement near Calicut, some members of the crew lost their lives. For the maintenance of their widows and children a sum of Rs. 237 was sanctioned. [Extract 3]

* * * * *

Rs. 500 .. Amount sanctioned for the send off given to the *tandels* (captains) and also to the *gurabs* going on an expedition. Money was sanctioned for the *sari* and *choli* of the out-going *gurabs*. [Extract 4]

Rs. 3,500 .. For the repairs of the navy teak was usually received from the province of Bassein. Owing to shortage, when the required supply could not be had from Bassein it was decided that teak should be obtained from Kalyan and Sashti. Sanction was given for the purchase of 700 long beams of teak at the rate of Rs. 5 per beam. The total amount thus sanctioned for the purchase of teak amounted to Rs. 3,500.

Rs. 3,200 .. Dhulap was to spend carefully this money required for purchasing gun-powder for the armada. The amount of Rs. 3,200 sanctioned for gun-powder was to be handed over to Naro Tryambak who was to order the manufacture of medium type of gun-powder at the rate of 2½ pucca *seers* per rupee, the total quantity of gun-powder to be purchased being 10 *khandis*.

Rs. 7 .. Dalji Dharmoji Shelatkar received a gun shot in the leg in an engagement at Halemadi when the factory of Shaba Ali was attacked. He was permanently disabled. He was sanctioned a disability pension of Rs. 7.

* * * * *

In the year 1771-72 the sailors had three engagement with the Portuguese [Extract 5]
within a period of one week. In the engagement about 20 persons lost their
lives and fifty to one hundred sustained injuries. The sailors also captured a *sarai* of
the Portuguese. Rs. 5,000 were distributed as special rewards, and presents offered to
deities for the success in the engagement. The crew was, however, not satisfied
with rewards given. They therefore requested that the government might be pleased
to sanction Rs. 10,000 for rewards. The government in reply informed that they
would be pleased to offer Rs. 10,000 as rewards, if, during the current year the sailors
brought home booty worth many lakhs.

* * * * *

Pir Husen Darga of Vijaydurg fort as already mentioned, had proved propitious to [Extract 6]
the navy. A sum of Rs. 25 was, therefore, sanctioned in cash for the *Pir*.

* * * * *

Maladivi coir was purchased on credit from Ali Sultan, Raja of Canannore, at [Extract 7]
the end of the year *Samman Sitain* (A.D. 1767-68). Subsequently, some elephants
and teak belonging to the Sultan were captured. But owing to the Sultan's friendship
with the government it was decided that the Sultan should surrender one elephant
and five teak poles useful for the navy and retain the rest. For the coir purchased,
Rs. 2,000 were sanctioned and paid subsequently, though the elephant and the teak
poles were not received.

* * * * *

Anandi gurab which had become old was in the dock. It was to be sold if it [Extract 8]
could fetch a good price. Otherwise it was to be dismantled, its iron to be taken out
and its material reutilised for naval repairs.

* * * * *

The *pals Samsherjang* and *Phatejang* were quite big. Their iron-work and other [Extract 9]
repairs had to be completed. It was requested that an expenditure of about Rs. 10,000
be sanctioned for their repairs. The *pals* had to be taken care of. The old dock could
not accommodate them. It was therefore decided to construct a new dock at the
port of Giryā to carry on the repairs of at least one *pal*. The said dock was to be
completed within one year. The expenditure required for the dock was to be met
from the proceeds of the sale of another *galbat*. Men who were at the port, together,
with the crew on the armada on its arrival were to be employed as labour. Christians
were also to be employed if necessary. Thus, a new dock was to be constructed and
one of the *pals* towed in. Later, repairs were to be carried on for which necessary
sanction was to be sought.

* * * * *

It was observed that one full month was spent in embarking guns and other heavy [Extract 10]
equipment on the armada and the same time was wasted in disembarkation. Thus,
two months were lost in the loading and unloading operations. If however, a wheel

which was used by the *Topikars* (the English) could be constructed the period of two months could be profitably utilised in fitting out an expedition, and also the *galbats* would not be damaged in the act of embarking and disembarking. The construction of the wheel was expected to cost Rs. 4,000.

A request to this effect being made to government, it was decided to sanction the said amount in the annual budget.

* * * * *

There were some captured ships in the naval department. One of these ships of port Surat belonged to the English. It was to be sold and the money utilised for the construction of the dock (the dock at Giryā as stated above). [Extract 11]

Another vessel, a *sarai*, belonging to the Portuguese was worth a lakh rupees. However, the English were not prepared to purchase it as it belonged to their European friend. It was reported to government that some merchants from Vengurla were offering Rs. 15,000 for the *sarai*. If any one making a bid for the vessel exceeding Rs. 15,000 approached the government, the naval authorities were to wait for a period of one month for orders. After the expiry of this time-limit, the vessel was to be sold and the money credited to the account of the naval *subha*.

Thus, the two ships, one belonging to the English (Port Surat) and the other belonging to the Portuguese were to be sold and the proceeds credited to the account of the naval *subha*.

* * * * *

In the year *Arba Tisain* (A.D. 1793-94), when the armada was sent to Kolaba, *Mahadeva pal* while sailing out of the port struck against the rock of the fort and broke. The crew of the *pal* 216 men and 33 boys, was therefore to be deducted from the total number of 1,826 men for whom sanction was given in the year *Salas Tisain* (A.D. 1792-93) in cash and kind. [Extract 12]

* * * * *

The water-tanks which had gone old had become useless. For preparing new ones iron, cotton and five carpenters were needed. The total estimate for material and men was Rs. 4,500. [Extract 13]

* * * * *

The *machavas* used for embarking goods on board the *pals* and the *gurabs* had become unserviceable. For constructing new ones about Rs. 2,000 were sanctioned, as also the services of four carpenters. [Extract 14]

* * * * *

Rs. 4,000 were sanctioned for the purchase of new masts as the old ones had become unserviceable. The *galbats* in the naval department had gone old. They were of no expeditionary use unless repaired. Others taken as prize did not suffice for the purpose. [Extract 15]

Galbats were required to accompany the big ships. To make up their shortage new ones were being constructed at Anjanvel and Ratnagiri. Out of the new *galbats* under construction one had arrived from Anjanvel. Orders were to be issued for the delivery of the remaining two from Ratnagiri, after their completion.

The construction of new *galbats* had been started towards the end of the previous year and they were expected to be ready for expedition during the current year. The estimated cost of the material required, iron, planks, cotton, labour, etc., came to about Rs. 17,000.

* * * * *

The three naval stores had become quite old. For the construction of new ones [Extract 16]
Rs. 500 were sanctioned including material and labour.

* * * * *

The construction of the *gurab Sahebsadar* which was ashore was only half done. [Extract 17]
The work was on, under the supervision of one Gangadhar Govind. To complete the half-finished work which, it was feared, would be damaged if left in the same state, a sum of Rs. 10,000 was sanctioned.

* * * * *

For the construction of a new *vaghi* which was to ply in the port, a sum of [Extract 18]
Rs. 1,000 was sanctioned. This was necessitated as the old *vaghi* had become un-serviceable. *Machavas* were required as messenger boats and also for landing men ashore from the *pals* and *gurabs* in the event of an expedition. To meet the need, construction of five *machavas* was afoot costing in all Rs. 2,000.

* * * * *

The cordage of the *pals* and *gurabs* which had become old had to be replaced as [Extract 19]
it could not stand the stormy sea. The cordage material included coir, wire and jute-canvas. A sum of Rs. 10,000 was asked for the entire material.

* * * * *

Samsherjang pal having been ready was taken out for an expedition against the [Extract 20]
Portuguese last year. This year too it was sent on an expedition. For the payment of the crew, recruited, sanction was required as shown below :

Rs. 5,723-0-0	.. For soldiers numbering 100 at the rate of
	Rs. 57-3-6 per soldier.
Rs. 6,468-0-0	.. For sailors numbering 100 at the rate of
	Rs. 64-8-0 per sailor.
<hr/>	
Total .. Rs. 12,191-0-0	
Rs. 1,262-8-0	.. Deducted for the absentees.
<hr/>	
Rs. 10,928-8-0	.. Actual amount required for payment.

* * * * *

A store-house for the naval department was under construction. Out of the total estimated cost of Rs. 1,000 for its construction, Rs. 400 were sanctioned in the year *Sabain Samanin* (A.D. 1786-87). The balance of Rs. 600 was asked for from government. [Extract 21]

* * * * *

Pension from the naval *subha*, for the dependants of those who died in action. [Extract 22]

One Mahadaji Shelatkar received a gun-shot in a naval engagement last year. He was disabled as he sustained a severe injury in the leg. For sometime after the accident he worked as a sentry but later succumbed to the injury. He died on government duty as a disabled re-employee. His widow was granted a pension of Rs. 3 in cash (probably per month).

Galbat Raghunath had an engagement with the *gurab Haidari*. Five men from the crew on board the *Raghunath* died in action. For their widows a sum of Rs. 37 was sanctioned as pension.

* * * * *

Statement giving details of the debt incurred by Anandrao Dhulap in the year *Saman Samanin Maya va Alaf*, 1188, Arabic year i.e. A.D. 1787-88. [Extract 23]

Haidar Naik had established his posts along the coast in Saundha and Bednur. Dhulap was ordered to oust him from the posts by leading an attack both by land and sea. Accordingly Bhagwantrao Dhulap proceeded by land as far as Karavad and Shiveshwar, and checkmated the enemy. For the new recruits required for this march Dhulap had to borrow a sum of Rs. 15,374-8-0. (Haidar Naik died in 1782. This reference is obviously to his successor.)

* * * * *

Sibads carrying rice belonging to the merchants of Sashti were captured by Malvankar. It was ordered that Malvankar should be punished for this Act. Accordingly two *gurabs* and one *galbat* of Malvan were captured. Later, one Santaji Gayakwad from Malvan was deputed to Vijaydurg for talks. It was decided that all the ships of Malvan along with their crew should be released on the condition that Malvankars agree to pay Rs. 11,500 as compensation for the *rice-sibads* seized by them. Actually, one *gurab* and one *galbat* were released by us as the other *gurab* was wrecked in a storm. Out of this sum, Rs. 10,000 would be credited to the naval account and Rs. 1,500 taken out as *darbar* (court) expenses. For the rice belonging to the merchants of Sashti payment was to be made from Rs. 10,000 in *Salas Samanin* (A.D. 1782-83). [Extract 24]

* * * * *

In a naval engagement with the English in *Salas Samanin* (A.D. 1782-83) one Lakshamanrao Pote received a *jejal* shot in the left leg and succumbed to it in *Khamas Samanin* (A.D. 1784-85). His widow was sanctioned a pension of Rs. 75 including [Extract 25]

payment in cash and kind. One Kanoji Mayekar employed on the ship *Naranag* was launching it in the sea in the year *Khamas Samanin* (A.D. 1784-85). A log used as a lever while launching the ship accidentally came down upon him breaking his thigh-bone. Later, Kanoji Mayekar succumbed to the injury. An annual pension of Rs. 20 was sanctioned for his widow and children.

* * * * *

A *batela* was purchased for conversion into a *gurab*.

[Extract 26]

Rs. 2,000 . . Price of the *batela*.

Rs. 5,000 . . Cost of converting the *batela* into a *gurab*.

Rs. 7,000

* * * * *

A boat belonging to the English was captured. It was to be converted into a *gurab*. The estimated conversion cost was Rs. 5,000. [Extract 27]

* * * * *

In a naval engagement with the English, Anandrao Dhulap made prize of their ships. In appreciation of his service an extra amount of Rs. 1,700 was sanctioned for him. [Extract 28]

* * * * *

Rs. 800 sanctioned as pension for the widows and orphans of 37 persons who lost their lives at sea on different occasions : [Extract 29]

- (1) for those who died in a naval engagement with the English.
 - (2) for those who were drowned in the sea as a result of shipwreck in the year A.D. 1781-82.
 - (3) for those who died as prisoners of the Siddis at Rajpuri.
- * * * * *

Balaji Hari Ghate, an officer, was sent to Revadanda with the account papers of the years 1765 and 1766 on board a *galbat*. The *galbat* was taken by the pirates and therefore all the account papers were lost. New accounts were prepared with the help of the papers that were left at the *subha* (i.e. Vijaydurg). [Extract 30]

(The pirates were probably the Siddis of Janjira who must have attacked the *galbat* carrying account papers near Revadanda.)

* * * * *

Phattejang pal which was on the shore was unserviceable. It was therefore to be dismantled and its wood to be utilised in the repairs of a *pal* and a *galbat*. Its iron was to be credited to the account of the *subha*. [Extract 31]

(The dismantled wood of the *Phattejang pal* was to be utilised for repairing the *pal* and the *galbat* anchoring in the port of Vijaydurg.)

* * * * *

Memorandum issued from *Taluka Ratnagiri* in charge of *Rajashri Mahipatrao Krishna* dated *Salas Samanin*, 5th *Safar* i.e. 9th January 1783. The contractor of the said place being *Datto Govind*.

The *savkars* (merchants) and *Kolis* were informed that they were allowed to transport salt on board their *sibads* from *Uran* and other places, to *Taluka Ratnagiri* as usual. They were, however, to bear in mind that their *sibads* would be confiscated if found transporting any commodity other than salt from the ports of the English to ours (Marathas) or *vice versa*.

Letters to the merchants of—

1. Fort Bombay,
2. *Prant Rajpuri*, and
3. to the fishermen of *Thana*,
4. *Prant Kolaba*.

As stated above letters were issued to the merchants and fishermen allowing them to transport salt in their *sibads* and *mahagiris* to the port of *Ratnagiri* from the ports of the English. Their *sibads* were to be seized if found carrying any commodity other than salt. Letters to this effect were issued to—

5. *Ganesh Hari* under *Chintaman Hari Patwardhan*,
6. *Chintaman Hari Patwardhan*.

They were to allow the transport of salt without any objection.

Total number of (Secretarial) letters issued were six.

* * * * *

Rajamandal

[Extract 33]

R. No. 166

Swari Rajashri Pant Pradhan. *Taluke Ratnagiri* in charge of *Mahipatrao Krishna*, letters of memorandum.

On the 4th of *Jamadilakhar*, an English ship ran into the sands of the said place. You have been ordered last year to hand over the iron of the said ship weighing twenty *khandis* to *Anandrao Dhulap* in charge of *Vijaydurg* port. The iron should be weighed and given to *Dhulap* along with the additional quantity which you might have extracted (recently), and receipt for the same should be obtained.

Letter to—

Mahipatrao Krishna of *Taluke Ratnagiri* permitting him to transfer the said quantity of iron,

from *Naro Ballal Bapat vice Sarvottam Shankar hashamnisi* (clerk in charge of soldiers etc.).

* * * * *

For the provision of the navy at Vijaydurg in charge of Anandrao Dhulap dated [Extract 34]
5th Ramajan.

Anandrao Dhulap was allowed to cut down wood useful for the navy, viz. teak, mango, jack and *undal*. He could also cut down a few trees on which tax was paid. He was to pay the tax before cutting such trees and was to send letters to that effect.

* * * * *

A three-masted ship belonging to the English was captured in the port of [Extract 35]
Ratnagiri, in the scuffle that followed the capture of the pretender (the pretender of Bhausahab). Two masts of the said ship had been given to Suvarnadurg (port) in charge of Moro Bapuji. The masts were to be handed over to him and a receipt obtained.

A sanad dated 17th *Safar* (probably in the name of Anandrao Dhulap).

A *phattemari* of the English was captured along with a crew of twenty. Four or five persons of the crew whose services were highly valued were to be retained and they were to be paid from the *taluka* (probably from Vijaydurg). The rest were to be released.

* * * * *

R. No. 489

[Extract 36]

Swari Rajashri Pant Pradhan, expenditure in respect of the navy under Anandrao Dhulap to be debited to the account of the *Jamdarkhana*, dated 6th *Jamadalaval*.

The navy on its expedition to the south was required to cast anchor at different ports for fresh water and other supplies. In order to keep good relations with the rulers of the ports of call, cloth was given as present :

Rs.

500 .. Ajam Ali of Cannanore gave the Marathas all the necessary help when their navy was in his port. He continued to be their friend. (Cloth worth Rs. 350 presented to Ajam Ali himself. Cloth worth Rs. 150 to the *diwan* of Ajam Ali.)

200 .. Cloth worth Rs. 200 to Khivarma of Kolatri State, Charkal (Karaikal).

200 .. Cloth worth Rs. 200 to Manavarma of Kadatnada State.

900 .. Total amount spent.

* * * * *

Swari Rajashri Pant Pradhan. The naval *subha* in charge of Anandrao Dhulap. [Extract 37]
Money debited to the account of *Jamdarkhana* (Stores Department).

Dated 10th *Rajab*. One Krishnaji Sirasekar *vice* Bhagavantrao Dhulap of the naval *subha* boarded a *dangi* of the enemy, fought bravely and captured four other *dangis*. Letters conveying this good news were brought by a messenger named Chapaji Tilekar to the *subha*. He was given cloth as present worth Rs. 86-8-0.

The money to be debited to the account of the *Jamdarkhana, subha* Vijaydurg.

* * * * *

R. No. 438

[Extract 38]

Zadati, subha armar Vijaydurg in charge of Anandrao Dhulap dated *Arba Sitain Maya va Alaf* (1164, Arabi year i.e. A.D. 1763).

The number of *galbats* at the port of Vijaydurg :

8 *gurabs*

21 *galbats*

6 *mahagiris*

11 *machavas*

9 ships captured

Total . . 55

* * * * *

Naval *subha* in charge of Anandrao Dhulap at Vijaydurg. Various articles [Extract 39] used for repairing the ships :

Two-masted ships

1 *Shivaprasad*

1 *Sahebsadar*

1 *Ramaprasad*

1 *Ganeshprasad*

1 *Laksmi*

5

Three-masted ships

1 *Dattaprasad*

1 *Sawai*

1 *Anandiprasad*

3

Total number of ships : $5 + 3 = 8$.

