and Book
and Catalogue

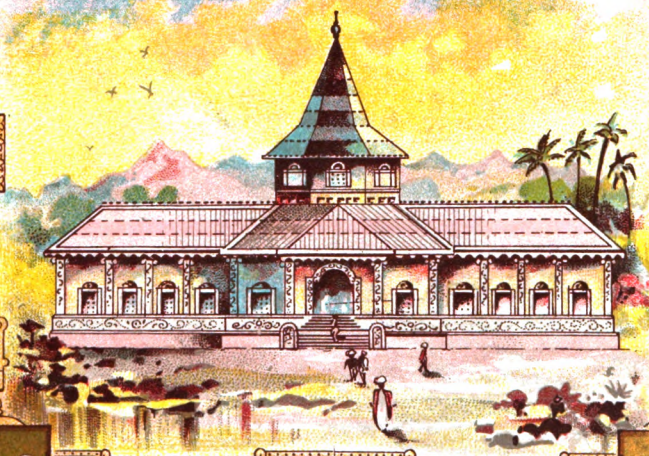
of the

Ceylon Courts.

1893

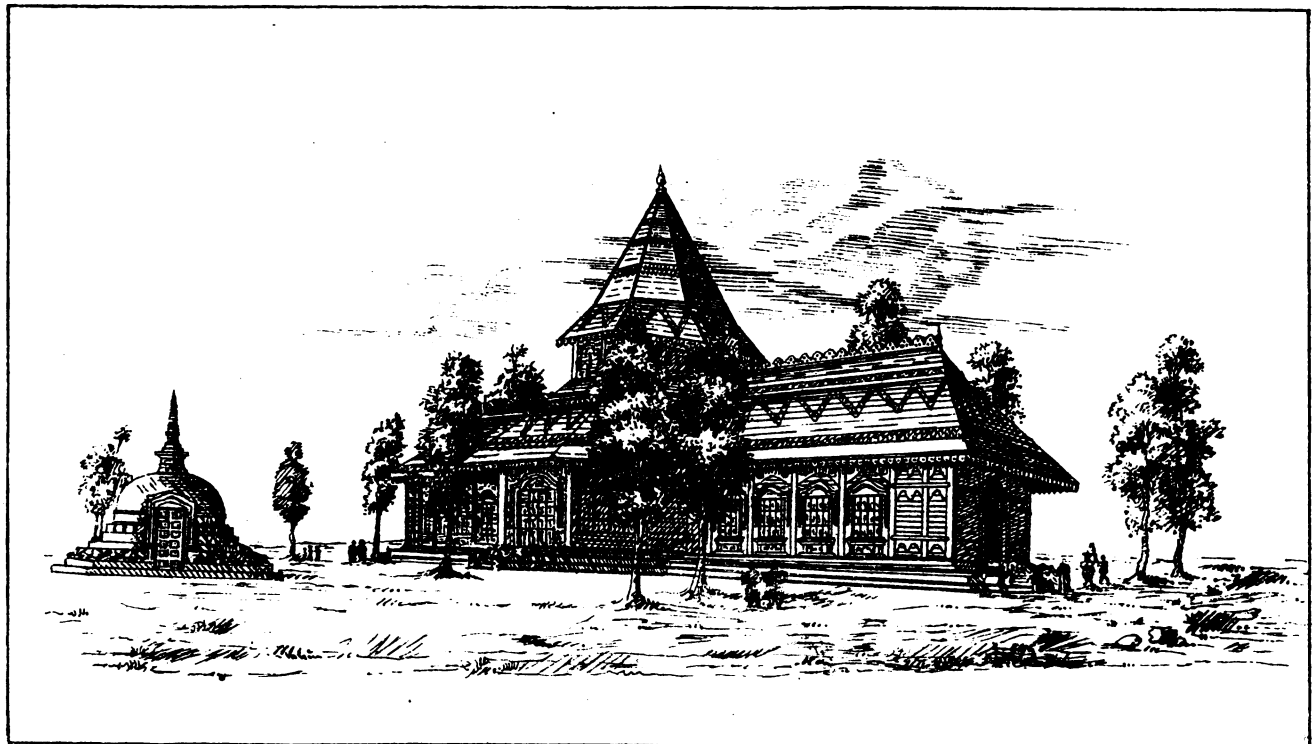
WORLD'S COLUMBIAN EXPOSITION

HAND BOOK & CATALOGUE



CEYLON COURTS

CASTELL BROTHERS, LONDON.



Lith: G C O Colombo № 468.

View of the Ceylon Court.

World's Columbian Exposition at Chicago, 1893.

OFFICIAL HANDBOOK & CATALOGUE

OF THE

CEYLON COURTS.

With Map and Illustrations.

COLOMBO:
H. C. COTTLE, ACTING GOVERNMENT PRINTER, CEYLON.

1893.

CEYLON.

COMMISSION APPOINTED BY HIS EXCELLENCY SIR ARTHUR ELIBANK HAVELOCK, K.C.M.G.

Special Commissioner.

THE HON. J. J. GRINLINTON, C.E., F.R.G.S., &c.,
Member of the Legislative Council of Ceylon.

Assistant Commissioner.

W. POLE FLETCHER, Esq., A.M.I.C.E., Public Works Department, Ceylon.

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PREFACE.

THE Right Hon. Lord KNUTSFORD (Secretary of State for the Colonies) having intimated by a Despatch dated 27th July, 1891, to the Governor of Ceylon that the Council of the Society of Arts in London had been appointed a Royal Commission to represent the interests of Great Britain and her Colonies at the World's Fair at Chicago, and that if the Government of Ceylon intended that the Colony should be represented, it should correspond direct with the Royal Commission and make its arrangements, His Excellency the Governor (Sir ARTHUR E. HAVELOCK) appointed a Local Committee, consisting of the following gentlemen, to make the preliminary arrangements, viz.: the Hon. F. R. SAUNDERS, C.M.G., Treasurer; the Hon. A. R. DAWSON, Government Agent, Western Province; the Hon. J. J. GRINLINTON, M.L.C.; the Hon. L. H. KELLY, M.L.C.; the Director of the Royal Botanic Gardens (Dr. H. TRIMEN, F.R.S.); the Director of the Colombo Museum (A. HALY, Esq.); the Chairman of the Planters' Association (GILES F. WALKER, Esq.); and the Chairman of the Chamber of Commerce (H. BOIS, Esq.).

From the first it was determined by the Planters' Association, and indeed by the whole community, not to lose the opportunity presented by such an Exhibition as that proposed to be held at Chicago of placing the Ceylon Tea industry (which had attained such a high position in England and in the Australian Colonies) prominently before the American public; and with a view to carrying out this object the Committee of the Tea Fund of the Planters' Association, and the Chamber of Commerce, intimated that they would at once subscribe, and the Government voted a sum sufficient to meet preliminary expenses.

The Local Committee, through the Government, entered into correspondence (which was forwarded to the Royal Commission) on the subject of the space to be allotted to Ceylon, and a resolution was submitted to Government expressing the desire of the Committee "That Ceylon should be represented by a Commission of its own representatives, appointed by the Governor, working in accord with the Society of Arts."

The resolution was forwarded to the Secretary of State by the Governor, and Lord KNUTSFORD approved of the proposal.

At a General Meeting of the Planters' Association, the Hon. J. J. GRINLINTON, Member of the Legislative Council, was unanimously chosen by that body, and his nomination submitted to the Governor, who appointed him Special Commissioner to represent Ceylon at the forthcoming Chicago Exhibition, stating at the same time that he fully shared in the confidence shown in Mr. GRINLINTON by the Planters' Association.

With a view to making arrangements for the proper representation of the Colony, and also to obtain suitable accommodation for Ceylon exhibits which it was proposed by the Special Commissioner should be placed within the Courts, constructed of the woods of the Island, the Commissioner proceeded to America in 1892, and while there succeeded in obtaining from the Directors of the World's Columbian Exposition four sites :—

One for the Principal Court, in extent...		18,706 square ft.
One in the Agricultural Building	...	1,684 square ft.
One in the Manufactures Building	...	~~331~~ square ft.
One in the Women's Building	...	~~225~~ square ft.
	In all ...	~~21,546~~ square ft.

Originally it was hoped that 625 square feet would have been allotted in the Women's Building, but the Lady Managers found that they were unable to allot more than 225 square feet.

X Additional space allotted when the Buildings were being erected.

The large court is 162 ft. in length, and is entirely constructed of the woods of the Island. The pillars and such parts of the ends of the beams as are in view, and the four entrance doors, as also the central Octagon, are beautifully carved in imitation of the carving found on the stone pillars and objects of art at the ancient city of Anurádhapura and other places of great antiquity. This court is a fine exhibit in itself.

The minor courts are also made of the woods of the Island, beautifully carved, and acknowledged by all who have seen them to be works of art.

The exhibits are numerous, and consist of works of art, manufactures, the products of the Island, jewellery, and curios, with a most interesting exhibit presented by the late SULTAN OF THE MALDIVES to the Ceylon Government, all of which will be found catalogued herein.

In order to conform to rules and to obtain a site in the Women's Building for a miniature court, it was suggested by Mrs. POTTER PALMER, the accomplished President of the Board of Lady Managers, that a Local Committee should be formed in Ceylon under the auspices of the Ladies' Committee in England.

The suggestion was duly communicated to Her Royal Highness PRINCESS CHRISTIAN and the Ladies' Committee in England, through the kind offices of Lady KNUTSFORD, and approval was expressed of the formation of a Local Committee in Ceylon, which should act independently of the Ladies' Committee in England.

The Ladies' Committee in Ceylon consists of :—

Lady HAVELOCK, *President.*

Lady Burnside.	Mrs. Allanson Bailey.
Lady Grenier.	Mrs. Dawson.
Lady de Soyza.	Mrs. Grinlinton.
Mrs. Copleston.	Mrs. Mitchell.

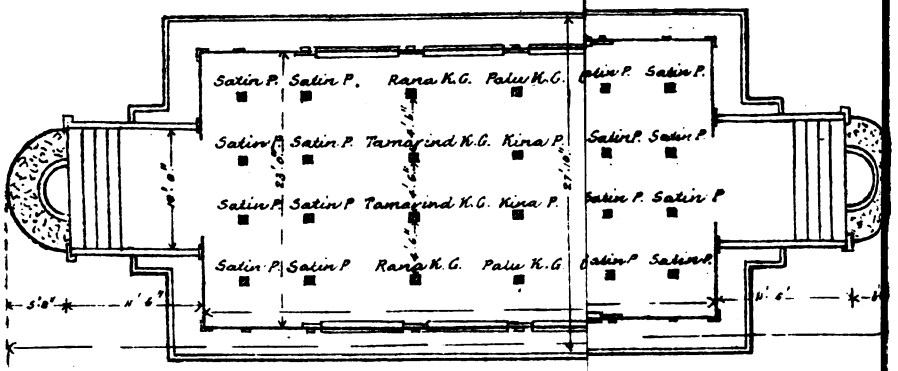
Some excellent exhibits in lace, the work of natives of the Island, and some works of art, all being the work of women's hands, have been collected by the Committee, and will form

an interesting feature in Ceylon's miniature court at the Women's Building. To the interest taken by Lady HAVELOCK in the collection of these exhibits will be due to a great extent the success of this most interesting part of Ceylon's representation at the World's Fair.

Ceylon is much indebted to the various gentlemen whose names appear in the Table of Contents, who have obligingly added to the interest and information which it is hoped will be afforded by the chapters contributed by them to this publication. The special services rendered by Mr. TOMALIN, the Architect of the Courts; Mr. HALY, the Director of the Museum, in his unremitting exertions in selecting most of the exhibits and in arranging and cataloguing them; Mr. COTTLE, the Acting Government Printer, in placing before the public an interesting Handbook and Catalogue; and Mr. BURROWS' kindness in editing the papers, are greatly appreciated; as also the services rendered by the Surveyor-General's Department through the kindness of Col. F. C. H. CLARKE, R.A., C.M.G.

To His Excellency the Governor, Sir A. E. HAVELOCK, Ceylon owes a debt of gratitude, not alone for having promptly met the views of the Planters' Association, in the manner proposed by them for raising the funds to enable Ceylon to be adequately represented at the Great Exposition, but for his ever thoughtful consideration and powerful aid and patronage in everything which has been done, in endeavouring to make the Exhibition creditable to the Colony.

PLAN OF TEA
Chicago Exhi
Ceylon Cour



Reference.

P. Pillars from Pollonnaruwa
K.G. do do Kings Granary
A. do do Audience Hall
K do do Daladamaligaw

HANDBOOK

AND

CATALOGUE OF EXHIBITS

FOR

THE COLONY OF CEYLON.

WORLD'S COLUMBIAN EXPOSITION, CHICAGO, 1893.

DESCRIPTION OF THE COURT.

THE main building of the Ceylon Court comprises a central octagonal hall with two wings facing respectively north and south. The central hall, or Octagon, is 50 ft. 3 in. in width, and the length of the entire court is 145 ft. 6 in. Views of the court's exterior and the interior of the Octagon are given.

The court partakes largely of the Dravidian style of architecture in the design of its columns, an architecture adopted, if modified, by the Singhalese in their ancient temples throughout the Island of Ceylon. The details of this mixed architecture may be studied with advantage in the numerous temples and ruins scattered over Ceylon, of which excellent views are shown in photographs exhibited in the court.

The court is constructed entirely of the beautiful native woods of Ceylon. Some twenty thousand cubic feet of

timber has been expressly felled for the purpose. The woods used are generally of a hard and durable character, and consist of the following kinds :—

Ná, or Ironwood (*Mesua ferrea*).
Kina (*Calophyllum*).
Dun (*Doona zeylanica*).
Yakahalu (*Doona trapezifolia*).
Satin (*Chloroxylon Swietenia*).
Hulan-hik (*Chickrassia tabularis*).
Lunu-midella (*Melia dubia*).
Margosa (*Azadirachta indica*).
Pehimbiya (*Filicium decipiens*).
Panakka (*Pleurostylia Wightii*).
Gammalu (*Pterocarpus Marsupium*).
Suriya-mara (*Albizzia odoratissima*).
Ṇedun (*Pericopsis Mooniana*).
Kumbuk (*Terminalia glabra*).
Muruta (*Lagerstrœmia Flos-reginæ*).
Ebony (*Diospyros Ebenum*).
Palu (*Mimusops hexandra*).
Ubberiya (*Carallia calycina*).
Wewarana (*Persea semecarpifolia*).
Sapu (*Michelia*).
Jak (*Artocarpus integrifolia*).
Tamarind (*Tamarindus indica*).

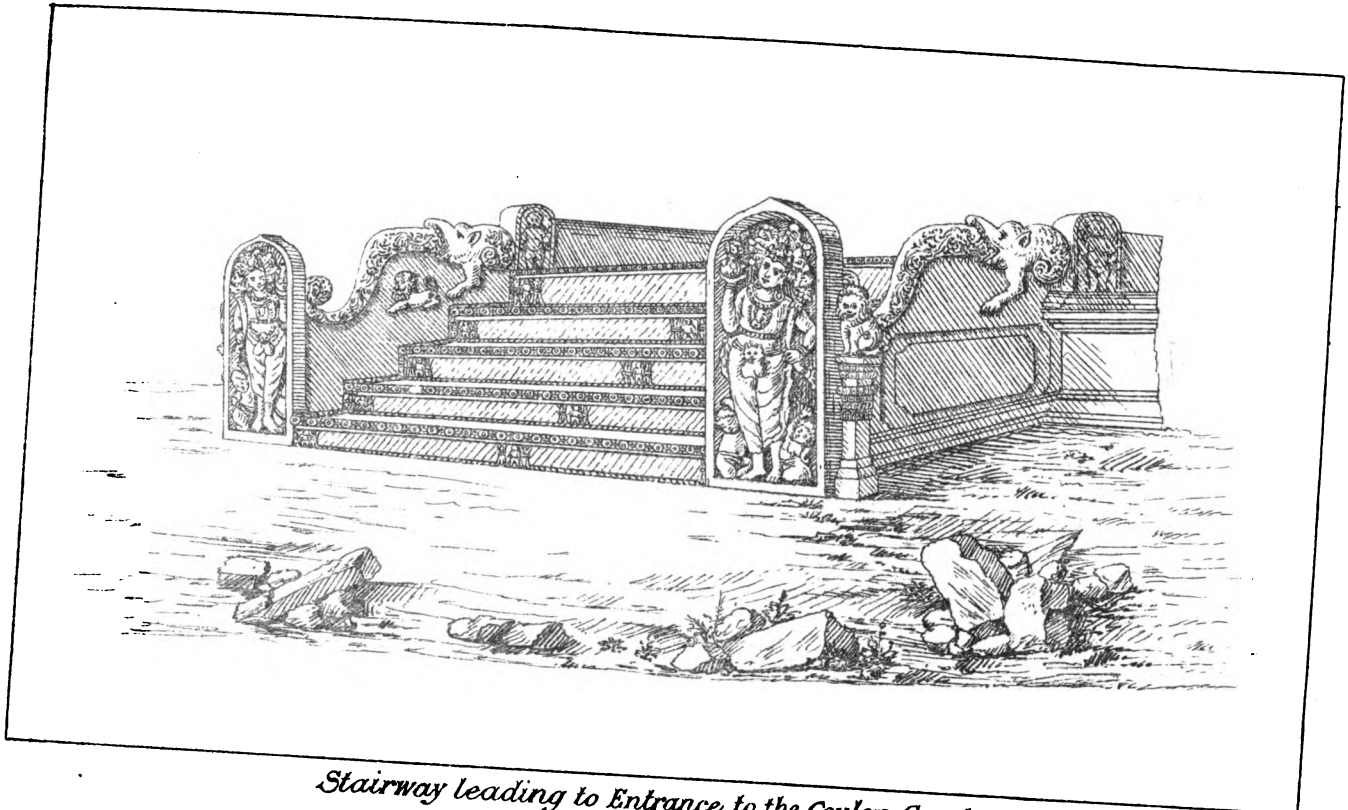
The whole court is raised on a projecting basement some four feet above ground level, and is reached by four stairways highly carved, two leading into the central Octagon and one into each of the wings. These flights of steps (of which an illustration is given) are adapted designs from the well-known stairs of many fine ruined temples to be seen at Anurádhapura and Polonnáruwa, the successive ancient capitals of Ceylon between 543 B.C. and 1235 A.D.

The cobra-shrouded figures carved in bas-relief on the terminal stones, guarding either side of the approach, are termed *doraṭu-pálayas*, or janitors. These guard-stones are always found at the foot of steps to viháres (shrines), &c., in the older ruins, to ward off evil.

The small conventional lions on attached pillars at the side of the terminals are found equally with elephants and bulls on these guard-stones at Anurádhapura and elsewhere.

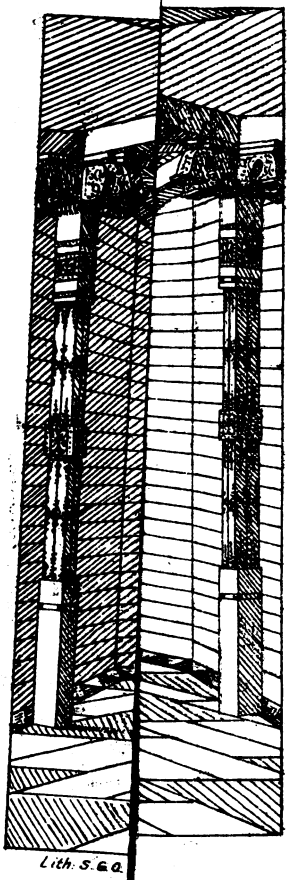
The figures on the face of and supporting the steps, the front edges of which have a small conventional pattern of the water-leaf ornament, or *padma*, carved upon them, have been supposed to represent *yakkas*, a class of evil spirits, also placed here to avert ill.

At the bottom of the steps is a large carved slab, semicircular in form, termed a *sandakada-pahana*, or moonstone, carved in bas-relief, to represent a lotus flower open in the



Stairway leading to Entrance to the Ceylon Court.

Lith: S G O N° 469.



centre, and concentric bands of *haṇsas* (sacred geese), foliage, and figures of lions, elephants, horses, and bulls in the outer ring. The carved balustrade on either side represents a *makara*, a fabulous beast, half lion, half crocodile.

Arriving at the top of the stairs, the entrance to the building is through a handsome doorway having carved jambs of similar pattern to those of the Daladá Máligáwa* at Kandy, and at the Ambulugala and Dippitiya viháres in the Four Kóralés of the Kęgalla District of Ceylon.

The *liya-vel*, or continuous scroll ornament, should be particularly noticed, also the *de-pota*, or intersecting double-foliaged scroll. The *nári-latá*, or fancy design of leaf ornament spreading downwards from the trunk of a woman's body, is here particularly handsome, and follows the line of the *torana*, or arch.

The ceiling of the central hall is supported by twenty-four elaborately carved pillars, which are in two stages; the lower storey supporting cross beams terminating in a carved bracket. Between the cross beams, and forming a capital to each pillar, are carved cross-bracket-capitals termed *pushpa-bandha:* they are carved to represent conventional drooping lotuses. The upper tier of these pillars, with their attached bracket-capitals, are carved in the form of a plantain flower, and the ornamentation on the face of the pillars is that of the *padma*, or lotus ornament.

The pillars forming the two outer rings are carved after the manner and style of those now existing in the Audience Hall at Kandy. The carved pillars forming part of the inner ring of the hall follow the design of examples in stone in the Kandy temple, and the polygonal pillars with lotus ornament on the several square faces are from examples at the ruined city of Polonnáruwa and the Ganégoḍa viháré in the Four Kóralés of the Kęgalla District of Ceylon. The types can be ascertained from the reference plan.

In the north and south wings there are three types of pillars, those described above as from the Kandy temple, and also pillars of similar polygonal design as those in the central hall, the third type of pillar being from a building formerly used as the king's granary at Kandy. These pillars have all moulded capitals, excepting at the entrances, where the *pushpa-bandha* bracket-capitals are again introduced.

The names of the different woods of which the several pillars are made are indicated by labels, with the English and botanical names in plain characters, and the Siṇhalese names in native characters.

---

* The temple in which the sacred tooth of Buddha is deposited.

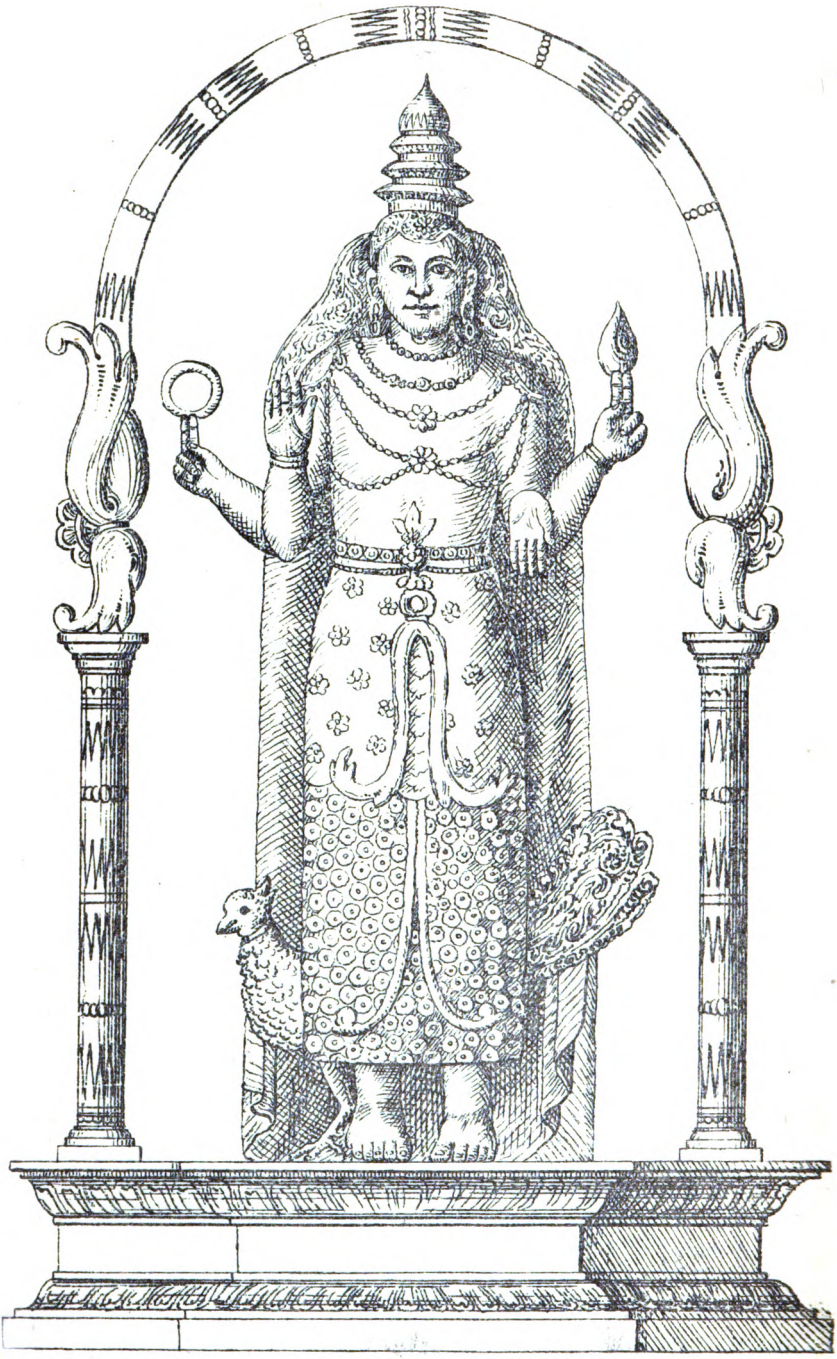
All the pillars in which the octagonal shaft terminates in a square have the shoulder carved with a conventionalised representation of a cobra's hood, known as the *nága-bandha*, or cobra-knot.

The ceiling at the lower tier of capitals above the ten outer rings of the central hall is formed of satinwood, enriched with *padma* ornamentation on the beams and panels. There are also mouldings coloured with native colours, the ingredients and methods of mixing which are jealously guarded. The ceiling of the upper part of the central hall is divided into thirty-two panels, enriched and decorated in a similar manner.

The ceilings of the two wings are in panakka wood, the shading being natural. Between the upper and lower stages of the interior, and also of the first outer ring of the tiers of pillars supporting the upper ceiling of the central hall, are paintings executed by native artists, and entirely with native materials.

Those round the inner rings are representations of a *perahera*, or religious procession. The north-west, west, and south-west panels are exact copies of frescoes discovered during the progress of excavations at the ruins of the Demala Maya Saya at Polonnáruwa, and probably date between the 10th and 13th centuries A.D. They represent scenes from the life of Buddha, and are of exceptional interest. The north and south panels are subjects taken from frescoes at the ancient temple of Kelaniya, near Colombo, and are subjects of frequent representation in Buddhist temples. The north-east, east, and south-east panels are figure subjects portraying the wives of king Kásyapa, the patricide monarch who dwelt in the rock fortress of Sigiri ("the lion rock") between 459 A.D. and 475 A.D. Enclosing the spaces between the inner ring of pillars forming the support of that part of the ceiling of the central hall are highly carved screens framed with satinwood and ebony mouldings in relief. In the panels are three figures of Buddha: the lowest seated on a *tamara* or lotus-seat, and with the usual type of *ásanaya*, or throne. The figure next above is also that of Buddha, with a glory or nimbus, termed *sirespota*, above the head. The uppermost figure is that of Buddha overshadowed and seated on the coils of the seven-hooded cobra, or *Muchalinda Nága Rája*. The termination of the screen is that of a *makara-torana*, an ornamental arch surmounted by the head of a *makara*. The sides of the screen are carved with a continuous *liya-vel*, or foliated creeper ornament, and also with the *de-pota*, or continuous intersecting scroll ornament.

The ornamental floors of the octagonal hall and annexes, which add greatly to the effect of the interior, are laid with



Vishnu The Lotus God

Lith S.G.O. N°466

Sedent figure of Gotama Buddha.
Scale Half Inch to a Foot - 1/24

Lith. Surveyor General's Office Columbo 1853 N° 462

a diaper pattern in light and dark woods, the dark being palu and the light satinwood.

The Tea Room (an important feature of the court) is reached by a lift from the floor of the central hall, the shaft being concealed by means of the ornamental screens previously described. The room is of octagonal form, some 35 ft. between the opposite angles, and is of similar design to the hall below, but with less ornamental carving. The ceiling and floor also resemble those of the lower hall, but are less ornate. There are paintings round the upper part of the room, of modern design. Round the lift-shaft in the Tea Room is a handsomely carved balustrade of peculiar pattern, well worthy of inspection.

Between the double tier of pillars, which are draped with Oriental hangings, thus forming recesses, tea-poys made of the beautiful satin and margosa woods are placed, and an excellent view can be obtained over the Exposition grounds from the windows.

On either side of the central hall are colossal figures of a sedent Buddha and Vishnu. The hands of the seated Buddha are, as usual, placed in the lap, the back of the right hand resting on the left palm, and the crossed feet showing the *magul-lakunu*, or sacred marks, on the soles.

The figure of Vishnu, usually ranked as the second of the *Trimurti*, or Hindu triad, is represented four-armed, the back pair of hands holding his discus and chank, with his *vahana*, or vehicle, the winged *garuda* behind, and standing on a pedestal, framed in a pillared *toraṇa*. The "lotus-god" is, as usual, painted blue.

The other figures ranged round the Octagon are those of a Buddhist priest holding a *pátra*, or begging bowl; a *ratémahatmayá*, or Kandyan chief; a Colombo Chetty, or trader; and a Veḍdah (or aborigine) and his wife. These latter are interesting, as the Veḍdahs are fast dying out, from various causes; the last Census return giving their number as only 1,229.

The whole building is enclosed with an ornamental façade, there being eight windows to each annexe and four of double width to the central hall. The windows have architraves carved with the *pála-péti*, or water-leaf superficial ornamentation, and under each window is a panel containing conventional and other designs in bas-relief. The upper part of the window is formed of an ornamental *toraṇa*, or arch, carved with the same pattern as the architrave. The carved architrave terminates with a shoulder enriched with the creeper-knot, or *geṭa-liya*, ornament.

The whole exterior of the building is framed with satinwood ornamented with Kandyan scroll-work, and the

roofs, which have large projecting eaves, are terminated at the eaves-line with valance tiles of a pattern found in frequent use in Kandyan buildings. All the roofs, which are covered with imitation pan-tiles, are framed with a break of line a little more than half way up the slope, which is especially characteristic of Kandyan architecture. The roofs over the central hall and Tea Room rise in three tiers, and the whole is surmounted by a *kota*, or spire, terminating in a hammered brass finial exactly similar to the one surmounting the Temple of the Sacred Tooth of Buddha at Kandy. All the ends of projecting beams, or *gonęs*, are highly carved, and the terminations of the rafters are cut in the manner and form peculiar to the architecture of the building.

Of the panels under the windows, that under the third window from the south-east corner is a representation of the *Ira-handa*, the sun-and-moon symbol of the Four Kóralés, with the lion holding two daggers.

The fifth panel, or the first in the Octagon, contains a representation of a Kandyan *perahęra*, or religious procession. The first and second figures are holding flags of some temple; the third figure is depicted as blowing a horn used in these processions; the fourth figure is that of a tom-tom beater; the fifth is that of a figure beating a tom-tom with a double face; the sixth is that of a devil-dancer; the seventh figure is also that of a beater of an *uddakki* (a small kind of tom-tom); the eighth figure is that of an elephant carrying on its back a *dágaba* with enclosed *dhátu*, or relics, of Buddha; the ninth figure is holding a *sasatha* having depicted on the face emblems or figures of gods; the tenth figure is that of a *ratémahatmayá*, or Kandyan chief, who usually appears in the procession; the eleventh figure is that of an attendant holding an ola over the *ratémahatmayá* (these olas are used in Ceylon by the priests and others in place of umbrellas); the twelfth figure is that of a dancer, who usually follows the procession; figures thirteen and fourteen are those of devil-dancers wearing *vesmunu*, or masks, of hideous appearance, one of whom is holding a torch in either hand; the last figure is that of a *marthanju* beater (a kind of tom-tom).

The sixth panel, or that under the north-east window of the Octagon, is a copy of a design carved on the dado of the basement of the stone-built viháré at Ganégoda, in the Kęgalla District, and is a representation of female dancers and tom-tom players. The three central figures are united so as to have but two pairs of legs between them.

The eighth panel consists of five figures, the two outer being those of *devás*, or gods, and the mythical double-headed eagle termed *bhérunda-pakshi* (lit., a bird of terrific

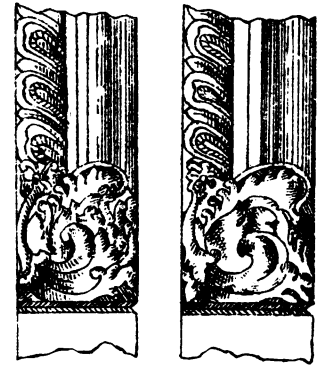
Panels of the "Main Court"

Eighth Panel - Devás, and the emblem of the "Three Korales" and figure from "Tissamaharama"

Ninth Panel - The "Nári - Lata"

Scale - One inch to a Foot = $\frac{1}{12}$.

Lith: S.G.O. N°663



"Naga-bandha Ornament"
Scale 1½ Inch to a Foot
= $\frac{3}{98}$.

Panels of the Main Court

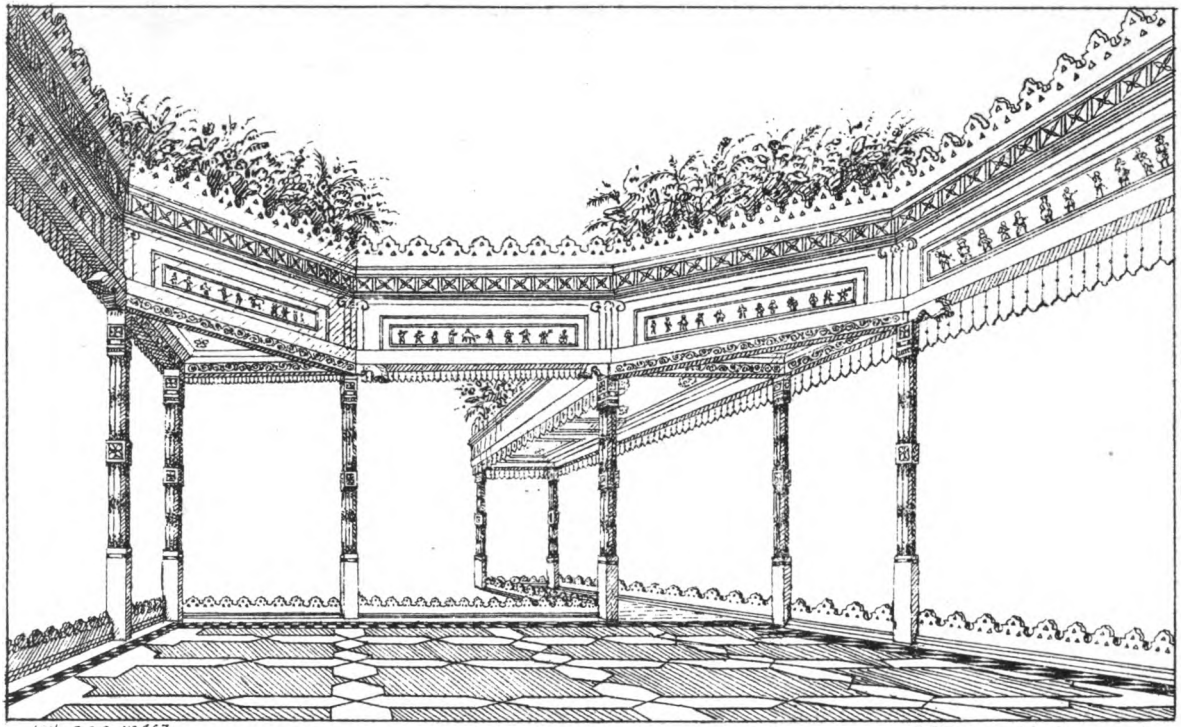
Third Panel "Ira Handa".
(Sun and Moon emblem of the Four Kóralés)
Scale One Inch to a Foot - 1/12.

Fifth Panel "Kandyan Perahera."

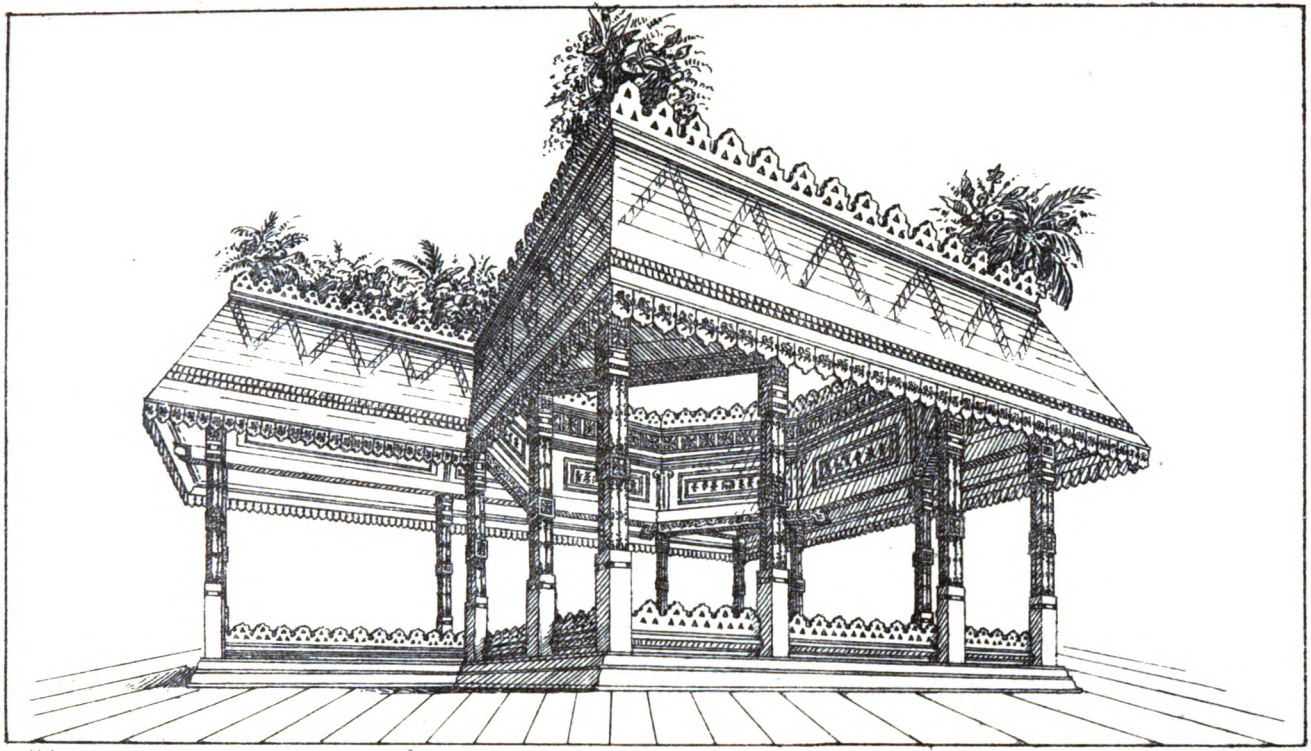
Sixth Panel. From "Ganegoda Vihare"
Scale 3/4 Inch to a Foot - 1/16.

Lith. Surveyor General's Office Colombo 4/93. No 464

KANDYAN CHIEF.



Interior View of the Ceylon Court — Agricultural Building.



Lith. S.G.O. Nº 467.

Exterior View of the Ceylon Court Agricultural Building

form). On either side of the centre is the emblem of the Three Kóralés. The central subject is that of a whale-like beast, with a figure standing on its lower jaw holding open the mouth. This is copied from a representation carved in stone found among the ruins of Tissamahárama, in the southern part of Ceylon, and is exhibited in the original.

The ninth panel is that of the *nári-latá* (lit., women-creeper), a fancy design of leafy ornament spreading downwards from the trunk of a woman's body.

The panels not specially described are principally of figures represented on the moonstones at Anurádhapura. One of the figures is that of the Katragam Deviyó riding his peacock.

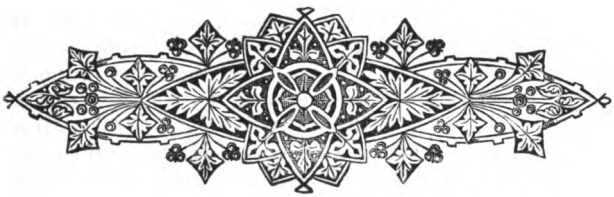
The numerous exhibits are ranged round the hall and annexes in handsome cases made of satinwood and ebony, the lower panels having the form of the *toraṇa*, or Siṉhalese arch. Other exhibits are disposed round the walls and pillars of the building.

Close to the court and immediately to the north-west is a building in the form of a dágaba, set apart for the use of the Ceylon Court Staff. It is an exact representation of the Ruwanveli dágaba at Anurádhapura, as taken from a model carved in stone which stands within the *pradakshina*, or "procession path." Ruwanveli dágaba was commenced by king Dutugamunu in the year 161 B.C., and completed 137 B.C. It is constructed of solid brickwork, rising to a height of 150 ft., with a diameter at the base of 379 ft. The original outline of the dágaba was destroyed by the Malabars in 1214 A.D.

The minor court in the Manufactures building is of similar design as regards pillars, paintings, &c., to the main building, as are also those in the Agricultural and Women's buildings.

Perspective illustrations of the exterior and interior of the court in the Agricultural building, and a plan and elevation and perspective view of the exterior and interior of the main court, are given.

Illustrations of the principal panel subjects and sketches of the *naga-bandha* ornament, and of the figures of Vishnu and Buddha, are also given.



RUINS OF THE JÉTAWANÁRÁMA POLONÁRUWA.

INTRODUCTION.

TO attempt to write anything new and original about Ceylon would be exceedingly difficult, and, fortunately, out of place. Few countries of its size have been so fully and persistently described. New and exhaustive books on Ceylon spring into being year after year, with a curious facility of growth, and a tropical luxuriance of leaves. They can be had of every kind: from the early utterances of the Buddhist pilgrim Fâ Hian, ere the Christian era was 400 years old, to Mr. Murray's brand-new handbook; from the entertaining genuineness of the sturdy captive John Knox in the seventeenth century to the mendacious extravagances of the latest globe-trotter. The object of the present little volume is simply to be a portable *rechauffé* of well-known and easily accessible facts; to bring rapidly before the view of the visitor to the Ceylon Court a few of the salient points concerning the distant tropical Island, of whose architecture, products, and manners he may here see something of a counterfeit presentment.

The following chapters, by leading members of the Island community, deal briefly with many of these points; on which therefore it is needless to say much here. It is only necessary to supply a few words on the past history of the Island; and to add a few facts concerning its art work, the specimens of which cannot fail to attract the visitor's attention.

A sentence from Sir Emerson Tennent (whose work on Ceylon, amid the plurality of books alluded to above, still

holds, and seems likely to hold, a deserved pre-eminence) will help to show the opinion which the men of old time entertained of the Island :—

The Brahmans designated it by the epithet of *Lanka*, "the resplendent," and in their dreamy rhapsodies extolled it as the region of mystery and sublimity ; the Buddhist poets gracefully apostrophised it as "a pearl upon the brow of India"; the Chinese knew it as the "island of jewels"; the Greeks as "the land of the hyacinth and the ruby"; the Mahometans, in the intensity of their delight, assigned it to the exiled parents of mankind, as a new elysium to console them for the loss of Paradise ; and the early navigators of Europe, as they returned dazzled with its gems, and laden with its costly spices, propagated the fable that far to seaward the very breeze that blew from it was redolent of perfume.

The charge is often brought against us English that we are too unimaginative and practical ; and perhaps an enemy would find further proof of this in the fact that we, the successors of those old poetic voyagers, chiefly know "the land of the hyacinth and the ruby" as the home of the tea-bush and the coffee-berry. It is an unfortunate fact that these products, the modern wealth of the Colony, have spoilt to a certain extent the picturesque beauty of the hill-regions. But it would be wrong, perhaps, in the face of modern economics and *fin-de-siècle* views of the fitness of things, to regret the primeval forests and profligate vegetable marvels that have given place to the more utilitarian and undoubtedly hideous growths ; and we moderns must find what consolation we may in the signs of human energy and intelligent labour which the denuded hill-sides of a tea estate present.

To the passing traveller of thirty years ago, the only known town in Ceylon was Point-de-Galle, which in its turn has been eclipsed by its lustier rival, Colombo, which, thanks to its magnificent breakwater and its position, has now become one of the most important ports of call in the East. But the two older capitals of the Island must engage our attention first : Kandy, the chief town of the mountain-land and the last refuge of the moribund monarchy, and Anurádhapura, the venerable relic of vanished power. An artist in word-painting might indeed draw a striking contrast between the great and notable city where this Exposition is being held, "the beautiful, golden Chicago, gay Queen of the North and the West," and the desolate, jungle-grown ruins that mark the site of what was the capital of Ceylon 500 years before the Christian era. It, too, was "the beautiful city, The famous and wonderful city, The proud and magnificent city, The Queen of the North and the West" ; and an old Siṇhalese writer, who preceded the poet of Chicago by 1,300 years, has described "the temples and palaces whose golden pinnacles glitter in the sky, the streets spanned by

arches bearing flags. Elephants, horses, and myriads of people pass and repass, jugglers, dancers, and musicians of all nations, with chank-shells and other instruments ornamented with gold. The distance from the principal gate to the south gate is 16 miles, and the same from the north to the south gate. The principal streets are Moor street and Great King street—the first containing 11,000 houses, many of them two stories in height. The smaller streets are innumerable." But 2,500 years have passed over it, and the barest outline now remains of the once beautiful city. Who can say whether as much will remain of Chicago when five-and-twenty centuries have passed again? But one interesting link unites their dissimilar destinies. The same Anglo-Saxon race that reared the modern marvels of Chicago is restoring prosperity amid the ruins of Anurádhapura: the new city and the old bear testimony to the enterprise of an English-speaking people.

