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VOLUME XXXV No. 93

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into the History, Religions, Languages, Literature, Arts,
Sciences and Social Condition of the present and
former Inhabitants of the Island of Ceylon.

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SINHALESE EMBASSIES TO ARAKAN.

BY

SIR D. B. JAYATILAKA

(President, Royal Asiatic Society, Ceylon Branch.)

When Vimaladharma I (1592—1604) had firmly established himself on the Throne of Kandy after defeating Rajasinha of Sitawaka and the Portuguese invaders of his territory, he turned his attention to the internal affairs of the kingdom. Confusion and disorder confronted him everywhere. Attacks from outside and internal dissensions had utterly disorganized the social life of the country, education had been neglected, and religion had lost its hold upon the people. The Sangha had virtually ceased to exist, so much so that the whole country could not muster five ordained Bhikkhus. Vimaladharma resolved to remedy this wretched state of affairs. In order to resuscitate the faith of the people, he turned for help, as did Vijayabahu I in the 12th century, to Burma or rather to that part of Burma which was known to the Sinhalese as Rakkhanga Desa and to the Burmese as Arakan. Although the Portuguese had by that time established themselves in the maritime districts, intercourse with the outside world had not yet been closed to the Sinhalese Government. Vimaladharma despatched an embassy to Rakkhanga Desa and got the King of that country to send out a number of competent Bhikkhus, headed by two eminent Theras—Nandicakka and Candivisala—to re-establish Upasampada ordination in Ceylon. The Mahavansa (Chapter 94: 15-22) gives a brief description of this event. A full account of this first embassy to Arakan has not yet been discovered. It cannot possibly be that no such account was written at the time, and future investigations may yet bring to light a detailed report of this mission.

The revival inaugurated by Vimaladharma I did not unfortunately last long. The King himself did not live long enough to complete his labours. The whole of the reign of his successor, Senaratana, (1604—1632) and a

greater part of the reign of the next King, Rajasinha II, (1632—1684) was spent in continuous fighting against the Portuguese. Though this terrible struggle ceased with the expulsion of the Portuguese in 1656 and Rajasinha lived for more than quarter of a century after that event, the iron of bitter disappointment at the treatment he received from his Dutch allies had entered his soul, and beyond defending the integrity of his territory, he did little to improve the condition of his subjects. Once again religion gradually lost its hold upon the people and religious observances and practices fell into disuse. When Vimaladharma II succeeded his father in 1684, the social and moral condition of the people had become as hopeless as it was a hundred years earlier when his grand-uncle, Vimaladharma I, initiated his reforms.

The new King was of a peaceful disposition. His relations with the Dutch were on the whole friendly and he ruled the country with justice and moderation. His reign of 22 years was thus free from trouble. This respite from war and strife the King turned into good account for promoting the welfare of the country. Naturally pious and devoted to his Faith, he found that the Sangha had become thoroughly corrupt and unworthy to be the custodians of that Faith and teachers of the people. Following the example of his grand-uncle (Vimaladharma I), he decided to appeal to Arakan for help in order to re-establish ordination. For this purpose two embassies were sent, the first to obtain information as to the state of Buddhism in that country, and the second to bring over a number of competent Bhikkhus in order to perform the ordination ceremony. I have been fortunate enough to secure an ola manuscript which gives a fairly full account of these embassies written, as the context makes it clear, by one of the Sinhalese envoys, most probably by Sivāgama Pandita Mudiyanse, who was a member of both the Embassies. It is a document which, I think, is well worth publishing with notes and explanations. Leaving that task for a future occasion, I propose now to give a short summary of the contents of this manuscript.

The first embassy despatched by Vimaladharma II was composed of the following officials:—

Dodanvala Herat Mudiyanse,
Bāminivatte Disānāka Mudiyanse, and
Sivāgama Pandita Mudiyanse.

The retinue of these Chiefs totalled 20.

The embassy left Kandy on Thursday, the 7th day in the dark half of the month of Poson (June-July) in the Saka year 1615 (1693 of the Christian era) and arrived in four days in Colombo where they remained for ten days and embarked for Tuticorin. In six days the boat reached Tuticorin, where the envoys were received with due honour by the Dutch officials there who escorted them in procession to their lodgings in the Fort. After seven days, they embarked for Arakan on a Dutch vessel called "Bomba." The voyage lasted 18 days. Land was sighted on the seventh day in the bright half of the month of Nikini and the ship cast anchor at the mouth of a river which, though unnamed in the manuscript, must be the Irāvādī on which the capital of Arakan was situated. Two or three of the party landed and made preliminary enquiries as to the state of Buddhism and concerning the reigning king. Then they sailed up the river for three days and anchored. The arrival of the ship had evidently been reported to the King of Arakan and a Court official styled "U Mravu" came on board to make enquiries. It was by no means a formal call. In fact the unexpected arrival of the Dutch ship seems to have excited the suspicion of the Arakan authorities, and the Sinhalese envoys were subjected to a pretty stiff cross-examination.

They were asked all sorts of questions as to where they came from, why they travelled on a Dutch vessel, whether the Sinhalese King had no ships of his own, how many guns this Dutch boat carried, what documents the envoys had brought with them, and what presents to be offered to His Majesty of Arakan. The envoys were also particularly asked if they had brought any articles for trade purposes. The Sinhalese Ambassadors answered these questions as best as they could, at times diplomatically, if not with strict accuracy and relevancy. After this interrogation the official left, having enjoined the Sinhalese envoys not to land until further instructions were sent. Three days after, the same official with two others came on board and informed the envoys that they had been sent by the King to obtain confirmation of what had been reported to His Majesty on the previous interview. Again the same process of interrogation was gone through and the three officials left, having instructed the ship to remain where it was anchored until further orders. Two days after, the "U Mravu" returned with permission for the vessel to proceed and enter the harbour. The ship sailed up and having anchored fired a salute of fifteen

guns. If the Sinhalese envoys expected that all the obstacles in their way had been removed, they were soon disillusioned. The Commander of the Fort gave peremptory orders that no one on board should be allowed to land. In this predicament the Ambassadors made use of the Interpreter (Tuppasiyā) to make representations on their behalf to the higher authorities, with the result that the Commander of the Fort came on board with six permits to three Sinhalese and three Dutchmen to land and obtain necessary supplies of water and firewood. Thereafter the envoys received a visit from the Chief of the Port (styled Sahabandu) and the Commander of the Fort who came to inquire whether they would agree to hand the Pali document which they had brought with them on board the ship, or at some Vihare in the presence of the Sangha, or whether they sought an audience of the King for the purpose. The Ambassadors replied that they could present the document only to the King in audience. Four days after, another pair of officials appeared and questioned the envoys as to the object of their visit and whether they were really emissaries from the King of Ceylon. Upon their repeating that assurance, the officials stated that they had received orders to remove to the Court the Pali document and the two Bana books which the ambassadors had brought with them. These were handed to the officials who escorted them in procession amidst the firing of guns. The suspicion which the Arakan Authorities had entertained having at last been removed, the Sinhalese ambassadors were allowed to land. They were lodged in suitable quarters near the harbour, where high officials of the Court visited them with the following presents:—

200	rupees.
15	bunches of coconuts.
14	„ „ plantains.
2	baskets of oranges.
2	„ mandarins.
2	„ nasnāran
2	„ lemons.
2	„ guavas.
2	„ kātāmbilla.

Such gifts were repeated on several occasions during the stay of the envoys in Arakan. Some time after the Ambassadors were requested to confer with a high dignitary of the Court (styled *Sikkh.*) as regards their mission. After several interviews and conferences with various officials, audience was granted to the envoys who were escorted to

the palace in procession with elephants. The King graciously received the Sinhalese Ambassadors and heard the purpose of their visit to Arakan and promised his help. The Ambassadors returned to their lodgings and remained there until the King's reply was prepared. Then they embarked and arrived in Colombo on the 10th day of the bright half of the month of Durutu. On their way to Kandy a number of Ministers, headed by the Adigar Yalagoda met them at Kosgama and escorted them to the Capital, which they reached on the 11th day of the bright half of the month of Vesak (May-June) in the Saka year 1616 (1694 A.C.), that is nearly a year after their departure on their mission.

The account of the second Embassy to Arakan given in this manuscript is exceedingly brief. The mission left Kandy on Thursday, the 7th day of the bright half of the month of Āsala (July-August) in the Saka year 1618 (1696 A.C.). The Embassy consisted of the following officials:—

Dodanvala Herat Mudiyanse,
Bāminivatte Disānāka Mudiyanse,
Gampaha Vijetunga Mudiyanse,
Sivāgama Pandita Mudiyanse, and
Galagama Mohottāla.

It will be noted that three of these officials formed the first embassy.

• The envoys were entrusted with a Royal letter and valuable presents to the King of Arakan, and 550 sets of *ata pirikaras* (eight requisities) and other offerings to the Sangha. They embarked at Colombo and arrived in due course at the Capital of Arakan. The King received them in audience, and soon preparations were set on foot to send out a number of ordained Bhikkhus to Ceylon. Thirty-three Bhikkhus were selected for the purpose, under the leadership of the great Theras, Santāna and Lokarāgapudgala. The envoys having accomplished their mission returned to Ceylon with the Bhikkhus and having landed at Colombo they immediately proceeded on their way to Kandy. Court officials sent by the King met them at different points on the journey, until they reached Attāpitiya where a halt was made to enable a deputation headed by the Adigar, Yalagoda Nilame, arrived to escort them to the Capital in a magnificent procession. Vimala-dharma received the Arakanese Bhikkhus with great honour and lodged them at Malvatte Vihare. On the 13th day of the bright half of the month of *Bak* (April-May)

in the Saka year 1619 (1697 A.C.), in a special audience hall erected in front of the Dalada Maligāwa the King received the envoys in audience when the reply of the King of Arakan was presented to His Majesty.

Mr. Pakeman said that the History Department of the University of Rangoon might be able to give information as to the authorities consulted by Mr. Harvey for the purpose of giving the dates, which might throw light on the curious discrepancy referred to by the lecturer.

Sir Baron replied that Harvey seems to have consulted the Burmese authorities on this question. Yet the details in his History and the *ola* do not correspond, especially in the matter of the dates. It is the date of the embassy which warrant investigation as being very important.

DR. PARANAVITANA asked who was the writer of the manuscript.

SIR BARON: "Perhaps it is one of the ambassadors who went on both embassies. It is written in the first person and may have been written by Sivagama Pandita Mudiyanse."

SIR BARON JAYATILAKA in reply to the criticisms offered by Dr. Pieris said that he did not maintain that the Sinhalese were deliberately inaccurate in their statements. He said that the Sinhalese ambassadors were very diplomatic in their answers which were often amusing.

For example, he said, that when the Sinhalese were asked what presents they brought for the King of Arakan the ambassadors merely extolled the virtues of the King of Ceylon.

One question asked was as follows:— (read out from the Manuscript).

Q. Has the King of Ceylon got no boats and why do you travel in a Dutch boat?

A. The King of Kandy had all sorts of vessels. Not that he did not have boats. He has indeed got several boats.

Sir Baron said that the answers were not strictly accurate but were very diplomatic. He said that details had been inserted in the manuscript very carefully as for example even the number of guns fired on different occasions is most carefully recorded.

MR. E. W. PERERA asked how the *ola* was discovered.

Sir Baron replied that it was found by a Buddhist priest from whom he secured it.

The meeting adjourned with a vote of thanks to Sir Baron Jayatilaka proposed by Dr. Paul Pieris:

SOME ASPECTS OF THE ASIATIC ELEPHANT IN ZOOLOGY AND ETHNOGRAPHY:

PART II.

BY

P. E. P. DERANIYAGALA, M.A. (Cantab.); A.M. (Harvard.);
F.C.P.S.; F.L.S.; F.Z.S.

Director, Colombo Museum and Acting Director of Fisheries.

(With one plate and five text figures)

Zoology

1. *The Swamp Elephant of Ceylon.*

The first article of this series drew attention to the subdivision of the Asiatic elephant into numerous 'castes', which experienced Asiatic mahouts claim they can accurately determine together with the locality of capture of the individual; if this be so, scientific investigation might reveal that some of these 'castes' are valid races and that *Elephas maximus* Linné, exists as a 'foremenkreise' of unusual interest.

This view is supported by the fact that the Asiatic elephant, unlike the African, seldom forages over great distances; only under stress of great dearth will it leave its district to which, however, it returns directly the rains commence. This homing tendency is easily verifiable by investigating the movements of "rogues" which are kept under observation for obvious reasons. Generally a rogue elephant is found to remain in its district, even if frequently wounded, and is eventually killed in it.

There is also reason for supposing that the herds of any one district consist of an assemblage of consanguineous families. Should the supply of fodder be limited though perennial, it would lead to their localization, resulting in greater in-breeding than would otherwise be the case.