Articles used for the repairs of these ships :

Rope (called *jamagi*),

Iron,

Gud (jaggery),

Turmeric powder,

Ghee,

Coir,

Cocoonut oil,

Gum,

Coir from Maldiv Islands,

Jute,
 Frankincense,
 Alum,
 Cotton,
 Chandrus (gumanime or gum copal),
 Red chalk or ochre,
 Soap,
 Candles,
 Sulphur,
 Tar,
 Red led,
 Kata (an astringent extract obtained from *mimosa chadira* or
Catechur),
 Undi or undal planks (pinnary or oilnut tree planks or *calophyllum*
inophyllum),
 Teak poles,
 Jack wood,
 Mango wood,
 Punaya wood for yards and masts,
 Cloth for ensigns and sails.

* * * * *

Naval *subha* in charge of Anandrao Dhulap, fort Vijaydurg.

[Extract 40]

Account of the palm branches used for covering the ships drawn ashore during the rainy season (palm branches were profusely used to protect the ships from rain water during the monsoon) :

(i) Palm branches	Name of the ship
2,500	.. gurab Shivaprasad
2,500	.. gurab Ramaprasad
1,500	.. gurab Laksmi
1,300	.. gurab Ganeshprasad
2,700	.. gurab Dattaprasad
3,450	.. gurab Sawai
2,000	.. gurab Sahebsadar
2,550	.. gurab Anandi
18,500	8 ships

(ii) <i>Palm branches</i>	<i>Name of the ship</i>
800	.. galbat Sawai Samsher
425	.. galbat Saradari
700	.. galbat Dangi and Manji
800	.. galbat Vasai-Samsher
500	.. galbat Shah-tir
500	.. galbat Sugriva
550	.. Saradari-Underi
400	.. galbat Navaratan
700	.. galbat Yesavanti
600	.. galbat Yeshvantrao
600	.. galbat Bahiri
80	.. Mahagiri Sikara
350	.. galbat Garud
1,000	.. galbat Shersha
700	.. galbat Naranag
100	.. galbat Sambhu
900	.. galbat Sadak
400	.. Waghi (Naubandist)
800	.. galbat Phattelashkar
150	.. galbat Punav
140	.. galbat Daulati
325	.. galbat Hawai
350	.. galbat Wavadi
625	.. galbat Hirakani
400	.. galbat Hanamant
200	.. galbat Langboti
<hr/> 13,095	<hr/> 26 ships

(iii) For the *gurab Bhavani* of Malvan palm branches required 500.

Palm branches

2,334 For the masts etc.

200 For the rudders of the *gurabs* (these were taken out during monsoon).

2,534

(iv) Total palm branches required :

(i) 18,500

(ii) 13,095

(iii) 500

(iv) 2,534

Total .. 34,629

These figures speak for the care that was taken in maintaining the accounts. It seems that there were 35 ships of different categories taken ashore.

The next part of this account gives details of the cotton and oil required for the guns on board the ships.

Detailed account was also maintained of the quantity of coir used for the ships and of the jute that was utilised for the guns.

* * * * *

Zadati (account) of naval *subha* under Naro Tryambak *Subhedar*, Taluka [Extract 41]
Vijaydurg, material used for the repairs of the *galbat Samsher*.

Cloth used for the bigger sail measuring six and a quarter units at Rs. 3 per unit :

Total cost . . Rs. 18-12-0.

* * * * *

R. No. 438/2743-44

[Extract 42]

The *gurabs Dattaprasad* and *Ibrahim* under the *sarang* Phondu accompanied by Janrao Dhulap fired guns in honour of various gods as they sailed along the coast :

<i>Shots fired</i>	<i>In honour of</i>
1	.. While weighing the anchor
1	.. <i>Rameshwar</i>
1	.. <i>Bhavani</i> of Ratnagiri
1	.. <i>Karadeshwar</i>
1	.. The <i>Subhedar</i> when he boarded the ship
1	.. The <i>Pir of Purnagad</i>
1	.. <i>Ganapati</i> of Pule

(On the return journey)

2	.. <i>Vetal</i> of Khanderi
1	.. <i>Pach Pir</i> — Rajpuri
1	.. The god of Suvarnadurg
1	.. <i>Karadeshwar</i>
1	.. <i>Ganapati</i> of Pule
1	.. Kulaba
1	.. <i>Hareshwar</i>
1	.. <i>Pir</i> of Dabhol
1	.. Kelshi
1	.. <i>Velaneshwar</i>
1	.. <i>Bhavani</i> of Ratnagiri
1	.. <i>Rameshwar</i> of Vijaydurg
1	.. <i>Ganapati</i> of Pule
1	.. While entering the port of Ratnagiri.

(All these are well-known places along the coast of Konkan.)

Similarly, when the armada sailed southward from Vijaydurg under Janrao Dhulap, guns boomed at various places in honour of the local deities and also in honour of the petty rulers and officers at the ports. When ships of the friendly countries met on the high sea they were saluted by firing guns :

<i>Shots fired</i>	<i>Occasion or in honour of</i>
5	.. When Janrao Dhulap started for the voyage (2 shots when he boarded the ship and 3 when the anchor was weighed)
1	.. <i>Kunakeshwar</i>
1	.. <i>Rameshwar</i> of Malvan
5	.. Portuguese captain who met on the sea
1	.. When a three-masted ship of the Portuguese was captured
1	.. When the Sayad came to see at Helmandi
1	.. Mangrul (Mangalore)
1	.. Kadwad
1	.. Ankole
5	.. When the captain at Helmandavi came to see Janrao Dhulap
10	.. When Janrao Dhulap landed at Helmandavi
1	.. <i>Hirbadevi</i> of Deogad
1	.. When the ships came near Goa
1	.. When the armada of Ali Raja met on the sea
1	.. At Calicut when an English ship met
1	.. Gokarna Mahabaleshwar
1	.. At Reddi
1	.. Malvan
1	.. <i>Gajamai</i> goddess
1	.. <i>Hirabadevi</i>
1	.. God of Vijaydurg.

Among other places where shots were fired when the armada reached them may be mentioned :

Ponnani, Calicut, Tellicheri, Ramtalli, Manjesar, Basnor (Basrur), Ankole, Goa, Achare, Bhatkule (Batal), Miraj, Shiveshwar, Deogad.

* * * * *

R. No. 2749

[Extract 43]

Fifteen shots were fired when :

- (1) Bachyajipant *Subhedar* of Vijaydurg came to see the *gurabs*,
- (2) Gopal Mahadeo from Poona came to inspect the *gurabs*,
- (3) Anandrao Dhulap boarded a ship.

* * * * *

R. No. 2751

[Extract 44]

Fourteen shots were fired with a view to preventing the oxidisation of the guns containing the shots in the wet season.

* * * * *

R. No. 2755

[Extract 45]

Three shots were fired in honour of the nephew of Ramaji Mahadeo when he came to see the *gurab*.

* * * * *

R. No. 2756

[Extract 46]

At Calicat Portuguese ships coming from China were anchoring. When the Portuguese captain came to see the Maratha ships, they fired five guns in their honour.

* * * * *

R. No. 2784

[Extract 47]

One shot was fired near Surat where the English ships met at night.

* * * * *

R. No. 2785

[Extract 48]

One shot was fired when Visaji Keshav went to Kalyan.

* * * * *

R. No. 438/2808

[Extract 49]

Account

Department of Armada at the Fort Vijaydurg in charge of Anandrao Dhulap.

For repairs the following articles were utilised :

Teak beams .. 4

Iron .. 7.5 sheers

Coir from Maldiv.

* * * * *

In the month of *Jilkad* a new keel was fitted to the ship *Waghi*. The work was started on an auspicious day when the following articles were distributed : [Extract 50]

(1) Cocoanuts .. 15

(2) Betel leaves .. 50

(3) *Frankincense*

(4) Yarn

(5) Nuts

(6) Sugar (Chinese).

Similarly, on the occasion of fitting a new sail, a yard, a mast, weighing the anchor, cocoanuts, betel leaves and betel nuts were distributed and presents were given to the Brahmins.

A gun boomed when the flag in honour of god *Shrirameshwar* was hoisted on the *gurab Ramaprasad*.

Seven shots were fired when the *gurab Dattaprasad* started for an expedition. The shots were fired in honour of the local Pir of Vijaydurg.

Cloth measuring 7.5 units (*ankhs*) was utilised for the decoration of the mast of *gurab Shivaprasad*.

Ships were dragged ashore and put into the docks at an auspicious hour (*muhurta*).

At the port of Jaygad when the *gurabs Shivaprasad, Ramaprasad and Laksmi* were taken ashore, three goats were sacrificed as the custom demanded and an amount of Rs. 4 in all was distributed.

* * * * *

R. No. 438

[Extract 51]

When a ship was taken inside a dock its entrance was closed either for preventing the sea-water from entering the dock or for stopping the dock-water from being drained back into the sea with the neap-tide, as required.

Pucca lime or mortar, coir, jute and mud were utilised for closing the entrance of the dock. To make the mortar waterproof the following articles were mixed with it :

- (1) Jaggery,
- (2) *Catechu*,
- (3) Jute fibers,
- (4) Yellow or *chebulic myrobalan (terminalia chebula)* or (country galls).

For lighting the *gurab Laksmi* the following material was used :

- (1) Candles,
- (2) Sweet oil,
- (3) Yarn for preparing wicks,
- (4) Cloth for torches.

* * * * *

R. No. 438

[Extract 52]

At night signals were sent from the shore to the sailing ships so that they should not miss the way in darkness.

Three *Chandrajyotis* were lighted as signals for the *galbat Hirakani* sailing at night under *Goda Tandel*.

* * * * *

R. No. 438/2903

[Extract 53]

For dyeing the ensigns of *gurabs* and *galbats* following articles were used :

1. Country galls,
2. Alum,
3. Impure carbonate of soda.

* * * * *

R. No. 438/2902

[Extract 54]

Sweet and copra oil was provided for applying to the body when the sailors were engaged in taring the ships.

* * * * *

R. No. 438/2904

[Extract 55]

For dyeing the ensigns of ships the following material was used :

1. Turmeric powder,
2. *Caesalpinia Sappan* ; *Sappan* wood,
3. Sweet oil,
4. Red chalk.

For bailing out the water from the ships leather buckets were used.

For painting the hull of the *gurab Ramprasad* red lead costing Re. 1 was utilised.

* * * * *

R. No. 438/2915

[Extract 56]

For oiling the pullies about two *sheers* of oil was utilised.

For painting the hull of the *gurab Ramprasad* red lead costing Re. 1 was utilised.

* * * * *

R. No. 448/863

[Extract 57]

Two *batelas* and two ordinary ships of the English were sighted by the Marathas at the port of Anjanwel. The English ships were chased and the two *batelas* were captured. About 500 shots were fired. The bullets used were *garbhachhat* and *bukhi*. (It has not been possible to differentiate between *garbhachhat* and *bukhi*.)

* * * * *

R. No. 448/995

[Extract 58]

In order to maintain the depth of the docks during the rains eight seamen had to be employed for dredging. As they had to dive in the water day and night they were exposed to cold. To enable them to have enough heat in the body a total allowance of Rs. 3-15-0 per month was sanctioned.

* * * * *

R. No. 451/216

[Extract 59]

Account, dated *Tisa Sabain* (A.D. 1778-79).

The *galbats Ramban* and *Shahtir* were sent on an expedition. They came across a Portuguese flotilla. An engagement took place in which a Portuguese ship was captured. The ship along with the goods thereon was credited to the account of the *subha*.

* * * * *

R. No. 451/217

[Extract 60]

The *gurabs Ramprasad* and *Ganeshprasad* were sent on an expedition along with five *galbats*. Near the port of Malvan the flotilla met with a *dangi* named *Vikramprasad* belonging to one Thak Kamat who was transporting goods from Goa to Div. After a severe engagement the *dangi* was captured. The merchandise on board the *dangi* was credited to the account as it became the property of government by usage.

* * * * *

R. No. 454/1351

[Extract 61]

Naval *subha* of Fort Vijaydurg in charge of Anandrao Dhulap.

Pals, *gurabs* and *galbats* were sent on an expedition to the south. They came across some English ships of Bombay near Ratnagiri. An engagement took place lasting for three hours.

Some of the Maratha ships were damaged and lost their war material. Later, they were weather-beaten. The articles lost were debited to the account.

* * * * *

R. No. 454/1344

[Extract 62]

Naval *subha* of Fort Vijaydurg in charge of Anandrao Dhulap, debit as *darbar* (court) expenditure.

English ships of Bombay were proceeding to Karnatak. They were attacked by the Marathas near Ratnagiri. In the engagement the Marathas captured five ships of the English, along with the captain and the Councillor (*Kosildar*). On receipt of government order to release them, they were offered clothes as present and given a send off. The money spent on this occasion was debited to the government account.

* * * * *

R. No. 454/1541

[Extract 63]

Naval *subha* of Fort Vijaydurg in charge of Anandrao Dhulap, expenditure for the repairs of ships.

The *gurab Ramprasad* which was on an expedition was caught in a tempest near Revadanda. The ship lost its masts in the sea and ran aground. The damaged parts of the ship were repaired and the expenditure debited to the account.

* * * * *

R. No. 457/1568

[Extract 64]

Naval Taluka of Vijaydurga Swari Gangadhar Govind.

A sum of Rs. 90 was spent for repairing the roof of a ware-house for storing masts, yards, etc. of the navy during the rainy season.

The total number of tiles purchased was 30,000 at the rate of Rs. 3 per thousand.

* * * * *

R. No. 438/794

[Extract 65]

The guns on board the *pals*, *gurabs* and *galbats* were taken ashore during the rainy season. To prevent them from being damaged by oxidization *mau* or greased cotton had to be inserted. Rs. 10 were spent for cotton weighing two *khandis*.

* * * * *

R. No. 460/1016

[Extract 66]

Four caulkers were employed in applying tar to the tanks on the *gurabs* and *galbats*. As an antidote against the foul fumes of the hot tar which they had to inhale, they were given fresh copra for chewing. About 34 cocoanuts were supplied when the taring work was on.

* * * * *

R. No. 461/1155

[Extract 67]

The *pal Dattaprasad* had become old and therefore was of no use for an expedition. It was taken ashore, its keel was replaced and new cross-beams were fitted in the broadsides. Thirty-two cross-beams were fitted into the right broadside and thirty-one in the left.

* * * * *

R. No. 490/9012

[Extract 68]

During the current year the armada was severely damaged in an engagement with the Portuguese. It had to be repaired. One of the *gurabs* *Shivaprasad* had been taken ashore for repairs. The Crew was recruited for the armada for the whole year i.e. 611 sailors and 170 boys. This crew had to be paid even when the armada was under repairs.

* * * * *

R. No. 491/1780

[Extract 69]

For embarking guns and heavy goods on board the ships one full month was required. The same time was taken for disembarking. Thus, two months were lost in loading and unloading delaying the actual expeditions. To avoid this it was proposed that an English type of crane—*kalashicha rahat*—be prepared costing Rs. 4,000. After considering the matter the government decided to sanction the construction of the crane or wheel and further instructed to go ahead with the work.

■ ■ ■

APPENDIX C-2

MAJORITY of the extracts from the *Peshwa Daftar* or the Alienation Office, Poona, given in this appendix belong to *Prant Bassein*. Bassein was formed into a separate administrative unit directly under the Peshwas after it was captured from the Portuguese in A.D. 1739. The Peshwas appointed their own officers for the administration of port Bassein. Shankaraji Keshav was the officer in charge of the port in 1739.

Various papers discussed here are marked at the top by the words '*Rajamandal Swari Rajashri Pant Pradhan Prant Bassein*'.

This appendix gives details of the ships captured by the Marathas when found without passports. A wrecked ship touching their shore was claimed by the Marathas according to the time-honoured custom. If it belonged to a friendly power it was returned after recovering the cost required for guarding the wreckage. Pirates were a constant threat to commerce and normal coastal traffic. In order to stop their marauding activities effectively an extra *gurab* and a *galbat* were to be built by the Marathas. The estimated cost of the *gurab* was Rs. 33,157 and that of the *galbat* Rs. 7,852-4-0.

Interesting account of the petty engagements is also given here. The letters or papers range between the years A.D. 1739 and 1795.

The language in which a passport or a permit called a '*kaul*' was couched can be known from some extracts which appear here.

Extracts given in this appendix selected from the *Peshwa Daftar*, are numbered at the right-hand side for reference.

R. No. 1538/15234

[Extract 1]

Account of Bassein (port) in charge of Shankaraji Keshav for the year 1739.

Some of the English ships were captured last year and the articles and cash thereon were credited to the account. Later, an order was received from Government to return the articles as the English were on friendly terms with the *Shrimant* (The Peshwas). In accordance with the said order a sum of Rs. 2,093 shown on the credit side last year was debited in the current year because articles etc. valued at Rs. 2,093 were returned to the English. The transaction was shown in the name of one Vishwanathbhatt Paradkar.

* * * * *

R. No. 1539/1145

[Extract 2]

Account of Fort Bassein (*Prant Bassein*) *Rajamandal Swari Pant Pradhan*.

A ship belonging to the English was captured as it was without the government permit. The merchandise thereon was confiscated and credited to the government stores. Later it was decided to compensate for the merchandise. Accordingly a sum of Rs. 22-7-0 was paid and the amount debited to the account.

* * * * *

R. No. 1539/13

[Extract 3]

Account of the total number of ships of *Prant Bassein* under *Rajamandal Swari Pant Pradhan*.

Galbats (96)		Gurab	
Warships			
32			
		Captured	
		64	
			1
Total ..	$\left\{ \begin{array}{c} 32 \\ 64 \\ 1 \end{array} \right\} = 97$		

* * * * *

R. No. 1540/983

[Extract 4]

The armada had been on an expedition led by one Krishnaji Gole. It captured a few *dangis* out of which one was burnt in the engagement. Along with the *dangi* a gun belonging to the government which was with Hari Dativarekar, was destroyed. The gun was debited to the account.