The visitor to the Ceylon Court will hardly care to be bored with too many details of the early history of the Island. He need not be troubled with discussions as to the origin of the aboriginal race who inhabited it when prince Wijeyo, the discarded scion of a royal race from the valley of the Ganges, first entered it with his followers in the sixth century before Christ. The exact spot where he landed is the subject of much local discussion, but need not detain us here: suffice it to say that the chroniclers, after the fashion of the ruling race, describe the aborigines by the contemptuous appellation of "demons" or "snakes"; that the invader made good his footing in the land, behaved with conventional duplicity towards the reigning princess of the "demons," founded a dynasty, and was gathered to his fathers. The conquerors increased and prospered; and in the third century before Christ were converted to Buddhism by the zeal of the great missionary Mahindo, who secured for his converts two precious relics of the "Light of Asia"—the collar-bone of Buddha, and a branch of the sacred Bó-tree under which he reclined when attaining Buddhahood; which latter is alive unto this day, and yearly receives the homage of thousands of pilgrims. Anurádhapura was founded and beautified, and the surrounding country gradually brought under its dominion, while innumerable shrines and monasteries arose in honour of the new and triumphant faith; and vast schemes of irrigation, the remains of which astonish us even now, were thought out and accomplished. But it requires something more than strict attention to religion and irrigation to hold a conquered kingdom; the conquerors waxed wealthy and unwarlike; mercenaries of another race were taken into the royal pay;

the South Indian nations, pent up in a land too poor to feed their swelling numbers, scented out the fatness of the neighbouring Isle, and the writing was upon the wall. In 237 B.C. a usurper of the Malabar race actually forces his way to the throne ; and though a Sinhalese hero arose to restore the fortunes of the "Dynasty of the Sun," it was only for a time ; the inroads became more and more frequent and persistent, and in 104 B.C. the king was driven from his throne and his capital sacked. But the end was not yet. The invaders obtained no permanent footing in the capital, the dynasty was again restored ; the priesthood flourished amazingly ; the throne was occupied by a succession of pious *fainéants*, interrupted by the occasional appearance of a ruler of energy, who even attempted retributory incursions into the Malabar country ; until in the eighth century A.D. Anurádhapura was finally abandoned to the foe, and the capital was transferred to the less accessible site of Polonnáruwa, which, in the twelfth century, flourished amazingly under the great king Prakrama Báhu and his successor Nissanka Malla. The vast ruins still extant, though rarely visited, bear witness to the power and the piety of these monarchs ; of whom the latter has left a large number of elaborate rock-cut inscriptions, descriptive of his virtues, his victories, his buildings and his bequests ; while of the former there remains but a solitary statue with a powerful, melancholy face turned away from the sacred city, as though searching for the invader who was but too soon to make desolate the last great capital of the ancient monarchy. This time the invader came from the Dekhan, and did his work more thoroughly than before, owing to dissensions and factions and their inevitable results. The wretched monarch had to move his uneasy seat of Government to Yapahu, to Kurunégala, to Gampola, to Pérádeniya, and finally to Kandy ; penetrating deeper into the mountains as his Indian foes got firmer hold upon the plains. And there he was established, with diminished territory but increased security, when in 1522 A.D., says the Sinhalese chronicle, "it came to pass that in the month of April a ship from Portugal arrived in Colombo, and information was brought to the king that there was in the harbour a race of very white and beautiful people, who wear boots and hats of iron, and never stop in one place. They eat a sort of white stone and drink blood ; and they have guns with a noise louder than thunder, and a ball shot from one of them, after traversing a league, will break up a castle of marble."

With the arrival of the white man begins what may be termed the Modern History of Ceylon ; but the troubled one hundred and forty years during which Ceylon was a Portu-

BURIED CITIES OF CEYLON: THE GAL-VIHÁRÉ AT POLONNÁRUWA.

guese Colony need not detain us long. They proved but poor Colonists, in the higher sense of the term ; fostered the dissensions among the various petty chieftains which were already rife enough to ruin the country ; fought endless small battles with varying success in their attempt to capture the inland country and coerce the natives to their own creed ; and left behind them a record of cruelty, bigotry, and mismanagement. Perhaps the most notable thing they achieved was the seizure and solemn destruction, at Goa, of the celebrated tooth of Buddha ; a counterfeit of which (unless the one destroyed was itself a counterfeit) is jealously guarded and piously worshipped at Kandy to this day ; and perhaps the most enduring monument they have left is to be found in the quaint survival of Portuguese names among the low-country Sinhalese. It surprises and amuses the traveller to find "Don Pedro" scantily, if appropriately, clad in a skirt and a comb ; while "Donna Maria," in a very aged cloth, is scrupulously removing the insects from "Donna Madalena's" hair.

It was in May, 1602, that the first Dutch ship was seen in Ceylon waters. It rejoiced in the peaceful name of the "Sheep," and belonged to the "Het Maatschappy van verre landes," or "Company for distant lands." But it was not till ten years later that the first Dutch fort was erected in the Island ; and not till 1658 that the Portuguese finally evacuated Ceylon. By that date the Dutch had mastered the whole sea-board ; but had failed, and continued to fail, to penetrate the central hill-country. Their policy was as peaceful as that of the Portuguese was warlike. Their ruling principle was trade, before the exigencies of which everything else had to give way. Conquest was less important than cinnamon ; the glory of battles paled before the profit of spices ; and the insults and cruelties which, to secure their trade with the inland parts, the Dutch put up with from the barbarous tyrant of Kandy, are almost incredible. Elephants and arecanuts, cinnamon, cardamoms, and pepper were the chief objects of their solicitude ; and to secure their safe export the coast line was firmly held and strongly garrisoned ; while the denizens of the highland regions were pacified with quaint gifts and addressed with obsequious flattery. There was no "grand Colonial policy" about the Dutch ; no talk about "the expansion of the Netherlands" or "greater Holland," but they left behind one notable memorial, the Code of Roman-Dutch Law, which was in use in the Island for eighty years after their departure.

The reasons which made the British attack Ceylon and led to the ousting of the Dutch have to do chiefly with general

European politics and the national upheavals of 1795; but that the Dutch yielded without a struggle was due to local demoralisation and the enervating effects of a merely commercial policy. It was on February 16, 1796, that the Dutch finally capitulated, and the British flag floated over Colombo; though the Island was not formally incorporated with the British possessions till the Peace of Amiens in 1802. The early chapters of British rule are not altogether pleasant reading. An attempt was made to govern it from Madras, which resulted in complete and discreditable failure; and a Governor was sent out from England in the person of Mr. North (afterwards Lord Guilford). Mr. North managed, by not very creditable means, to gain possession of Kandy, displace the reigning Sovereign, and put up a puppet of his own; but his tortuous policy was rewarded by the massacre of the garrison left behind there, and the loss of the mountain capital for twelve years. But in 1815 the British were strong enough to despatch a properly organised force to regain their lost possession, avenge the murder of their countrymen, and seize and finally banish the tyrant, who had meantime made his name infamous by hideous atrocities; and from that year dates the establishment of British rule throughout the Island. A series of enlightened Governors consummated by peaceful methods the work which the sword had made possible. A list of them and of their works would be impossible within our narrow limits. But posterity will hardly forget that it was the first of these—Sir Edward Barnes—who laid the foundation of the magnificent road system, which has been the chief agent in the introduction of the *Pax Britannica* and all it implies, and who planted, close to the famous Botanic Gardens of Pérádeniya, the first upland coffee estate; and that it was the last of these—Sir Arthur Gordon—whose bold advocacy of irrigation has led to the restoration of many of those remarkable irrigation works of the ancients, by means of which alone the rural population can raise the rice on which their livelihood depends.

For fifty-five years from the planting of Sir Edward Barnes' first estate, Ceylon was, from the European point of view, "the land of the coffee-berry." And then came the total ruin of the coffee enterprise. The cause, or variety of causes, may be left to the scientists to determine: the fact seemed to threaten the Island with inevitable ruin, so rapid was the collapse, so widespread the financial disaster. Estate after estate was abandoned; firms went into liquidation; banks were reported shaky; European planters who a year or two before were living in affluence and comfort, were reduced to absolute penury, and were

equally without the means of finding employment or leaving the Colony. But if the British soldier fights well because he never knows when he is beaten, so the British planter is difficult to tame by disaster; and no one who witnessed the crisis from 1880 to 1886 is likely to forget the pluck, the fortitude, and the skill with which threatening ruin was faced, the inevitable accepted, and new products sought for and experimented with to replace the old; until at last came the reward of perseverance and energy, and the rise of the tea industry not only equalled the successes of coffee-growing, but holds out hopes, at the present moment, of a future of commercial prosperity for Ceylon hardly dreamt of in the most palmy days of coffee. For the well-being of the native, the success of the civilian, the efficiency of the Government are bound closely up with the good fortune of the planting industry. War cannot be carried on without the sinews of war, and the sinews of Ceylon in peace are represented by her customs and her railways, the two sources of revenue which are most clearly affected by the ruin or the success of the planter.

Here then this hurried and imperfect sketch may appropriately end. The visitor will turn from it (perhaps with relief) to gaze upon the more interesting relics of past times presented to his view: the copies of quaint and beautiful carvings from the ancient capitals, the art work from designs of immemorial antiquity; the pictorial representations of religious scenes, picturesque processions, and native life. They will help him to realise the various phases through which the Island history has progressed: the dim times of the aborigines, the early invasion of the Gangetic Aryans, the rise of Buddhism, the gradual decline of the great Sinhalese monarchy, the irruption of the Dravidian peoples, the influence of the Portuguese and Dutch rule, and the result of the advent of the British race. And if he is enabled thereby to form a clearer notion of the distant Eastern Isle; to realise more distinctly its past, its present, and its future; to take a livelier interest in its welfare, its people, and its products, —he will not have visited the Ceylon Court in vain.

ETHNOLOGY, LANGUAGE, AND RELIGION.

Names of the Island.—The name "Ceylon" represents the native word "Siṉhala" (pronounced Sing-hala), of which the historical origin is uncertain, though "Siṉha" means "lion." A shorter and more strictly local form of the same word is "Eḷu"; and with the addition of *dîpa*, "island," it forms Selpan-dib or Serendib.

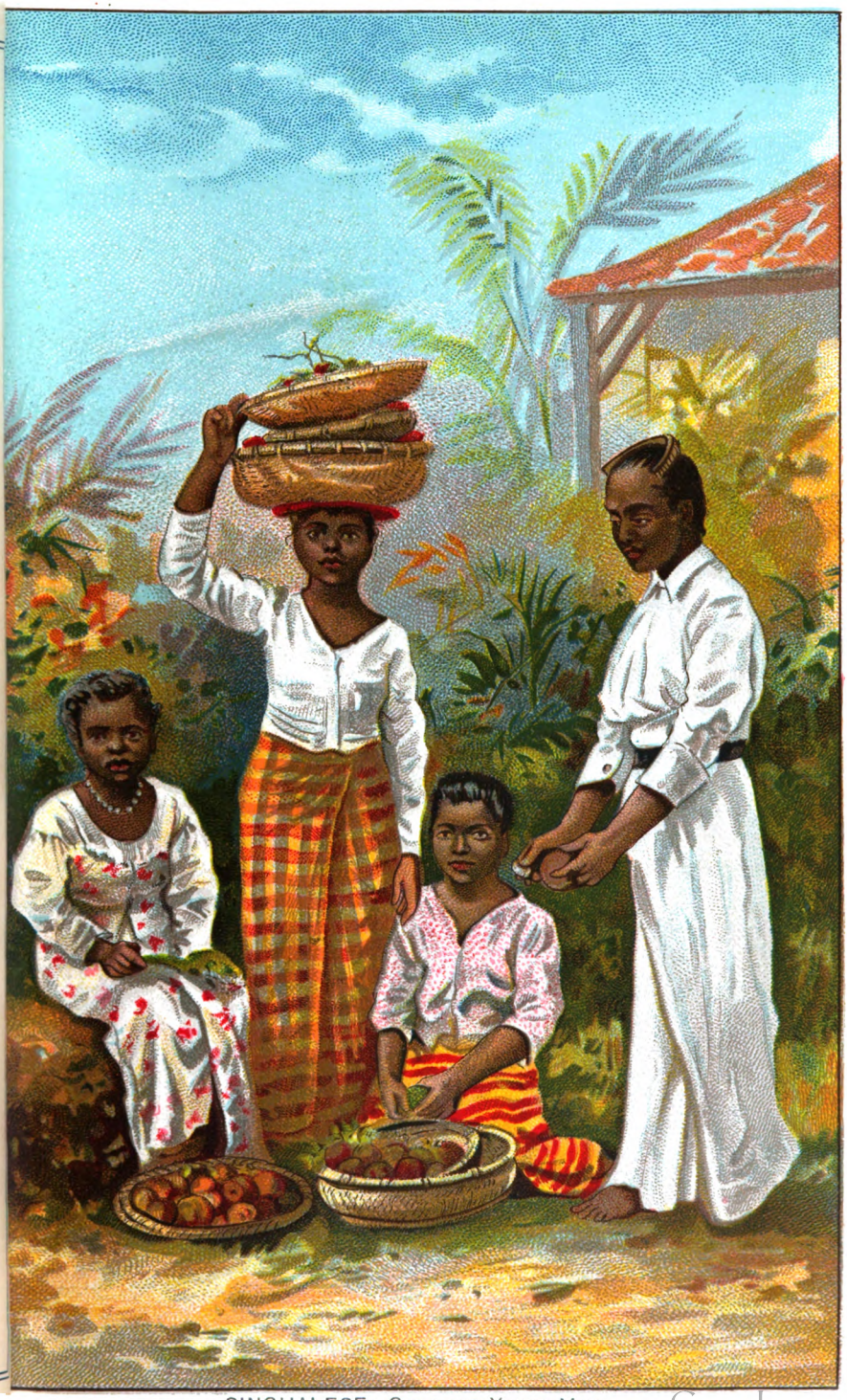
In the classical language of India, and in ordinary native use in Ceylon itself, the Island is called "Laṉká."

A third name, perhaps the oldest geographical name of the Island, was Támraparṇi, which in Greek and Latin became Taprobane, and is used by Milton.

Elements of the Population.—The large majority consists of the Siṉhalese, the nation who have held Ceylon throughout historic times (probably from the fifth or even sixth century B.C.), but the northern part is occupied by Tamils, a distinct race (Dravidian), who have immigrated in past centuries from South India. These settled Tamils are also numerous in most of the large towns. From the same race are constantly drawn the labourers (coolies, over 200,000 in number), by whose toil is produced the tea for which the Island is so justly famous.

Moormen.—A third and very energetic element of the population is formed by the "Moormen" (that is, Mohammedans), a race of Arab origin who, in Ceylon as in South India, do a large part of the local trade, and who live distinct from the other races, with recognised institutions and even laws of their own.

Malays.—A considerable number of Malays, chiefly the descendants of imported soldiers, and a few Parsees and others, complete the Oriental population.



SINGHALESE; GIRLS AND YOUNG MAN.

Burghers.—The descendants of the Portuguese, who occupied parts of the Island from near 1500 to about 1650 A.D., and of the Dutch who succeeded them, and handed it over to the English a little before 1800, are alike called "Burghers," though the title must have belonged originally to the Dutch. Few of these Burghers are now of unmixed European descent, but most are of unblemished, and some of noble origin. The term Eurasian is not applied to them.

SIṆHALESE MAN AND WOMAN.

The number of each race given in the Census of 1891 is as follows :—

Europeans	...	...	4,678
Siṅhalese	...	...	2,041,158
Burghers	...	...	21,231
Tamils	...	...	723,853
Moormen	...	...	197,166
Malays	...	...	10,133
Veḍdahs	...	...	1,229

Origin of the Siṅhalese.—Of the Tamils, Moormen, and other races not peculiar to Ceylon, this is not the place for any account. The elements of population peculiar to Ceylon are the Siṅhalese and the Veḍdahs.

According to tradition, both Indian and local, the Siṅhalese are of Aryan race and connected with the north of India; and this is borne out by language, customs, and subsequent

history. The ancient North Indian poem *Rámáyana* (dating from 500 B.C. at least), and the inscriptions of Asoka (250 B.C.), prove early intercourse between North India and the Island; and the chronicles, compiled in Páli in the fourth and fifth centuries A.D. out of the archives of the great Buddhist monastery at Anurádhapura—(it is the peculiar distinction of the Siṉhalese among Indian peoples to possess such histories)—describe the establishment of the Buddhist religion in the Island by Aryan influences in the third century B.C. These same chronicles ascribe, and with all probability, the previous civilisation of the Island to Aryan immigration.

Siṉhalese Language.—The Siṉhalese language is closely akin to the Sanskrit; that is, it is one of that group of Indo-Aryan languages of which Sanskrit is the literary type. It comes nearer probably to the Bengali than to any other of the present forms of this group.

In its modern form, its true characteristics are disguised by the abundance of words which it has *borrowed* in later times from the Sanskrit, just as the old English stock of words akin to Latin but not borrowed from it is overlaid by a later borrowing. For instance, "man," "name," and "draw" correspond to the older and truer Siṉhalese; "human," "nomenclature," "attract," to the modern element in it. But the Siṉhalese is much nearer to the Sanskrit than the old elements of English are to the Latin.

This old Siṉhalese, or Eḷu, is characterised, in comparison with Sanskrit, by lightness and brevity, avoiding long vowels, compound consonants, and long words. "Rakshá" is in Siṉhalese "ráká," "manushya" is "miniha," "kshíra," is "kiri," &c. The pronouns as "ma," "me"; the numbers, all radically identical with our own; the verbal terminations "mi," "si," "ti"; and not a few common words which, in the course of change, have rested in a form like the English—such as *dora*, "door," *band*, "bind," &c.—show us that the Siṉhalese language belongs to our own Aryan stock.

Relation to Páli.—It is probably a mistake to call Siṉhalese a derivative of Páli, though this, being the sacred language of Buddhism, has greatly influenced Siṉhalese. Like Páli, Siṉhalese avoids all compounds of *r*, but unlike Páli it rejects double letters, and allows short diphthongs. Hence the usual sequence of the three languages is represented by the series, márga, magga, maga; or śreshṭa, seṭṭha, seṭa.

Relation to Tamil.—During nearly the whole of its history Ceylon has been in close relations, sometimes hostile through invasions and occupations, sometimes friendly through alliance and settlements, with the Dravidian races

TAMILS.

of South India, especially the Tamil; and the Siṉhalese language has been greatly affected, especially in the later three or four centuries, by the influence of Tamil, from which it has borrowed not only words, but grammatical forms and inflections of verbs and nouns. The most usual form of plural, in the modern Siṉhalese, is probably an imitation of the Tamil plural. But there is no fundamental Dravidian element in the language.

TAMIL MAN AND WOMAN.

Relation to European Languages.—Many Portuguese words, names of things which the Portuguese introduced, have become naturalised in Siṉhalese; and not only the words for "table" (mésé), "bread" (pán), and "carriage" (karatté), but that of the now characteristic "hackery," are of this origin. The Dutch language, coming afterwards, left far less trace, though a "verandah" (itself a word which the English climate obliged us to borrow from the East) is still called an "istoppuwa" ("stoep" at the Cape). The present prevalence of English in the maritime provinces is producing rather a jumble of both languages than a legitimate modification of the vernacular. A corrupt Portuguese is still spoken by a decreasing number of the Burgher community.

Veddahs.—A small element of the population, but one of considerable ethnological interest, is formed by the Veddahs (or "hunters"), whom some suppose to represent the aboriginal pre-Aryan population of Ceylon, corresponding to some of the mountain tribes of India. It may be doubted whether a distinction of race has been established, and certainly the peculiarities of the Veddahs have been exaggerated—*e.g.*, that they cannot laugh! Many of them have been induced without much difficulty to adopt a civilised life, and are called "Village Veddahs"; these speak Sinhalese or Tamil, according to their neighbourhood; they fish, hunt, or even farm; and a few of them are genuine Christians. But it is commonly believed that there are still left, about the east centre of the Island, some of the genuine "Rock Veddahs," who live by the bow and the snare; store their meat, pickled in honey, in hollow trees; and avoid intercourse with other men; and who, formerly at least, used to bargain with their Sinhalese neighbours by leaving at the edge of the forest a model of the tool or article which they wanted to buy, and the haunch of venison with which they proposed to pay for it, coming afterwards in silence and secrecy to carry off their purchase. The Veddahs are enumerated in the late Census at 1,229, but it is thought that many put themselves down as Sinhalese or Tamil.

Religion.—In respect of religion the population of Ceylon is thus divided :—

Christians	...	...	302,127
Hindus	...	...	615,932
Buddhists	...	...	1,877,043
Mohammedans	...	...	211,995

Of the Christians the majority are the descendants of those who were christianised by the Portuguese, a smaller number of those who were christianised by the Dutch, and the remainder are the converts of the missions of this century. In the decade 1881–91 the increase in the number of Christians was 13 per cent., while that of the general population was 9 per cent. Of the 302,127 Christians, 246,214 were returned as Roman Catholics, and this is perhaps rather below the number.

The Hindus belong chiefly to the Sivite, and the Mohammedans to the Sunni sect.

The form of religion, however, which is most characteristic of Ceylon is Buddhism, which has a longer continuous history here than anywhere else. It is Buddhism of the "Southern" school; and its teaching claims to be a faithful representation of that which was originally propounded in the valley of the Ganges in the sixth century B.C., and

which is formulated in the three-fold collection of Páli treatises called the "Tipitaka." This is rather a system of human conduct than a religion, since it has no place for worship, prayer, or approach to a person. Its teaching knows nothing of Creator, Saviour, or Judge ; and rests on the assumption that while there is no radical distinction between the different grades of living beings (the demons and the brutes who are below man, men, and the supernatural beings above men), all these are alike miserably involved in an endless and wearying series of successive births and deaths ; but that among all these the most favourable position is occupied by the Buddhist monk, and above all by the Buddha himself. The Buddha is the title of the teacher, Gautama by name, who first in this cycle of the world discovered the true nature of existence, and has taught it for the benefit of all classes of living beings. The secret discovered and taught is briefly this : that evil is inseparable from existence, and that there is therefore no other way of escaping evil but to escape existence. To this purpose the disciple is taught to destroy in himself all which tends to attach him to anything, to maintain him in any relations with the external world, or to foster in him any desire for it ; and so to withdraw himself from existence. This withdrawal, like the going out of a flame for want of fuel, is called Nirvána, and is virtually attained as soon as there is no longer any danger of any other life succeeding this one. It is finally entered on when the last life comes to an end.

This dreary theory wears however a very different aspect when it comes to be worked out in detail. The chief obstacles to escape from existence are held to be lust, anger, pride, and error ; and the circumstances favourable to such escape to be purity, kindness, meekness, and insight. In the insistence on those moral principles the Buddhist teaching, as found in the "Tipitaka" and the commentaries thereon, attains a high level of excellence ; and an immense collection of illustrations, fables, and legends sets its moral injunctions in a strong light. The system is marred by the want of any recognition of the right use of the emotions, or of any reference to beings morally superior to man ; and by the insistence, to an extravagant degree, on the supposed importance of avoiding the taking of animal—or even vegetable—life.

In modern Ceylon the theory as above sketched is in the background, and is practically superseded by a simple but defective system—in which the law against taking life occupies a grotesquely disproportionate place—for obtaining after death, through acts of merit done here, birth in one of

the many heavens or places of enjoyment. This is mixed, in the popular mind, with a complicated superstition—partly Hindu and partly of lower origin—by which every event of life and every natural circumstance is connected with gods, demons, planets, charms, and rites of exorcism.

Externally, the Buddhism of Ceylon is seen in graceful processions, simple offerings of flowers, and in the maintenance, by the daily alms of the common people or the liberality of the rich, of a large number (nearly 10,000) of "priests," or more correctly "monks," whose dignified figures with their shaven heads and toga-like yellow robes are one of the characteristic elements in the picturesque scenes of the Island.

A CEYLON MOORMAN.

RAMBODA FALLS.

NATURAL HISTORY OF CEYLON.

THE fauna of Ceylon is neither attractive on account of its beauty, nor impressive from the number of individuals, therein differing greatly from most tropical countries, more especially the Continent of India, the Islands of the Malay Archipelago, and Brazil. Half-a-dozen species of the superb Himalayan or Brazilian butterflies are sufficient to outweigh in attractiveness all the numerous species, some 320 in number, found in the Island, and it is the same with the other Orders of insects.

On the contrary, the scientific interest of the fauna is very great, both on account of the great number of species, and from the fact that a very large proportion of them, as far as hitherto known, are peculiar to the Island.

To such a great extent does this obtain that Mr. Wallace has divided off Ceylon and Southern India as far as the river Kistna as a distinct subdivision of the great Oriental region.

Amongst the monkeys, the bear monkey (*Semnopithecus ursinus*, Blyth) is only found in the Ceylon hills; the purple-faced monkey (*Semnopithecus æphalopterus*, Erxleben) is mixed with it in the lower hills, and extends all through the wet low-country districts, whilst the Madras sangur (*Semnopithecus priamus*), which inhabits the hot, dry plains, does not extend beyond Southern India. There is also a very rare white monkey, probably an albino of either the bear or purple-faced monkey. The South Indian bonnet monkey (*Macacus sinicus*) is replaced by a distinct variety, *Macacus pileatus*. Thus in the highest order of the Mammalia the little Island at once stands out as marked by peculiar and interesting species.

The little lemur, *Liris gracilis*, a nocturnal animal feeding on small birds and their eggs, commonly known as the Ceylon sloth, is a lemur quite peculiar to Southern India and Ceylon.

The largest of the cat tribe is known in the Island as the cheetah ; it is, however, the common leopard of Asia and Africa. There are several smaller cats, and a bear, but none of them peculiar to the Island.

A civet cat (*Paradoxarus aureus*, F. Cuvier), and a mungoose (*Herpestes fulvescens*, Kelaart) are not found elsewhere. Of the smaller Mammalia of the Orders of Insectivora and Rodentia, very little is as yet known ; and there is no doubt that several interesting discoveries in this field will reward a patient collector.

Of the twenty-two species of bats recorded from Ceylon, none are peculiar to the Island.

Foremost amongst the Mammalia is the elephant. Herds of these animals wander over the low-country, and ascend to the highest elevation. They are under very strict Government protection. Kraals are instituted from time to time, especially when princes are visiting the Island, and the animals thus captured are tamed and sold.

Wild buffaloes exist in great numbers in the plains, and may be seen standing round the large tanks side by side with the crocodiles.

The porcupine and pangolin, the large deer misnamed in Ceylon the elk, but really the sambur (*Cervus unicolor*), and several smaller species, together with wild pigs, are all abundant. The curious dugong still visits the north-western coast, but is becoming very scarce. The sperm and whalebone whales are washed ashore occasionally, and the seas round the Island swarm with porpoises. Myriads of aquatic birds and waders frequent the lakes and water-courses, especially those along the coast near Batticaloa and the innumerable salt marshes and lagoons to the south of Trincomalee ; but they are all birds of wide geographical distribution.

Ceylon boasts of one eagle, one falcon, and three owls peculiar to the Island. Of the last family (*Phodilus assimilis*) the Ceylon bay owl is one of the rarest of known birds. The mystery in connection with the cries of the so-called devil bird is not yet thoroughly cleared up. These fearful, and but rarely heard night calls, which have been compared to a woman being murdered or a child tortured, are probably the cry of some owl : in fact Mr. T. H. Stephens shot a specimen of *Bubo nipalensis* whilst uttering, as he believed, the cries in question ; but the difficulty is that this *B. nipalensis* is found over a great part of India and in Tenasserim, and no

one has ever heard these cries in those countries. The sound that Mr. Stephens attributed to the owl may have been the screams of some animal that the bird had caught. Two species of parrots, two woodpeckers, three barbets, three cuckoos, a trogon, and a hornbill are peculiar to the Island.

Amongst the Passerine birds, none can boast of any very striking plumage, and but few have a song that compares with that of the warblers of Europe.

In the elevations of the Kandyan country there are a few, such as the Nuwara Eliya robin, and the long-tailed thrush, whose song rivals that of their European namesakes. In the low-country the magpie robin sings a very sweet song in the early morning, and during the day utters a variety of calls scarcely to be surpassed by any other species of bird ; but perhaps the most striking song to the newly-arrived visitor is that of the spurred partridge (*Galleperdix bicalcarata*, Forster), a peculiar Ceylon species. All day long its song, consisting of five bars, rising from *c* in alt chromatically to *e*, and then falling to *b*, may be heard in the forests and dense jungle.

The Reptile fauna is quite peculiar. Of the one hundred and thirty-three species recorded from the Island, no less than forty-three have not been found elsewhere. Of the snakes, eight are poisonous. Of these, the two largest and most dangerous are the cobra (*Naia tripudians*, Merrem.) : less common and of much smaller size, but almost equally fatal, is *Bungarus ceruleus* (Schneider). It is yet doubtful whether *B. ceylonicus* (Gunther) is a distinct species or not. Two vipers, the tic polonga (*Vipera Russellii*, Shaw) and the green polonga (*Trimeresurus trigonocephalus*, Daudin), are common and dangerous, but their bites are not so fatal as those of the cobra and *Bungarus*. The other poisonous species are too small and scarce to be of any account.

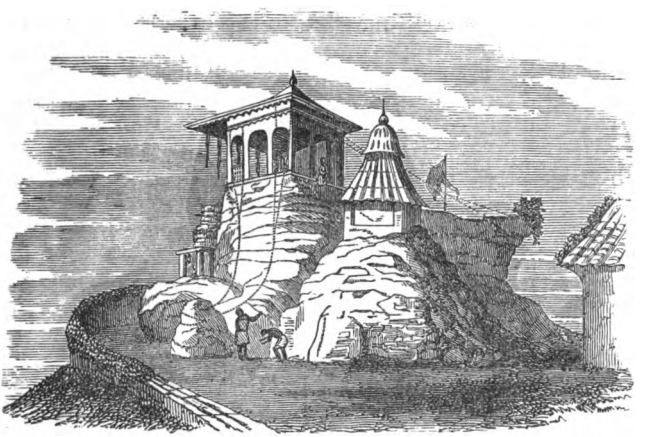
The fresh-water fish of Ceylon are not numerous, and only a few small species are peculiar to its rivers.

The seas abound in fish, but there is no particular interest attaching to them from a purely local point of view. The sea fish and all the marine forms of crabs, shells, star-fish, and corals form a part of that great fauna which extends from the Gulf of Suez nearly to the Cape, across the Indian seas through the Malay Archipelago, far out into the Pacific, and northwards to Japan.

Turning again to the land, the lower forms of life seem as far as is known to characterise Ceylon in a very special manner, their relationship being more Malayan than Indian.

The butterflies, as a rule, have a wider range ; but the majority of the moths are peculiar to the Island. Of upwards of 1,500 species of beetles the descriptions of which have

been published, it may be said that as far as is at present known nearly all are peculiar to Ceylon. Too little is known of the other insects to say with certainty how far this applies to them, but the land shells are of great interest to collectors, being mostly Island species. They are now becoming very difficult to obtain in consequence of the clearance of the forests.



THE SUMMIT OF ADAM'S PEAK.

The shrine on the left is immediately over the "footprint."

SENSATION ROCK.

THE GEOLOGY OF CEYLON.

CEYLON does not present a field of much interest to the geologist, the rocks being mainly of Archæan or pre-Cambrian age. They are of a crystalline nature, with generally a marked absence of those veins of eruptive material which are usually associated with the rocks of this series, and comprise generally micaceous, talcose, and chloritic schists, quartzose rocks, and granitoid-gneisses, with bands of crystalline limestone. The prevailing rocks consist, however, of massive gneisses, in which hornblende and a reddish felspar are the chief ingredients. A pure hornblende rock is very frequent. Interbedded with gneiss-granite, and with hornblende-gneiss or eurite, there occur in many parts of the country large masses of crystalline limestone, more especially in the hill region. There is no evidence to help us to fix a period at which the mountain system was raised: the centre of the greatest energy seems to have been in the region of Adam's Peak.

All along the coast from Negombo to Mátara, and for some distance inland, laterite, the product of disintegrated gneiss (locally termed "cabook") occurs, and is largely used for building purposes. The beds are often thirty feet or more in thickness. There are also large formations of lithomarge and other deposits of lateritic age in the hills.

In the Jaffna peninsula there exists a formation of coral rock extending right across the Island, which shows evidence of gradual elevation. Conglomerate rocks also appear in the Jaffna peninsula, and between Mannár Island and Karativu. They have also been found during a well-boring operation at Mannár, with shells of recent mollusca, at a depth of 30 ft., but to what extent inland the formation occurs has not yet been determined.

On the west coast from Chilaw to Galle is exposed during the prevalence of the north-east monsoon a breccia in process of formation from the agglutination of coral fragments and shells mixed with sand. The breccia is quarried north of Colombo, and is in considerable demand for use in pavings and steps. The low-country of the Island extending all round the hill region is of an undulating character, and the soil seems to have been formed from the waste of gneiss rocks and laterites, and almost everywhere lateritic formations appear. Evidences all over the Island point to great denudation. In the north, and covering large areas, are found sheets of quartz gravel lying immediately under a poor soil often exceeding 15 ft. in thickness; they appear to be of lateritic age. In other parts the soil is a deep loam, but everywhere gneiss rocks form the lower stratum. Gems are found in great profusion near Ratnapura (lit., *City of Gems*) and elsewhere, the most valuable being the sapphire and, ruby. They are obtained by washing a sandy clay, which is generally mined. The valuable mineral graphite (or plumbago) is found in considerable quantities in the Western, Sabaragamuwa, and Southern Provinces, and is extensively worked, principally from open mines. The export of plumbago during 1892 was 426,000 cwt., a large quantity going to the United States.

Hematite iron ore is found largely in the hills, but it has not yet been profitably worked. Gold occurs in very small quantities in the rivers of the Eastern and Southern Provinces, and in the *patanas* of the hill region.

THE BOTANY OF CEYLON.

CEYLON is a completely tropical Island, with a high and very equable temperature throughout the year, and no cold season whatever. The native wild vegetation is therefore entirely of a tropical character, consisting mainly of trees and shrubs, often climbing, and with but few herbaceous plants. It is true that in the mountain region, the highest peak of which rises to nearly 8,300 ft., we have a much lower temperature, but the climate is of the same equable character, with no marked seasons, and the vegetation, though of a somewhat more familiar aspect, is still of a distinctly tropical type on the whole.

Climatic Regions.—There are two Ceylons climatically, the wet and the dry, rather abruptly demarcated, and characterised by the different amount and distribution of the rainfall. Though the wet region is very much the smaller, and indeed does not comprise more than a quarter of the Island, it is the only part generally known and visited by strangers, and from it all ideas and descriptions of Ceylon vegetation are commonly taken. It occupies the south-west quarter. In this favoured district rain falls more or less throughout the year, both the south-west and the north-east monsoons bringing abundant showers. The mountain mass is included in this region, and it is to it that is due the precipitation of the copious rains brought by the south-west monsoon. The yearly fall is nowhere less than 75 in., and in places in the hills reaches to as much as 250 in. The dry region occupies the remainder of the Island; speaking generally, a flat plain, with a long period of drought every year, and a short rainy season during the north-east monsoon only, the whole annual amount of rain nowhere reaching 75 in., and in places being as low as 30 in. The native vegetation of these contrasted districts is, as

might be expected, quite dissimilar, the flora of the wet region being much the more attractive.

The Native Flora.—There are about 3,000 species of native plants; a large number, but not anything remarkable for a tropical island. A striking point is however noticeable in the unusually large proportion of species which are peculiar, *i.e.*, found nowhere else, or, as botanists call it, endemic: some 800 Ceylon plants are found nowhere else in the world. Of these peculiar species, by far the greater portion are found in the wet region.

Relations with other Countries.—As is to be expected, the great bulk of the flora is identical with that of Southern Peninsular India, and this is particularly the case in the dry region. In the wet region are found many species quite absent from India, but either identical with or allied to plants found in the islands of the Malay Archipelago. In the hills, however, the species, though mostly peculiar, are always allied closely to those of the Nilgiri mountains of Southern India.

Forests.—In its primitive condition Ceylon was probably, with the exception of sandy barren tracks near the coast, entirely covered with forest. But cultivation doubtless commenced at a very early period, and has been general over much of the low-country for very many hundred years. The dry region is now for the most part unbroken forest, but there is no doubt that much of it has been under cultivation in the past, whilst the low-country in the wet region has been always continuously cultivated, and but little forest remains. The great agent of destruction of the forests here has been the practice of *chena*, by which the forest growth of ages is sacrificed to obtain two or three scanty crops of dry grain. The mountain forests, however, remained almost untouched until the English commenced the plantation of coffee some sixty years back, and so rapidly have they been since cleared that at the present time, except at the highest elevations, very little remains. It is a marked feature of the Ceylon forests, as compared with those of India, that all are evergreen as a whole, in spite of the presence of a few deciduous trees in them.

The best timber trees are met with in the dry region, where grow satinwood, ebony, palu, kumbuk, margosa, halmilla, milla, ranai, and many others; but some are met with in the wet region, as nedun, calamander, ná, mendora, and del. A general characteristic of Ceylon timbers is great hardness.

Introduced Plants.—To see the real native flora, then, it is necessary to go into the remaining forests; the true "jungle" plants are scarcely to be found elsewhere. But it is not

GROUP OF PALMS; PÉRÁDENIYA.

these that strike the eye of the ordinary traveller in Ceylon and arrest his attention. During the course of centuries a great number of beautiful or useful plants have been brought to Ceylon from other tropical lands, and many of these have now become naturalised in the cultivated districts to such an extent that they form the most characteristic part of the ordinary vegetation. Yet a large number of them, coming as they do from the New World, can have been here, at the most, somewhat under four centuries. The line between wild and cultivated plants, drawn so easily in temperate countries, fails in the Tropics: most plants about such a place as Colombo appear to be neither one nor the other, and it is safe to say that of a bouquet of wild flowers collected there, scarcely half-a-dozen will have any claims to be considered natives of Ceylon.

Palms.—Take the palms for example. Those that at once catch the eye are the cocoanut and the arecanut, both always planted, and the latter originally from Malaya, whilst the origin of the cocoanut is unknown. The palmyra (*Borassus flabelliformis*), which is the most useful palm of the north of Ceylon, is in the same case, and probably originally African. The kitul, or jaggery palm (*Caryota urens*), is however probably a true Sinhalese, and the noble talipot (*Corypha umbraculifera*) may be so also, though it is now never found in the forests. This last palm is one of the glories of our flora, reaching, when fully grown and in flower, to 100 ft. in height, of which some 20 ft. are occupied by the great pyramidal flower-head. It belongs to that group of palms which flower but once, in this case after about forty-five to fifty years' growth, and die after ripening the seed.

Fruit Trees.—What is above stated as to the palms is still more striking with the fruit trees. Of all those grown here, only a very few, and those by no means the best, are native plants. The list is nearly exhausted by the plantain (never called the "banana" in Ceylon), jambu (*Eugenia aquea*), goraka (*Garcinia Cambogia*), and several of less importance. Yet nearly all the fruits of the Tropics are met with here; every village garden contains breadfruit, mango, tamarind, pomegranate, bilimbi (*Averrhoa Bilimbi*), pumelo, orange, lime, lovi-lovi (*Flacourtia inermis*), and the ubiquitous jak (*Artocarpus integrifolia*), none of which are native to the country, but come from various parts of the Old World; whilst scarcely less abundant are the guava, pineapple, papaw, cashewnut, soursop (*Anona muricata*), and bullock's heart (*Anona reticulata*), all of which are of American origin. Less common are the Malayan fruits, the durian, mangosteen, rambutan (*Nephelium lappaceum*), nam-nam (*Cynometra cauliflora*), dookhoo (*Lansium domesticum*), &c., and the

Tropical American ones, the sapodilla (*Achras Sapota*), custard apple (*Anona squamosa*), and Avocado pear (*Persea gratissima*). The fruits of China and Japan are grown here with difficulty, the heat and moisture being too great, but litchi, loquat, and wampi fruit in some years. In places in the mountains where the rainfall is not too heavy a few European fruits can be grown with care, such as peaches, plums, and apples of some varieties.

Ornamental Plants.—The beautiful flowering trees and shrubs which are so striking a feature in the low-country are also rarely of native origin. The temple tree (*Plumeria acutifolia*), the gorgeous flamboyante (*Poinciana regia*), the brilliant shoe-flower (*Hibiscus Rosa-sinensis*), the annatto, the peacock-flower, and the beautiful climbers *Allamanda* and *Thunbergia laurifolia*, which, along with the shrubs with coloured foliage, *Acalypha*, "crotons" (*Codiæum*), and lettuce-tree (*Pisonia*), make such a blaze of colour, all come from foreign countries, but are more or less naturalised. But there are besides plenty of handsome flowering shrubs and trees native to the Island, among which may be especially mentioned the deliciously scented ná (*Mesua ferrea*) and *Saraca indica*, the scarlet ratambala (*Ixora coccinea*), the muruta (*Lagerstræmia Flos-reginæ*), the mussenda, and many others; whilst in the hills there is the great crimson rhododendron (*R. arboreum*) and numerous lovely balsams, *Melastomaceæ* and *Gesneraceæ*. Some of the plants originally introduced for ornament have now become weeds. No plant is so conspicuous in the wet region as *Lantana mixta*, which literally covers many square miles of open country to the exclusion of nearly everything else; this West Indian plant was introduced as a garden plant from Europe less than seventy years ago. A more recent arrival is a Californian sun-flower (*Tithonia diversifolia*), which was introduced only in 1851, but is already an almost universal weed. And there are many others scarcely less abundant.

Orchids.—It is supposed by many people that the epiphytic orchids of the Tropics are always showy and striking, but this is by no means the case. Of over 168 species which grow wild in Ceylon, the great majority have very inconspicuous flowers (being what the orchid-fancier contemptuously terms "Botanists' Orchids"), and not more than about twenty are thought worth cultivation in collections.

Ferns.—These are abundant in the wet forests, especially in the mountain zone, but are almost absent from the dry region. We have about two hundred and thirty different kinds, including five tree-ferns, of which *Alsophila crinita* of the hill-forests is the largest and most beautiful.

TEA CULTIVATION IN CEYLON.

UNTIL recent years the staple industry of Ceylon was coffee, which by the enterprise and industry of the European planters was cultivated on the mountain ranges of the interior at from 2,000 to 5,000 ft. above mean sea level.

This industry was, however, almost destroyed in the course of but a few years by the ravages of a fungoid pest known as leaf-disease (*Hemileia vastatrix*), and the planters at once, with the patient energy and skill characteristic of their countrymen, in Ceylon as elsewhere, set to work to plant their lands with tea.

How quickly and successfully this was done may be gathered from the fact that, whereas only 23 lb. of tea were exported in 1873, the exports had risen in 1880 to 162,575 lb.; in 1885 to 4,372,722 lb.; in 1890 to 45,799,519 lb.; while the exports for 1892 were 71,809,465 lb.

The welfare of the Island is largely bound up in the prosperity of the British Colonists, who not only employ some 200,000 free immigrant Tamil labourers from the adjacent territories of the Madras Presidency of India, on wages nearly double those they can earn in their own villages, but also directly and indirectly afford employment to many thousands of the indigenous Sinhalese and Moormen, as wood-cutters, sawyers, carpenters, masons, cartmen, and in other crafts; and have, moreover, enabled the Government of the Colony, by the revenue derived from their enterprise, to cover a large portion of the Island with excellent roads, and to connect the towns and villages of the east with Colombo, the capital of the Island on the west, by an excellent railway system, which—passing through magnificient tropical scenery—crosses the mountain range at

over 6,000 ft. above the sea, and is still being further extended in favour of native industries.

The area under cultivation at the present time is about 265,000 acres. The tea bushes are planted in regular lines, about 4 ft. by 3½ ft. apart, on estates clean-weeded every month, and varying in elevation from but little above sea level to upwards of 6,000 ft. At the lower elevations the teas are stronger, and the yield more abundant; on the higher hills the yield is less, but the teas are of purer and more delicate flavour, and their greater value compensates for a smaller yield. The yield varies from about 350 to 700 lb. an acre, though sometimes in flat alluvial lands it exceeds 1,000 lb. The bushes are pruned once in every eighteen to twenty-four months, according to elevation—less frequently at the higher elevations—and to a height of from 21 to 36 in. or thereabouts.

The green leaf is plucked about every ten days—the tender bud and two soft leaves only being taken—and carried three times a day to the factory in baskets. It is then spread thinly on tats (shelves made of *Jute hessian*) and left to wither until it becomes soft and flexible, like an old kid glove to the touch. This it does in from twenty-four to thirty-six hours in fine weather, though in wet weather the process takes longer. It is then put into large rolling machines and rolled once or twice for from half an hour to an hour each time (the process varying in different factories), the machines being carefully washed after each day's work is finished.

The roll, as the green sticky mass is now called, is then put into shallow trays or baskets to ferment (oxidize) for from one to six hours, according to weather and temperature, at the end of which time it assumes a more or less bright copper colour, and the fermentation (oxidization) is complete. The fermented roll is next put into large firing machines, through which it is passed at a temperature of from 180° to 240° Fahr., and in from fourteen to eighteen minutes comes out as made tea.

The bulk, as it is now called, is then put into bins to cool, and on the following day is passed through a sifter with meshes of different sizes, which separates the finer from the coarser leaves, and produces the teas of commerce known as Broken (or Orange) Pekoe, Pekoe, and Pekoe Souchong, with a small residuum of Souchong fannings and dust. These are put away in separate bins; and when enough tea has been made to allow of an invoice being despatched, the teas are once more final-fired at a low temperature of about 150° to 160° Fahr., and packed hot in lead-lined chests and carefully soldered down to exclude the air, and are then sent from

A TEA ESTATE.

the factory in bullock carts and by rail to Colombo, the port of shipment.

The factories on the estates are large, well-built buildings, in which the most scrupulous cleanliness and order are observed, the teas themselves being throughout every process manipulated by machinery, so that scarcely any handling takes place after the green leaf once reaches the factory.

The advantages claimed for Ceylon tea are its absolute purity and cleanliness, and the fact that with a great deal of the strength and body of the Indian teas it combines the purity and delicacy of flavour of those of China; and that whilst its superior body and richness make it a more refreshing and invigorating beverage than the latter, it has the advantage over most of the former of being a tea that can be drunk by itself—"a self tea," as the saying is—that does not require to be blended with weaker and poorer teas to soften any harshness of flavour.

The principle on which the dietetic properties of tea depend is theine, and of this analyses show that there is one-third more in Ceylon than in China leaf.

