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[Despatch Abstract.]

Government Museum

Reviewing the report on the administration of the ——— & the Connemara Public Library for the year 1898-99, & forwarding Copy. to the Govt of India.

T. 10.7.99

BACK PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

Government {1899} of Madras.

EDUCATIONAL.

Recd. } 1899. *Enclosures*

Regd. } 1899. *Spare copies*

G.O., &c., Nos. 462, 463, 14th July 1899.

JULY.

Government Museum.

Reviewing the Report on the administration of the — and the Connemara Public Library for the year 1898–99, and forwarding copy to the Government of India.

GOVERNMENT OF MADRAS.

EDUCATIONAL DEPARTMENT.

Read—the following paper:—

From EDGAR THURSTON, Esq., Superintendent, Government Museum, Madras, to the Secretary to Government, Local and Municipal Department, dated 23rd June 1899, No. 391.

I have the honour to forward, for submission to His Excellency the Governor in Council, my report on the working of the Government Museum during 1898–99, and to request that I may be supplied with 160 copies for distribution to other Museums, etc.

ADMINISTRATION REPORT OF THE MADRAS GOVERNMENT MUSEUM FOR THE YEAR 1898–99.

1. Visitors.—The total number of visitors to the museum old building was 333,895 and to the new building 351,942—figures which indicate the popularity of the institution from the point of view of the sight-seer.

	Old building.	New building.
Smallest number of visitors on any day, not a holiday ..	85	85
Largest " " " " ..	8,591	9,865
Smallest number of visitors on Sunday	140	155
Largest " " "	1,321	1,283

The largest number of visitors on a single day was 58,044 to the old and 59,862 to the new building at the feast of Pongal. (The visitors to the Zoological Gardens, London, on the last bank-holiday were only 33,569.) The vast crowd of natives was thoroughly orderly, and no accident or damage to exhibits, or theft by professional thieves, occurred.

The number of gosha females who visited the museum on the days set apart for them was 3,627.

The rule relating to gosha visitors was slightly modified, the words "no males except infants in arms" being substituted for "no males of any age," and the word "females" being used in lieu of "ladies," as experience has taught me that many visit the museum on gosha day, who have no claim to the latter title.

2. Grounds.—The grounds were placed under the management of the Agri-Horticultural Society, which attended to the flower-beds, and to the welfare of the large number of trees planted to replace those which were sacrificed during the construction of the new buildings. The bald appearance of the grounds is fast disappearing owing to the rapid growth of plant life in a tropical climate. Garden seats were provided, and greater facilities than heretofore afforded for the supply of drinking-water and refreshments to visitors and readers in the library.

The new Taxidermist's quarters were completed and occupied. The old quarters were fitted up as a record room for Patent Office records, Parliamentary papers, official papers, &c. A room in the new quarters was set apart for use as a photographic dark-room.

3. Lighting.—An oil-gas generating apparatus and gasometer were set up in the grounds, and both theatre and library were provided with a gas installation, which has proved in every way satisfactory, and is far superior to, and safer than, open kerosine lamps.

4. Anthropology.—As bearing on the policy of the museum, I reproduce, in Appendix F, an article published in *Nature* (May 26, 1898) entitled "Anthropology in Madras," which explains in popular language the nature of the special work which is being carried out in this institution.

A long tour was made in connection with the anthropological survey, in the course of which the investigation of the Malaiālis of the Shevaroy hills was completed. Suspicious of my motives, they proved unwilling subjects, and the examination was carried out only with great difficulty. Though now living on the summit and slopes of the hills, and bearing a name which signifies inhabitants of the hills, the Malaiālis have no claim to be reckoned as a genuine hill-tribe, being Tamils who migrated from the plains—probably Conjeeveram—in comparatively recent times.

Advantage was taken of my visit to the Shevaroys to examine, on behalf of Government, Mr. R. Bruce Foote's private collection of "pre-historic" implements, with a view to the possible purchase thereof for the museum. The museum "pre-historic" collection was arranged by Mr. Foote in a gallery of the new building, which will be opened to the public during the ensuing year. Enriched by the addition of Mr. Foote's collection, the museum would possess the finest existing collection illustrative of Indian "pre-historic" times.

A protracted stay was made at Calicut on the Malabar Coast, where Eurasians, Cherumans, and Tiyans were examined anthropometrically. During a short stay at Ootacamund, an inquiry was carried out in connection with the physique of the elder boys at the Lawrence Asylum school, concerning whom I have recorded that "a good climate, with a mean annual temperature of 58°, good food, and physical training, have produced a set of lads well nourished and muscular, with good chests, shoulders, and body-weight. More eloquent than columns of figures, which appeal only to those accustomed to anthropometric methods, was examination of the lads themselves, as they stood stripped for investigation."

In continuation of my examination of the jungle tribes, short of stature and with high nasal index, round whom, as the existing remnant of a once more numerous race, much interest centres, the Kādirs of the Anaimalai hills were examined at the Forest depot, Mount Stuart. Not the least interesting characteristic of these hardy mountaineers is the practice, resorted to by both sexes, of chipping the incisor teeth to a sharp point—a practice which, though carried out in Africa and the Malay Archipelago, is, I believe, confined to the Kādirs alone so far as peninsular India is concerned. An ethnographic fact, and one which is significant, is that the detailed description of tree-climbing by means of pegs, as carried out by the Dyaks of Borneo, and as given by Wallace (Malay Archipelago) might have been written on the Anaimalai hills, and would apply equally well in every detail to the Kādirs.

Photographs, illustrating the tribes investigated, were taken, and collections purchased in illustration of personal adornment, &c.

To the anthropological laboratory were added printed instructions for measuring heads and skulls; skulls labelled to show the essential measurements, relation of brain to face in man and apes, &c.; skulls and ear (in spirit) of a young Orang-utan; photographs of Chimpanzee and an African Negro; and an articulated human skeleton.