* * * * *

R. No. 1540/1089

[Extract 5]

Rajamandal Swari Pant Pradhan Prant Bassein. The *galbats* under Moraji Shinde had an engagement near fort Dahanu with a *gurab*, a *dangi* and a *tavada* belonging to Daman. During the engagement the following material was utilised :

Cannon balls	..	75
Lead shots	..	932
Cotton bags	..	206
Total ..		1,213

In addition, gun-powder and coir were utilised.

* * * * *

R. No. 1540/689

[Extract 6]

Rajamandal Swari Rajashri Pant Pradhan Prant Bassein, money debited under religious head as gift.

One Vedamurti Rajashri Krishnabhatt Telang was offering prayers (*anusthana*) in the temple of Siddheshwar at Bahaddarpura (Bassein) for nearly six months, so that the god might bless him in securing a bride. After the expiry of the period the said Krishnabhatt was invited by Shankarajipant, the officer in charge of Bassein, and

told that the necessary arrangement for his marriage would be made, if the government armada which was on an expedition would return home victorious with a booty worth rupees one hundred thousand. To this the Brahmin, Krishnabhattach, replied that he would pray god and if the armada came home victorious the necessary provision for his marriage be made. Within three days of this talk, Bajirao Belose who had led the expedition returned to the port with a three-masted ship of Surat as a prize. As the prayers of the Brahmin came true he was given a sum of Rs. 300 for his marriage.

* * * * *

R. No. 1545/810

[Extract 7]

Rajamandal—year Khamas—Swari Rajashri Pant Pradhan Prant Bassein. Account of the ship captured by Sekh Itbar working under Bajirao Belose.

Sekh Itbar of fort Dahanu was proceeding to Surat with a fleet in order to receive the escort money. On the way he met with a piratical *batela* (ship). The *batela* when chased made good for the shore. The pirates escaped on land leaving the *batela* empty. A few sundry articles like knives, broken shields and a gun were captured and were credited to the account along with the *batela* itself.

* * * * *

R. No. 1540/787

[Extract 8]

Rajamandal Swari Rajashri Pant Pradhan Prant Bassein, armada in charge of Bajirao Belose.

On the 12th *Rabilaval* a *dangi* named *Lakhamiprasad* of port Veravalpattan owned by Kanaji Jivan was sailing to its destination—Veravalpattan—after loading goods in the port of Navasari. On its voyage it met with the government armada and was found to be without the permit (*kaul*) for the current year. It was therefore captured by the government armada and brought into the port of Bassein. The articles on the *dangi* were counted and credited to the government stores by Mahadaji Raghunath Phadnis (accountant) and Balaji Avaji (store-keeper).

Details of the articles

	Rs.
Mirror with a handle	8-0-0
Necklace valued at	0-8-0
Glass beads 40 at	0-8-0
Three knives at As. 2 per knife	0-6-0
One big knife	0-4-0
Forty-nine whet-stones for sharpening barber's instruments.	2-0-0
One hundred and fifty pearl strings	5-0-0
Other sundry articles	2-12-0
	19-6-0

In addition a cash of Rs. 1,341-15-0 was found.

* * * * *

R. No. 1546/246

[Extract 9]

A *batela* from Cambay (Khambayat) after loading timber in the port of Umbergaon was sailing back to its destination. Very near from Umbergaon the *batela* suffered a wreck and the wreckage was credited to the stores :

Teak logs	..	..	..	16
Sisavi logs	..	..	..	25
			Total ..	41

* * * * *

R. No. 1546/1713

[Extract 10]

Rajamandal Prant Bassein. A *mahagiri* belonging to a merchant named Muhammad Sale was sent out for fishing with a view to extracting oil from the catch for the use of the armada. The *mahagiri* was caught by the ships of Manaji Angre and taken away. Muhammad Sale was given a new *mahagiri* named *Pawan*.

* * * * *

R. No. 1559/861

[Extract 11]

Rajamandal Arba

Account of a captured ship.

A *galbat* named *Mahadevprasad* owned by Vita Bhavanidas of port Viraval, piloted by Ranasod, was sighted by the government ship *Sitabao* under Sardar Sekh Hasan of Underi as its captain. *Sitabao* was on patrol duty. Near Versova the guards on the *Sitabao* called the *Mahadevprasad*, whereupon, the latter's crew shouted from a distance saying that the ship had the government permit, and proceeded towards Bombay. On being told by the captain Sekh Hasan that the fleet of the Angres was in the neighbourhood of Bombay, the *Mahadevprasad* sailed towards Bassein. Throughout the night it was closely watched and in the morning it was approached by the *Sitabao* near Pospir. On inspection the *Mahadevprasad* was found to be with the permit of the previous year. As the ship was without the permit of the current year it was captured and towed into the Bassein harbour.

The following articles on the ship were credited to the stores :

1. Bleached cloth,
2. Turbans,
3. *Dhotis* from Gujarat,
4. Chintz from Gujarat,
5. Cotton,
6. Wool,
7. Tobacco.

* * * * *

R. No. 1563/1651

[Extract 12]

Rajamandal account

A *dangi* named *Rahimani* owned by a merchant Dhanji Gopal of Bombay was coming from Maskat. It was captured by the government armada and later sold to one Narayan Shenavi Khote for Rs. 800.

After sometime, orders were received from Poona that the ship should be returned to Dhanji Gopal as the government was at peace with the English. Accordingly the sum of Rs. 800 was paid to Narayan Shenavi Khote and the *dangi* returned to its owner.

* * * * *

R. No. 1565/1899

[Extract 13]

Rajamandal account (Tissa)

On 12th *Rabilaval*, Naro Trimbak and Rudraji Dhulap arrived in the port of Bassein along with the fleet of Vijaydurg. Under orders from the *Shrimant* (Peshwas) guns boomed from the bastions *Ganesh* and *Vetal* of the Bassein fort in honour of the guests.

* * * * *

R. No. 1573/2060-63

[Extract 14]

Rajamandal account (*Salas*) in respect of a banquet given to 64 soldiers and six officers of the Portuguese from Daman.

Rajashri Ramaji Narayan wrote a letter on behalf of Raghunath Jivaji to the headquarters (Bassein fort) that reinforcement should be sent to drive away the fifteen pirates anchoring in the creek of Umbergaon. The letter was received at night. Prior to the receipt of the said letter news was received from a messenger sent by one Jivan Patil Nargolkar about the pirates. Accordingly a party of 40 persons was despatched but the pirates looted about 10 *galbats* in the creek and made off before the arrival of the party. They could not be punished. When the pirates appeared for the second time reinforcement was sent by land to punish them. But it was found that they could not be driven out without the aid of a strong navy. It was therefore decided to seek the help of the Portuguese of Daman, and a request to that effect was made. The Portuguese captain replied saying that he was unable to send a fleet as all the armada was taken ashore, however, he sent 70 soldiers for help. *Rajashri* Hari Mahadeo with his own soldiers and those of the Portuguese attacked the pirates. The pirates thereupon left the creek. For the timely help given by the Portuguese a banquet was arranged for the six officers and 64 soldiers, and the expenditure incurred was debited to the account.

* * * * *

R. No. 1573/2078

[Extract 15]

Rajamandal account (Salas)

Fort Indragad. On 10th *Rajab* some merchantships from Bombay were going to Daman. When they came into the creek of Kalai the pirate ships approached them and the pirates boarded the merchantships. Immediately succour was sent from the fort (Indragad) and the pirates driven away.

* * * * *

R. No. 1573/1715

[Extract 16]

On 2nd *Saban* about 25 pirate ships anchored in the water near Satapati, immediately after sunset. As a warning to the people of the neighbouring area a couple of guns were sent booming.

* * * * *

R. No. 1575/1471

[Extract 17]

Rajamandal Swari (Arba)

Four *galbats* had been to the south on escort duty. On the return journey all the *galbats* under captain Kano Balaji were attacked by the pirates near Rajpuri. Three *galbats* escaped them but one lagged behind. In its attempt to break through, it was caught in a storm and wrecked on the rocks of Rajpuri.

The ship along with the articles on board was lost and therefore debited to the account.

* * * * *

R. No. 1582/1073

[Extract 18]

Rajamandal (Saba)

A *padav* under captain (*tandel*) Mitha Sakin of port Daman, along with nine other *padavas* anchored in the waters (near Bassein) with a view to searching for material of the *galbat* *Faijamaki* which had sunk there a year or two before. In order to stop this search three *mahagiris* were despatched from the fort (Bassein). At the sight of the *mahagiris* the *padavas* set sail. Nine of them escaped into the sea but one was caught by the *mahagiris* and credited to the government stores.

* * * * *

R. No. 1586/836

[Extract 19]

Rajamandal account (Saman)

One Bab Muhammad Satari had laid the keel of a ship he intended to construct. Government had given him permission to cut about 500 pieces of teak from the jungle

without the payment of the usual tax (*tijai*). The total cost of the teak was Rs. 2,004, out of which the *tijai* was deducted i.e. Rs. 668, thus the actual cost was,

Rs.
2,004
— 668
<hr/>
1,336

(*Tijai* was one-third of any amount.)

* * * * *

R. No. 1542/763

[Extract 20]

Rajamandal (Suma)

Swari Rajashri Pant Pradhan Prant Bassein, ships captured credited to the naval account.

Two *dangis* from the south laden with merchandise were proceeding to the port of Surat. The *galbat Samsher* on patrol duty was watching them for a couple of days. Later, it was joined by the *galbats Sadashiv, Vetal, Nagin* and *Serva*, and also by the *gurab Daryadaulat*. The men on these ships boarded the *dangis*, when they were found without the necessary permits. The *dangis* were captured.

Description of the *dangis* :

1. The *dangi* named *Shambhuprasad* owned by Lala Bholanath and Basavant Rai, and piloted by *nakhava* (captain) Musa Karani Thakkar Mulji, had taken the permit on 29th *Ramjan*, which expired in *Saval*. It was captured on the 10th *Jilheja* as the due date of the permit exceeded by one month and 10 days.
2. The *dangi* named *Serwai* was also captured as it was found with a permit of expired date.

* * * * *

R. No. 1625/348

[Extract 21]

Rajamandal (Sit)

On the 22nd *Saval*, about 22 *galbats* of the pirates anchored near the village Nargol of *Prant Sanjan*, and plundered its citizens. A rescue party from the fort of Umbergaon under Shankaraji Ballal came to the village and attacked the pirates killing eight of them and wounding about ten. The pirates were chased right upto their *galbats* and one of the ships they had captured previously was recovered.

The ship was credited to the account.

* * * * *

R. No. 1645/49

[Extract 22]

Account of a *galbat* without a permit captured by the government armada.

A *dangi* named *Kalyanprasad* owned by Govind Purushottam and piloted by captain (*tandel*) Haran Sakin, of port Parepattan, was sighted by the government

armada which had set out on an expedition from the fort of Arnala. The *dangi* was chased and overtaken near Versova. On inspection it was found without the permit (*kaul*) and was therefore confiscated. The articles on the *dangi* were counted by Krishnaji Vishnu, the clerk of the *subha* (Bassein) and Raghunath Nagoji, the clerk at Janjira Arnala.

* * * * *

R. No. 1648/1477

[Extract 23]

Rajamandal (Tisa)

A merchantship from Navasari had come to the port of Mahim. After loading cocoanuts it set sail back for its destination. On the way it met with a pirate ship which chased it. The merchantship tried to escape into the breast-deep waters of Satapati, but the pirates attacked it firing all the time. Succour was sent from the fort (probably Satapati) but it was of no avail, and the merchantship was carried away by the pirates.

* * * * *

R. No. 1664

[Extract 24]

Arba Samanin Maya va Alaf, A.D. 1783

A *galbat* named *Salamati* owned by Ibrahim Tiparya Nandgaonkar was transporting cattle from *Prant* Rajapur to Bombay without a permit. It was captured by Mahadaji Kambali near the island of Khanderi when he was proceeding from Revadanda to Bassein. The *galbat* along with the cattle and the goods thereon was confiscated and credited to the account by Anand Ram.

* * * * *

R. No. 1667/2680

[Extract 25]

Rajamandal Swari (Khamas, 17th Safar)

The *galbat* *Nagin* of fort (Bassein) under Hasan Yakub and Sardar Bhivaji Naik Kalegaonkar, with soldiers was on patrol duty. It came across pirate ships numbering four. It tried its utmost to fight through, but was over-powered and taken away. The *Nagin* along with the articles was debited to the account.

* * * * *

R. No. 1711

[Extract 26]

List of the ships of *Taluka* Bassein during the year (*Khamas Tissain Maya va Alaf*, A.D. 1794-95.

A sum of Rs. 15,000 was sanctioned for the recruitment of additional men.

At the port of Bassein there were one *gurab* useful for war, two *sadaks* and about ten *galbats* of different size. Out of these, five being unserviceable had been taken ashore. Of the rest, one *gurab*, two *sadaks* and five *galbats* had gone old and therefore

were useless for the purpose of expedition. The entire coast-line was constantly threatened by pirates. To guard against them at least one *gurab* and a *galbat* were necessary. An estimate for their construction was prepared as below :

			Rs.
One <i>gurab</i>	..	..	33,157-0-0
One <i>galbat</i>	..	..	7,852-4-0
			<hr/>
			41,009-4-0

It was requested that at least a part of this estimated cost be sanctioned to start the construction.

* * * * *

R. No. 1726/1532

[Extract 27]

Rajamandal Prant

Prant Bassein, fort Dahanu, account of the warning given by firing.

On the 27th *Jamadilakhar* pirate ships came near the coast at night and started giving secret fire signals to each other for an attack. In order to intimate the people of Dahanu and Naikwadi about the presence of the pirates two guns were sent booming.

* * * * *

R. No. 1726/2354

[Extract 28]

Rajamandal account of the year (*Ihide*) of *Prant* Bassein, in respect of the repairs of the bastion *Mahadeo* of fort Bassein.

On the 20th of *Jamadilaval* in the morning, about 15 pirate ships were seen anchoring near the bastion *Mahadeo*. The pirates belonged to Jafarabad. About a hundred of them landed on the shore and attacked the bastion. About 20 men on the bastion under the command of one Khanvilkar fired at them. Five to six men of the Marathas were wounded in the exchange of fire. As the day advanced the pirates approached the gate of the *Mahadeo* bastion, scaled the walls and broke open the doors. They carried away the guns guarding the bastion.

New guns from the armada were given for the use of the bastion *Mahadeo*, and the damaged doors were replaced by new ones.

For the doors and windows a sum of Rs. 58-9-0 was spent.

* * * * *

R. No. 1735

[Extract 29]

Arba Mayataina va Alaf, A.D. 1803

The *gurab Khandeshwari* which was newly constructed was found to be very good when launched on the water. The two carpenters employed on the *gurab* did their work diligently and therefore, were given special awards in cash—

			Rs.
Uddhavji Mistri	..	..	355-8-0
Shankaraji Mistri	..	..	36-7-0
			<hr/> 391-15-0

* * * * *

R. No. 1752/755

[Extract 30]

Rajamandal Swari Rajashri Pant Pradhan in charge of Visaji Keshav, *Prant Bassein (Arba)*.

The *galbat Ramprasad* and other ships with the Officers Ghasi Khan and Sekh Mohiddin had been on an expedition. On the way the fleet came across pirate ships. An engagement took place and one of the *galbats* of the pirates was captured and brought into the Bassein port. The captured *galbat* named *Rana Kundal* alias *mahagiri Yeshwanti* actually belonged to a citizen of the Maratha Government, Maghya Patil Revadandekar. After its recovery, the articles on board were credited to the government stores and the ship was returned to the owner on payment of Rs. 800 as expedition expenses.

* * * * *

R. No. 1768/1022

[Extract 31]

Rajamandal account of the year *Sabha* of *Prant Bassein*, expenditure on account of a naval engagement.

On the fourth of Jilkad some merchantships escorted by a government fleet were sailing from the port of Dahanu to Surat. Just an hour before sunset, they saw near Gholvad some pirate ships plundering a group of merchant-vessels which were proceeding to Surat from Bombay. On seeing the government fleet the merchantships which were being plundered fired a few alarm shots. The government fleet left behind the merchantships they were escorting, and ran to the rescue of the ships in distress. An engagement took place. The pirates released the *galbats* they were towing and made good only with a sail they had dismantled.

The expenditure incurred on this occasion for firing was debited to the account.

■ ■ ■

APPENDIX C-3

THIS appendix presents a complete picture of a sanctioned budget for the naval *subha* of Vijaydurg in charge of Anandrao Dhulap. It belongs to the *Suru* or Arabic year 1171 (*Ihide Sabain Maya va Alaf*) corresponding to A.D. 1770-71. The budget bears the seal 'Shri Rajaram Narapati Harshanidhana Madhavrao Ballal Pradhan', meaning 'the Prime Minister Madhavrao Ballal, the treasure of joy of the Lord of the people, Rajaram'. Rajaram was formally crowned as the Chhatrapati by Peshwa Madhavrao I, on 23rd March 1763. Rajaram was actually addressed as Ram Raja by Tarabai to avoid calling him by her husband's name (Rajaram) as required by the Hindu custom.

The end of this budget in original *Modi* is marked by the stamp '*Lekhana Sima*', meaning 'the limit of writing'. It was the practice to put the seal to all important state documents at the beginning and the stamp at the end reading 'the limit of writing' or the like. This helped preventing forgery in the document. The seal at the beginning was the *sikka* and the stamp limiting the writing of the document was known as the *mortab*. Both the *sikka* and the *mortab* of this budget are given.

One can have an idea of the budget by looking to the figures marked with the Roman numerals I, II, III, IV and V. They stand for the different parts of the budget into which it is divided for easy understanding and reference.

Part I stands for the expenditure as allowed under normal conditions i.e. Rs. 1,13,755-0-0. After additions to this on account of :

- (a) special allowance to those who sustained injuries while on duty at sea ;
- (b) for the maintenance of a palanquin sanctioned to Balaji Hari Phadnis ;
- (c) awards distributed on occasions such as marriage and anniversary ;

is obtained amount under *Part II*—Rs. 1,15,352-0-0.