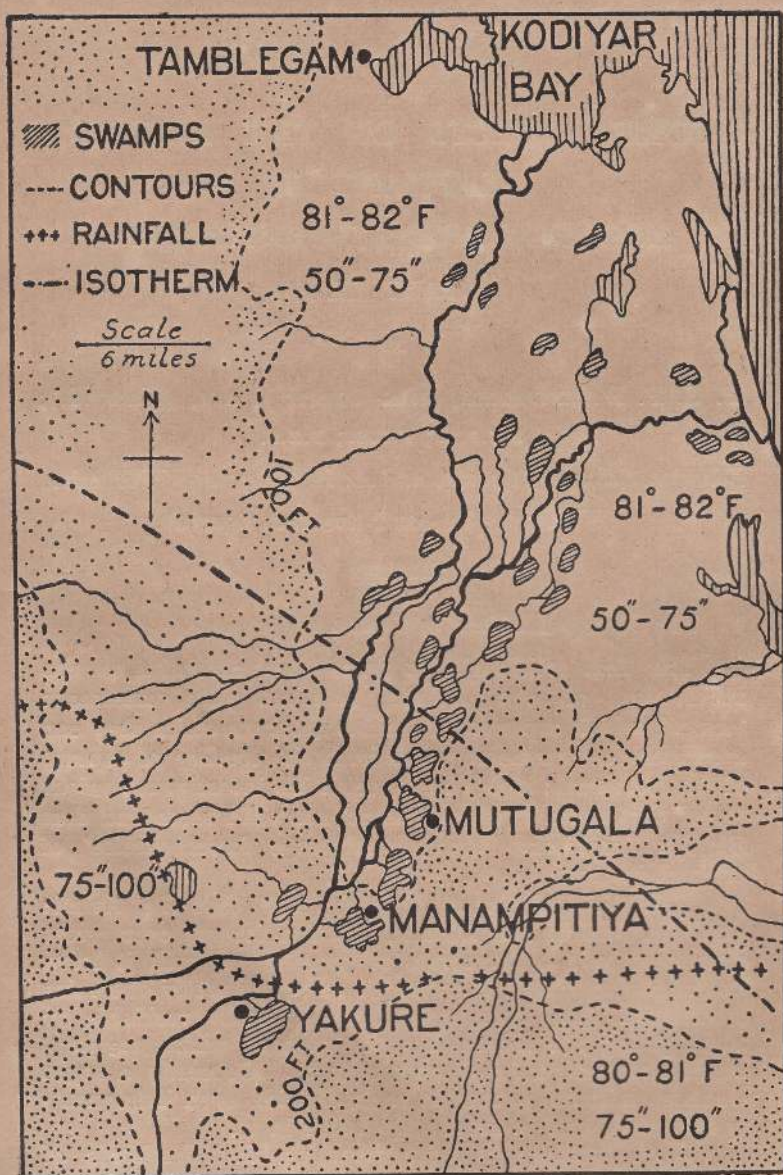


Fig. 1. A contour map of the flood plain of the Mahavili Ganga, the type locality of *Elephas maximus vilaliya* Deraniyagala, showing swamps, rainfall and isotherms.

Under such conditions new subspecific characters might develop, while at the same time, it is possible that a number of the original characters, liable to disappear on crossing, would be retained.

Should the supply of fodder be widespread and distributed with comparative evenness, unrelated herds are more likely to feed in association and interbreed than when they are confined to isolated oases which can only support a limited number. Such a restricted tract conducive to inbreeding, is supplied by the flood plain of the Mahavilī¹ river both immediately before and after it descends below the 30·5 metre (100 foot) contour line into the arid, eastern coastal plain of Ceylon (fig. 1). In this area the existence of a large race of elephant has been known to sportsmen for a number of years.

The first to comment upon the outstanding size of these swamp elephants was that redoubtable big game hunter Sir Samuel Baker (1854, p. 129), who stated that the largest elephant he had ever seen was at Manampitiya, and that the herd of seven which he saw at Gunner's Quoin in the same district consisted of the largest individuals he had ever come across in a group (p. 349). H. Storey (1907, p. 108), a sportsman with fifteen years' experience of the Ceylon jungle, and who claimed to have seen many hundreds of wild elephants in all parts of the Island, was the first to suggest that these large elephants were not mere isolated individuals, but members of a special breed inhabiting the swamps of the Tamankaduva district. Storey was a frequent visitor to these swamps and his was no random statement. He figures the skull of a swamp specimen alongside that of a large 'rogue' he shot elsewhere. The former dwarfs the latter as completely as those figured in Pl. 1. (figs. *b*, *c*, *e*.) do two skulls from Nikavāratīya (fig. *a*) and Panāmūrē (fig. *d*) respectively. E. L. Walker (1923) another well known elephant hunter agrees with Storey's view, and R. Lydekker (1924 p. 15) basing his opinion upon Storey's account, though with no opportunity of first hand study of these animals, was also inclined to agree, but the suggestion has generally been overlooked.

1. *Maha* = large, *Vilī* = swamps, probably the name is derived from the number of swamps originating from this river. (See fig. 1). This figure is based upon the Surveyor General's Map and that of the Annual General Report (1938) by the Department of Commerce and Industries.

Hennessey, (1940) another elephant shot, in listing records of big game, states that the three largest elephants shot in Ceylon were from the flood plain of the Mahavili Ganga, and in this connexion it is of interest to note that Nolthenius (1937) expresses the general opinion of Ceylon elephant hunters that "it is thought that due to rare seclusion in very swampy districts some elephants may grow a slightly larger pad than would be the case with elephants under our usual conditions in the wilds".

The above evidence shows that the elephants in the swamps of the Mahavili Ganga are sufficiently unusual to impress sportsmen, but it was Walker who first attempted to study the question further. Parts of his account agree so closely with my own observations that I can do no better than quote from his book entitled "Elephant Hunting and Shooting in Ceylon" (1923). In chapter viii he states that "The animals in this district are much larger as a breed than those in any other part of Ceylon. Some of the old elephants are real giants of their species. Tamankaduva elephants are not much taller but are more thick set, have a much larger bulk and far outweigh elephants of other districts." (p. 65).

"His form is much more suited to water than other elephants. His huge feet cover a large area of ground, preventing him from sinking in the soft earth surrounding the swamps of his *habitat*. He spends most of his life wading about in the *wilas* (Swamps) of Tamankaduva in preference to the higher dry land." (p. 68).

My observations commenced when I visited the Tamankaduva swamps near the village of Manampitiya in the flood plain of the Mahavili Ganga in 1931, and the frequency of the unusually large elephant foot prints there caused me to make enquiries among the local villagers who informed me that the animals around these swamps so greatly exceed others in bulk that they are easily distinguished from those which stray within this area from outside, during severe droughts. Such intrusions result in fights and it is the experience of the villagers that of the combatants, one is invariably lighter² in build, more agile, and leggy, than its rival which latter they claim to belong to the local stock. Other features were also recognized by them: and I was informed by the late Revenue Officer for this district that the swamp

2. Known to these villagers as the *Sith Aliya* or *Sith Arne* to distinguish it from the usual elephant, the 'Aliya' or 'Arne' of the swamp area.

elephant feeding upon low swamp vegetation carries its forehead in a vertical plane, whereas the outsider relying for the greater part of the year on bark and twigs at a relatively higher level, poises its head with the forehead sloping backward.

Today the majority of Ceylon elephants are restricted to the north, north-west, east and south-east of the Island where the annual rainfall ranges from 50 to 75 inches and the temperature from 81° to 82° F. In these districts, generally speaking the heavy rains exceeding 10 inches a month occur only from November to January, while for eight months the average is below 5 inches. This low rainfall produces conditions which force the elephants to depend mainly upon twigs and bark for sustenance.

In the Central and Sabaragamuwa provinces, however, where the annual rainfall is 75 to 200 inches or more, and the temperature 59° to 81° F, the dense shade of the rain forest checks the food-providing undergrowth, while cultivation has greatly reduced the available forest. Consequently the supply of fodder although more or less perennial, is scanty.

The superior size of the swamp elephants of the Mahavili cannot be ascribed solely to an unrestricted supply of fodder, for the elephants of Sabaragamuwa are not much larger than those from other districts. It is possible that apart from the influences of a perennial source of fodder, large skeletons develop in swamp-feeding animals as a result of the accumulation in swamps of mineral salts washed in from higher ground. Since the Mahavili is the largest and probably oldest river in Ceylon, its swamps are possibly particularly rich in such supplies, but it will be perceived from the passages already quoted that elephant hunters had noticed that bulk was not the only character distinguishing the swamp race from the other inhabiting Ceylon.

A study of this Island's elephants, which is now in progress, reveals that certain characters occur in association with one another to form two groups. One such group is predominant in the ordinary elephant, the 'forma typica'; the other is best seen in the large swamp race inhabiting the flood plain of the Mahavili Ganga. There is also a certain proportion of elephants which appear to be hybrids.

The elephant material examined from the 'vilas' of the Mahavili Ganga consists of ten skulls of which eight were large and two of normal size, two solitary bulls seen at fairly close quarters by the writer, a bull shot and examined

for the Colombo Museum by Mr. E. C. Fernando, the taxidermist of that institution, and the skeleton of this same animal which is now set up in the Museum. The swamp elephant has already been briefly described by me (1939). The type skull No. 85 D. 1937 in the Colombo Museum is figured in Pl. 1. (figs. *b*, *e*). Alongside is the skull of an ordinary sized rogue from Nikavāratīya in the North Western Province and that of another swamp bull, all shot by Mr. E. L. Walker (figs. *a*, *c*.) while compared with this 'type' skull *e*, is that of a powerful tamed bull named Kota captured at Panāmūrē, Sabaragamuva *d*. Comparison of these figures with Storey's illustration supports his view regarding the swamp elephant, and it will be noted that generally speaking the swamp elephant skulls are larger and show greater development of diplœ and antero-posterior compression, while in specimens possessing only the last molars, the angle formed in lateral view between the front margins of these teeth and the maxillary and pre-maxillary bones is more acute than in the forma typica, (Pl. 1. fig. *d*), the mandible is also generally somewhat weaker. In addition to these are the dental characters enumerated in the first article of this series.

It is significant that the majority of these various characters occur in association with one another in the large skulls from the swamp district whereas the small skulls of similar age from this area, reveal characters assigned to the two races. (Deraniyagala, 1939).

After examining eight large skulls, it is necessary to consider the two smaller skulls from the Manampitiya swamps. These two, which would be considered large for elephants from outside this swamp area, display the antero-posterior compression and strong development of diplœ of the large swamp race, but the dentition resembles that of the ordinary Ceylon elephant in the extensive wear of the third molar even before the loss of the second, in the strong cementing of the enamel folds of the third molar, and in the compressed base of each tooth. Since none of the large skulls from the swamp area reveals this combination of dental characters, it is possible that these two skulls are from hybrids between the large swamp form and animals from outside areas.

A comparison of the skeleton of the bull shot by Mr. E. C. Fernando on August 19, 1937 at the swamp of Handapan vila, Yakurē, with that of a rogue shot by Mr. Varian at Anuradhapura and now in the Colombo Museum is not without interest. The latter was a tush elephant

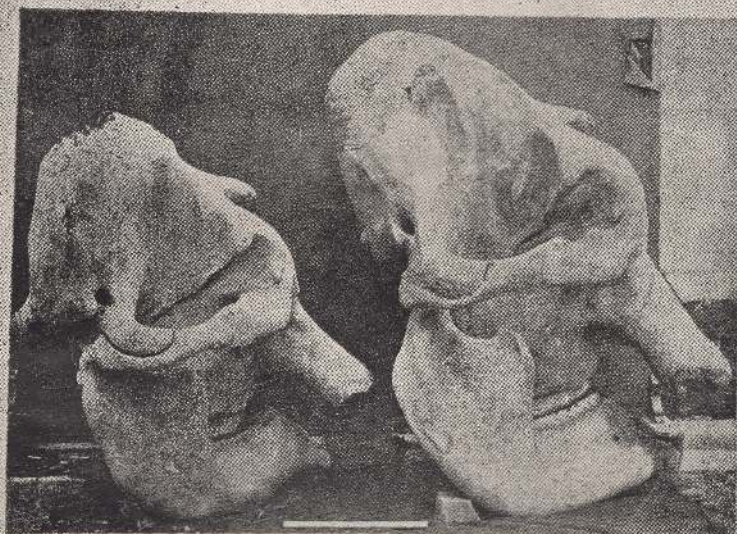
The Asiatic Elephant



a.

b.

c.



d.

e.



f.

P. Deraniyagala.

a, d, skulls of *Elephas maximus maximus* Linné; b, c, e, f, swamp elephants, f head of Handapan vila bull showing throat, right cheek and eye; tusches hidden.

but since its skull had been replaced with that of a tusker and the original destroyed several years ago, a comparison of their skulls is unfortunately impossible.

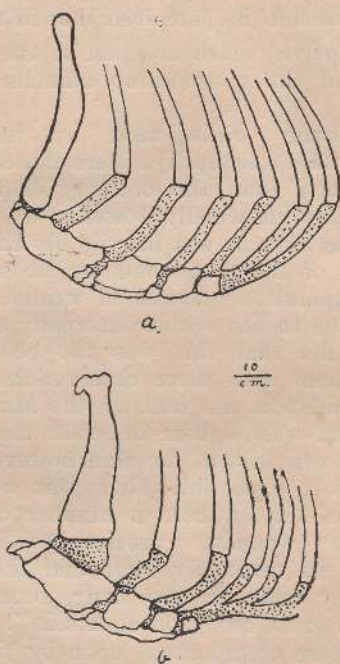


Fig. 2. sternum of (a) the Anuradhapura rogue, (b) the Handapan vila solitary bull elephant. Note the difference in the width of the first ribs and the positions of attachment of the ribs $\times \frac{1}{20}$ natural size.

A comparison of the post-cranial skeletons reveals the following differences. The sternum of each comprises the same number of sternebrae, but that of the Handapan vila bull is shorter, and the number and positions of attachment of the ribs with the sternum differ. It will also be seen that the first rib of the Handapan vila bull (fig. 2. b) is broadly spatulate at its sternal end, thicker and shorter than in the Anuradhapura rogue (fig. 2. a). The former animal possesses 19 pairs of ribs and 20 dorsal vertebrae, whereas the Anuradhapura bull possesses 20 pairs of ribs and 21 dorsal vertebrae. The former has 29 caudal vertebrae, but some are missing from the latter skeleton. The $\frac{\text{pelvic width}}{\text{length of femur}}$ also differs. In the

Anuradhapura rogue it is $\frac{41.5}{41.5}$ inches, in the 'type' specimen it is $\frac{51}{45}$ inches and in the Handapan vila bull it is $\frac{45.75}{41.5}$. It will thus be perceived that in the Anuradhapura animal the pelvic width is equal to the length of its femur, whereas in the two swamp animals it is several inches more.