Ceylon tea therefore, weight for weight, is a more economical as well as a better and richer flavoured tea; and it is a noteworthy fact that in Great Britain and Australia, and into whatever other countries it has been introduced, it has successfully displaced, and is still displacing, the teas formerly in use.

THE CEYLON TEA PLANTING ENTERPRISE.

[Supplementary Notes by Mr. J. FERGUSON, of *The Ceylon Observer* and *Tropical Agriculturist*.]

Varieties of Tea.

IN a lecture on Tea before the Society of Arts, Mr. Richard Bannister has the following:—The youngest leaves made the best teas, and starting from the end of the shoot, and numbering the leaves as they came from *a* to *f*, the following varieties would be obtained: *a*, Flowery Pekoe; *b*, Orange Pekoe; *c*, Pekoe ("poco" means "white hair," or down of tender leaves); *d*, First Souchong; *e*, Second Souchong ("souchong" means "small plant"); *f*, Congou (means "labour," expressing the care required in preparation); *a*, *b*, *c*, Mixed Pekoe; *a*, *b*, *c*, *d*, *e*, Mixed Pekoe Souchong. Hyson means "before rain," or "flourishing spring"; Kyson, "skins, refuse of tea" (native term "tea skins"), coarser refuse native term "tea bones").

Planted Area.

The progress of *Tea Cultivation* in Ceylon, as indicated by Ferguson's "Ceylon Directory" record, is as follows :—

Area of Tea Planted.

	1867	1868	1869	1872	1873	1874
Acres ...	10	200	250	260	280	350
	1875	1876	1877	1878	1879	1880
Acres ...	1,080	1,750	2,720	4,700	6,500	9,274
	1881	1882	1883	1884	1885	1886
Acres ...	13,500	22,000	2,000	70,000	102,000	150,000
	1887	1888	1889	1890	1891	1892
Acres ...	170,000	183,000	205,000	220,000	250,000	265,000

Exports.

The total *Exports of Tea from Ceylon* so far, according to the Customs accounts, have been as follows :—

Year.	lb.	Value. Rs.	Year.	lb.	Value. Rs.
1873 ...	23	58	1883 ...	1,665,768	916,172
1874 ...	492	1,900	1884 ...	2,392,973	1,435,784
1875 ...	1,438	2,402	1885 ...	4,372,722	2,842,269
1876 ...	757	1,907	1886 ...	7,849,888	5,102,427
1877 ...	2,105	3,457	1887 ...	13,834,057	8,300,434
1878 ...	19,607	20,900	1888 ...	23,820,723	12,624,990
1879 ...	95,969	85,229	1889 ...	34,345,852	17,859,840
1880 ...	162,575	150,641	1890 ...	45,799,519	22,899,759
1881 ...	348,157	322,993	1891 ...	67,718,371	30,473,267
1882 ...	697,268	591,805	1892 ...	71,809,465	32,314,259

Intrinsic Value of Ceylon Teas and Chemical Analyses.

At the Melbourne Exhibition in 1881 the analyses of Ceylon and Indian teas by official experts proved the superiority of the Ceylon leaf, as the following figures show :—

	Extract.	Soluble Salts.	Theine.
Darjiling Pekoe ...	38·97	3·16	1·96
Ceylon ...	43·80	3·32	1·82

In total extract the Ceylon leaf was superior by very nearly 5 per cent.; it is also superior by ·16 per cent. in soluble salts, while only in theine (a constituent in which the Ceylon Orange Pekoe specially excelled) is our Pekoe ·14 per cent. below the Darjiling tea. In the case of Pekoe Souchong, a comparison was instituted with similar teas from the hot Dooars, from lofty Darjiling, from the flat alluvials of Assam, and from Cachar, foremost of Indian districts for high quality teas (if the claims of the high-grown leaf from Darjiling, Kumaon, the Kangra Valley, and the Nilgiris are reserved). Here are the figures :—

	Extract.	Soluble Salts.	Theine.
Dooars Pekoe Souchong...	40·97	3·08	2·86
Darjiling Souchong ...	41·80	3·20	1·96
Assam Souchong ...	40·12	3·04	1·66
Cachar Souchong ...	40·66	3·24	1·44
Ceylon Souchong ...	42·80	3·12	1·86

In this case, as in both the others, Ceylon took the lead in the important item of total extract, showing fair figures for soluble salts, and but for the extraordinary figures for theine in the case of the Dooars tea would compare well in respect to the property which, specially present in tea, is also a principle in coffee. There is little doubt that, of all the properties of the tea leaf, theine is the most variable in proportion to care or the reverse in preparation. Here is how the Indian and Ceylon Souchongs compared :—

	Extract.	Soluble Salts.	Theine.
Darjiling Souchong ...	36·99	3·02	1·66
Assam Souchong ...	39·27	3·00	1·46
Cachar Souchong ...	40·29	3·12	1·76
Ceylon Souchong ...	40·40	3·20	1·84

In the case of this, the lowest class of tea which Ceylon is likely to make and send in quantity into the markets of the world, our produce ranked highest, not only in total extract, but in soluble salts and theine : *in all which makes tea valuable, in fact.*

China and Ceylon Teas.

But it is as compared with China that the great superiority of Ceylon teas is shown. Here is one passage from the results obtained by the chemists at the same Melbourne Exhibition :—

The British analysts' standard for *lowest* class tea is stated by Mr. Newberry to be 30 per cent. for extract and 3 per cent. for soluble salts. The first test is very largely exceeded by all our Ceylon teas, while the second is also considerably exceeded in the case of all save the congou and the green tea. As they stand, the results obtained by Mr. Dunn seem most satisfactory. The average of mineral ash in our teas is only 4·82 per cent., as against 5·34 in the case of Indian teas ; but, as explained, this deficiency of ash is entirely in our favour, as proving that so much less of the constituents taken from the soil by the plant remain inert. In total extract, which I take to be the real test of tea, the Indian average is 39·42, which is more than 10 per cent. above the China congous. Our Ceylon average, even when lowered by including the congou, is 42·20, or nearly 3 per cent. higher than the Indian and 13 per cent. over the China. But as no congou was included in the Indian teas, the fair course is to exclude it and also the green, and to take the average of the teas common to both lists. We then get for Ceylon teas 42·95, or 3·53 higher than the Indian average (39·42) and 13·69 per cent. above the China congou. These are the great points in Mr. Dunn's analysis of Ceylon teas, resulting in an average of extract of nearly 4 per cent., a result never exceeded so far as my knowledge extends.

Since then Mr. John Hughes, of Mark lane, and Mr. David Hooper, of Utacamund, have given favourable analyses of Ceylon tea, and that of the former is appended.

Tea Grown at High Elevations in Ceylon.

When Mr. Arthur Thompson, of the well-known London tea-broking firm of Messrs. W. J. & H. Thompson, visited Ceylon, he was struck by the delicate and superior flavour of teas he tasted in the neighbourhood of Nuwara Eliya, the sanatorium of the Island. If there were only a sufficient quantity grown at this elevation, it could well be classed separately as "Ceylon-Darjiling," and sold at prices equal to, if not above, those got for the fine delicate teas grown around Darjiling station. But, inasmuch as the Nuwara Eliya tea district, or indeed the area of tea gardens in Ceylon as yet above 6,000 ft., is limited, a good deal of the tea from that region which has so far reached the London market has been necessarily classed with other Ceylons, yielding a much stronger liquor though with less delicate flavour.

When Ceylon tea was first introduced to English housekeepers, many thought it too strong and preferred mixing it with China; and this objection is still expressed by some to average Ceylon teas, although they are admittedly less strong and harsh than those from India, and although carefully prepared blends are now freely available in the home market. It was interesting, therefore, lately to get the opinion of a number of people both in England and France on samples of tea grown and prepared in Nuwara Eliya at 6,500 ft. above sea level. These teas (unassorted) have met with general acceptance, indeed marked approval, and it is curious to find how the testimony of private consumers—who know nothing of marketable or analytical tests—confirms what experts and chemists report of such tea. For instance, an invalid lady wrote after having a pound weight of the tea referred to (from a garden at Nuwara Eliya):—"This is the first Indian or Ceylon tea I have ever been able to get that seems to suit a weak digestion; always previously my mucous membrane has been affected, and disagreeable after-effects have prevented me using such tea." Not much importance was attached to this opinion, until a sample of the same tea sent to Mr. John Hughes, of Mark lane, for his personal use, but without any thought of provoking a special test, much less a chemical analysis, resulted in the following communication, which so exactly bore out and gave the scientific explanation of the invalid lady's experience. Mr. Hughes was good enough to write as follows:—

Thank you for the tea from the Nuwara Eliya estate, which I omitted to refer to, when writing from the country. We have tasted

it practically at home, the opinion being that "the tea yields a good deep liquor with fine flavour, but wanting in strength." Wishing to submit this opinion to a chemical test I find that there is only 6·37 per cent. of soluble tannin as against 10·12 and 15 per cent. found in some of the teas examined last year from the Colonial Exhibition. The other extract is only 2·35 per cent., and there does not appear to be any resinous matter present, and in this respect it quite agrees with other teas grown at a high elevation. I hope to have the full results ready next week, and will send them on; as so far they quite confirm the opinion that the *strength* of a tea *chiefly* depends upon the proportion of *tannin*. I have another sample of Ceylon tea sent me for a report; so the matter is of additional interest.

Sample of tea marked Pure Ceylon Tea from a plantation 6,500 ft. elevation, Pekoe Souchong flavour. received from Mr. John Ferguson, Colombo, Ceylon.

Moisture dried at 212° F.	7·30
Chlorophyl and oil	2·25
Soluble tannin	6·37
Other soluble organic matters	29·03
Soluble mineral matters	2·50
Vegetable fibre and insoluble organic matters ...	49·62
Insoluble mineral matters	2·93
	100·0

The mineral matters contain—

Nitrogen	4·40
Potash	2·11
Lime	0·56
Phosphoric acid	0·65

This tea yields a rich deep brown liquor of fine flavour, and is only wanting in strength.

JOHN HUGHES, F.C.S.,
Fellow of the Institute of Chemistry,
Consulting Chemist to the Ceylon Coffee Planters' Association.

The small proportion of tannin fully explains the good opinion entertained of the tea by invalids and others who find very strong teas disagree with them. High-grown teas of this description should be very suitable for use in the Continent of Europe, more especially France, where delicate flavour and mild teas are in great repute. At Vichy the tea which Mr. Hughes analysed above was very greatly approved. It may be well to mention these facts for the benefit and encouragement of tea growers at a high elevation—say from 5,500 to 7,000 ft. in Ceylon. They cannot expect quite such heavy crops through abundant flushes of leaf as their neighbours lower down, nor may their teas be so useful to the Mincing lane buyers for mixing purposes; but it is something

to have a growth which can be thoroughly recommended for direct consumption by special classes who enjoy delicate, high-flavoured, though mild tea.

The Future of Tea in Ceylon.

"From whatever direction it may be approached"—writes Emerson Tennent—"Ceylon unfolds a scene of loveliness unsurpassed, if it be rivalled, by any land in the universe: the Island rises from the sea, its lofty mountains covered by luxuriant forests, and its shores, till they meet the ripple of the waves, bright with the foliage of perpetual spring." The luxuriant vegetation, above all other objects, fills the visitor to Ceylon with surprise and admiration. Situated in the path of the two monsoons—the south-west from the Indian Ocean and the north-east from the Bay of Bengal—there can scarcely be said to be a month of the year without some rain in Ceylon: there is certainly no dry period such as is experienced in India. As a consequence, vegetation is always green and leafage luxuriant. Here, therefore, if anywhere, we ought to find the very paradise for tea, or any similar leaf crop so far as climate is concerned; and there can be no doubt that the south-west division of the Island, especially from Galle and Colombo to the farthest eastern verge of the mountain zone (with probably a few million acres of uncultivated land), we have moisture and heat, with large areas of fairly good soil, admirably adapted to the tea plant. Reference to meteorological returns and tables of rainfall will show how well distributed is the rain throughout the year; and this, with sunshine, accounts for the continuous crops of cocoanuts and other fruit, of rice and cinnamon, for hundreds of years, many of the fields never having manure. Hitherto the question has not been at what altitude and situation will tea grow well in Ceylon, but where will it not do, at least so far as the south-west and larger and more populous division of the Island is concerned, for some of the best crops (and highest prices) have been got from tea growing within the influence of the sea breeze, and only 200 ft. to 300 ft. above sea level, and against from tea over 5,000 ft. and even 6,000 ft. above the sea in the neighbourhood of our highest mountains. There is every reason, therefore, to anticipate that Ceylon will become as great a producer of tea as ever she was of coffee in the palmiest days of the enterprise: in other words, that we may look forward (within the next five years) to from 280,000 to 300,000 acres of tea (including native gardens) producing from 90 to 110 million pounds of tea on an average every year, of which, however, we should hope to see a goodly portion; rising from three to

PICKING TEA

five million pounds, retained by the natives for their own consumption in the Island, while of the balance we should like to see our American cousins drinking some 20 million pounds by an early date, the quantity rising to 50 or 60 million pounds eventually.

Finally, we cannot do better than append the return of exports for ten years and distribution for the last two years, just published by the Ceylon Chamber of Commerce :—

EXPORTS OF TEA FROM CEYLON DURING THE PAST TEN YEARS.

			lb.
Exports from January 1 to December 31,		1892 ...	71,153,657
Do.	do.	1891 ...	68,274,420
Do.	do.	1890 ...	46,901,554
Do.	do.	1889 ...	34,048,085
Do.	do.	1888 ...	24,381,296
Do.	do.	1887 ...	13,800,545
Do.	do.	1886 ...	8,111,137
Do.	do.	1885 ...	4,411,578
Do.	do.	1884 ...	2,403,095
Do.	do.	1883 ...	1,641,810

TABLE SHOWING THE DISTRIBUTION OF CEYLON TEA FOR 1891 AND 1892.

Countries.	1891. lb.	1892. lb.
To the United Kingdom ...	63,744,987	64,815,075
To Austria ...	74,426	93,793
To Belgium ...	85	605
To France ...	21,210	15,374
To Germany ...	92,291	123,077
To Holland ...	2,280	970
To Italy ...	4,649	4,279
To Russia ...	11,230	400
To Spain ...	16,995	13,830
To Sweden ...	300	—
To Turkey ...	4,211	3,130
To India ...	620,161	528,037
To Australia ...	3,210,598	5,166,154
To America* ...	163,137	100,893
To Africa ...	70,828	64,728
To China ...	163,041	103,988
To Singapore ...	3,618	11,381
To Mauritius ...	68,783	89,617
To Malta ...	2,000	18,326
Total Exports from January 1 to December 31 ...	68,274,420	71,153,657

* *Direct* shipments to America, but apart from these a great deal of Ceylon tea has been sent from London to America.

PADDY CULTIVATION.

PADDY cultivation appears to have been the chief agricultural pursuit of the inhabitants of Ceylon from very remote antiquity. Paddy cleaned of its rough outer coat, termed the husk, is called rice, which forms the principal article of food of the whole Siṉhalese nation. As it has been the staple food of the nation for thousands of years, the cultivation of it has become a very congenial employment to all classes and conditions of the people. By the ancient kings and by the meanest of their subjects paddy cultivation was, and is up to the present day, considered a very noble calling. In ancient times the kings, their ministers, and subjects vied with one another in projecting and constructing irrigation works. The Minnériya, Kaláweṛwa, and Kanthalai tanks, and a host of others, bespeak more eloquently than can be described the interest manifested and the expenditure lavished on furthering this national industry. To explain fully the method of cultivating paddy would take up much more time and space than we can devote to the subject here. We can only describe in a cursory manner the several stages of cultivation till the paddy is converted into rice.

Different kinds of Paddy.

There are more than sixty varieties of paddy grown in the Island. Of these, only one kind is cultivated without irrigation, all the other kinds requiring more or less continual irrigation. The "eḷ-vi," which is cultivated entirely on dry land, is dependent on rain only. There are several varieties of eḷ-vi, but very few of them are cultivated in Ceylon. Seven or eight kinds of eḷ-vi are enumerated in our ancient books, although at the present date not more than two or three

TOPARÉ TANK.

are known. However, no great importance is attached to these varieties. They take about the same amount of time to grow and come to maturity, and are cultivated under the same conditions.

The mode in which this kind of paddy is cultivated is simple enough. Jungle land five to six years old is felled and cleared in the usual way. The felling is generally commenced in the early part of the year, either in January or the early part of February. After the jungle is felled it is left to dry for a month or so, and in March or thereabouts the jungle so felled is set fire to, and if the weather remain dry, as is usually the case during these months, the whole land is well burnt, and the further clearing becomes very easy. In fact, except the larger sticks which are fit for fences and firewood, all the rest of the useless brushwood is burned up. The land is allowed to lie in this state for about a fortnight or a month, and when the rains set in at the end of April (that is, just after the new year of the Siṉhalese, which falls on April 11), the work of clearing and sowing commences. The whole land is then weeded, and the smaller stumps removed. This work is done by the men. The women then remove all vegetation, stumps, and other sticks, and make the land very clean. Then it is drained. The drains are made shallow, for after the paddy comes up there is no fear of the soil being washed away. After the draining the seed paddy is sown broadcast, and the land is fenced all round. Along with the seed paddy, Indian corn and several other varieties of beans, mustard, &c., are also sown in small quantities. In about three months the women undertake the weeding by means of small hooks resembling mamoties, and remove the grass and other weeds. In the meantime the crops that are raised from the other beans afore-mentioned are gathered as they ripen, for all the other seeds used are carefully selected out of such as come to maturity before the paddy. In this wise the cultivator is always supplied with some vegetables during the continuance of the growth and maturity of his paddy. The héna, as the land so cultivated is called, becomes a sort of kitchen garden throughout the year to the cultivator. This kind of paddy takes six months to ripen, so about the end of October or the beginning of November it is reaped and threshed. This rice is really a most delicious variety, and affords very rich food.. But if the paddy is allowed to remain over a year the flavour is lost, and the rice is not prized much. An acre of land of this description would produce about twelve to fifteen bushels of paddy. This mode of cultivation is much sought after owing

to its concomitant advantages referred to above. When this crop is taken off the land, another two (or sometimes three) successive crops of inferior varieties of fine grain are raised, and the land is allowed to grow into jungle until it is again fit to be so cultivated. In some districts where there are wild elephants, pigs, and other animals, the cultivated land has to be continuously watched both day and night to prevent the inroads of these wild animals. Elephants and wild pigs are most destructive animals to these cultivated areas. The natives do not depend much upon this mode of cultivation, as exceptional dry weather, such as sometimes occurs, may wither away the whole crop. No amount of rain, however, can do any material harm to the héna: the more the rain, the merrier is the cultivator.

Having disposed of the only kind of paddy cultivated on dry land, we will turn to some of the principal varieties cultivated on irrigated land, giving the number of months that each takes to ripen :—

	Months.
Má-vi	7
Hátiyal, of which there are several varieties ...	6
Hondarawála, hinaṭi, maḍa-el	4 to 5
Heṭadá	2½

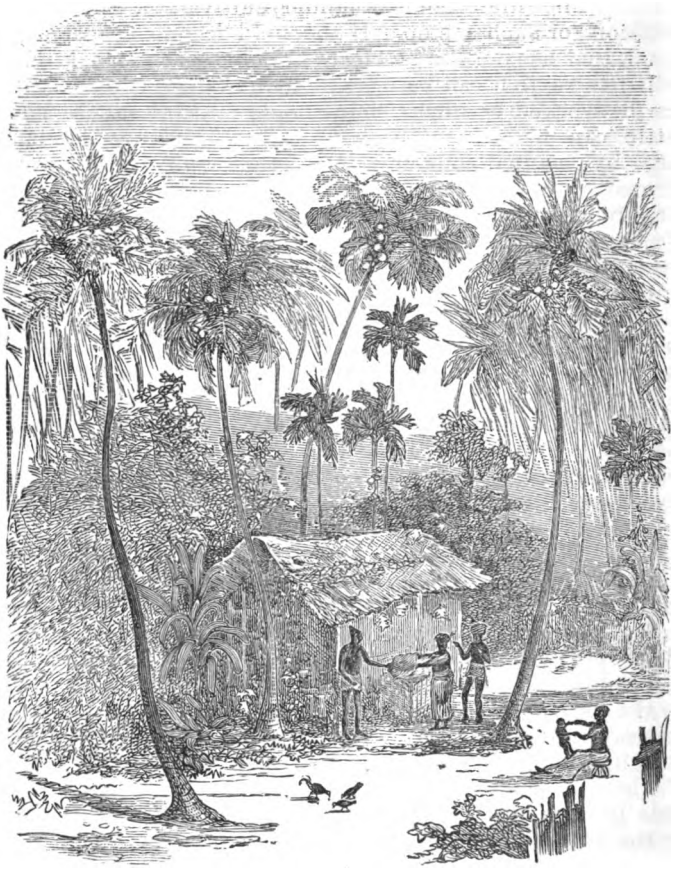
The sixty varieties referred to at the beginning of this article can be classed under one or more of the four varieties enumerated above, according to the time they take in giving a crop. Of these, "má-vi" takes the longest period to ripen. Its rice is regarded as very nourishing, but the paddy is generally considered injurious as food for horses, as the small stalk-like pins at the end of the grain are dangerous. It is the kind of paddy cultivated on lands where there is a never-failing supply of water by springs. If the other kinds of paddy are sown in such land, no good crops can be raised. In the same way, the fields that are irrigated by artificial means, that is, by canals, tanks, &c., never successfully grow this species of paddy in them, owing to the uncertainty of a regular water-supply. In short, the varieties of paddy are selected according to the facilities of irrigation.

In Ceylon there are two seasons for cultivating paddy, termed *yala* and *maha*. The yala cultivation begins in February and continues till April. The maha begins in June and continues till October. Sometimes two crops are taken from the same field during the same year. Such fields are considered more valuable than others that yield only one crop. The average value of such a field would be about six or seven hundred rupees. Where there are two crops raised,

the seed paddy used is a species which would take four or five months to yield a harvest. In some parts of Ceylon, but very rarely, three crops are raised within the same year.

In cultivating land for paddy, the preliminary work is to clear the jungle round the field. The field itself being worked every year, has no jungle growing on it. If the surrounding high land is under cultivation, there is no occasion for such a step. If the field is one irrigated by a canal, that has next to be cleared. There are two kinds of soils : those that can be worked by buffaloes and those that can be worked by men. Some lands sink so much that no cattle can be driven in them. Such swampy lands are dug by manual labour. An implement of husbandry termed "udella" is used. English planters and others term it "mamoty," being a corruption of the Tamil word *man vetti*, the "earth cutter." This done, the several dams which are in the field to regulate the overflow of water are repaired, leaving certain gaps to carry off the surplus water after the whole bed is full. After turning up the soil in each bed with the instrument mentioned above, the several beds are filled with water and allowed to remain so for three or four weeks. By that time the weeds and stubble get completely soaked and decomposed, whereby a manure is imparted to the soil. When the cultivator is satisfied that all the weeds and stubble have been properly decomposed, the soil is again turned up as formerly, and is allowed to be under water for another fortnight or three weeks. By this time the field has become quite free of weeds. At this stage well-seasoned seed paddy is selected, and after carefully removing the chaff it is put in water and allowed to soak during one night. In the morning it is spread on the ground about two inches thick, and allowed to germinate in this state for five days and nights. In the meantime it is well covered up with fresh plantain leaves. After the seed paddy has been four days in this germinating state, the field is again smoothed by means of the "udella," and again the beds are filled with water. This process helps to bring the beds to water level, whereby the young plants are evenly irrigated. After the fifth day the seed paddy has again to be removed from its germinating state and carefully separated from the clots it gets into owing to the roots already out by this time, and re-soaked in water and spread out again as before. After two or three days the seed paddy will be quite fit to be sown. At this stage of the seed paddy the water of the field is well drained, and the whole is smoothed by means of a board with a very long handle. Small drains are then traced in the mud to make the beds quite dry. When the whole field is thus drained

the sower takes the seed paddy and sows it broadcast in each bed throughout the field. For seven days no water is allowed to remain in the beds. After the seventh day water is turned on, and allowed to accumulate till about one and a half or two inches of the plants are under water.



A VILLAGE HOME IN CEYLON.

Before proceeding further we ought to state that where it is possible to do so, the fields are ploughed by means of buffaloes three times. The third time no ploughs are used, their places being supplied by means of boards, which smooth the earth. Sowing and other operations follow as usual.

After the second or third month the whole field is weeded by women, who do it with their hands. Whilst this is being done, any vacant spots, especially the little drains mentioned before, are planted with plants rooted from places where they are too thick.

When the ears of corn get ripe, and the fields put on a sable appearance by reason of the ripening of the paddy, the water is turned away, and the beds are allowed to dry completely.

At the expiration of fifteen or twenty days the corn is reaped and bundled up, and put into an open place prepared for the purpose, and threshed. This is done with the assistance of buffaloes, and always at night—the animals are not workable on dry ground during the day, for buffaloes delight in water and shun the sun as much as possible. The paddy is separated from the straw. The straw is heaped up around the threshing floor in a semi-circular form, which presents a very picturesque appearance. The paddy is allowed to dry for a day or two on the threshing floor, and heaped up at night, and covered with straw. After it is quite dry, its chaff is separated by means of winnows, in a peculiar manner. In districts where there is much wind, a basket of paddy is taken to a loft constructed for the purpose on the threshing floor, and allowed to gently fall from a height of about 12 or 15 ft. In the process of falling the chaff is carried away to some distance, and the good paddy falls into a heap below the loft. In districts where there are no such high winds, the paddy is spread in thin layers in a semi-circular form on the ground, and two people with winnows on either side separate the chaff.

After this is done the paddy is stored and used. The richer classes who have more paddy than they can consume sell the surplus. Those who do not own land cultivate the lands of others, and give half to the landowner and take the other half as wages for the labour bestowed by them.

It has been completely shown by competent authorities that the cultivation of paddy is not a remunerative pursuit. The yield in different soils varies so much that some fields give as much as 30 to 40 fold. But the average yield of a Ceylon field may be put down at 20 fold.

Up to the close of last year (1892) one-tenth of the net produce of paddy lands was paid as a tax by all paddy cultivators in Ceylon, while no other product was taxed in a direct manner, except for a special purpose. The removal of the tax from the 1st of January, 1893, was, however, decided upon by Government, and a great boon has thus been conferred on the paddy cultivators of the Island during the rule of its present Governor, Sir Arthur Elibank Havelock.

FIBRES AND PALM PRODUCTS.

The Kitul (Caryota urens).

THE kitul palm has long been known to the native inhabitants of Ceylon. It is widely distributed throughout the forests of the Island in those localities where droughts do not prevail.

In parts of the country, as for example round the base of the Adam's Peak range, on its southern slopes, the kitul palm is found in great abundance, presenting quite a feature in the forest scenery. It has been in places introduced by the natives into their gardens, as it yields so much that enters into the economy of their daily life, while also affording a marketable commodity in the form of jaggery, or native sugar.

According to Gamble* this palm is found in the "evergreen forests of the western and eastern moist zone of India. On the Western Ghats it extends to near Mahableshwar. It is common in Burma, Bengal, and Orissa, ascending in Sikkim up to 5,000 ft."

It yields a variety of products, of which the native sugar—called *hakuru* by natives and *jaggery* by Europeans—is the chief. Toddy is also obtained from this valuable plant, and is an intoxicating beverage. The unfermented toddy, as taken fresh from the tree, is a pleasant sweetish drink, but to those unaccustomed to it it is rather mawkish.

The exact age at which the kitul palm begins to yield toddy, and the quantity obtainable from a tree, appear to be subjects of much difference of opinion; but it may be assumed that at fifteen years of age is about the period when the tree first flowers, and it is from the flower that the chief products of the palm are obtained.

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* "Manual of Indian Timbers," 1881 ed., p. 420.

The flowers only appear once at the top of the tree, after which they appear at slow intervals in the axils of the leaves, descending downwards, the lower ones indicating the approach of death.

It is from the first flower that the largest quantity of sap or toddy is obtained, the yield being from a quarter to 1½ and sometimes 2 gallons of fluid in twenty-four hours. The sap is obtained by cutting off the flower when in the bud stage at about 5 in. from the apex of the enclosing flower-sheath. A piece of string or rope is tied round the flower below the incised end, and the sap is allowed to flow into a vessel placed immediately below it, which is tied to the tree. Morning and evening the flower bud is re-opened by cutting off a thin slice from the wounded end, causing the sap to flow afresh, till at last it ceases altogether. The sap so collected is called by the Siṇhalese *telijja*, from which the sugar is, by boiling and fermentation, obtained.

In order to make jaggery or sugar from the kitul sap, the toddy, as described above, is first strained to remove any impurities that may have been introduced. It is then left in an earthen vessel for some hours over a slow fire, which evaporates most of the watery matter, after which the residue begins to thicken to a consistency of treacle, and is then poured into moulds and left to cool. Crystallisation sets in as the fluid cools, till finally the whole becomes solid and hard. The solid jaggery—for that is now what the boiled sap has become—is next taken out of the moulds and wrapped in pieces of dried plantain leaf, or not unfrequently in the dried leaves of the wild croton,* and tied with string usually made from the bark of the walla tree,† or with strips of plantain fibre, and is then ready for the market.

The trade in kitul jaggery is very large, as this article affords nearly the only sweetening matter used by the poorer classes. From this cause it is very difficult to estimate with any approach to accuracy what the total trade done in jaggery really is, but assuming that 6,000,000 cakes a year are sold of the common sorts only, this quantity represents in weight no less than 893 tons, worth Rs. 150,000. This is quite exclusive of what is exported.

Illustrative of the trade in jaggery, the Hon. the Collector of Customs of Ceylon reports that under the head of Palm Sugar the exports from Ceylon in 1891 represented £789. 14*s.* 8*d.*, taking each rupee at 1*s.* 4*d.*

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* *Kęppęṭṭiyá*, Siṇh.; *Croton laccifernm*, L.; one of the Euphorbiaceæ common in Ceylon and India.

† *Gyrinops Walla*, Gaertn., one of the Thymelæceæ.

In the manufacture of jaggery no particular standard of size or weight is adopted, but it may be stated as approximately correct that three balls of jaggery equal one pound by English weight, and the price obtained among the rustic classes is Rs. 2·50 per 100 balls or cakes, or about two and a half farthings each.

In order to make a pound weight of jaggery, a little over one gallon of sap is required. The proportion lost by boiling being about 5-6ths of the volume, and allowing one gallon for every 2½ balls of jaggery, the local consumption alone must represent about 2,400,000 gallons of sap a year. This is exclusive of what is consumed in the form of fermented or unfermented toddy.

The better kinds of jaggery, known as "white jaggery," are prepared in the same manner as detailed above, except that greater care is taken in the removal, during the boiling process, of impurities that tend to darken the residuum.

Welihakuru, or crystallised jaggery, is purely a fancy variety. It is made by pouring the boiled syrup into shallow vessels, which are then left for several weeks, and often months, close to a fire, so that by a slow drying larger crystals form. This particular form of palm sugar is not largely manufactured by the Siṇhalese owing to the slowness of the process, and is regarded by them merely as a luxury.

Fermented toddy or *rá* (pronounced *rar*) is made by leaving the sap for some hours till a scum begins to form. This is a highly intoxicating liquor, and as such finds a ready sale. It is often made use of in lieu of yeast in the manufacture of bread.

To arrest fermentation, the toddy-drawers, as the manufacturers of jaggery are often called, use the bark of a large tree known as the *hal*. This tree is the *Vateria acuminata* of botanists, and is one of the resin-yielding family of Dipterocarpaceæ, of which Ceylon affords many large and valuable members. The chemical action that takes place in arresting fermentation is not exactly known, but it is probable that the resinous juice within the *hal* bark acts as a sterilising agent on the microbes that produce the fermented condition of the fluid, after it has been left exposed to the air. It is curious, however, that no other substance is known to the Siṇhalese that produces the same result.

The timber of the kitul palm is naturally restricted to a small quantity, forming the outer part or shell of the stem, as the tree is for the most part hollow, with its central cavity filled with a sago-like mass, that is also, according to Seemann, "good and very nutritious."

The wood itself is very hard, close, and heavy, giving about 70 lb. weight to the cubic foot. It is used for spouting, and in this form enters much into the irrigation works connected with the rice fields of the country, for conveying water from field to field or across rocky stream beds.

In house-building the wood of the *Caryota urens* is cut up into laths, and is often made use of for rafters in the roofing of houses. Pins for furniture are largely made from this wood, as it is at once lasting and close, besides being extremely strong.

Ceylon also exports another product of the kitul palm, known as kitul or bristle fibre, which enters largely into the manufacture of brushes, for which purpose it is in considerable demand. The fibre, as it is called, forms at the base of the leaves of the palm, in a strong sort of bracing, that tends to hold the leaf against the stem as it appears on both sides of the blade of the leaf stalk. This is removed with a knife from the fallen leaves, and then cleaned, to free it from extraneous matter, and finally put up into bobbins, in shape not unlike a torpedo, when it is ready for sale. Ropes, and even fishing lines, are made from kitul fibre, as it is easily twisted into fine cord, and is strong and durable.

In his Administration Report for 1891 the Hon. the Collector of Customs gives the value of the exports from Ceylon of kitul fibre as follows:—

	Rs.	c.
To Europe ...	... 66,772	0
To the East ...	... 320	0

or a little under Rs. 70,000.

The Areca Palm (Areca Catechu).

Ranging next to the cocoanut and kitul palm in importance, the Sinhalese value the areca palm as the third most useful, for though it does not supply the same variety of domestic products, yet it affords the well-known and universally used betel-nut that is chewed by so many Oriental races. It is a cultivated species, and probably introduced from Malay countries, but so freely does it grow that in parts of the country it has become almost wild. Above 3,000 ft. altitude it does not appear to flourish so favourably as at lower levels, but in the matter of cultivation this palm appears to require the minimum of attention.

The nuts are usually allowed to ripen on the trees, their ripeness being indicated by the outer covering or husk becoming a dull orange colour. They are then collected and dried, after which the husk is removed and the nut is ready for sale or use.

The betel-nut, *puwak* of the Siṉhalese, affords a powerful astringent, and it is probably for this reason that it forms so large a factor in the masticatory already referred to. Its medicinal purposes are also well known, the areca supplying catechu, which is also used for tanning. Grated and dried, the nuts make a powder that is used as a vermifuge, while in another form it is given to horses as a preventive of diarrhœa; while finally, burnt to charcoal and powdered, it becomes a valuable tooth-paste.

According to a statistical authority, in the year 1874 the quantity of arecanuts exported from Ceylon amounted to 129,826 cwt., valued at £108,730, but of late years the price, owing to largely increased supply, has very much fallen off. In 1891 the Customs reports give Rs. 850 worth exported to Europe and Rs. 906,343 worth to the East.

The wood of the arecanut palm is largely used for temporary buildings, and as scaffolding poles or light rafters for roofing purposes, or the hoods of the native carts, besides being extensively used in fencing and wall building. It is of moderate weight, and tough. The average weight per cubic foot is about 56 lb.

In some parts of Ceylon the chief vessels used for carrying water are made from the leaves of this graceful palm, which, being of a leather-like consistency, are easily converted into strong and durable water buckets, in the making of which the natives show great ingenuity.

Rattan (Calamus radiatus).

Ceylon produces some eight or nine species of creeping palms, most of which are known to Europeans as canes, or rattan canes, of which the following are the most in use:—

Calamus rudentum, the Má-wéwḷ of the Siṉhalese.
C. Roxburghii, or Ḷa-wéwḷ.
C. pachystimonus.
C. radiatus, or Kukul-wḷ.

These palms are common throughout the damp forests of the Island up to 3,500 ft. altitude. In some districts they occur in great abundance, affording a conspicuous feature in the forests, their tall feathery heads overhanging the highest trees, while their powerful stems, often 200 ft. in length, appear like green cables coiling about the ground in curious contortions and disorder.

The two first named species are very largely used for a variety of purposes, such as the manufacture of baskets, chairs, crates, and the hoods of carts; while, split into strips and twisted, they become most powerful ropes.

A very large trade is done in making tables and chairs of these canes, of which the most familiar is probably the well-known "deck chair," to be found on every passenger ship in Eastern waters.

The two smaller canes, *C. pachystimonus* and *C. radiatus*, the stems of which only attain the thickness of a pencil, are used in vast quantities for the manufacture of baskets for Ceylon tea gardens, for receiving the tea leaves as they are plucked from the bushes; in fact so great is the quantity consumed in this way that if the canes used in these baskets were put end to end they would extend for some thousands of miles.

In addition to its use in basket-making this cane supplies the material for making the bottoms of chairs, for which purpose it is first split into long thin strips to render it elastic and pliable.

Twisted, the *kukul-wel* supplies rope for towing purposes, as its tenacity is prodigious.

Finally, the thin strips cut from this cane are used for making frames for hats used by some of the labouring classes in Ceylon.

Aloe (Yucca gloriosa).

The so-called aloe, or Adam's needle, or Spanish bayonet (*Yucca gloriosa*, Linn.)—one of the Liliaceæ for which we are indebted to the American Continent—is cultivated in many parts of Ceylon, but chiefly as a hedge plant, as no animal can get into a plantation surrounded with this powerful lily. It is known to the Siṉhalese as *hana*, and is largely used by them in the manufacture of string, for the harnessing of their cattle to carts, &c. The difficulty of extracting the fibre cheaply has long stood in the way of its introduction on a large scale into the commerce of the country, as the cost of the cultivation of the plant is extremely low, while the area of land in Ceylon over which it could be grown is practically unlimited.

So far, the manufacture of rope from this source has been confined to the natives, and only to a small quantity.

Niyanda (Sanseviera zeylanica).

Bowstring hemp, the *Sanseviera guineensis* of botany, finds a near ally in the Ceylon plant, known to the natives as *niyanda* (*Sanseviera zeylanica*), that grows in a wild state in the dry drought-stricken districts of the country. It is usually found growing among rocks, and affords a magnificent fibre of great strength. It is largely made up into ornamental ropes by an outcast race of Siṉhalese called the Rhodias, who do a small trade in this product.

In order to make the fibres bright and showy they are generally stained with two colours, yellow and dull red. The colouring matter employed in both cases is purely vegetable, the yellow being obtained by boiling the fibre in a vessel containing chips of the wood known as jakwood (*Artocarpus integrifolia*), one of the Urticaceæ; while the red is obtained in exactly the same manner by boiling with chips of sappanwood (*Cæsalpinia Sappan*), a leguminous plant that affords a brilliant dye.

Plantain (*Manilla Hemp*).

The edible plantain, cultivated in enormous quantities in Ceylon for the sake of its fruit, yields a fine fibre, though it is not to be compared with its close and world-famous ally, the Manilla hemp.

In the domestic economy of the Siṉhalese this product of so common a plant as the plantain is much restricted in its use, owing probably to the difficulty in cleaning and preparing it. It is therefore more often found used as string, when cut into strips, for odd jobs, in which a superior material would not be called into use.

Kirindi-weḷ (*Rourea Santaloides*).

A powerful cordage largely made use of by the Siṉhalese, called *kirindi-weḷ*, is obtained by twisting the stems of a creeper known to botanists as *Rourea Santaloides*. It belongs to a family closely connected with the beans, though distinct from them in point of structure. The rope so made from this common forest plant is largely used for building strong fences or stockades; in agriculture, where fascines have to be erected for the support of temporary earthwork, &c. In many cases it is used for tethering cattle.

Weni-weḷ (*Coscinium fenestratum*).

Weni-weḷ is a strong woody climber, found in great abundance in the moist districts of Ceylon between sea-level and 3,500 ft. altitude. It is bright yellow when freshly cut, and by twisting is made into a strong rope, largely used by the natives in tying cattle. Besides its use for cordage it is a popular remedy in fever, and is supposed to be of use as a lotion for sore or bloodshot eyes. This plant, the *Coscinium fenestratum* of botany, is one of the medicinal family of Menispermaceæ, to which the tonic Cocculus belongs.

Pitcher Plant (*Nepenthes Distillatoria*).

One of the most useful cordage plants growing in a wild state in Ceylon is the famous pitcher plant, *Nepenthes Distillatoria*.

It is found in great abundance in the wet low-country, being peculiarly partial to wet ground with sandy bottom. The plant trails over any supporting tree or bush, and it is this trailing stem that affords the cord called by the natives *bandurá-wel.* It is used very largely in building fences, walls, and sometimes in fixing the rafters and reepers of native cottages.

In the manufacture of baskets it also plays an important part, its pliability rendering it extremely easy to manipulate.

Deer and Buffalo Hide Ropes.

Ceylon has long been famous for its elephants, one of the sights of the country being the kraaling of these huge brutes. Part of the operation of kraaling, in fact the final one, is the so-called noosing of the elephant, which consists of passing a powerful rope round one of the hind legs of the beast, and securing the same to the nearest tree.

For this purpose the ropes are generally made from hides, those of the buffalo or sambur deer (wrongly called the elk in Ceylon) being in chief request. The native name for both these kinds of rope is *warramadu*, and their manufacture is entirely carried out by Rhodias.

The process of manufacture in both cases is the same. The hide is first soaked in water till quite soft, after which it is cut into long strips and woven together into ropes of about an inch in thickness.

These hide ropes must be considered as the strongest of any of the native-made cordage, hence their employment in kraaling, where they often have to resist the fullest strain that can be brought to bear upon them by the enraged elephant, after it has been made a prisoner. Beyond the purpose mentioned above, deer or buffalo hide ropes are rarely used, as their cost places them above the average means of the Sinhalese.

THE POST AND TELEGRAPH DEPARTMENTS.

POST.

In Ceylon there are 125 post offices, 47 of which are combined post and telegraph offices, besides 58 village receiving offices and 15 railway receiving offices. These village receiving offices were established in 1886 with the object of extending postal facilities to rural districts.

The revenue of the Postal Department for 1891 was Rs. 451,100, while the expenditure for the same year was about Rs. 527,250.

All letters and parcels from Government officials are passed free, under a very extensive franking system, which materially reduces the receipts from postage.

There are some 700 employés in the Postal and Telegraph Departments.

Local letters posted in Ceylon are addressed in three languages—English, Siṉhalese, and Tamil.

The mails are conveyed by train, horse coaches, bullock coaches, and runners. The latter carry the correspondence either in mail bags on the top of the head, or in knapsacks fastened to the back by straps. They carry a spear with bells to protect themselves in case of attack by man or wild beast. In some parts of the Island these runners are injured, and sometimes killed, by elephants or bears ; the latter they dread more than the former. The last instance of the kind occurred in the Eastern Province about two years ago, when an elephant, standing in the jungle by the side of the road, charged a runner who was conveying the mails by night. The unfortunate man dropped the mails and his torch and bolted, but unluckily for him there was a bank on the

side of the road which he did not see in the dark, and falling against it the elephant caught him and killed him on the spot. There are 190 runners employed in the Department.

All post offices in the Island transact money order and savings bank business.

The inland money order system was first introduced into the Colony in 1877, and the results have been very satisfactory. At the end of 1891 the value of orders issued amounted to Rs. 2,875,900, and the commission earned was Rs. 23,000, while the orders paid aggregated Rs. 2,871,700.

The business done by this branch of the Department would be largely increased if the facilities afforded by it were more generally availed of by all classes of the population. The Chetty or Tamil native trader of Ceylon, a race from which the "Shylocks" of the Island are for the most part composed, appears, however, to have unbounded faith in the infallibility of the Postal Department, and will frequently, in order to save the commission on money orders, which he looks upon as a tax to be avoided, remit his earnings in paper money by registered letter, though this course is strictly prohibited by the regulations of the service. The result of this objectionable practice is that the mails, which have on many of the lines to be conveyed by runners through dense forests and along lonely and unfrequented paths, are occasionally robbed for the sake of the contents of the mail bags.

The exchange of money orders with India commenced in 1880. The figures at the end of 1891 were as under :—

	Rs.
Orders issued by Ceylon on India ...	1,003,007
Commission on above	11,446
Orders paid in Ceylon	82,900

A large proportion of the above amounts represent the remittances made by the planters in the tea districts of Ceylon to their kanganies or cooly agents in India, to enable them to bring over gangs of labourers from the southern coast of India to work on their estates. A considerable sum, too, finds its way to India from the savings of the coolies so employed, being the remittances made by them for the support of their families and aged parents who have remained behind in their villages.

The exchange of orders with the United Kingdom showed at the end of 1891 the following results :—

	Rs.
Value of orders issued in Ceylon ...	41,473
Commission on above	839
Value of orders paid	24,405

As there are several banks in the Island issuing drafts payable on demand in London and other parts of the United Kingdom, whose rates of remittance are more favourable than it is possible for the Postal Department to make them, and taking into consideration the large depreciation in the value of silver currency, the business done in this line is, on the whole, satisfactory.

Post office savings banks were opened for the first time in the Colony in 1885. At the close of 1891 the number of accounts appearing in the books of the Department was 17,387, representing an amount to the credit of depositors of Rs. 409,263. The deposits during the year amounted to Rs. 383,216, and the withdrawals to Rs. 293,393.

Frauds of any consequence committed by the public in connection with the money order and savings bank branches of the Postal Department in the Colony have, up to the present, been conspicuous by their absence, and the few that have been attempted and proved successful, have, as a rule, been of a very ordinary type, and not worthy of special comment.

Between Northern India and Ceylon there is a close connection, chiefly in consequence of the large number of natives of Southern India who are employed on the tea estates in Ceylon, and as a natural consequence there is a large amount of correspondence exchanged between the Colony and the opposite Continent. Formerly every advantage was taken of the opportunities afforded by the voyages of the British India steamers round the Indian coast, but the steamers did not call regularly, and it is only within the last twelve months that a punctual service by steamers has been established between Colombo and Tuticorin. For this reason, for many years the bulk of the letters were exchanged by mail catamarans, which conveyed letters and registered packets across Palk's Strait, the distance between Kangesanturai on the coast of Ceylon and Point Calemere on the opposite coast of India being 29 miles. The catamaran is a small raft consisting of logs of wood roughly bound together, and in this primitive craft, placed on a little platform, securely protected from wet, the mails are taken across by a crew of two, or sometimes three men, who paddle and sail according to circumstances. Though the land on both coasts, being perfectly flat, is invisible a few miles from the shore, and they have no compass to steer by, the men pilot the catamarans across without difficulty, merely correcting their position when necessary by means of soundings.

It is not known when this mail service was started, but it has been in existence from the earliest days of the Ceylon Post Office, and for a period of more than half a century.