The amount under *Part III* is obtained after making deductions because of the absentees, payments withheld and money given to the distributing staff. The amount under *Part III* is Rs. 96,609-12-0.

The figure under *Part IV*—Rs. 1,22,158-8-0—stands for the total budget sanctioned. This was to be met from various sources, such as, the revenue from *Taluka Saundal* of *Prant Rajapur*, money from permits given to ships, house-tax from *Taluka Vijaydurg* in charge of Mahadaji Raghunath, money sanctioned by government from *Taluka Sashti* in charge of Ramaji Mahadeo etc. The total amount from these sources worked at Rs. 1,20,500-4-0 and is shown under *Part V*. The difference between *Part IV* and *Part V* i.e.

	Rs.
	1,22,158-8-0
—	1,20,500-4-0
	<hr/>

1,658-4-0 was to be sanctioned by Government after considering the practice of the previous year in this regard.

Out of the revenues of *Taluka Saundal* of *Prant Rajapur*, and of *Taluka Sashti*, assigned to the navy, deductions were made for the upkeep of the temples and the maintenance of priests. The navy, it is obvious, depended upon the land revenue.

The budget ends with a number of rules which were to be strictly observed by the naval *subha*. They are indicative of Peshwa Madhavrao's administrative discipline. They have been given under conclusion :

Rumal No. 490

Shri

Budget sanctioned for the naval *subha* of Vijaydurg in charge of Anandrao Dhulap for the *Suru* year 1171 (A.D. 1771) from the beginning of the year to its end. Cash sanctioned for expenditure Rs. 96,609-12-0.

		Total	Men	Boys	Monthly pay Rs.	Daily wages Rs.	Annual salary Rs.
Soldiers	.. ..	1,292	1,039	253	15,974-12-0	1,621-4-0	10,882
Extra Soldiers	.. ..	51	50	1	500-4-0	389-4-0	....
Sailors	.. ..	958	911	47	6,610-0-0	5,098-0-0	....
Grand Total	.. ..	2,301	2,000	301	23,085-0-0	7,108-8-0	10,882

Expenditure as allowed by rules

Part I—Rs. 1,13,755-0-0 Total expenditure.

Rs. 1,07,799-8-0

Expenditure on account of daily wages and annual salary.

Rs. 5,955-8-0

For cloth 17,866.75 *akhas* or units at the rate of 3 *akhas* or units per rupee.

Rs. 1,13,755-0-0

Details:

Rs. 63,451-4-0

Amount meant for the total crew numbering 1,292, Rs. 62,651-4-0 was sanctioned for the previous year. Rs. 800 were sanctioned as extra amount for the maintenance of a palanquin granted to Balaji Hari. Out of this amount, Rs. 600 were from the sanction of the current year and Rs. 200 from the balance of the previous year.

Rs. 5,037-0-0

Were sanctioned for the 51 extra soldiers, roughly on the basis of the budget of the previous year. At the end of the year an explanation was to be submitted regarding the expenditure of this amount.

Rs. 45,266-12-0	For 958 sailors.	
<hr/> Rs. 1,13,755-0-0	Rs. 63,451-4-0	For the crew numbering 1,292.
	Rs. 5,037-0-0	For the 51 extra soldiers recruited.
	Rs. 45,266-12-0	For 958 sailors.
	<hr/> Rs. 1,13,755-0-0	

Rs. 650-0-0	Additional amount to be disbursed as follows :	
	Rs. 500-0-0	For the injured while on duty at sea.
	Rs. 150-0-0	For the maintenance of a palanquin by which Balaji Hari Phadnis was honoured, sanctioned for the current year as per <i>sanad</i> dated 5th <i>Jamadilaval</i> .
	Rs. 947-0-0	Sanctioned as awards on occasions such as marriage and anniversary.

Part II—Rs. 1,15,352-0-0	Deductions on account of:	
	Rs. 9,904-0-0	Absentees approximately.
	Rs. 8,500-8-0	Payments—daily wages and annual salaries— withheld.
	Rs. 337-12-0	For persons distributing payments as allowed by rule.
	<hr/> Rs. 18,742-4-0	

Part III—Rs. 96,609-12-0	Rs. 96,609-12-0	Money sanctioned. Out of this sum, Rs. 96,259-12-0 formed the usual expenditure sanctioned, and Rs. 150 for the maintenance of a palanquin.
		Rs. 96,259-12-0
		Rs. 150-0-0
		<hr/> Rs. 96,409-12-0
		200-0-0 Balance of the amount sanctioned to Balaji Hari Phadnis for a palanquin for the main year— <i>sar sal</i> .

Rs. 342-0-0	For the widows and orphans of roughly 64 crew.	
	Rs. 212-0-0	Cash.
	Rs. 130-0-0	For cloth.
	<hr/> Rs. 342-0-0	

Rs. 3,974-12-0	For additional payments—
Rs. 2,600-0-0	Freight for the naval supplies.
Rs. 750-0-0	Office maintenance.
Rs. 624-12-0	Sundry annual expenses.
Rs. 3,974-12-0	
Rs. 25-0-0	For the maid servants, <i>i.e.</i> for their clothing and other expenses, employed at Vijaydurg.
Rs. 21,105-0-0	For purchases.
	Details of purchase:
Rs. 17,276-12-0	For the repairs of the <i>gurabs</i> , <i>galbats</i> and the <i>Mahadeo pal</i> .
Rs. 125-0-0	For lighting on the <i>gurabs</i> and the <i>pal</i> .
Rs. 309-14-0	Oil for the torches and other lighting arrangement.
Rs. 2,917-8-0	For the extra soldiers and the sailors on active naval duty—for ghee, areca-nut and tobacco.
	Rs. 2,787-8-0 ghee.
	Rs. 70-0-0 areca-nut.
	Rs. 60-0-0 tobacco.
	Rs. 2,917-8-0
	Ghee per <i>mond</i> Rs. 8.
	Areca-nut per <i>mond</i>
	Rs. 3-8-0. Tobacco per
	<i>mond</i> Rs. 3.
	Rs. 475-14-0 For sundry expenditure.
	Rs. 21,105-0-0
Rs. 125-0-0	Balaji Hari Phadnis was given a mare and a pony by government. Rs. 125 were sanctioned for the maintenance of these animals, <i>i.e.</i> for gram and shoeing.
Rs. 1,22,181-8-0	
Rs. 177-0-0	House tax collected from the servants of <i>Taluka</i> Saundal in charge of Mahadaji Raghunath of Vijaydurg.
Rs. 1,22,358-8-0	
Rs. 200-0-0	Deduction from the total amount sanctioned for the upkeep of a palanquin sanctioned to Balaji Hari Phadnis.

Part IV—Rs. 1,22,158-8-0 The total budget sanctioned for the current year.

Rs. 1,00,903-8-0 Normal estimate of the budget.

Rs. 21,255-0-0 Extra money sanctioned for the current year.

Rs. 1,22,158-8-0

The amount of Rs. 1,22,158-8-0 sanctioned for the expenditure of the navy was to be collected from the different sources as shown below :

Rs. 10,860-0-0 The balance of the previous year to be credited to the naval account.

Rs. 50,468-4-0 Credited for the current year.

From the revenues of *Taluka Saundal* of *Prant Rajapur*:

Rs. 7,993-5-0 Collected as land revenue and *Kamavisi*.

Rs. 18,061-5-0 Proceeds from sales.

Rs. 26,054-10-0 Deductions from this revenue collection:

Rs. 59-11-0 For temples.

Rs. 50-0-0 Annual sanctions (for the priests, the learned etc.).

Rs. 696-0-0 Grants.

Rs. 625-0-0 Sanctioned for servants under Govindrao and Chimaji Mankar of *Prant Rajapur*.

Rs. 1,182-15-0 For purchases.

Rs. 2,613-10-0

Thus, the actual amount utilised for the navy from the revenues of *Taluka Saundal* of *Prant Rajapur* worked at—

Rs. 26,054-10-0

Rs. 2,613-10-0

Rs. 23,441-0-0

Credited on account of the navy:

Rs. 8,573-12-0 Permits.

Rs. 184-8-0 *Moharavan*.

Rs. 26-8-0 Present on account of a *sibad*.

Rs. 500-0-0 Escort money and presents.

Rs. 13,500-0-0 Credit on account of captured ships.

Rs. 239-4-0 For the services of a *sibad*.

Rs. 23,024-0-0

From the clerks, the *Divan* and *Majumdar* :
Rs. 1,003-4-0

Extra corn was received for distribution in addition to the cash payment. It worked out to Rs. 3,000 when valued at Rs. 30 per *khandi* the total extra corn being approximately 100 *khandis*.

Rs. 3,000-0-0

Thus :

Rs. 23,441-0-0 Revenue from *Taluka*
Saundal of *Prant Raja-*
pur.

Rs. 23,024-0-0 Collected as *Kaulavana*,
Kamavisi, permit yield
etc.

Rs. 1,003-4-0 From the clerks, *Divans*
etc.

Rs. 3,000-0-0 Value of the extra corn.

Rs. 50,468-4-0

Rs. 172-0-0 House-tax from *Taluka* Vijaydurg in charge
of Mahadaji Raghunath.

Rs. 59,000-0-0 Sanctioned by government from *Taluka*
Sashti in charge Ramaji Mahadeo.

Thus, the total money on the credit side for the use of the navy was :

Rs. 10,860-0-0

Rs. 50,468-4-0

Rs. 172-0-0

Rs. 59,000-0-0

Rs. 1,20,500-4-0

Part V—Conclusion—Out of this total Rs. 1,20,500-4-0 on the credit side, the usual credit was Rs. 36,901-0-0 and the credit for one year, Rs. 83,599-4-0. Thus, Rs. 83,599-4-0 + Rs. 36,901-0-0 = Rs. 1,20,500-4-0.

The sanctioned expenditure Rs. 1,22,158-8-0

The sanctioned credit Rs. 1,20,500-4-0

Balance Rs. 1,658-4-0

To meet the sanctioned expenditure Rs. 1,22,158-8-0, the government agreed to pay the balance of Rs. 1,658-4-0 after duly considering the practice of the previous year.

Rules to be observed by the naval *subha* :

1. All the points to be observed have been mentioned in the budget of the previous year. They should be strictly followed.
2. Sanction for the extra soldiers numbering 51 is given after roughly estimating the expenditure on their account. It was found that their appointment was made irregularly and without attention to the practice. It should, therefore, be noted that the pay-sheet mentioning the names of the payees should be presented to government at the end of the year and agreement be made thereafter. The government would sanction the budget for the next year after scrutinising the previous accounts.
3. Income from the *Taluka Saundal* of *Prant Rajapur* has been assigned to the navy. The revenue of the said place has been sanctioned in the year *Tisa-Sitain* from the *sar-subha* after making deductions on account of grants etc. However, the present revenue does not show for the year *Saman-Sitain* either any deficit or surplus in the estimate and the contract. No explanation has been submitted to government regarding this nor any agreement has been entered into. Agreement should therefore be made with government regarding the revenue for the expenditure of the navy after presenting the revenue account village-wise and the necessary explanation thereof.
4. Money from the *Taluka Sashti* has been assigned for expenditure. From this assignment the instalment of Rs. 14,000 is to be received in the month of *Chaitra*. Regarding this instalment it has been stated in the budget of the previous year that it should be collected from the *subha* concerned and credited to the naval account. However, the account regarding the collections and the dues of the last year has not been submitted. Under the circumstance the actual collection of the last year should be deducted from the total revenue and the balance recovered. Revenue which could not be recovered should be explained to the *sar-subha*. Recoverable revenue should be deducted from Rs. 14,000 and the balance should be received from *Sashti*. All the details regarding credit and debit should be explained to government at the end of the year and the balance settled.

Thus, the expenditure has been sanctioned subject to the aforesaid rules.

Cash sanctioned for expenditure amounts to—

Rs. 1,22,358-8-0

Rs. 200-0-0 Amount lapsed from the budget of the previous year.

Rs. 1,22,158-8-0 Actual sanction.

Details of the actual sanction :

Rs. 1,00,903-8-0 Usual expenditure sanctioned.

Rs. 21,255-0-0 Extra amount sanctioned for the current year.

Rs. 1,22,158-8-0

This amount sanctioned is to be met from the revenues (*see* earlier part of this appendix).

Revenue assigned from different sources :

Rs. 1,20,500-4-0

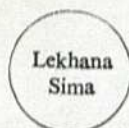
Expenditure sanctioned .. Rs. 1,22,158-8-0

Revenue assigned .. Rs. 1,20,500-4-0

Balance .. Rs. 1,658-4-0

The balance would be paid by government. The revenues assigned should be collected economically and the expenditure made carefully. The four rules stated above should be strictly observed.

Order, dated 16th *Ramjan*



= Seal



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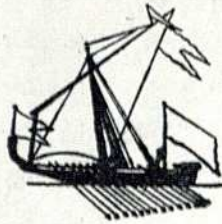
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	Arabic	.. Arb.
	Danish	.. Da.
	Dutch	.. Du.
	Persian	.. Per.
	Prakrit	.. Pkt.
	Sanskrit	.. Skt.

• Appendixes C-1, C-2 and C-3 explained.

Appendix C-1.15 means extract No. 15 of the appendix given at its right-hand. The same explanation applies to Appendixes C-2 and C-3.



TRANSLITERATION MARKS

TRANSLITERATION MARKS USED FOR WORDS IN MARATHI WRITTEN IN THE ROMAN SCRIPT, IN THIS WORK

The underlined letters of the English word approximately suggest their phonetic equivalents in Marathi

a	for अ	as in <u>a</u> ccount or <u>a</u> bridge.	ṭha	for ठ	as in <u>ṭ</u> hatta, <u>ṭ</u> hug.
ā	for आ	as in <u>p</u> ath or <u>b</u> ath.	ḍa	for ढ	as in <u>ḍ</u> usk.
i	for इ or ञि	as in <u>i</u> ll or <u>i</u> t.	ḍha	for ढ	as in <u>Gaḍh</u> wal.
ī	for ई or औ	as in <u>e</u> ast or <u>e</u> at.	ṇa	for ण	as in <u>Baṇa</u> (an arrow).
u	for उ or अु	as in <u>b</u> ull or <u>r</u> uin.	ta	for त	as in <u>Ta</u> rai or
ū	for ऊ or अू	as in <u>s</u> oon or <u>m</u> oon.	tha	for थ	as in <u>th</u> under.
ṛ	for ऋ	short.	da	for द	as in <u>th</u> us.
ṝ	for ॠ	long.	dha	for ध	as in <u>Dh</u> avalgiri (a peak).
e	for ए or ऐ	as in <u>e</u> mpy or <u>E</u> verest.	na	for न	as in <u>n</u> urse or <u>n</u> ut.
ai	for ऐ or औ	as in <u>Ai</u> ravata.	pa	for प	as in <u>p</u> up or <u>p</u> ulp.
o	for ओ	as in <u>o</u> pen or <u>o</u> val.	pha	for फ	as in <u>f</u> ur.
au	for औ	as in <u>b</u> out or <u>b</u> oundary.	ba	for ब	as in <u>b</u> ut.
m	for अं	as in <u>b</u> ump.	bha	for भ	as in <u>Bh</u> arata.
a:	for अः		ma	for म	as in <u>m</u> usk.
ka	for क	as in <u>c</u> urb.	ya	for य	as in <u>y</u> oung.
kha	for ख	as in <u>K</u> halif.	ra	for र	as in <u>r</u> udder.
ga	for ग	as in <u>g</u> ulf or <u>g</u> un.	la	for ल	as in <u>l</u> ull.
gha	for घ	as in <u>G</u> hazni.	va	for व	as in <u>w</u> onderful.
n	for ङ	as in <u>Vaṇ</u> maya (literature)	śa	for श	as in <u>ś</u> hūn.
ca	for च	as in <u>C</u> hurch.	ṣa	for ष	as in <u>Ṣ</u> hatkona (Hexagon).
cha	for छ	as in <u>C</u> hhatrapati.	sa	for स	as in <u>s</u> un.
ja	for ज	as in <u>j</u> udge.	ha	for ह	as in <u>h</u> ut.
jha	for झ	as in <u>Za</u> rathushta.	ḷa	for ळ	as in <u>g</u> uḷa.
ña	for ञ	as in <u>Pañ</u> chatantra.	kṣa	for क्ष	as in <u>Kṣ</u> atriya.
ṭa	for ट	as in <u>ṭ</u> usk or <u>T</u> urk.	jña	for ज्ञ	as in <u>j</u> ñana (knowledge).

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KEY TO PROPER NAMES AND NAVAL TERMS IN THE TEXT

K EY to proper names and naval terms found in the text with internationally accepted transliteration marks, is given here alphabetically. This helps pronounce the proper names and naval terms as in Marathi without changing their current spelling.

Words in the first column (left hand) are as they appear in the body of the text. Their exact pronunciation as in Marathi is given in the second column (right hand).