From the Madras Medical College a very interesting skull of a Tamil, conspicuously dolichocephalic, and with marked prognathism, was received. To Mr. Foote the museum was indebted for a native skull, discovered 250 feet below the surface in the Ajampur gold mine, Mysore.

A course of demonstrations on practical anthropology was held in the museum theatre for the benefit of students in the University classes of history, which, as laid down by the University, includes a knowledge of ethnology. The course was well attended, the students availing themselves of the opportunity to supplement the theoretical knowledge acquired in the lecture-room, by witnessing the application of practical methods to the living subject, skull, etc.

A large number of data were collected, for future publication, with the apparatus referred to in my last report as having been purchased from the Cambridge Scientific Instrument Company. A series of candidates at a Civil Engineering examination

were brought to me for supplementary examination with sundry tests of "appreciation," "re-action," &c.; and it was distinctly interesting to note that the order, as recorded by me, corresponded approximately with the order in which they were placed by their college examiners.

Bulletin Volume II, No. 2, was issued, containing statistics relating to Eurasians of the poorer classes; a note on tattooing; a review of an article entitled "Malagaches-Nias-Dravidians," by M. Zaborowski; and a Toda petition to Government concerning the limitation of the number of buffaloes to be slaughtered at the kēdu (funeral rites). The Todas complaining that "the sacrifice of buffaloes at the kēdu is the most important of all the rites and ceremonies of the religion which the community of Todas, your petitioners, practise; and that, without its due and proper observance, they believe that they are prejudiced in the next world, while the reputation of the surviving relatives of the dead are lowered in the eyes of the community from the same cause."

The proof sheets of Bulletin Vol. II, No. 3, containing notes on the Kādirs and Malaiālis, syllabus of demonstrations, the Dravidian head, and a summary of the existing evidence on the complex Dravidian problem, were in an advanced stage at the close of the year.

The manuscript of a full and interesting report by Mr. F. Fawcett, of the Police department, on various tribes and castes of Malabar, was received for publication in the Bulletin series.

A magnificent photographic enlargement representing the seething crowd of natives in the tank at the Mahamakam festival, Kumbakónam, was acquired by purchase.

The collection of pre-historic implements lent to the museum by Mr. H. Gompertz was returned to him during the year.

5. Botanic and Economic Sections.—The appointment of a successor to Mr. M. A. Lawson, the late Government botanist, brought about certain changes in the working of the botanical section of the museum, in compliance with G.O., No. 102, dated 8th February 1899, to the effect that "the herbarium, being a necessary adjunct to the Botanist's work, will for the present be removed from the museum and placed in the Botanist's charge at Ootacamund. Mr. Barber will make arrangements to this end with the Superintendent of the Government Museum. The more important books, which formed the official botanical library of the late Mr. Lawson, are now in charge of the Superintendent, Government Museum, and should also be transferred to Mr. Barber." The museum herbarium-keeper, Mr. Rangachari, remains attached to the staff of the museum, and, in the absence of the herbarium, his appointment would be more appropriately entitled "Botanic and Economic Assistant." A detailed scheme has been worked out, and set in operation, for the development of the economic section and of the botanical index series, of which the latter will be arranged in the gallery over the mineral room, and should be of great value as an aid to the study of morphological and systematic botany by University students and others.

The herbarium-keeper spent several months on the Palnis in connection with the investigation of the flora of this mountain range, which was commenced by Dr. A. G. Bourne in 1897, and continued by him during the year under review.

A dado, composed of Malabar timbers from the Malabar Steam Saw Mill, Calicut, was set up on the stair-case leading to the economic gallery. The timbers thus exhibited are as follows:—

1. Tectona grandis (teak).
2. Dalbergia latifolia (rosewood).
3. Dysoxylum malabaricum (white cedar).
4. Cedrela Toona (red cedar).
5. Artocarpus hirsuta (aini).
6. Lagerstrœmia lanceolata (benteak).
7. Canarium strictum.
8. Hopea parviflora.
9. Terminalia tomentosa (Malabar walnut).
10. Xylia dolabriformis (iron-wood).

11. Terminalia paniculata.
12. Calophyllum longifolium (poon).
13. Pterocarpus Marsupium (Wynaad padauk).
14. Mangifera indica (mango).
15. Hardwickia pinnata (Malabar mahogany).
16. Vateria indica.
17. Artocarpus integrifolia (jack).
18. Adina cordifolia.
19. Diospyros Ebenum (ebony).
20. Grewia tiliæfolia (Malabar lancewood).
21. Michelia Champaca.
22. Bombax malabaricum.
23. Tetrameles nudiflora.

The museum was consulted in connection with an insect, which was causing considerable pecuniary loss by boring into planks for tea chests made of *Bombax Malabaricum* timber in a large open godown at Calicut. The insect was identified at the Indian Museum, Calcutta, as a species of *Bostrychus* new to the museum collection. As a possible remedial agent, soaking the plants in water, and exposing them to the sun, were recommended. Among other economic references may be mentioned an isopod crustacean, which produced considerable damage by eating the roots of coffee seedlings in the Wynaad.

From the Public Works Department were received specimens of a pelagic amphipod crustacean, which was present on the surface of the Cooum near its entry into the sea, and, by its decomposition in millions, added to the smell emanating from that unsavoury river.

At Calicut specimens were obtained of the timber of *Mesua ferrea* (iron-wood), serving as piles for the pier, which had been extensively bored by a species of *Pholas*.