There is not a single record of any irregularity, while there is only one instance, in December, 1884, of the loss of a mail. On this occasion a cyclone of great violence visited the north coast of Ceylon, doing a great deal of damage. Its approach was as sudden as it was unexpected, and the catamaran, which had left with the mails during the night with three men in charge, was lost, and though every search was made no traces of the men or the catamaran were ever found.

The subsidy paid for these catamarans, which voyage 58 miles a day, or roughly 1,740 miles a month, is only Rs. 110 a month, being at the rate of 6 Ceylon cents a mile.

A single voyage in one of these catamarans would be dangerous to a constitution not specially inured to such exposure; but the hardy sailors of the north coast of Ceylon are conspicuous for their powers of endurance. Their catamarans, considering the roughness of the sea at times of the year, the length of the voyage, the form of the craft, and the small amount of subsidy paid for the service, are the most remarkable vessels at present used in the Postal Service of any country for the sea conveyance of mails. One of the catamarans, which has been used for some years as a mail boat, is to be seen at this Exhibition.

In contrast with them are the fine steamers which are subsidised by the British, French, German, and Australian Governments for the conveyance of mails. The following list furnishes particulars of the mail steamers which call at the port of Colombo and convey mails from and to Europe, Australia, India, China, Burmah, and Mauritius :—

Mail Steamers leaving for Europe.

The Peninsular and Oriental Steam Navigation Company.
The Messageries Maritimes Company.
The Orient Line.
The Norddeutscher Lloyds.

Mail Steamers leaving for Mauritius.

The British India Steam Navigation Company.

Mail Steamers leaving for Madras and Calcutta.

The Messageries Maritimes Company.
The British India Steam Navigation Company.
The Peninsular and Oriental Steam Navigation Company.
The Austrian Lloyds Company.

Mail Steamers leaving for Bombay.

The British India Steam Navigation Company.
The Austrian Lloyds Company.
The Peninsular and Oriental Steam Navigation Company.

Mail Steamers leaving for Australia.

The Peninsular and Oriental Steam Navigation Company.
The Orient Line.
The Norddeutscher Lloyds.

Mail Steamers leaving for the Straits.

The Messageries Maritimes Company.
The Peninsular and Oriental Steam Navigation Company.
The Norddeutscher Lloyds.
The Austrian Lloyds.

Mail Steamers leaving for Rangoon.

The Bibby Line.

Mail Steamers leaving for Tuticorin.

The British India Steam Navigation Company.

Mails for Europe, &c., leave eight times a month.
Mails for Mauritius direct once a month.
Mails for Rangoon direct once a month.
Mails for Pondicherry direct once a month.
Mails for India *viâ* Madras and Calcutta four times a month, and daily *viâ* Point Calimere.
Mails for India *viâ* Bombay three times a month.
Mails for India *viâ* Tuticorin sixteen times a month.
Mails for Australia five times a month.
Mails for the Straits and China six times a month.

TELEGRAPHS.

Considering the area of the Island, the extent of the telegraph system is considerable. It comprises 900 miles of line and 1,500 miles of wire at the present time. All the principal towns and the greater number of the lesser ones are thereby connected, and facilities for instantaneous communication with one another have been placed within the reach of the people of the country living apart on its utmost confines. These facilities are freely availed of by all classes, as the charges for telegrams are moderate. Connection with the Continent of India and the rest of the world is established by means of submarine cables laid across Palk's Straits, on the north-west of the Island.

The instrument generally in use is the Morse Sounder, combined with Siemen's polarised relay. It is worked simply on the open current system on the Post Office lines,

and on the closed current system on the railway lines. The necessity for the adoption of duplex working has not arisen yet.

The lines which cross from the west to the east coast are carried over the mountain ranges which form the backbone of the Island. They rise from sea level to an altitude of 6,500 ft. for half the distance, and descend from this elevation to sea level over the other half. Where the country is rough and the passes through it tortuous, the supports are planted on a few salient points, and the wires in these cases span deep valleys and gorges. Many of the spans are not less than 800 yards in length. The lines traversing the Island from the extreme south to the extreme north—Dondra Head to Point Pedro, a distance of 400 miles—follow the south-west coast to Colombo, whence they deviate eastward inland, and run alongside the railway to Kandy, which is at an elevation of 1,700 ft., and from Kandy to Mátalé 700 ft. lower, and here civilisation ends. Beyond Mátalé the lines follow the great northern trunk road for 200 miles, which passes through dense forests over a wild and sparsely populated country. This section presents many obstacles to conservancy and rapid restoration of communication. The offices are far apart, and the frequent fall of trees is a prolific source of interruption. Water for many months of the year is difficult to procure, and natives as well as Europeans travelling along the road must carry their provisions with them. Bears and elephants are very plentiful, and much feared, and with just grounds, as travellers are often attacked and severely injured by these animals; but these lines are the most important of any in the Island, in that they connect it with the Indian Continent, and the capital with the important seaports of Trincomalee and Jaffna; and commensurate efforts are made to maintain uninterrupted communication over them with success in spite of all difficulties, as the occasions are very rare on which the Island is cut off from communication with the outer world.

Several years before the introduction of the telegraph system in Ceylon, a successful attempt was made by Dr. Elliott, then proprietor of the *Observer* newspaper, to establish communication between Galle and Colombo by means of carrier pigeons, the former being then the port of call of all mail steamers. The service lasted from 1850 to 1858. The supply of birds was chiefly obtained from Madras, although carriers of the best breeds were procured from London.

For upwards of seven years these birds brought mail and other news from Galle to Colombo with almost unfailing regularity.

On the arrival of the pigeons a flag was hoisted, which was called the "pigeon flag," and an expectant group would collect in the *Observer* office to hear the news which the mail had conveyed from Europe.

The time occupied by these birds flying from Galle to Colombo was from one to two hours.

In 1857 the Ceylon Government decided to open telegraphic communication in the Colony, and accordingly the first line was completed in January, 1858, between Colombo and Galle, along the sea-board, a distance of 74 miles in length. The wire, which was of No. 1 I.W.G., was secured to the tall trunks of the cocoanut palms. Insulators were not employed, but wooden brackets were nailed to the trees on which the wire was suspended. The cost of maintaining communication on this line was very great, in view of the frequent interruptions which occurred owing to the wire being exposed to the full force of the monsoons. The gales, which blow with great severity on this part of the coast, cause much damage to property by falling trees.

This line was subsequently transferred to wooden posts, and secured to porcelain insulators of an approved pattern.

In June, 1858, the telegraph line was extended from Colombo to Kandy, the present capital of the Central Province and the former capital of the Kandyan kings, 1,727 ft. above sea level.

In October, 1858, direct telegraphic communication with India was established by the construction of a line from Kandy to Mannár and Tallamannár. This line, which is constructed on wooden supports with iron-hooded single-cup insulators, runs for the first 30 miles through a gently undulating and cultivated country, and from thence along a perfectly flat and wild tract. Shortly after the completion of this line frequent interruptions to communication were caused by herds of wild elephants pulling down the supports and breaking the wire.

Tallamannár, which is 173 miles from Kandy, is situated to the north of the island of Mannár. From this point the submarine cable (gutta-percha) was laid on the 17th September, 1858, to Tanikody, a sandy and barren spot on the southern coast of India, the cost of the cable being borne by the Government of India.

In 1882 this line was thoroughly reconstructed, and an additional wire provided to meet the increased message traffic. This alteration effected such a vast improvement in the insulation of the lines that direct work with Madras, 600 miles distant, has been practicable ever since.

On the 1st July, 1859, the Morse system was introduced into Ceylon in place of the old needle instrument. This

VIEW OF THE HARBOUR OF TRINCOMALEE, EAST CEYLON.

change was marked by a great improvement in accelerating the quick despatch of message traffic. Particularly on the arrival of the China and Australian mails the traffic was so great that the unsatisfactory needle instrument caused much vexation and delay.

In November, 1864, the telegraph wire was extended from Kandy *viâ* Dambulla to Trincomalee, which possesses one of the safest and most beautiful harbours in the world. The line, 88 miles in length, was hung on trees principally, the wire being No. 1 I.W.G., secured to the old-fashioned iron-hooded single-cup insulator. This track, too, was infested by herds of wild elephants, and frequent interruptions were caused by the wires being pulled down and broken by these huge beasts.

The line from Dambulla to Trincomalee was dismantled in 1881, and another line along a better route from Anurádhapura to Trincomalee took its place.

On the 2nd March, 1865, the first direct message from Europe was received in Colombo.

On the 19th August, 1865, the first direct message from America was received in Colombo.

In July, 1880, the telegraph lines were transferred from the Indian to the Ceylon Government, and the system is now administered by the Postmaster-General of Ceylon, who is also Director of Telegraphs. All the telegraph offices, with the exception of that in Colombo, are now combined post and telegraph offices.

The battery used from 1858 to 1869 was the original Daniell's, consisting of two solutions of salt water and sulphate of copper, separated by a porous pot, in which a zinc plate and a copper strap were immersed respectively. In 1869 this battery fell into disuse, and Minotto's modification of Daniell's battery, which is too well known to be described, was substituted. It is the chief battery in use at the present day. In the central office at Colombo, however, Fuller's bichromate battery is used, which allows of one small battery of this kind working all the lines in the Island.

The Morse Sounder is the only instrument in use all over the Island. It is worked simplex, the necessity for the duplex system not having arisen.

The Time Diffuser was devised in 1885 by Mr. E. B. Hurley, the then Superintendent of Telegraphs, Ceylon, whereby the time from Madras is automatically transmitted to all stations direct from the Madras Observatory.

A tabulated statement of the telegraph lines constructed from 1881, with their length, the materials employed in their construction, and their cost, is annexed.

Section.	Length in Miles.	Description of Supports.	Description of Wire.	Description of Insulators.	Cost.	Date of Completion.	Remarks.
Anurádhapura to Trincomalee	66	Wooden posts	Iron, galvanised ...	Prussian No. 38 ...	Rs. c. 10,714 48	Sept. 1881	—
Colombo to Kandy ...	75·68	Hamilton's standards ...	do.	do.	89,832 4	May 1882	Reconstructed
Polgahawela to Kurunégala...	12·50	Siemen's standards ...	do.	do.	—	—	—
Kandy to Mátalé ...	16	Hamilton's standards ...	do.	do.	19,059 3	July 1882	Reconstructed
Mátalé to Mannár ...	140·17	Wooden posts	do.	do.	49,262 96	Nov. 1882	—
Nawalapitiya to Nuwara Eliya	44·75	Siemen's posts	do.	do.	25,192 79	May 1885	—
Mannár to Tallamannár ...	17	Wooden posts	do.	do.	2,380 67	March 1885	—
Colombo to Negombo ...	32·50	do.	do.	do.	10,840 0	April 1887	—
Colombo to Ratnapura ...	50	do.	do.	do.	15,543 9	Feb. 1889	—
Galle to Mátara ...	28	do.	do.	do.	8,191 27	July 1890	—
Colombo to Kandy ...	75 68	Hamilton posts	do.	do	8,709 25	Aug. 1890	Alternative line
Polgahawela to Kégalla ...	8·25	Wooden posts	do.	do.	1,357 73	Sept. 1890	—
Negombo to Puttalam ...	61	do.	do.	do.	11,641 35	—	—
Hatton to Maskeliya ...	8	Siemen's posts	do.	do.	2,398 42	March 1891	—
Talawakele to Agrapatana ...	7	do.	do.	do.	896 25	April 1891	—
Jaffna to Point Pedro ...	26	Wooden posts	do.	do.	4,673 71	June 1891	—
Colombo to Slave Island, Kollupitiya, &c. ...	10·95	do.	do.	do.	—	July 1891	—
Maskeliya to Bogawantaláwa	7·75	Siemen's posts	do.	do.	1,883 52	April 1892	—

On the occasion of a Pearl Fishery a temporary telegraph line is run up on bamboos from Mannár to the scene of the fishery, which is situated to the north-west of the Island, where a telegraph office, combined with a post office, is kept open to serve the large number of persons who are attracted to the spot.

The receipts on account of message traffic during the year 1891 were Rs 357,500, and the expenditure Rs. 90,500.

The time occupied by a letter in transit from Chicago to Colombo is less than one month. For instance, a letter posted on the 24th October at Chicago bears the following Post Office dates:—Chicago, October 24; New York, October 25; London, November 2; Colombo, November 21.

STATISTICS RELATING TO CEYLON,

"THE EDEN OF THE EASTERN WAVE."

The Land of Tea, Palms, Cinnamon, Coffee, Cinchona, and the Chocolate Plant; of Pearls, Rubies, and Sapphires; of Ancient Ruins second only to those of Egypt; of Tropical Scenery the Finest in the World.

By J. FERGUSON, of the *Ceylon Observer* and *Tropical Agriculturist*, at the request of the Hon. J. J. GRINLINTON, M.L.C., Commissioner for Ceylon to the Exposition of 1893.

[*Revised and corrected up to the beginning of 1893.*]

Area in square miles, about 25,300 = 16,200,000 acres.

Population by Census of 1891, 3,007,789.

Divided into nine Provinces, administered by a Governor and about eighty Civil Servants.

Races.—Sinhalese, 2,041,158; Tamils, 723,853; Moormen (Arab descendants), 197,166; Burghers, 21,231; Malays, 10,133; Europeans, 4,678; Veddahs, 1,229; others, 8,341.

Religions.—Buddhists, 1,877,043; Sivites (Hindu), 615,932; Mohammedans, 211,995; Roman Catholics, 246,214; Protestants, 55,913; others, 692.

Longest River.—The Mahaweli-ganga, 150 miles (the Ganges of Ptolemy).

Highest Mountains.—Pidurutalagala, 8,296 ft.; Adam's Peak, 7,353 ft.; 150 Peaks from 3,000 ft. to 7,000 ft.

Towns.—Colombo (capital), 130,000 people, with splendid Breakwater, great steamer coaling and calling port of the East; Kandy (ancient capital), 20,375; Point-de-Galle, 33,590; Trincomalee, with grand harbour, 11,596.

Wild Animals, &c.—Elephant, Cheetah, Black Bear, Buffalo, Boar, Elk, and small Deer; Eagle; Crocodile; Shark.

Revenue, counting exchange, about ... £1,200,000

Trade.—Total Annual Trade, counting exchange £9,000,000

Imports from United Kingdom, do. ... £1,400,000

Exports to United Kingdom, do. ... £2,750,000

Shipping.—Total of Shipping entered and cleared annually, about 6,000,000 tons.

Roads.—3,700 miles, metalled and gravelled, among the best in the world.

Railways.—207 miles first-class 5½ ft. Railway, 64 under construction = 271 miles. Projected, 211 miles.

Canals.—170 miles.

Education, &c.—Total of Scholars 154,000, or about 20 per cent. of children of school-going age; 1,500 miles of Telegraph and Telephone Wire; 246 Post Offices.

Area Cultivated.—3,203,000 acres. Probable extension of Cultivation within ten years to 4,600,000 acres.

Details of Cultivation :—

Under Palm Trees (Cocoanut, Palmyra, Arecanut, Kitul, &c.), 650,000 acres.
Under other Fruit Trees (Orange, Mango, Bread Fruit, Jak Fruit, &c.), 50,000 acres.
Under Rice, 660,000 acres.
Under other Grain, 150,000 acres.
Under Garden Vegetables, 100,000 acres.
Under Coffee (Arabian and Liberian), 50,000 acres.
Under Tea, about 265,000 acres.
Under Cinnamon, Cardamom, and Spices, 60,000 acres.
Under Chocolate Plants (Cacao), 14,000 acres.
Under Cinchona Bark (Quinine), 18,000 acres.
Under Tobacco, 25,000 acres.
Under Rubber and Gum Trees, 5,000 acres.
Under Fibre-yielding Plants, 10,000 acres.
Under Essential Oil Grass (Citronella), 20,000 acres.

Exports of Tea have risen from 19,607 lb. in 1878 to 7,849,888 lb. in 1886; to 13,834,057 lb. in 1887; to 23,820,723 lb. in 1888; to 45,799,519 lb. in 1890; to 67,718,371 lb. in 1891; and to 71,809,465 lb. in 1892.

Exports of Coffee rose from 325,000 cwt. in 1856 to 885,000 cwt. in 1870; fell to 611,000 cwt. in 1880, to 300,000 cwt. in 1884, to 168,000 cwt. in 1887, to 86,000 cwt. in 1891, and to 43,000 cwt. in 1892.

Exports of Cinchona Bark rose from 200,000 lb. in 1878 to 14,700,000 lb. in 1886; fell to 13,113,067 lb. in 1887; to 10,498,487 lb. in 1888; to 8,728,000 lb. in 1890; to 5,595,977 lb. in 1891; rose to 6,793,000 lb. in 1892.

Exports of Cocoa (from the Cacao or Chocolate Plant), 10 cwt. in 1878 to 19,000 cwt. in 1889; fell in 1890 to 15,942 cwt.; rose in 1891 to 20,015 cwt.; about 17,300 cwt. in 1892.

Exports of Cardamoms (Spice) from 14,000 lb. in 1878 to 388,000 lb. in 1890; 422,000 lb. in 1891; 372,500 lb. in 1892.

Exports of Cinnamon from 650,000 lb. in 1850 to over 2,250,000 lb. of late years.

Exports of Cocoanut Oil have risen to 550,000 cwt. from 35,000 cwt. in 1850.

Total crop of Cocoanuts in one year is equal to 700,000,000.

Exports of Plumbago from 23,000 cwt. in 1850 to 426,000 cwt. in 1892.

Tamil Coolies.—200,000 find work on Plantations. A large number of Sinhalese are now helping on the Tea Plantations in some parts, notably in the Kelani Valley, Kalutara, and Galle Districts.

SUMMARY OF INFORMATION REGARDING CEYLON.

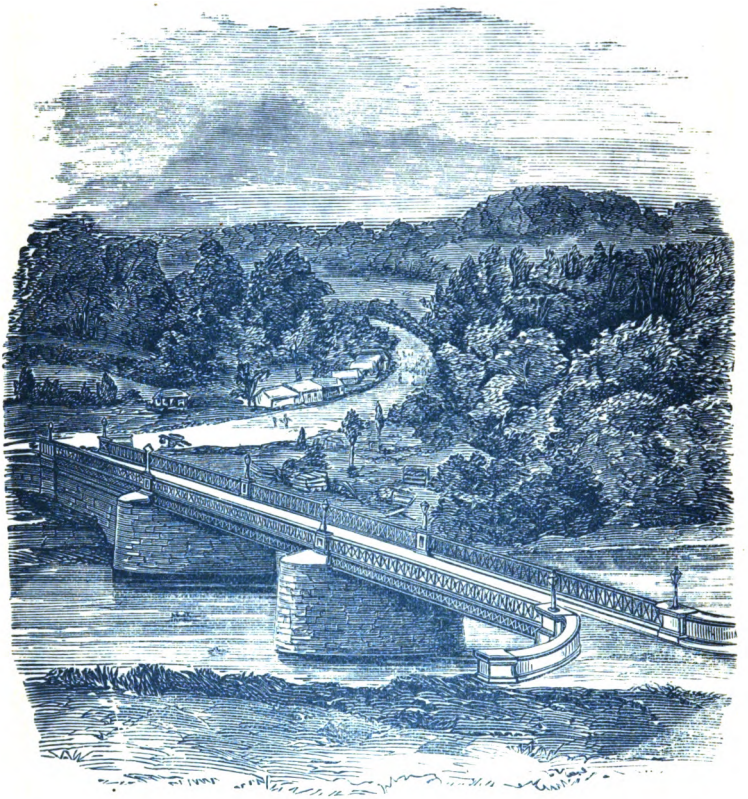
ITS NATURAL FEATURES, CLIMATE, PROGRESS, COMMERCE, AGRICULTURE, INDUSTRIES, PUBLIC WORKS, &c.

(Compiled and corrected up to January, 1893, by John Ferguson.)

CEYLON (part, as many believe, of the region known to the Hebrews as Ophir and Tarshish), Taprobane of the Greeks and Romans (from Támrapaṇie, *Sanskrit*, and Tambapáni, *Páli*); Serendib of the Arab voyagers; Laṇká of the Continental Hindus and the Sinhalese; Ilangei of the Tamils; Lankápura of the Malays; Tewalanká of the Siamese; Seho or Teho of the Burmese; Ceilaõ of the Portuguese, &c.; Pearliform Island ("Pearl-drop on the brow of Ind"). Bounded by the Indian Ocean, Bay of Bengal, and Gulf of Mannár; greatest length and breadth, 267 by 140 miles; circumference, 760 miles. Lat., 5° 53′ to 9° 51′ N.; Long., 79° 41′ 4″ to 81° 54′ 50″ E. Sun rises 5½ hours before it shines on Britain. Light from 6 A.M. to 6 P.M. nearly all the year round; but the sun sets about 42 minutes later in July than in November; indeed twilight in June occasionally exists till after 7 P.M.

AREA.

About 25,333 square miles, or 16,213,120 acres, of which about one-sixth comprises hilly and mountainous zones, lying in the centre of the southern half of the Island. Maritime districts generally level, and northern end of Island broken up into flat narrow peninsula and small islets.



THE KATUGASTOTA BRIDGE, OVER THE MAHAWELI RIVER, CEYLON.

NUWARA ELIYA.

Distances (approximate).

From nearest point of Southern India *viâ* "Adam's Bridge" and Ramisseram to Tallamannár, 60 miles; from Madras to Point Pedro 250; to Galle 545. To Colombo: from Tuticorin 450; Madras 615; Calcutta 1,385; Bombay 875; Aden 2,093; Suez 3,400; Port Said 3,500; Malta 4,435; Gibraltar 5,420; Brindisi 4,500; Marseilles 5,750; Cape 5,000; England by Cape 10,400; by Suez Canal to Southampton 6,570; from Mauritius *viâ* Aden 4,500, direct about 2,500; Singapore 1,659; Hongkong 3,100; Yokohama, Japan, 4,900; Freemantle, Western Australia, 3,000; King George's Sound or Albany 3,400; Adelaide 4,400; Melbourne 4,900; Sydney 5,450 (*viâ* Torres Straits 6,500); Brisbane *viâ* Torres Straits 5,900; New Zealand (Auckland) 7,000 miles. The distances generally are counted from Colombo.

Highest Mountains.

Pidurutalagala (rising over the Sanatarium of Ceylon, Nuwara Eliya) 8,296 ft., or nearly 1,000 ft. higher than Adam's Peak (7,353), usually described as the highest, because it is to voyagers the most conspicuous mountain in Ceylon. This latter is really the fifth in altitude, being inferior to Kirigalpotta (7,832), Totapola (7,746), and Kuduhugala (7,607), as well as to Pidurutalagala. Fully 150 mountains ranging from 3,000 ft. to 7,000 ft. (245 recorded trigonometrical altitudes over 1,000 ft., 145 over 3,000 ft., 118 over 4,000 ft., 53 over 5,000 ft., 28 over 6,000 ft., and 10 over 7,000 ft.) Most of the mountain ranges on which tea and cinchona or coffee is cultivated are wooded to their summits; but vast prairie tracts of hill region, chiefly on the eastern side, bear little beyond coarse lemon-grass. The mountain scenery is generally rich and grand. In the planting districts it is especially so, varied as it is by exquisite valley, woodland, and homestead scenery.

Greatest Rivers and Waterfalls.

The Mahaweli-gaṇga (Ganges of Ptolemy), nearly 150 miles from its source in its longest feeder, the Agra-oya, under Kirigalpotta (the "milk-stone-book" mountain) close to Horton Plains, to its double debouchure near the great harbour of Trincomalee on the east coast. This river drains nearly one-sixth of the area of the Island. Rivers not naturally favourable for navigation, except near the sea, where they expand into backwaters. Steam navigation by means of small vessels introduced on Colombo lake, between Colombo and Negombo on canal, and shortly expected on Kalu-gaṇga, and on Kẹlani river to Awisáwélla. The Kẹlani

entering sea near Colombo ; Kalu-gaṇga at Kalutara ; Maha-oya, near Negombo ; the Gin-gaṇga, near Galle ; Walawe-oya, near Mátara, are some of the other numerous rivers. Rivers in mountain regions frequently fall over precipices, forming beautiful waterfalls. One in Dimbula and another in lower Maskeliya, both between 200 and 300 ft. high ; in Eastern Haputalé one said to be 500 ft.; and the foot of Ramboda Pass, celebrated for a series of beautiful falls. No proper surveys available ; but a series of cascade-falls on Kurundu-oya in Maturaṭa measure from top to bottom, when nearly full of water, about 920 ft. In the arid regions of the north of the Island some of the river beds which run full of water in the rainy months of the north-east monsoon (middle of October to middle of January), show only expanses of sand with a few pools in the dry or south-west monsoon season, during which the north-east of the Island is almost rainless, while torrents are deluging the south-west coast.

Lakes.

None inland, but ruins of magnificent tanks (Sea of Prakráma, Mineriya, Kanthalai, Giant's tank, &c.) in north and east of Island ; and fine extensive backwaters on the sea-coast, such as the Negombo lake, the lakes of Bolgoda, Mullaittívu, Batticaloa, &c. The fresh water lakes which add so much to the beauty of Colombo, Kandy, and Nuwara Eliya are artificial, or partly so. The Labugama Reservoir for the Colombo water supply, covering 176 acres among the hills, 30 miles from Colombo, forms a beautiful lake, and is well worth a visit.

Tides.

These are almost imperceptible (at Colombo the rise and fall never exceed 3 ft.), more generally 2 ft. to 2 ft. 6 in. on the springs, and 6 in. to 9 in. on the neaps ; but in the debouchures of some backwaters and rivers the tide is more noticeable. At Pánaduré the tidal current runs in at the rate of four miles an hour. Powerful currents also sweep round the coast, some of them owing their origin to the Indian Ocean.

Geology and Mineralogy.

The geological formations met with in Ceylon are of the Archæan age. The principal rock is gneiss, with crystalline limestone. Extensive beds of laterite (locally named "cabook") are found, plenty of iron, but no trace of coal. Manganese, gold, and platinum exist, but in such small

NEGOMBO CANAL.

quantities that they are not apparently worth gathering. Molybdenum, cobalt, nickel, tin, copper, and arsenic also occur. Plumbago is the only mineral of commercial importance. Cretaceous beds of Jaffna are of Mezozoic age. Nitre in caves. Salt forms naturally, and is also manufactured in sufficient quantities at Puttalam, Jaffna, and Hambantota to supply the consumption of the Island. Calcareous tufa met with at Bintenna deposited from warm springs. Hot springs at Trincomalee and other places, but no direct evidence of present volcanic action (unless in Kelebokka valley), and earthquakes seldom perceptible, save as the outer verge of disturbances in Java and the Eastern Archipelago. Greenstone, however, underlies gneiss at Kadugannáwa, and with vitrefactions is observed in fissures of rocks at Trincomalee. Spring of sulphuretted hydrogen similar to Harrogate water occurs in the Puttalam district. Large tracts of alluvium occur in the Nuwara Eliya and other districts. Process of slow upheaval believed to be in operation on western coast, with compensating disintegration of mountain ranges. Recent formation *a breccia* formed of particles of disintegrated rock held together by calcareous and ferruginous matter near Negombo and along coast. Gems abundant, especially about Ratnapura ("city of gems"), but, with exception of blue sapphire and ruby, of slight value. A flawless sapphire is rare, and good rubies are excessively scarce. Zircon, or "Mátara diamond," and amethyst, common. Chrysoberyl (or "cat's-eye") not uncommon, curious, and of late years prized in Britain. Moonstones (very beautiful form of "adularia") and "cinnamon stones" (brown garnets) common. Spinel and tourmaline very abundant. Many rocks and river beds sparkle with red garnets, beautiful, but intrinsically valueless. Ceylon celebrated for fine pearls, chiefly from oyster or mussel banks of north-west coast. Gemming license in Ceylon is Rs. 10 per annum, subject to certain published rules.

Climate.

Varies in different parts, from hot and arid plains of north and east to warm and humid south-west coast, and cool and wet mountain regions, but, for the tropics, is generally healthy. Fever zone extends below middle altitudes of mountain ranges, and banks of rivers frequently unhealthy. Fever seldom or never occurs above 3,000 ft. altitude, and is rare within the influence of the sea breezes. The hot months at Colombo are February, March, and April, and sometimes (when the monsoon is delayed) May, when all who can, ascend to the hill regions, Nuwara Eliya especially. The

heat in Ceylon, however, seldom reaches 90° in the shade: 95½° in April being the maximum in Colombo—95·8° on 22nd February, 1885, actual highest—where the mean of the year nearly touches 81° F., sea breezes tempering the heat for a large portion of the year. At Trincomalee the maximum was 101·7° on 10th May, 1886. The rate of mortality in Ceylon towns ranges from 1·65 per cent. for Jaffna (Colombo 1·76) to 4·06 for Kurunégala. The military death-rate in Ceylon is down to 25 in 1,000; and this rate is capable of still further reduction by sanitary measures. The opening of the Suez Canal and the facilities offered by steam communication have led to the abandonment of Nuwara Eliya as a military sanatarium, invalid soldiers being sent "home" instead. The perfection of climate in Ceylon is supposed to be found at and around Bandarawela (distant by railway 161 miles from Colombo—one day's journey) on the plateau of the Uva principality at 3,900 ft. elevation, the average temperature being 63°, with an average annual rainfall of 78½ in. falling on 126 days; but the climate of Lindula, Bogawantaláwa, Udapussellawa, and Nuwara Eliya is also very good.

METEOROLOGY.

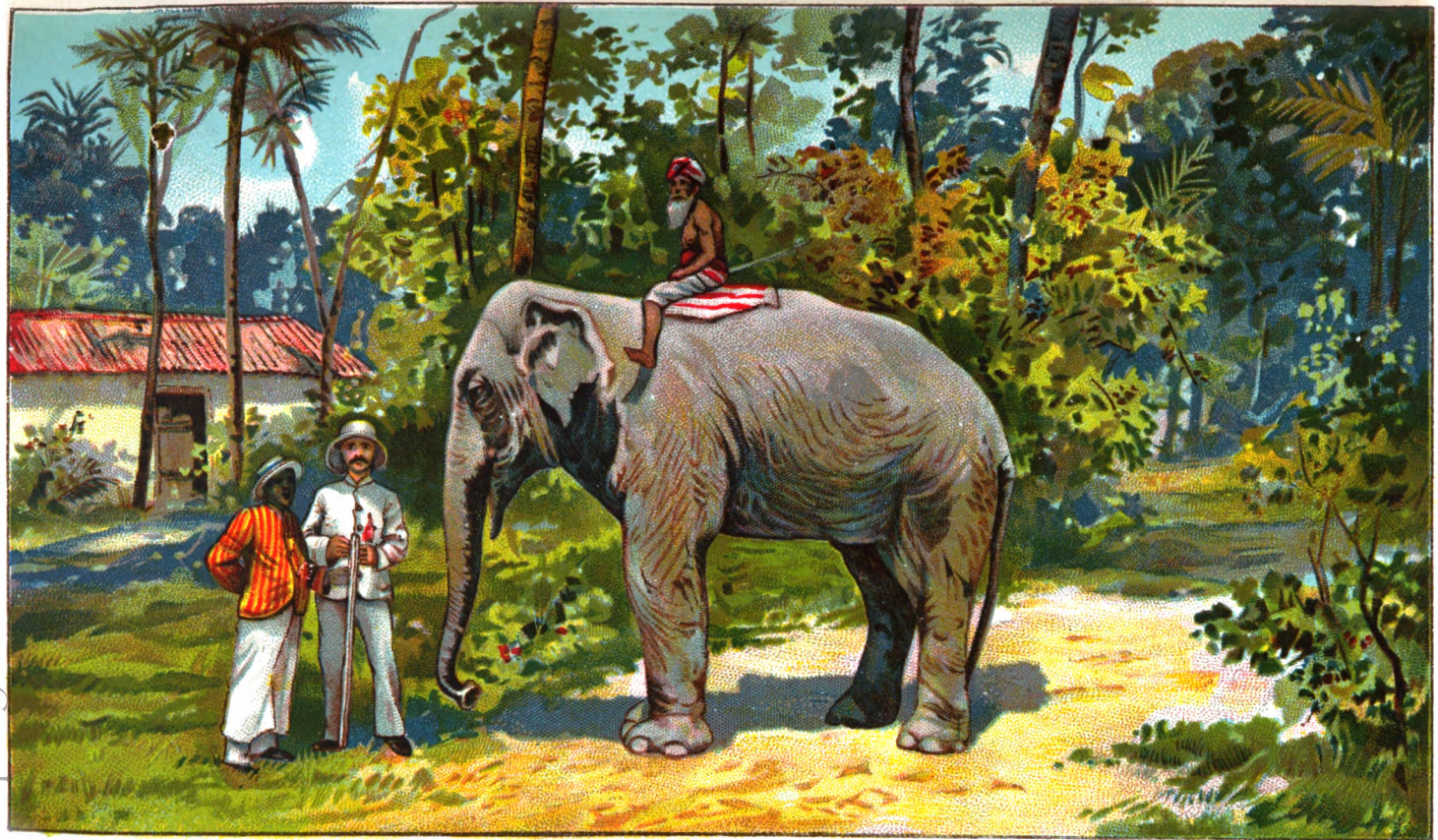
Exposed to both monsoons (south-west from April to September, north-east from November to February), but storms seldom violent. Ceylon is most fortunate in being outside the region of the cyclones peculiar at certain seasons to the Bay of Bengal; also the hurricanes of the Mauritius seas, and the volcanic disturbances of Java and the Eastern Archipelago. Rainfall: 35 in. at Hambantota; 38 in. at Mannár; 48 in. at Jaffna; 53 in. at Anurádhapura; 52½ in. at Batticaloa; 61½ in. at Trincomalee; 78½ in. at Bandarawela in Uva; 81½ in. at Kandy; 85½ in. at Mátalé; 87½ in. at Colombo; 93½ in. at Kurunégala; 100 in. at Nuwara Eliya; 106½ in. at Kalutara; 127 in. at Ramboda; and from 117 to 150 in. on the Dimbula, Dikoya, and Maskeliya ranges, outside the tablelands of Nuwara Eliya at 6,000 ft. and Horton Plains 7,000 ft. altitude; 150½ in. at Ratnapura, 152½ in. at Náwalapitiya; 159 in. at Awisáwélla; and 200 in. at Templestowe, Ambagamuwa; and the maximum 228 in. at Padupola, north-east of Adam's Peak. In parts of Yakdessa the annual rainfall is often over 200 in., as much as 50 in. of which have been known to fall in one month, and 12 in. in as many hours. Temperature varies from a mean of 58° F. at the mountain sanatarium of Nuwara Eliya; 65° to 66° at Langdale, Dimbula, and at Bogawantalawa, Dikoya; a mean of 72° at Badulla, 75½° at Kandy, 81° at Colombo, 80° at Galle, Ratnapura, Puttalam, Hambantota, and Anurádhapura; about 82° at

Batticaloa, Jaffna, and Mannár, and a fraction higher at Trincomalee. The extremes in the shade range from below freezing point at Nuwara Eliya, to 95·8° at Colombo, and 101·7° at Trincomalee. Except in the north and east, climate moist as well as hot. Fertility due more to this circumstance than to richness of soil, generally. Fruits of temperate regions fail from continuous warm moisture, but long-continued and extreme heat, acting as a wintering (the roots being laid bare), favours grape cultivation at Jaffna: successful growth also in Dumbara valley and near Nuwara Eliya. Snow is unknown. Hail not unfrequent in hill districts in very hot weather. Ice forms occasionally at Nuwara Eliya under clear radiating sky during the rainless months, December to February. Electrical phenomena—thunder, lightning, waterspouts, &c.—frequent and sometimes grand, and lightning occasionally destructive to life, especially to natives who climb trees or take refuge from rain under them. Cocoanut palms, papaws, plantain, and other pithy or sappy trees and shrubs are peculiarly fitted as lightning conductors. Lightning so frequently seen without thunder being heard, that Arabs compare a liar to Ceylon lightning. Optical phenomena—such as rainbows, Buddha rays, anthelia, mirage —occasionally very striking. Sunsets frequently beautiful, and zodiacal light sometimes seen. Moonlight and starry nights are often splendid, and when perfectly cloudless are peculiarly cool.

Animals.

Monkeys are numerous, five species of wanduró (*langurs*), of which no less than four are recognised as peculiar to the Island. The capped-monkey (*macacus*), famous for its grimaces and capacity for learning tricks; the loris, a queer creature, the eyes much valued as medicine by the natives! Bats are very numerous in genera and species, flying foxes (*Pteropus*), vampires, leaf-nosed, horse-shoe, and the beautiful painted bat and others; musk and other shrews plentiful, a hill species peculiar to the Island; the sloth-bear common in the low country; jackals everywhere; otters common in suitable places from the shore to the highest hills; no tigers or lions (though the native name of the people signifies the "lion-descended"); the panther or leopard (erroneously called cheetah locally) is the largest feline, and is common in most places; the tiger and red-spotted cats generally distributed; lesser civet numerous, its presence being often betrayed by its powerful scent; a *Paradoxarus* peculiar to the Island, and palm-cat common; mongooses numerous, of five species, a very distinct one (*Onychogale Maccarthia*, Gray) peculiar to the Island; squirrels abound, two species

of the remarkable flying squirrel, several small and pretty ground squirrels (equally at home on trees as well) can be seen and heard on all sides and are amusing to watch; rats and mice only too numerous: the jeeboa or jumping rats, bandicoot, and bush or coffee rat may be mentioned; a rat and a mouse also peculiar to the Island; the porcupine generally found through hill and low lands, as is also the black-necked hare; that strange mail-covered but toothless creature, the pangolin, is found up to a considerable elevation as well as in the low country. Elephants, the lords of the forest, specially famous, and found from the sea-coast to the highest points of the Island, are said to be decreasing in some districts, but still numerous in others. Large numbers formerly killed by sportsmen; 1,600 (captured by being snared, or enclosed in kraals) exported to India from Northern Province in five years ended in 1862. A license now required to shoot elephants, and the number killed or captured has much decreased: only 1,685 exported in eighteen years from 1862 to 1879, valued at Rs. 452,000, a royalty of Rs. 200 for every elephant exported having no doubt checked the trade. Royalty reduced to Rs. 100 in 1882: exports in twelve years 1880–91 equalled 447 elephants. The wild boar common everywhere; buffaloes common in the wilder parts still, but their numbers much reduced during the last decade or two from disease and the rifle. Of deer, the fine sambur (locally elk), the spotted, the paddy-field, the red (*rumptjæ*), and little mouse-deer (*miminna*) still common, and afford good sport to the hunter. Whales, dugongs, porpoises, and dolphins represent the marine carnivora which sport around the coast, where also the screaming cries of sea-eagles and the osprey may be heard, which find their "echo" in the distant hills from the large beautiful crested eagle peculiar to Ceylon, and others of the family; peregrine falcons have their stations here and there; kestrels, harriers, and many species of hawks numerous. Owls of many species, from the fine forest-eagle owl to the little scops, not forgetting the renowned devil-bird, all fairly numerous; the sportsman is attracted by the numerous pea-fowls, jungle and spur-fowls (these two peculiar to Ceylon), and quails, which are common in many places. The frog-mouth and several goat-suckers, swifts, including the species remarkable for making edible nests; swallows common, rollers, king-fishers, bee-eaters, the scarlet breasted trogan; several species of sun-bird (called humming birds locally) represent the feathered beauties of the Island; tailor and weaver birds, the wonderful nest-builders, wagtails and warblers in winter only (so they sing not here), remind Europeans of sweet home; many varieties of thrushes, babblers, orioles, bulbuls,



TAME ELEPHANT.

flycatchers, chats, and drongos everywhere; the splendid mountain jay and its sober-coloured friend the gray starling are peculiar to the Island; grakles, munias (locally ortolans), larks, and pipits numerous; paraquets, hornbills, barbets, and gaudy woodpeckers each have representatives peculiar to the Island, and many other species so common as to be a marked feature in woodland retreats of hill and dale; a beautiful wood-pigeon peculiar to Ceylon, the rock-pigeon, many species of fruit pigeons and doves, a titmouse, a lovely nuthatch, crows and shrikes, the ubiquitous magpie robin, the long-tailed jungle robin and blackbird are fine songsters, the jungle robin inferior only to the nightingale itself; many others have songs, like Annie Laurie's low and sweet, so are not noticed by casual observers. Not less interesting and extensive is the list of marsh and sea-birds: the famous Marabon and other storks, the gigantic and other herons, beautiful egrets and bitterns of several species, the painted and other snipes, sandpipers, plover, dotterel, the cock of the reeds, the purple and other gallimules and rails numerous in suitable places. The singular jacanas or water-pheasant, the scarlet flamingo, ducks of many kinds, the dab chick, gulls, terns, snake-birds (darter), cormorants, and pelicans common round the coast and tanks; frigate birds and petrels occasionally, altogether making up a wonderfully diversified list of fur and feathers for so small an area, over 360 species of birds having been recognised to date, of which no less than 45 are believed to be peculiar to the Island.

The following reptiles are found in Ceylon:—Land tortoise one, freshwater one, freshwater turtle one, marine turtles four, crocodiles two, water lizards two, skinks five, acontiads four, geckos sixteen, agames (or bloodsuckers) fifteen, chameleon one, snakes of fifteen different groups, about sixty-eight of which are venomous and three deadly, whilst about twenty-three sea-snakes are found on the coast, all said to be deadly. Of ground and tree frogs forty, and one burrowing batrachian.

River fish, chiefly carp, are few in number and of inferior quality. Better kinds might be introduced: perch introduced in Nuwara Eliya lake and experiment with trout about to be made. There are from 500 to 700 different kinds of sea-fish, mainly species of mackerel, to which the salmon-like seer-fish belongs, with sharks and rays. No cod, but sword and saw fish, mullet, perch, lobsters, crabs, prawns, "bêche-de-mer," chanks, edible and pearl oysters. Sea and land shells numerous and beautiful. The floor of the sea in certain parts is studded with richly-coloured corallines and the softer zoophytes, while the waters swarm with star and jelly-fish and infusoria, so that frequently the waves, in

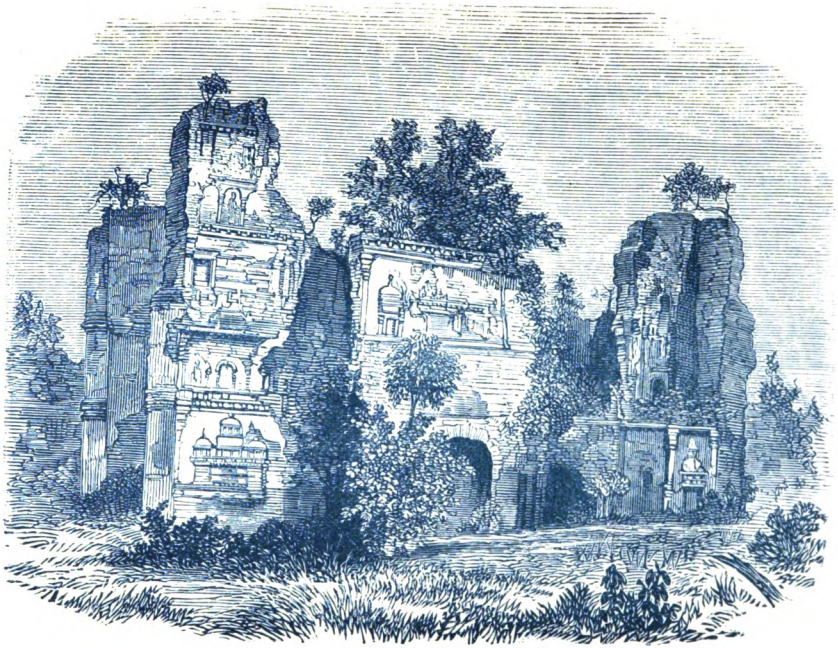
breaking, display a line of phosphorescence, chiefly caused by the *Noctiluca miliaris.*

Perhaps there is no sea-coast in the world richer in fish and shells, and some of the fish described have a right to the title "odd." Mr. Edgar Layard has described perch which "walk across country" (allied to those which Dr. John, of Tranquebar, found climbing palmyra trees); and the late Rev. B. Boake made acquaintance with air-breathing species which flourish in mud, but drown in pure water, and others which, disdaining the marsupial pouch possessed by the "sea horses," carry their young in their mouths. Fishes actually live in the hot wells near Trincomalee in a temperature of 115°. The natives of Ceylon are great consumers of fish, the Buddhists salving their consciences by the subterfuge that they do not kill the fish: they only take them out of the water!

Myriads of insects, including butterflies, beetles, bees, wasps, mosquitoes, white, black, and red ants, ticks, scorpions, centipedes, tarantulas, multitudes of curious spiders, &c., are found in Ceylon, and the periodical swarms of butterflies, which proceed in the teeth of the prevailing winds, are peculiarly interesting. Many of the butterflies, moths (including atlas moth, cinnamon moth, and the variety which yields the *tusser* silk), beetles, and dragon-flies, are exceedingly beautiful. Efforts to domesticate bees have not been very successful hitherto: two or three wild varieties. Leaf-insects and "praying mantis" curious, and whole regions resound to the incessant noise of the cicada, or "knife-grinder." Cocoanut beetles, cockchafers and their grubs, and coccus, known as coffee bug, very injurious. Grasshoppers and locusts occasionally destructive over limited areas. A species of wasp builds pendant nests (chiefly on cocoanut trees) six feet long. Spiders' webs, sometimes so numerous, large, and strong as almost to check the progress of travellers through forests. Land leeches excessively troublesome in the damp forests of the lower hills. Indian medicinal leech common.

Historical Notes.