Words in the Text	Pronunciation of words as in Marathi	Words in the Text	Pronunciation of words as in Marathi
A		A—contd.	
Abaji	.. Abājī	Anaskura	.. Anaskurā
Abdagir	.. Abdāgīra	Andhrabhṛitya	.. Āndhrabhṛitya
Abdhiyana	.. Abdhiyāna	Angre	.. Āngre
Achare	.. Ācare	Ankha	.. Ānkha
Achhasaradari	.. Acharadārī	Anurdhva	.. Anūrdhvā
Ada	.. Ādā	Annaji	.. Ānnājī
Adhi	.. Ādhī	Anusthana	.. Anuṣṭhāna
Adiparvan	.. Ādiparvan	Aparajita	.. Aparājita
Agar	.. Āgara	Aparanta	.. Aparānta
Agari	.. Āgarī	Apararka	.. Aparārka
Agashi	.. Āgāśī	Appaji	.. Āppājī
Agra	.. Āgrā	Ara	.. Ārā
Agramandira	.. Agramandirū	Aramar	.. Āramār
Aitihāsik	.. Aitihāsik	Arba	.. Arbā
Aiyaparaja	.. Aiyaparāja	Armar	.. Aramār
Ajabrav	.. Ajabarāv	Arnala	.. Arnālā
Ajanta	.. Ajantā	Arthashastra	.. Arthasāstra
Ajayaispatatala	.. Ajayaispātatala	Aryan	.. Āryan
Ajnapatra	.. Ajñāpatra	Asheri	.. Aśerī
Akha	.. Ākha	Asman	.. Asmān
Alat	.. Ālāt	Asolani	.. Asolaṇī
Alibag	.. Alibāg	Avadana	.. Avadāna
Ala-ud-din	.. Alā-ud-din	Avajar	.. Avajār
Amatya	.. Amātya	Avuji Nilkanth	.. Āvuji Nīlakanṭh
Amba	.. Ambā	B	
Amin	.. Amīn	Baburao	.. Bāburāv
Amkha	.. Āmkha	Bachyajipant	.. Bacyājīpant
Anandi	.. Ānandī	Badami	.. Badāmī
Anandiprasad	.. Ānandīprasād	Baggala	.. Baggālā
Anandrao	.. Ānandarāv		

Words in the Text	Pronunciation of words as in Marathi
B—contd.	
Bahadarpura	.. Bahādarpurā
Bahiri	.. Bahirī
Bahus	.. Bāhus
Baji Bhivarao	.. Bājī Bhivarāv
Bajirao	.. Bājirāv
Bajirav	.. Bājirāv
Bakaji	.. Bakājī
Balaji	.. Bālājī
Balav	.. Balāv
Ballal	.. Ballāl
Balwantrao	.. Bālwantarāv
Balyav	.. Balyāv
Banavasi	.. Banavāsī
Bandra	.. Bāndrā
Bangadi	.. Bāngadī
Bankot	.. Baṅkoṭ
Bapat	.. Bāpaṭ
Bapuji	.. Bāpūjī
Bara	.. Bārā
Barakin	.. Bārakīṇ
Bardes	.. Bārdes
Barjo	.. Bārjo
Barkas	.. Bārkas
Baryagaza	.. Bāryagāzā
Basrur	.. Basrūr
Bassein	.. Vasaī
Batela	.. Batelā
Bathor	.. Bāthor
Bav	.. Bāv
Bawadekar	.. Bāvaḍekar
Bayanel	.. Bāyanel
Behari	.. Beharī
Belapur	.. Belāpūr
Bhadrapad	.. Bhādrapad
Bhagwantgad	.. Bhagawantagaḍ
Bhandari	.. Bhaṇḍārī
Bhandarkar	.. Bhaṇḍāraḱar
Bharat	.. Bhārat
Bharukachha	.. Bharūkachha
Bharuna	.. Bharūna
Bhaskar	.. Bhāskar

Words in the Text	Pronunciation of words as in Marathi
B—concl.	
Bhatya	.. Bhātyā
Bhausahab	.. Bhāūsāheb
Bhauvani	.. Bhauvānī
Bhavani	.. Bhavānī
Bhavila	.. Bhāvila
Bhawani	.. Bhawānī
Bhavanidas	.. Bhavānīdās
Bhaya	.. Bhayā
Bhendi	.. Bheṇḍī
Bhima	.. Bhīmā
Bhimaksha	.. Bhīmākṣa
Bhivaji	.. Bhivājī
Bhiwandi	.. Bhiwaṇḍī
Bhoi	.. Bhoī
Bhramah	.. Bhramah :
Bhujangrav	.. Bhujaṅgarāv
Bijapur	.. Bijāpūr
Birwadi	.. Bīrawādī
Bolinj	.. Bolīnj
Bond	.. Boṇḍ
Bori	.. Borī
Borivali	.. Borivalī
Borlai	.. Borlai
Borya	.. Boryā
Bot	.. Boṭ
Brahman	.. Brāhmaṇ
Bukhi	.. Bukhī
Buruj	.. Burūj
C	
Chaitra	.. Caitra
Chakrani	.. Cakrāṇī
Chakraniputabhedah	Cakrāṇiputābhedah :
Chakravarti	.. Cakravartī
Chalukya	.. Cālukya
Chandor	.. Cāndor
Chandraditya	.. Candrāditya
Chandrajyoti	.. Candrajyotī
Chandraro	.. Candrarāv
Chapala	.. Capalā
Charai	.. Carai
Charase	.. Cārase

Words in the Text Pronunciation of words
as in Marathi

C—contd.

Chatuh	.. Catuh :
Chaturthi	.. Caturthī
Cheul	.. Ceul
Chhabina	.. Chabīnā
Chhatrapati	.. Chatrapatī
Chimajiappa	.. Cimājiappā
Chinai	.. Cināī
Chinchani	.. Cincanī
Chintaman	.. Cintāman
Chiplun	.. Cipalūn
Chitnis	.. Citanīs
Chittapavan	.. Cittapāvan
Chittaraja	.. Cittarāja
Choli	.. Colī

D

Dabhade	.. Dābhāḍe
Dabhol	.. Dābhol
Daha	.. Dahā
Dahanu	.. Dāhānū
Daldi	.. Dāldī
Dalji Dharmoji Shelatkar	Dālji Dharmoji Śelātkar
Damaji	.. Damājī
Daman	.. Damān
Danda	.. Daṇḍa
Dandah	.. Daṇḍah;
Dandi	.. Dāṇḍī
Dangi	.. Daṅgī
Dantidurg	.. Dāntidurg
Daphara	.. Dapharā
Darakhdar	.. Darakhadār
Darbar	.. Darabār
Darga	.. Dargā
Darwaja	.. Darawājā
Darya	.. Daryā
Daryabar	.. Daryābār
Daryasagar	.. Daryāsāgar
Daryavardi	.. Daryāvardī
Dasara	.. Dasarā
Dasgaon	.. Dāsgāv

Words in the Text Pronunciation of words
as in Marathi

D—contd.

Dasgavi	.. Dāsgāvī
Dativarekar	.. Dātivarekar
Datrarashmigrhaka	.. Datraraśmigrāhaka
Dattaprasad	.. Dattaprasād
Daulatabad	.. Daulatābād
Daura	.. Daurā
Dav	.. Dāv
Deogad	.. Devagaḍ
Deshastha	.. Deśastha
Devagiri	.. Devagiri
Devanagari	.. Devanāgarī
Devili	.. Devilī
Dhabu	.. Dhabū
Dhabusha	.. Dhabūśā
Dhada	.. Dhaḍā
Dhakka	.. Dhakkā
Dhanagad	.. Dhanāgaḍ
Dhanagad	.. Dhanagaḍ
Dhar	.. Dhār
Dharavi	.. Dhārāvī
Dharini	.. Dhārīnī
Dhavadasbi	.. Dhāvaḍaśī
Dhavala	.. Dhavalā
Dhondji	.. Dhoṇḍajī
Dhone	.. Dhoṇe
Dhulap	.. Dhuḷap
Dida	.. Dīḍa
Dipavamso	.. Dīpavamso
Dirgha	.. Dīrghā
Dirghika	.. Dīrghikā
Dishayantram	.. Diśāyantram
Divalatoda	.. Divālatoda
Divan	.. Divān
Dongari	.. Doṅgarī
Doni	.. Doṇī
Durgavara	.. Durgāvara
Dwadashi	.. Dwādaśī
Dwaraka	.. Dwārakā

E

Elephanta	.. Elephantā
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Words in the Text	Pronunciation of words as in Marathi
F	
Faijmaki	.. Faijmaki
Farman	.. Farmān
Fatehgad	.. Fatehgad
Fattegad	.. Fattegad
G	
Gabadi	.. Gābaḍī
Gabit	.. Gābit
Gadandi	.. Gaḍāṇḍī
Gadi	.. Gāḍī
Gajamai	.. Gajamāi
Galabatavari	.. Galabatāvari
Galbat	.. Galabat
Gamani	.. Gāmini
Gandivi	.. Gaṇadivi
Ganapati	.. Gaṇapati
Ganesh	.. Gaṇeśa
Ganesh Chaturthi	.. Gaṇeśa Caturthī
Ganeshprasad	.. Gaṇeśaprasād
Ganga	.. Gaṅgā
Gape	.. Gāpe
Garbhachhata	.. Garbhachāṭa
Garbhara	.. Garbharā
Garbhini	.. Garbhini
Garnali	.. Garnālī
Gatavara	.. Gatavarā
Gauli	.. Gaulī
Gautamiputra	.. Gautamīputra
Gayakwad	.. Gāyakawāḍ
Gelani	.. Gelānī
Ghalun	.. Ghālūn
Gharapuri	.. Ghārāpuri
Ghat	.. Ghāt
Ghate	.. Ghāṭe
Gheria	.. Gheriyā
Ghodbandar	.. Ghoḍbandar
Ghosale	.. Ghosālē
Ghosalgad	.. Ghosālagaḍa
Gibicha	.. Gibicā
Girya	.. Giryā
Godavari	.. Godāvari
Gogha	.. Goghā

Words in the Text	Pronunciation of words as in Marathi
G—contd.	
Gokarna	.. Gokarṇ
Gole	.. Gole
Gopakapattana	.. Gopakapattana
Gopal	.. Gopāl
Gopalgad	.. Gopālagad
Goval	.. Govaḷ
Govardhandas	.. Govardhandās
Govindram Thakur	.. Govindarām Thākūr
Govalkot	.. Govaḷkot
Granthamala	.. Granthamālā
Gud	.. Guḍ
Gujrat	.. Gujarāt
Gulbai	.. Gulabāi
Gulbarga	.. Gulabargā
Gurab	.. Gurāb
Gyali	.. Gyālī

H	
Hajar	.. Hajār
Haji Musa	.. Hāji Musā
Hamsakhala	.. Hāmsakhala
Hanamante	.. Haṇamante
Hanuman	.. Hanumān
Harappa	.. Harappā
Hari	.. Hari
Harvit	.. Harviṭ
Hashamanis	.. Haśamanīs
Havai	.. Havāi
Hawai	.. Hawāi
Helmandavi	.. Helamāṇḍavi
Het	.. Heṭ
Himmatgad	.. Himmatagaḍ
Hindusthanacha	.. Hindusthānacā
Himsrika	.. Himsrikā
Hirbadevi	.. Hirabādevī
Hirada	.. Hiraḍā
Hirakani	.. Hirakaṇī
Hirakot	.. Hirākot
Hodi	.. Hoḍī
Hoka	.. Hokā
Hokayantra	.. Hokāyantra
Holi	.. Holī

Words in the Text Pronunciation of words
as in Marathi

H—contd.

Holkar	.. Holkar
Honavar	.. Honavar
Hoysal	.. Hoyasal
Hubli	.. Hubli
Hutasani	.. Hutāsani
Hujur	.. Hujūr

I

Ibrahim	.. Ibrāhīm
Igatpuri	.. Igatpuri
Inam	.. Inām
Itihasa	.. Itihāsa
Itihasachi	.. Itihāsāci

J

Jabata	.. Jābatā
Jafarabad	.. Jāfarābād
Jagbudi	.. Jagabuḍi
Jagir	.. Jāgīr
Jahaj	.. Jahāj
Jalal-ud-din	.. Jalāla-ud-din
Jalanirgamah	.. Janirgamah:
Jambura	.. Jambūrā
Jamburi	.. Jamburi
Jamdarkhana	.. Jāmdārkhānā
Jamādilakhar	.. Jamādilākhar
Jamādilaval	.. Jamādilaval
Janrao	.. Jānarāv
Janghala	.. Jāgbālā
Janjira	.. Janjirā
Janmashtami	.. Janmāṣṭamī
Jataka	.. Jātaka
Jatichi	.. Jātīci
Java	.. Jāvā
Javar	.. Javār
Javajibaba	.. Jāvājibābā
Jayakeshi	.. Jayakeśi
Jayagadas	.. Jayagaḍās
Jayatapur	.. Jayatāpūr
Jaygad	.. Jayagaḍ
Jejuri	.. Jejuri
Jejal	.. Jejal

Words in the Text Pronunciation of words
as in Marathi

J—contd.

Jilkad	.. Jilkād
Jinji	.. Jinji
Jivaji	.. Jivaji
Jivadhan	.. Jivadhan
Jivan Patil	.. Jīvan Pātīl
Johar	.. Johār
Juhu	.. Juhū
Jyoti	.. Jyoti

K

Kabila	.. Kabīlā
Kabul	.. Kabūl
Kadatanad	.. Kaḍatanāḍ
Kadwad	.. Kaḍawāḍ
Kajjalorekha	.. Kajjalorekhā
Kajirda	.. Kājirḍā
Kalabadevi	.. Kālābādevī
Kalambi	.. Kaḷambī
Kalaphati	.. Kalaphatī
Kalasicha	.. Kalāśīcā
Kalasicha Rahat	.. Kalāśīcā Rahāt
Kalavali	.. Kālāvalī
Kali	.. Kālī
Kalim	.. Kālīm
Kallal Bangdi	.. Kallāl Bāṅgaḍī
Kalusta	.. Kālustā
Kalyan	.. Kalyāṇ
Kalyanprasad	.. Kalyāṇaprasāḍ
Kamandurg	.. Kamānadurg
Kamavisi	.. Kamāviśī
Kambali	.. Kāmbalī
Kanara	.. Kanarā
Kandori	.. Kandori
Kangori	.. Kāngori
Kangri	.. Kāngri
Kanji Jivan	.. Kānji Jīvan
Kanhoji	.. Kānhojī
Kanheri	.. Kānherī
Kanun	.. Kānūn
Kaphala	.. Kāphalā
Kapitan	.. Kapitān
Kappi	.. Kappī

Words in the Text Pronunciation of words
as in Marathi

K—contd.

Karakhana	.. Kārakhānā
Karakhanis	.. Kārakhānīs
Karanda	.. Karaṇḍā
Karanja	.. Karaṇjā
Karhad	.. Karhāḍ
Kari	.. Kārī
Karkun	.. Kār kūn
Karli	.. Kār lī
Karnadhara	.. Karṇadhara
Karnatak	.. Karnāṭaka
Karval	.. Kārvāl
Karvar	.. Kārvar
Karyat	.. Karyāt
Kasaba	.. Kasabā
Kasim	.. Kāsīm
Kasiraja	.. Kaśirājā
Kastha	.. Kāṣṭha
Kasti	.. Kastī
Kata	.. Kāṭā
Kathewad	.. Kāṭhewāḍ
Kathiawar	.. Kāthiāwār
Katur	.. Kātūr
Kautilya	.. Kauṭilya
Kaulavan	.. Kaulāvaṇ
Kavadi	.. Kavaḍī
Kedar	.. Kedār
Kedati	.. Keḍatī
Kelashi	.. Keḷaśī
Kelave	.. Keḷave
Khabar	.. Khābar
Khadi	.. Khādī
Khalasi	.. Khalāśī
Khan	.. Khān
Khanderi	.. Khānderī
Khanderao	.. Khaṇḍerāv
Khandeshvari	.. Khaṇḍeśvarī
Khandi	.. Khaṇḍī
Khandoba	.. Khaṇḍobā
Kharava	.. Khāravā
Kharavi	.. Khāravī
Kharepatan	.. Kharepāṭaṇ

Words in the Text Pronunciation of words
as in Marathi

K—concl.

Khattalwadi	.. Khattalawāḍī
Khed	.. Kheḍ
Khilji	.. Khiljī
Khivarma	.. Khivarmā
Khokari	.. Khokarī
Khote	.. Khoṭe
Khub	.. Khūb
Khup Ladha	.. Khūp Laḍhā
Khutav	.. Khuṭāv
Kiblenuma	.. Kiblenumā
Killa	.. Killā
Kinara	.. Kinārā
Kintan	.. Kintān
Kirtivarman	.. Kīrtivarman
Kitta	.. Kittā
Kolaba	.. Kulābā
Kolatri	.. Kolatī
Kolhapur	.. Kolhāpūr
Kolhapurkar	.. Kolhāpūrakar
Koli	.. Kolī
Kolvan	.. Kolvaṇ
Korlai	.. Korlāī
Kosavar	.. Kosāvar
Kothaya	.. Koṭhayā
Kramanka	.. Kramāṅka
Krishnaji	.. Kṛṣṇājī
Kshaharata	.. Kṣaharāta
Kshatriya	.. Kṣatriya
Kshudra	.. Kṣudrā
Kuda	.. Kuḍā
Kudal	.. Kuḍāl
Kulabkar	.. Kulābakar
Kunakeshwari	.. Kuṇakeśvarī
Kundalika	.. Kuṇḍalikā
Kundapur	.. Kuṇḍāpūr

L

Ladha	.. Laḍhā
Lagiyache	.. Lāgiyāce
Lakshman	.. Lakṣmaṇ
Laksmi	.. Lakṣmī

Words in the Text Pronunciation of words
as in Marathi

L—contd.

Lakshmiprasad	..	Lakṣmīprasād
Lakud	..	Lākud
Lanka	..	Laṅkā
Ledda	..	Leḍḍā
Lekhanka	..	Lekhāṅka
Lohgad	..	Lohagaḍ
Lola	..	Loḷā
Langboti	..	Lāṅgaboṭī
Lowji Nasarwanji	..	Lowjī Nasarwānjī
Wadia	..	Wāḍiā

M

Mab	..	Māb
Machava	..	Macavā
Madgaon	..	Maḍgaṅv
Madh	..	Maḍh
Madhavrao	..	Mādhavarāv
Madhyama	..	Madhyamā
Madhyamandira	..	Madhyamandirā
Modi	..	Moḍī
Maha Darwaja	..	Mahā Darawājā
Mahabaleshwar	..	Mahabaḷeśvar
Mahabharata	..	Mahābhārata
Mahad	..	Mahāḍ
Mahadaji	..	Mahādajī
Mahadeo (va)	..	Mahādev
Mahagiri	..	Mahāgiri
Mahajanaka-Jataka	..	Mahājanaka-Jātaka
Mahakaya	..	Mahākāya
Mahal	..	Mahāl
Mahamandaleshwar	..	Mahāmaṇḍaleśvar
Mahananda	..	Mahānanda
Mahagiri	..	Mahāgiri
Mahangiri	..	Mahāngiri
Maharashtra	..	Mahārāṣṭra
Mahawamso	..	Mahāwamso
Mahegiri	..	Māhegiri
Maheshvar	..	Maheśvar
Maheshwara	..	Maheśvar
Mahim	..	Māhim
Mahipatrao	..	Mahipatrāv
Mahmud Begada	..	Mahamūda Begaḍā

Words in the Text Pronunciation of words
as in Marathi

M—contd.