6. Art Section.—At the Exhibition held under the auspices of the resuscitated Madras Fine Arts Society, I acquired on behalf of the museum a series of ivory carvings of animals executed by an artisan employed by the Elaya Raja of Travancore; repoussé aluminium plaques made at the Madras School of Arts; carved teapoy made at the Madura Technical Institute; an oil-painting entitled "The gong-beater" by Mr. C. Krishna Raja, which secured the prize for the best picture by a native of Southern India. It is to be hoped that the series of exhibitions, in which the museum is directly interested, will be continued annually, and that they will be the means of developing, and promoting an interest in the indigenous arts and handicrafts of the Madras Presidency.

7. Archæology.—A number of stone carvings, which have been for many years exhibited in the museum grounds round the main entrance, were set up in the archæological section.

I was interviewed by the Prince priest of Siam in connection with the proposed transfer of a relic from the Buddhist stupa of Bhattiprôlu in the Kistna district, which, it was suggested by a correspondent to the *London Times*, should be rescued from the "obscurity of the Madras Museum." The relic, which is coveted, is a fragment of bone contained within a crystal casket, which was itself contained in a large stone casket, whereon is inscribed the legend: "By the father of Kura, the mother of Kura and Siva (has been ordered) the preparation of a casket, and (has been given) a box of crystal in order to deposit some relics of Budha" (Translation, Bühler *Epigraphia Indica*).

Correspondence took place with reference to a suggestion from Dr. J. Burgess that the collection of Gandhâra Græco-Bactrian sculptures, received by the Madras Museum some years ago, should be reproduced by photography for publication. Several of the sculptures were successfully reproduced by the Madras Survey department, and the photographs sent to Dr. Burgess for approval before the work is finally carried out. The sculptures under reference form a fitting companion to those from the Amarávati stupa in the Kistna district, which are among the most valuable of the possessions of the museum.

A series of nineteen copper plates, bearing the names and dates of various Sētupati and other native princes, which had appeared from time to time in suits on the file of the several courts in the Madura district, were received from the District Judge, and added to the existing collection.

A stone figure of Krishnaswāmi of unusual type, found in the Tiruvannámalai taluk of the South Arcot district, was acquired under the Treasure Trove Act.

8. Geological Section.—The collection of fossil Ammonoidea, made by Dr. Warth in the Trichinopoly district, which was sent to Professor Waagen, Vienna, in 1893, was returned, and exhibited. A report thereon by Dr. F. Kossmat, with description of new species, has been published in a monograph entitled "Untersuchungen über die südindische Kreideformation." The remainder of the cretaceous material (nautiloidea, gastropoda, bivalves, brachiopoda, and corals) is retained by Dr. Waagen pending the publication of the monograph relating thereto. Among other additions may be mentioned :—

(*a*) An interesting type-series of hand specimens of rocks from Coorg, named according to modern nomenclature, and received from Mr. T. H. Holland of the Geological Survey of India.

(*b*) Polished blocks of charnockite rock from the Nilgiris.

(*c*) Polished block of red granite from Dammur, Bellary district.

(*d*) Coal in the seam from the Singareni coal-fields.

(*e*) Charts illustrating rainfall distribution, cyclonic storms, and the physical configuration of India.

9. Numismatics.—The most important additions to the collection of coins were—

(*a*) A small collection of coins of the Moghul Emperors from the Bellary district.

(*b*) Eleven silver denarii of Tiberius, found in a hill at Salibundam village in the Chicacole taluk of the Ganjám district.

(*c*) Fifteen gold coins from Ganjám, identified by the Philological Secretary, Asiatic Society of Bengal, as being issues of the Kings Jajalladeva (circa 1090–1120 A.D.), Ratnadeva (circa 1120–1140), and Prithvideva (circa 1140–1170), of the Kalacuri dynasty of Mahakosala.

Three copper Indo-French coins of fleur-de-lis type, with dates 1769, 1781, and 1790, were received in exchange.

Two large coin-cases, enclosed in burglar-proof iron safes, were purchased, and the groups of coins already published in museum catalogues, and certain miscellaneous groups of unpublished coins, transferred thereto.

A commencement was made with the arrangement of the large series of Moghul coins, the majority of which have been received from time to time from the Asiatic Society of Bengal.

Progress was made with the preparation of the manuscript of the catalogue of the rich collection of South Indian coins, the publication of which, in amplification of the information contained in Sir Walter Elliot's "Coins of Southern India," and liberally illustrated, is a very great desideratum. A conference was held, in connection therewith, with Messrs. T. M. Rangachari and T. Desika Chari, who themselves possess a good private collection of South Indian coins, and the task of cataloguing the coins of the Cholas, Pandyans, Sētupatis, and Vijayanagar dynasty was entrusted to them. The issue of my "Catalogue of Mysore Coins," for which there is a constant demand from amateur collectors, is exhausted, and was re-written, with additions, for incorporation in the new catalogue.

10. Industrial Monograph.—As a companion to my "Monograph on the Cotton Fabric Industry," 1897, a monograph on the woollen fabric industry of the Madras Presidency was, under instructions from the Government of India, prepared, and issued. This industry resolves itself into two main heads—(*a*) carpets and rugs, (*b*) blankets (kamblis). Of these, the extent of the industry, and fame of the former are on the decline; the latter are still extensively manufactured in many districts, and have not suffered to the same extent as cotton fabrics from the competition of cheap imported articles. Of the woollen carpet industry there are at the present day, as in the past, four chief centres—Ellore in the Gódávari district; Masulipatam in the Kistna district; Walajanagar in the North Arcot district; and Ayyampéttai in the Tanjore district; and, of these, the most important is Ellore. The demand for Ellore carpets seems to be fairly well maintained, as a Madras firm (Messrs. Arbuthnot & Co.) still supplies them annually to the value of about 1½ lakhs of rupees.