From conquest by Wijaya, prince from Northern India, about 543 B.C., to deposition of Sri Wikrama Rája Siṉha, last king of Kandy, in 1815, the Siṉhalese annals record 160 sovereigns. Portuguese first visited Ceylon in 1505, erected fort at Colombo in 1518. Dutch first visited Ceylon in 1602, landed forces in 1640, and ousted the Portuguese in 1658, so that Portuguese occupation lasted 140 years. Dating from their landing in 1640 to the capitulation of Colombo in 1796, the Dutch occupation lasted 156 years, or 138 if the 18



THE BURIED CITIES OF CEYLON: RUINS OF THE JÉTAWANÁRÁMA, POLONNÁRUWA.

years of warfare with the Portuguese are excluded. Acquired by England: Maritime provinces, 1796 (separated from Madras Presidency and made Crown Colony 1798); Kandyan kingdom, 1815. Torture, compulsory labour, and slavery successively abolished 1803, 1832, and 1844. Trial by jury introduced 1811. Kandyan polyandry and polygamy (prematurely) prohibited 1856; law relaxed 1869. There was a formidable rebellion in 1817–18 in the Kandyan provinces, and again a feeble rising, also of Kandyans, in 1848. The Kandyans, equally with the rest of the population of Ceylon, are now loyal, contented, and pacific; so that the small military force (about 1,250 infantry and artillery) which the Colony supports is scarcely required, since about 1,300 Volunteers (1,000 Infantry, 150 Artillery, and 150 Mounted Infantry) and a strong body (1,300) of police are more than sufficient for the repression of any possible internal disturbance (religious or rice riots the only public form experienced), and it is believed for repelling (with the Artillery) what we may deem impossible sudden piratical attack. Ceylon, out of her small force, yielded valuable aid to India in repressing the mutiny of 1857, and Colombo, it has been found, is a convenient depôt for the despatch of troops with reference to wars in China, New Zealand, Egypt, and South Africa, for which parts regiments have been taken from Ceylon.

Antiquities.

Besides tanks, important and ancient Hindu and Buddhist temples and other ruins at Dondra, Anurádhapura, Polonnáruwa, Mihintale, Sigiri, &c. The Jétawanáráma dágaba at Anurádhapura, originally 316, is still 269 ft. high, or more than half the altitude of the great Egyptian Pyramid; diameter at base 396 ft., side of square 779 ft. The sacred bó-tree (*Ficus religiosa*) at this place is believed to be one of the oldest historical trees in the world, perhaps over 2,100 years. The Máligáwa at Kandy is famous as containing the so-called tooth of Buddha—a piece of discoloured ivory. At Dambulla is a vast rock temple; while the small Aluviháré, near Mátalé, is interesting as the place where the Buddhist doctrines are said to have been reduced to writing about a century B.C. (See Burrows' "Buried Cities of Ceylon.")

Population.

Results of Census of 1891; 1 per cent. can be added for each year since.

3,007,789 (over 3,073,000 probably in 1893); 119 to square mile, ranging from 19 in North-Central Province to 532 in Western. *Races* (estimated): Sinhalese (Kandyan

and maritime) 2,041,158; Tamils 723,853; Moormen 197,166; Malays 10,133; Javanese, Kafirs or Negroes, Afghans, Arabs, Persians, Parsees, &c., 8,341; Veddahs 1,229; European descendants 21,231; Europeans 4,678.

About 235,000 of the Tamils are *immigrants*, balance of nearly 3 million who came from Southern India (chiefly to labour temporarily on coffee estates) in 52 years ending 1892, and who have settled down here, besides which there is a floating Tamil population of nearly 200,000 more. Nearly one-fourth of the Europeans are *military* and families. Effective *military* number about 1,250. *Native soldiery* (since the disbandment of the Ceylon Rifle Regiment) consists of 214 Asiatic Artillery and Gun Lascars. *Total military* (Volunteers, European, and native), with women and children, say 4,000. Constituents of *European* population, the wives and families included:—Military 1,670; planters 4,000; the Colonial Service (Civil Servants proper number 80, with 15 Writers) 900; merchants and their employés, clergymen, physicians, storekeepers, railway, &c., 1,600. There are of all classes about 725 lawyers, advocates, and proctors in Ceylon, with 737 notaries; 1,048 clergymen and missionaries (178 Europeans); 2,280 physicians, medical practitioners, and surgeons (besides 4,333 native vedaralas); 200 justices of the peace and unofficial police magistrates.

Political Divisions.

The latest regular Census was that of 1891.

Nine Provinces, viz.: Western 1,432 square miles, 762,533 population, 532 to square mile; North-Western 2,997, 320,070, 107; Southern 2,146, 489,799, 228; Eastern 4,037, 148,444, 37; Northern 3,363, 319, 296, 95; Central 2,300, 474,487, 206; North-Central 4,002, 75,333, 19; Uva 3,155, 159,201, 50; Sabaragamuwa 1,901, 258,626, 136. Provinces subdivided into kóralés or counties, and minor divisions such as pattus, &c. Besides municipalities and local boards in the chief towns, and "gansabawas" or rural village councils, there are also judicial divisions and circuits, liable to change, the enumeration of which would convey but little definite information.

Chief Towns.

Colombo, according to Census of 1891, with military and shipping added, 128,870, in area of 9½ square miles; Galle 33,590; Kandy 20,375; Jaffna 43,179; Batticaloa 7,257; Kurunégala 4,745; Anurádhapura 2,508; Badulla 5,023; Ratnapura 3,527. The above are the capitals of the Provinces. Negombo, Kalutara, Pánadure, and Moratuwa

in the Western Province; Gampola, Mátalé, Náwalapitiya, Nuwara Eliya, and Hatton in the Central; Kalpitiya, Chilaw, and Puttalam in the North-Western; Point Pedro in the Northern; Mátara, Ambalangoda, and Baddegama in the Southern Province; Kégalla in the Province of Sabaragamuwa; Haldummulla and Lunugala in the Uva Province, are some of them of more importance as regards population than the provincial capitals, while Trincomalee (population 11,596), though no longer the chief seat of Civil Government in the Eastern Province, continues to be of importance as the naval headquarters of the East Indian Fleet; although now that Colombo, with convenient harbour works, has been made the mail steamer port, it is expected the naval station will ere long be transferred to it, especially if a graving dock is constructed.

Languages and Literature.

Siṅhalese, founded on the Sanskrit, with a considerable infusion of Páli, and therefore belonging to the Indo-European family; but peculiar, except in its Sanskrit roots, to Ceylon. A Dravidian origin has been claimed for the language, but, as Spence Hardy shrewdly pointed out, all the names of places, mountains, and rivers are Sanskrit. *Tamil*, the leading branch of the Dravidian family, common to about 16 million of people in Southern India and Ceylon, spoken by the Moormen as well as the Tamils proper. A Portuguese *patois* still retains its hold amongst the European descendants, but Dutch has gone entirely out. Knowledge of English rapidly advancing in towns and villages. Historical and Buddhistical literature generally in Páli, with Siṅhalese translations, commentaries, and glossaries. Translation of *Maháwansa* by Turnour and Mudaliyár Wijesinha throws a flood of light on the history of Ceylon and India, while researches of Gogerly and writings of Spence Hardy and others, including the recent work by Dr. Copleston, the Bishop of Colombo, have done equal service in revealing the true nature of the atheistical system of philosophy called Buddhism. Goldschmidt and Müller have more recently, by examining and interpreting rock inscriptions, illustrated the history of the Siṅhalese language, though not much new matter has been added by their researches to the history of the country and people. Works on medicine and science, generally in Sanskrit, and almost wholly derived from India. Four daily English newspapers with weekly editions, published in Colombo, meet with fair and increasing support; also a bi-weekly English journal in Colombo, and the weekly *Government Gazette*; a Jaffna weekly paper;

and several periodicals in English, organs of churches, missions, &c.; and a native press, Sinhalese and Tamil, with a few representatives in newspapers and periodicals. Among English periodicals the *Tropical Agriculturist* (monthly), begun in June, 1881, has an extending circulation throughout the Tropics, and is regarded even among London publishers as a credit to Ceylon. An interesting collection of palm-leaf manuscripts exists in the library of the Colombo Museum.

Education.

Through the agency of a Government Department of Public Instruction and a grant-in-aid system, chiefly availed of by the various missionary societies, about 154,000 children, or 1 in 20 of the population, are receiving instruction in English and the vernaculars. Private schools, not connected with missionaries or religious bodies, are few and ill-supported. A knowledge of vernacular reading and writing, generally very imperfect, is communicated in some of the Buddhist temple "pansalas" and private native schools. A large proportion of the population can sign their names but can do little more. Education in missionary schools is, of course, strictly Christian. In Government schools, the custom is, where no objection is offered, to read the Bible during the first hour. Attendance during that hour is not compulsory, but pupils seldom or never absent themselves. Cost of Government Educational Department (educating some 28,000 pupils) Rs. 300,000 per annum, besides grants-in-aid, which amount to Rs. 200,000 for 60,000 pupils, of which Rs. 28,000 is returned in the shape of fees, sale of books, &c. Total outlay on education, public and private, is about Rs. 700,000 (£70,000), against Rs. 7,000,000 (£700,000) supposed to be spent by the population on intoxicating drinks. Science is now practically taught in the principal educational establishments in the chief towns, and technical training in agriculture and useful trades is gradually being added. Government grants, aggregating Rs. 3,000 per annum, are distributed among 18 public libraries. The Census gives about 7,603 teachers, &c., male and female, in Ceylon.

Occupations.

Vast majority of the inhabitants engaged in agriculture: 2,119,868 in Census. Settled inhabitants (Sinhalese and Tamil) cultivate chiefly rice and other grain, with cocoanuts, palmyras, arecas, other palms, fruit trees, and vegetables; while 200,000 Tamil coolies (native born and immigrants), superintended by Europeans, work on plantations, chiefly tea, with the old staple coffee, to which have, of late years,

been added cinchona, Liberian coffee, cacao, rubber, cardamoms, croton-oil seeds, pepper, and other new products. Rice, tea, bark, and coffee from plantations are conveyed mainly by Siṇhalese "bullock bandy men," or carters, where railway communication does not serve. There are about 57,000 licensed carts, mainly employed in plantation traffic, against one-eighth that number in 1850; this is exclusive of unlicensed carts employed not only by natives but by estate owners, now in very considerable numbers. Bullocks in size and strength, and carts in capacity, greatly improved. Fisheries (12,000 boats and canoes) and small class of shipping (vessels belonging to Ceylon number 600; tonnage 25,000) employ a good many; 25,000 fishermen and boatmen in Census, below the mark. The timber trade gives employment in felling, sawing, rafting, or carting to very many. Local manufacturing industry advancing: carpentry, weaving, coir-matting, oil-making, &c. There were 62,000 boutique-keepers and traders (male and female) returned in Census; 46,000 carpenters; 14,000 masons; 38,000 dhobies; 64,000 coir-workers; 30,000 mat and basket-makers; 15,000 tailors and seamstresses; 4,500 cotton and cloth spinners and weavers; 3,500 lace-makers; 1,700 printers and bookbinders; 19,000 bakers; 11,000 toddy-drawers; 7,200 sawyers; 8,000 plumbago-diggers; 19,000 jewellers; 800 gem-diggers; 13,000 blacksmiths; 4,000 barbers; 3,000 horsekeepers; 12,000 domestic servants. There are about 1,000 small looms and 2,000 wooden or stone oil presses, or "chekkus," scattered over Ceylon; while steam and other machinery is extensively in use for preparing tea, coffee, and coir, expressing oil, sawing timber, &c., with perhaps 200 engines, aggregating 3,000 h.p., and 25,000 employés. About 100,000 coffee, oil, and plumbago casks and many thousands of tea boxes made, besides those imported and exported each year; and many thousands of women and children, chiefly Siṇhalese, find remunerative employment in "coffee-picking," and preparing cinnamon and cinchona bark, coir and cocoanut oil, and plumbago, and to some extent bulking and packing tea at the Colombo stores. The planting enterprise gives employment to a large number of mechanics, carpenters, and masons, who also find occupation on roads and bridges, water, harbour, irrigation, and railway extension works. Very serviceable bricks and tiles made in the Island; and 5,000 Moormen (Arab descendants off north-west coast) have special aptitude as masons. Potteries for common earthenware utensils, common. Numerous distilleries, with simple apparatus for manufacture of arrack, and a few to obtain essential oils of cinnamon, citronella, and lemon-grass. Plumbago mining is increasing, giving employment in

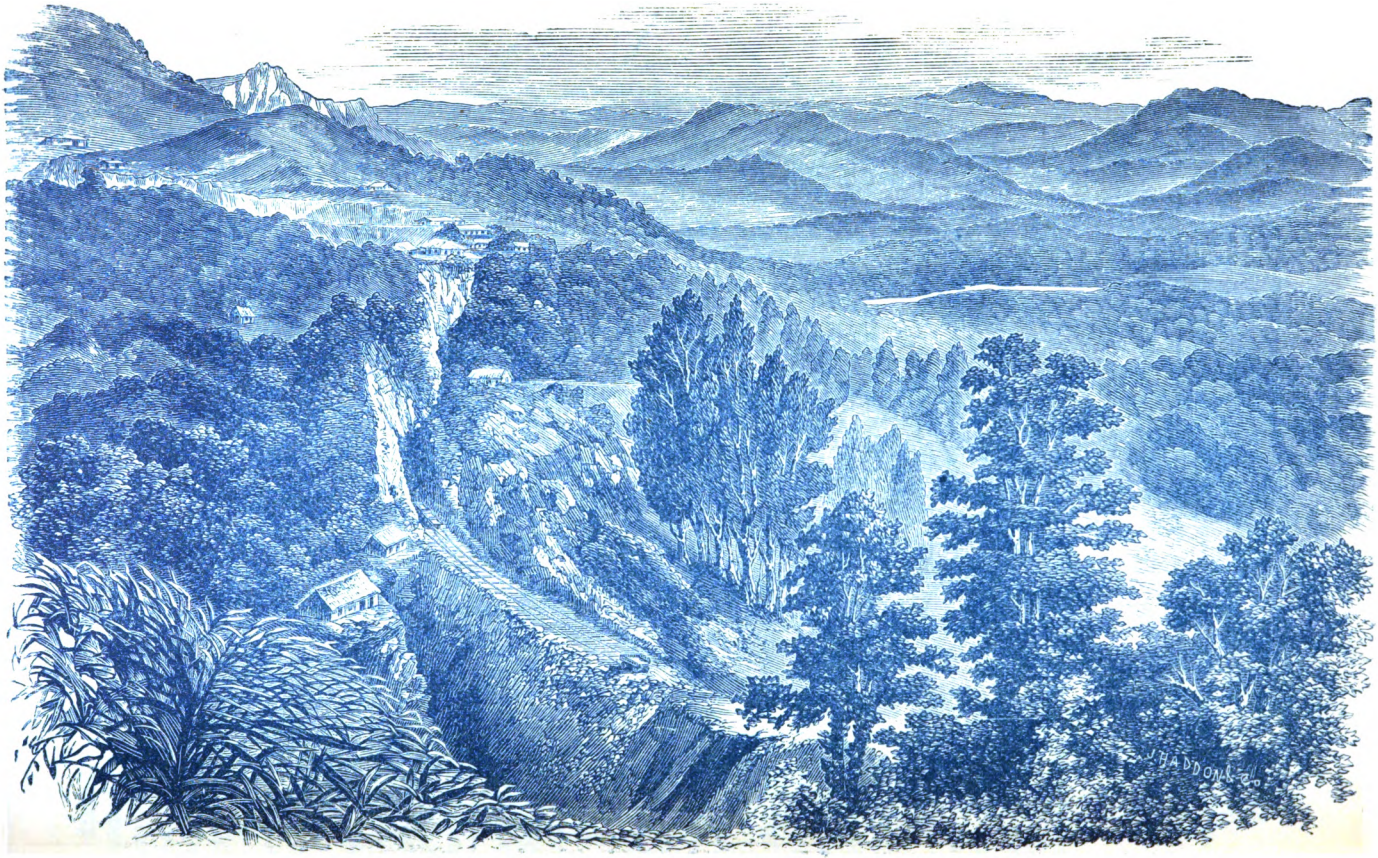
digging, carting, preparation, and shipment to several thousands; and gem-searching (92 gem and 20 iron mines) employs a number (1,200) of not over-peaceable persons. Pearl fisheries uncertain—foreign divers (from coast of India) chiefly employed: no fisheries expected off north-west coast next few years. Chank fishery steady, but not very profitable.

Stock.

Returns very defective. Perhaps there are 6,000 horses, 1,100,000 cattle (including buffaloes), 87,000 sheep, 135,000 goats, and 50,000 swine in Ceylon, with 1,000 asses and 200 mules. Ceylon imports (chiefly from India, with some from Australia) nearly all its horses, most of its draught cattle, and many cattle, sheep, goats, and poultry for food, to a total value of over a million rupees per annum. Two-fifths of the grain consumed (about 13 million bushels in all) is also imported. Prices, always high in Ceylon, have risen steadily, and the tendency is upwards, though a little checked by the planting depression in 1880–86. So with the wages of servants and labourers. Butcher-meat, especially up-country, is likely to become scarcer and dearer in consequence of cattle establishments having been abolished on a large proportion of estates as not profitable. Artificial manures are found to cost less, generally, than the dung of cattle fed on cultivated grasses and expensive grain and oilcakes.

Commerce.

Imports 66 million of rupees; *exports* 58 million: total value of commerce 124 million, nominally 12 million pounds sterling; or, excluding specie, 117 million. The *coasting* trade is also considerable. Staple imports:—Rice, &c., 7 million bushels, 1½ million sterling; cotton goods about £600,000; live stock £100,000; salt fish £100,000; other food requisites £200,000; wearing apparel, &c., £110,000; machinery £90,000; liquors £120,000; manures £50,000; coal 333,000 tons. Staple exports:—Coffee 40,000 to 50,000 cwt.; tea 71 million lb. (likely to rise a good deal); cacao 17,300 cwt. cardamoms 372,500 lb.; cocoanut oil 7 million gallons; cinnamon 2¼ million lb.; coir 100,000 cwt.; plumbago 426,000 cwt; ebony 15,000 cwt.; cinchona bark 7 million lb. In 1837 Ceylon's total value of trade, including the then valuable article of cinnamon, only £900,000, against £9,000,000 now. In 1833 the value of Ceylon exports was only £130,000, imports £320,000, total £450,000. So that the increase of trade in little more than 50 years has been nearly 20-fold. Tonnage outwards and inwards nearly 6 million now, against less than 100,000 tons in 1825.



VIEW ON THE KADUGANNÁWA RAILWAY INCLINE, CEYLON.

Means of Communication.

A line of railway, 74½ miles long, between Colombo (chief shipping port) and Kandy (capital of the Central or planting Province), was opened in August, 1867; an extension to Náwalapitiya from Pérádeniya, 17 miles, in December, 1874; an extension from Kandy to Mátalé, 17½ miles, opened on October 4, 1880. Besides the above, a seaside line has been constructed from Colombo to Alutgama, 40 miles, to be extended to Galle, 72 miles in all, by end of 1893, and a few miles of line to serve the breakwater. And on August 3, 1880, the first sod was turned of an extension from Náwalapitiya, for 41½ miles, to Nánu-oya, within 4 miles of the Sanitarium, Nuwara Eliya, and opened on May 20, 1885. From Nánu-oya the line is carried 25½ miles farther to Haputale, to be opened in June, 1893, and thence 7 miles to Bandarawela later on. Altogether about 191 miles of railway, all on the 5½ ft. gauge, have now been opened (25 more miles shortly, and 54 miles under construction). The line at Kadugannáwa reaches 1,700 ft. above sea-level; at Kandy 1,600 ft.; Pérádeniya 1,512 ft.; Mátalé 1,200 ft.; Náwalapitiya 1,913 ft.; Hatton 4,168 ft.; Nánu-oya 5,292 ft.; summit level 6,250 ft.; the Moragalla tunnel at Kadugannáwa is 365 yards long; the Poolbank tunnel 614 yards; Taláwakele tunnel 265 yards; sharpest curve 5 chains; ruling gradient Kadugannáwa incline 1 to 45 (12 miles long), on Nánu-oya extension heaviest gradient 1 to 44. Other lines are to connect the main line at Polgahawela with Kurunégala 13 miles; a line is under survey, 187 miles, from Kurunégala to Jaffna. At present two coaches run daily from Bentoṭa to Galle, and *vice versâ;* a coach runs tri-weekly (shortly to become daily) between Colombo and Ratnapura, also from Colombo to Yatiyantoṭa, and from Ratnapura to Pelmadulla; and mail-carts or coaches run between Colombo and Negombo, Galle and Mátara; also a coach or mail-cart from Nánu-oya to Nuwara Eliya; from Mátalé to Dambulla, and thence a bullock coach to Jaffna. In three days a visitor to Colombo might easily run up *viâ* Kandy to Nuwara Eliya, passing through the finest of mountain scenery and return; two days would suffice to pay a visit from Colombo to Nuwara Eliya and the middle planting region, while a run to Kandy and back, with a sight of the beautiful and grand scenery in view on and from the railway incline, can be accomplished in one day.

Form of Administration: Central and Municipal.

Governor, aided by Executive and Legislative Councils, the power of making laws being vested in the latter concurrently (as is the case with Crown Colonies generally) with

the legislative power of the Crown, which exercises that power by orders in Council. Executive Council consists of five of the principal officers of Government, presided over by the Governor, who, being personally responsible to the Home Government, can consult, but is not bound to follow the advice of, the Executive Councillors. All appointments to, or promotions in, the Civil Service with salaries over Rs. 2,000 per annum vest in the Secretary of State, but practically all appointments except to the higher offices are left to the Governor. For Writerships in the Civil Service four gentlemen are named for each vacancy by the Secretary of State, or the Governor, and the candidate who receives the greatest number of marks is appointed. With salaries much more moderate in Ceylon than in India, we have a covenanted Civil Service numbering about eighty members for about three million of inhabitants, instead of less than a dozen civilians with native assistants for a similar population in India. The Legislative Council is composed of the members of the Executive, four other principal officers of the Government, and eight unofficial members selected by the Governor with reference to as fair a representation as possible of the various classes and interests (at present representatives include Low-country and Kandyan Siṉhalese; Tamil, Moorman, and Burgher members; one European for planters, one for merchants, and one for general European interests): sixteen in all; six however forming a quorum, and an order of the Queen in Council declared the proceedings of the Legislature valid, though all unofficial seats be vacant. The Governor can command the votes of all official members except on points where religious principles are affected. Governor presides, with casting vote and ultimate power of veto. All Ordinances are sent for the final approval of Her Majesty, but only in rare cases is the operation of a law suspended pending that approval. Unofficial members can, after permission obtained, introduce drafts of Ordinances where votes of money are not concerned. Nine Provinces administered by Government Agents and their Assistants (with native revenue and police headmen, such as raṭémahatmayás, mudaliyárs, muhandirams, kórálas, vidánes, &c.) all under strict supervision of Government; centralisation being the ruling principle, perhaps to an injurious extent. By means of native village councils, municipalities in the three chief towns (Colombo, Galle, and Kandy), and local boards in nine towns of secondary importance (ranging from 1,800 to 10,000 in population), the principles of self-government are being of recent years to a considerable extent diffused. As yet, however, the bulk of the natives appreciate the incidence of municipal taxation

more than the benefits conferred by sanitary and other improvements. The Colombo Municipality has introduced gas and spent a large sum on a good water supply. Kandy and Galle have also made provision for water supply.

Police.

Whether regularly organised and paid, as in towns, or rural system of unpaid headmen called vidánes, by no means perfect, the material to work on being far from good. Reforms in the regular police have, however, been carried out, the total number under an Inspector-General, with six Provincial Superintendents, being now over 1,300. Some 50 of the constables are Europeans, besides all the superintending officers. The regular police are taught rifle drill, and in furnishing guards for prisons, escorts for treasure, &c., largely performs duties which previously fell to the military, mainly to the late Ceylon Rifle Corps.

Currency and Finance.

Rupees, and cents of a rupee, the copper or bronze subsidiary coinage including a five-cent piece, cents, half-cents, and quarter-cents. The latter have now superseded the old Dutch coins—fanams, pice, challies, &c.—as well as English pence and their parts. The silver half-rupee is taken at 50 cents, the quarter at 25 cents, and a subsidiary silver coin is one of 10 cents. The rupee for some time averaged 1*s.* 6*d.* sterling in value, but latterly has fallen below 1*s.* 4*d.* Gold coins are sold by the banks at about current rates of exchange. The note issue in Ceylon has been since 1st January, 1886, a Government issue, and paper money to an average value of 5½ million of rupees is in circulation. There are in the Island agencies of the Chartered Mercantile Bank of India, London, and China; the Bank of Madras; of the Chartered Bank of India, Australia, and China; of the National Bank of India; of the Hongkong and Shanghai Bank; of the Comptoir d'Escompte de Paris, and through mercantile houses of others. The clearing-house returns for Colombo show about Rs. 80,000,000 of cheques per annum. Besides these private banking institutions, and some agencies of loan companies, there are the Government Savings Bank (with deposits equal to about Rs. 1,750,000 lodged by over 13,000 depositors) and the Loan Board, each of which lends money on good house security at comparatively moderate interest.

Weights and Measures.

British standard, to which local candies, leaguers, &c., are reduced. Coffee, our old staple produce, is usually sold locally by the bushel, from 4½ to 5 bushels "parchment"

going to 1 cwt. clean coffee. Tea and bark by lb.; cocoanut oil by gallon or cwt., 12½ gallons going to cwt. For freight purposes, 10 chests tea of usual size make 50 cubic ft., which go to a ton; 16 cwt. coffee in casks, 18 in bags, go to a ton; 17 cwt. cocoanut oil, 12 cwt. coir and cardamoms, 14 cwt. hides, 16 cwt. horns and pepper, 17 poonac or oil cakes, 800 lb. cinnamon or cinchona; measurement goods 50 cubic ft. to the ton. A maund of tea seed or leaf about 84 lb.; bushel of rice 63 lb.; candy of copperah 500 lb.

Customs Duties.

Port dues, pilotage, &c., are moderate, the leading principle in the Customs tariff being 5 to 6½ per cent. on the value of imports, and the only export duties being Rs. 100 for every elephant and Rs. 5 per ton on plumbago, in lieu of Government royalty; with moderate charges on tonnage, which now has the benefit of safe and commodious harbour accommodation at Colombo, by means of the fine breakwater. Export levies of a fractional amount are also imposed on certain plantation products for cooly medical aid purposes, 10 cents per cwt. on tea, coffee, and cacao; 20 cents on cinchona bark; with 6 cents per chest of tea for harbour dues.

Colombo Harbour Works.

Begun in 1875; foundation laid by H. R. H. the Prince of Wales, 8th December; Sir John Coode, Knight, Consulting Engineer; John Kyle, M.I.C.E., Resident Executive Engineer. Over £700,000 expended in all, and 4,211 ft. of breakwater arm completed from starting point at shore end to pier head with lighthouse, besides extensive reclamation work, forming a safe and commodious harbour covering 250 acres with from 26 to 40 ft. of water, and 250 acres more with from 6 to 24 ft. of water. A northern arm and harbour reclamation at Mutwal, and a graving dock for imperial naval as well as commercial purposes, are also projected.

Tramways in Colombo

are an anticipated city improvement, several lines being projected and tendered for to the Municipality by a responsible agency.

The Colombo Waterworks

were commenced in 1881–82 to supply the city (covering 9½ square miles) with 2 million gallons of water daily, from a reservoir in the Labugama hills, 30 miles away. The contract for the hill and city (Maligakanda) reservoirs and for laying pipes was given in from 1882 for Rs. 1,415,500,

the work to be done in three years, by Messrs. Mitchell & Izard, the Consulting Engineer being Mr. Bateman, of Westminster, and Mr. A. W. Burnett the Chief Resident Engineer. The Labugama reservoir (of 176 acres, 59 ft. maximum depth of water, to contain 1,373,000,000 gallons, 360 ft. top water above sea-level), and pipes thence have been laid; also about 145,000 yards of pipes in the city; but the Maligakanda reservoir (to hold 9 million gallons), 100 ft. top water above sea, proved a failure at its first and second trials. The water supply is, however, being utilised independently from Labugama.

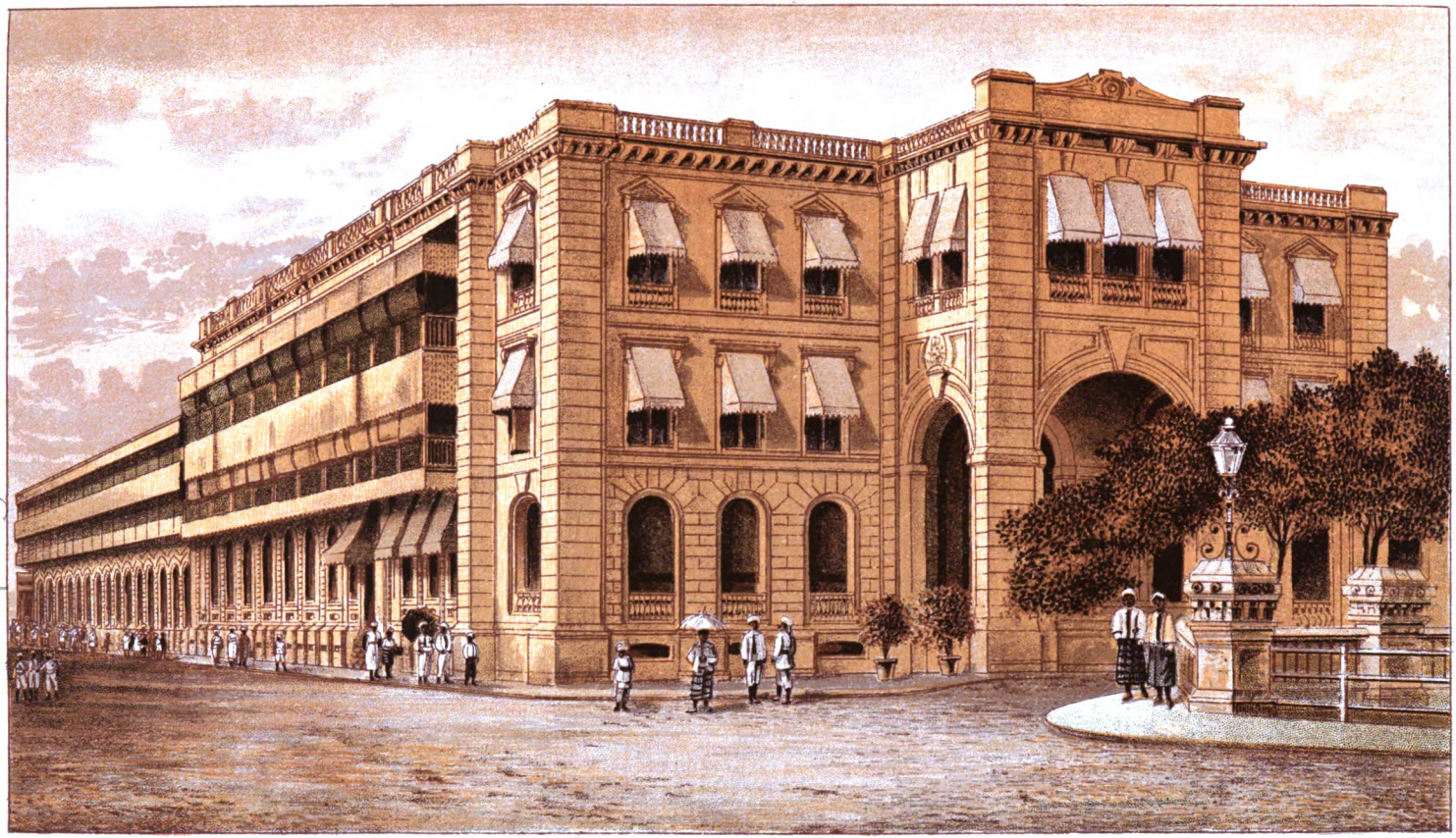
DISEASES.

The most formidable diseases of Ceylon are malarious fevers, malignant dysentery, and wasting diarrhœa, with "sore mouth." These are varied forms of "fever," which occupies here the place of lung disease in England. Elephantiasis, or "Cochin leg," is fever caused by inflammation of the absorbent vessels and glands; the remote cause of the inflammation is supposed to be a blood worm in the circulation. "Parangi," a loathsome congenital disease aggravated by scarcity of nutritious food, prevails in some of the more remote portions of the Island. It is said to resemble the "yaws" of the West Indies. Ceylon boils, signs (generally) of debility, are sometimes very trying, but rapidly disappear on a "change" to the cool mountain regions, or *vice versâ* to seaside. Liver disease is often troublesome, but is far less prevalent than on the continent of India, and sunstroke exceedingly rare. Cholera and smallpox become occasionally epidemic, but Europeans very seldom fall victims to either. With facilities for occasional change, and the exercise of care and temperance, the chances for European life here are scarcely, if at all, inferior to what they are in England. The large majority of the planters enjoy robust health. Surveyors, road officers, and railway engineers, when compelled to traverse feverish regions and endure exposure to sun and rain, incur much greater risk, as also planting pioneers in new districts. With all its moisture, the climate is favourable to the extension of consumptive lives. Here, as elsewhere in the Tropics, life is practically passed in the open air, so that vitiated air in dwellings is seldom a source of disease. Children of European parents can generally remain in Ceylon till 8 or 9 years, and in the hill-country even longer, especially at Nuwara Eliya, with its average temperature of 58 degrees. Colombo is a specially healthy town, and its sanitation will be still more improved when the hill water supply is fully provided. Government Civil Medical

Department and Hospitals cost over Rs. 700,000 per annum ; about 200,000 cases are treated in hospitals and dispensaries annually ; in hospitals alone, 24,000 cases with 3,000 deaths, rest cured or relieved ; there are 350 lunatics and 200 lepers in asylums. About 2,000 paupers noted by Government; no poor laws ; relief extended in towns by friend-in-need societies, voluntarily managed and supported, with some aid from general revenue.

Objects of Special Interest to Strangers in Ceylon.

Colombo and Western Province.—The Fort : Government offices ; Sir Edward Barnes' statue ; the Grand Oriental Hotel ; the military buildings. Galle Face esplanade and drive. The lake. The law courts at Hulftsdorp, with busts of the late C. A. Lorenz and Sir R. F. Morgan, Kt. (by a Ceylonese, R. G. Andriesz). Town hall, with pictures of H. R. H. the Duke of Edinburgh, Sir Hercules Robinson, Sir William Gregory, the late C. A. Lorenz, M.L.C., and Sir C. P. Layard, K.C.M.G. Cinnamon Gardens, Circular Walk Gardens, near which is situated the Colombo Museum, with statue of Sir William Gregory, K.C.M.G. Hulftsdorp mills and other establishments for preparing coffee, cinchona bark, cocoanut oil, and coir. Cinnamon culture, peeling and baling at Maradana, or at Ekela and Kadirana, near Negombo. Plumbago stores in Brownrigg street, Cinnamon Gardens. Welikada jail, Lunatic, and Leper Asylums. Koch memorial tower, the Government Civil Hospital. Banyan tree, Hunupitiya. Railway and breakwater works. Government factory and elephant shed. Colombo ironworks. Gasworks. Maligakanda Water Works reservoir. Alfred Model Farm towards Kotte. General Cemetery and Galle Face Cemetery for memorial stones. Wolvendahl Dutch Church, with memorials of Dutch Governors on walls and floors. St. Peter's Episcopal Church, with some interesting monuments on the walls. Roman Catholic Cathedral at Kotahena. Colombo Royal College, St. Thomas' and Wesley Colleges, and other schools. Moor (Mohammedan) boys' school ; mission schools, Borella and Kollupitiya. Ancient tortoise at Tanque Salgado, and large kumbuk tree near mouth of river at Mutwal. Crow island at mouth of river. Quasi peat and breccia formations north side of mouth of river and canals. Bridge of boats and railway bridge across the Kelani river. View of Adam's Peak from Colombo in early morning during north-east monsoon. Boat trip on river to Kelani Buddhist temple. Buddhist temples at Kelani and Kotte. Rich palm, bambu, and general vegetation on banks of river. Mission



GRAND ORIENTAL HOTEL, COLOMBO.

station and schools at Kotte, Gonawala, or Moratuwa. Tea, Liberian coffee, and cacao cultivation at Kalutara, Hanwella, and Polgahawela. Henaratgoda Government Experimental Gardens. Trip to Ratnapura, and scenes of gem-digging, *viâ* side of Kęlani river.

Galle and Colombo road.—Groves of cocoanut palms, with jak, bread fruit, and other trees along the whole route. Bentota resthouse, with river and oyster fishing and sea bathing. View of interior, with mountain range from the road

THE BRIDGE OF BOATS OVER THE KĘLANI RIVER, NEAR COLOMBO.

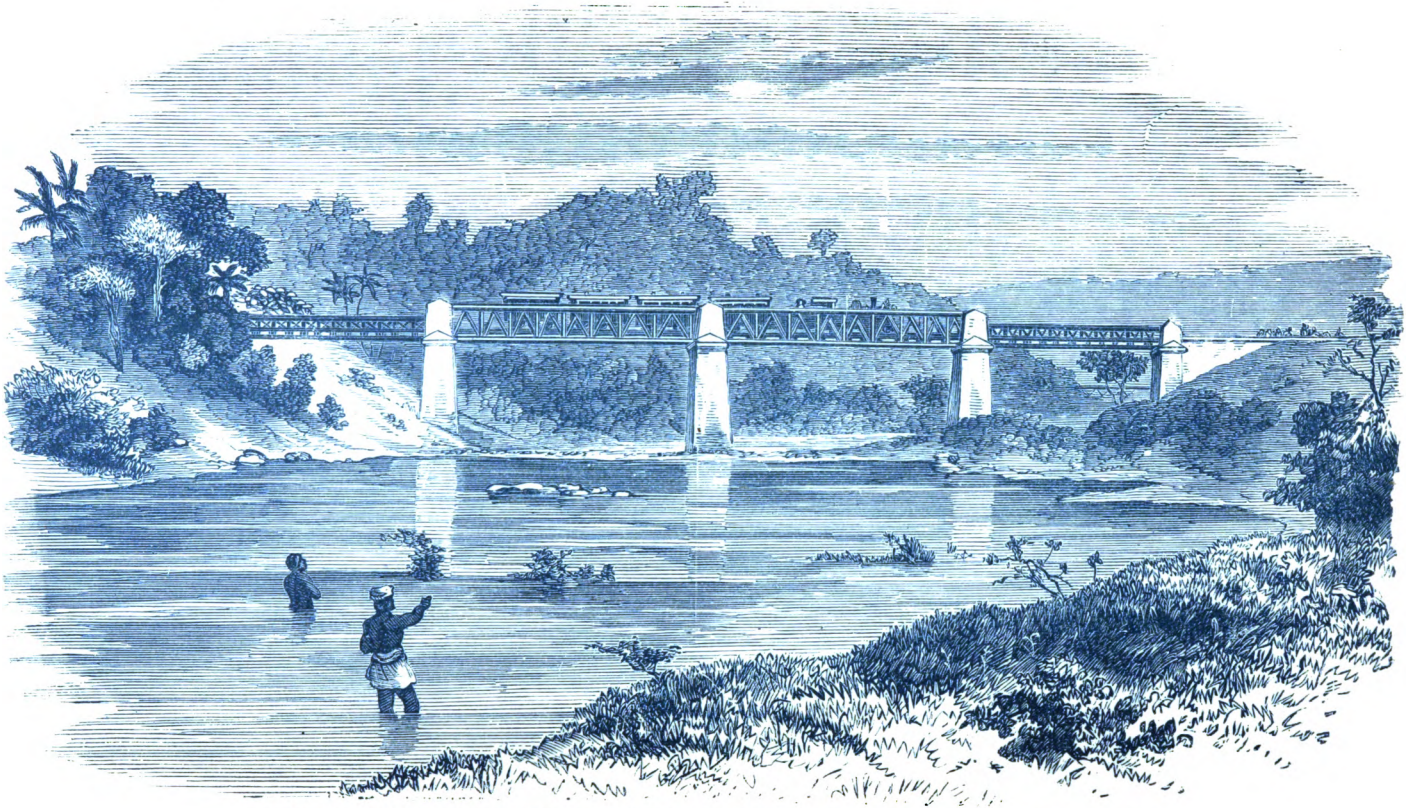
at Beruwala, near the 32nd milestone. The Kalutara river (Kalu-ganga, or black river), bridge, and town. Railway along seashore from Kalutara to Colombo. Panadure outlet for extensive backwaters. Moratuwa, a prosperous village of carpenters. Mount Lavinia Hotel and Boarding House.

Galle and Southern Province.—All Saints' Church, Galle. Native bazaars and shops of jewellers and dealers in tortoise-

shell and carved work; Wakwella and cinnamon gardens near Galle; drives and view alongside the Gin-ganga, of the Haycock and Adams' Peak mountains; Baddegama mission station; Richmond Hill mission station, and view. Cultivation of sugar and lemon-grass by Messrs. Winter & Sons, and others. View from Buona Vista, near Galle, and mission station. Tanks in Matara District. Temple ruins and salt formations, Hambantota. Temple ruins at Dewundara (Dondra Head), near Matara. Weligama bay, Urubokka dam, Weligama, and rock figure of Kusta Rája, or the leper king. View of the fort and harbour of Galle from the site of the Roman Catholic Church at Kaluwella.

Colombo to Kandy, Gampola, Nawalapitiya, Hatton, and Nánu-oya, also to Mátalé.—Rice fields at Mahara and along line, Maha-oya (river), and vegetation. Kadugannáwa pass, Dekanda valley, Alagalla mountain and railway incline, with Miyangala gallery, "Sensation rock," and tunnels. View of Dekanda valley from incline. View looking back from Sensation rock. Dawson's monument at Kadugannáwa. Pérádeniya satinwood bridge and railway iron lattice bridge. View from railway of the Mahaweli-ganga, and of Pussellawa mountains beyond Gampola. View of Mahaweli-ganga and Kotmale on railway, and Pasbage, and of Adam's Peak, Dolosbage, and Ambagamuwa, onwards to Náwalapitiya. View towards sea over Yakdessa, and low-country from Ambagamuwa; waterfalls and rocky glen before Hog's back tunnels; the Watawala valley; Dikoya valley and Adam's Peak; Great Western mountain from Kotagala valley; view over Pussellawa and distant mountains from St. Andrew's; St. Clair falls; Devon falls; the *coup d'oeil* of upland and mountain forest and river scenery from side of Great Western and Nánu-oya. The Mátalé railway bridge over Mahaweli-ganga, view of Hunasgirikanda and Etapola, views of the Mátalé valley, Aluwihara, Balakaduwa pass. Tea on Mariawatta estate; coffee in Dikoya or Agrapatana; cinchona in Dimbula; cacao in cultivation on Palakele and Wariyapola.

Kandy, Central Province, &c.—Sir Henry Ward's statue in Kandy. Daladá temple at Kandy. Audience hall and octagon, Prince of Wales' fountain, new jail, police station, and kachchéri. Messrs. Walker & Co.'s factory for coffee and tea preparing machinery, &c. Mátalé railway. Hantane peak or Matana Patana for view. Gregory road and Lady Horton's walk. The Pavilion. Pérádeniya Botanic Gardens. Gampola bridge. Uva, Dimbula, and Mátalé for coffee, tea, cacao, and cinchona cultivation. Ramboda falls and pass. Kadiyanlena, Kotmalé, and Devon and St. Clair falls, Dimbula. Huluganga falls in the Knuckles. View of



VIEW OF THE RAILWAY BRIDGE OVER THE MAHAWELI RIVER AT PÉRÁDENIYA, CEYLON.

Adam's Peak from Ambagamuwa road. Waterfalls in the Horse-shoe valley, Maskeliya, and at the Balangoda end. Adam's Peak, the climb up and view from. Trip to Anurádhapura *viá* Mátalé and Dambulla (where rock temple); ruins at Polonnáruwa; the great tank region, &c. Elk hunting, elephant shooting, gemming, &c.

From Nánu-oya to Haputalé.—By railway across the dividing plateaux, with grand views of Uva and the low country to the sea. The trip to Badulla. Ella pass and the highest waterfall in Ceylon. The Badulla temple, fort, and hot springs.

Nuwara Eliya.—The drive from the Nánu-oya station upwards; the Blackpool and variegated forest tints. The "Longden road" along the side of the Nánu-oya; the drive round the lake and Moon plains; on the new Uda Pussellawa road with beautiful alternation of forest and grass land ("patanas"), magnificent gorges, fern-covered gullies and waterfalls; the waterfall and "grotto" on Portswood estate; the view of the lake; bund and river from Lady Horton's walk above the bund: "The Lady's Waterfall" below the patanas leading from the bund (Elliewatte Gorge), and Lady Horton's walk; the view of Adam's Peak, Dimbula, &c., from One-tree hill; also of the whole circle of mountains, Adam's Peak, Kirigalpotta, Kuduhugala, Totapola, Hakgala, Haputalé, Namunakulakanda, Uda Pusselláwa, Lover's Leap, Pidurutalagala, Kikilimana, and of the town, plains, and lakes from Naseby Hill, 6,400 ft.; of Uva from Hakgala Gardens, with the Gardens themselves, fernery, &c., and the delightful drive down. The climb to Pidurutalagala summit. The old graveyard.

Jaffna.—The fort and batteries, the Dutch Church, the Batticotta seminary, "the bottomless well," the Friend-in-need Society's hospital, the market, salt léwáyas, and pearl banks off Arippu. Tobacco cultivation and the coral wells at Jaffna, &c., Giant's Tank ruins in Mannár District.

Batticaloa.—Fort and batteries, beautiful bay of Vandeloos. Extensive rice and cocoanut cultivation.

Trincomalee.—One of the finest harbours in the world. Fort Ostenburg, Fort Frederick. Nillavelli salt pans. Hot springs at Kiniyai.

Dambulla, Anurádhapura, Polonnáruwa, &c.—See, for full particulars of sights and way to make journey, "Buried Cities of Ceylon."

Shooting Trips.—For snipe, hare, and small deer in Western, Southern, and other Provinces. For elephant, to Hambantoṭa and Bintenne. For elk, cheetah, &c., in higher hill regions. For crocodiles, bears, &c., in the northern tank regions.

