Summer Naval Power

During a period whose beginning is uncertain but whose termination may be placed, approximately, towards the end of the 4th century B.C., Ceylon was colonised by Indo-Aryan mariners and migrants who sailed from the deltas of the Indus and the Ganges, the earliest arrivals being those who came from north-western India. Before they established settlements in Ceylon, these mariners, whose business was trade, had doubtless made several coastal voyages to this island and carried back its products, or the profits from those products, to their homelands. In B.C. 325, Onesicritus, the chief pilot of Alexander the Great, was told by the seafaring people of the Indus delta, who had long been acquainted with Ceylon, about the situation, the surroundings and the products of the island. It is probable that the Indo-Aryans first learned of Ceylon from South Indian sailors, with whom they must necessarily have made earlier contacts and who, it is reasonable to suppose, could not have been ignorant of the existence of their large, island neighbour. In abandoning their homelands and journeying to settle in far-distant Ceylon, the southernmost limit of their then known world, the first Indo-Aryan emigrants took a step which was perhaps not irrevocable because the ships they travelled in could have taken them back if the enterprise failed. Prominent, probably first, among the reasons which urged them to choose Ceylon for their new settlement would have been a reliance, if not a sense of assurance, that they would not encounter resistance which they could not overcome from the peoples, whoever they were, who then inhabited Ceylon, as well as from others, like themselves, who were trading with the island. A second vital consideration would have been the greater material gains that would accrue to them from the known riches of the new territory in pearls, precious stones and chanks: possibly, they were also aware of additional sources of wealth in ivory, elephants, tortoise shell and spices. A third important factor on which they would have relied would have been an abundance of water and cultivable land on which they could raise crops for their sustenance.

The Vijaya legend of the Ceylon Chronicles (itself a combination of various other legends) describes a voyage at the mercy of winds and currents ending in a fortuitous landfall on an auspicious day at the hitherto unknown and rich island of Ceylon. One of these legendary versions related by Fa Hsien implies a progressive colonisation and is the least unreal of these stories, all of which are fabulous and were embellished with miraculous and supernatural elements when they came to be written many centuries later. What we may safely assume is that this was no haphazard adventure but that the first settlement of Indo-Aryans, who were an agricultural community, was an organised expedition to a known land, that regular communication was maintained thereafter with the homeland, and that the success of the pioneer settlement encouraged further waves of emigrants to follow. The distance by sea was about 1,500 miles and none but intrepid seamen in sea-worthy ships could have accomplished this succession of outward and return voyages.

The background of the Indo-Aryan settlers in Ceylon was, therefore, one of expertise in sea faring, namely, in the building of sea-going vessels, the efficient management and navigation of them on the ocean, the ability to make voyage of many days duration, and a knowledge of winds and currents: concomitantly, they would have been equally expert in the lesser skills of building and operating smaller craft for the Ceylon pearl and chank fisheries and of boats for the catching of fish for food. (A fish was the distinctive emblem of the independent dynasty of Gāmanis who ruled over south-eastern Ceylon but lost their authority early in the 2nd century B.C.) Sea faring, in every aspect of its activities, was the forte of these earliest colonists of Ceylon and should have been the inherited skill of their descendants, the Sinhalese. In the reign of Devanatapiyawissa (B.C. 246–206) the Sinhalese were still making long voyages because the king’s envoys sailed to the Ganges and back with gifts for the Mauryan emperor, Asoka, and they repeated the double journey in the following year. The existence of active communication between Ceylon and the Mauryan empire (Asoka mentions Ceylon in his edicts) can scarcely be doubted. The return from voyages abroad, in one day, of seven ships to a port in Rohana laden with valuable cargoes, is recorded in a semi-legendary story of the early 2nd century B.C.