Mahuli	..	Māhulī
Mai	..	Māi
Majumdar	..	Majumdār
Makhajan	..	Mākhajan
Malabar	..	Malabār
Malad	..	Mālāḍ
Malami	..	Mālamī
Maldiv	..	Māladīv
Malharrao	..	Malhārarāv
Malim	..	Mālim
Malkhed	..	Mālkheḍ
Mallikarjuna	..	Mallikārjuna
Malonda	..	Malondā
Malvan	..	Mālavaṅ
Manaji	..	Mānājī
Mandad	..	Māndāḍ
Mandagora	..	Mandāgorā
Mandala	..	Maṇḍala
Mandale-Borlai	..	Maṇḍale-Borlai
Mandangad	..	Maṇḍangaḍ
Mandavi	..	Māṇḍavī
Mangalisa	..	Mangalīśa
Mangurl	..	Mangrūl
Manji	..	Manjī
Mankoji Marathe	..	Māṅkojī Marāṭhe
Mankar	..	Māṅakar
Manori	..	Manorī
Manthara	..	Mantharā
Manusa	..	Māṇūsa
Manusmriti	..	Manusmṛtī
Maratha	..	Marāṭhā
Marathi	..	Marāṭhī
Marathyanchya	..	Marāṭhyāṁcyā
Martand	..	Mārtanḍ
Maruti	..	Mārutī
Marva	..	Mārvā
Masan	..	Masān
Masik	..	Māsik
Matalai	..	Matalai
Mathuradas	..	Mathurādās
Maval	..	Māvaḷ
Maya	..	Māya

Words in the Text Pronunciation of words
as in Marathi

M—concl'd.

Mayanaik	..	Māyanāik
Maynak	..	Māyanāk
Mazgaon	..	Māzagāv
Mhal	..	Mhāl
Mhasala	..	Mhasalā
Mira-Daulat	..	Mirā-Daulat
Mirya	..	Miryā
Mistri	..	Mistrī
Mitha	..	Mīthā
Modi	..	Modī
Moharami	..	Moharamī
Moharavan	..	Moharāvān
Moin	..	Moīn
Mokasa	..	Mokāsā
Mopla	..	Mopalā
Moraji	..	Morājī
Mriganka	..	Mṛgāṅka
Mubarak	..	Mubārak
Muchakundi	..	Mucakunḍī
Muhurta	..	Muhūrta
Mujumdar	..	Mujumdār
Mumbari	..	Mumbarī
Murud	..	Murūḍ
Musa	..	Musā
Musalman	..	Musalman

N

Nachani	..	Nacāṇī
Nagaon	..	Nāgāv
Nagin	..	Nāgīn
Nagothane	..	Nāgoṭhane
Nahapana	..	Nahapāna
Naik	..	Nāik
Naikwadi	..	Nāikwāḍī
Naka	..	Nāka
Nakhava	..	Nākhavā
Nali	..	Nālī
Nana	..	Nāṇā
Nanajirao	..	Nānājīrāv
Nandgaon	..	Nāndagāv
Narali	..	Nārālī
Naranag	..	Naranāg
Narayan	..	Nārāyaṇ

Words in the Text Pronunciation of words
as in Marathi

N—cont'd.

Nargol	..	Nāragol
Naro	..	Nāro
Nath	..	Nāth
Naukashastra	..	Naukāśāstra
Navadhyaksha	..	Nāvādhyakṣa
Navah	..	Nāvah :
Navam	..	Nāvam
Navasari	..	Navasārī
Nawayat	..	Nāwāyat
Nayak	..	Nāyak
Nijama	..	Nijām
Nilakantha	..	Nīlakaṇṭha
Niyamaka	..	Niyāmaka
Nizam	..	Nizām

P

Pacha	..	Pāca
Padaghi	..	Paḍaghi
Padagi	..	Paḍagī
Padakot	..	Paḍakot
Padav	..	Paḍāv
Padhagya	..	Paḍhagyā
Padhagu	..	Paḍhagū
Padkot	..	Paḍakot
Pagar	..	Pagār
Pakshiraja	..	Pakṣīrāja
Paithan	..	Paithaṇ
Pal	..	Pāl
Pali	..	Pālī
Pallivana	..	Pallīvāna
Palshet	..	Palśet
Pan	..	Pān
Panchetan-Borlai	..	Pāncetān-Borlāi
Pandavgad	..	Pāṇḍavagaḍ
Pandit	..	Paṇḍit
Pandya	..	Pāndya
Panhala	..	Pānhālā
Pani	..	Pānī
Para	..	Pārā
Parabhan	..	Parabhān
Paroda	..	Paroḍā
Parsik	..	Pārasik

Words in the Text Pronunciation of words
as in Marathi

P—contd.

Pasana	..	Pāṣāṇa
Pata	..	Paṭa
Patala	..	Paṭalā
Patalaganga	..	Pātāḷagaṅgā
Patangarav	..	Paṭaṅgarāv
Pathavavya	..	Pāṭhavāvya
Patraputa	..	Paṭrapuṭā
Pavas	..	Pāvas
Pen	..	Peṇ
Peshwa	..	Peśawā
Phadke	..	Phaḍke
Phadnis	..	Phaḍṇis
Phalguna	..	Phālguna
Pharsi	..	Phārasī
Phatteghad	..	Phategaḍ
Phatemar	..	Phatemār
Phatemari	..	Phatemārī
Phattejang	..	Phatejaṅg
Phattermar	..	Phattermār
Phirangi	..	Phiraṅgī
Phirangipada	..	Phiraṅgīpādā
Phond	..	Phoṇḍ
Phonda	..	Phoṇḍā
Phungus	..	Phuṅgūs
Philaji Jadhav	..	Pilājī Jādhav
Pingale	..	Piṅgale
Pir Husen Darga	..	Pīr Husen Dargā
Piraji	..	Pirājī
Plavini	..	Plāvinī
Poladpur	..	Polādpūr
Poona	..	Poona or Puṇe
Pospir	..	Pospīr
Pote	..	Poṭe
Prabhanvalli	..	Prabhānavallī
Prabhasapattam	..	Prabhāsapattam
Prabhu	..	Prabhū
Prachitgad	..	Pracitagaḍ
Pradhan	..	Pradhān
Pradip	..	Pradīp
Prahari	..	Praharī
Prakrita	..	Prākṛt
Prant	..	Prānt

Words in the Text Pronunciation of words
as in Marathi

P—concl.

Prasad	..	Prasāḍ
Prataprao	..	Pratāparāv
Prataprav	..	Pratāparāv
Pratinidhi	..	Pratinidhī
Pratisthana	..	Pratiṣṭhāna
Pulakesi	..	Pulakesī
Pule	..	Puḷe
Pulumavi	..	Pulumāvī
Purana	..	Purāṇa
Puraskrita	..	Puraskṛta
Puri	..	Purī
Purna	..	Pūrṇa
Purnagad	..	Pūrṇagaḍ
Purnavadan	..	Pūrṇāvadāna
Purnima	..	Pūrṇimā
Putabhedah	..	Putābhedaḥ

R

Rabilaval	..	Rabilāval
Rachol	..	Racol
Raghuji	..	Raghūjī
Raghunath	..	Raghunātha
Ragi	..	Rāgī
Rahamani	..	Rahamānī
Rahat	..	Rahāṭ
Rahimani	..	Rahimānī
Raigad	..	Raigaḍ
Raimurdha	..	Raimurdhā
Raja	..	Rājā
Rajahams	..	Rājahams
Rajakot	..	Rājakoṭ
Rajamandal	..	Rājamaṇḍal
Rajaniti	..	Rājanīti
Rajapur	..	Rājāpūr
Rajapuri	..	Rājāpurī
Rajaram	..	Rājārām
Rajashri	..	Rajāśrī
Rajavali	..	Rājāvalī
Rajavalliya	..	Rajavallīya
Rajayani	..	Rajayānī
Raje	..	Rāje
Rajmachi	..	Rajamācī

Words in the Text

Pronunciation of words
as in Marathi

R—contd.

Rajpuri	..	Rājapurī
Rajyacha	..	Rājyācā
Rajyavyavaharkosha		Rājyavyavahārakośa
Raghunath	..	Raghunāth
Ram	..	Rāma
Ramban	..	Rāmbān
Ramachandra Pant	..	Rāmacandra Pant
Ramajan	..	Ramajān
Ramaji	..	Rāmājī
Ramayana	..	Rāmāyana
Rameshwar	..	Rāmeśvar
Ramprasad	..	Rāmprasād
Rana	..	Raṇa
Ranabhima	..	Raṇabhīma
Ranajaya	..	Raṇajaya
Rao	..	Rāv
Rāshtrakuta	..	Raṣṭrakūṭa
Ratta	..	Raṭṭa
Rattaraja	..	Raṭṭarāja
Ratnagiri	..	Ratnāgiri
Rav or Rao	..	Rāv
Reddi	..	Reḍḍī
Revadanda	..	Revadaṇḍā
Revadandekar	..	Revadaṇḍekar
Revati	..	Revatī
Rewari	..	Rewārī
Richa	..	Rcā
Rigveda	..	Rgveda
Riyasat	..	Riyāsāt
Roha	..	Rohā
Rojamara	..	Rojamarā
Rudraji	..	Rudrājī Dhulap
Rumal	..	Rumāl
Ruparel	..	Rupārel

S

Saban	..	Sābān
Sabani	..	Sābānī
Sabda	..	Śabda
Sabhasadachi	..	Sabhāsadācī
Sabhamandap	..	Sabhāmaṇḍap
Sabhaparvan	..	Sabhāparvan

Words in the Text

Pronunciation of words
as in Marathi

S—contd.

Sadak	..	Saḍak
Sadashiv	..	Sadāśiv
Sadhane	..	Sādhane
Sagar	..	Sāgar
Sagaraphena	..	Sāgaraphena
Sagargad	..	Sāgargaḍ
Sagunabai	..	Saguṇābāī
Sahatira	..	Śahātīra
Sahebsadar	..	Sāhebsadar
Sahukari	..	Sāhukārī
Sahyadri	..	Sahyādri
Saivan	..	Saivān
Sajili	..	Sajilī
Sakin	..	Sākin
Salabai	..	Sālabāī
Salamati	..	Salāmatī
Saman	..	Samān
Saman	..	Sāmān
Samanin	..	Samānīn
Samanya	..	Sāmānya
Samsher	..	Samśer
Samsherjang	..	Samśerjang
Sambhaji	..	Sambhājī
Sambhu	..	Sambhū
Samshodhaka	..	Samśodhaka
Sangameshwar	..	San̄gameshwar
Sangraha	..	San̄graha
Sanjan	..	Sanjān
Sanskrit	..	Sam̄skṛta
Sardar	..	Sardār
Sardari	..	Saradārī
Sardeshmukhi	..	Sardeśmukhī
Sarai	..	Sarāī
Sarang	..	Sāraṅg
Sharangdhara	..	Śāraṅgad̄hara
Saraswat	..	Sārasvat
Sari	..	Sāḍī
Sarja	..	Sarjā
Sarjakot	..	Sarjākot
Sarjya	..	Sarjyā
Sarvamandira	..	Sarvamandirā
Sashti	..	Sāṣṭī

Words in the Text Pronunciation of words
as in Marathi

S—contd.

Sasti	..	Saṣṭī
Sasthdeva	..	Saṣṭhadeva
Sata	..	Sāta
Satakarni	..	Sātakarṇī
Satanandapura	..	Śatānandapura
Satapati	..	Sātapāṭī
Satara	..	Sātārā
Satari	..	Sātārī
Satavahana	..	Sātavāhana
Satawali	..	Sātawālī
Satra	..	Satrā
Satyashraya	..	Satyāśraya
Saurashtra	..	Saurāṣṭra
Savaisadar	..	Savāīsadar
Savakar	..	Sāvakār
Savakari	..	Sāvakārī
Saval	..	Savāl
Savant	..	Sāvant
Savantvadi	..	Sāvantavāḍī
Savase	..	Savāse
Savitri	..	Sāvitṛī
Sawai	..	Sawāī
Sawaisadar	..	Sawāīsadar
Sawant	..	Sāwant
Sawantwadi	..	Sāwantavāḍī
Sawantwadikar	..	Sāwantavāḍīkar
Sayavan	..	Sāyavān
Sekha	..	Sekhā
Sekhoji	..	Sekhojī
Serva	..	Servā
Shah	..	Śāha
Shaha	..	Śahā
Shahatira	..	Śāhatīra
Shahu	..	Śāhū
Shankarajipant	..	Śankarājīpant
Shaska	..	Śāsaka
Shastakhan	..	Śāstākhān
Shastri	..	Śāstrī
Shataritram	..	Śatāritram
Shenavi	..	Śeṇavī
Shibad	..	Śibāḍ
Shibar	..	Śibār

Words in the Text Pronunciation of words
as in Marathi

S—contd.

Shid	..	Śiḍ
Shilahara	..	Śilāhāra
Shirgaon	..	Śīrgāon
Shivaji	..	Śivājī
Shivaprasad	..	Śivaprasād
Shivaratra	..	Śivarātra
Shravan	..	Śrāvāṇ
Shri	..	Śrī
Shrimant	..	Śrīmānt
Shringa	..	Śṛṅga
Shringarpur	..	Śṛīṅgārapūr
Shriwardhan	..	Śrīvardhan
Shurparaka	..	Śūrpāraka
Sibad	..	Sibāḍ
Sibadi	..	Sibāḍī
Sida	..	Siḍ
Sidhoji	..	Sidhojī
Sikka	..	Sikkā
Sikhara	..	Sikharā
Silahara	..	Śilāhāra
Sima	..	Śimā
Simha	..	Śimha
Simhala	..	Śimhala
Simhapura	..	Śimhapura
Sipai	..	Sipāī
Siphara	..	Siphārā
Sirasi	..	Sirasī
Sitabrao	..	Sitābarāv
Sitabarav	..	Sitābarāv
Sivachitta	..	Sivacitta
Sivade	..	Sivāḍe
Somanath	..	Somanāth
Sonkoli	..	Sonkolī
Sopara	..	Sopārā
Sorath	..	Sorāṭh
Sravasti	..	Srāvāṣṭī
Sravana	..	Śrāvāṇa
Sronaparantak	..	Śronāparāntaka
Subha	..	Subhā
Subhadar	..	Subhādār
Subhanrav	..	Subhānarāv
Subhanji Kharade	..	Subhānaji Kharāḍe

Words in the Text Pronunciation of words
as in Marathi

S—concl.

Subhedar	.. Subhedār
Sudhagad	.. Sudhāgaḍ
Sudridha	.. Sudṛḍha
Sugriv	.. Sugrīv
Sukanu	.. Sukānū
Sukarna	.. Sukarṇa
Sukkan	.. Sukkān
Sukta	.. Sūkta
Sultan	.. Sultān
Suma	.. Sumā
Sumatra	.. Sumātrā
Surgad	.. Surgaḍ
Surparaka	.. Śurpāraka
Suru	.. Surū
Suryavamshi	.. Sūryavamśī
Suvarnadurg	.. Suvarṇadurg
Swami	.. Swāmī
Swaraj	.. Swarājya
Swarnamukhi	.. Swarṇamukhī
Swari	.. Swārī
Swiya	.. Swīya

T

Tainat	.. Taināt
Tajik	.. Tājik
Takile	.. Tākile
Tala	.. Talā
Tale	.. Talē
Talkhadi	.. Talakhāḍī
Taluka	.. Tālukā
Tandel	.. Tāṇḍel
Tansa	.. Tānsā
Tarabai	.. Tārābāī
Taraju	.. Tarājū
Tarande	.. Tarāṇḍe
Tarani	.. Tarānī
Tarapur	.. Tārāpūr
Tarave	.. Tārave
Tari	.. Tarī
Taru	.. Tārū
Tavada	.. Tāvada
Thal	.. Thal

Words in the Text Pronunciation of words
as in Marathi

T—contd.