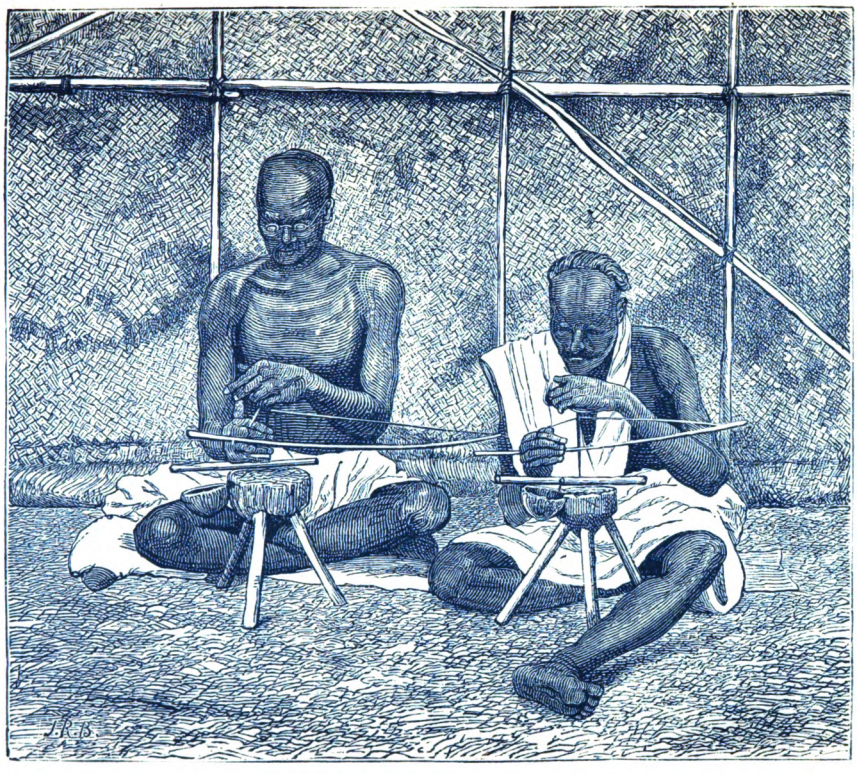
WRITERS ON CEYLON, AND AUTHORITIES TO BE CONSULTED FOR MORE DETAILED INFORMATION.

De Barros, De Couto, Ribeiro (Lee's translation, with valuable appendices), Valentyn, Baldæus, Knox (edited by Philalethes), Percival, Cordiner, Lord Valentia, Bartolacci, Marshall, Davy, Forbes, Bennett, Knighton, Pridham, Emerson Tennent; Furgusons; Casie Chitty's Gazetteer; Parliamentary Papers; Ceylon Blue Books; Governors' Speeches; Sir H. Ward's collected Minutes and Speeches; Ceylon Almanacs, Civil Lists, Manuals, Directories, &c. For *Natural History:* Moon, Gardner, Thwaites, Kelaart, Hooker and Thomson, Templeton, Nietner, E. A. Layard, W. Ferguson, Boake, Steuart, Tennent (Monograph on Elephant, and on Pearl Oysters, Natural History of Ceylon), Legge, Moore, &c. On *Oriental and Buddhistical Literature:*— Turnour, Casie Chitty, Gogerly, Hardy, Jas. Alwis, Fox, Callaway, Tolfrey, Upham, Childers, Rhys Davids, Bishop Copleston; with transactions of Asiatic Societies of Britain, Bengal, Bombay, Ceylon, and Paris, American and German Oriental Societies, "Indian Antiquary," "Orientalist," "Literary Register," &c. On *Antiquities*, besides above: Burrows' "Buried Cities of Ceylon." On *Elephant and Elk Shooting:* Baker. For *Laws and Principles of Justice*, see Thomson's Institutes, collected volumes of Proclamations, Ordinances, &c., with index, and Reports of cases by Marshall, Murray, Morgan, Lorenz, Beling and Vanderstraaten, Beven and Mills, &c., and "Supreme Court Circular" volumes. On *Kandyan Law:* Sawers, Armour, &c. *Tamil* and *Mohammedan Law:* Muttukistna. On *Coffee Planting:* Sabonadiere's "Coffee Planter of Ceylon"; A. Brown's Manual; R. E. Lewis, Aliquis (description of coffee planting in rhyme, by the late Captain Jolly), pamphlets by Dr. Elliott, Geo. Wall, P. Moir, Ballardie, Cross, Owen, &c. *New Products:* On Tea, Liberian Coffee, Cinchona, Cacao, Cardamoms, Cocoanut, Tobacco, and Cinnamon planting, see Manuals published at *Ceylon Observer* Office. *Poetry:* Captain Anderson's "Ceylon" and other poems. On *Missionary Operations:* Harvard, Selkirk, Sir Emerson Tennent's "Christianity in Ceylon," Life of the "Apostolic" Daniel, Hardy's Jubilee Memorials of Wesleyan Mission, Jones' Jubilee Memorials of Church Mission, Memoir of Mrs. Winslow and other American works, with reports of Baptist, American, Wesleyan, Church, and Romish Missions. On *Sinhalese Language:* Clough, Lambrick, Chater, Carter, Jas. Alwis, Jones, Nicholson, Gunasekara, &c. On *Tamil Language:* Winslow, Percival, Rev. W. Clark, A. Joseph, A. M. Ferguson, &c. For the most complete repertory of

general and statistical information affecting the Colony, more especially of its planting enterprise, see successive editions of the "Ceylon Directory and Handbook of Information," by A. M. & J. Ferguson. For local guides : see Ferguson's "Ceylon Railway and Sanitarium"; Burrows' "Kandy and Central Province"; Skeen's "Guide to Colombo." For information bearing on every branch of Tropical agriculture, see the *Tropical Agriculturist*, published monthly at the *Ceylon Observer* Office. For the latest popular work of general information respecting the Island, see "Ceylon in 1893" (with illustrations), by John Ferguson.

ART WORK IN CEYLON.

THE art worker of Ceylon belongs, and always has belonged, to a distinct and not very high caste ; and whether he works in gold, silver, or brass, or paints temple walls, or carves ivory, it makes very little difference to him in the social scale ; he remains a low-caste man, with all the disadvantages attaching thereto. And this fact must always be remembered in criticising Oriental art work. The position of the worker is absolutely and irretrievably different from that of the European artist. He does not work from religious inspiration, like the painters of medieval Italy ; he has none of the incentive of public praise or of the chance of social success and distinction which may possibly stimulate at times the efforts of the modern Michael Angelo. He works because he was born into the caste of art workers ; he traces out his patterns not because they are lovely in themselves or because he has invented them, but because they are the patterns which his caste-ancestors, from time immemorial, have traced, till the source of them has been completely lost. He may equal or surpass his ancestors in delicacy of manipulation, or depth of cutting, or height of relief, but he must not vary the design ever so little, or a dozen village critics will be down upon him, including that great man his chief, at whose door he lives, and under whose patronage he moves and has his being. For the art worker in former times was as necessary an appendage to a great chief's establishment as a carpenter or a "dhoby." He lived under the shadow of the potentate, decorated his knife-handles for him, or worked bangles for the ladies of the establishment ; trembled at his displeasure, or was rewarded with paddy land and privileges for unusually successful



TAMIL MEN DRILLING PEARLS.

work. The result of all this is very obvious in the art work. Laborious detail without originality, repetition without improvement, ignorance of the divisions between the beautiful, the quaint, and the grotesque, prodigality of labour in the slavish imitation of precedents without discrimination, these are all plainly apparent, and knowing the circumstances of the case, their absence would be far more remarkable than their presence is. On the other hand, if some of their models are unworthy, many are very beautiful, more especially their scroll-patterns and the designs into which the lotus enters; and if their attempts to portray deities, demons, or humanity, come too close to the border line between the curious and the hideous, it must be remembered that this is partly due to the wild prolific polytheism of those Indian races from whom these designs originally came. For there is every reason to believe that our art work derives its origin entirely from the neighbouring continent; but the interest of it lies in the fact that it has probably been very little altered (as in India) by successive waves of religious change, Mohammedan, Jain, and Hindu; and even now reproduces very much what existed and was admired in the early days of Buddhist supremacy in Bengal.

Two points about the handicraft can hardly fail to strike the European spectator—the exceeding simplicity of the tools used, and the workman's remarkable memory for detail without any design before him. The latter has of course been one of the hindrances to any progress in the arts: it is not mentioned here as an admirable, but as a distinguishing characteristic.

The two metals most frequently worked in nowadays are silver and brass; and in both the work done will compare favourably with that of India. Gold work is occasionally done by the Siṇhalese; more frequently by the Tamils in the north of the Island, whose minute filagree work, though monotonous, is decidedly worthy of praise. The principal centres of brass and silver work are Kandy, Kęgalla, and Ratnapura.

Good ivory carving is rare and difficult to obtain, owing to the well-known fact that very few indeed of the Ceylon elephants have tusks, and consequently the supply is very limited.

The tortoise-shell work comes chiefly from the district round Galle, in the Southern Province; and the material in use comes mostly from Singapore and the Maldive Islands. There are two different varieties of tortoise-shell, the dark and the light kind. The former is taken from the body of the animal, the light-coloured variety from the claws.

The pottery-ware is of no great moment: the colouring is crude, the clay very fragile, and the colours are not burnt in, but simply laid on and covered with a kind of varnish made from the milky juice of the jak fruit. Some of the designs are curious and of great antiquity, but it compares very poorly with the best pottery of India.

Nor can very much be said in favour of the lace work, so far as originality is concerned, for the patterns are mostly copies from Maltese and Irish models, and the art is certainly no older in Ceylon than the arrival of the Portuguese. But though it cannot be classed as an originally native art, the work is remarkably cheap and durable, and sometimes exceptionally good.

NOTES ON THE PAINTINGS OF THE PERAHERA PROCESSION.

(In the Main Court.)

PAINTINGS prepared for the World's Columbian Exposition, illustrating sections of the Kandy Perahera Festival :—

No. 1.—Devil dancers (to avert the evil-eye), and whips to clear the way.

No. 2.—Dancers and singers with pots (view of Máligáwa in the background).

No. 3.—Musicians.

No. 4.—Chiefs (or wardens) of temples.*

No. 5.—Máligáwa elephant, with Tooth Relic.

No. 6.—Standard bearers and pikemen.

No. 7.—Elephant belonging to a dewálé, or temple of inferior gods.†

No. 8.—End of the procession : randhoolies or palanquins of ancient form.

The rest of the procession consists of elephants of minor temples, each preceded by wardens and their attendants and musicians, and followed by standard bearers.

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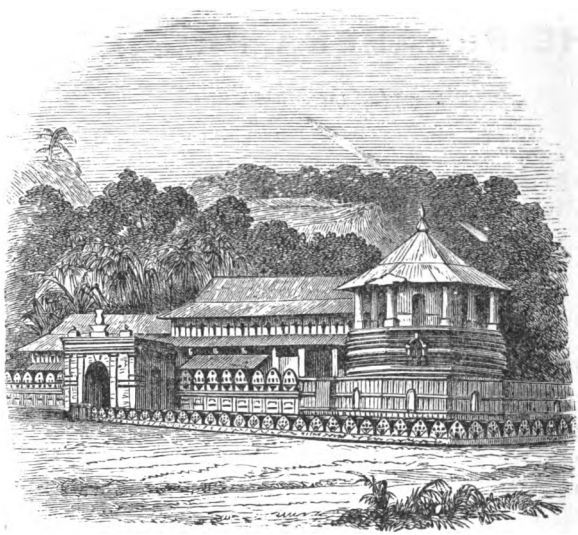
* No. 4.—Chiefs of various grades are represented, together with the peculiar sunshades used by them. White is the royal colour of the Sinhalese, and it is customary to wear white on religious festivals.

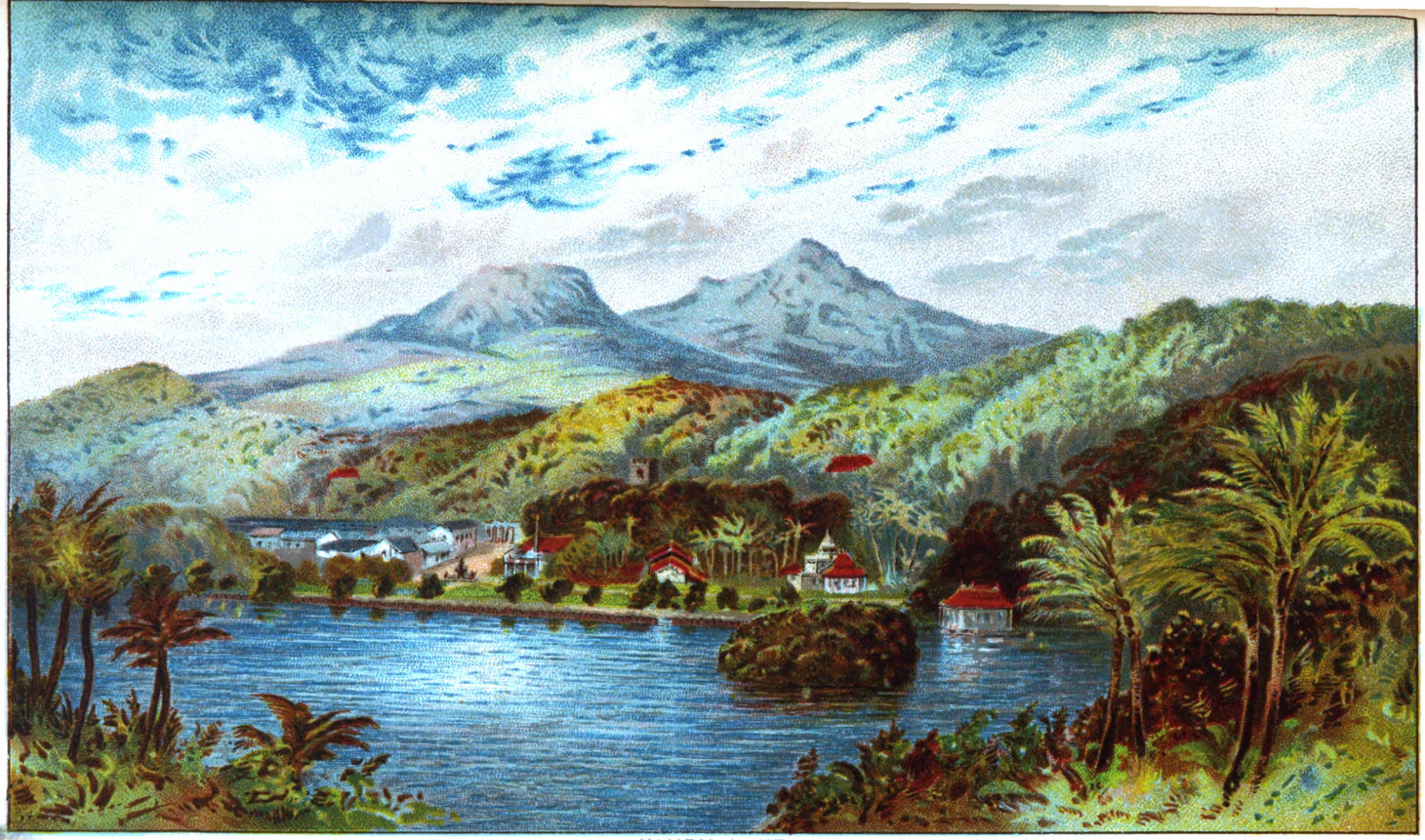
† No. 7.—Dewálés and temples, where the worship of Hindu gods is mixed with the worship of Buddha : hence Hindu surroundings are seen about them. A warden, bare headed, carries an offering of flowers on the back of the elephant. Some of the dewálá elephants are only half trained.

The annual procession known as the Perahẹra in Kandy is a triumphal commemorative one, to celebrate a victory over the king of Jaffna and the release of certain Siṇhalese captives thereby. It was said to have been gained by the aid of a giant in the service of the Siṇhalese king, who tore up a young jak tree for a walking staff, squeezed water out of a stone, killed two elephants by knocking their heads together, and divided the waters of an arm of the sea which divided Ceylon from Jaffna, to enable the Siṇhalese army to cross over; and this feat was done twice, simply by striking a staff on the waters. On the return of the army a pot of water was taken up at the parting of the waters, and



THE "TEMPLE OF THE TOOTH" AT KANDY.

brought to Kandy. This pot and the wonderful staff were deposited in one of the four dewálés in Kandy, and the water renewed every year from Lewella ferry by striking the river with a golden sword at the time of the August full moon, when the above-mentioned events are said to have occurred. By lapse of time each of the four dewálés contended for the honour of being the custodian of the miraculous staff, although the golden pot and the golden sword were always deposited in the Maha Vishnu dewálé adjoining the Pavilion. In order to settle the dispute, the astrologers agreed that a fresh jak tree should be selected by them annually, divided into four pieces, and each piece, representing the giant's staff,



KANDY LAKE

deposited as follows: One in the Vishnu dewálé; one in the Nata dewálé, opposite; one in the Pattini dewálé within the Daladá Máligáwa buildings, and the remaining one in the Katragam dewálé (whose elephants are always the largest, and surrounded by standards containing Hindu emblems). These sections of the jak tree are burnt every year as the dewálés receive fresh ones, and their ashes are scattered to the four winds. As the Maha Vishnu dewálé demands a valuable security on lending the golden pot and golden sword even for a few hours of the last day of the Perahera, the practice of depositing the Tooth Relic in the dewálé during the interval of the necessary journey to Lewella for fresh water and back must have originated, and given a colour to, the supposition that Buddhism and the Perahera have some connection with each other. The dewálés are temples where the gods of the Hindu Pantheism are worshipped. Ceylonese Buddhism recognises them as inferior gods, but Siamese Buddhists refuse such recognition. The effigy of the giant is now carried in the procession in the costume of a Jaffna Tamil, although he was a loyal subject of the Siṉhalese king, and it was at the instance of his mother's appeal to the Siṉhalese king to deliver her husband, who was carried captive to Jaffna, that the invading army was raised. The randhoolies at the end of the procession are ancient palanquins completely covered, in which the wives of the leaders of the expedition are supposed to be carried. They are empty, and surrounded by female retainers of the family who walk beside them. The principal temples provide three elephants each. Those who carry relics do not carry men, and their drivers proceed on foot, embracing the decorated tusks of the animal, while incense bearers lead the way. The elephants on either side carry men with peacocks' tail fans, silver shields, state umbrellas, &c. Single elephants from subordinate and poorer temples are sometimes as small as five feet in height. Each elephant is preceded by chiefs, who are the wardens of the temple to which the elephant belongs, together with their attendants; musicians and standard bearers, with pikemen, walk before them, and surround them. Dancers with cross staves and with pots of flowers go before the musicians; men with long Kandyan whips and with copper balls waving around them, clear the way in front; and devil dancers in grotesque masks, and men and boys carrying flags of grotesque shape, proceed in front of all others, to avert the influence of the evil eye. A similar order is observed along the whole line of the procession respecting each temple.

NOTES ON THE BUDDHIST PAINTINGS.

(In the Main Court.)

OF the eight mural paintings in this Court, four represent the Perahera procession, which will be found fully described in another article. The other four represent the chief incidents of the "Deva Dharma Játaka," one of the "birth stories" told by the Buddha of himself as having happened during the period preceding his attainment of Buddhahood. No translation has (so far as is known) hitherto appeared of this particular "Játaka," and one is therefore (with some hesitation) appended. It has been made by Mr. T. B. Yatawara, the son of a Kandyan chief; and the original has been adhered to as closely as possible. It may possibly interest some few readers to peruse a specimen of early Buddhist theology, and to see, in the mural frescoes, the conventional method of illustrating these drawings on temple walls or roofs.

DEVA DHARMA JÁTAKA.

This the Tathágata related while residing at Sevat, to reprove a certain wealth-storing mendicant. This person became a mendicant after his wife's death, and he sought a separate cell for himself and filled it with every requisite, and equipped it with men-servants and even maid-servants for service. He had two or three robes. He would not put on the robe he wore during the day at night, nor did he wear the robe he wore at night during the day. One day when other mendicants were passing by his cell they saw these robes put out to dry, and they asked him, "To whom do these belong?" He replied, "They are my own." Then they took him by force before the All-Enlightened One, and complained to him that he was found leading a life which was prohibited. Then the Blessed One addressed the mendicant in these words: "Is it true, O mendicant, that you are wearing two to three

upper robes?" And he replied, "Yes, my Lord!" "Do you not know that *I* use only one, and that my law prohibits you from using more than one?" continued the Blessed One. Then the mendicant replied, "Yes, my Lord, I have no use even of this robe": and throwing off his upper garment he stood up in the presence of all without fear or shame. Thereupon the Blessed Lord said, "This is not the first time you were born without fear or shame; in a previous incarnation you were born so too; for, O mendicant, you eked out a miserable life as a water-demon." Buddha then related the story of the *past* at the request of one of the mendicants.

In the past, when a King called Brahmadatta was reigning in Benares, in the Kingdom of Kasi, giving satisfaction to his subjects, there was delivered out of the womb of his chief Queen a Prince, and on the name-giving day he was called Prince Mahinsaka. When this Prince was able to run up and down and play about, another son was born to the Queen, and he was called Prince Candra. When this second Prince was running up and down and playing about, their mother died. After that the King installed another Princess as his chief Queen. This Queen lived harmoniously with the King, and pleased him always; and a Prince was born to her. He was called Prince Suriya. The King seeing *this* son was greatly pleased, and said to his Queen, "My dear one! you had better receive a *wara** for your son." The Queen replied, "That *wara* I shall ask whenever I want it," and mentally reserved it for the future.

When this Prince grew up, the Queen addressed the King thus: "My Lord! you have, on the day my son was born, given me a *wara*, and therefore may it please Your Majesty to give over the Crown to my son." Hearing this the King said, "I have two other sons as brilliant as two columns of fire," and refused to comply with her request, saying, "I cannot give the Kingdom to your son," although she importuned the King by repeating her request over and over again. The King knowing that the Queen was asking the Kingdom for *her* son thought, "This one may do some injury, evil, or deliberate injustice to *my* sons," and called them to him and said, "My dear children! when Prince Suriya was born I gave him a *wara*, and now his mother asks the Kingdom for him. I do not wish to give the Kingdom to him. Women are naturally sinners, and it will be bad if she plots any evil schemes against you. You had better, therefore, take refuge in the woods, and come here after my death, and reign over this Kingdom which belongs to you." Thus saying he wept, and kissing the heads of the Princes he sent them off. These two, after saluting their father the King, were leaving the palace, when they were seen by Prince Suriya, who was amusing himself in the court-yard; and knowing the cause thereof he himself started off with them, saying, "I will also go with my brothers." Departing thus they reached the Himalayas, and while on their way Prince Mahinsaka went off the road, sat down under a tree, and said to Prince Suriya, "Brother dear! go to the tank yonder, bathe yourself, drink its water, and fetch us some water in a lotus leaf."

Now this tank was owned and guarded by a certain water-demon, who received it from King Vesamuni, who, on giving it over to his custody, said, "O Demon! I give you permission to eat all who get into this tank, save those who know the Deva Dharma, but you

* A promise, a grant, a boon.

shall not eat those who do not get into this tank." From that day the water-demon, whenever anyone steps into the tank, inquires from him about the Deva Dharma, and those who reply that they do not know it, he devours.

This Prince Suriya, too, reached the tank, and without taking any heed descended into it. Then the water-demon laid hold of him and asked him whether he knew the Deva Dharma, when he replied, "Sun and moon, these two individuals are called the Deva Dharma." Thereupon the water-demon said, "You do not know the Deva Dharma," and took him underneath the water and kept him there. Prince Mahinsaka, seeing that Prince Suriya was tarrying, sent Prince Candra after him, when the water-demon caught hold of him also, and asked him whether he knew the Deva Dharma. He replied, "The four cardinal points are called the Deva Dharma," when the water-demon, saying "You do not know the Deva Dharma," took him underneath the water, and hid him there.

As Prince Candra, too, had not returned, although it was getting late, Prince Mahinsaka thought, "Surely some calamity must have befallen my brothers": and he himself went to the tank, and seeing the footprints of the two near the tank, thought, "This tank must be one possessed by a demon," and slinging his sword across his shoulders he stood there with bow and arrow in hand stretched over his head. The water-demon, seeing that Prince Mahinsaka did not get into the water, forthwith assumed the form of a man walking in the jungle in search of timber, and said to Prince Mahinsaka, "You seem to be tired with walking. Why do you not therefore get into the tank, bathe yourself, eat the yams and the tender leaves of the lilies, deck yourself with their flowers, and go away happily?" Prince Mahinsaka seeing him, thought, "This must be the demon who seized my brothers," so he asked the demon, "Did you seize my brothers?"

"Yes, I did," he replied.

"Why did you do so?" inquired the Prince.

"Because I have permission to eat all who may get into this tank."

"What! Have you permission to eat one and all?"

"Yes. I have permission to eat all, save those who know the Deva Dharma."

"Will the Deva Dharma be of any use to you?"

"Yes! The Deva Dharma is of use to me."

"If so, I shall repeat it to you. Hear me."

Hearing this the water-demon said, "In that case say it, and I shall hear it." Then Prince Mahinsaka replied, "I shall proclaim the Deva Dharma to you. I am powerful enough to do that, but as I am soiled with travel I feel weak and disinclined." Thereupon the water-demon bathed Prince Mahinsaka, gave him water to drink, decked him with flowers, anointed him with perfumed oil, and gave him a decorated seat covered with a magnificent canopy.

Prince Mahinsaka seated on the "throne" prepared for him, got the demon to sit near his feet, and saying, "Now, then, hear it," proclaimed the Deva Dharma thus: "In this World if any one were to refrain from sin, and from committing other offences which are against the laws of society, through fear and shame; if he lives in dread of consequences, if he is always devotedly attached to meritorious deeds, if he possesses the virtues and instincts of a noble and generous nature, the conduct of that man is called Deva Dharma in this World."

The demon hearing this sermon was pleased with the Prince, and said to him: "I am delighted with you, I shall give you one of your brothers. Which of them will you have?" Hearing this the Prince said, "Let me have the younger of the two." Then the water-demon replied, "O Pandit! You only know the Deva Dharma, and beyond knowing it you do not practise it." "Why do you say so?" inquired the Prince. The demon replied, "Because by your asking for the younger of the two, instead of the elder, you do not recognise and practice the law called the privilege and advantage of seniority."

Hearing this, Prince Mahinsaka replied, "O Kako Demon! I know the Deva Dharma, and I *do* practise it. It is on account of this younger brother that we came into the woods, and it was on his account that the Queen asked the Kingdom from my father for him. And my father, without granting her that boon, told us to live in this wood to save our lives. My younger brother, who had heard it, came to the woods with us without staying behind. And now, if we say that this Prince was devoured by a demon in the forest we shall not be believed; and, being afraid of getting into contempt and disgrace, I asked you to give me the younger of my two brothers." The water-demon having heard this, cried out, "Very good, very good, Pandit! You know the Deva Dharma, and also practise it," and through joy he applauded him again, and delivered the two brothers to him. Then Prince Mahinsaka, advising him, said, "O Demon! By the power of the sins you have committed, you now eat and drink the flesh and blood of other bodies. If you continue thus you will never be able to get out of the Four Hells. And therefore, henceforward leave all sins and do meritorious acts." Acting on this advice the Prince was able to convert the demon. When Prince Mahinsaka was living there under the protection of the demon whom he had converted, one day, looking up at the stars and their position, he saw that his father had died; so he returned to Benares with the demon, became King of that country, and made Prince Candra his Heir-Apparent, and Prince Suriya he made Prime Minister. As for the demon, he built a temple on a site which pleased the demon, located him there, and gave orders that offerings of rice, flowers, lights, scent, and ointment should be made to this beneficent sprite, before paying such honours to anyone else. Prince Mahinsaka reigned virtuously and made a wise King, and in the course of natural events he departed this life for the next world.

The Teacher having delivered this religious discourse in illustration of what he said, summed it up by saying: "The water-demon, who possessed no fear and shame, was this mendicant; Prince Suriya was Ananda, Prince Candra was Sariputra, and Prince Mahinsaka was myself, who have now become the All-Enlightened One."

Key to the Paintings.

First Painting.—The king in his palace, with his first queen and her two sons, Mahinsaka and Candra.

The king on his throne, with his ministers on their knees before him.

The funeral procession of the first queen.

Second Painting.—The king has married a second queen, who has a son. The queen is begging a favour for her son, which the king promises to grant.

Palace gateway, decorated with the "makara torana" (a very familiar incident of temple decoration in Ceylon developed out of the "Buddhist window").

(The new queen has reminded the king of his promise, and asked for the kingdom for her son.) The king is seen bidding farewell to his two elder sons, whom he bids hide in the jungles.

They start for the Himalayas, and are met by Prince Suriya (the new queen's son), who elects to join them.

Third Painting.—Arrival of the trio in the forests of the Himalayas: forest scene.

Prince Suriya and Prince Candra go forth to seek for water in a neighbouring lake. They are met by the water-demon who inhabits it, and asked if they know the *Deva Dharma*. As they do not, he seizes and imprisons them.

Prince Mahinsaka goes on the same errand, armed. Meets the demon in the form of a villager. Is questioned as to the *Deva Dharma* and replies correctly. The demon attends on and adores Mahinsaka, and restores his two brothers. The three live with the demon.

Prince Mahinsaka gazes at the stars, and ascertains thereby his father's death.

Departure of the three princes and the demon for Benares.

Fourth Painting.—A temple has been built for the repentant demon, and he is seen installed in it.

Prince Mahinsaka (having succeeded his father) on his throne, and his two brothers in honourable places (above).

Funeral and cremation of the virtuous Mahinsaka.

THE TANK REGIONS OF CEYLON: ELEPHANTS BATHING.

CATALOGUE OF EXHIBITS

IN THE

Ceylon Courts

AT THE

WORLD'S COLUMBIAN EXPOSITION.

CLASS A.—AGRICULTURE, ETC.

Group 1, Cereals, Etc.

The Ceylon Commission.

Paddy—

1601 Kiri-naran
1602 Sudu-hathela
1603 El-hal
1604 Kalu-hathela
1605 Agara-dewareddiri
1606 Mada-el
1607 Hathela
1608 Horanawala
1609 Kalu-dewareddiri
1610 Kothyaram
1611 Sudu-mawi
1612 Hapu-dewareddiri
1613 Kalu-hathela
1614 Elwi
1615 Sudu-handiran
1616 Sudu-hineti
1617 Gal-horanawala
1618 Ratkunda-mawi
1619 Horanawala
1620 Sudu-dewareddiri

Seeds, etc.--

472 Indian corn
745 Iringu
1555 Aba
1556 Muneta
471 and 1557 Kurakkan
1558 Madita
1559 Me-eta
1560 Kumburu-eta
1561 Patangi-eta
1562 Bada-iringu
1563 Silindi
1564 Arecanut
1565 Kollu
1566 Komba eta
1567 Dhomba-eta
1568 Thala
1569 Endaru eta
1570 Bulu
1571 Nelli
1572 Kekuna
1573 Arula
1574 Gammiris

Group 2, Starch, Etc.

The Ceylon commission.

1730 One bottle arrowroot flour

Group 3, Sugar Syrups.

The Ceylon commission.

851 Black jaggery from the kitul palm
852 White do. do.
853 Crystallized do. do.
854 Jaggery syrup

Group 4, Food Preparations.

Charles De Soyza.

1119 Poonac
1122 to 1133 Desiccated Cocoanut

D.P. Dias.

38 One case of preserves

J. A. Gauder.

40 One case of preserves

Julian Heyzer.

1678 Six bottles common sauce

Group 5, Tea, Coffee, Spices, Etc.

From various Estates.

Tea from—

1 Blair Athol estate
2 West Hall estate
3 Maha Coodagalle estate
4 Tonacombe estate
5 Broad Oak estate
7 Fairlawn estate
8 Dunkeld estate
9 Dunkeld estate
10 Ardlaw and Wishford estates
11 Sandringham estate
12 Maskeliya estate
14 Portswood estate
15 Newton estate
16 Goomera estate
18 Bunyan and Ovoca estates
19 Espernza estate
21 Shrubs Hill estate
22 Glenalla estate
23 St. John Del Rey estate
24 Blair Athol estate
25 Mousakelle estate
26 Claremont estate
27 Claremont estate
29 Claremont estate
32 Holmwood estate
33 Kintyre estate
34 Edinburgh estate
36 Linstead estate
37 Gartmore estate
41 Hethersett estate
42 Court Lodge estate
43 Forest Hill and Mousakanda estate
44 Denmark Hill Estate
45 Tillyrie estate
46 Gonadika estate
47 Dambolagalla estate
49 Brunswick estate
50 Alton estate
51 Dunottar estate
52 Dambolagalla estate
53 Bloomfield estate
54 Rookwood estate
55 Brunswick estate

56 Scottish Tea Company
57 Invery estate
58 Wariagalla estate
59 Laxapana estate
61 Dotale estate
62 Osborne estate
65 Chascieban estate
75 to 79 Kurundu-oya estate
80 Great Western estate
81 Blackstone estate
82 Blackstone estate
85 to 88 J. W. C. de Soysa
89 Callander estate
90 Oononagalla estate
91 Ancoombra estate
94 North Matale estate
96 Vellai-oya estate
97 and 106 Henfold estate
101 Luccombe estate
102 Udaradella estate
104 Pedro estate
105 Aberdeen estate
110 Sinnepitiya estate
111 Glen Devon estate
112 Aberdeen estate
117 Hatale estate
118 Vellai-oya estate
130 Yapame estate
131 Glen Taaffe estate
132 St. Clair estate
133 Lawrence estate
139 Mahacoodagalla estate
141 to 143 Clyde estate
150 Rahatungoda estate
151 Kurundu-oya estate
152 Kurundu-oya estate
153 Leanegahapella estate
154 Columbia estate
1496 Kurundu-oya estate
1499 Kurundu-oya estate
1500 Langapalla Estate
1512 to 1515 Pooprassie estate
1516 to 1518 Gerunella estate
1519 to 1522 Dambetenne estate
1523 to 1525 Monerakande es't.
1526 to 1528 Leymastotte estate
1503 to 1505 Coffee from Haputale estate
1506 to 1508 Coffee from Leymastotte estate
1509 to 1511 Coffee from Monerakande estate
1264 Coffee from Gonavie estate
Coffee from Dombatenne estate
109 Oriantal Bank Estates Co.
30 Cocoa from Gangaroowa estate
108 Cocoa from Oriental Bank Estates Co.
107 Coffee and Cocoa from Oriental Bank Estates Co.

Darley, Butler & Co.

92 Cinnamon.

The Ceylon commission

103 Vanilla
1594 to 1600 Cinnamon of various qualities
1621 Extra quality not exported
6 Cardamoms, Galantenna estate
1593 *a* One bag of cloves
1573 *b* One bag of mace
1593 *c* One bag of nutmegs

Group 6, Animal and Vegetable Fibers.

The Ceylon coimmssion.

195 Lolupatta
196 Belipatta
197 Hana
198 Nawapatta
199 Madapatta
200 Pathaliya
201 Kalawellapatta
202 Ehatu aralu
203 Damunupatta
204 Flax
205 Nianda patta
206 Gonipatta
207 Nuga aralu
208 Wara
209 Maila
210 Lolu
211 Dammunu
212 Nawa

213 Kalawella
214 Nuga aralu
215 Niada
216 Embulpala
217 Liniyapatta
410 Niyanda fibre
855 Kitul fibre
861 Arecanut fibre and rope
862 Aloe fibre
863 Rope of aloe fibre
864 Plantain fibre and rope
865 Bow string of hemp fibre
866 Rope of hemp fibre
867 Nawa fibre
868 Rope of nawa fibre
869 Walla fibre
870 Rope of walla fibre
871 Beli-patta fibre
872 Rope of belipatta fibre
873 Kirindiwel rope
874 Weniwel rope
875 Kukuiwel rope
876 Bandarawel rope
877 Rope made from buffalo hide
878 Rope made from sambur deer hide
915 Three specimens driedaloe fibre from Dumbara

Case of coir
1575 Plantation fibre
1576 Abatu
1577 Muruwa
1578 Hana
1579 Wara
1580 Anas
1581 Beli
1582 Nawa
1583 Bandakka
1584 Goni
1585 Niyada
1585*a* Walla
1713 Naruvilly
1714 Elechu
1715 Banyan
1716 Maral
1717 Chaya root
1718 Nuga
1719 Nudella
1720 Wal-hana
1721 Kula-wal
1722 Geen shell
1723 Madu
1724 Napiritta

C. P Hayley & Co.,
1677 Ten specimens of coir yarn

Aitken, Spence & Co.
1679 Seven packets of coir and one packet of kitnl fibre

Delmege, Reid & Co.
28 One case coir exhibits

Darley, Butler & Co.
92 Coir yarn

Group 7, Alcohols, Etc.

The Ceylon commission.
1591 Two bottles milk wine

Group 8, Machinery for Distilling, Etc.

The Ceylon commission.
638 to 649 Set of models illustrative of an arrack distillery

Don A. Weeraratne
74 Model of an arrack distillery

Group 9, Farms and Farm Buildings, Etc.

The Ceylon commission

282 Model of Kandyan grain store

775 Large model showing the cultivation of tea, rice, and cocoanuts.

Group 10, Farming Tools, Impliments, Machinery, Etc.

The Ceylon commission

425 Mamoty
426 Mamoty
427 Adze
428 Katty
429 Axe
430 Knife
431 Knife
432 Knife for cutting grass
433 and 434 Chisels
436 and 437 Ploughs
438 Mud Planer
439 and 440 Yokes
441 Winnower
475 Mud planer
476 Goad
477 Stick for driving bulls
495 Plough
496 Yoke
497 Mud planer
498 Goad
499 Vessel for throwing water
500 Mamoty
501 Paddy measure
502 Grass cutter
602 Habaruwa, a scare-crow
607 Set of instruments for shoeing bullocks
608 Set of irons for branding cattle
610 Set of cinnamon peeler's tools
1168 Model of water scoop
1169 Do mud planer
1170 Do mamoty
1170 Model of plough
1172 Goad

The Hon T. B. Panabokke

77 Model of a sickle

Group 11, Oils, Etc.

C. P. Hayley & Co.

140 One case of essential oils

Delmege, Reed & Co.

1262 and 1263 Citronella Oil

Darley, Butler & Co.

92 and 93 Cocoanut Oil

Ceylon Government

1342 One bottle mercantile cocoanut oil

1343 One bottle cinnamon oil

Ceylon commission.

1586 Gingeli (tala-tel)
1587 Bassia longifolia [mi-tel]
1588 Brassica junicea [aba-tel]
1589 Calophyllum mophyllum [domba-tel]
1590 Castor oil (enduru-tel)
1591 Calophyllum zeylanicum [kekuna-tel]

Charles De Soysa

1120 Cocoanut oil

Peter A. Jansen

196 Two bottles cocoanut oil, 25 years old

Group 12, Forestry and Forest Products.

The Ceylon commission.

981 Elaeodendron glaucum
982 Mimusops hexandra
983 Hydnocarpus alpinus
984 Adena cordifolia
985 Eugenia bracteata
986 Eugenia jambolana
987 Mischodon zeylanicus
988 Gleniea zeylanica
989 Tabernæmontana bichoto mado
990 Vitex Leucoxylon
991 Cassia fistula
992 Albizzia amara
993 Wrightia tomentosa
994 Albizzia odoratissima
995 Holarrhena mitis
996 Odina Woodier
997 Sapindus marginatus
998 Eugenia Gardneri
999 Albizzia stipulata
1000 Albizzia Lebbek
1001 Artocarpus nobilis
1002 Alseodaphinesemicarpifolia
1003 Napoleona Longana
1004 Morinda citrifolia
1005 Salvadora persica
1006 Stereospermum chelonioides
1007 Xylopia parviflora
1008 Melia dubia
1009 Canthium didymum
1010 Eugenia lissophylla
1011 Semecarpus nigroviridis
1012 Dimorphocalyx glabellus
1013 Barringtonia acutangula
1014 Diospyros ebenum
1015 Nephilium Gardneri
1016 Premna tomentosa
1017 Sarcophalus cordatus
1018 Maba buxifolia
1019 Sheblus asper
1020 Diosphyros montana
1021 Carollia entigerima
1022 Vernonia arborea
1023 Walsura piscidia
1024 Diploxpora Dalzelli
1025 Feronia elephantum
1026 Atalantia missionis
1027 Alangium Lamarkii
1028 Callophyllum inopyllum
1029 Canthium parviflorum
1030 Ixora parviflora
1031 Diospyros ovalifolia
1032 Gardenia latifolia
1033 Frenela orientalis
1034 Gisiomops walla
1035 Mimusops elengi
1036 Eugenia operculata
1037 Acronychia laurifolia
1038 Myroxylum Percival
1039 Diosphyros embiyopteris
1040 Pityramthe verrucosa
1041 Mallotus alva
1042 Alophyllus zeylanica
1043 Canarium zeylanicum
1044 Largerstrœmia flos-reginæ
1045 Ficus glomerata
1046 Persia semicarpifolia
1047 Chætocarpus castanocarpus
1048 Cassia siamea
1049 Alstonia scholaris
1050 Mangifera zeylanica
1051 Ægle marmelos
1052 Butea pondosa
1053 Erythroxylon monogynum
1054 Dalbergia frondosa
1055 Hemicyclia Gardeneri
1056 Sapium insigne
1057 Eugenia Neesiana
1058 Pterocarpus marsupium
1059 Diospyros misignis
1060 Phyllanthus indica
1061 Memscylon umbellatum
1062 Pongamia gbalra
1063 Strychnos Nux vomica
1064 Dellenia retusa
1065 Briderlia retusa
1066 Polyalthia sepiaria
1067 Flacourtia sepiaria
1068 Phyllanthus embellica
1069 Cleistanthus pallidus
1070 Chikrassia tabularis
1071 Pterospermum subcrifolius
1072 Aryadrsachtu indica
1073 Brassia longifolia
1074 Atalantia monophylla
1075 Vitex altissima
1076 Mallotis zeylanicus.
1077 Spondias mangefera
1078 Gitea rottleriformus
1079 Pleurostylia Nightii

1080 Samahera indica
1081 Berrya amonilla
1082 Myristica laurifolia
1083 Gyrocarpus Jacquini
1084 Tamarindus indica
1085 Aglaia Roxburghiana
1086 Limonia alata
1087 Teminalia gladea
1088 Pericopsis Mooniana
1089 Cratœva Roxburghii
1090 Eugenia Sylvestris
1091 Aporosa Lindleyana
1092 Accacia leucophlora
1093 Mesua ferria
1094 Ficus tseila
1095 Zizyphus ornopha
1096 Batica Roxburghiana
1097 Feliscium decipiens
1098 Tectonia grandis
1099 Dipterocarpus zeylanicus
1100 Hemicyclia sepiaria
1101 Leeasam Briena
1102 Diospyros cruminata
1103 Polyalthia coffocoides
1104 Stephegyne Parivifolia

Timbers and Cabinet Woods.

THE whole of Ceylon, to the summit of the highest mountains, was once covered with dense forest. In the hills, however, European enterprise has destroyed hundreds of square miles of timber originally cleared for coffee, but now mostly occupied by tea. The dry districts of Ceylon, which comprise nearly four-fifths of the area of the Island, are still forest country, but the trees are for the most part small and of little commercial importance. The most attractive of the cabinet woods of Ceylon is the calamander [*Diospyros quæsita*], "kalu-mederiya" of the Sinhalese. It is a tree of slow growth, and is now becoming extremely scarce. The lower part of the timber of the famous tamarind tree [*Tamarindus indica*, "siyambala"] produces a variegated ornamental wood, but little inferior to calamander. Satinwood [*Chloroxylon Swietenia*, "buruta"] is one of the best known and most abundant of the useful timbers and fancy woods of Ceylon; it is found chiefly in the North-Western and Eastern Provinces, especially at Trincomalee and Batticaloa. Another highly valued cabinet wood much used for all kinds of furniture in Ceylon is the nandoon [*Pericopsis Mooniana* "nedun"]. This species is peculiar to Ceylon, and found in the Western and lower parts of the Central Province No wood is better known in Ceylon than ebony, produced by the *Diospyros ebenum* [Kaluwara], and the carved furniture made of it at Kalutara and other places is justly admired and very costly, as the wood is very hard and difficult to work. These woods are admirably displayed in the beautiful collection of furniture lent by Lady de Soysa. The following series of woods contain as many specimens as could

be procured at short notice, but must not be considered as thoroughly representative of Ceylon forestry:—

1037 *Acronychia laurifolia* [Ankenda]
984 *Adina cordifolia* [Kolon]
1051 *Ægth marmelos* [Beli]
1085 *Aglaia Roxburghiana* [Kanna-kombu]
1027 *Alangium Lamarckii* [Kalanninchil]
992 *Albizzia amara* [uvil]
944 *Albizzia odoratissima* [Suriya-mara]—Hard and durable and not liable to warp or or crack, used for naves of wheels, pestles and mortars, picture frames, furniture, parts of boats, etc. The heart-wood mades good charcoal.
999 *Albizzia strigulata*[Kabalmara.]
1042 *Allophylus zeylanicus*
1049 *Alstonia scholaris*[Rukattana]—A common tree in Ceylon. Its timber, white and light, and used for coffins, packing cases, &c.
1091 *Aporosa Lindleyana* [Barawa-embilla]
1001 *Artocarpus nobilis.*—Fishing canoes are hollowed out of single trees.
1094 *Atalantia monophylla* [Perum-kurundu]
1026 *Atalantia missionis* [Pamburu]—The wood when variegated is very handsome, and is used for furniture and cabinet work.
1072 *Azadiracta indica* [Kohomba.]
1013 *Barringtonia acutangula* [Ela-mudella)
1073 *Bassia Longifolia* (Mi) The timber is heavy, close, and straight grained, very flexible and durable. It is valued for keels of ships, and for planking below the water-line; it is also used in the construction of carts and for bridges.
1081 *Berrya ammonilla* (Halmilla)
1065 *Bridelia retusa* (Ketakala)—The wood stands the action of water; the bark is a strong astringent.
1052 *Butea frondosa* (Parasu)
1043 *Canarium zeylanicum* (Kekuna)
1009 *Canthium didymum* (Panu-karawis)
1029 *Canthium parieflorum* (Karai)
1021 *Carrallia integerrima* (Dawata)—The timber is ornamental, of a reddish colour, and is used for furniture and fittings.
971 *Cassia fistula* (Ehela)
1048 *Cassia siamea* (Wa)—A coarse-grained wood, used for various purposes.
1047 *Chætocarpus castanocarpus* (Hedoka)--The hedoka is a hard, heavy wood, not much esteemed.
1070 *Chickrassia tabularis* (Kulaukik)
1069 *Cleistanthus pallidus* (Visa)
1087 *Cratava Roxburghii* (Lunuwarana)
1054 *Dalbergia frondosa* (Velurruva)
1012 *Dimorphocalyx glabellus* (Tanitukki)
1014 *Diospyros ebenum* (Kaluwara)—The timber is used for building purposes.
1039 *Diospyros embryopteris* (Timbiri)—Timber of average quality, used for building purposes.
1059 *Diospyros insequis* (Poruwa-mara)
1020 *Diospyros montana* (Vellai-kurunkali)
1031 *Diospyros ovalifolia* (Vedu-kanari)
1024 *Diplospora Dalzellii* (Vella)
1099 *Dipterocarpus zeylani-*

cus (Hora)—Easily worked, but valuable only where very long spars are required, and adapted only to temporary works. being perishable; very useful for centering, dam piling and large scaffolding.