---

2. C. J. S. (G), II, 99, 100, 175, 176; Sir Paul Pieris Felicitation Volume, 66, 67.
3. M 11.20-39 : 18.6-8 : 19.1-8 : 22.69. Either the Sinhalese had no knowledge of the currents on the western coast of Ceylon or they had lost that knowledge when the story of Vimalakirti came to be written. It is said that the was cast adrift on the sea near the mouth of the Kalani River and that the vessel was carried to a landing place in Rohana. This is impossible because the current is northward and not southward, and it is this northward current which accounts for the pattern of the lagoons on the west coast.

---

Note.—The word “navy” is not used in its modern sense of warships exclusively. In ancient times, the merchant ship and the fighting ship were one. In Elizabethan England of the 16th century, the “Navy” meant “all English ships and all English seamen.”
SINHALESE NAVAL POWER

Thereafter, Sinhalese sea power appears to have suffered eclipse. In the 3rd century B.C. and earlier there was active maritime trade between the Arabs and the Indians. Then, in the 2nd century B.C., the Greeks began to cut out the Arab intermediaries and to make coastwise expeditions themselves to India. The direct dealing stimulated trade between the West and India. The South Indian ports, too, began to be visited with increasing frequency by Western ships. A trade boom had begun. Great opportunities for acquiring wealth by the sale of the products of South India and Ceylon to these Western merchants presented themselves, and doubtless excited the cupidity of the rulers and governing classes of these regions. Early in the 1st century B.C., the great discovery was made of the use of the monsoons to sail direct across the Indian Ocean, and Greek and Roman ships came with regularity and in much greater numbers to South Indian harbours. The products of Ceylon were obtained by the Romans in South Indian ports to which they were conveyed in South Indian ships. During the period of about two and a half centuries preceding the second decade of the 2nd century A.C. (when Roman ships began to make regular visits to Ceylon and deal direct with the Sinhalese), the Sinhalese had only an indirect share in the flourishing trade with the West and were dependent on South Indian shipping and intermediaries for the transport and marketing of their valuable merchandise.

This loss, in the second half of the 2nd century B.C., of their sea power which the Sinhalese had previously possessed in a high degree becomes, therefore, a very significant event in the early history of Ceylon. The only apparent reason for it is that the vast, new opportunities for highly profitable trade created by the advent of Western ships and merchants into South Indian waters led to a conflict between the Tamils and the Sinhalese for the control of Ceylon's lucrative export trade in those seas. The Tamils were numerically stronger than the Sinhalese but were probably less skilled in seafaring, although it is very likely that they had greatly increased their efficiency since the days when they had stood aside and allowed the Indo-Aryans to occupy Ceylon and acquire its riches. In the struggle for command of the sea which followed, the Sinhalese were vanquished. The invasions and conquests of Ceylon which took place early in the 2nd century B.C., first by the Damilas, Sena and Gutthaka, who are described as the sons of a ship's captain who brought horses to Ceylon, and soon afterwards by the Damila, Emaru, appear to have been the most crucial phases of this struggle. All three are described as benevolent rulers, in marked contrast to later Tamil conquerors, and this benign foreign rule is consistent with a policy of achieving commercial control and at the same time giving every encouragement to the subject people to increase their production of and profits from their island of commerce. The final phase in the subjection of Sinhalese sea power, it may be conjectured, was the Pandyan conquest in the reign of Vattagamani Abhayas early in the 1st century B.C. To this time may be assigned the inscriptions at the capital, Anuradhapura, of a guild or corporation of Tamil householders whose leader was a ship's captain.

The collapse of Sinhalese sea power and the capture of Ceylon's external trade by Tamil intermediaries were largely discounted about the year 125 when Roman ships began to sail into Ceylon harbours and to deal directly with the Sinhalese. Chinese ships were also trading direct with the Sinhalese at this time and Ceylon became eventually the entrepot of trade in the Indian Ocean. A resuscitation of Sinhalese sea power was no longer essential solely in her trade interests, because the Romans and the Chinese would have seen it to their own advantage to deal with Ceylon were not interfered with by the Tamil navies: and the Sinhalese had no aggressive intentions nor any desire to extend their territory overseas. Moreover, the ancient sea faring skill of the Sinhalese had been lost for over 200 years and now survived as a memory, while the Tamils were actively engaged during that period in seaborne activities and had attained a high level of efficiency which they never lost thereafter.