The two living bulls seen by the writer in 1934 and 1935 near Manampitiya were noticeably massive and lighter in color than the ordinary elephant, with a pink tinge ventrally, especially towards the bases of the limbs. One of the animals was heavily blotched with white towards the base of the trunk and on the ears. In both there was a comparative absence of wrinkle in the skin. In neither were the tushes visible externally and Mr. E. L. Walker informs me that this was the condition in the 'type.' In agreement with these observations are the field notes on the Handapan vila bull by the Museum taxidermist. The animal was lighter in color than the usual elephant, the iris was brown, the skin however was strongly wrinkled, but it is possible that this was due to ill-health, since the animal bore a number of severe and festering bullet wounds, previously inflicted. The ears appeared to be unusually large and the tushes were hidden completely under a very long, broad, labial fold which "formed a great bump on each side". (Pl. 1. fig. f).

The last feature commented upon by the taxidermist is well displayed in a photograph of another animal, with a fore foot circumference of 56 inches, which was shot at the neighboring village of Hingurakgoda by Mr. S. C. Rasaratnam (*Loris* 1. No. 6 p. 333).

The statement that the swamp elephant possesses a proportionately larger foot circumference than the ordinary animal is also a subject needing investigation. The usual method of estimating an elephant's height by doubling the circumference of its fore foot³ is of importance in this

3. Measuring the foot print for this purpose is completely unreliable, since the weight of an elephant splays out its foot leaving an enlarged print that varies with the looseness and dampness of the soil. The height of an elephant is often greatly exaggerated. The usual height of a Ceylon bull is between 7ft. and 8ft., and Evans (1910), gives the average height for 300 Burmese bulls as 7 ft. 10½ ins. Heights of skeletons were measured by passing a tape between the ribs and to the end of the neural process of the vertebra.

study, but the accuracy of this method has to be checked by ascertaining the ratio of other parts of the elephant in terms of its height.

The materials available for this purpose at the Colombo Museum are the left femurs and the pelvises of three bull elephants, one being the 'type' of *E. m. vilaliya* Deraniyagala.

TABLE I.

	Manampitiya	Handapan	Anuradhapura
<i>E. m. vilaliya</i>	"type."	Bull	'rogue'
Height to top of 3rd dorsal vertebra	...	8' 10 $\frac{3}{4}$ "	8' 3"
Height to top of 11th dorsal vertebra	...	9' 1"	8' 5 $\frac{1}{2}$ "
Length of left femur	3' 9"	3' 5 $\frac{1}{2}$ "	3' 5 $\frac{1}{2}$ "
" " " humerus	3' 0 $\frac{3}{4}$ "	2' 8 $\frac{1}{2}$ "	2' 9"
Width of pelvis	4' 3"	3' 9 $\frac{3}{4}$ "	3' 5 $\frac{1}{2}$ "
Circumference of right fore foot	0' 64"	0' 56"	...
Circumference of mounted fore foot	0' 62"	0' 51"	...
Number of cervical vertebrae	...	7	7
" " dorsal "	...	20	21
" " lumbar "	...	3	3
" " sacral "	...	4	4
" " caudal "	...	29	...
" " ribs	...	19	20

It will be noticed from table 1 that the greatest height of each skeleton is at the eleventh dorsal vertebra, but a position less subject to error through artificial distortion is at the third dorsal, where the height of the fore limb prevents any unnatural elevation of the vertebrae above the scapula in reassembling the skeleton. Assuming that the thickness of the dorsal skin of the living animal is 1 $\frac{1}{2}$ inches, and the skin of the sole of the foot 2 $\frac{1}{2}$ inches, a total of 3 $\frac{1}{2}$ inches should be added to the skeletal height in estimating the height of the living animal. On this calculation the height of the living Handapan vila bull at the withers should be 9 ft. 2 $\frac{1}{4}$ in. and 9 ft. 4 $\frac{1}{2}$ in. at the eleventh dorsal vertebra.

The necessity for devising a method of calculating the living height if only a fore foot or parts of the skeleton

e.g. a thigh bone or pelvis, were available, has been stressed by many sportsmen. The taxidermist's measurement of the circumference of the sole of the right fore foot directly he shot the Handapanvila elephant, was 56 inches; a plaster cast he made of the severed foot some hours later is $54\frac{1}{2}$ inches, and today the sole of the mounted fore foot is 51 inches. Multiplying each of these foot circumferences by 2 gives the height of the Handapan vila bull as 9 ft. 4 in., 9 ft. 1 in. and 8 ft. 6 in. respectively. As already seen the actual living height at the withers is 9 ft. $2\frac{1}{4}$ in. The discrepancy between the taxidermist's measurement and that of the cast is to be expected, but it is interesting to find that an estimate based upon his measurement yields a figure so close to the calculated living maximum height at the eleventh dorsal vertebra, namely 9 ft. $4\frac{1}{2}$ in. (or 9 ft. 1 in. + $3\frac{1}{2}$ in.)

An estimate of the height of the "type" specimen of *E. m. vilaliya* is now attempted. According to Walker (1923. p. 65) the foot of the freshly killed animal was 64 inches but he informs me that now many years after mounting it has shrunk to 62 inches. This is quite in accordance with what had occurred to the foot of the Handapan vila bull, within the brief space of a few months.

Although twice the circumference, or 5.27 times the antero-posterior length of the sole of the fore foot of the freshly killed Handapanvila bull gives its greatest body height, these methods are unsatisfactory when applied to the 'type' specimen of which the left thigh bone and pelvis are fortunately available.

The height of the Handapan vila bull calculated in terms of the length of its left thigh bone which is $3' 5\frac{1}{2}"$ shows that the latter is contained 2.65 times in the animal's living height of 9ft. $2\frac{1}{4}$ inches. It will now be perceived that a more or less accurate estimate of the living height at the withers of this bull can be obtained by any of the following methods:

- (a) $2 \times$ circumference of fore foot.
- (b) $5.27 \times$ length of sole of fore foot.
- (c) $2.65 \times$ length of thigh bone.

In the case of the Anuradhapura bull the length of its left thigh bone is contained 2.46 times in its living height.

Since the average of these two $\frac{\text{height}}{\text{thigh}}$ ratios is 2.55 the height of a living adult bull elephant is approximately 2.6 times the length of its left thigh bone, but it should here be noted that the thigh bone of the Handapan vila bull is

proportionately shorter than in the Anuradhapura animal. Calculating the height of the 'type' from its left thigh bone which is 3 feet 9 inches long, the animal appears to have been 9 ft. 10½ in., but were this height estimated from the circumference of the fore foot, it should be 10 ft. 8 inches, if Walker's measurement of 64 inches is accepted, or 10 ft. 4 in. if the reduced measurement of 62 inches for the mounted foot, be taken into consideration. In either instance the foot measurements yield heights that are 9½ in. and 5½ in. in excess of the living animal's height as calculated from the thigh bone. The loss by shrinkage of only two inches, and the fact that other sportsmen have also obtained bulls with foot circumferences of over 62 inches from these swamps e.g. D. J. Hennessy 63 inches, T. Y. Wright 62½ inches (Hennessy 1940) suggests that Walker's measurement of 64 inches is accurate. In view of these facts and the difference between the heights calculated on the basis of the foot circumference and the thigh bone of this 'type' specimen, it is evident that the former method cannot be applied to a typical animal of the swamp race, since its feet are proportionately larger than in the ordinary form, a character commented upon by the various writers already quoted. Consequently it is not advisable to regard the Handapan vila bull as a typical specimen of the swamp race, for although it shows several points of difference from the Anuradhapura skeleton, its foot proportions are no different from those of the ordinary elephant.

Some of the field notes made by the Museum Taxidermist Mr. E. C. Fernando on the Handapanvila bull are as follow:—

Color lighter than normal, paler ventrally and under neck, chin and ears; tip of trunk flesh pink, iris brown, tongue and palate pink. Hair lengths as follow:—on base of trunk 2½'' on lower lip ¾'', on top of head 3'', on sides 1''—1½''. Trunk girth at base 5 ft., trunk length 7' 6''. Fore foot—circumference of sole 4' 8'', antero-posterior length of sole 1' 7'', width 1' 5''. Hind foot—circumference 4', antero-posterior length of sole 1' 6½'' width. 1'. Toe nails, 5 in fore foot, 4 in hind foot. Top of head to tip of trunk 10 feet, tip of trunk to tip of tail 24 ft; tail length 4' 7'', ear length posteriorly from ear opening 2' 10'', depth of ear to the lowest point of lobe 2' 10'', length of small intestines 78' 6'', of large intestine 38'.

The above measurements show certain unusual

features e.g. the length of the hair upon the base of the trunk and its shortness upon the lower lip, and the somewhat large size of the ear. To these should be added the differences noticed between the skeletons of this bull and that of the Anuradhapura rogue, namely, in the sternum, ribs, vertebrae, proportionate lengths of thigh bones and width of pelvis.

The collection of adequate material to establish sub-specific characters in so large an animal as an elephant is by no means easy; consequently at this stage it is only possible to describe the swamp elephant tentatively, for several of the numerous differences to which attention has been drawn, might upon further study prove to be due to individual variation, although it is also probable that some of them might be established as distinct racial characters, especially those that have been conspicuous enough to attract the attention of even casual observers. For example some of the skull characters might account for the difference in head carriage noted by the Revenue Officer and the villagers, (Pl. 1. figs. *d*, *e*) while the proportionately large feet and the greater bulk commented upon by various sportsmen appear to be supported by the foot circumference, proportionately shorter thigh bone, and wider pelvis to which attention has already been drawn.

It is also of interest to note that although the tendency to lose the tushes might be regarded as indicating specialization (Morris 1936), the development of the molars indicates less specialization than in the "forma typica" while the proportionately larger foot circumference is an infantile character (Evans, 1910, p. 6). A further character of interest is the spatulate sternal termination of the first rib (fig. 2. *b*.) a shape common in skeletons of certain extinct Pleistocene elephants e.g. *Archidiskodon meridionalis nebrascensis* (Scott 1937, fig. 170).

The Upper Pleistocene deposits of the *Ratnapura series* have revealed an extinct, swamp-dwelling race of *Elephas maximus* Linné, known from fossil teeth found in association with those of a form of hippopotamus which flourished during the *lake phase* of the Pleistocene in Ceylon (Deraniyagala 1940.).

Should further investigation prove the living swamp elephant to be a direct descendant of this extinct race it will be evident that the 'forma typica' which is the common Ceylon form, is the result of adaptation to a changing environment, whereas *Elephas maximus vilaliya* Deraniyagala, in its comparatively unaltered surroundings and

isolated by the arid conditions which prevail in this part of Ceylon, has been less affected⁴.

Elephas maximus vilaliya Deraniyagala

Elephas maximus vilaliya Deraniyagala 1939 J. Roy. Asiatic Society, (Ceylon Branch) Vol. xxxiv, No. 91 pp. 129. 130.

A race of *Elephas maximus* Linné, characterized by its extreme bulk, relatively large head, feet and pelvis, and relatively retarded tooth development (Deraniyagala 1939). Teeth no larger than in the 'forma typica'. The skull displays a strong development of diplöe, which gives the occipital condyle a sunken position and results in the straight distance from the foramen magnum to the ear hole being contained more times in the vertical height of the skull above the ear hole, than in ordinary elephants. (Pl. 1. figs. *d*, *e*).

The skin is relatively more free from wrinkle than in other elephants, its color is lighter, and there is a pink tinge ventrally, especially towards the bases of the limbs.

Type. The skull, left humerus, left femur and pelvis, of a solitary bull shot by E. L. Walker in the swamps near Manampitiya. These are in the Colombo Museum and bear the registered number 85 D. 1937. (Pl. 1. *b*. & *e*).

Paratype. A skull of a male shot at Mutugala, presented by me to the British Museum of Natural History in 1936, and bearing the Registered Number 1936.6.26.1 along with teeth from another large skull. The teeth of the latter specimen are numbered 1936.6.26.2. to 5.

Distribution. The swamps in the flood plain of the Mahavili ganga (fig. 1). Herds are thought to ascend temporarily into the hills during extreme droughts by following the river.

Dimensions. The measurements in c.m. of the parts of the 'type' of *Elephas maximus vilaliya* Deraniyagala, available in the Colombo Museum are as follow:—

Skull. (Pl. 1. figs. *b* & *e*) vertical height when set on mandible 121.5 c.m., narial opening to end of premaxillaries

4. With the spread of the Railway and the opening up of these swamps for cultivation, the herds of this giant race are fast scattering and hybridizing. The desirability of saving this interesting race from such extinction was emphasized by the writer in a letter dated August 15, 1939 to the Game Warden and as a result the Fauna and Flora Protection Advisory Committee has requested the Deputy Game Warden and the writer to select an area suitable for reservation as a sanctuary for these elephants.

57, foramen magnum to end of premaxillaries 87, lateral straight distance from ear hole to end of premaxillaries $80\frac{1}{2}$, choanae to end of premaxillaries 56, choanae to foramen magnum 25, greatest width at vertex 87, width of interorbit across naris 72.5, below lacrymals 56.5, width of narial opening 40, distance from ear hole to ear hole 77, terminal width of premaxillaries distally 44, width across face 81.4, *left humerus* length 91, *left femur* length 113, circumference at middle 35. *Pelvis* greatest width 126, greatest length 104, length of pubic symphysis 42, obturator foramen 17, diameter of acetabulum 16.

In conclusion I wish to express my indebtedness to Mr. E. L. Walker a well-known elephant shot in his day, to the late Mr. D. C. de Silva, Revenue Officer of the Tamankaduwa District, and to his Police Vidanes, especially to K. T. Ponniah of Mutugala, for information and specimens which were of much value in the preparation of this article.

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EXPLANATION OF PLATE.

Plate. I. Skulls and a head of elephants from the Mahavili swamps and other parts of Ceylon.