985 *Eugenia bracteata* (Pandikayan)

998 *Eugenia Gardneri* (Dambu)

986 *Eugenia jambolana* (Mahadan)—Used in native house building, cart framing, agricultural implements, and a variety of purposes; resists the action of water well.

1010 *Eugenia lissophylla* (Mahakuretiya)

1036 *Eugenia operculata* (Batadomba)—Used for house building and agricultural purposes.

1074 *Fiscus Tsiela* (Kal-itti)

1097 *Filicium decipens* (Pehimbiya.

1067 *Flacourtia sepearia* (Nul anninchil).

1032 *Gardenia latifolia* (Galis)

788 *Gleenia zeylanica* Walmora).

1083 *Gyrocarpus jacquini* (Tanakku).

1055 *Hemicyclea sepiaria* (Wira).

995 *Holarrhena mitis* (Kiriwalla).—The wood is light in weight and color, of a fine close grain, and is used for inlaying cabinet work.

983 *Hydnocarpus alpina* (Attasankulai).

1030 *Ixora parviflora* (Maharatambala.)

1044 *Lagerstræmia Flos-reginæ* (Murutu).—Very durable under water, though it soon decays under ground

1101 *Leea sambucina* (Gurulla).

1086 *Limonia alata* (Kuladikurundu.

1018 *Maba buxifolia* (Tuvarai).

1011 *Mallotus albus* (Bukenda).

1050 *Mangifera zeylanica* (Etamba).

1008 *Melia dubia* (Lunumidella).— The wood is light and cedar like, and much used for ceilings in Ceylon. The outriggers of native canoes are invariably made of this wood. It is said to resist the attacts of white ants.

1061 *Memecylon umbellatum* (Kora-kaha).

1093 *Mesua ferrea* (Na)-This wood is the best in the Island for piles and the construction of bridges, and is very durable under water. It is straight grained, hard and difficult to work.

1035 *Mimusops Elengi* (Munamal).—This timber takes a good polish, it is used in house building, cart shafts, and for cabinet purposes.

982 *Mimusops hexandra* (Palu). The natives use this wood for oil presses, building, etc. It is excellent for rulers, handles of instruments, and all articles of turnery, and for all cabinet purposes.

989 *Mischodon zeylanicus* (Tammana).

1004 *Morinda citrifolia* (Ahu)

1082 *Myristica laurifolia* (Malaboda).

1015 *Nephelium Gardneri* (Nurth).

1003 *Nephelium Longana* (Mora).—The wood is used for common house building. but is not much in request.

996 *Odina Woodier* (Hik)

1046 *Persea semicarpifolia* (Wewarana).

1060 *Phyllanthus indicus* (Karawu).

1040 *Pityranthe verrucosa* (Dikwenna).

1079 *Pleurostylia Wightii* (Sirupiyari)

1066 *Polyalthia Longifolia* (Nara-illupai).

1062 *Pongamia glabra* (Magulkaranda).

1016 *Premna tomentosa* (Buseru).
1071 *Pterospermum suberifolium* (Velanga).
1005 *Salvadora persica* (Uvai)
1080 *Samadera indica* (Samadara). This wood is used for buoys.
997 *Sapindus emarginatus* (Vai-kottan).
1017 *Sarcocephalus cordatus* (Baki-mi)
1011 *Semecarpus nigrobiridis*
1104 *Stepheyne parvifolia* (Helamba).
1006 *Stereospermum chelonoides* (Lunu madala)
1019 *Streblus asper* (Pirasu)
1063 *Strychnos nox-vomica* (Goda kaduru)
989 *Tabernæmontana dichotoma* (Divi-kaduru.
1084 *Tamarindus indica* (Siyambala).

1078 *Tectonagrandis* (Tekka) —Wood of a light gray colour, fine free grain, and most easily worked. It resists the attacks of white ants, and is very durable when protected from the weather.
1087 *Terminalia glabra* (Kumbuk).
1075 *Vitex altissimai* (Milla)
1023 *Walsura piscidia* (Kirikon).
993 *Wrightia tomentosa* (Palmadankai)
1009 *Xylopia parviflora* (Atuketiya).

CLASS B.—HORTICULTURE.

Group 13, Floriculture.

William Brothers.

60 Case of bulbs from Henaratgoda Gardens
63 Do. Do.
64 Do. Do.

Group 14, Seeds.

Mackwood & Co.

93 Case of seeds—croton, annatto, &c.

CLASS C—LIVE STOCK, ETC.

Group 15, Insects and Insect Products.

The Ceylon commission.

1590 One bottle honey.

CLASS D—Fish, Fisheries, ETC.

Group 16, Fish.

The Colombo Museum.

A few specimens of Ceylon fish.

Group 17, Sea Fishing and Angling.

The Ceylon commission.

284 Set of fishing tackle (three lines and hooks, one gaff, club, small bag, knife, and bait basket

773 Large model of the Ceylon pearl fishery

1341 Model of a pearl-fishing boat

1256 Kaludela

1257 Ududela

1258 Kraal net

1259 Sududela

1260 Moradela

1261 Ingrudela

Group 18, Fresh Water Fishing and Angling.

590 Ritelda, net for fresh water fishing
591 Kara-paladela, do.
592 Atanguwa, net for removing fish from boats
594 and 772 Eratiya, fish trap used in the paddy fields
595 Eswattiya, do. do.
596 Bag for fresh water fish
664 Net for casting in rivers
665 Elandela, a net used in the rivers
606 Fish trap used in the Kandyan Provinces
1731 Hook used in the chank fishery
1732 Probe do. do.

Group 19, Products of the Fisheries.

The Government of Ceylon.

12 A box of chanks

Presented by Captain Donnan.

285 A bag of pearl oysters
286 Pearl oysters, 1 year old
287 Pearl oysters, 2 years old
288 Pearl oysters, 3 to 4 years old
289 Pearl oysters, 5 years old
290 Pearl oysters, 6 to 7 yearsold
291 Pearl oysters, 3 to 6 months old
292 Pearl oyster spat

CLASS E—MINES, MINING, ETC.

Group 20, Graphite and its Products.

The Ceylon commission

1142 to 1144 Case of plumbago,

Jacob de Melt.

66 to 68 Case of plumbago.

Darley, Butler & Co

92 Thirteen specimens of plumbago.

W. A. Fernando.

1173 Six samples of commercial plumbago.

Mackwood & Co.

83 One case plumbago.

Aitken, Spence & Co.

1679 Eight packets of plumbago.

The Ceylon Government

115 One large block of plumbago.

W. M. Smith & Co.

155 One box of pipe clay
156 do do

CLASS F—MACHINERY.

Group 21, Miscellaneous Tools, &c.

The Ceylon commission.

470 Articles used for weaving nets
563 Set of jeweller's tools
603 A set of silversmith's tools
609 Set of tin-maker's tools
615 Dhoby's (washerman's) iron
630 Comb-maker's tools

Group 22, Machines for Working Stone, Clay, and other Minerals.

The Ceylon commission.

282 Gem Polisher's
611 Set of potter's instruments.
612 Set of tile-maker's tools
613 Set of brick-maker's tools
623 Model of brick and tile kiln
624 Model of lime kiln
625 Model of potter's kiln

Group 23, Articles used in the preparation of food.

The Ceylon commission.

229 Medicine cutter
230 Pestle and mortar
231 Grinding stone and roller
281 Oil chekku
403 Round grinding stone
465 Sandalwood grinder

CLASS G—TRANSPORTATION, ETC.

Group 24, Vehicles, Etc.

The Ceylon commission.

112 Low-country double bullock cart
113 Up-country double bullock cart
559 Model of bullock cart
560 Model of dust cart
1141 Model of bullock hackery
1159 Model of up-country cart
1160 Model of low-country cart
1151 Model of single bullock cart, Negombo
1162 Model of gravel cart
1163 Model of scavenging cart
1164 Model of racing hackery
1167 Model of carrying chair
1337 and 1338 Models of passenger hackeries
1339 Model of Negombo cart
1340 Racing hackery
1489 Model of hackery

The Postmaster-General, Ceylon.

1266 and 1267 Two letter bags
1268 and 1269 Two spears used by letter-carriers
1490 Model of the Jaffna and Dambulla mail coach

Group 25, Vessels, Boats, &c.

The Ceylon commission.

474 Kattamaran
480 Padda boat with net
481 River rowing boat
482 A Galle fishing boat
483 Double canoe
1136 Model of fishing canoe
1137 Model of fishing canoe
1138 Model of fishing canoe

1139 Model of catamaran
1140 Model of catamaran
1174 Model of Jaffna ballam
1175 Model of catamaran
1487 and 1488 Models of catamarans
1491 to 1494 Models of canoes
1662 Model of dhoney
1663 Models of padda boat
1664 Model of fishing boat
1665 Model of boat used on the rivers
1666 Model of passenger boat
1667 Model of double canoe
1672 Model of padda boat with net
1672 Model of fishing boat
1673 Model of catamaran
1674 Model of ballam
686 Model of fishing boat, Colombo
687 Model of passenger boat, Galle
688 Model of dhoney
689 Model of padda boat for Colombo canal

Miss Karunaratne.

197 Model of outrigger
198 Model of madel boat

CLASS H—MANUFACTURES.

Group 26, Chemical and Pharmaceutical Products, Druggists' Supplies.

The Geylon commission.

508 Kokum potu
509 Pomatum
516 Ægle marmelos, root of beli tree
517 Bombax malaavricum, katu imbul
518 Ipomœa belidambe, bintamburu
519 Herpestes Mooniana, lunuwila
520 Mimosa pudica, nidikumba
521 Azsdirachata indica, margosa bark

Native Medicinal Plants and Medicines.

In Sinhalese medical practice disease is held to be a disturbance in the equilibrium of the three humors—air, bile, and phlegm—which pervade the human system. These agents preside over certain vital functions, and while susceptible of being affected by temperature, diet, drugs, habits, &c., re-act on the organs whose functions they control. Every individual is supposed to be born with a predisposition to some one of these humours or to a modification of one of them in combination with some proximate principle, corresponding with the nervous, bilious, phlegmatic, and sanguineous temperaments formerly recognized in the practice of Western medicine. The object of treatment is therefore to ascertain the mutual relation existing between these three humours in the patient, and to bring about an equilibrium between them. Crude as this theory may appear, it is essentially the system which, borrowed from India by the Greeks and Arabians, entered more or less into all European systems of medicines till the close of the seventeenth century. Of the five or six hundred different causes of disease recognized in Sinhalese medicine, more than a fourth are ascribed to the abnormal conditions of the three humours, and the rest to vitiation of the seven proximate principles of the human body, viz., blood, flesh, fat, &c. Hence diseases are not classified by their symptoms so much as by their causes, and accidental symptoms are not only confounded with essential ones, but receive special treatment as distinct diseases. The treatment accordingly is more theoretical than empirical, every symptom being referred to some deranged humour, which alone receives attention, and has to be rectified according to the rules laid down by recognised authorities. The true significance of any group of symptoms as indicating any definite morbid condition, or any particular stage of disease, is barely, if at all, realised by the native practitioner, their only value being to assist the memory to recall the particular Sanskrit stanza which details the orthodox treatment to be adopted under the special circumstances. No attempt is made to anticipate or arrest morbid changes, or guide

them to a healthy issue, except in so far as this is included in the general line of treatment, for the simple reason that a pathology based on actual observation of the dead body finds no place in native text-books of medicine, and no native practitioner, however experienced, would care to verify by a *post-mortem* examination the fanciful theories on which their system of medicine is founded. A very common practice with native practitioners is to allow a disease to progress for some time with a view to "mature" it, or "to bring it to a head," before any attempt is made to remove it. A quick recovery, whether under European or native treatment, is deprecated as likely to lead to a relapse, since sufficient time has not been allowed for the restoration of a permanent healthy equilibrium between the contending humours. They have great faith in critical days, and in the influence of the different phases of the moon, each of which is supposed to preside over its own set of organs; so that purgatives, for instance, however much they may be needed in any given case, are never prescribed on the day (*kala*) on which the moon exercises its influence on the bowels, emetics on the day on which it presides over the stomach, &c. As they seldom make use of powerful or hurtful remedies, however, and are content in the majority of cases to relieve disease chiefly by acting on the emunctories by means of emetics, purgatives, and low diet, native practice is usually not often mischievous even when it fails to effect a cure. In most cases the treatment only serves to change an acute disease into one of chronic charac er, while recovery from a simple affection is protracted, the patient being kept half-starved on gruel, and made to swallow huge quantities of infusions and decoctions of medicinal herbs, villainously compounded, the number of ingredients in each potion increasing in direct ratio with the continuance and severity of the disease. A mild form of fever, for instance, would be treated with a decoction of the "Five Minor Roots—*Desmodium gangeticum*, *Uraria lagopodioides*, *Solanum Jacquini*, *Solanum indicum* and *Tribulus terrestris*—which are believed to cure fever due to deranged phlegm, catarrh, &c. A severer form would be ascribed perhaps to deranged air, requiring the use of the "Five Major Plants" —*Ægle marmelos*, *Calosanthes indica*, *Gmelina arborea*, *Stereospermum suaveolens*, and *Premna speciosa*. In remittent fever, &c., all ten may be prescribed together, and in typhoid fever,

with head symptoms, the same with the addition of eight or ten other ingredients. When conducted by intelligent and skillful practitioners, native practice is not unlike the modern treatment of European medicine, viz., that of trusting to nature for efforts to restore health, while placing the patient under the most favourable conditions for recovery by means of suitable diet and regimen, medicinal treatment being directed chiefly to the relief of the more urgent symptoms. Unfortunately, however, the practice of native medicine has fallen into the hands of a class of men the majority of whom are ignorant and unskillful, and who do not possess even the little knowledge which may be gathered from the study of medical books in the vernacular. It must be admitted, however, that the Materia Medica of the Sinhalese will compare favourably in many respects with the Pharmacopœia of the most enlightened countries of the West. Not only is every class of medicine well represented, and supplied in profusion by the boundless prodigality of nature in Eastern tropical climes, but some of the vegetable productions are valuable enough to deserve a place in the medicinal resources of Western science, while very many can easily and usefully replace the more expensive drugs of the same class which are imported into the Colony for use in hospitals.

The following series of selected vegetable drugs used by the native practitioners are all derived from indigenous or wild Ceylon plants. The uses given under each head have been taken down at first hand from the mouths of the *vedaralas*, or village doctors, themselves; adapted, however, to modern medical phraseology as far as possible. It must not however be supposed that they are in all, or even in a large majority of cases, based on any real properties. Much is traditional merely, or empiric, in much the same way as in middle ages, and up to the seventeenth century in Europe, numerous plants which are known to be quite inert, were credited with "virtues," on the authority of older writers and astrologers. The extreme complexity of Sinhalese prescriptions [many of which are of great antiquity and handed down from generation to generation] must often render it impossible to distinguish the effects of any particular ingredient:—

516 *Ægle marmelos* (Beli)—The root, bark and leaves for flatulency and in low fever with biliousness and diarrhœa. The unripe fruit boiled and then baked under hot ashes checks diarrhœa and dysentery. The tender fruit dried and boiled as tea is used as a drink in chronic diarrhœa. The ripe fruit is cooling and laxative, and a good remedy for piles. A sweet scented extract from the flowers is used as a lotion for the eyes.

517 *Bombax malabaricum* (Katu-imbul)--The roots, a restorative, astringent and alterative, externally applied for swellings and for rheumatic pains.

518 *Ipomœa beladambœ* (Bimtamburu)—The oil checks giddiness and keeps the head cool.

519 *Herpestis momiera* (Lunuvila)—The whole plant is a mild purgative; is also used as a fomentation for erysipelas and elephantiasis.

520 *Mimosa indica* (Eliddikumba)—For cobra bite. The plant is chewed when anything falls into the eye, and it is believed that the foreign body will be expelled.

521 *Azadirachta indica* (Kohomba)—The juice of the leaves is used for injuries to the eye, and to kill intestinal worms. The bitter bark in fevers and convulsive diseases. The fruit is vermifuge and purgative. The oil extracted from the seeds is a good external remedy for rheumatism caused by exposure to cold air.

522 *Cyclea Burmanni* (Kehipittan)—The whole plant is used for catarrhal fever, cough and asthma.

523 *Ixora coccinea* (Ratambala)—The flowers and the bark are used for bloodshot eyes, and the leaves for sores and ulcers.

524 *Dipterocarpus zeylanicus* (Hora) The resin is used in devil ceremonies, and the leaves and bark to reduce the swelling of the joints of cattle caused by overwork.

525 *Eleusine indica* (Walkurakkan, Belatana)—Used for sprains and dislocations.

526 *Cassia auriculata* (Ranawara)—The bark and roots are used as an alterative. The dried leaves are also used for the same purpose, prepared as a tea.

527 *Calotropis gigantea* (Wara)—The green leaves are locally applied to dispel swellings. The root is a useful tonic, good in coughs and catarrhs. The milk of the plant is internally used as a cure for leprosy.

528 *Cissampelos pareira* (Diyamitta)—The roots are used in fever and diarrhœa. The plant also cures ulcers.

529 *Ficus altissima* (Nuga)—Used as a wash for ulcers, and internally to check diarrhœa.

530 *Hydrocotyle javanica* (Maha-gotu-kola)and *H. asiatica* (Hin-gotu-kola) A good tonic chiefly given to children for bowel complaints. It purifies the blood, checks slight dysentery, and promotes digestion; it also cures nervousness and skin diseases. and is a reputed cure for offensive breath.

531 *Epaltes divaricata* (Hinmudamahana)--A bitter and astringent tonic. It promotes digestion, cures bleeding piles, and destroys intestinal worms. Also employed with benefit in diseases of the bladder and urinary passages.

532 *Barleria prionitis* Katukarandu)—A cooling diuretic tonic. The whole plant is used in urinary and paralytic affections, rheumatism and jaundice, hepatic obstruction and dropsy.

533 *Curcuma longa* (Kaha)—Used in skin diseases; also as a cooling wash in opthalmia..

533 *Cardiospernum helicaca-*

bum (Penela-we)—The whole plant is used in cases of rheumatism, nervous diseases, orchitis, and dropsy. Used also as a hair-wash to remove scurf.

535 *Dregea volubilis* (Kiri-anguna)—Given in mild fever in children, and to women after child birth to improve the secretion of milk. It is also said to cure asthma.

536 *Adenanthera povonina* (Madatiya)—The leaves and the bark in combination with other medicines are used to reduce the swelling caused by sprains and bruises. In cases of snake-bite by the polonga, if the wounded part is stroked with a bundle of the leaves several hundred times, it is believed that the poison will be expelled.

537 *Cassia fistula* (Ehela)—In cases of rheumatic fever, the tender leaves are used as a mild purgative, and the bark in composition with medicines is used for rheumatism.

530 *Crotalaria laburnifolia* (Yakberiya)—The whole plant is used for diseases of the gum and in sorethroat, and externally for sores and eruptions.

539 *Hedyotis rutida* (Pita-sudu-pala)—Used in nervous diseases and intermittent fever. Considered a blood purifier.

540 *Leucas zeylanica* (Geta-kumba) Used in dog bite, and in mild fever caused by indigestion; also to relieve pain caused by intestinal worms.

541 *Eclipta erecta* (Kikirindi) and *Wedelia calandulacea* (Ran-wan-kikirindi). Used to purify the blood, to cure cutaneous diseases, and to cool the head.

542 *Abreus precatorius* (Olinda-wel). The juice of the green leaves is used for purification of the blood, especially in females. The root for sorethroat, leprosy, stiffness in the joints, paralysis, and nervous diseases. Externally it is applied to ulcers and sores.

543 *Coscinum fenestratum* (Weni-wel). The woody stem is an excellent stomachic, and a popular remedy in fever. Also promotes appetite, and is used to cure bloodshot eyes.

544 *Desmodium triflorum* (Hin-undu-piyali). Used in cases of fever caused by catarrh.

545 *Evolvulus alsinoides* (Vesnu-kranti). The whole plant is used as a good tonic, to promote the appetite, to cure mild fever; it is a pleasant bitter.

546 *Cassia alata* (Rata-tora). The wood is used as an alterative.

547 *Aliesomeles ovata* (Yak-wansa). The leaves, bark, and root are used in colic, catarrhal fever, and as a vapour bath in severe headache.

548 *Atalantia zeylanica* (Yakmaran). The leaves and roots are used in catarrhal fever, cough, and similar diseases.

549 *Celtis cinnamomea* (Gurenda). The wood, which has a disgusting odour, is used as a fumigation at child-birth. Internally it is taken in composition with other medicines in cases of cutaneous diseases.

550 *Alyssicarpus bupleurifolvis* (Aswenna) A mild astringent. The root is used in composition with other medicines in mild fevers, and the leaves locally applied to wounds and bruises.

551 *Bassia longifolia* (Mi). The bark is slightly astringent and rather pleasant. It is given to promote appetite, and in fevers with rheumatism. The oil extracted from the seeds is used externally.

552 *Ærva lanata* (Polkudu-pala). Much employed for coughs, as a vermifuge for children, and in indigestion.

553 *Cratœna Roxburghii* (Lunu-warana). The leaves are used as a remedy for gouty swellings, the bark to sharpen the appetite, and in diseases of the urinary organs

554 *Cyperus rotundus* (Kalandura). The rhizome is used in fever, diarrhœa, dyspepsia, and stomachic complaints. It is considered to be diaphoretic.

555 *Hemidesmus indicus* (Iramusu). The root is used to purify the blood, promote appetite and cure skin diseases and syphilis. Called native Sarsaparilla.

556 *Oroxylum indicum* (Totila). The bark is used as a bitter tonic. It dispels rheumatic swellings, reduces phlegm, and checks fever, diarrhœa and dysentery.

557 *Kagia montana* (Welkahambiliya). Given in mild fever in children caused by bowel complaints.

1145 *Tinospora cordifolia* (Rasa-kinda). The stem is used in fever, skin disease, jaundice, rheumatism, and sympathetic affections, and is a valuable tonic.

1146 *Hedyotis auricularia* (Geta-kola). Used for cooling the bowels and in cutaneous diseases.

1147 *Gmelina asiatica* (Demata). The bark is used in bilious fever, indigestion, and stomach-ache.

1148 *Adhatoda Vasica* (Adhatoda). The root, leaves, flowers, and bark are used in diseases caused by excessive phlegm, also in menorrhagia. It is also a remedy for rheumatic pains.

1149 *Andropogon muricatus* (Sevendara). The roots are used in bilious fevers.

522 Cyclea burmanii, kehipittan
523 Ixora coccinea
524 Dipterocarpus zeylanicus, hora
525 Elusine indica, belatana
526 Cassia auriculata, ranawara
527 Caloropis gigantea, wara
528 Assampelos Paretra, diyamitta
529 Ficus altissima, nuga
530 Hychocotyle javanica, mahagotukola
531 Epaltes divaricata, huimudamahana
532 Barberia prionitis, katukarandu
533 Curcuma longa, kaha
534 Cardiospermum halicalum
535 Dregea volubilis, kirianguna
536 Andenanthera pavonina, madatiya
537 Cassia fistula, ehala
538 Crotalaria laburnifolia, yak-heriya
539 Hedyotis nitida, pitasudupala
540 Leucas zeylanica, geta-tumba
541 Eclipta erecta, kikirindi
542 Abrus precatorius, olinda
543 Coscinium fenestratum, weniwel
544 Desmodium triflorum, hin-undu-piyali
545 Evolvulus alsinoides, veshna-kranti
546 Cassia alata, rata-tora
547 Anisomeles ovata, yak-wanassa
548 Atalantia zeylanica, yakinaran
549 Celtis cinnamomea, gurenda

550 Alyssicarpus bupleurifolia
551 Bassia longifolia, mi
552 Ærva lanata, polkudupala
553 Cratœva Roxburghii, lunuwara
554 Cyperus rotundus, kalanduru
555 Hemidesmus indicus, irimusu
556 Oroxylum indicum, totilla
557 Tragia montona, welkahamliliya
558 Cratæva religiosa
1145 Tiniflora cordifolia
1146 Hedyotis auricularia
1147 Gmelina asiatica
1148 Adhatoda Vasica
1149 Andropogon muricatus

The Oriental Bank Estates Company.

113 One case of cinchona

Group 27, Paints, Colours, Dyes, &c,

Crystal Hill Estate.

17 One case of anatto.

The Ceylon commission.

511 Native whitewash.

512 Terracotta wash for walls
513 Laterite wash for walls
514 Sulphuret of antimony
515 Dorene-tel, for mixing paints

Group 28, Paper, Stationery.

The Ceylon commission.

234 Brass style
235 Bundle of olas
510 Native ink

Julian Heyzer.

1678 Six bottles blue-black writing fluid

Group 29, Furniture.

The Colombo Museum.

57 and 58 Spoon racks

C. de Soysa

81 Calamander cabinet
82 and 83 Ebony couches
84 and 85 Elephants' tusks mounted on calamander wood stands
86 to 89 Elephants' tusks mounted on tamarind wood stands
90 to 95 Elephants' tusks mounted on ebony stands
96 Table of tamarind wood
97 and 98 Tamarind wood sofas
99 to 104 Tamarind wood chairs
105 Carved ebony cabinet on ebony table
106 and 107 Low-backed ebony chairs
108 and 109 Old Dutch high-backed ebony chairs
110 and 111 Old Dutch round-backed office chairs
112 and 113 Carved calamander book cases
114 Calamander stand for flower pot
115 Carved ebony show case for jewelry

Group 30, Funeral Ceremonies.

The Ceylon commission.

326 Sinhalese bier and coffin
561 Tamil high caste bier | 562 Moorish bier and cloth
626 Model of pyre for cremating a Buddhist priest

Group 31, Art Metal Work.

The Ceylon commission.

22 to 41 Brass trays
116 Brass spittoon, cobra head
300 Brass Kandyan chief
301 Brass Kandyan chief's wife
331 Brass hanging lamp
332 Brass standing lamp
357, 358, and 362 Brass trays
370 Brass ash trays
371 to 375 Brass chembns
376 and 377 Brass spittoon
379 Brass sprinkler
385 Brass tobacco box
386 Brass chembu
387 Brass chunam box
388 Betel pounder
392 Silver inlaid arecanut cutter
419 Betel tray
420 Betel box
564 and 566 Brass plates
631 Scent sprinkler
667 Brass chatty
1155 Brass chembu
1156 Brass chembu
1157 Brass spittoon
1158 Brass pot
1460 to 1479 Brass trays, Kandyan work
1480 Pair brass chembus, Kandy
1532 Engraved brass chembu
1533 Do bowl
1534 Plain brass chembu
1535 Do bowl
Model of—
1539 Pan for cooking rice
1540 Chatty do
1541 Cover of chatty
1542 Arikimala, for cleaning rice and separating it from sand
1543 Spoon for cooking curry and rice
1544 Sempu for drinking water
1545 Rice stand
1546 Rice plate
1547 Spittoon
1548 Spittoon
1549 Betel stand
1550 Lamp
1551 Salt vessel
1552 Hurache
1553 Flower vase
1554 Betel plate

The Colombo museum.

5 Brass carved goblet
6 Carved brass chembu
49 and 50 Brass trays
51 and 52 Brass rice dishes
53 Brass lamp
56 Brass tray

M. J. Perera.

33 Brass betel tray

Subhuti Terunnanse.

35 One brass lamp | 36 and 37 Brass spittoons

Group 32, Gold and Silverware.

The Colombo museum.

16 Tobacco box
18 Silver betel box | 69 Silver tobacco box

The Ceylon commission

15 Wata heppuwa
16 Betel box
17 Wata heppuwa
18 Mulu heppuwa
20 Wata heppuwa
21 Mulu heppuwa
491 Silver box
1151 Round silver box

N. Josa Guru.

71 Silver box

S. L. Omer Lebbe Markar.

271 Silver box

Group 33, Jewelry and Ornaments.

The Colombo museum.

8 Two hairpins
9 Brooch
11 Comb
19 Pair of bangles with Matara diamonds
67 Silver waist-chain

The Ceylon commission.

12 Set Sinhalese lady's head-dress
13 Set Sinhalese lady's head-dress
14 Silver necklace
230 Horn comb
231 Horn comb
241 Tortoiseshell bangle, silver mounted
242 Pair tortoiseshell bangles
243 Pair tortoiseshell bangles
244 Pair tortoiseshell bangles
245 and 246 Tortoiseshell necklaces
247 Watch chain
248 and 249 Two sets of anchors
278 Sinhalese lady's chatelaine
330 Kandyan chief's ring
349 Set silver head-dress
350 Silver chain
351 Tortoiseshell comb
448 to 452 Horn combs
457 Villiager's brass necklace
492 Tortoiseshell comb
791 Gold thaly
573 Makkodi, gold top knot
574 Necklace of gold pieces
575 Two sets of four bangles
576 Eight gold rings
577 Silver ornaments for the feet (one set of eight pieces)
1150 Ivory box
1152 Silver chatelaine, with keys

M. J. Perera.

34 Antique Dutch comb
1 Pair of silver gilt bangles
2 Silver gilt necklace
3 Tortoiseshell high comb
70 Sinhalese lady's head-dress set with Matara diamonds

A. Thomas

26 Pair of silver bangles

N. Josa Guru

72 Silver chain

W. D. Bastian Appu

99 Tortoiseshell head-dress

D. D. Silva & Co

245 One Sapphire
247 Bracelet set with sapphires
248 Pair of bracelets set with moonstones
249 Brooch formed of a tiger-claw

Don Eliyas

250 Cat's-eye

M. C. Ismail Lebbe & Sons.

254 Gold necklace

A. L. M. Mohama Mohammed.

255 Necklace of alexandrites
256 Bracelet with rubies and cat's-eyes
257 Bracelet with sapphires and brilliants
258 Pearl bracelet
259 Brooch with sapphires and pearls
360 Horse-shoe brooch with sapphires

Magdon A. Ismail

263 String of pearls

O. L. Mohama Macan Markar.

263 Necklace of cat's-eyes and diamonds

A. H. Ismail.

264 Pair of gold bracelets
265 Belt of Arabic coins
266 Bridal necklace (antique)
267 Bride's crown (do.)

A. L. M. Mohammed.

268 Necklace and bangls set with moonstones and rubies
269 Necklace with sapphires

S. L. Omir Lebbe Markar.

270 Fancy stone necklace

W. D Sebastian Appu

99 Tortoiseshell head-dress

Group 34, Yarns and Woven Goods of Cotton, Etc.

The Ceylon commission.

95 Dyed tundu cloth
96 to 99 Kaiyeli
100 Kunkuma soman
389 Piece of Kandyan cloth
390 Painted Kandyan cloth

Spinning and Weaving Company, Limited.

148 One case of samples of cloth
1536 One box containing 26 specimens of Batticaloa cloth

Group 35, Clothing and Costumes, Etc.

The Colombo Museum.

1 Red hat worn by Colombo Chetty
2 Talipot hat worn by Colombo Chetty
3 Belt worn by Colombo Chetty

The Ceylon commission.

101 Sinhalese lady's headdress
111 Velvet cloth with gold lace
226 Fisher's hat with hook and string
227 Fisher's hat
228 Fisher's cap
276 Chetty lady's cloth, gold work
277 Chetty lady's jacket
443 Sinhalese jacket and gown

Lady De Soysa

120 White and gold embroidered skirt
121 White and gold head dress
122 Red and gold embroidered skirt
123 Red and gold head-dress
124 Green and gold embroidered skirt
125 Green and gold head dress
126 Sinhalese lady's head dress, silk embroidered on satin
127 Embroidered scarf
128 Black and gold embroidered head dress
129 Comboy in white and gold

Group 36, Laces, Embroideries, Etc.

The Ceylon commission.

1255 Four sets of artificial flowers

The Colombo museum

13 One Kandyan betel bag

M. J. Perera

4 to 6 Cloth for teapoys

Don Hendrik Silva

275 One pair of antimacassars
276 Woolen mat for flower stand

Group 37, Toys and Fancy Articles.

M. J. Perera

24 Bracket made of shells

P. D'Abrew.

195 Tat of the finest cinnamon quills
260 Six wooden cups and saucers
435 Wooden tray

The Ceylon commission

1680 Black painted teapoy
1681 Do teapoy
1682 Do bottle
1683 Do tumbler and tray
1684 Do wineglass
1685 Do stand
1686 Do flower vase
1687 Cocoanut-wood box with 6 dried cocoanuts
1688 Red painted stand
1689 Do goglet
1690 Do botttle
1691 Do stand
1692 Do tray and cover
1693 Do cup and saucer
1694 Do tumbler
1695 Do wineglass
1696 Do flower vase and stand
1697 Do stand with four arms
1698 Black painted goglet with stand
1699 Do tumbler and stand
1700 Do stand

Group 38, Leather and Manufactures of Leather,

The Ceylon commission.

1190 Pair brown shoes
1191 Pair iguana shoes
1192 Pair iguana shoes
1193 Calf skin, black
1194 Calf skin, black
1195 Pale brown shoes
1196 Bullock hide
1197 Cow hide
1198 Cow hide
1199 Calf skin
1200 Calf skin, black
1201 Sheep skin
1202 Kid, white
1203 Goat skin
1204 Goat skin, black
1205 Dog skin
1206 Calfskin, chamois leather
1207 Calf skin with hair on
1208 Calf skin with hair on
1209 Kid, white
1210 Calf skin, white
1211 Goat skin, for bellows
1212 Calf skin
1213 Sheep skin
1214 Calf skin, tanned brown
1215 Calf skin with hair on
1216 Sheep skin, brown
1217 Iguana skin

Group 39, Scales, Weights, &c.

The Ceylon commission.

333 Measure for rice
462 Measure for oil

Group 40, Arms.

The Ceylon commission.

567 to 570 Antique Kandyan knives
114, 348, 487 Kandyan knives
488 and 489 Kandyan knives with styles
479 to 486 Kandyan swords
391 Iron spear head
778 and 789 Spear heads
780 and 781 Spear handles
1165 and 1166 Old Kandyan pistols
1669 Sword in carved tortoiseshell sheath

R. W. Ievers.

59 Ancient gun
60 Silver handled sword
61 to 64 Old swords

E. R. Gunaratna.

65 and 66 Mudaliyar's dress sword

Group 41, Edged Tools, Cutlery, &c.

The Colombo museum.

54 Arecanut cutter representing a Tamil lady

The Hon. T. B. Panabokke.

77 and 78 Arecanut cutters

Group 42, Miscellaneous Articles of Manufacture.

The Ceylon commission.

236 and 237 Tortoiseshell boxes
238 Tortoiseshell card case
239 and 240 Tortoiseshell paper cutter
250 and 251 Calamander box
252 Large porcupine box
253 Porcupine work basket
254 Small porcupine box

255 Ebony writing case
269 to 275 Kurunegala mats
279 Ivory engraved box
293 Ebony box, ivory inlaid
294 Ebony box with ivory flowers
295 Calamander box with arecanut cutter, etc.
296 Calamander box inlaid with silver
297 Ebony carved box
318 Porcupine inlaid box
322 Ebony writing desk
319 to 321 Ebony carvedboxes
323 and 324 Octagonal porcupine boxes
325 Small porcupine box
328 Porcupine box, ivory placques inlaid
382 Cocoanut writing desk
383 Porcupine quill box
418 Mat
423 Fancy mat
424 Kandyan mat
442 Calamander box, Inlaid ivory
478 Mat
490 Kandyan ivory box
503 Ebony writing desk
504 Ebony carved box
979 Set of Bishop's hat baskets
980 Set of baskets called an asane

1481 to1485 Elephant's feet mounted as workboxes
1495 Almirah inlaid with porcupine quills

The Colombo museum

7, 10, 20 and 36 Tortoiseshell boxes
37 Calamander box, silver bound
38 Tortoiseshell work box
42 Carved Ebony box
48 Calamander box
130 Ivory box

The Hon. T. B. Panabokke

79 Kandyan round shade
80 Kankyan open shade

M. J. Perera

7 to 23 Kalutara baskets
27 to 29 Tea baskets
30 and 31 Betel bags
32 Ebony boxe

T. B. Candappa

75 to 84 Negombo baskets
85 34 Negombo fancy caps
199 Baskets for curry stuffs
200 to 203 Set of Bishop's hat baskets
204 and 205 Set of work baskets
206 Thirty two small mat trays
207 Fourteen small lace baskets
208 Fifteen small flat trays
209 Six small trays
210 to 211 Two hopper baskets
212 One box basket work

Miss Karunaratne

88 to 90 Kalutara baskets

Mrs Karunaratne

91 to 94 Seven Kalutara mats
95 Lady's mat and pillow
96 Six bags

A. H. Fernando

12 Lacquered buttons

D. D. Silva

232 Casket made of an elephants tooth
233 and 234 Ivory elephants
235 Ebony box
236 Tortoiseshell jinricksha
237 One pair of tortoiseshell whist markers
246 Pair tortoiseshell whist markers

L. B. Manuel

238 Ebony Elephant 239 Antique ebony almirah

M. C. Ismail Lebbe

240 Tortoiseshell phaeton and tortoiseshell jinricksha

Don Eliyas

243 One pair ebony elephants 252 One pair ivory elephants

251 to 253 Carved ebony boxes

A. L. M. Mohama Mohammed

261 Carved ebony box

B. L. de Silva

272 Ivory casket set with precious stones

273 Ivory elephant with gold trappings and shrine

Don Theodoris & Co.

274 Elephant's foot mounted with silver and ivory

CLASS J—FINE ARTS, PAINTING, SCULPTURE, ETC.

Group 43, Painted Pottery, Lacquered Wood, etc.

The Ceylon commission

261 to 263 Painted plates
264 to 267 Painted pots
268 Painted money box
411 Painted box
412 Painted flower vase
413 Water vessel
414 to 416 Painted tray
417 Painted pot and cover
421 Spear handle
422 Painted walking stick

650, 663, and 665 to 666 Specimens of Kandyan painted pottery

1219 One large chatty
1220 One large pot
1221 One small mug
1222 and 1223 Flower vases
1224 to 1226 Small mugs
1227 and 1228 Large mugs
1229 Water pot
1230 and 1231 Rice washers
1232 Rice pan
1233 and 1234 Rice pan cover
1235 to 1238 Cake pans
1239 to 1243 Small chatties
1244 to 1246 Plaques
1265 Plaque

Group 44, Antique and Modern Carvings, Etc.

The Colombo museum

55 Ebony Elephant

The Ceylon commission.

256 Six Ebony elephants
257 Two ebony elephants
258 Two ebony elephants
259 Twelve small elephants
316 Large ebony elephants
317 Large ebony elephants
363 to 368 Carved cocoanuts
380 and 381 Carved cocoanuts

571 and 572 Carved cocoanut shells

1153 and 1154 Figures of tom tom beaters in ivory

CLASS K—LIBERAL ARTS

Group 46, Books, Libraries, etc.

Ceylon Government Printer

131 Ceylon Administration Reports, 1891.
132 Ceylon Sessional papers, 1892
133 The Ceylon Blue Book, 1891
134 Report on the Census of Ceylon, 1891
135 The Ceylon Government Gazette
136 Register of books printed in Ceylon, 1885-92
137 The Mahawansa (English)
138 do (Pali)
139 do (Sinhalese)
140 Abhidhanappadipika, a Dictionary
141 An English-Sinhalese Dictionary
142 The Ceylon Civil List, 1892
143 A Sinhalese Grammar
144 The book of Common Prayer (Sinhalese)
145 A Manual of Notes of Lessons (Sinhalese)
146 A Sinhalese-English Grammar and exercise Book
147 Loka Kathawa, a history of the World (Sinhalese)
148 The Ceylon Post Office Guide, 1891
149 A Catalogue of Sanscrit, Pali and Sinhalese Works
150 Skeen's Guide to Colombo

A Series of School Books, Comprising:—

151 A First Book (Sinhalese)
152 A First Standard Reader (Sinhalese)
153 A Second Reading Book (Sinhalese)
154 A Third Standard Reader (Sinhalese)
155 A Fourth Standard Reader (Sinhalese)
156 A Fifth Standard Reader (Sinhalese)
157 A Sixth Standard Reader (Sinhalese)
158 A Seventh Standard Reader (Sinhalese
159 A Eighth Standard Reader (Sinhalese)
160 A Physical Geography (Sinhalese)
161 A School Arithmetic (English)
162 do Part II (Sinhalese)
163 do Part III (Sinhalese)
164 Sukhopadesaya, a Sanitary Primer (Sinhalese)
165 Lessons on Domestic Economy (Sinhalese)
166 A Primer of Botany (English)
167 A First Book of Botany (Sinhalese)
168 A Primer of Agriculture (English)
169 Do (Sinhalese)
170 Do (Tamil)

Don Bastian.

1702 Sinhalese Almanac for 1892
1704 Sinhalese Newspaper
1705 Sinhalese Price Lists
1706 Kavmini Barana
1707 Kalana Mutu Ruwana
1708 Adara Binna Malaya

1709 Sinhala
1710 Sudasa Salmi
1711 Tenpuda Sarasaviya

Groups 46, Photographs, Maps, Etc.

The Ceylon commission

1105 Maldivan fleet in Colombo harbour
1106 Mosque at Mali
1107 View of the barrier reef and island, North Mali
1108 Mali harbour
1109 The chief mosque, Mali
1110 Garden gate, Mali
1111 Mali harbour and roads looking east
1112 The Sultan's palace, Mali
1113 A street, Mali
(The above are from negatives taken by P E Radley

Leechman & Co.

1529 Photograph of exhibits
1530 Photographs of mill yard

Sangamitta Girls' School

1455 Photograph of the school
1456 Photograph of Wesleyan girls' school

A. W. A. Plate

1114 A village street, Ceylon
1115 Group of villagers
1116 Country road with village hut
1117 Halting station for carts
1118 Wandering minstrels

W. L. H. Skeen & Co.

Six cases containing 126 views of Ceylon

The Surveyor General

Large map of Ceylon prepared under the supervision of the Hon. Col. F. C. H. Clark, CMG., Surveyor General

G. L. Gabriel Perera

97 Map of Ceylon surrounded with pen and ink etchings of the Governors of Ceylon

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Group 47, Civil Engineering, Etc.

The Ceylon commission.

283 Model of a rattan bridge

Group 48, Music and Musical Instruments.

The Colombo museum.

39 Tamil drum
40 Horn
41 Flageolet
302 Wenawa
485 Ivory flute
493 Kinnarama

The Ceylon commission.

Figures used in Marionette Show.

2 Ehalapola
3 Ehalapola Dewi
4 Mudiyanse, mudaliyar
5 Lamateni, mudaliyar's wife
6 Marakkalaya, moorman
7 Siya, old man
8 Achchi, old woman
9 Konangiya, clown
10 Berawaya, tom-tom beater
11 Berawaya, tom-tom beater

Masks used in Comedy of Kolan.

42 Rajjuruwo
43 Bisawa
44 Liyana Arachchi
45 Hewaya
46 Do
47 Do
48 Panikkala, father
49 Do mother
50 Do son
51 Arachchi
52 Mudiyanse
53 Ratnakuta
54 Do
55 Gona
56 Hettirala
57 Thambi
58 Kotiya
59 Do
60 Wedikankanama
61 Emattaya
62 Dobakka
63 Sinhaya
64 Kapiriya
65 Kapirigeni
66 Kapiriya
67 Kapirigeni
68 Nagarase
69 Maname-rajjuruwo
70 Manam-edewi
71 Wediraja
72 Kindura
73 Do
74 Marwraksa
75 Walaha
76 Do
77 Nariya
78 Yaka
79 Yaksani
80 Piya
81 Mau
82 Puta
83 Aspaya
84 Dikpitiya
85 Dittalanda
86 Gamarala
87 Gammaiya
88 Gamaralage akka
89 Kilamune
90 Hettiya
91 Hencha
92 Keduwa
93 Do

CLASS L—ETHNOLOGY, &c.

Group 49, Athletic Exercises and Games.

The Colombo museum.

4 Olinda board

The Ceylon commission.

329 Swing used at festivals
505 and 506 The game of ankeliya
598 Iddokke
599 Taka damboruwa
600 Diyasokade
601 Dandusokade
619 Chess board
620 Puncha
621 Dolaha
622 Chonka
628 and 629 Two toy bows

Group 50, Objects of Spiritual Significance.

The Ceylon commission.

Devil Dancer's Masks.

668 Dreaming snakes
669 Health god
670 Suffering from deafness
671 Serpent mask
672 Suffering from fright
673 Suffering from madness
674 Suffering from heat
675 Death god
676 Suffering from cold
677 Suffering from blindness
678 Suffering from throat disease
679 Suffering from dumbness
680 Suffering from delirium
681 Suffering from common fever
682 Suffering from lameness
683 Devil-struck
684 Suffering from spleen
685 Suffering from suffocation

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19 Karandu
94 Kolasanniyaka
102 Yakbere
103 Daula
104 Tammattama
105 Nalawa
106 and 107 Devil dancers' dress
108 Dole
109 Bere
110 Rabana
115 Brass dagoba
222 Udakkiya
223 Devil dancers' bangles
224 Pair foot bells
225 Waist belt
298 Sleeping Buddha
299 Standing Buddha
305 Incense burner
444 Wooden dagoba
484 Mask of Janitor
578 A temple cloth
627 An expanding lotus flower disclosing a worshipping figure, used at Buddhist festivals
1344 One Mahasun-kalpay
1345 One Nata dewiyo
1346 One Siyawatuka raksha
1347 One Budurajananwahanse
1712 Drawing of a temple

The Colombo Museum.

21 to 24 Ivory Buddhas
25 to 27 Small bronze Buddhas
28 to 29 Bronze standing Buddhas
30 Small bronze Buddha
31 Brass Buddha
32 Sitting brass Buddha
33 Reclining brass Buddha
34 Brass dagoba
35 Sandalwood Buddha
43 and 44 Wooden dagobas
45 Standing brass Buddha
46 Ivory Buddha
116 Silver dagoba with a model of Buddha's tooth

W. Don Chas. Appuhami

25 Bronze Buddha
Ivory Buddha

Group 51, Womans Work.