The Calavaminas states that Mogallana I (491-509) "by instituting guards for the sea-coast, freed the island from danger." It may be that in this statement is to be perceived the beginning of the revival of Sinhalese sea power, for it did revive and became powerful once again in the reign of Parakkamabahu I in the second half of the 12th century. In the 3rd, 5th and 7th centuries, particularly in the 7th century, Sinhalese princes with pretensions or claims to the throne crossed to South India and returned with Tamil mercenaries to wage war against the ruling monarch. Very probably these Tamil troops were transported in Tamil ships. The Chronicles say nothing of sea fights on these occasions nor of any attempted invasions being repulsed on the seas: the decisive contests were always on land. The silence of the Chronicles is not, however, sufficient ground for a conclusion that there were no naval encounters: it may well be that...


6. The theory of a struggle for sea power between the Sinhalese and the Tamils in the 2nd and 1st centuries B.C. and the victory of the Tamils is the outcome of a stimulating discussion with Mr. B. J. Perera.

attempted invasions which were beaten off at sea were not recorded. Manavamma (684—718), who put an end to civil war, secured the throne with the aid of a Pallava invasion force, given him by the Pallava king, which was conveyed across the seas in Pallava ships. Many of these Pallavas settled in Ceylon and examples still survive of their characteristic art and architecture. It is probable that the resumption of sea faring by the Sinhalese was given a powerful impetus at this time under Pallava guidance.

After the Pandyyan conquest of 429 to 455, Ceylon was not invaded by the Tamils until the reign of Sena I (833—853), a period of nearly four centuries. The earlier conquest exposed the vulnerability of Ceylon from her lack of naval forces, and we have seen that remedial measures were initiated by Moggallana I at the end of the 5th century. The naval build-up was apparently inadequate to resist the Pandyyan invasion in the reign of Sena I, and this weakness appears to have been realised because it is stated that this king’s successor, Sena II (853—885), “set up guards against every danger” and “made the Island hard to subdue by the foe.”8 The “foe” in this context means the Tamil enemy in South India, and the measures of security taken to render the Island “hard to subdue” must have included defence on the sea as well as on the invasion coast. The strengthening of sea power undertaken after the second Pandyyan invasion was completed rapidly and efficiently, because Sena II was able to invade South India in 862.

In 862 and again in 915 Sinhalese expeditionary forces crossed the seas to the Pandyyan kingdom. The first of these landings in Pandy was an invasion whose purpose was to dethrone the Pandyan king and replace him on the throne by a Pandyan prince who had sought the aid of the Sinhalese monarch, while on the second occasion the Sinhalese army fought as an ally of the Pallava army against the Colas. It could be assumed that on both occasions the Pandyanas would have given all the naval assistance they could to ensure that they could not be supplied or reinforced: a secondary purpose may have been to capture their shipping. Ceylon emerged from the Pandyyan conquest with a depleted and not a shattered navy. After Vijayabahu’s victory, he re-established overseas relations with Kaliliga and Burma, and also made preparations at two seaports to embark an expeditionary force upon an invasion of the Cola kingdom. He could not, therefore, have lacked naval resources.11

Save for an abortive attempt at conquest by an invader (Viradeva of Palandipa) whose identity is obscure,12 Ceylon was free of external attack for a century following the expulsion of the Colas. For some years there was a disastrous civil war which impoverished the country, but with the accession of Parakramabahu as ruler of Dakhinadesa, an era of great prosperity was inaugurated. He increased the money resources of his principality by exporting precious stones.13 The ports available to him at that time would have been the havens and anchorages between the mouth of the Kala Oya and Kalutara. (Colombo was already a seaport in the

---

SINHALESE NAVAL POWER

10th century. Valigama in Matale district was also a flourishing port and there were many merchants there "to whom their life and their money were dear," but Parakkamabahu exercised no authority over it.