Complete sets of impressions of the beautiful wooden blocks in the industrial section of the museum, which were formerly used in printing cotton fabrics, and are now laid aside in favour of the predominant imported piece-goods, were, at their request, prepared for business men interested in the cotton fabric industry in Europe, and visiting India in search, *inter alia*, of designs suitable for the capricious requirements of the Indian market.

11. Sea Fisheries Investigation.—As the result of correspondence between the Board of Revenue and myself on the subject of fish-curing statistics, the Board resolved that "the fish-curing statistics, as at present collected, having proved themselves to be valueless either scientifically or commercially, a stop should be put to their record, and a less ambitious, but more accurate system substituted on the lines suggested by the Superintendent, Government Museum". My views as to the lines on which the investigation should be carried out are expressed in the letter reproduced in appendix G . . The suggestion contained therein that, with a view to a comparison being made of the fishes caught off the east and west coasts, a census should be held, at each fish-curing yard, during two entire weeks of the year—one before, the other towards the close of the south-west monsoon—was adopted. The results of the March census were being tabulated at the close of the official year. I propose to visit personally, during the ensuing year, some of the more important fish-curing yards on both east and west coasts, with a view to collecting data in amplification of the reports which are received monthly from the Inspectors of the yards.

An application was received from the German Sea-fisheries Board (See-fischereiverein) for the loan of native divers from Tuticorin in connection with investigation of the pearl oysters off the coast of German East Africa. A number of divers expressed their willingness to proceed thither, on certain conditions as to remuneration, hours of work, depth of water and dietary, which were communicated to the Board.

12. Natural (History Animal).—A number of birds and fishes shot in the environs of Madras city or obtained in the local market were, as usual, added to replace old, faded, and worn out specimens.

As an addition to the existing collection of stuffed mammals, which, of necessity, lack the artistic treatment displayed in those exhibited at the National Museum at South Kensington, skin specimens are being exhibited as the opportunity arises. Such specimens (supplemented by skulls), though less attractive to the general mass of visitors, are, for the purpose of identification by those interested in natural history, really more useful than grotesquely stuffed specimens, inasmuch as the characters of the entire surface (dorsal, lateral, and ventral) are displayed at a glance. The same remark applies to the exhibited collection of birds. The casual visitor, or one in search of elementary knowledge, is perfectly satisfied if he can see birds which are familiar to him, or which he wishes to identify, set up on labelled wooden supports or perches, regardless of their habits, arboreal, swimming, wading, &c. But the occasional critic notices that, in the absence of an organised band of collectors and shikáris distributed throughout the Presidency, and of material received from amateur collectors and volunteer museum helpers, the general effect is perforce marred by the placing of recent specimens side by side with those collected many years ago in the early history of the museum, and difficult to replace.

Among the additions to this section during the year, the following may be noted :—

Mammalia.

Skeleton of Loris gracilis.
,, of Sciurus palmarum—the palm squirrel.
Skull of Pteromys oral—the large brown flying squirrel, from Malabar.
Skin of Viverricula malaccensis—the small Indian civet.
,, of Felis bengalensis—the leopard cat, from the Nilgiris.
,, of Platacanthomys lasiurus—the Malabar spiny mouse, from the Wynaad.

Skull of Cervulus muntjac—the rib-faced or barking deer, from the Nilgiris.

Clavicles (collar-bones) of man compared with the rudimentary clavicles in the Felidæ (tiger, panther, jungle cat, and domestic cat).

A series of specimens illustrating the mechanism of the retractile claws of the Felidæ (illustrated by the panther).

Skeletons of the feet of an elephant, showing the true position of the bones during life.

A series of specimens illustrating the structure of the molar teeth of the elephant.

A series of framed labels, descriptive of the salient characters of the various orders of mammalia, and process reproductions of photographs of South Indian Mammals, with brief descriptions thereof, taken from the publication "All about animals" were exhibited, and, I was glad to notice, widely studied by visitors.

Aves.

Skin of an albino peacock.

Golden-backed woodpecker (Brachypternus aurantius) showing the long protrusible tongue.

Crimson-breasted barbet, or coppersmith (*Xantholæma hæmatocephala*) in a hole bored in the trunk of a Casuarina tree. Skulls and eggs of the Emu and Cassowary, and eggs of the Ostrich and Emu (added to the index collection).

Reptilia.

Section of the skeleton of Chelone mydas (turtle), showing the internal osteology.

Sections of the skeletons of pond tortoises, showing the position of the cervical (neck) vertebræ when the head is retracted within, and projected outside the carapace.

Carapaces of pond tortoises, showing the bony plates constituting a bony dermal armour.

Chamæleon with its long projectile tongue, adapted for catching insects at long range, protruded.

Skull of a gharial (*Gavialis gangeticus*).

Skin of Varanus bengalensis (lizard), showing the bony scales.

Keeled bony scutes of a crocodile.

A snake, Tryophis pulverulentus, was received from Sultan's Battery, Wynaad, 3,000—4,000 feet. This species is recorded by Boulenger (Faun. Brit. Ind.) from Ceylon and the Anaimalai hills, 2,000 feet.

Specimens were issued on loan, for the purpose of object lessons, to various elementary schools. At the Educational Conference, which was held in the museum theatre at Christmas, I read a short paper, illustrated by examples, on "the circulation of specimens to schools," in the hope that some interest in the study of natural history (animal, vegetable, and mineral), served up in pleasant form, might be aroused among those responsible for the education of the rising generation.

13. Live Animals.—At the close of the year the collection of live animals, which continues a source of great attraction, was composed of the following:—

Aves.

Aquila maculata—large-spotted eagle.
Coturnix communis—common or grey quail.
" coromandelica—black-breasted or rain quail.
Perdicula asiatica—jungle bush quail.
Domesticated pigeons, illustrating variation under domestication.
Turtur humilis—red turtle-dove.
" risoria—common ring-dove.
" suratensis—spotted dove.
" meena—rufous turtle dove.
Pterocles fasciatus—painted sand-grouse.
Munia malacca—black-headed munia.
Uroloncha malabarica—white-throated munia.
" punctulata—spotted munia.