The Ceylon commission

792 An asane of six baskets, Kalutara
793 An asane of six baskets, Pata Dumbara
794 Seven open-work grass trays
795 Set of six colored grass trays, Pata Dumbara
796 Set of three small grass trays, Pata Dumbara
797 Tray with semi-attached lid, palmyra
798 Ekel tray, palmyra
799 Open work grass tray, palmyra
800 Grass basket with three bags, palmyra
801 Small chili basket, palmyra
802 Small chili basket, palmyra
803 Man's betel bag, palmyra
804 Man's betel bag, palmyra
805 Set of four ekel baskets, Kalutara
806 Set of six baskets, Kalutara
807 Set of six baskets Kalutara
808 Twelve baskets, Kalutara
809 Twelve baskets, Kalutara
810 Twelve baskets, Kalutara
811 Twelve baskets, Kalutara
812 Twelve baskets, Kalutara
813 Six baskets, Kalutara
814 Six baskets, Kalutara
815 Six Octagonal baskets Kalutara
816 Three open work baskets
817 One small-work basket with twenty-one small bags
818 Open work hand bag
819 Set of six baskets
820 Set of six bishop's hat baskets
821 Set of six bishop's hat baskets
822 Set of six bishop's hat baskets
823 Large bag
824 Basket
825 Basket
826 Basket with ten bags
827 Baskct with six bags
828 Set of three smoking caps
829 Six table mats
830 One school bag
831 One open work basket with sixteen bags
832 Six Bishop's hat baskets
833 Set of twelve baskets
834 Work bag
835 Work bag
836 Cigar case
837 Cigar case
838 Cigar case
839 Cigar case

840 Basket
841 Set of twelve baskets
842 Set of twelve baskets
843 One mat
844 One mat
845 One mat
846 One mat
849 Moorish childs' jacket
848 Fifteen pieces of lace and sundries, from Abdul Rahiman
849 Kandyan chief's jacket
850 Tamil woman's jacket
880 Basket for carrying rice
881 do
882 do
883 Elephant of basket work
884 Curry stuffs basket with lid
885 do without lid
886 Three chatty holders
887 Three mat suspenders
888 Three mats, Galle work
889 Three mat bag suspenders
890 Five spoon racks
891 Three plate suspenders
892 Milk strainer
893 Mat, for receiving sifted flour
894 Mat, red stand pattern
895 Parcel of one dozen betel bags
896 One small kolapota for sifted flour
897 Betel stand, basketwork
898 Oil extractor
899 Red and white rice basket
900 Nest of two baskets
901 do
902 Hand basket
903 Bag with compartments
1176 to 1189 Mats
1356 Matara baskets
1357 Basket containing 6 betel baskets
1366 Jaffna fan
1368 Box containing thirty-two cigar cases and betel bags
1397 and 1398 Basket containing one handkerchief, two embroidered cloths and a basket
1430 White satin head-dress
1431 to 1434 Set of baskets
1435 and 1436, 1438 to 1441, 1445 and 1446 } Specimens of lace

Kumari Hamy

904 Wakya, mat for sifting flour
905 Spoon rack
906 Seven mats for sifting flour
907 Cover made of palmyra
908 Baskets
909 Box (basket work)
910 Small bag
911 to 913 Baskets
912 Betel stand

Vennappuwa Boarding School, Convent of the Holy Family.

916 Embroidered leaves
917 Child's cap, worsted work
918 Piece of embroidery with tassels
919 Embroidered velvet with specimens of lace
920 Mat
921 Tea cloth
922 Mat
923 Pattern of lace
924 Pattern of lace
925 Crochet Bertha
926 Crochet bertha
927 Booties, three pairs
928 Child's hat
929 Bracket fringe
930 Two handkerchiefs
931 Pattern of lace
932 Embroidered silk
933 Bead mat
934 D'Oyley
935 Lace
936 Mat
937 Child's cap
938 Cushion cover
939 Applique
940 D'Oyley
941 Infant's hat
942 Infant's hat
943 Embroidered curtain
944 Patchwork satin cushion
945 Satin pin cushion
946 Satin valance
947 Antimacassar
948 Embroid'red head cushion
949 Antimacassar
950 Antimacassar
951 Chair cushion, worsted-work
952 Child's bonnet, crochet-work
953 Collar and cuffs, lace
954 Lace handkerchief
955 and 956 Lace handkerch's
957 Chemisette
958 to 963 Lace
964 Moorish woman's jacket
965 Embroidered center for dinner table
966 to 968 Woman's jacket
969 Child's jacket, embroid'd
970 and 971 Women's jackets, embroidered
972 Child's satin jacket
973 Women's muslin jacket
974 Woman's cotton jacket
975 Woman's muslin jacket
976 Embroidered cloth
977 Embroidered cloth
978 Cushion embroidered with beads and wool

Malay Girl's School, Colombo.

1358 Embroidery in frame
1359 Embroidered cushion
1360 Child's embroidered robe
1376 Worsted flowers

Convent of the Holy Family, Kurunegala.

1361 Embroidered leaf in frame
1362 Embroidered butterfly on perforated cardboard
1363 Baby's pinafore
1401 Four mats

Mrs. Trimmes's School, Jaffna.

1364 Three embroidered pillow-cases
1365 Three embroidered handkerchiefs

Galle Face School.

1367 Four ladies' jackets

Girls' Tamil School, Nelore, Jaffna.

1369 Three child's jackets
1370 Three child's silk jackets
1371 Three handkerchiefs
1372 Child's dress
1373 Piece of embroidery
1374 Three jackets

St. Stephen's Orphanage, Colombo

1375 Antimacassar

Uduvil Girls' School, Jaffna.

1377 Basket
1378 Smoking cap
1379 Fancy basket

Buona Vista Orphanage, Galle.

1417 to 1429 Specimens of lace

Galle Face Day School, Colombo.

1437 and 1444 Lace

Good Shepherd Convent, Colombo.

1442 Lace

Galle Schools

1380 to 1382 Embroidered silk cushions

Point Pedro Schools.

1383 One box with eleven dolls' jackets, five turbans, and one apron

Sangamitta Girls' Schooi

1384 One model of bullock hackery
1403 Jacket
1443 Lace

Vllage School near Colombo

1385 Two grass pots

American Mission School, Uduvil Jaffna

1386 Doll, Tamil bride
1387 Doll, Tamil bridegroom
1388 Betel bag
1389 and 1390 Two samples Tamil alphabet
1391 Antimacassar
1392 Childs' jacket
1393 and 1394 Handkerchiefs

Native Government School, Point Pedro

1395 Childs' jacket

Venbuch Girls' School

1396 Patchwork

Convent Boarding School, Jaffna

1399 Jacket
1400 Needle case

Kahawa Vernacular Girls' School

1402 Skein of coir

Nolloire Girls' School

1405 Twelve Jaffna fans
1406 to 1415 Jaffna mats
1416 Fancy baskets

Church Missionary Institution, Kotte

1459 Box containing lace and embroidery

Group 52, Isolated and Collective Exhibits.

1.—Collective Exhibit: Model of Sinhalese Hut, with Articles of daily use.

304 Brass Inkstand
306 Sweetmeat mould
307 to 309 Hopper spoons
310 Spoon rack (with four spoons)
311 Bamboo fibre cocoanut strainer
312 Bamboo fibre round basket
313 and 313 Bamboo fibre trays
415 Bamboo fibre tiffin basket
327 Native hut
334 Rice measure
335 Pot and cover
336 Pot for water
337 Pot for water
338 Brass betel pounder
339 Brass oil jar
340 Brass pan
341 Brass spittoon
342 Tobacco box
343 Grinding stone
344 and 345 Knives

346 Axe
347 Katty
352 Villiagers' knife
353 Rabana
354 Pingoe
355 Medicine kettle
356 Medicine pounder
359 Betel tray
370 Bar for husking cocoanuts
361 Sweetmeat mould
369 Ash tray
378 Brass sprinkler
393 Common clay spittoon
394 Clay tray
395 Clay spittoon
396 Clay candle stand
397 Clay pot
398 and 399 Clay trays
400 Clay lamp
401 Water vessel
402 to 404 Clay pots
405 to 407 Clay pans
408 Rice strainer
409 Clay plate
445 Cocoanut scraper
447 Flower basket
453 and 454 Pair of betel bags
455 Brass spoons
456 Lime box
176 Head scratcher
459 Model of a tat
460 Tin lamps
461 Tin cake
463 and 464 Wooden rice measures
466 Box for curry stuffs
467 Winnower
468 Flour sieve
469 Tray mat
494 Knife to cut fruit
580 to 582 Very common tin jewelry
583 Brass spittoon
584 Cocoanut scraper
585 Arecanut cutter
586 Lamp
587 to 589 Spoons
597 Box for curry stuffs
604 Dagger
605 Comb
617 Cake mould
618 Rice measure

II Collective Exhibit: Models of Veddha Man and Woman, with Articles used by the Vehdhas.

129 Twelve Veddhas' bows
130 Nineteen arrows
131 Eight axes
132 Mamoty
133 Katty
134 Basket
135 Two pieces earthenware
136 Winnowing fan
137 Basket
138 Spoons
139 Vomoke
140 to 144 Skulls
145 Waist string
146 Betel bag
147 Beads
148 Earrings
149 Rings
150 Hawariwya
151 Bangle

III Collective Exhibit: Skins, Horns and Tusks.

Ulagalla Ratemahatmaya
14 and 15 Tusks
H. B. Hurulle, President.
16 and 17 Tusks
The Ceylon commission.

152 to 154 Bear skins
155 to 157 Tiger skins
158 to 161 Spotted deer skins
162 Mouse deer skins
163 and 167 Red deer skins
168 to 170 Rock squirrel skins
171 Ape skins
172 Hare skins
173 Mungoose skins
174 Wild boar jaw
175 Pair buffalo horns
176 to 179 Elk horns
180 to 182 Deer horns
183 to 191 Red deer horns
192 Bear teeth
193 Aligator teeth
194 Boar teeth
218 to 221 Elk skins
1537 Monkey skin
1538 Leopard skin

IV Collective Exhibit.

The Ceylon Government

70 to 75 Bronzes from Anuradhapura

V Collective Exhibit: Models of Natives.

117 to 119 Model of tom-tom beater
120 Model of devil dancer
121 Model of horn player
122 Model of basket carrier
123 Model of cultivator
124 Model of wood cutter
125 Model of low country man
126 Model of low country woman
127 Model of ayah with child
128 Model of a Sinhalese woman

VI Collective Exhibit; Product of the Palmyra Palm

Collected for the Ceylon Commission by W. C. Twynam, C. M. G. Government Agent of the Northern province.

690 Watering basket
691 Hand basket
692 Cigar basket
693 Ruler
694 Cake Basket
695 Rope for drawing water
696 Sleeping mat
697 Mattress mat
698 Flour sieve
699 Bag for storing paddy
700 Elephant basket
701 Childs'rattle
702 Curry stuffs basket
703 Toy basket
704 Dried ola mat
705 Sitting mat
706 Grain basket
707 Infants' mat
708 Threshing mat
709 Bag for olas
710 Kitchen basket
711 Basket for offerings
712 Flour sieve
713 Cradle
714 Ladder
715 Platform to keep grain
716 Cot
717 Measuring rod
718 Walking stick
719 Gate
720 Well
721 Model of palmyra
722 Cattle yoking rope
723 Tamil alphabet
724 Ola book
725 Pullak kodiyal
726 Charcoal
727 Kernel
728 Root
729 Ripe fruit
730 Palmyra pulp
731 Panip panatu
732 Panip panatu
733 Spiced jaggery
734 Spiced jaggery
735 Kalakkaram
736 Cloth basket
737 Small fan
738 Umbrella
739 Umbrella
740 Basket for drawing water
741 Toddy pot
742 Chatty suspender
743 Toddy drawers' case
744 Toddy-drawer's baskat
745 Palmyra cup
746 Cap 747 Winnower
748 Large Shallow basket
749 Large hand basket
750 Hand basket
751 Basket for boiling flour
752 Cigar case
753 Water basket
754 Water basket
755 Large fan
756 Milk strainer
757 Irrigation basket
758 Money basket
759 Basket for carrying loads
760 Chatty stand
761 Betel basket
762 Bag for illnppai nuts
763 Grass basket
764 Grass basket
765 Leaf of palmyra palm
766 Small basket
767 Rope for cattle
768 Watcher's seat
769 Tender state of fruit
770 Ripe fruit. 771 Nut

VII Collective Exhibit: Products of the Cocoanut Palm

Leechman & Co., Colombo

1271 Cocoanut coir twilled matting, plain
1272 Cocoanut coir rug or door mat, colored border
1273 Cocoanut coir rug or door mat, plain
1274 and 1275 Cocoanut coir twilled matting, coloured
1276 Cocoanut wood boards
1277 Cocoanut flawer stalk torches, or chules
1278 Cocoannt ebel brooms without handles
1280 Cocoanut leaf torches, or chules
1281 and 1282 Cocoanut fibre brooms with cocoanut wood handles
1283 Coocanut ekel brooms with cocoanut wood handles
1284 Cocoanut fibre fancy brooms with cocoanut wood handles
1285 Cocoanut wood cocoanut husker
1286 Cocoanut wood walking stick
1287 Cocoanut bristle fibre
1289 Cocoanut coir bags for cocoanuts
1290 Cocoanut coir bag for coal
1291 Cocoanut coir bag for copperah
1292-1293 Cocoanut coir bags for feeding horses
1294 Ordinary cocoanuts with husk
1295 Sweet cocoanuts with husks
1296 Medicinal cocoanuts with husk
1297 King cocoanuts with husks
1298 Cocoanuts with husk, shell and kernel, ripped and dried
1299 Cocoanut coir yarn No 2
1300 Cocoanut coir yarn No. 1
1301 Cocoanut coir yarn, fine
1302 Cocoanut coir yarn, ordinary
1303 Cocoanut coir yarn, very fine
1305 Cocoannt coir scrubber for horses
1306 Cocoanut fibre brushes with cocoanut wood handles, for white-washing
1307 Cocoanut leaf mat
1308 Cocoanut lerf bag
1311 Cocoanut wood box containing very small cocoanuts
1315 Cocoanut wood box
1317 Cocoanut wood cigar box
1318 Cocoanut ornamented shell
1319 Cocoanut shell funnel
1320 Cocoanut wood writing desk
1321 Cocoanut shell scoops with cocoanut wood handles
1322 Cocoanut shell ladles with cocoanut wood handles
1323 Copperah, dried cocoanut kernels
1324 Jaggery, or crude sugar
1325 Maldive Island cocoanuts, husked
1326 Extra fine white cocoanut oil
1327 White merchantable cocoanut oil
1328 Ordinary merchantable cocoanut oil
1329 Arrack
1330 Vinegar
1334 Cocoanut fibre broom with cocoanut wood handle, for cleaning roofs
1335 Cocoanut ekel fish trap
1337 Cocoanut leaves, or cadjans, for thatching native huts

1338 Cocoanut flower stalks
Cocoanut poonac
Cocoanut mattress fibre
Cocoanut coir rope coils
Cocoanut coir matting ordinary
Cocoanut wood rafters for roofing houses

Edwin R. Tillekeratne

(Cocoanut Shell Articles)

1 Cocoanut shells
2 Shell for salt
3 Pe-tetiya (for measuring time
4 Measure for selling toddy
5 Smaller measure for selling toddy
6 Salt measure
7 Grocers' spoons
8 Sinhalese cakeladle
9 Kitchen spoons
10 Gravy spoons
11 Porowiketa (for testing arrack)
12 Teaspoon
13 Soup ladle
14 Dessert spoons
15 Salt spoons
16 Mustard spoons
17 Forks
18 Cups and saucers
19 Wine glasses
20 Champagne glasses
21 Hock glasses
22 Vegetable dishes
23 Soup tureen
24 Butter dish
25 Teapot
26 Milk jug
27 Carved shells
28 Carved vase
29 Flower vases
30 Carved phial (to sprinkle rose water)
31 Salt cellar
32 Pickle stand
33 Cruet stand
34 Cruet stand
35 Shaving dish
36 Toothpick
37 Ear pick
38 Rice cake mould
39 Jaggery mould
40 Begging bowl (for Buddhist monk)
41 Milking shell
42 Oil can
43 Goodogooda shell
44 Empty shell
75 Shell for carrying water
46 Hookah
47 Venawa (musical instrument)
48 Guitar
49 Mug
50 Finger cups
51 Canister
52 Dabarawa (used by hermits to carry water)
53 Funnel
54 Sugar bowl
55 Slop basin
56 Soup dish
57 Rings
58 Surtain pole rings
59 Studs
60 Links
61 Links
62 Flat dish
63 Flat dish
64 Flat dish
65 Flat dish
66 Flat dish
67 Egg preserver
68 Pen rack
69 Coat buttons
70 Shell and chain (used by beggers)
71 Shell for chunam
72 Top
73 Top
74 Top
75 Inkstand
76 Bambu-pittu shell
77 Wax pot
78 Basin
79 Shells for spices
80 Borupawa (plaything)

Cocoanut Wood and Fibre.

81 Writing box
82 Hair brush
83 Coat brush
84 Crumb brush
85 Tooth brush
86 Shaving brush
87 Horse brush
88 Corkscrew
89 Painting brush
90 Brush for striping floors
91 Mouth-piece
92 Mouth-piece (wood and shell
93 Ladies' folding chair
94 Reading lamp
95 Hanging lamp
96 Ruler
97 Walking stick
98 Walking stick
99 Pen holder
100 Paper weight
101 Paper cutter
102 Blotting pad
102 Ruling pencil
103 Cocoanut pealer
104 Towel horse
105 Bottle
106 Sandals
107 Picture frame
108 Picture frame
109 Picture frame
110 Box with roller lid
111 Dola (drum)
112 Small stool
113 Ladies' devenport
114 Table
115 Table
116 Round table
117 Lounger
118 Tool cabinet
119 Angle
120 Angle
121 Angle
122 Handle of augur
123 Handle of augur
124 Handle of carpenter's line drawer
125 Handle of mallet
126 Handle of plane
127 Handle of saw
128 Handle of cocoanut scraper
129 Handle of cocoanut peeler
130 Handle of hammer
131 Handle of hand saw
132 Handle of fibre comb
133 Coir yarn (for polishing wood)
134 Cocoanut husk for polishing wood
135 Wax cleaner
136 Tom-tom (native)
137 Tambourine
138 Toddy tub
139 Arrack barrel
140 Arrack barrel
145 Flower vases
146 Door shutters
147 Rice pounder
148 Mortar
149 Looking glass (with frame and stand
150 Fishing net with handle
151 Curtain poles
152 Pegs for curtain poles
153 Rings for curtain poles
154 Rafters
155 Beams
156 Hat rack
157 Hat rack
158 Betel crusher
159 Pestle of crusher
160 Candle stand
161 Wash hand stand
162 Folding chair
163 Easel
164 Small tambourine

Tender-leaf Articles.

165 Mat
166 Pillow
167 Bag
168 Broom
169 Box
170 Hat
171 Plaited basket (for pots)
172 Plaited basket (for pingo)
173 Globe lamp
174 Parrot on a star
175 Riding whip
176 Rice boiler
177 Hand brush (for devil dancer
178 Kanwel (for decoration)
179 Arches (for decoration)
180 Flat basket
181 Box

182 Dirty clothes basket
183 Sowing basket
184 Cake basket
185 Fan
186 Fan
187 Cocoanut milk strainer
188 Rice basket
189 Pan stand
190 Rice tray
191 Flower basket
192 Snake basket
193 Winnowing fan
194 Sewing basket
195 Sewing basket
196 Sewing basket
197 Chain of rings
198 Basket with handle
199 Napkin rings.
200 Table mat
201 Table mat
202 Flower vases
203 Flower vases
204 Wall tat
205 Tiffin basket

Green-leaf Articles.

206 Turkey or poultry pen
207 Basket for carrying jak-fruit
208 Bundle of leaves (for chunam)

Green or matured Ekel Articles.

209 Hand broom
210 Broom with handle
211 Bird cage
212 Wall tat
213 Fish trap
214 Fish trap
215 Ekel pincels
216 Ekel toothpick

Dry-leaf Articles.

217 Torch or rushlight
218 Wete (for climbing trees)
219 Round box
220 Cadjans

Different kinds of Husk and Fibre.

221 Cocoanut husk
222 Dried husk
223 Decayed husk
224 Coir fibre
225 Coir strands

Cocoanut Fibre Articles.

226 Coir yarn
227 Coir yarn
228 Coir yarn
229 Coir yarn
230 Coir yarn
231 Coir yarn
232 Coir yarn
233 Coir yarn
234 Coir yarn
235 Coir matting
236 Coir rug
237 Coir mat (for straw)
238 Spitting rug
239 Yoke rope
240 Coir yarn reins
241 Well rope
242 Stable rope
243 Rope for coupling trees
244 Veranda broom
245 Hand brush
246 Curry brush
247 Whitewashing brush
248 Whip
249 Coir rope
250 Coir rope
251 Coir rope
252 Coir rope

Cocoanut Kernel.

253 Kernel
254 Scraped cocoanut
255 Cocoanut refuse
256 Sambal
257 Sambal
258 Mellun
259 Cocoanut milk
260 Cocoanut soup
261 Copperah
262 Milk oil
263 Hand extracted oil
264 Cold-drawn oil
265 King cocoanut oil (cold drawn)
266 Poonac

Cocoanut Cabbage

267 Cabbage | 268 Pickled cabbage

Cocoanut Tree in its different stages and its different parts

269 Cocoanut shoots
270 Cocoanut plant
271 Cocoanut roots
272 Plant with leaves spread
273 Flower (spadix)
274 Flower in full bloom
275 Flower, barren
276 Bunch of tender cocoanuts
277 Bunch of young cocoanuts
278 Bunch of half matured cocoanuts
279 Bunch of well matured cocoanuts
280 Tender branch
281 Cocoanut cabbage
282 Branch (green)
283 Branch (dried)
284 Flowet covering [pekanissa
285 Interwoven covering
286 Tender leaves
287 Tender ekels
288 Green leaves
289 Green ekels
290 Trunk of a cocoanut tree
291 Cocoanut nursery

Different kinns of Cocoanuts.

292 Green cocoanuts
293 Red cocoanuts
294 Cammadala, or loo-pol
295 Bodiri
296 Navasi
297 Peni-pol
298 Dikiri-pol
299 Goodogooda-pol
300 Gon tembili
301 Rat tembili
302 Ran tembali
303 Jaffna cocoannts
304 Fighting cocoanuts
305 Keta-pol
306 Ratu-pol
307 Gudu-pol
308 Puhu-pol

Produce taken from the Flower.

309 Toddy
310 Arrack
311 Sweet toddy
312 Honey
313 Jaggery
314 Crystalized honey
315 Vinegar

Miscellaneous.

316 Ana-bole
317 Embryo
318 Ekel hat
319 Ekel hat
320 Cocoanut pudding
321 Coal bag
322 Hand basket
323 Cigar case
324 Betel case
325 Betel case
326 Hat made of tender leaves
327 Hat made of tender leaves
328 Handle of a chisel
329 Handle of a chisel
330 Flower tray

VIII. Collection of Ancient and Modern Coins.

E. Creasy.

1 Fanam
3 Fanam
4 Sri Raja Raja

Coins of the Rajas of Ceylon.

6 Iraka
7 Laksmi[a doubtful Ceylon coin (*three* only found in the island), but a rare South Indian coin]
8 Warragon
9 Larin(a fish-hook variety)
11 Sri Parakrama Bahu
12 Sri Parakrama Bahu (the lion coin)
14 Sri Vijaya Bahu
17 Sri Raja Lilavati
18 Sri Mat Sahasa Malla
22 Vi (Rhys Davids)

Dutch coins

34 Six-stuiver pieces... 1730.....Holland
36 Two stuivers ....1766.....Holland
39 Two stuivers ....1757.....Friesland

Coins of the United East India Company.

60 Two stuivers.... 1789
63 One stuiver ....1780.....Colombo
64 One stuiver ....1782..... Colombo
65 One stuiver ....1783.....Colombo and Galle
66 One stuiver ....1784 .....Colombo
67 One stuiver ....1785..... Colombo
68 One stuiver ....1786.....Colombo
69 One stuiver ....1787 .....Galle and Colombo
70 One stuiver ....1788..... Columbo
72 One stuiver ....1789..... Galle
73 One stuiver ... 1790.....Columbo and Trincomalee
74 One stuiver ....1791 .... Trincomalle and Colombo
75 One stuiver ....1792.....Trincomalee, Galle and Colombo
76 One stuiver ....1793..... Galle, Colombo and Trincomalee
77 One stuiver ....1794.....Colombo
78 One stuiver ....1795 .....Columbo

80 One stuiver
81 Half stuiver
82 Dagger coins

83 Quarter silver
84 One duit ... 1789
85 One duit ... 1792

Duits

90	Zealand	1728	120	Friesland	1738	151	Friesland 1750
92	Friesland	1729	121	Zealand	1739	152	Utrecht 1750
93	Zealand	1730	122	Holland	1740	153	Holland 1751
94	Holland	1730	124	Holland	1742	154	Friesland 1751
95	Holland	1731	125	Utrecht	1742	155	Zealand 1751
96	Zealand	1731	126	Holland	1743	156	Holland 1752
97	Gelderland	1731	127	Friesland	1743	157	Zealand 1752
98	Friesland	1731	128	Holland	1744	158	Utrecht 1752
99	Holland	1732	129	Zealand	1744	159	Friesland 1752
100	Gelderland	1732	130	Utrecht	1744	161	Zealand 1753
101	Zealand	1732	131	Friesland	1744	162	Utrecht 1753
102	Friesland	1732	132	Holland	1745	163	Friesland 1753
103	Holland	1733	133	Zealand	1745	165	Utrecht 1754
104	Zealand	1733	134	Utrecht	1745	166	Zealand 1754
105	Friesland	1733	135	Friesland	1745	167	Friesland 1754
106	Gelderland	1733	136	Holland	1746	168	Holland 1755
107	Holland	1734	137	Zealand	1746	169	Zealand 1755
108	Zealand	1734	138	Utrecht	1746	170	Utrecht 1755
109	Friesland	1734	139	Friesland	1746	171	Friesland 1755
110	Holland	1735	140	Holland	1747	172	Friesland 1756
111	Zealand	1735	141	Zealand	1747	173	Zealand 1756
112	Friesland	1735	142	Friesland	1747	174	Zealand 1757
113	Holland	1736	143	Holland	1748	175	Utrecht 1757
114	Zealand	1736	144	Zealand	1748	176	Zealand 1764
115	Friesland	1736	145	Friesland	1748	178	Holland 1765
116	Holland	1737	146	Zealand	1749	179	Zealand 1765
117	Zealand	1737	147	Friesland	1749	181	Friesland 1765
118	Friesland	1737	148	Holland	1749	182	Holland 1766
119	Zealand	1738	149	Holland	1750	183	Zealand 1766

184	Utrecht	1766	208	Zealand	1785	224	Zealand	1789
185	Friesland	1766	209	Gelderland	1785	225	Gelderland	1789
191	Friesland	1771	211	Holland	1785	226	Utrecht	1789
193	Friesland	1772	212	Zealand	1786	227	Friesland	1789
194	Gelderland	1776	213	Gelderland	1786	228	Holland	1790
195	Friesland	1776	214	Utrecht	1786	229	Zealand	1790
199	Holland	1780	215	Friesland	1786	230	Gelderland	1790
200	Utrecht	1780	216	Gelderland	1787	232	Utrecht	1790
201	Friesland	1780	217	Utrecht	1787	233	Zealand	1791
202	Zealand	1780	218	Friesland	1787	234	Gelderland	1791
203	Utrecht	1781	219	Zealand	1788	235	Utrecht	1791
204	Friesland	1781	220	Utrecht	1788	236	Friesland	1791
205	Holland	1784	221	Gelderland	1788	238	Gelderland	1792
206	Utrecht	1784	223	Holland	1789	241	Gelderland	1794

Half Challies.

248	Holland	1740	249	Holland	1752	255	Utrecht	1755
244	Friesland	1745	250	Utrecht	1752	256	Utrecht	1756
245	Holland	1749	251	Holland	1752	257	Utrecht	1757
246	Holland	1750	252	Utrecht	1753	258	Holland	1759
247	Holland	1751	253	Holland	1754	259	Friesland	1770
248	Utrecht	1751	254	Utrecht	1754	260	Holland	1770

English Coins.

269	Rix-dollar	1821	281	Two stuivers	1812	291	One stuiver	1810
275	Fanam Token (circa)	1820	282	Two stuivers	1801	293	Two stuivers	1813
			283	One stuiver	1801	294	Two stuivers	1815
276	Four stuivers	1803	284	Quarter stu'r	1802	295	Two stuivers	1815
277	Two stuivers	1803	285	One stuiver	1802	305	One stuiver	1815
278	One stuiver	1803	288	Two stuivers	1802	306	One stuiver	1815
279	Four stuivers	1804	290	One stuiver	1809	308	Half stuiver	1815
280	Two stuivers	1805						

Maldivian Coins.

311	Bodu-lari . .	1168	318*a*	Kuda-lari . .	1276
313	Bodu-lari . .	1180	318*b*	Kuda-lari . .	1202
316	Kuda lari . .	1292	318*c*	Kuda-lari . .	1221
317	Kuda-lari . .	1298	318*d*	Kuda-lari . .	1257
318	Kuda-lari . .	1300	318*f*	Kuda-lari . .	1248

English Coins.

320	English sovereign	George III	326	Penny	George III
			327	Penny	George III
321	Half crown	George III	328	Penny	George IV
322	Florin	Victoria	329	Half-penny	
323	Sixpence	George III	330	Farthing	
324	Fourpence	Victoria	331	Half-farthing	
325	Threepence	Victoria	332	Quarter-farthing.	

Ceylon Coins.

333	Rupee	336	Five cents
334	Half-rupee	337	One cent
335	Twenty-five cents	338	Half-cent
335*a*	Ten cents	339	Quarter-cent

Other Coins.

1 Persian gold coin, very ancient, found under dagoba at Tissamaharama tank

2 Eyptian coins

3 Hyderabad coins

4 Japanese coins

5 Egyptian coins

IX. Models of Natives of Ceylon, showing Costumes.

1 Buddhist monk
1302 Colombo Chetty
1303 Low-country headman
1304 Kandyan chief
1305 Sinhalese woman wearing antique villiage bridal costume

X Collective Exhibit: Maldivian Articles.

Presented to Ceylon Government by the late Sultan Ibrahim Noorudin Iskander.

1 Six gold bangles
2 Set 24 gold earrings
3 Gold necklace of twelve chains
4 Large mat, black and white stripes
5 Sultan's ship, large
6 and 7 Sultan's ship, small
8 Fishing boat
9 Life boat
10 Game board with 18 holes
11 Game called naranchi
12 Tops, whipping
13 Tops
14 Chess board
15 and 16 Toys (tip cat game)
17 and 18 Tops
19 Flageolet
20 and 21 Plates for rubbing sandalwood
22 Cowries
23 Pipe
24 Game
25 and 26 Drums
27 Vessel for keeping betel
28 to 30 Boxes used for sending presents
31 Wooden box for betel
32 Vessel for water
33 Vessel for sweetmeats
34 Vessel for water
35 Vessel for flour
36 Glass case for water
37 Case for keeping medicines
38 and 39 Medicine boxes
40 Box with three rooms
41 Jewelry box
42 Wooden needle
43 Bamboo pen
44 Ladle
45 Stand for keeping books
46 and 47 Wooden sandals
48 to 53 Boxes for holding plates
54 Wood-turning machines
55 Thread twister
56 Fisher's cap
57 Handkerchief for female turbans
58 Stand for making lace
59 Bottle of kurakkan seed
60 Meneri seed
61 Turban for females
62 Handkerchiefs for males
63 Turban for males
64 Stand for making gold lace
65 Bottle of meneri seed
66 Turban for males
67 A phial of medicine
68 Six pieces comboys
69 Parcel, two pairs trousers
70 Parcel, two shirts
71 Six comboys
72 Parcel. 4 comboys
73 Shirt
74 Piece cloth
75 Seruval silk
76 Parcel, 4 pieces comboys
77 and 76 One piece comboy
79 and 80 Shirts
81 Parcel, 2 pieces comboys
82 Parcel, 2 pairs trousers
83 Parcel, 3 cloths
84 Inferior cloth
85 and 86 Six pieces cloth
87 Cloth for trousers
88 and 89 Best shirts for males
90 Real thread
91 Roller for making rottie
92 Drumstick
93 Shield
94 Six pieces sick laces
95 and 96 Phials (scent)
97 Wooden plate
98 Whipping tops
99 Chisels for carving
100 Couch swing
101 Couch or bed
102 Footstool bench
103 Thread-twisting machine
104 Rat trap
105 Balance
106 Gem polisher

107 Pingo(for carrying toddy)
108 and 109 Vessels for toddy
110 Winnower
111 Cocoanut leaf basket
112 Vessel for straining cocoanut milk
113 Cocoanut leaf for wrapping the cocoanut flower
114 Spoons
115 Brush for cleaning cocoanut shells
116 Ladle for taking water
117 Copperah squeezer
118 Carved spoons
119 Vessel for taking water
120 Stick used in hammering cocoanut flowers for toddy
121 A net used in throwing out live bait from water
122 Ladle used in throwing water
123 Drill
124 Adze
125 Knives
126 Knife used in cutting cocoanut flowers
127 Knife for cutting fish
128 Ekel covers
129 Vessel for keeping paint
130 Carpenter's lining thread
131 Jar covers
132 Cocoanut scraper
133 Folding cocoanut scraper
134 Rice stirrrer
135 Knife
136 Chisel
137 Planer
138 Knife
139 Fish knife
140 Axe
141 Net
142 Mat
143 Pillow
144 Net
145 Basket for taking dirt
146 Cocoanut milk strainer
147 Basket with cover for sweetmeats
148 Wooden knife used by confectioers
149 Mat sail, small
150 Mat sail, large
151 Mat bags
152 to 159 Bundles of coir
160 Cocoanuts
161 Brooms
162 Ekel brooms
163 One bundle fishing implements
164 to 168 Cocoanuts
169 Mortar
170 Pestle
171 to 179 Bottles of sweetmeats
180 Basket
181 Rolls
182 and 183 Tamborines
184 to 187 Kites
188 and 189 Sticks
190 Weapon
191 Spear used in processions
192 Fancy stick
193 and 194 Sticks used in processions
195 Carved wood
196 Spear
197 Knife
198 Weapon
199 and 200 Tombstones
201 to 220 Mats
221 Net
222 Bag cowries

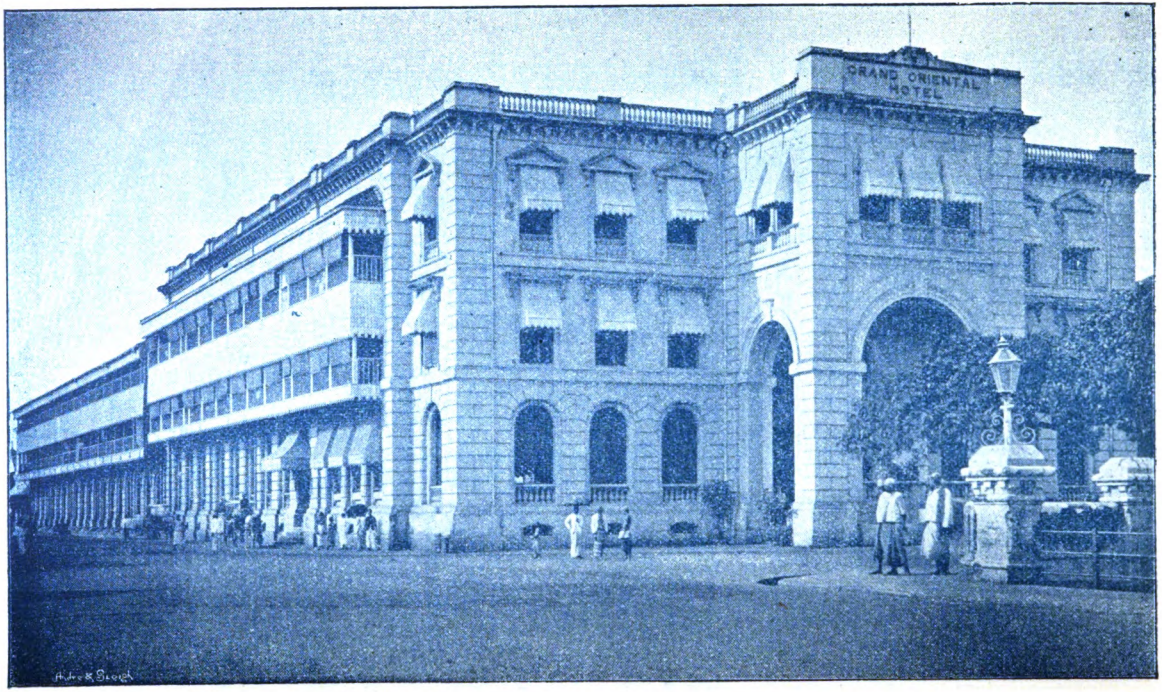
XI—Collective Exhibits: Maldivian Articles.

The Ceylon commission

1 Box for sweetmeats
2 Dish cover
3 Plate
4 Three medicine plates
5 Womans' comboy
6 Girls' do
7 Childs' do
8 Set of six silver bangles
9 do
10 Large lacquer box
11 Small do
12 Lacquer tumbler
13 Set of brass bangles
14 Two gold chains
15 Silver waist chain
16 Piece of coral
17 Five rings made from above

18 Lace pillows, 17 bobbins, and 2 gold laces
19 Reel for thread
20 Stopper for water pipe
21 Small top
22 Set of 23 gold earrings
23 Ivory handled knife
24 Waist ornaments
25 Turban
26 Cloth
27 Belt
28 Small mat
29 Game with 16 men and 6 cowrie dice
30 Top with string
31 Common knife
32 Small lacqur tray
33 Ivory handled knife
34 Set of chess
35 Large top
36 Grindstone
37 Hat stand
38 Grindstone
39 Window curtain
40 Woman's jacket
41 Nine-stone game
42 Milk strainer
43 Knife with black carved handle
44 Do
45 Lacquered tumblers
46 Common mat
47 Mat
48 Do
49 Do
50 Do
51 Do
52 Do
53 Rice washer
54 Milk warmer
55 Chisel
56 Gauge
57 Brush
58 Game called marriage
59 Book stand
60 Casting net
61 Woman's chess
62 Lacquered tumbler
63 Box for finger glass
64 Lacquered box
65 Box mill with turned off lid
66 Fish knife
67 Cotton reel
69 Cake stamp
70 Water ladle
71 Brush
72 Do
73 Ruler
74 Nest of boxes
75 Common box
76 Rice measure
77 Nautilas cup and spoon
78 Nautilas spoon
79 Laquer box
80 Barber's knife box
81 Cocoanut scraper
82 Spoon nautilas
83 Small carved tumbler
84 Pair of pattens
85 Dish cover
86 Stool
87 Ornament for waist belt
88 Small box
89 Fishing rod, line, and hook
90 Bottle-shaped box
91 Candlestick
92 Axe
93 Knife with silver handle
94 Small basket net
95 Common knife
96 Big hook for turtle fishing
97 Feather hat
98 Net
99 Cocoanut leaf basket
100 Child's ring
101 Arecannts
102 Do
103 Do
104 Long handled knife
105 Six playing sticks
106 Tambourine
107 Scales
108 Kite
109 Medicine dish
110 Black box
111 Water drawer
112 Sweetmeat box
113 Tortoiseshell needles
114 Sweetmeat tray ruler
115 Boat baler
116 Game of tip-cat
117 Large knife
118 Knife
119 Very large black-handled knife
120 Large axe
121 Black and yellow box
122 Three child's playing sticks

123 Two dancers sticks
124 Double chunam box
126 Set of four swing rings
127 Fly wisp
128 Lacquered pot
129 Baker's knife
130 Tin nautilus
131 do
132 Thread winder
133 Holder for burning wood
134 Pillow
135 Six rings and bangles used by the poor
136 Two anklets used by the the poor
137 Gold chains
138 Finely lacquered box
139 Shark's hook
140 and 141 Knitting needle (lacquered)
142 Rice sifter
143 Rice isay
144 Child's swing
145 Chopping knife
146 Scoop
147 and 148 Ivory knitting needles
149 Flower stand
150 Green box
151 and 152 Rakes
153 Child's cap
154 Fly wisp
155 Cover for incense burner
156 Cocoanut squeezer
157 Cowrie weight
158 Cocoanut measure
159 Plate
160 Knife in pith sheath
161 Cake mould
162 Drill
163 Gouge
164 Chisel
165 Large gouge
166 Double cocoanut (for toddy drawer)
167 Very small cocoanut
168 do
169 Box
171 Tooth sand box
172 Cocoanut basket
173 and 174 Two knives
One coir brush
175 Pair of pattens
176 Brass bangles
177 Box for finger glass
178 Toddy-drawer's knife
179 Coir basket
180 Lacquer box
181 Knife in sheath
182 Plate
183 Rice measure
184 Wooden dish
185 Cocoanut scraper
186 Cotton reel
187 Carved cocoanut
188 do
189 Common box
190 Boat bailer
191 Book siving
193 (Unknown) probably a net needle
194 Hat
195 Hat
196 Pair of small bellows
197 Bag of cowries
198 Mat sail
199 and 200 Cadjans
201 Diamond-shaped plate
202 Covered basket with Maldive characters
203 Cocoanut squeezer
204 Paddy pounder
205 Cake stamp
206 Dhoby's lathe
207 Cocoanut beater
208 Haum glass
209 Model paddy pounder
210 Rice mortar
211 Pipe, hubble-bubble
212 Cover for scent bottle
213 Box with scales
214 Doctor's pestle and mortar
215 Cocoanut spoon
216 Sling for dwellings
217 Big top
218 Six small cocoanuts
219 Silver ornament for waist belt
220 Dust pan
221 Scent bottle in silk case
222 Bodkin with plume
223 Rice stirrer
224 Confectionery knife
225 Drill chuck
226 Box with lock and key
227 Nine-stone game
228 Flageolet
229 Yellow jar
230 Cake box, large



VIEW OF THE GRAND ORIENTAL HOTEL, COLOMBO, CEYLON.

VOLKART BROTHERS

IMPORT AND EXPORT MERCHANTS AND COMMISSION AGENTS.

Coal Depots:—Colombo and Galle, in Ceylon. Suppliers to the British War Ships and Transports.

Head Office:—Winterthur, Switzerland.

London Agency:—11, Billiter Square, E.C.

BRANCHES.

India:—Bombay, Kurrachee, Delhi, Tuticorin, Madras, Cochin, Calicut, and Tellicherry.

Ceylon:—Colombo and Galle.

Steamer Agencies:—Austrian Lloyd's Steam Navigation Co., Trieste; The Shire Line of Steamers (Messrs. Jenkins & Co.), London; Navigazioni Generale Italiana, Genoa; Bombay and Persia Steam Navigation Co., Bombay; "Hansa" Deutsche Dampfschifffahrts Gesellschaft, Bremen; Flensburger Dampfschifffahrt-Gesellschaft v 1869, Flensburg; Deutsche Dampfschiffs Rhederei zu Hamburg; The City Line, Limited, Glasgow.

Insurance Agencies:—North British and Mercantile Insurance Co., London; Hamburg-Bremen Fire Insurance Co., Hamburg; Transatlantic Fire Insurance Co., Hamburg; The Baloise Fire Insurance Co., Basel; Assicurazioni Generali, Trieste; Transatlantic Marine Insurance Co., Berlin; The London and Lancashire Fire Insurance Co., Liverpool (Galle Branch only); Northern Assurance Co., London (Galle Branch only); The Straits Insurance Co., Limited, Singapore (Galle Branch only).

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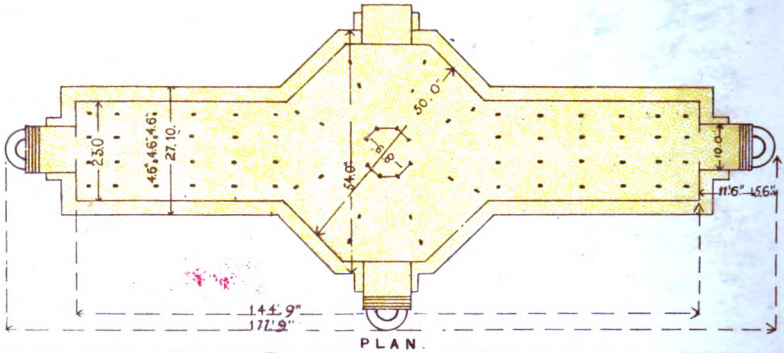
PLAN OF TEA CCTAGON,

CEYLON PRINCIPAL COURT,

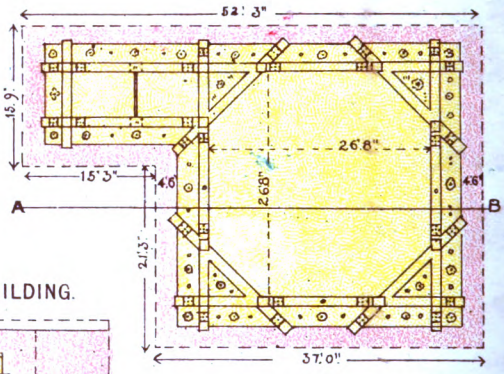
CHICAGO 18 93 EXPOSITION,

ELEVATION.

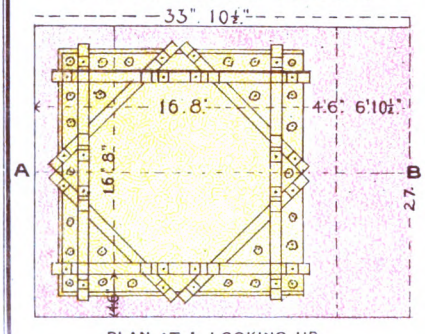


PLAN.

MINOR COURT IN AGRICULTURAL BUILDING.

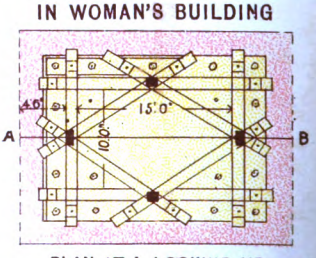


IN MANUFACTURES' BUILDING.



PLAN AT L LOOKING UP.

IN WOMAN'S BUILDING



PLAN AT L LOOKING UP.