- (a) Nikavāratīya rogue shot by E. L. Walker $\times \frac{1}{30}$ natural size.
 (b) skull of the 'type' of *Elephas maximus vilaliya* Dera-niyagala, shot at Manampitiya. (Colombo Museum No. 85 D. 1937). $\times \frac{1}{30}$ natural size.
 (c) skull of a swamp elephant shot by E. L. Walker. $\times \frac{1}{30}$
 (d) skull of *Kota* a powerful tame *E. maximus maximus* Linné, captured at Panamuré, Sabaragamuva. Only the last molars are present. $\times \frac{1}{18}$; (e) A lateral view of (b).
 (f) Head of the Handapan vila bull directly it was shot. Right cheek and eye uppermost, its tusches are completely hidden by the lip. $\times \frac{1}{17}$

In the skulls *d*, *e*, note the differences in (1) the distance between ear hole and foramen magnum, (2) the slope of the skull, (3) the angle formed between the front of the upper molars and the premaxillo—maxillary projection, (4) the curve of the lower jaw, (5) the sutures between the bones, (6) the proportionate lengths of the premaxillaries, (7) proportionate distances from lower edge of cheek bone to molars and to nasal prominence respectively.

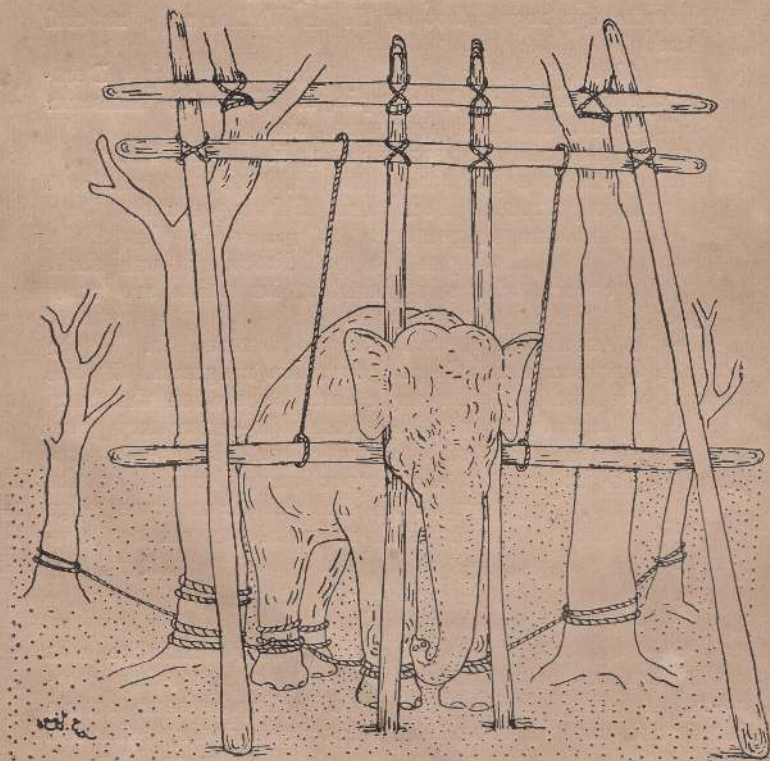
Ethnography.

II. The *Ānde*.

In the first article of this series, reference was made to contrivances employed for training elephants to carry their heads erect⁵. The present article deals with one of these which has been depicted in two rough pencil sketches by an officer at Kandy on May 15, 1816. The sketches are in the Colombo Museum.

5. The *Silinguva* there mentioned is the Sabaragamuva synonym for the Kandyan *Ānde*. The Indian variation is depicted in the illustrated guide to "Asiatic Researches of Bengal" (1799) Vol. III pp. 229—248.

The contrivance is known as the *Ānde* (අඳ) The wild elephant is secured to two trees by a single rope termed the *Vara manda* (වර මන්ද) which is ingeniously looped from limb to limb as a series of nooses. The ends of this rope are attached to two other trees beyond the animal's reach, to enable the noosers to tighten or relax the constriction on the limbs without any difficulty. Once the elephant is thus secured, the *Ānde* is constructed to train it to carry its head erect, for the wild animal usually carries it low to facilitate movement through dense forest whereas the erect carriage of a trained animal enhances its dignity and market value.



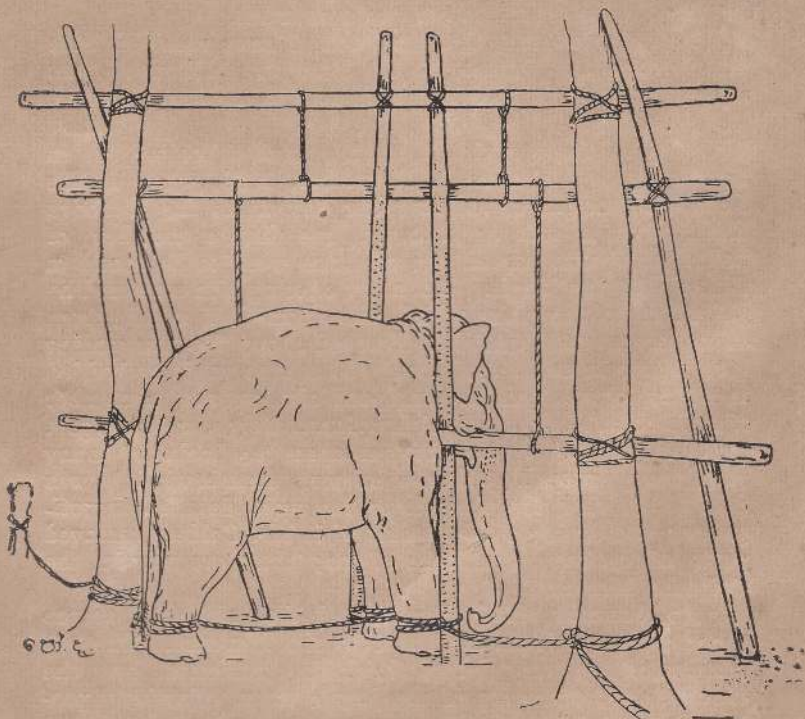
P. Deraniyagala del.

Fig. 3. Anterior view of an elephant in the *Ānde* (based upon a rough sketch dated 1816 in the Colombo Museum.)

The *Ānde* consists of two pairs of upright, parallel beams and three horizontal ones. The inner pair of parallel

beams have their ends fixed, and are here termed *fixed* beams; these prevent the elephant from moving its head from side to side. The outer pair of parallel beams have their lower ends free and are here termed *free* beams.

The topmost cross beam connects the two trees to which the elephant is secured. The 'fixed' parallel beams are placed some distance in advance of a line connecting the roots of these two trees, and the tops of these beams are secured to the cross beam. The elephant's head is placed in position between these two 'fixed' parallel beams. The 'free' or moveable parallel beams next come into use. They are attached to a cross beam and the distance between these two parallel beams roughly equals that between the roots of the two trees. From this cross beam is suspended a free swinging cross beam which is the lowest of its series. The upper extremities of the two



P. Deraniyagala del.

Fig. 4. Posterior view of an elephant in another *Ande* (based upon a rough sketch dated 1816 in the Colombo Museum.)

'free' parallel beams are pushed under the lateral ends of the cross beam lashed to the trees, so that the upper cross beam of the 'free' parallel beams rests on both trees and upon the 'fixed' parallel beams. (figs. 3. 4.).

The lowest or suspended beam known as the *Häppini kanda* (හැප්පිනි කන්ද) swings between the 'fixed' parallel beams and the trees and is now brought up against the throat of the captive by shifting the lower ends of the 'free' parallel beams towards the roots of the trees. The pressure upon the throat can be varied at will by shifting the lower ends of these beams either towards or away from the roots of the trees. After raising the elephant's head to the desired height in this manner (fig. 3) the *Häppini kanda* is made fast to the two trees and rendered immobile.

(Fig. 4). The elephant is kept in this 'stocks' until it develops the desired head carriage, it is then taken out for training in other aspects of deportment.

I here acknowledge the assistance I have received from the Diyavadana Nilame, T. B. Ratwatte, Dissava, who furnished me with details of this now little-known device.

III. *The Terra-cotta Elephants of Tabbova.*—Mr. A. M. Caldera and I were on a fossil collecting trip at Tabbova near Puttalam in November, 1938, when at the North-east corner of the reservoir known as the Tabbova Kudā väva a villager informed me that a number of hollow elephants carved out of stone were to be found in the neighboring jungle. Upon my offering him a reward he guided us to the place which was about half a mile from the reservoir and somewhat elevated above the surrounding land. There in an area of about 400 square yards embedded in a fine, compacted, brownish-red silt, we saw a number of terra-cotta elephants, which unfortunately were damaged, for treasure seekers had broken open the backs of many that were exposed. After a cursory examination it was decided to visit the place later for more detailed investigation; and during a subsequent visit Mr. Caldera removed parts of the body and limbs of one; these are now in the Colombo Museum.

In January, 1940 I re-visited the place to secure a complete specimen for the Colombo Museum. The silt compacted to an almost brick-like hardness by the drought, and the roots of the jungle trees, effectively protected those elephants that were not exposed, rendering excavation unusually difficult. Upon removing the surrounding silt the elephants were found so close together (fig. 5 a) that seven were discovered in the patch excavated which



a

P. Deraniyagala



b

52mm
SCALE

P. Deraniyagala del.

Fig. 5. Terra-cotta elephants from Tabbova Kuḍū Vāva (a) the elephants after partial excavation (b) A small elephant from this group (the specimen is in the Colombo Museum.) $\times \frac{1}{5}$

was barely two yards square. Their proximity to each other was such that it was impossible to remove one without destroying four others in the process and their arrangement suggested that they stood in five rows within this small area, the animals standing head to tail and the alternate rows facing opposite directions. They were of two sizes, the larger about double the smaller, which latter were of the size of a terrier dog.

Further excavation revealed that the elephants rested on a gravel-covered floor over which the fine, brownish red silt had been deposited later. Most of them were tilted so that only the limbs of one side were in contact with the floor, the others being supported by the hardened silt. All were hollow, with openings externally at the soles, penis, mouth and ears, and although far from realistic, the figures were nevertheless of arrestive massiveness for such small objects. This impression was attained by pushing the head back far between the shoulders, dispensing with the neck altogether, and bringing the eyes and fronts of the fore limbs into the same vertical plane. The head was proportionately small with 2 to 3 bumps at the vertex and always carried tusks; the trunk was uncoiled with its extremity in contact either with a fore leg or the chest; the ears were fully extended, with rounded lower lobes, a shape which is rare in the living animal.

The body was fore-shortened and the back sloped abruptly to the stern while the limbs were disproportionately long and massive, each with three terminal rings but without toe nails. There were trappings round the neck and waist besides external marks as if the surplus clay had been scraped away with the potter's fingers; such marks were more pronounced within the cavities of the head and body. The limbs alone appeared to have been cast or produced through some mechanical device, for spiral marks existed within each (fig. 5 *a.*). The tail rested on the rump and hind limbs. The terra-cotta was unusual in displaying many dark cloudy patches.

As there is no record of such elephants from Ceylon it was at first surmised that this was a late neolithic burial site and that the figures were funereal urns, but the presence of grains of paddy and straw⁶ in the clay, the rope

6. The preservation of grains of paddy and straw in the baked clay of which the elephants are composed should make it possible to identify the variety or varieties of paddy grown in this area at the time. Probably the breaching of the large Tabbova reservoir and the resultant failure of the paddy crop might have led to the abandonment of the colony.

trappings, and at times a bell on each side, indicated that they were either protohistoric or historic. The specimen figured (fig. 5 *b*) lacks these bells.

Although the Tabbova area is believed to have been abandoned between the 13th and 14th centuries A.C., the fact that these figures are tilted by earth movement suggests that they are probably more antique. Supporting such a view is the discovery within a mile of this place of other pottery painted red, with peculiar external criss-cross, basket work ridges, indential with pottery found with second century statues at Ambalantota in the Southern Province. In addition to these potsherds was found a Roman copper coin also thought to be second century A.C.

Protohistoric burial urns shaped like animals occur in South India, and nearly life sized models of various species of animals such as horses, elephants, etc., are known from ruins connected with the worship of the god Aiyenar. In Ceylon, such finds are unknown, a fact which increases the importance of the present discovery restricted as it is to a single species of animal. It is possible that these elephants served the same purpose and that further excavation might reveal other animals, arranged in similar groups in contrast to the miscellaneous arrangement found in India, and that they are connected with the worship of Kālē Deviyo,⁷ the Lord of the forest. It is also possible that they were either intended as a magical protection against the wild elephants which still abound in this area, or were ornaments in a palace garden, or they might be the remains of the store of a potter who specialized in such work. Whatever the explanation, the completeness of the rows suggests the hasty abandonment of the settlement.

The measurements of the two sizes of elephants are as follows:—

TABLE II.

	<i>Small</i>		<i>Large</i>
1. Straight length dorsally from cranial bumps to root of tail	33.2 cm	,,	? 42.5 cm.
2. Height from sole to crown	39.6 cm	,,	? 57.6 cm.
3. Girth of waist	15.2 cm	,,	? 26.1 cm.
4. Girth of fore limb	9.7 cm	,,	10.6 cm.
5. Depth of ear	10.4 cm	,,	12.9 cm.
6. Length of body	34.1 cm	,,	43.1 cm.

The two specimens from which the above measurements were obtained are on view in the ceramics room of the Colombo Museum.

Sir Baron Jayatilaka who occupied the chair proposed a vote of thanks to Mr. Deraniyagala for the interesting paper and wished that a more detailed study of these elephants may be made and more details as to age and origin be obtained.

7. The Sinhala equivalent for the Indian deity Aiyenar.

According to Hillman 1924 *Trans. Engineering Assn. Ceylon* p. 43, Tabbova possessed a temple of Aiyenar.

PROPOSAL TO TRANSFER SOCIETY'S LIBRARY TO THE MUSEUM LIBRARY

(Report of a Sub-Committee of November, 1939).