Thakur	.. Thākūr
Thana	.. Thānā
Tijai	.. Tijāī
Tina	.. Tīna
Tiparya	.. Tiparyā
Tir	.. Tīr
Tirkati	.. Tirakaṭī
Tisasitaina	.. Tisāsitaina
Tissa	.. Tissā
Tivi	.. Tivī
Tiwara	.. Tiwarā
Toni	.. Tōnī
Topikar	.. Topīkar
Topikarache	Topīkarāce Kalāsīcā
Kalashicha Rahat	Rahāt
Torana	.. Toranā
Traikutaka	.. Traikūṭaka
Trikati	.. Trikaṭī
Tukoji	.. Tukoḷī
Tulaji	.. Tuḷājī
Tungar	.. Tungār
Tunga-tikona	.. Tuṅga-tikonā
Tuphan	.. Tuphān
Turuska	.. Turuṣka
Tutka	.. Tuṭakā

U

Uchali	.. Ucalī
Udaji Padval	.. Udājī Paḍaval
Udayagiri	.. Udayagirī
Udayatara	.. Udayatārā
Uddhavji	.. Uddhavajī
Ulhas	.. Ulhās
Umbargaon	.. Umbaragāv
Undal	.. Unḍal
Underi	.. Underī
Undi	.. Unḍī
Unnata	.. Unnatā
Uran	.. Uraṇ
Urdhva	.. Ūrdhvā
Ushavadat	.. Uśavadāt
Utaravara	.. Utaravārā
Uttarardha	.. Uttarārdha

Words in the Text	Pronunciation of words as in Marathi
V	
Vaghi	.. Vāghī
Vaghothane	.. Vāghoṭhāṇe
Vaitarana	.. Vaitaraṇā
Valipattam	.. Valīpattam
Varata	.. Varatā
Vari	.. Varī
Varma	.. Varmā
Varna	.. Varṇa
Varuna	.. Varuṇa
Vasaichi	.. Vasaīci
Vasai	.. Vasaī
Vasaihuna	.. Vasaīhūna
Vasisthi	.. Vāsīṣṭhī
Vasudeoshastri	.. Vasudevaśāstri
Vatapipura	.. Vātāpipura
Vavadi	.. Vāvāḍī
*Vedamurti	.. Vedamūrtī
Vegini	.. Veginī
Velaneshwar	.. Velāneśwar
Vengurla	.. Vengurlā
Venkatrao	.. Venkaṭarāv
Veraval	.. Verāval
Veravalpattan	.. Verāvalapattan
Vesava	.. Vesāvā
Vesave	.. Vesāve
Vetal	.. Vetāl
Vetalaprasad	.. Vetālāprasād
Vibhag	.. Vibhāg
Vichare	.. Vicāre

Words in the Text	Pronunciation of words as in Marathi
V—contd.	
Vihar	.. Vihār
Vijarat-mava	.. Vijārat-māva
Vijayadasami	.. Vijayādaśamī
Viraval	.. Virāval
Virgal	.. Viragalla
Visaji	.. Visājī
Vishalgad	.. Viśālgaḍ
Vishishtha	.. Viśiṣṭha
Vishnu	.. Viṣṇu
Vishvanath Bhat	.. Viśvanāth Bhaṭ
Vithoji Naik	.. Viṭhojī Nāik
Vyankat	.. Vyankaṭ

W	
Wadi	.. Wāḍī
Waghi	.. Wāghī
Wavadi	.. Wāvāḍī

Y	
Yadava	.. Yādava
Yaksha	.. Yakṣa
Yavani	.. Yāvani
Yesaji	.. Yesājī
Yesavanti	.. Yesavanti
Yeshawantgad	.. Yeśavantagaḍ
Yeshwantrao	.. Yeśawantrāo(v)

Z	
Zadati	.. Zaḍatī



KEY TO NAVAL TERMS IN APPENDIXES B-1, B-2, B-3

Naval terms in Appendixes B-1, B-2 and B-3 are given here alphabetically.

Terms in the first column (left hand) are as they appear in these appendixes. Their exact pronunciation as in Marathi is given in the second column (right hand).

Words in the Appendixes	Pronunciation of words as in Marathi	Words in the Appendixes	Pronunciation of words as in Marathi
A		B—contd.	
Adaras	.. Aḍaras	Barakani	.. Barakani
Adavan	.. Aḍavan	Barakin	.. Barākīn
Adavani	.. Aḍavani	Barakas(ś)	.. Bārakas (ś)
Adavani	.. Aḍavani	Barakat	.. Barakata
Ade	.. Āḍe	Baras	.. Barās
Adhe	.. Āḍhe	Batan	.. Batān
Adhi	.. Āḍhī	Batela	.. Batelā
Akada	.. Ākaḍā	Batena	.. Batenā
Akat-avadan	.. Akat-avadān	Bathor	.. Bāthor
Alat	.. Alāt	Bavakan	.. Bāvakaṇ
Alath	.. Alāth	Bavakand	.. Bavakāṇḍ
Aramar	.. Aramār	Bhala	.. Bhālā
Aramar	.. Āramār	Bhandari	.. Bhaṇḍārī
Arasa	.. Ārasā	Bhang	.. Bhāṅg
Araye-Karane	.. Āraye-Karane	Bharati	.. Bharatī
Asaman	.. Asamān	Bharkas	.. Bhārkas
Astaman	.. Astamān	Bhauvani	.. Bhauvānī
Atala-vara	.. Ātalā-vārā	Bhoy	.. Bhoya
Avadar	.. Avadār	Bhurada	.. Bhuraḍā
Avadi	.. Āvāḍī	Bodad	.. Boḍad
Avajar	.. Avajāṛ	Bomb	.. Bomba
Avakhanda	.. Avakhaṇḍā	Bomb-batali	.. Bomb-bāṭalī
Avale	.. Avaḷe	Bomb-haja	.. Bomb-hājā
B		Bomb (bom) patali	.. Bomb (bom) pāṭalī
Badadi	.. Bādāḍī	Bond	.. Boṇḍ
Bagala	.. Bagalā	Bond-yari	.. Boṇḍ-yārī
Baheracha-vara	.. Bāheracā-vārā	Bot	.. Boṭ
Bala (lya) v	.. Balā (lyā) v	Budhadha	.. Buḍḥḍhā
Bandar	.. Bandara	Buleti	.. Buleṭī
Bap	.. Bāp	Bulir	.. Bulīr
Bara	.. Bārā	Buranda	.. Burandā
Barajo	.. Bārajo	Burkas	.. Burakas
		Burkhat	.. Burakhat

Words in the
AppendixesPronunciation of words
as in Marathi

C

Chalani	.. Cālānī
Chapane	.. Cāpāṇe
Charani	.. Cāraṇī
Chauk	.. Cauk
Chaut	.. Cāuṭ
Chavata	.. Cavaṭā
Chabina	.. Chabīnā
Chota-te-ti	.. Choṭā-ṭe-ṭī
Chuladan	.. Culadān
Chulait	.. Culait
Chumbal	.. Cumbāl

D

Dalaka	.. Ḍalakā
Daman	.. Damān(ṇ)
Danda	.. Dāṇḍā
Dangi	.. Daṅgī
Daphara	.. Dapharā
Dastur	.. Dastūr
Data	.. Dāṭā
Daur	.. Ḍaur
Dav	.. Ḍāv
Delake	.. Ḍelake
Dere	.. Ḍere
Dhabula	.. Ḍhabulā
Dhada	.. Dhaḍā
Dol	.. Ḍol
Dolachi	.. Ḍolaci
Dol-javasa	.. Ḍol-jāvasā
Dol-kathi	.. Ḍol-kāṭhī
Dole	.. Ḍole
Doni	.. Ḍonī
Dubaka	.. Ḍubakā
Dubare	.. Dubāre
Dudavak	.. Duḍavāk
Durabinit	.. Durabiniṭ
Duramin	.. Duramīn
Duramit	.. Duramīṭ

G

Gabadi	.. Gābaḍī
Gachi	.. Gacī

Words in the
AppendixesPronunciation of words
as in Marathi

G—contd.

Gai	.. Gaī
Gala	.. Gālā
Galbat	.. Galabat
Gamatkarane	.. Gamatakarāṇe
Ganj	.. Gañj
Gape	.. Gāpe
Gavi	.. Gāvī
Gay	.. Gaya
Ghodi	.. Ghoḍī
Ghos	.. Ghosa
Gudadi	.. Guḍaḍī
G(gh)urab	.. G(gh)urāb
Gyali	.. Gyālī

H

Hakane	.. Hākāṇe
Halesa	.. Halesā
Halesi marane	.. Halesī mārāṇe
Halis	.. Halīs
Handi	.. Hāṇḍī
Hanja	.. Hānjā
Haras	.. Harās
Het	.. Heṭ
Hetacha-vara	.. Heṭacā-vārā
Heti	.. Heṭī
Hisada(di)	.. Hisādā(ḍī)
Hodage	.. Hoḍage
Hodake(ki)	.. Hoḍake(kī)
Hodar	.. Hoḍār
Hodi	.. Hoḍī
Hodi-mandane	.. Hoḍī-māṇḍane

I

Idali	.. Iḍalī
Idalis-haza	.. Idalis-hāzā
Idarus-yari	.. Idarus-yārī
Ikhali-yari	.. Ikhālī-yārī
Indrus-yari	.. Indrus-yārī

J

Jahaj	.. Jahāj
Jerip	.. Jerīp

Words in the Appendixes	Pronunciation of words as in Marathi	Words in the Appendixes	Pronunciation of words as in Marathi
J—contd.		K—contd.	
Jibh	.. Jībh	Kharmal	.. Kharmāl
Jibhange	.. Jibhāṅge	Khatara	.. Khaṭārā
Jibhanja	.. Jibhānjā	Khisti	.. Khistī
Jigha	.. Jighā	Khopa	.. Khopā
K		Khur(ra)m-alat	.. Khura(rā)m-ālāt
Kabila	.. Kabīlā	Kiblenuma	.. Kiblenumā
Kachi	.. Kaci	Kinara	.. Kinārā
Kadani	.. Kāḍani	Kintan	.. Kintān
Kagaricha-vara	.. Kāgaricā-vārā	Kisti	.. Kistī
Kahebi	.. Kahebī	Kolmachava	.. Kolmacavā
Kalabi, Kalambi	.. Kalabī, Kalambī, Kaḷambī	Kothava	.. Koṭhavā
Kalabi-gavi	.. Kalabī-gāvi	Kothaya	.. Koṭhayā
Kalabu-kande	.. Kalabū-kāṇḍe	Kuchar	.. Kucār
Kalami	.. Kalamī	Kud	.. Kūḍ
Kalaphati	.. Kalaphatī	Kurva	.. Kurvā
Kalaskathi	.. Kaḷaskāṭhī	Kurvak	.. Kurvāk
Kalim	.. Kālīm	Kutra	.. Kutrā
Kand	.. Kāṇḍ	L	
Kandi	.. Kāṇḍī	Labaran	.. Labarān
Kantali	.. Kāṇṭalī	Lais	.. Lāīs
Kaphala	.. Kāphalā	Lais-karane	.. Lāīs-karaṇe
Kapitan	.. Kapitān	Lakhalakhi	.. Lakhalakhī
Kappi	.. Kappī	Lanj	.. Lānj
Kari	.. Kārī	Lat	.. Lāt
Karval	.. Karvāl	Latadani	.. Latāḍaṇī
Kata	.. Kātā	Latarani	.. Latāraṇī
Katran	.. Kātraṇ	Lhanj	.. Lhānj
Katur	.. Kātūr	Loi(ya)li	.. Loi(ya)lī
Kaulavan	.. Kaulāvaṇ	M	
Kedali	.. Keḍalī	Mach	.. Māc
Kedati	.. Keḍatī	Machan	.. Mācaṇ
Keva(va)r	.. Keva(vā)r	Mach-dene-ghene	.. Māc-dene-ghene
Khadya	.. Khādyā	Machava	.. Macavā
Khaj	.. Khāj	Machhimari	.. Macchimārī
Khala(shi)si	.. Khalāś(s)ī	Mahagiri	.. Ma(ā)hāgiri
Khambauti	.. Khambautī	Malaki	.. Mālakī
Khambya	.. Khāmbyā	Malim	.. Mālīm
Khanda	.. Khāndā	Malami	.. Mālamī
Khap	.. Khāp	Mandi	.. Māṇḍī
Khapata	.. Khapāṭā	Manja(i)	.. Manjā(i)

Words in the
AppendixesPronunciation of words
as in Marathi

M—contd.

Marakh	.. Marākh
Mastul	.. Mastūl
Mastur	.. Mastūr
Masturi	.. Masturī
Matalai(ya)	.. Matalai(yā)
Matan	.. Mātan
Mateli(ri)	.. Mateli(rī)
Mauj(a)	.. Mauj(ā)
Mayal	.. Mayāl
Mayas	.. Mayās
Medhe(dhi)	.. Medhe(dhī)
Mhal-adhi	.. Mhāl-ādhi
Mudat	.. Muḍat

N

Nad	.. Nāḍ
Nade	.. Nāḍe
Nahat-hone	.. Nahāt-hone
Nal	.. Nāl
Nangar	.. Nāngar
Nav	.. Nāv
Nilim	.. Nilīm
Nirim	.. Nirīm
Nishan	.. Nīśāṇ
Nishan-ekajibhi	.. Nīśāṇ-ekajibhī
Nivat	.. Nivāt

P

Padav	.. Padāv
Padhagi	.. Paḍhagī
Pag	.. Pāg
Pagar	.. Pagār
Pakar	.. Paka(kā)r
Pal	.. Pāl
Panaval	.. Pānavāl
Pani-jokhane	.. Paṇī-jokhaṇe
Par	.. Pār
Paraba(bha)n	.. Parabā(bhā)n(n)
Paraban-gavi	.. Parabān-gāvī
Paranal	.. Paranāl
Paranalika	.. Paranālikā
Parpo	.. Pārpo

Words in the
AppendixesPronunciation of words
as in Marathi

P—contd.

Pat	.. Pāt
Patali	.. Paṭalī
Patan	.. Paṭan
Patari	.. Paṭarī
Pathacha-vara	.. Pāṭhacā-vārā
Pathan	.. Pāṭhāṇ
Pathar	.. Pāṭhār
Patinga	.. Pāṭingā
Pavada	.. Pāvada
Pavade	.. Pāvade
Pelani	.. Pelanī
Peracha-ja	.. Peracā-jā
Perachi	.. Peracī
Peraj	.. Perāj
Phalati	.. Phalaṭī
Phani	.. Phaṇī
Phattemar(ri)	.. Phattemār(rī)
Pheni	.. Phenī
Phogi	.. Phogī
Phugav	.. Phugāv
Phurar	.. Phurār
Pinjari	.. Pinjarī
Porke(kya)	.. Porke(kyā)
Poyasicha-vara	.. Poyasīcā-vārā

R

Ramjan	.. Ramjān
Renol	.. Reṇol
Royali	.. Royālī

S

Sabai	.. Sābāī
Sadak	.. Saḍak
Sadi	.. Sāḍī
Sakarne	.. Śākārṇe
Sakati	.. Sākāṭī
Sama	.. Samā
Sambuk	.. Sambūk
Sar	.. Sār
Sarai	.. Sarai
Sarang	.. Sāraṅg
Sara-varaodhane	.. Sārā-varaodhaṇe

Words in the Appendixes	Pronunciation of words as in Marathi
S—contd.	
Sar-dupai	.. Sār-dupāī
Sar-dupai-yari	.. Sar-dupāī-yāī
Sar-kand	.. Sar-kāṇḍ
Satami	.. Satamī
Sataras	.. Sātaras
Satavar	.. Sātavār
Sati	.. Sāṭī
Selane	.. Selāṇe
Sera	.. Serā
Shid	.. Śīḍ
Shivaji	.. Śivājī
Sibad	.. Sibāḍ
Sid	.. Sīḍ
Sid-bamb	.. Sīḍ-bamb
Sid-dupetane	.. Sīḍ-dupetāṇe
Sid-kalabiche	.. Sīḍ-kalabīce
Sid-kambi	.. Sīḍ-kāmbī
Sid-kand	.. Sīḍ-kāṇḍ
Sid-pan	.. Sīḍ-pān
Sid-phogi	.. Sīḍ-phogī
Siki	.. Siki
Siphar	.. Siphār
Sola	.. Solā
Sora	.. Sorā
Sukanu	.. Sukāṇū
Sukanu-bave	.. Sukāṇū-bāve
Suval(la)	.. Suvāl(lā)

T

Tadani	.. Tāḍaṇī
Taj	.. Tāj
Takani	.. Tākaṇī
Take	.. Tāke
Takta	.. Taktā
Tangali	.. Tāṅgaḷī
Tangare	.. Tāṅgare

Words in the Appendixes	Pronunciation of words as in Marathi
T—contd.	
Tangul	.. Taṅgūḷ
Tani	.. Taṇī
Tapar	.. Tapār
Tarande	.. Tarāṇḍe
Tarani-pip	.. Tāraṇī-pīp
Tarapha	.. Tarāphā
Tari	.. Tarī
Taru	.. Tārū
Tavada	.. Tāvaḍā
Tivada	.. Tivaḍā
Toni	.. Toṇī

U

Udhan	.. Udhān(ṇ)
Ulandi	.. Ulaṇḍī
Uparacha-vara	.. Uparācā-vārā
Utar-bandar	.. Utār-bandar
Utaracha-vara	.. Utārācā-vārā

V

Vaghi	.. Vāghī
Vak	.. Vāk
Vara	.. Varā
Varam	.. Varām
Vari	.. Varī
Vasa	.. Vāsā
Vasada	.. Vasāḍā
Vasaru	.. Vāsarū
Vata-dharane	.. Vāta-dharaṇe
Volana	.. Voḷaṇa

Y

Yari	.. Yāī
------	--------

Z

Zadi	.. Zāḍī
Zap	.. Zāp
Zelati	.. Zelatī

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Thana navigable rivers and creeks—Bassein, Bhivandi, Bolinj, 8 ; Chinchani, Dahanu, 10 ; Kalyan, 8 ; Manor, 10 ; Sopara, 8 ; Tarapur, Thana, Ulhas, Vaitarana, 10