The first record in the Chronicles of a sea fight occurs in the course of the narrative relating to the war between Parakkamabahu of Dakkhiṇadesa and Gajabahu of Rājāraṇha. It has to be borne in mind, however, that much of the Cīlavamsa account of Parakkamabahu is pure panegyric: there is a great deal of adulation and exaggeration, and successful skirmishes are made to appear as major victories. In the two naval engagements described, "many hundreds of ships" are said to have participated and "many thousands of men" to have fallen: this description is not to be taken literally. The fights were, in fact, a contest for the mastery of the Pearl Banks off the north-western coast. In the first conflict the Malaya-rāyara, a commander of Parakkamabahu, advanced from Valikakhetta (identified by Codrington with modern Vellavcla, near Battulu Oya) and captured Gajabahu's fortress at Mallavalana, a place in the vicinity of Puttalam or Kallipitiya. He then embarked his troops on ships and sailed to Muttakara (the Pearl Banks) where Gajabahu's naval forces, who were in possession, offered resistance. The Chronicle says that he twice engaged Gajabahu's ships and put them to flight, but it is clear from the sequel that he failed to wrest the control of the Pearl Banks because shortly afterwards Parakkamabahu had to despatch another general to accomplish this task. This general, the Nagaragiri Mahinda, followed the same plan. He captured Mallavalana (which had been retaken by Gajabahu's forces), put to sea with his troops, fought a victorious naval action against Gajabahu's ships and secured the control of the Pearl Banks: to consolidate and hold his gains, he built a fortress at the place named Pilavasu and garrisoned it. Thus Parakkamabahu deprived his opponent of one of the main sources of money revenue from external trade, and doubtless exploited that success by exporting pearls in addition to precious stones.

Parakkamabahu united the whole of Ceylon into one kingdom in 1153. He certainly raised the military might of Ceylon to a level which it had never attained before, and his naval power was considerable, enabling him to carry out invasions of Burma and South India. The attack on Burma should more accurately be described as a massive, punitive raid rather than an attempt at conquest, but it was a naval enterprise of some magnitude. The provocation for the conflict between the two countries, between which there had long subsisted strong ties of friendship and cordial trade relations, is stated in detail in the Cīlavamsa. In brief, the Burmese king, Alaungsithu, grown haughty and intolerant in old age, impeded and put a stop to the trade of Sinhalese merchants, especially the trade in elephants. He raised the prices of elephants to prohibitive levels, refused to make the customary exchanges, and then seized and imprisoned a group of Sinhalese merchants and confiscated their wares and their ships. Two Sinhalese envoys were sent back to Ceylon in a leaking vessel. On a later occasion he accepted payment from Sinhalese merchants for elephants and then refused to deliver them. The final act of aggression was the seizure of a Sinhalese princess on her way to Kamboja (Western Siam). The Sinhalese king resolved to make war and put in hand preparations for an invasion of Burma. The building of a fleet of vessels of various kinds was begun and "now all the country round about the coast was one great workshop occupied with the building of the ships." The work of shipbuilding was completed in five months and the fleet assembled at the port of Pallavavanka (identified by Codrington as Palvakki, about 24 miles northward of Trincomalee). The overall Commander of the entire naval and military force was the Damijjadhikārīn Ādīcca, a dignitary whose peace-time duties were connected with the State Treasury, and next in command under him was the Nagaragiri Kitti (called Kit Nuvaragal in the Devanagala inscription). The fleet, it is stated, was provisioned with supplies to last one year. "Now when this assemblage of ships all at the same time sailed forth in the midst of the ocean it looked like a swimming island." Rough seas and adverse winds were encountered on the voyage and the ships became separated (a not uncommon event in the marine history of sailing ships). Some sank and others drifted to foreign shores. One ship made land at Kākādīpa ("Crow's Island"), probably one of the Andaman Islands, and the troops on board captured several of the inhabitants and brought them to Ceylon as prisoners. Five ships under the command of the Nagaragiri Kitti entered the port of Kusumiyā (Bassein), where the troops landed, defeated the Burmese forces who opposed them and laid waste the surrounding countryside. The Damijjadhikārīn Ādīcca landed at Pappāhālama and advanced and captured the town of Ukkama: it is claimed that his troops slew king Alaungsithu but this claim is not supported by the Burmese accounts of the death of their king. The Burmese now sent envoys to Ceylon to make a treaty with the Sinhalese king: whether these envoys preceded or accompanied or followed the Sinhalese ships on their return journey is not dis-