Your Sub-Committee was appointed to report on a reference made to the Council of the Society by the Acting Director of the Colombo Museum on the instructions of the Minister for Education contained in the following communication. "Please ascertain from the Royal Asiatic Society (C.B.) and report whether they have any objection to their Library being merged in the Museum Library and taken over to the Crown for good, and access being provided to their members in the same manner as access is allowed to the general public to the Museum Library. They may, however, be informed that in the proposed new Ordinance their right to hold meetings in the Museum Hall will be retained."

The relations between the Museum and this Society are based upon the provisions of sections 5 and 6 of the Museum Ordinance, which are annexed to this report for convenience of reference. The Minister's proposal is that the ownership of the Society's books be now transferred to the Crown and that members should surrender their right to borrow and remove them from the Library. The Society's books are today worth not less than a lac of rupees. There is no suggestion that any compensation should be made to the Society for the loss of this valuable asset and of the privilege of removing books; instead members are to rank with the general public as regards the use and ownership of their books. The proposal is inequitable and its acceptance is not in the interest of the Society.

Under the law the Society is entitled to "have the use of a room for the regular meetings of the branch." It is now suggested that instead the new Ordinance should provide for its "right to hold meetings in the Museum Hall" being retained. Whether the so called Museum Hall, which is placed at the service of all manner of associations, satisfies the requirements of the "room" contemplated by the Ordinance, is an arguable point; if it is considered that it does, the advantage of altering the existing words of the law is not apparent.

The Society's collections of specimens and books, got together over a period of nearly thirty years, formed the nuclei of the present Museum collection and its Library. On 3rd June, 1873 the Governor, from the Society's Chair, "remarked that it was his intention to introduce a vote at the next meeting of the (Legislative) Council, for the erection of a Public Museum and as Members of this Society would be accorded certain privileges beyond those granted to the public etc."

The Ordinance as it stands embodies the intentions then expressed. We deprecate any action which will cast into oblivion an historical connection of which the country as a whole might well be proud. We are of opinion that the Minister's proposals should not be approved by this Society, and that sections 5 and 6 of the original be left unaltered.

Sgd. D. B. Jayatilaka.

I agree ,, Edward W. Perera.

13.11.1939.

,, P. E. Pieris,

21.11.39.

HISTORY OF SOCIETY'S LIBRARY

(Report of a Sub-Committee of February, 1940).

We were appointed a sub-Committee to report on

- A. The History of the connection between this Society and the Museum authorities with regard to the Society's Library;
- B. The legal position which has been created; and
- C. The practice which is being followed today.

We were also instructed to make such recommendations as appeared to us desirable.

A. THE HISTORY OF THE CONNECTION.

Ample information is available in the Society's Journals and the Administration Reports of the Director of the Museum, and our narrative is based exclusively on these.

The Report of the Society's Committee of Management for 1845 shows that a Library was already in existence and its earliest Regulations, dated 7th February, 1845, contemplated a Librarian among its Office-bearers. J. Capper was the first to hold the office, which he combined with that of Treasurer. By 4th May, 1846, a Museum also had been started.

At the second Anniversary Meeting held on 26th February, 1847, a Catalogue of the books in the Library was laid on the table, as well as a list of acquisitions; the submission of such a list was a recognised feature of subsequent Meetings. New Rules had also been framed and these laid down that

"The Librarian will take charge of the Library keeping a List of the Books, giving them out to Members in the manner directed by the Committee, and seeing that they are returned in proper time and in good condition."

On 23rd March, 1850 R. E. Lewis succeeded Capper as Librarian; he does not appear to have held office long, and in 1852 a paid Officer was engaged till on 5th March, 1853 the Hon'ble Mr. Justice Stark was elected. He prepared a Catalogue of the books, but by the 1st February, 1854 he had left the country. The new Rules published in Vol. II of the Journal contemplate a Librarian and his assistant and access to non-members when properly recommended.

A period of dormancy followed. No meeting was held till 2nd October, 1856. The Library and Museum, originally housed in the rooms of the Loan Board, had been shifted to a room in the Colonial Secretary's office till two rooms were rented behind the Chamber of Commerce. J. Nietner was now appointed Librarian, Curator and Corresponding Secretary. How long he held office is not clear, for on 21st January, 1858 James Alwis was appointed Assistant Secretary and Librarian. On 18th December, 1858 it was announced that Government had made a grant of £200 towards the Library and Museum and that the Governor had appropriated for the Society two rooms adjoining the Auditor-General's Offices. The succeeding Librarians were:—

12th September, 1859 J. Maitland, Curator and Librarian.

6th July, 1861 P. Grimbolt, a Frenchman and an eminent Pali Scholar, as Librarian.

Some difficulty arose; L. de Zoysa was sounded as to whether he would be joint Librarian, and on his refusal he was on 1st December, 1865 appointed sole Librarian, and continued to be so for many years. Rule 4 of the Library Rules at the time prohibited the issue for removal outside of Dictionaries, works of reference or of special value, and still recognised the introduction of properly recommended non-members to consult the Library.

At the meeting of 2nd November, 1865 it was resolved "that in future any member who wishes to obtain the loan of a book, shall make application for it in writing to the Librarian."

The need of a Public Museum was being realised and on 8th October, 1872, to the delegates who waited on the Governor to invite him to be the Society's Patron, he mentioned a scheme to erect in the Circular Walk, a Public Museum in which provision might be made for the Society's Library and the Committee. In furtherance of this he at the General Meeting of 3rd June, 1873 stated that the necessary financial provision would be made at the next session of the Legislative Council. The Society's Committee on the 9th September, 1873 considered the provisions of the draft Museum Ordinance and decided that they were advantageous to the Society. The relevant sections, as finally passed in the Ordinance 11 of 1873, are as follows:—

5. Should the Branch of the Royal Asiatic Society

established in Ceylon desire to transfer their collections and Library to the Museum, such of the objects and books of the said Society as shall be considered by the Director as proper to the Museum may be transferred to the said Museum. 6. In case of the transfer of the collections and books of the said Branch to the said Museum, the members of the said Branch shall have access to the Museum on all days of the week within the hours which shall be fixed by by-laws, and they shall have the use of a room for the regular meetings of the Branch. The collections and books transferred shall be labelled as belonging to the Branch, and an inventory shall be kept of the same, but they shall be under the sole charge of the Director, and shall not be removed from the Museum excepting in pursuance of the regulations made for the Museum as hereinbefore provided; and should the said Branch be dissolved the books and collections belonging to it shall be considered as appertaining to the Museum; provided that the Director shall, with the consent of the Governor, have power from time to time to remove such specimens as may no longer be required, in which case they shall be re-transferred to the Branch.

H. J. Macvicar had succeeded as Librarian and in view of the provisions of section 5 the Committee on 17th December, 1875 resolved, with regard to the transfer of the Society's property to the Colombo Museum, that the Director, Mr. Haly, be requested to report on the articles which he considered worth removing and that everything else be sold by auction. The books were transferred and the Committee, at a meeting held apparently towards the end of 1876 resolved "That the thanks of the Society be rendered to H. J. Mac Vicar, Esqr., for his kind voluntary assistance as Librarian, and to the Government for relieving them of the necessity of having a Librarian attached to the Society." From this date a Librarian ceased to figure among its office-bearers. The Museum was opened to the public on 1st January, 1877 and the Director in his report for the year, stated that the Library contained 1440 volumes "of which 815 had been presented by the Ceylon Branch of the Royal Asiatic Society."

From 1874 when Fyers, the President, left for England, the Society remained inactive till his return in 1879. At

the General Meeting on 11th September, 1879 he remarked "In 1874-75 when the new Museum was built it was decided that the books in the Society's Library and the specimens in its Museum should be handed over to Government, to be placed in the new Museum, where the large meeting room was to be available for meetings of the Society and the members were to be allowed to have access to the Library of the Museum at all times." He continued "many members complain of the rule which does not allow books to be taken out of the Museum Library. They found they could only refer to the Society's books in the Museum itself, and members are in no better position than those holding the Museum reading tickets. Hence they would not pay their subscription."

This difficulty had arisen because as the result of the transfer to the Museum, the Museum regulation against the removal of books had automatically come into effect. The Governor, who occupied the Chair, was sympathetic and suggested that the Museum Committee should be moved to hold out greater advantages to Members of the Society as regards the use of the books in the Society's Library. He brought his personal influence to bear and the result was reported on 16th December, 1880 at the Annual Meeting, in the Presidential address.....

"I also stated at our last meeting that gentlemen who had originally been Members of the Society and others who wished to join it, were deterred from doing so in consequence of the Rule which did not allow any books to be taken out of the Museum Library. H. E. the Governor promised on that occasion to take the question into consideration at the next Meeting of the Museum Committee; this was done and a Resolution passed authorizing members of the C.B.R.A.S. to take out of the Library one set of the books presented by the Asiatic Society to the Museum at a time.....A Catalogue of our books which was ordered to be prepared by the Museum Librarian, has been a long time in hand, and as soon as it has been completed we propose sending home for a considerable number of valuable books." i. The Resolutions referred to were printed with the Society's Rules in the following fashion:

RESOLUTIONS OF MUSEUM COMMITTEE.

1. That the books belonging to the Ceylon Branch of the Royal Asiatic Society in the Library of the Colombo Museum be issued to Members of the Society but that no

book is to be retained by a Member for a long period than 14 days.

2. That a book be kept at the Museum in which any member of the R.A.S. desiring to borrow one of the books lately belonging to or presented by the Society shall enter his name and the date on which he takes the book.

As the necessary sequel, the Society's books which hitherto had been mixed with the Museum books, were sorted out and the Director in this year's Report says "The works presented by the R.A.S. have been separated from those purchased by the Government and are now available for circulation amongst the Members."

The Librarian of the Museum, van Cuylenburgh, began a Catalogue of the Society's books of which he laid the draft before the Society's Committee on the 2nd February, 1881; but the Society's Secretary, H. C. P. Bell, considered it unsatisfactory and undertook to set it right, with the result that on 14th June he reported that a misunderstanding had arisen with the Museum Librarian; however on the 12th September he reported that the Mss. which was prepared by himself and W. E. Davidson was in the press. Bell was also dissatisfied with the Museum Regulations regarding the Society's Library, and proposed a set of new rules which were "adopted almost verbatim from those of the Royal Asiatic Society of Bengal, of June 1878." At the Annual Meeting on 16th December, 1881 it was resolved "That the Committee of the Society in conjunction with the Museum Committee do consider the new Rules for the R.A.S. Library drawn up by the Hony. Secretary, with a view to their adoption."

Following on this at a Meeting of the Society's Committee on 11th June, 1883, Bell as Secretary pointed out "that until a complete understanding was come to with the Museum Committee as to the extent of the Librarian's duties, it would be impossible to bring the Society's Library into an efficient state." "Thereupon the Committee resolved" to take action to have the R.A.S. Library Rules passed by the Museum Library." Action was taken and on 5th October, 1883 "the Chairman announced that the Rules of the Society's Library had been duly brought before the Museum Committee and passed, so as to form an integral part of the entire body of Rules affecting the Museum Library, and that for their proper working the Museum Secretary and Librarian was responsible." This was repeated on 20th December, 1883 in the Annual Report as follows: "A further improvement in

working has been secured by the incorporation of the R.A.S. Library Rules with those of the Museum Library, thus definitely throwing undivided responsibility on the Secretary and Librarian of the Museum". The same year in his Administration Report the Director pressed the Government to supply for "the Library four cases for the Royal Asiatic Society books."

Pausing for a moment to sum up the position: at the end of 1883 it was fully recognised that the Library of the Royal Asiatic Society was in the sole charge of the Director of the Museum and that the responsibility for managing it as a Library was laid on the Librarian of the Museum who had to act in accordance with special Rules for the Society's Library sanctioned by the Museum Committee.

In 1884 the number of books was Museum 1920

Society 1939 and

Berwick and Davidson who had been appointed a sub-Committee to go into the question of the condition of the R.A.S. books, recommended amalgamation with the Museum Library on terms, with a Joint Catalogue in which the Society's books would be asterisked. In June 1886 F. H. M. Corbet succeeded van Cuylenburgh and acting on this report he on 27th November, 1886 in his capacity of Museum Librarian wrote to the Society's Secretary for permission to put the Society's books on the same shelves as the Museum books and to include them in the same Catalogue asterisked. He explained:—

"The plan for having consecutive numbers on the volumes present many advantages: the chief of these as regards your books will be that the absence of a work from the shelf to which it belongs could hardly escape notice, and that it would enable me to apply regularly for the return of books borrowed from your Library.....At present I have but little check on the taking away of your books. I cannot know, except with much trouble if a volume is out.....The Catalogue I propose to make will be prefaced by a statement of the Rules of your Society and of the Museum on the subject of taking out books."

He commenced the practice of a separate Administration Report by the Museum Librarian, and mentioned this proposal in that for 1886. At the time the Museum Library Staff consisted of himself and his assistant, Mr. de Silva Wickremasinha, and there was not even a peon.

The proposal found acceptance and the Society's Annual Report for 1886 while mentioning that fact stated

that the proposed Catalogue would be commenced at once. In Corbet's next Administration Report (1887) he mentioned that the amalgamation had been begun and he gave details of the additions to both the Museum and the Society's Libraries made in the course of the year. On 18th October 1887 he was appointed joint Secretary of the Society with Bell. The Society's Accounts for that year showed that its only paid employee was a clerk on a paltry salary.

In 1888 there was no report by the Museum Librarian in which office G. A. Joseph acted for a portion of the year. The Director, however, in his Administration Report pointed out that it was not possible for the Librarian to keep the books in proper order unless more bookcases were at once provided. "I try to keep the increase of the Government side of the Library as low as possible consistent with the efficient working of my office, but I have no control over the increase of the R.A.S. Library." He appears to have overlooked the power of selection vested in him by section 5 of the Ordinance.