An attempt to keep in captivity the screech owl (*Strix flammea*) and kestrel (*Tinnunculus alaudarius*), failed.

Mammalia.

Loris gracilis—slender loris.
Gerbillus indicus—Indian antelope rat.

The loris, which is easily obtainable in the Madras market, feeds greedily on cockroaches. Being nocturnal in habits, it sleeps all day till 5 P.M., curled up in a bunch with its fellow-prisoners. It is very delicate in captivity, and the specimens have to be continually replaced.

Pisces.

Barbus, sp.
Rasbora daniconius.
Anabas scandens—climbing perch.

Reptilia.

Crocodilus palustris, juvenis.
Chamæleon calcaratus.
Python molurus.
Eryx johnii—sand snake.
Zamenis mucosus—rat snake.
Dendrophis—sp. incert.
Tropidonotus stolatus.
" piscator—fresh-water snake.
Atretium schistosum " "
Vipera russellii.
Trimeresurus gramineus ? from the Wynaad.
" anamallensis " "
Dryophis mycterizans—whip snake.
Echis carinata.
Naia tripudians—cobra.

The Python was caught in the jungle at Gudavancheri, where it was found coiled round a goat. Specimens were attached, in frames, to the cages, illustrating the strings of eggs of the rat snake, and the spurs in which the rudimentary hind limbs of the Python terminate.

14. Connemara Public Library.—The total number of readers during the year was 13,345 against 11,256 in 1897–98—

Smallest number of readers on any day	.. ..		12
Largest " "	.. ..		192
Smallest " Sunday	.. ..		17
Largest " "	.. ..		103

The number of books given out was 16,677 against 11,356 in 1897–98. The following tabular statement shows the numbers of applicants for books, and of the volumes given out during the last two years:—

Months.	1897–98.		1898–99.	
	Number of applicants for books.	Number of volumes given out.	Number of applicants for books.	Number of volumes given out.
April	Closed.		815	1,307
May	302	471	736	1,151
June	436	648	655	1,115
July	566	787	836	1,405
August	588	915	890	1,295
September	609	1,090	926	1,322
October	523	1,025	930	1,375
November	499	869	844	1,277
December	866	1,409	1,127	1,828
January	1,056	1,476	1,102	1,496
February	838	1,241	1,134	1,682
March	998	1,425	1,078	1,424
Total ..	7,281	11,356	11,073	16,677

From this statement it will be seen that there was, in the year under review, an increase of 52 per cent. in the number of applicants, and of 47 per cent. in the number of books given out.

The comparatively large number of readers between December and March is probably due to the large number of holidays in December and January, and to the presence in Madras of mofussil students reading for the University examinations.

During the year the following subject-index catalogues were printed:—

(1) Religion.
(2) Forensic medicine; hygiene and public health; materia medica and therapeutics; medical jurisprudence; medicine; microscope and microscopy.

Catalogues of "Serials" were added to the folio copies of catalogues, which were maintained up to date.

The total number of standard works added to the library was 379, of which 296 were acquired by purchase, and 83 presented (*vide* Appendix D). The library was indebted to General G. Godfrey Pearse, C.B., for a donation of a collection of books and pamphlets relating to Indian numismatics and other subjects.

In Appendix C is given a statement, showing the number of readers in every month during each hour of the working day, from which it will be seen that the most popular hours for readers were, as in the previous year, from 2 to 5 P.M.

15. Valuable Stock.—The necessary inventory of stock was maintained and duly checked. The collections were all in good order at the end of the year.

APPENDIX A.

Museum Old Buildings.

Visitors from 1st April 1898 to 31st March 1899 on week days.

1898–99.	Signatures made in											
	English.	Telugu.	Hindustani.	Tamil.	Mahratta.	Nagari.	Guzerati.	Canarese.	Chinese.	Singhalese.	Malayalam.	Bengali.
1	2	3	4	5	6	7	8	9	10	11	12	13
April	1,402	527	190	1,339	4	..	13	31	1	..	26	2
May	1,799	643	442	1,954	3	2	19	24	..	..	9	20
June	2,360	860	258	2,089	6	..	19	55	..	..	21	2
July	2,017	790	407	1,930	23	..	13	17	..	..	4	12
August	1,669	685	297	1,645	7	2	16	13	..	1	12	8
September	1,653	563	231	1,499	11	4	11	8	..	..	17	4
October	1,319	377	185	1,122	4	..	10	3	..	..	12	4
November	1,243	479	163	1,132	10	2	11	10	..	1	7	3
December	3,325	940	271	3,039	10	14	24	14	..	..	29	5
January	1,935	713	345	1,880	27	..	38	18	2	2	22	2
February	1,170	446	451	1,277	10	..	15	9	..	..	6	10
March	1,303	366	163	1,294	6	..	12	27	..	..	15	..
Total ..	21,225	7,389	3,403	20,200	121	24	201	229	3	4	180	72

1898–99.	Total number of signatures.	Unable to sign.	Total number of visitors.	Number of		Total number of visitors.
				Males.	Females.	
	14	15	16	17	18	19
April	3,535	10,459	13,994	8,646	5,348	13,994
May	4,915	12,024	16,939	10,720	6,219	16,939
June	5,700	14,913	20,613	12,317	8,296	20,613
July	5,213	14,069	19,282	11,652	7,630	19,282
August	4,355	14,824	19,179	11,200	7,979	19,179
September	4,001	13,521	17,522	10,335	7,187	17,522
October	3,036	10,109	13,145	7,976	5,169	13,145
November	3,061	8,800	11,861	7,576	4,285	11,861
December	7,671	42,807	50,478	26,586	23,892	50,478
January	4,984	22,170	27,154	15,161	11,993	27,154
February	3,394	12,577	15,971	9,240	6,731	15,971
March	3,186	14,257	17,443	9,263	8,180	17,443
Total ..	53,051	190,530	243,581	140,672	102,909	243,581

Museum New Buildings.