14. Col. 75. 45-46.
15. Col. 70. 60-65, 89-93.
16. Col. 76. 1-75.
The Cilavamsa account of the capture of Kusumiyà by the Nagara-giri Kittí and the restoration of peace by a treaty negotiated by Burmese envoys is confirmed by the Devanagala inscription17 of Parakkamabahu I, dated in the year 1165, recording a grant of land to Kit Nuvaragal for his services in the Burma campaign.

If the Cilavamsa narrative is construed literally, it would appear that only six troop-carrying Sinhalese ships reached Burma, the rest of the fleet having been scattered by the storms encountered at sea; and the submission of the Burmese, which is said to have followed upon the victories gained by the troops from these six ships, can only be explained either by a lamentable state of unpreparedness for defence in the Burmese kingdom or by divided loyalties within it and the adherence of powerful factions, actively or passively, on the side of the Sinhalese. On the other hand, it is not improbable that the Cilavamsa story of the subjugation of a foreign kingdom by six of Parakkamabahu’s ships is just another laudatory exaggeration of the marvellous power of its hero’s arms.

Parakkamabahu’s next military expedition across the seas was the invasion of Pandya. The Cola power was now declining, but it was not weak. In a succession dispute which arose in Pandya, the ruler, Parakkarna, was besieged in his capital, Madhura, by the claimant, prince Kulasckhara; Parakkama appealed to the Colas. Parakkamabahu of Ceylon responded to the Pandyan king’s call and began to assemble at the seaport, Mahatitha, ships and troops under the command of the Senapati Lankapura: but before the expedition was ready to sail, news was received that Kulasekara had captured Madhura and slain Parakkama Pandya and his wife and children. The Sinhalese king repeated his orders to the Senapati Lankapura to proceed with the invasion, depose Kulasekara and consecrate as king a scion of the house of the dead Pandyan king. The fleet with the troops on board thereupon set sail, the pre-selected landing place being the roadstead of Taladilla on the Pandyan coast. Since the ships could not stand in close to the shore at Taladilla, a large number of small boats was taken, probably in tow as well as slung over the sides, to transport the troops from the ships to shore. The crossing of the sea from Mahatitha to Taladilla took about 24 hours, a day and a night, and the landing was made successfully, as planned, in the face of Pandyan opposition: Taladilla was captured and established as a beachhead. The further course of the fighting, which was on land, is not relevant to this account of naval operations, but it may be mentioned that further, important use was made of the Sinhalese navy to bring to Ceylon numerous Tamil prisoners of war captured by the Senapati Lankapura as well as to reinforce the general with a large contingent of fresh troops at a crucial stage in his campaign. The Cilavamsa ends its account of the Pandyan invasion abruptly but on a note of victory.18 From the Cola inscriptions we know that the actual termination of this particular campaign was the defeat of the Sinhalese invading forces and the capture and decapitation of Senapati Lankapura and the other Sinhalese generals after the capture of Madhura by them and a probably imprudent attempt to invade the Cola kingdom which brought massive retaliation from the Colas. But this was not the end of Parakkamabahu’s intervention in the affairs of Pandya. The Pandyan rulers were “time-servers who changed sides according to their estimates of their own immediate interests.” But Parakkamabahu’s policy was consistent: he aligned himself with any Pandyan prince who was prepared to make war against the Colas and in pursuance of this policy it happened that he subsequently supported princes whom he had previously fought against.