Corbet's report for 1889 as Museum Librarian was detailed. "The Library of the C.B.R.A.S. was founded in 1845, the Government Oriental Library in 1870, and the Free Public Library in the Colombo Museum in 1876. These Libraries have been brought under one roof and to some extent amalgamated, the direct care and custody of the three collections of books and Mss. being one of the duties devolving upon the Librarian of the Colombo Museum". "The Rules of the Museum Library, passed on 1st May, 1889, must be read

- a. with the Rules of the Government Oriental Library* passed on October 1st, 1870.
- b. With the Rules of the Library of the C.B.R.A.S."

He mentioned the number of volumes freshly bound and the books issued outside, distinguishing between the Museum and the Society's collections, and in an Appendix gave the additions during the year to each.

The corresponding Annual Report of the Society, read on 21st December, 1889, stated that "the Librarian of the Museum has undertaken to catalogue your books together with those belonging to the Museum. The work has made some advance this year but unfortunately press of other work has retarded its progress." The revision of the

*(Note. The Oriental Library was originally at the Secretariat and de Zoysa was long its Librarian).

Society's Rules was dealt with at this Meeting and it was then pointed out "that the Society had no paid officials and had therefore to depend on the officers of the Museum Library."

In the Rules which were revised, were included the Library Rules, which were reduced from 22 to seven, and are substantially what appear under the Rules of 1913. There is no evidence to show that these Rules received the sanction of the Museum Committee, and if that is so they must be regarded as *ultra vires* to the extent that they vary from those which they replaced.

The Administration Report for 1890 was issued by the Director himself as Acting Librarian, and he quoted with approval what Corbet had said about the R.A.S. exchanges, "which insure important and numerous additions to our shelves at a slight expense to the Society and free of expense to us." He also gave the number of books issued outside from the Society's collection.

Corbet and his assistant Wickremasinha failed to complete their Catalogue and once again in 1891 the two collections were separated after their amalgamation.

The Society's Annual Report for 1891 while urging some member to complete the task continued: "The issue of a simple Catalogue of the Society's books would meet all practical wants, the compilation of a more ambitious Catalogue contemplated in the Annual Report for 1890 being left for the Museum authorities to carry out jointly with their own." Corbet's own Administration Report for 1892 only covered three quarters of a page; he mentioned the R.A.S. accessions but as to issues stated it "does not include the books of the R.A.S. which are consulted by readers frequently." For six months Joseph the paid Assistant Secretary of the Society, acted for Corbet as Museum Librarian and he also did so throughout 1893, while Gunawardhana acted for Wickremasingha, who was away in Germany. Joseph's Administration Reports in 1893 and 1894 followed Corbet's formula quoted above with regard to R.A.S. accessions and issues; in the latter year he was appointed to succeed Corbet permanently as Librarian. After that the Librarian's Report omitted the usual reference to the Society's Library.

At the date that Corbet ceased to hold office the relations between the Society and the Museum authorities with regard to the Society's Library were exactly what they were at the end of 1883 and were recognised by the Director, the Librarian

and the Society to be such. In view of this it is surprising to find among the few references to the subject which appear in subsequent years, a decision by the Society's Council on the 13th March, 1914 to invite Mr. John M. Seneviratne to be Hony. Librarian for a year. The Annual Report for 1915 mentioned that the rearranging and cataloguing of the Library was in hand and the printing of a new Catalogue would follow but this was never issued.

On 1st April, 1923 Mr. Lionel de Fonseka succeeded Joseph as Librarian of the Museum, (he was also elected Co-Secretary R.A.S.) and in his Administration Report he mentioned that he had started cataloguing the Library. He said "The indexing of the R.A.S. Library is being carried on by Mr. D. Jayaratna. I have adopted the system of placing both sets of cards, dealing respectively with the Museum and R.A.S. Volumes, in the same trays, white cards being used for the Museum books, and blue cards for the R.A.S. books."

It will thus be seen that the Museum Librarian in 1923 recognised the position to be what it was on Corbet's retirement, that he considered himself as responsible for the Society's books, and that he was employing the Society's Clerk, which Jayaratna was, to prepare the Catalogue; that Catalogue was left unfinished when after one year Mr. Weinman succeeded him as Librarian, but is still being used, the cards for the two collections being in the same tray. The new Librarian in his Administration report for 1925, spoke of the assistance he was receiving from Jayaratna, and in that for 1927 he said as follows:—"According to the provisions of the Ordinance 11 of 1873 it seems clear that the C.B.R.A.S. Library should be kept as a separate collection, but at the same time under the sole charge of the Director of the Museum." It is therefore puzzling to note that on 14th May, 1932 the Society's Council resolved to appoint Jayaratna, the clerk who had retired in 1929, to be Honorary Librarian.

B. THE LEGAL POSITION.

The second head of our reference concerns the legal position. Regarding that there is no room for any confusion of thought. The provisions of the Ordinance 11 of 1873 are binding and have always been recognised as binding and cannot be altered except by a fresh Legislative Enactment. The Acting Director of the Museum whom we consulted, was so kind as to place before us his recent correspondence with the Attorney General on this very

subject, and his ruling which we are permitted to quote was contained in the following letter.

No. E. 81/39,

Colombo, 24th March, 1939.

With reference to your letter No. M. 47 of the 9th February, 1939 I have the honour to state that you are required by law to be in sole charge of the collection and books of the Branch of the Royal Asiatic Society established in Ceylon which have been transferred to the Museum. In the circumstances I cannot see how you can avoid assuming control and responsibility in respect of the said collection and books.

Sgd. E. G. P. Jayetilleke,
for Attorney General.

Sgd. D. W. Fernando,
Crown Counsel.

Succinctly stated the legal position today is that while the Society is the owner of its collection of books, they are under the sole charge of the Director, and the regulations for their issue must be framed by the Museum authorities. Subject to the Society's ownership, the responsibility for the management of the collection as a Library lies on the Director. It is competent for the Director to refuse to accept such books as in his opinion are not "proper to the Museum."

C. THE EXISTING PRACTICE.

As to the practice which is being followed today the Museum Librarian has furnished us with a Memorandum in which appears the following statements:—

"It (i.e. the collection of books) is maintained from R.A.S. funds and is in charge of the Society's Clerk who is under the supervision of the Hon. Secretary directed by the Council of the Society. Only members of the Society have access to the books and the general public are not entitled to any rights or privileges whatsoever in respect of this collection of books."

"There is substantial evidence to support the fact that the Society was responsible for its collection of books."

"The Museum Rules and Regulations contain no reference to the Society's books or to their being in charge of the Director, but it is generally accepted that being housed at the Museum the Director is responsible for their custody."

"There is also very definite evidence to prove that the Society had their own Librarian."

Since he joined the Museum 15 years ago "neither the Director of the Museum nor any member of the Museum

Staff had any official connection with the management of the R.A.S. Library. The books were in charge of the Society's Clerk who was under the supervision of the Hony. Secretary."

The historical portion of this Report establishes the fact that these statements cannot be supported. The only evidence on which he relies for the assertion that the Society appointed its own Librarian is the description of the Society's Clerk from time to time (as well as of Wickremasinha and Joseph, 1886 and 1892) as Librarian in a list published in 1909. That description is erroneous, and no Librarian was appointed by the Society since 1878 save the two Honorary Librarians, J. M. Seneviratne and Jayaratna, previously mentioned, neither of whom at the time was an employee of the Society, and neither of whom effectively acted as Librarian. The Minutes of the Society establish the fact that the clerks were only appointed as clerks pure and simple, and that on a paltry salary which never exceeded Rs. 75/-. The Librarians ceased to figure among the Office-bearers of the Society since 1878 and the inclusion of petty clerks among the office-bearers along with for instance the Hon'ble Mr. Justice Stark and Mons. Grimbolt, while betraying a failure to appreciate the difference between an office-bearer as contemplated in the Rules (the President for instance being one such) and a servient officer, may well have been the result of the ambitious views of the clerk who prepared the list in 1909.

It would appear from the foregoing that the Directors of the Museum have not realised their correct position in the matter of the Society's Library for a number of years. During the last sixteen years the fact that the posts of Librarian of the Museum and joint Hony. Secretary of the R.A.S.C.B. have been held by the same person have led to confusion as to the capacity in which he was acting in this matter. He is under the impression that he exercises supervision over the Library as 'Hony. Secretary directed by the Council of the Society's whereas from the foregoing account of the historical and legal position it is clear that he should have done so as Librarian of the Museum, the ultimate responsibility resting with the Director. In actual fact the R.A.S. Library has been left pretty much under the control of the Society's Clerk: and though it does not come under our terms of reference to go into details as to the results of this unwarranted arrangement, they have been, to say the least of it, unfortunate; for instance it is a notorious fact that some of the Society's

books have been hawked about for sale in Colombo and that others are apparently untraceable. This may well be due to the careless (we hope not to the deliberate) action of some members: but a proper administration of the system of issue and return should have prevented this.

In the Librarian's Memorandum he states that "the plight of the Library is deplorable." While we do not dissent from this expression of opinion, we do not necessarily agree that this condition is due solely to insufficient accommodation.

Accordingly we recommend:

1. That the compilation of a separate Catalogue of the Society's books be taken in hand without delay. According to the existing legal position this work should be undertaken by the Museum authorities, it being clearly laid down in the Ordinance that they must keep an inventory of all the Society's books. However, as it is unlikely that the present staff of the Museum can possibly undertake this work under existing circumstances, we suggest that it would be to the Society's interest to devote a sum of money, sufficient to cover the necessary expenses, to this object: and further to arrange with the Director of the Museum for such a Catalogue to be prepared under the supervision of someone who has had special training in Librarianship, if the services of such a person can be secured.

2. That the attention of the Director should be called by the Council of the Society, if and when this report has been adopted, to his responsibilities in the matter of the Society's Library, for which purpose he might receive a copy of this report: he should be urged to fulfil effectively his legal responsibilities in the matter.

3. That the advisability of making recommendations for modifying the Ordinance of 1873 with a view to making the position as between the Society and the Museum authorities clearer should be considered.

Sgd. P. E. Pieris,

Sgd. S. A. Pakeman.

10 Feb., 1940.

Report of a Sub-Committee of October, 1940, on the New Museum Ordinance with reference to the Society's Library.

We were appointed a Sub-Committee of the Council of the Royal Asiatic Society, Ceylon Branch, in pursuance of a minute of the Council passed on May 23, 1940, and subsequently modified by the Council as regards personnel, by the substitution of Mr. F. A. Tisseverasinghe for Director, Colombo Museum which reads as follows:—

- "4 (d) that a Sub-Committee consisting of the Hon. Mr. C. H. Collins, Mr. E. W. Perera and the Director, Colombo Museum, should report on the third recommendation made by the Sub-Committee appointed to report on the relations between the R.A.S. and Museum Libraries, re the amendment of the Museum Ordinance with a view to clarifying the position between the Society and the Museum authorities."

2. Provision was made in the Museum Ordinance of 1873. Chapter 143, sections 5 and 6—by which if the Royal Asiatic Society, Ceylon Branch, so desire they may transfer their collection and library to the Museum and indicating what the consequences of such a transfer would be. The two sections read as follows:—

- "5. Should the branch of the Royal Asiatic Society established in Ceylon desire to transfer their collections and library to the said Museum, such of the objects and books of the said Society as shall be considered by the Director as proper to the museum may be transferred to the said Museum.
6. In case of the transfer of the collections and books of the said branch to the said museum, the members of the said branch shall have access to the museum on all days of the week within the hours which shall be fixed by by-laws, and they shall have the use of a room for the regular meetings of the branch. The collections and books transferred shall be labelled as belonging to the branch, and an inventory shall be kept of the same, but they

shall be under the sole charge of the Director, and shall not be removed from the Museum excepting in pursuance of the regulations made for the Museum as hereinbefore provided; and should the said branch be dissolved, the books and collections belonging to it shall be considered as appertaining to the museum:

Provided that the Director shall, with the consent of the Governor, have power from time to time to remove such specimens as may no longer be required, in which case they shall be re-transferred to the branch."

3. The collections of the Society were handed over to the Museum and have become completely absorbed in the Museum collection, the legal requirement for a separate inventory not having been complied with. On the other hand, the book collections were not transferred in the same way and the separate identity of the collection has been maintained. It would appear that the Museum authorities and the Royal Asiatic Society, Ceylon Branch, have worked in close harmony throughout the whole period of the Museum's existence and in place of the arrangements which were set out in the Museum Ordinance there has been a more or less informal arrangement between the Museum authorities and the Society, which has varied from time to time, but has in general been on the following lines:

- (a) The Royal Asiatic Society's collection apart from books have been handed over unconditionally to the Museum and have formed a part of the Museum collection.
- (b) The Museum has provided a room for meetings.
- (c) The Museum has provided accommodation for the library of the Royal Asiatic Society, Ceylon Branch.

4. The present position about the Royal Asiatic Society Library is as follows. The books, periodicals, magazines, etc. belonging to the Royal Asiatic Society, Ceylon Branch, have been given accommodation in the Museum. The Museum has provided most of the book-cases in which the books are housed—some of them very good pieces of furniture. The Museum authorities have had charge of the keys of the outer doors of the rooms or sections of the Museum in which the Royal Asiatic Society's books are placed.

The Museum authorities have made no inventory of the Royal Asiatic Society's books, and do not hold themselves responsible for the safety of the books beyond what is stated above. The Museum authorities do not issue, clean and fumigate the books. The Royal Asiatic Society has charge of the book-cases and shelves, and holds the keys of the cases and of the least of the inner rooms containing Royal Asiatic Society's books and magazines. Books are issued by officers of the Society only, and the registers and such catalogues as exist of part of the collection of books have been made and are maintained by the Royal Asiatic Society, Ceylon Branch, who attend to their cleaning etc.