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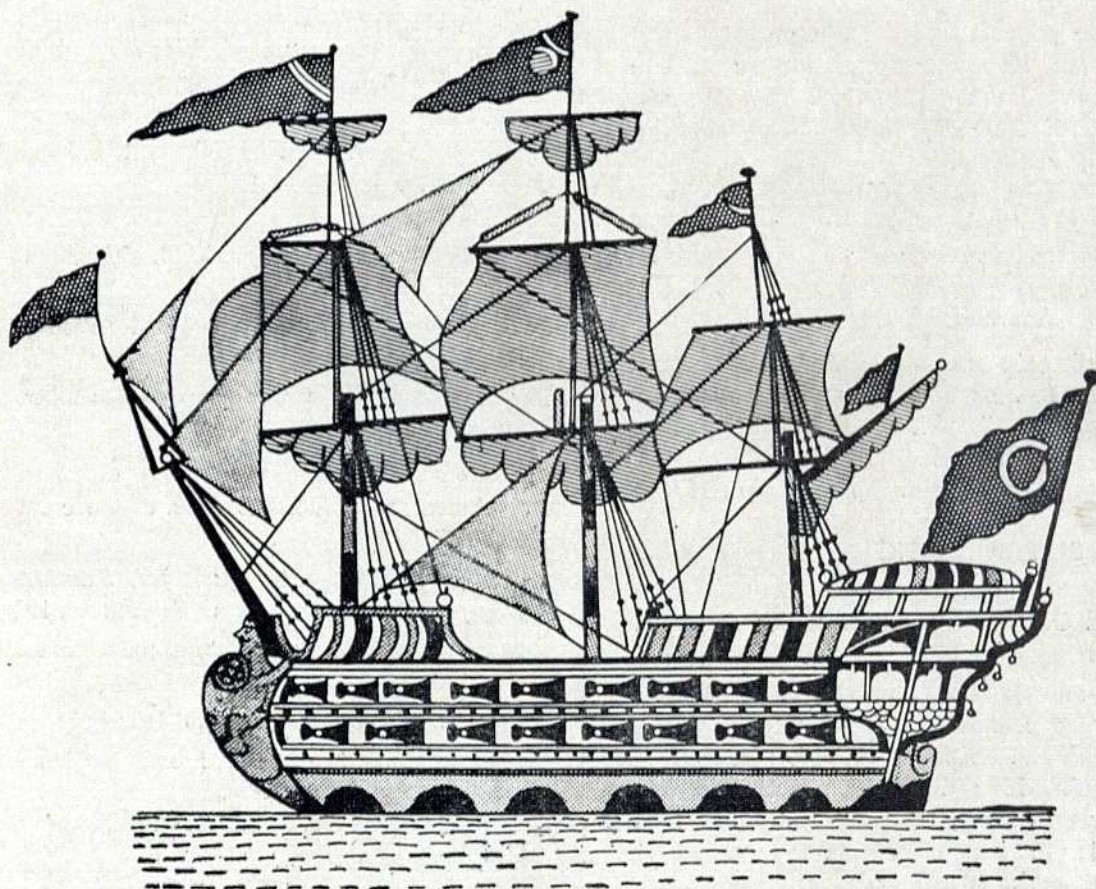
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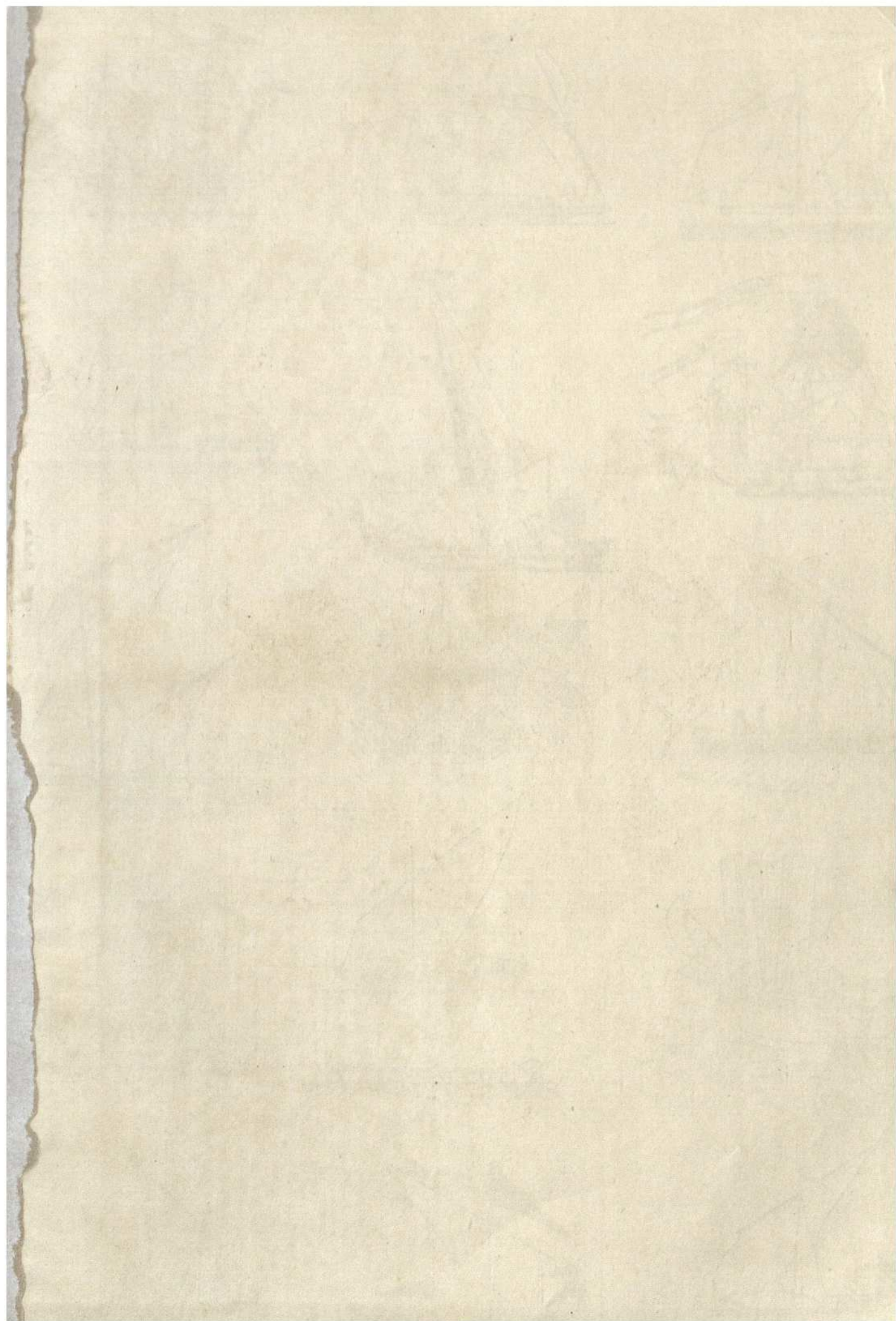
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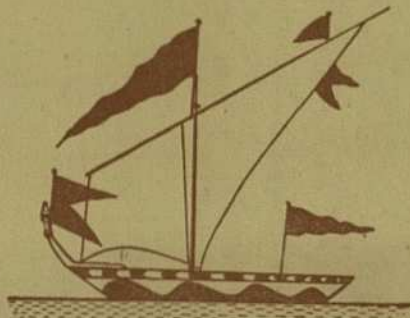
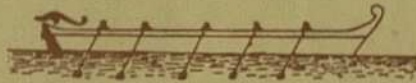
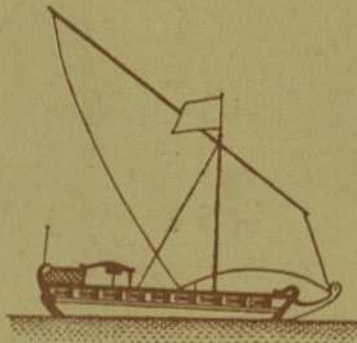
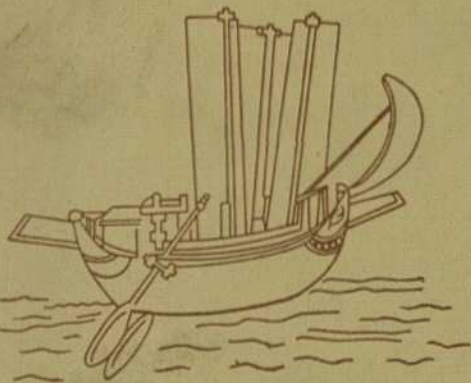
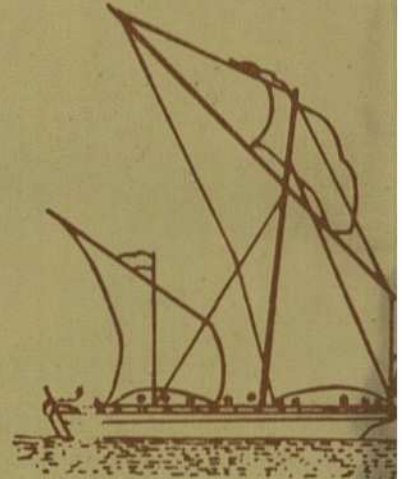
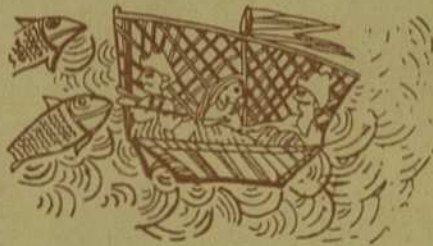
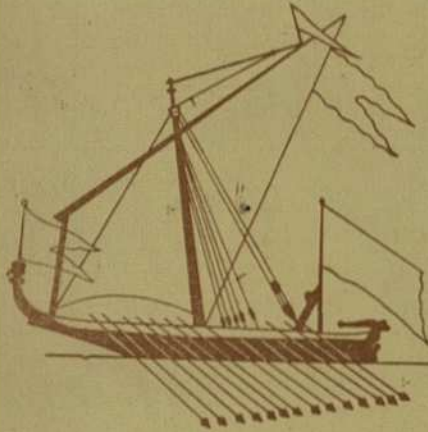
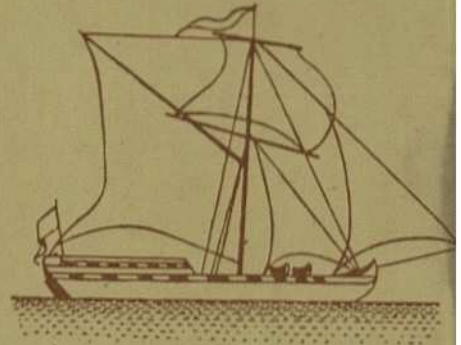
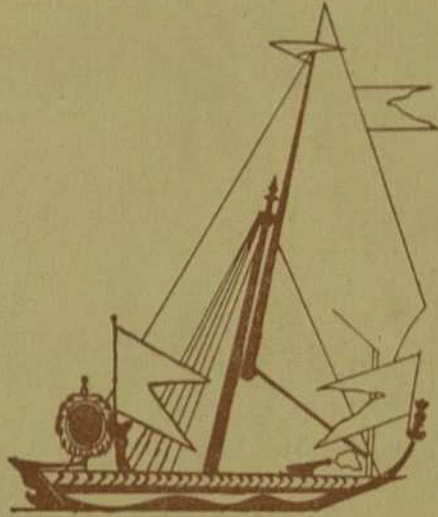
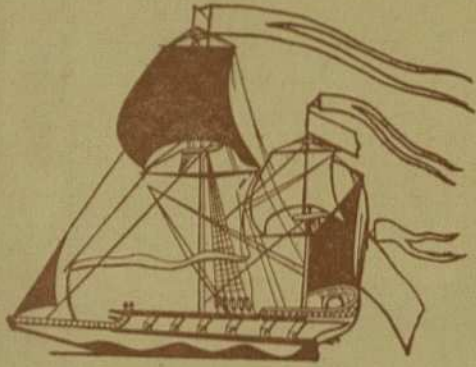
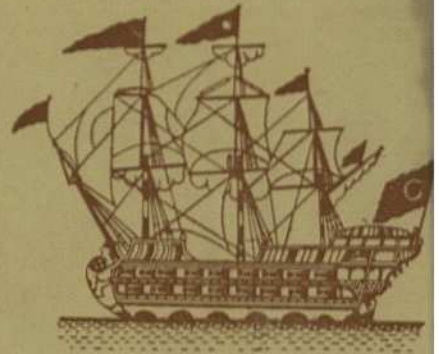
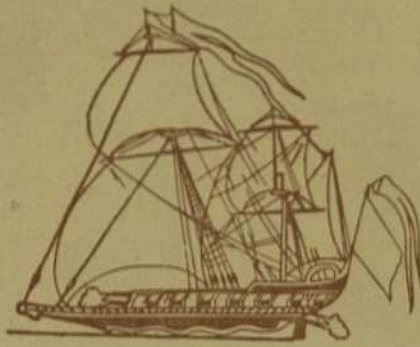
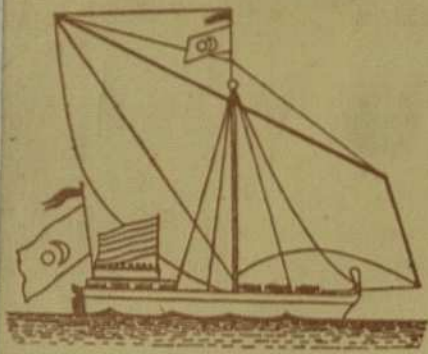


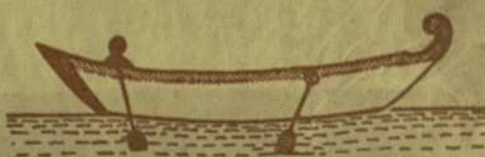
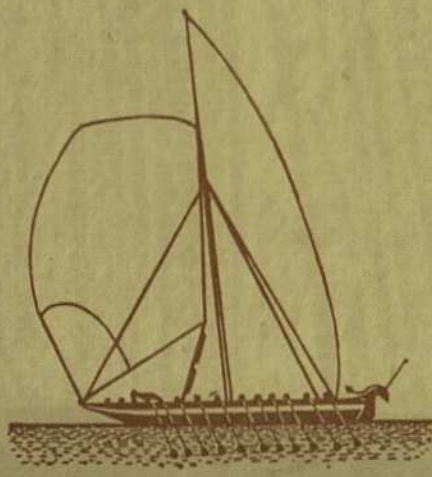
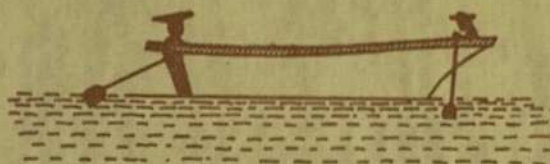
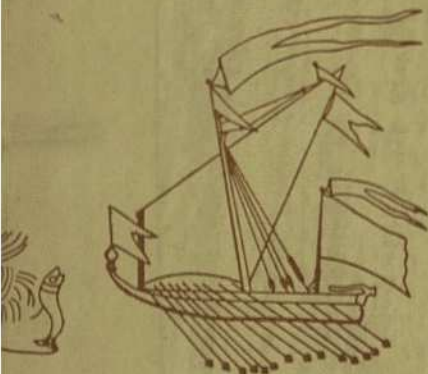
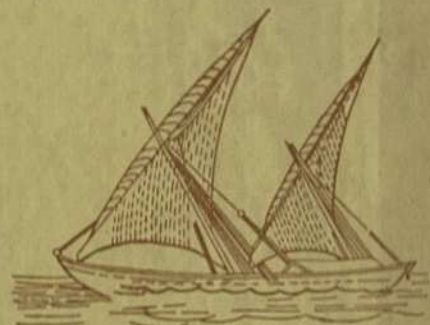
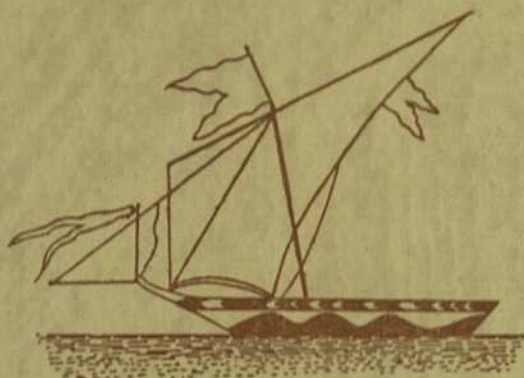
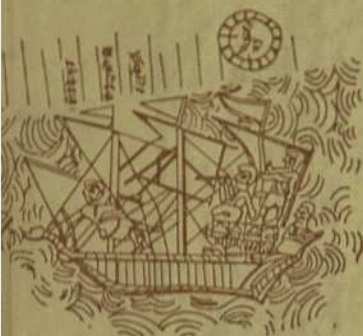
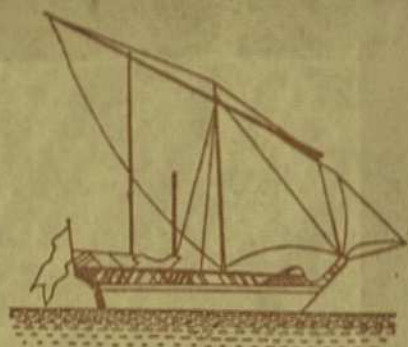
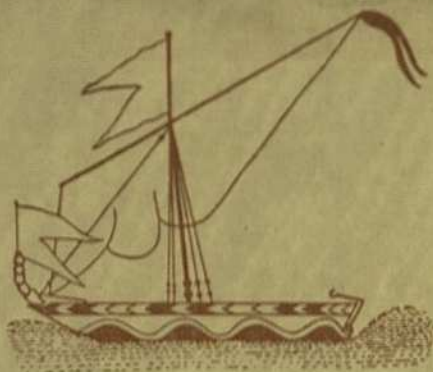
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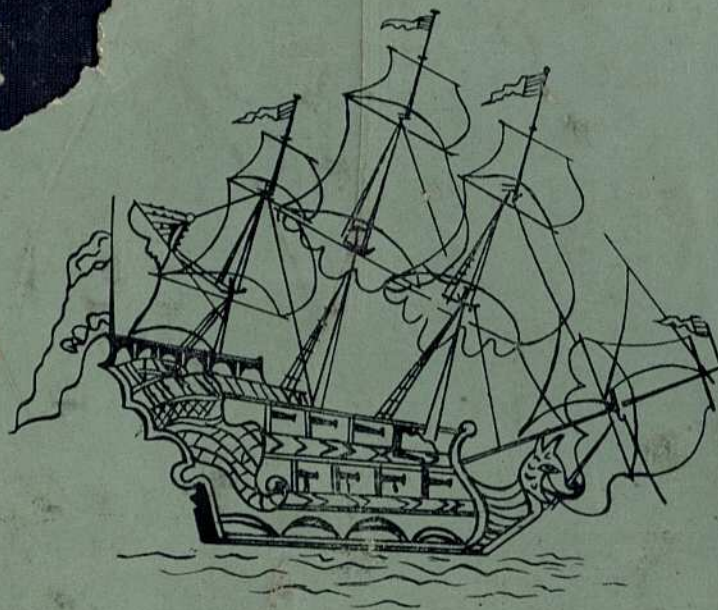
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