Visitors from 1st April 1898 to 31st March 1899 on Sundays.

1898-99.	Signatures made in											
	English.	Telugu.	Hindustani.	Tamil.	Mahratta.	Nagari.	Guzerati.	Canarese.	Chinese.	Sinhalese.	Malayalam.	Bengali.
1	2	3	4	5	6	7	8	9	10	11	12	13
April	325	130	18	234	1	..	..	8	..	..	4	..
May	310	108	14	290	..	9	..	20	..	..	..	..
June	345	175	36	377	..	..	..	21	..	..	11	..
July	600	200	50	502	1	9	2	20	..	..	5	..
August	410	70	26	298	..	..	..	12	..	..	29	1
September	390	75	22	336	..	..	..	10	..	..	12	..
October	308	78	24	254	..	..	..	11	..	..	5	..
November	281	80	24	235	1	..	..	12	..	..	2	..
December	471	76	31	370	..	..	7	10	..	..	4	..
January	660	258	78	1,380	2	..	2	24	..	..	21	..
February	360	87	38	433	2	..	6	21	..	..	13	1
March	310	55	22	338	..	1	3	12	..	..	5	..
Total ..	4,770	1,392	383	5,047	7	19	20	181	..	..	111	2

1898-99.	Total number of signatures.	Unable to sign.	Total number of visitors.	Number of		Total number of visitors.
				Males.	Females.	
	14	15	16	17	18	19
April	720	1,075	1,795	1,241	554	1,795
May	751	1,101	1,852	1,381	471	1,852
June	965	1,535	2,500	1,755	745	2,500
July	1,389	2,388	3,777	2,587	1,190	3,777
August	846	1,687	2,533	1,681	852	2,533
September	845	1,925	2,770	1,885	885	2,770
October	680	1,436	2,116	1,496	620	2,116
November	635	1,008	1,643	1,216	427	1,643
December	969	2,330	3,299	2,144	1,155	3,299
January	2,425	60,756	63,181	25,623	37,558	63,181
February	961	2,234	3,195	2,288	907	3,195
March	746	2,611	3,357	1,902	1,455	3,357
Total ..	11,932	80,086	92,018	45,199	46,819	92,018

APPENDIX B.

Donations, 1898-99.

Arden, Mrs.—
Butterflies, moths, &c.

Asiatic Society of Bengal—
Rupees of the following independent Kings of Bengal, found in Santhal Parganas:—
Sikandur Sháh I.
Shihábud-din Báyazid.
Jalal-ad-din Muhammad.
Rupees of the following Bengal Sultans, found in Mymensingh:—
Jalal-ad-din Fath Sháh.
Shamsad-din Muzaffar Shah.
Ala-ad-din Husain Sháh.
Ala-ad-din Firóz Sháh.
Nasir-ad-din Nasrat Sháh.
Ghiyas-ad-din Mahmud Sháh III.
Copper and silver coins belonging to the class commonly known as Gadhiyipaisé, found in Darbhanga—

Varáha coins.
Vigraha coins (Indo-Sassanian).
Silver punch-marked coins, found in Gaya.

Atheseum Pillay, Mr. T. G.—
Insect (Cricket).

Badcock, Mr. C. F.—
White-breasted Water-hen (Amaurornis phœnicurus).

Bartley, Mr. H.—
Horns of wild buffalo (Bos bubalus) from the Kimedy Malialis, Ganjám.

Bellary, District Forest-officer—
Blocks of Dammur red granite and Hurlihal trap porphyry.

Bobbili, Kumara Raja—
Photographs of Gadabas of Vizagapatam.

Brown, Mr. A.—
Specimens of Malabar timbers.

Browne, Colonel W. R.—
Rat-snake (Zamenis mucosus).

Cadell, Mr. C. R. S.—
Fish (Pterois volitans).

Chatterton, Mr. A.—
Cobra (Naia tripudians).

Daly, Mr. W. M.—
Skull of rib-faced or barking-deer (Cervulus muntjac).

Fawcett, Mr. F.—
Umbrella carried away by pilgrims from Jagganath.

Foote, Mr. R. B.—
Chank (Turbinella rapa) shell; distorted.

Foulkes, Mr. R.—
Snake (Chrysopelea ornata; greenish-yellow variety).

Gabbett, Miss.—
Wild silk moth (Actias selene).

Ganjám, District Magistrate—
Silver coins (Denarii of Tiberius) found in a hill at Salibundam village, Chicacole taluk.

Giffard, Captain G.—
Caterpillar.

Gillespie, Mr. J. T.—
Larva of sphinx moth.

Govind Doss, Mr. L.—
Snake (Tropidonotus stolatus).

Gray, Mr. C.—
Skin and skull of leopard-cat (Felis bengalensis).
Skull of large brown flying squirrel (Pteromys oral).
Skull of rib-faced or barking-deer (Cervulus muntjac).

Griffin, Mr. A.—
Moth.

Hammick, Mr. M.—
Photographs of Khonds, and Meriah sacrifice tree.

Harcourt, Mr. G.—
Nest of trap-door spider.

Hesketh Biggs, Mrs.—
Snake (Dryophis mycterizans).

Higgens, Mr. A. W. B.—
Square brick, found in a village near Rámachandrapuram, Gódávari.
Round stone with a hole in it, found at Vallam, Tanjore.

Hogg, Mr. J. R.—
Double cocoanut.

Holland, Mr. T. H.—
Collection of Coorg rocks.