Readers in the Museum who may not be members of the Royal Asiatic Society, Ceylon Branch, are allowed access to the books of the Society in the reading room only but may not remove them. The members of the Royal Asiatic Society, Ceylon Branch, have the right of access and of removal of books in accordance with regulations made by the Society. The rules of the Society which were last revised at a general meeting held on the 18th December, 1913, include the following governing the use of the library:

Rule No.

- 42 Every Resident Member shall be at liberty to borrow the books from the library, except such works as are reserved for use in the Library itself.
- 43 For every book so borrowed a receipt shall be signed by the member borrowing it.
- 44 No member shall borrow at the same time more than three works, without the special permission of one of the Honorary Secretaries.
- 45 Books borrowed may be retained for a month. If not asked for during this period, the loan may be renewed by the member signing a fresh receipt. All books borrowed shall be returned to the library before January 1 of each year.
- 46 The Council may, by special Resolution on such terms as it thinks fit, sanction the loan of manuscripts or of works reserved for use in the library; and may under special circumstances, suspend the operation of Rule 42.

5. The position at present is therefore that the provisions of the Museum Ordinance have only partially been put into effect, but in pursuance of the general policy of co-operation between the two bodies a working arrangement has been arrived at, which it is thought is to the bene-

fit of both parties. The position stated above is clearly accepted by the authorities, who have recently inquired whether the Society would be willing now to transfer its collection of books.

6. The proposed new Ordinance repeats to a considerable extent the provisions of the existing Ordinance. The sections of the Ordinance which apply are 7 and 9 which are reproduced below:

7. It shall be lawful for the Director from time to time, subject to the provisions of Section 9(3) and to such conditions or restrictions as may be prescribed.

Power of Director to purchase, exchange, dispose of or lend books and objects.

(a) to purchase for the purpose of preservation at any National Museum any book, document or object which is in his opinion desirable to acquire for that Museum;

(b) to exchange, sell or otherwise dispose of any book, document or object, kept at any National Museum, which is a duplicate book, document or object, or which is in his opinion unfit to be preserved or not required for the purposes of the Museum;

(c) to lend any book, document or object kept at any National Museum for the purpose of being temporarily displayed at any gallery, Museum or exhibition, or of being examined by any person or body of persons engaged in scientific or historical research;

(d) to transfer any books, documents or objects from any National Museum to any other such Museum;

9. (1) It shall be lawful for the Director to take charge of and to keep and preserve at the National Museum at Colombo any books, documents or objects which, being in the opinion of the Director suitable for preservation in the Museum, may from time to time be transferred to the Museum by the Ceylon Branch of the Royal Asiatic Society.

Preservation at Colombo National Museum of objects belonging to Ceylon Branch of the Royal Asiatic Society.

(2) All books, documents and objects, which may at any time prior to the prescribed date have been transferred to the Colombo Museum under section 5 of the Museum Ordinance, or which may be transferred to the National Museum at Colombo under sub-section (1) of this section, shall be the property of, and be labelled as belonging to, the Ceylon Branch of the Royal Asiatic Society, and it shall be the duty of the Director to cause an inventory of all such books, documents and objects to be maintained at the Museum.

(3) No book, document or object referred to in sub-section (2) shall be sold, exchanged or otherwise disposed of except by the Ceylon Branch of the Royal Asiatic Society:

Provided, however that—

- (a) all such books, documents and objects shall be in the sole charge of the Director, and may be lent in accordance with the provisions of section 7(c), or lent for purposes of reading or study to members of the Branch;
- (b) any such book, document or object may be returned to the Branch, if the Director is of opinion that it is no longer suitable for preservation at the National Museum at Colombo.
- (c) all such books, documents and objects shall, in the event of the dissolution of the Branch, be vested in the Government.

(4) So long as any books, documents or objects which are the property of the Ceylon Branch of the Royal Asiatic Society are kept and preserved at the National Museum at Colombo, the members of the Branch shall be entitled, free of charge, to have access to the Museum on such days and during such

hours as may be prescribed, and to the use of a room at the Museum for the regular meetings of the Branch and of the Committee thereof."

7. If the Society took advantage of these new proposals the present position would be altered in the following way. The Museum would have the duty of preserving and inventorization of the collections, which they do not do to-day. They would also under section 7(3) control the "examination" of such books by persons engaged in scientific or historical research, while under section 9(3) (a) the Director would have sole charge of the lending of books for the purposes of reading or study, i.e. the Society's rules about lending or removal of books would cease to have effect, and they would have no say in the matter, the sole discretion being with the Director. Moreover, a new provision is made in the Ordinance by which on dissolution of the Society its collection including the library would vest in the Government.

8. The important point to be noted is that the new Ordinance legislates for the Royal Asiatic Society, a private Association, the property in which and the administration of which belongs to its members. The first question therefore that we have to decide is whether it is necessary in the new Ordinance that there should be any provisions affecting the Royal Asiatic Society, secondly whether the proposed legislation affects the rights of the Society. Whatever conclusions we may come to on these questions it is obvious that proviso C of sub-section 3, section 9, if enacted will amount to expropriation of property belonging to members and ought to be deleted: on the dissolution of the Society—if such a contingency were to occur—the assets can only be distributed among its members.

9. Section 9 only comes into operation if and when the library or any part of it has been transferred to Government but it is admitted by the Government that no such transfer has been effected. Therefore the proviso is unnecessary and the matter can be considered when the contingency arises and an arrangement come to between the Royal Asiatic Society and the Government. Given goodwill on both sides between the authorities of the Colombo Museum and the Royal Asiatic Society the question of the housing of the Library, its care and custody can be dealt with. There has been no trouble for the last so many years by the working arrangement by which the Secretary of the Colombo Museum was appointed Librarian

of the Royal Asiatic Society. The state of the Library is the sole concern of the Royal Asiatic Society and its members, and they alone are responsible for its condition. Further, the Council of the Royal Asiatic Society has no authority to delegate the right to make rules for the Society to Government, or that it should be modified by a statute dealing with Museums. As stated previously, the Royal Asiatic Society is a private Society holding property and its members must have the unfettered right to frame rules dealing with their library.

10. The right of the Royal Asiatic Society to hold their meetings in the Colombo Museum was specially allowed by the Legislature in the Museum Ordinance of 1873 in accordance with the policy of the Government to assist the Society and to associate it with the Museum. This right ought to be safeguarded in the new Ordinance by declaring that a room should be placed at the disposal of the Royal Asiatic Society for the holding of its meetings and for housing its library and publications.

11. It must be admitted at once that there are aspects of the present arrangements which are thoroughly unsatisfactory. The Royal Asiatic Society's library which contain many valuable books is not being looked after properly. There is no proper catalogue, and though new books are entered in lists magazines and periodicals received, many of which are valuable, have been bundled up without any order in the shelves and are not only useless in the present disarray but are subject to attacks by insects and dirt.

12. It cannot be said that the Museum's arrangements at least as regards periodicals are themselves satisfactory.

13. The general view of the Committee is that the Royal Asiatic Society should retain its collection and be responsible for its inventoring and issuing books. It is essential that they should be put into proper order on the shelves, preserved properly and kept clean. The Secretary and Librarian of the Museum has usually been the Secretary of the Royal Asiatic Society and has had charge and supervision of the Royal Asiatic Society Library. This system might still continue, but it is clear that a suitable person with a knowledge of librarianship should have direct charge. He should be willing to work in the library itself, and should be given proper assistance.

It is only in this way that the valuable library can be preserved.

14. As regards the Ordinance itself, if this view is accepted, it will be necessary to amend the provisions to enable the Society to keep its lists and make its own arrangements for use and lending of its books, and for the return of the books to the Society if the Society is dissolved.

Sgd. C. H. Collins.

„ Edward W. Perera.

„ F. A. Tisseverasinghe

Colombo, 25th October, 1940.

A DUTCH HOUSE FOR CEYLON

(Sub-Committee's Report.)

We being three members of the Council of the Royal Asiatic Society and four nominees of the Dutch Burgher Union, with the Secretary of the Royal Asiatic Society as Secretary, were instructed to consider and report upon the proposal to establish a Dutch House, to serve as a permanent memorial of Dutch domestic architecture and life. All the Members took part in the discussions except Mr. R. L. Brohier who was absent from the Island.

We are of opinion that in view of the important part played by the Dutch in the social, political, and economic life of the country during the seventeenth and eighteenth centuries, and also in view of the increasing interest which is being taken in ethnology and history, the establishment of a House of the nature suggested is of great importance. We are further of opinion, having regard to the rapid social changes of today, and the steady diminution of the best type of objects illustrative of the period, that there should be no delay in taking action effectively to carry out the suggestion. With regard to its location we have given consideration to the fact that at various provincial towns like Jaffna and Galle, there are to be found buildings with distinctive characteristics which are less marked in those available at Colombo; their distance however, will militate seriously against that easy accessibility to the largest number which is essential to the practical success of the scheme, while it will exclude an important class, the tourist, whose intelligent understanding of the history of the country is a valuable asset, and also increase the difficulty of adequate supervision. We therefore recommend that the building to be selected should be in Colombo.

Supervision should be in skilled hands and in that respect the Director of the Colombo Museum, who has various advisers available, is well qualified. We recommend that the House should be treated as a part of the Museum and placed in charge of the Director. We understand that much of the furniture and other fittings which will be needed can be supplied from the Museum, which

has not sufficient room for its collections. If the House is to form part of the Museum we feel that it will be an advantage for a representative of the Dutch Burgher Union to be permanently on the Museum Committee.

Two buildings were brought to our notice as suitable for the purpose contemplated, and after a careful inspection we have decided to recommend the selection of the one now employed as the Pettah Post Office. This is situated in Prince Street, so called by the Dutch, we understand, in compliment to the son of Raja Sinha, and is in the centre of what was once their residential quarter. It was an official building intended to be the Orphanage and is therefore of a more commodious and substantial nature than a private dwelling house. It opens on the road with a verandah or *stoep* the roof of which is supported by pillars of striking height and dignity. From this an excellent doorway, of the type of which two or three are to be found in Jaffna and Galle but not, so far as our knowledge goes, anywhere else in Colombo, leads within. Over this doorway is a large tablet with an inscription within an ornamental border, which gives the date of the building 1782. Within there is much characteristic timber work, the chief item being the staircase. The rooms are very large, and the roof lofty so as to secure coolness. The old outhouses are also in existence and enclose a small compound typical of Dutch town houses. It is in the immediate proximity of the Fort and is easily accessible to tourists, though it suffers from the disadvantage of lack of sufficient parking accommodation; this disadvantage is remediable. It has however the very great advantage that it is the property of Government so that no money need be spent on acquisition and little on removing modern accretions.

There is ample accommodation, not only for reproducing the living rooms of Dutch times, but also for the display of a collection illustrating all phases of their life. In the large halls can be shown pictures, arms, dresses, china and glass, and a library of books and Manuscripts can be collected which might be consulted by those interested in the period. It ought not to be impossible to arrange to rent out a room to be run as refreshment room where collection illustrating all phases of their life. In the large halls can be shown pictures, arms, dresses, china and glass, Dutch dainties will be the chief attraction. We understand that the building has been reported to be unsuitable for its present purpose of a Post Office, and if this latter can be shifted to a more central spot like the old Town Hall,

the building can be dealt with as a Historic Monument in the manner touched upon by us. We advise that the opinion of the Museum Committee be now obtained.

1. Sgd. P. E. Pieris
2. „ R. L. Spittel
3. „ A. E. Keuneman
4. „ S. Paranavitana
5. „ E. W. Arndt
6. „ E. Reimers
7. „ R. L. Brohier.

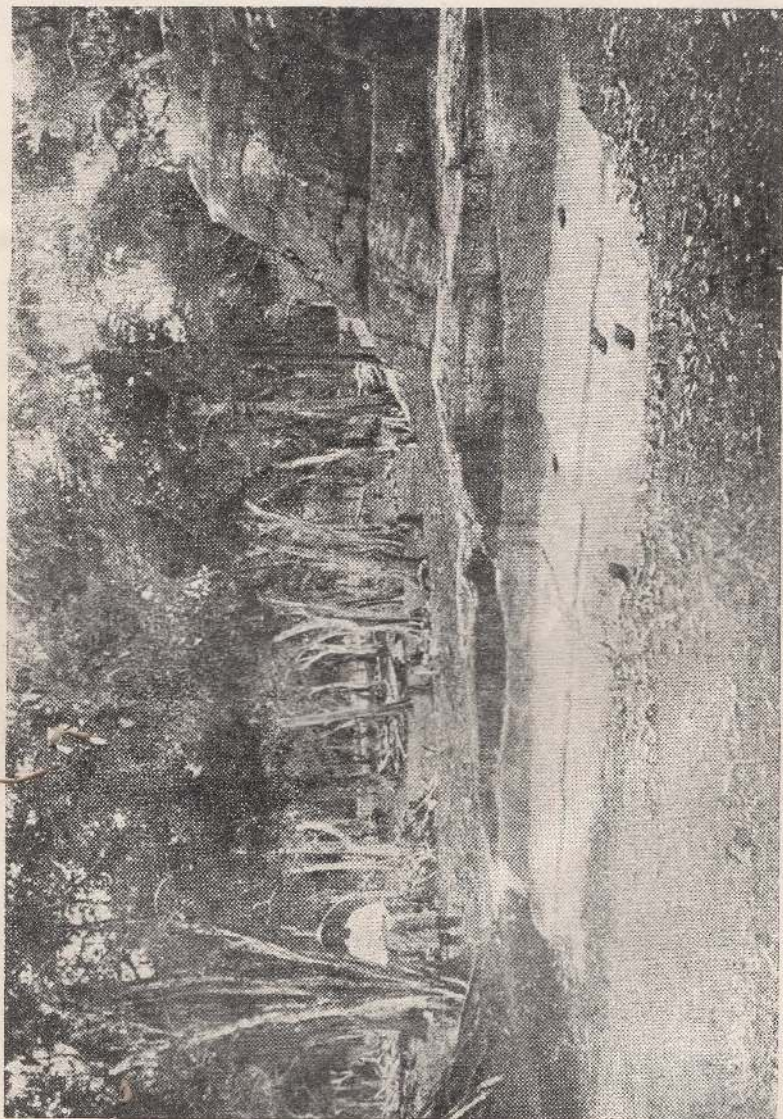
TAMIL HOUSE-HOLDERS' TERRACE ANURĀDHAPURA

BY

S. PARANAVITANA

About two hundred yards to the north of the junction of the Outer Circular Road with the Laṅkārama Road, and in the vicinity of the building called Ratanapāsāda, in Anurādhapura, there is a cluster of granite boulders of various shapes and sizes, among which, in the early days of Ceylon's history, the Buddhist anchorites had their simple abodes. In April 1939, the writer, while on a tour of inspection, noticed some hitherto unobserved Brāhmī letters on the face of one of these boulders, which had been chiselled before the writing was executed. The inscription had been buried for centuries and it was therefore not noticed by Mr. Bell or any other archaeologist who carried out investigations on the site and it was due to the washing away of the surrounding earth during the preceding rainy season that a part of the inscription was exposed to view. It was evident that the chiselling of the rock was not done for the purpose of the inscription but that the inscription was in the nature of a label attached to some monument. The clearing of the site resulted in the discovery of the remarkable monument described below—the only one of its kind, not only in Ceylon, but also, I believe, in India.