A Cola epigraph of 1178 (approximately) states that news was received in the Cola kingdom that the Sinhalese king, Parakkamabahu, was building ships and assembling troops at Urtturai (Kayts), Pulaicceri, Māṭoṭham (Māntai), Vallikāmām (Vallikāmami), Mattivill (Maṭtvil) and other places in order to make a fresh invasion of South India: to forestall this, the Cola king organised a counter-expedition, placing at its head prince Srivallabha of Ceylon, a nephew of king Parakkamabahu, who was then a refugee in the Cola country: this expedition landed in Ceylon, captured several places, including Pulaicceri and Māṭoṭham, seized many elephants, devastated a considerable area of land, killed or took captive some of the Sinhalese chieftains of the locality, and returned to the Cola kingdom with the captured booty. Parakkamabahu’s invasion plans were thereby frustrated. Reading between the lines, we may infer that the placing of a Sinhalese prince at the head of this Cola expedition was, if not an attempt to dethrone Parakkamabahu, an endeavour to secure a foothold in the northern part of Ceylon with a view to extending the scope of the operations later: this plan was frustrated by Parakkamabahu.

Sinhalese troops again crossed to Pandya about 1186 and fought on the side of the Pandyan faction which was at war with the Colas. A Cola inscription claims that the Cola soldiers “cut off the noses of the Singala troops who rushed into the sea.” Parakkamabahu died in 1186.

---

17. E. Z. III. 312-325.
SINHALESE NAVAL POWER

repeated interventions in Pāṇḍyan affairs would have imposed upon his
navy the tasks of transporting the expeditionary forces and the reinforce-
ments sent from time to time, supplying and provisioning these forces,
bringing back the wounded and prisoners, maintaining uninterrupted
sea communication, and, above all, preventing the Cōla navy from interfer-
ing with the seaborne operations. There is no reason to doubt that it
was capable of performing these tasks, and did perform them, successfully.

Nissanka Malla (1187—1196), in more than one of his vainglorious
inscriptions, claims to have invaded South India, received tribute from
Pāṇḍya and Cōla without fighting and, returned to Ceylon with captives.
The presence of an inscription of this king at Rāmeśvaram is evidence
that he did cross to the Indian mainland with an army, but the rest of his
claims receive no corroboration from any source. It is probable that he
continued the policy of Parakkamabāhu I of sending Sinhalese troops to
Pāṇḍya to aid the Pāṇḍyans against the Cōlas.

After the death of Nissanka Malla, the Sinhalese kingdom of Polonnarūva moved rapidly to its collapse. Civil wars and invasions succeeded
each other. There were at least four Cōla invasions between 1196 and
1210, and these were followed by a Pāṇḍyan conquest from 1211 to 1214.
In these encounters the military power of the Sinhalese on land and sea
was severely shaken: i., was finally smashed in the second and third quarters
of the 13th century by the conquests of the Kaliliga, Magha, and the
Pallava to aid the Pandyans against the Cōlas.

The naval history of ancient Ceylon may, therefore, be briefly sum-
mised as follows:—
(1) Up to 3rd B.C.—Expert skill and a great tradition in seafaring;
many voyages were made to and from the deltas of the Indus and
the Ganges; as sailors the Sinhalese were supreme in the South
Indian seas.
(2) 2nd and 1st centuries B.C. and up to about the year 125.—Rapidly
increasing commerce between the West (Greeks and Romans)
and South India led to a struggle between the Tamils and
the Sinhalese for the mastery of the South Indian seas in order to gain
control of Ceylon’s rich export trade, and in this struggle Sinhalese
sea power was vanquished in the 2nd century B.C.; thereafter, the
products of Ceylon were transported and sold in Tamil ports

90

19. For the Cōla inscriptions, see “The Cōlas,” by K. A. Nilakanta Sastri, 366-372, 378-385,
412, 423, 424; J.R.A.S. (C.B.), XXXI, 384-387. For Nissanka Malla and his successors, see Col.
(C.B.), New Series, V. 173-182.