Hubbard, Mr. J. R.—
Leaf insect.

Jagadisa Aiyar, Mr. P. V.—
Biotite (black mica) in granite.

James, Mr J. P.—
Mother of pearl shells (Avicula margaritifera).

King, Mrs —
Wild silk moth (Actias selene).

Lincoln, Miss. E.—
Larva of sphinx moth.

Lodge, Mr. F.A.—
Leaf insect.

Madura District Judge—
Series of copper plates.

Maitland, Colonel J.—
Insect (Nepa sp. "Water-scorpion").

Municipal Commission, Madras—

Australian parakeet.	Emu.
Cockatoo.	Spectacle monkey.
Rose cockatoo.	Tiger.
Yellow crested cockatoo.	Leopard.
Parakeet.	Sambar.
Parrot.	Llama.
Singapore parrot.	

Muthukumara Pillay, Mr. A.—
Cast (moult) skin of Rat-snake (Zamenis mucosus).

Narayanasawmy, Mr. M.—
South Indian copper coins, bow-type (Chera ?)

North-Western Provinces and Oudh, Government.—
Moghul coins.

Phipps, Mr. C. E.—
Insect: Nepa sp.

Pinto, Mr. P.—
Snakes, alive—
Krait (Bungarus cœruleus).
Rat-snake (Zamenis mucosus).
Cerberus rhynchops.
Dendrophis pictus.
Lycodon aulicus.
Tropidonotus piscator.

Ramachandra Iyer, Mr. A. V.—
Stick with the form of a dog's face.
Crystals of biotite (black mica).

Small, Mr. J. W.—
Fan made by the Vellálas of Jaffna.
Horoscope in Tamil, manufactured from the tender leaves of the Palmyra palm by the Vellálas of Jaffna.

Smart, Colonel, A. W.—
Portrait in oils of Sivaji, Raja of Tanjore.

Smith, Captain J. H.—
Moth (Actias selene).

Soobroyalu Chetty, Mr. V.—
Australian cockatoo.

Spoor, Mr. J. L.—
Dutch tomb stone found in Madras.

Stoney Mr. E. W.—
Young crocodile (alive).

Thurley, Mr. C.—
Snake (Tropidonotus piscator).

Venkatadry Naidu, Mr. R.—
Box, fly brush (chámaram), and neck chains made by hill-tribe, Vizagapatam.

Vibert, Mr. L.—
Quarter farthings, 1839, 1853.

Waddington, Mr. H.—
Snakes from the Wynád (Dryophis pulverulentus).

Waddington, Mr. H.—
Snake, Trimeresurus gramineus, alive.
Do. Trimeresurus anamallensis, alive.
Do. Tropidonotus plumbicolar.

West, Mr. H. C.—
Magnetite from Kanjamalai, Salem.
Coal from Singareni coal fields, with matrix attached.
Travancore knife with ornamental silver sheath.

Wilson, Mr. A. C.—
Soft-furred field-rat (Mus mettada), alive.

APPENDIX C.

Statement showing the total number of readers in Library in every month during each hour of the day, 1898–99.

—	7—8	8—9	9—10	10—11	11—12	12—1	1—2	2—3	3—4	4—5	5—6	Total.
April	80	95	105	102	91	75	79	115	137	137	45	1,061
May	116	102	99	83	73	58	79	85	115	95	63	968
June	86	106	88	91	77	75	71	94	105	109	26	928
July	97	84	81	93	70	79	78	127	114	107	19	949
August	73	79	85	94	117	69	66	132	123	129	31	998
September	64	95	46	69	104	145	99	98	127	92	28	965
October	58	62	75	90	81	110	95	84	116	66	16	853
November	64	80	69	84	95	88	78	107	77	59	4	805
December	78	88	135	158	118	175	222	231	196	164	22	1,587
January	69	124	154	164	153	167	181	239	243	169	33	1,696
February	67	103	109	113	132	95	109	159	153	117	31	1,188
March	101	98	130	131	138	125	100	162	153	169	40	1,347
Total ..	953	1,114	1,176	1,272	1,249	1,261	1,257	1,633	1,659	1,413	358	13,345

APPENDIX D.

List of Books added to the Library.

Donations.

Abbott, J.—Account of the Battle-field of Alexander and Porus now occupied by the Mutinous Sikh Army. Calcutta, 1849, 8vo.
A brief Sketch of British Progress during the Victorian Era. [*Tamil.*], 1898.
Aiyasami Sastriar, S.—Kongu History. Madras, 1898, 8vo.
Balasubramania Pillay, D.—Vivekarasattalattu: a Lullaby. [*The Viveka Chintamani Series.*], 1894, 8vo.
Bary, A. de.—Comparative Anatomy of the Vegetative Organs of the Phanerogams and Ferns. *Illust.*, Translation, Oxford, 1884, 8vo.
Bennet, A. W, and G. Murray.—Handbook of Cryptogamic Botany. *Illust.*, 1889, 8vo.
Benson, C. A.—Atmospheric Freaks. Ealing, 1896, 8vo.
Bidie, G.—Pagoda or Varáha Coins of Southern India. *Illust.*, Reprint, Calcutta, 1883, 8vo.
Blanford, W. T.— Birds. [*Fauna of British India.*] *Illust.*, Vol. IV, 1898, 8vo.
Branfill, B. R.—Names of Places in Tanjore. Madras, 8vo.
Brown, C. P.—Cyclic Tables of Hindu and Muhammadan Chronology. Madras, 1850, 8vo.
Burnell, A. C.—Devil Worship of the Tuluvas. *Illust*, Reprint, Bombay, 1894, 4to.
Cameron, P.—Hymenoptera Orientalia: Contribution to Knowledge of Hymenoptera of the Oriental Zoological Region. Reprint, Manchester, 1898, 8vo.
Campbell, F.—Index Catalogue of Bibliographical Works (chiefly in the English Language) relating to India, 1897, 8vo.
Codrington, O.—Coins of Bahmani Dynasty. *Illust.*, Reprint, 1898, 8vo.
——— some rare and unedited Arabic and Persian Coins. *Illust.*, Hertford, 1889, 8vo.
Cooke, M. C.—Britith Desmids. *Illust.*, 1887, 8vo.
——— British Fresh water Algæ, exclusive of Desmidæ and Diatomaceæ. Text and plates, 1882–84, 8vo.
Cust, R. N.—John, Lord Lawrence. Reprint, Hertford, 1897, 8vo.
——— Sir C. U. Aitchison. Reprint, Hertford, 1897, 8vo.
——— Sir Herbert Edwardes. Reprint, Hertford, 1897, 8vo.
——— Twenty-five years after India. Reprint, Hertford, 1897, 8vo.