On the northern side of the boulder in question, which is less conspicuous than many others on the site, has been cut a terrace, 28 ft. 9 in. in length and 2 ft. 9 in. to 5 ft. 3 in. in breadth. The surface of the terrace, which is about 1 ft. above the original level of the ground, is not even but is divided into five compartments which, starting from the left, gradually increase in height, the differences in levels being from 1 to $2\frac{1}{2}$ inches. The height of the chiselled vertical face of the rock behind the platform is uneven and varies according to the slope of the rock from 1 ft. 2 in. to 2 ft. 3 in. Socket-holes on the sides of the terrace show that it had wooden pillars fixed on it to support a roof, probably tiled.



Tamil House-holders' Terrace, Anurādhapura.

The inscription on the vertical face of the rock behind the terrace is in characters of the oldest type of the Brāhmī alphabet and enlightens us as to the purpose of the terrace. It reads:—

Ilubaratahi Damedā' Samane karite Damedā-gahapaṭṭikana pasade

"The terrace of the Tamil house-holders caused to be made by the Tamil Samana (residing) in Ilubarata".

This is not the place to discuss the linguistic import of the record, but I may state that it is in the old Sinhalese Prakrit in which are also written the many hundreds of Brāhmī inscriptions found in the island. The word *pasade* is equivalent to Skt. *prāsāda* which ordinarily means 'palace' but in this instance it has to be interpreted as 'terrace' or 'platform' so that it can appropriately be applied to the monument to which it obviously refers. The inscription proves that the stone terrace was the common property of the Tamil house-holders of ancient Anurādhapura, and was probably used as their assembly hall.

The unchiselled portion of the boulder between the ground and the surface of the terrace contains, in one line, seven short records which tell us that that portion of the platform immediately above each record was the seat of a particular individual among the Tamil house-holders. These records are not very well preserved but the following names can be deciphered: Kubira, Tisa, Kubira Sujata, Saga, Nasata, Kārava. The last-named is described as a ship-captain. The difference in level at the surface of the various compartments of the platform was probably intended to indicate the difference in rank and social status of the individuals whose seats were on them. If so, it is interesting to note that the ship-captain (*navika*) occupied the highest seat.

The age of the platform must be the same as that of the inscription which can be dated only by the palaeographical evidence. The script may belong to any date between the third century B.C. and the first century A.D. In this early period of Ceylon history, the island is said to have been under Tamil rule on three occasions, i.e., circa 177-155 B.C., 145-101 B.C. and 44-17 B.C. The platform could have dated from any of these periods. On the

1. *Damedā* and Skt. *Dramiḍa* or *Draviḍa* Pali *Damila* In modern Sinhalese *Demala*.

other hand, the presence of Tamil house-holders at Anurādhapura does not necessarily require Tamil sovereignty over the city and the monument may date from the reign of any early Sinhalese monarch.

This, I think, is the earliest epigraphical record so far known, in which the ethnical name *Dameda* (*Dravida*) occurs. The platform on which it is incised is also one of the earliest examples of the stone work of the Tamil people and the monument therefore deserves the notice of Indian archaeologists. It is, however, noteworthy that the record is in old Sinhalese and that some of the Tamil house-holders bore such Sanskritic names as Tisa (P. Tissa, Skt. Tiṣya) and Sujata (Skt. Sujāta) which were common among the Sinhalese of the pre-Christian centuries. These Dravidians must have therefore been much influenced by the Aryan culture of the North Indian people who colonised this island and became the originators of the Sinhalese nation.

Note:—The *s* in the words *Samane*, *pasade*, *Tisa*, *Sujata*, *Saga* and *Nasata* is palatal. The limitations of the printing press have made it impossible to give the correct transliteration.

SOME BOTANICAL FOSSILS FROM CEYLON.

BY

P. E. P. DERANIYAGALA, M.A. (Cantab.); A.M. (Harvard);
F.C.P.S.; F.L.S.; F.Z.S.,

Director, Colombo Museum, and Acting Director of Fisheries.

With one plate.

The botanical fossils dealt with in this article are from the Jurassic deposits of the Andigama and Tabbova horizons in the North Western Province and from the middle and upper Pleistocene deposits in the strike valleys of the Ratnapura series in Sabaragamuwa Province.

The oldest botanical fossils known from Ceylon are from the carbonaceous Andigama shale which has been tentatively regarded as equivalent to the Rajmahal of the upper Gondwana of the Indian Jurassic (Deraniyagala 1939-1940). Fragments were recently sent to Prof. B. Sahni, F. R. S. at Lucknow University and are now under investigation, by his pupil Miss M. Janet who has discovered material of both botanical as well as zoological interest in them.

The majority of Ceylon's Jurassic plant fossils belong to small forms, (Seward et Holtum 1922) consequently the recent discovery of parts of larger species is of sufficient importance to merit description. The first of these (Pl. III fig. c.) was discovered in 1939 when excavation at the spill of Tabbova Tank had brought up large fragments of a coarse yellowish-brown Jurassic sandstone. The specimen is the impress of part of the frond of a large cycad-like plant. The midrib and 5 leaflets on one side, two on the other, are quite distinct but, the specimen is too fragmentary for further identification. The length of the specimen is 150 mm., the leaflets range in length from 115 mm. to 127 mm. The only other plants recorded from Ceylon and assigned to the cycadophyta are *Taeniopteris spatulata* McClelland, which possesses simple, entire leaves:

2.5 to 5 c.m. long, 0.25 to 1.5 c.m. broad (Seward et Holtum) and *Anamozamites* (? *Nilssonia*) sp. Jacob, (Sahni 1940).

(2) The second fossil (Deraniyagala 1940) is also from Tabbova and was obtained about 3 kilometres from the previous site on the part of the bank known as Ismathé pitiya of the Lunu äle stream. The specimens are the first completely silicified fragments of timber discovered in Ceylon. Unfortunately they were not in situ but appeared to have been washed out and lay loose on the elevated bank of the stream alongside prehistoric artifacts of chert. The fossils consist of two, reddish brown, sub-cylindrical fragments each about 60 mm. by 35 mm. One was sent to Prof. B. Sahni, for examination. He agreed with my identification that it was silicified timber and after sectioning it expressed the opinion that the tree was a conifer.

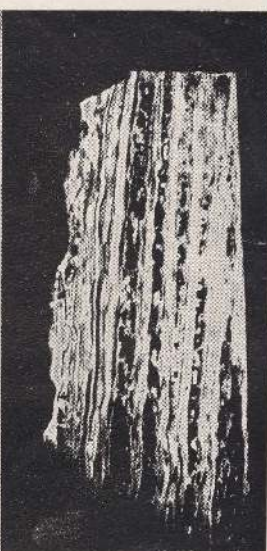
The fossil conifers hitherto recorded from Tabbova (Ceylon) by Seward and Holtum are.

(a) *Araucarites cutchensis* Feistmantel, from a single imperfect cone-scale 1.5 c.m. long, 1.5 mm. thick. (b) *Brachyphyllum mamillare* Brongniart, from the fragment of a slender branched shoot 23 mm. long. (c) *Elatocladus plana* (Feistmantel) from a foliage shoot 3 c.m. long 1 mm. broad.

The first fossil timber known from Ceylon is the present discovery. (Pl. III. figs. a, b) and it is coniferous wood. In India, fossil timber of the conifer *Araucarites cutchensis* is known from the Maleri series of the middle Gondwana of Madras and extends to the Kota series, which the timber of *Araucarioxylon* also occurs (Wadia p. 140).

The petrified wood of Jurassic conifers generally displays araucarian affinities, one being the comparative absence of the resin canals which are so well marked in the abietineous conifers. Araucarian forms are represented today by the living monkey puzzle of Australia *Araucaria imbricata*; the abietineous conifers by the pines, cedars, larches and firs, which came into prominence in the Cretaceous period. Examination of sections of the Ceylon fossil shows structures which might be resin canals. Should this view be correct the timber is probably abietineous. The question then arises as to whether it is Jurassic or from the much younger Miocene which covers a large tract barely seven kilometres to the

Botanical Fossils.



a.

$$\frac{5}{m m.}$$

b.



c.

$$\frac{2}{c m.}$$
P. Deraniyagala.

a, b. Coniferous wood. petrified $\times 2.4$.
 c, impress of a cycloid $\times \frac{1}{2}$.

North West of Tabbova, but this question will remain unanswered, until further specimens are discovered in situ.

The four slides made by Prof. Sahni and fragments of the silicified timber are on exhibition in the Paleontological section of the Colombo Museum.

(3) The remaining fossils are from the Middle and Upper Pleistocene deposits of the Ratnapura series in the Province of Sabaragamuwa. Leaf beds are commonly encountered by gem miners who term them 'Kola mätte', and their relative position and thickness have been already dealt with (Deraniyagala 1940). Steps are now being taken to identify this flora, which if coupled with pollen analysis, might throw important light on the fluctuations of climate during certain phases of the Pleistocene and possibly furnish a clue to one cause of extinction of some of the larger mammals of Ceylon.

(a) An important discovery was the more or less completely mineralized internode of a species of bamboo obtained from what are possibly middle Pleistocene gem gravels at Badalge Vatta, Colombugama. The arrangement of beds in this area, which is covered by the flood water of the Rakvan ganga is said to be as follows: recent earth 3 metres, red lateritic earth 2 m., kola mätte (leaf bed) 3 m., clay 1 m., grey sand 1.75 m., gem gravel 0.3 m.

This fossil which is 232 mm. long, 44 mm. in diameter and 130 mm. in circumference at its thickest end, was also sent to Professor Sahni, who informs me that upon opening it, the impressions of the leaves of five species of dicotyledonous plants were revealed. This important discovery will be dealt with in detail by Mr. G. S. Puri, his pupil.

(b) Samples from the upper Pleistocene and sub-recent leaf beds of different localities display considerable variety. For example a specimen from Kuttapitiya consists of rushes and swamp vegetation in addition to fruit and leaves from forest trees. The former indicate swamp deposits, a view supported by the occurrence of the swamp snail *Paludomus* as a fossil. At Kuruvita some of the leaf beds lack rushes and other aquatic plants and appear to be derived solely from forest trees which indicate fast flowing streams that heaped up their load of material at certain bends in their courses. Hitherto these plants have not been identified but Sinhala miners affirm that the following species here tabulated occur at depths of 7 to 10 metres.

LIST OF BOTANICAL NAMES

Sinhala Name	Scientific Name.
1. Bata	— <i>Ochlandra stridula</i> Thw.
2. Katu Kitul	— <i>Oncosperma fasciculatum</i> Thw.
3. Kitul	— <i>Caryota urens</i> Linné
4. Gal veralu	— <i>Elaeocarpus subvillosus</i> Arn.
5. Malaboda	— <i>Myristica dactyloides</i> Gaertn.
6. Kākuna	— <i>Canarium zeylanicum</i> Bl.
7. Veni vāl	— <i>Coscinium fenestrum</i> Colebr.

At Kuruvita—plants numbered 1, 3, 4, 5, 6, were reported; at Kuttapitiya—Rushes, forest leaves and No. 4; at Pālmedulla—Nos. 2, 3, 5, 6, 7; and at Bandaravella No. 3. was obtained by me from a depth of 5 m. at Kahatthe Vella.

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EXPLANATION OF PLATE.

Plate III. Some botanical fossils from Ceylon *a*, *b*, coniferous wood from Tabbova $\times 2.4$; *c* a cycad from Tabbova. $\times \frac{1}{2}$.

Mr. D. N. Wadia said that the fossil wood discovered by Mr. Deraniyagala was, no doubt, a very interesting specimen which probably belonged to the Miocene age and perhaps to the Jurassic. With Ceylon possessing records of only 2 or 3

periods of the earth's geological history, out of a succession of 17 such periods, the occurrence of the tiny patch of Jurassic sediments in between the Archaean and the Miocene of North Ceylon, should be considered a most fortunate circumstance and the discovery of this outcrop by Weyland in 1915 or 1916 a most fortunate event.

They were grateful to Mr. Deraniyagala for the discovery of the fossil wood and for giving them an opportunity for an interesting study.

The Chairman (Sir D. B. Jayatilaka) said it was his pleasant duty to propose a vote of thanks to the lecturer. Mr. Deraniyagala had been very helpful to the Society by giving talks on subjects of very great interest. He had no knowledge, said Sir Baron, of Botany, ancient or modern, and was therefore not in a position to make any remarks. Mr. Wadia had already invited their attention to the importance of the discovery of fossils. There was only one point that he would like to touch on. The lecturer had not stated how many thousands of years ago the Jurassic period commenced and when it ended.