SINHALESE NAVAL POWER

by Tamil intermediaries to Western merchants; perhaps, only
Chinese ships had regular dealings in a small way direct with the
Sinhalese.
(3) 125 A.C. to the 4th century.—Roman and Chinese ships were
calling regularly and in increasing numbers at the ports of Ceylon
and dealing direct with the Sinhalese, eliminating the Tamil
intermediaries, and this direct trade expanded to such dimensions
that Ceylon became the entrepot of trade in the Indian Ocean ;
the necessity for a Sinhalese navy for protection of trade or for
defence or for territorial expansion (which the Sinhalese never
contemplated) did not exist.
(4) The 5th century.—The Pāṇḍyan conquest emphasised the necessity
for a revival of Sinhalese naval power, and the first steps were
taken by Moggallāna I.
(5) The 7th and 8th centuries.—Under Pallava guidance the resuscita-
tion of Sinhalese sea power made further progress.
(6) The 9th and 10th centuries.—After the Pāṇḍyan invasion in the
reign of Sena I, the Sinhalese naval build-up was greatly expedited,
and in 862 and 915 the Sinhalese navy was capable of transporting
Sinhalese armies of invasion to Pāṇḍya and maintaining those
armies in the invaded territory.
(7) The 11th century.—Sinhalese sea power was not seriously incapaci-
tated during the Cōla conquest, and recovered rapidly after the
expulsion of the Cōlas.
(8) The 12th century.—Sinhalese naval power reached its peak, enabling
Parakkamabāhu to carry out an invasion of Burma and to send
a succession of expeditionary forces to South India; the Sinhalese
navy was able to keep the Cōla navy in check.
(9) The 13th century.—Destruction of the naval and military power
of the Sinhalese.

Neither the name nor the title of a Sinhalese naval commander, cor-
responding in rank to an Admiral, is mentioned in the Ceylon Chronicles.
There was, in fact, no such post, because the ships were not exclusively
warships and for the greater part of the time were employed as merchant-
men: moreover, many of them were privately owned, though the king
had, no doubt, the power to requisition them for war service whenever
necessary. In every Sinhalese expedition overseas, the overall commander
of the ships and the troops was always the commander of the land forces:
but in no instance is the king or a prince mentioned as having left Ceylon
in command of an expeditionary force. Sinhalese kings and princes commanded troops in the field within their own kingdom, but not abroad.

Of naval strategy and tactics the Chronicles say practically nothing. No doubt, Indian methods and techniques were borrowed, but there again we know almost nothing of Indian naval warfare.

POSTSCRIPT

Professor Paranavitana’s theory, first propounded at the Dambadeniya Cultural Conference on August 23, 1958, that Māgha, and by implication, presumably all the other Kāliṅga kings of Ceylon, were members of the Kāliṅga royal house of the Srivijaya kingdom of Malaya and Indonesia, has a vital bearing upon the history of Sinhalese sea power as well as resolves certain historical problems of the 10th to 13th centuries. Mahinda IV (956–972) was the first Sinhalese king to make a marriage alliance with this Kāliṅga royal house of South-east Asia, and the Cāḷavamsa employs significant words in narrating the event: “Although there was also in Lāṅkā a race of nobles, the ruler of men (Mahinda IV) had a princess of the land of the ruler of Kāliṅga fetched and made her his first Mahesi. Of her were born two sons and a charming daughter. He made his sons Āḍipadās and his daughter a Queen: thus the Ruler found the royal house of the Sīhalas.” Mahinda V, son of Mahinda IV by the Kāliṅga Mahesi, describes himself in an inscription as “a pinnacle of the Kāliṅga royal house.” Vijayabahu I, after he restored Sinhalese sovereignty over Ceylon in 1070, married a Kāliṅga princess as his second Mahesi, and by her he had a son, Vikkamabāhu, who also married a Kāliṅga princess. The grandmother of Parakkamabāhu I (1153–1186) was the Kāliṅga Mahesi of Vijayabahu I. Parakkamabāhu’s sister married a Kāliṅga prince and their son, Vijayabahu II, was nominated as Parakkamabāhu’s successor. Thereafter, the following kings of Ceylon were of pure Kāliṅga descent:—Nissaṅka Malla (1187–1196); Virabahu (1196); Vikkamabahu III, also called Erappata; Codagangā (1197); Sāhasamalla (1200–1202); Queen Kāliṅyavati, Mahesi of Nissaṅka Malla (1202–1210); Lokissara or Lokēśvara (1210–1211); and finally Māgha (1214–1239).

20. The writer was aware earlier of Professor Paranavitana’s views on this subject, but was precluded from making use of them till they were made public: That is the reason for introducing them now as a postscript.
22. E. Z. IV. 65.

The wise policy of Mahinda IV bore fruit. We have seen that during the Cōḷa occupation of northern and north-central Ceylon, Vijayabahu of Rohana was able to engage in sea-borne commerce with further India in spite of the Cōḷa blockade, and this external trade, which enabled him to build up his resources for fighting the Cōḷa, was doubtless facilitated, if not protected, by the Srivijaya navy. After his victory, Vijayabahu I had no lack of sea power. The ports on the eastern and southern coasts, particularly Trincomalee, would have increased in importance after the alliance with the Malays: we find Koṭṭāśāra (modern Kōṭṭiyār, in the Bay of Trincomalee) mentioned twice as the port of escape overseas for defeated Sinhalese princes of Kāliṅga descent, and Vāligama, in Māṭaras district, a flourishing seaport in the 12th century.

The naval might of the Sinhalese in the reign of Parakkamabahu I has already been described. There is little reason to doubt that here again
SINHALESE NAVAL POWER

The Sinhalese owed much to the Malays, and it was probably this obligation that influenced the selection of Parakkamabahu's nephew, the son of a Kālinīga prince, as his successor on the throne of Ceylon.

C. W. NICHOLAS

Secular Fluctuations in the Rainfall
Climate of Colombo

INTRODUCTION

The demonstration of short-period (decadal and pely-decadal) climatic fluctuations using evidence from climatic 'indicators' such as glacier regimes, varve chronologies, tree-rings, lake-levels etc., has been substantiated by analyses of instrumentally recorded meteorological data. Such investigations, while being numerous from mid and high latitudes, are but meagre in respect of tropical areas. Perhaps the more notable recent studies of tropical secular changes are those for Mexico⁴ and the more integrated study² covering the tropical area as a whole. The latter made yet another contribution, attempting to bring out the relationship between the monsoonal circulation (with its incidental rainfall) and the zonal circulation.

The rainfall data used in this study covers the period 1870—1952 with interruptions in 1936 and 1942. The site of the station—Colombo Fort (6° 54' N.L.; 79° 52' E.L.) has remained unchanged since 1870. But the rain-gauge has been shifted twice: in 1936 it was moved from its roof-position to the ground and subsequently in November 1942 it was replaced on the roof. However, the gauge remained in the same position on the roof from 1870 to 1935 and would therefore present a homogenous record. In 1910 the headquarters of the Ceylon Meteorological Department was moved to a new site (the present Colombo Observatory) a short distance away. Since 1911 observations were made from both sites up to the present day. A comparison of the 1911—1952 data of rainfall at both stations show (Fig. 2a) that though the amounts naturally differ (being lower at Colombo Fort in view of the elevated position of the gauge) the fluctuation-patterns are similar. A recent study³ using the roof-position gauge data for Bristol did not seem to affect the fluctuation-trends demonstrated for that region.