Denison, Sir W.—Attempt to approximate to the Antiquity of Man. Madras, 1865, 8vo.
Dobbs, J.—Recollections of an old 52nd man. Waterford, 1859, 8vo.
Fight at Dame Europa's School: showing how the German Boy thrashed the French Boy; and how the English Boy looked on, 8vo.
Foulkes, T.—Catechism of the Siva Religion. Translation, 1863, 8vo.
Godwin-Austin, H. H.—Land and freshwater Mollusca of India. Text (Parts VII, VIII), 8vo, and plates 4to, 1897-98.
Guyon, Abbé de.—History of the East-Indies, ancient and modern. Translation, 2 vols., 1757, 8vo.
Hassall, O. H.—History of the British freshwater Algæ, including the Desmideæ and Diatomaceæ. *Illust.*, 2 vols., 1845, 8vo.
Hawkes, H. P.—Sketch of the Coinage of Mysore. *Illust.*, Bangalore, 1856, 12mo.
Hill, G. F.—Roman Aurei from Pudukkotta, South India. Reprint, 1898, 8vo.
'Investigator' R.I.M.S. Illustrations of the Zoology. Calcutta, 1898, 4to.
Jagannath, M.—Arya Sampradayapradarsaka Gayatri Bhashyam, 1898, 8vo.
——— Do. do. explained in Hindi, 1898, 8vo.
Krishna Row, P.—Brief History of Mysore up to the death of Tippoo Sultan. Bangalore, 1868, 8vo.
Lacouperie, T. de.—L'Ere des Arsacides en 248 avant J. C. selon les Inscriptions cunéiformes. Reprint, Louvain, 1891, 8vo.
——— Premiére Introduction de la Civilisation Occidentale en Chine, 1892, 8vo.
Lindsay, J. L.—*Earl of Crawford*. Catalogue of Chinese Books and Manuscripts [*Bibliotheca Lindesiana.*] 1895, 4to.
——— Handlist of Oriental Manuscripts, Arabic, Persian, Turkish. [*Bibliotheca Lindesiana.*] 1898, 4to.
——— Handlist of a Collection of Broadside Proclamations issued by Authority of Kings and Queens of Great Britain and Ireland. [*Bibliotheca Lindesiana.*] 1886, 8vo.
——— List of Manuscripts and Examples of Metal and Ivory Bindings exhibited to the Bibliographical Society, 1898, 8vo.
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Lisboa, J. C.—List of Bombay Grasses, and their Uses. *Illust.*, Bombay, 1896, 8vo.
Loventhal, E.—Coins of Tinnevelly. *Illust.*, Madras, 1888, 8vo.
Medlicott, H. B.—Manual of Geology of India. Economic Geology, 2nd edition, 1898. Part I, Corundum, T. H. Holland.
Moore, F.—Lepidoptera Indica. *Illust.*, Parts 31—35, 4to.
Murdoch, J.—The Famine Policy in India and the Measures necessary to secure the Material Well-being of the People, 1898, 8vo.
——— The History of the Plague, and How to stop its Ravages, 1898, 8vo.
——— The Indian Empire. *Illust.*, Madras, 1898, 8vo.
——— The Indian National Congress, 1898, 8vo.
——— Indian Reforms, 1898, 8vo.
——— Twelve Years of Indian Progress, 1898, 8vo.
Muthusawmy Pillai, P. S. D.—A New Method for teaching Tamil and Geography to Infants, 4 to 10 years of age, 1898, 8vo.
Nahuys, Cte. M.—Numismatique des Indes Neerlandaises. *Illust.*, 1887, 8vo.
Natesan, M.—The Sastra Vichitram: or Wonders of Science, containing a series of most interesting and instructive Experiments in every Branch of Science, 1898. *Illust.*, 8vo.
Nathan, R.—Plague in India, 1896-97, 4 vols., 1898, 8vo.
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Newton, Sir Isaac. Mémoire sur la Monnaie. Translation, 1889, 8vo.
Pearse, G. G.—Note on a Rama Tanka. *Illust.*, Reprint, Pamphlet, Calcutta, 1880, 8vo.
Pocock, R. I.—Genus Pœcilotheria: its Habits, History, and Species. *Illust.*, Reprint, 1899, 8vo.
Rapson, E. J.—On the Attribution of certain Silver Coins of Sassanian Fabric. Reprint, 1896, 8vo.
Rohde, R. T.—Practicable Decimal System for Great Britain and her Colonies. Reprint, 1888, 8vo.
Sewell, R.—Eclipses of the Moon in India, 1898, 4to.
———Notes on Hionen-Thsang's Dhanakacheka. Reprint, 1880, 8vo.
Sibthorpe, C.—Clinical Manual for India. *Illust.*, 4th edition, Madras, 1897, 8vo.
Smith, E. W.—Portfolio of Indian Architectural Drawings, Part I, 1897, fol.
Swaminatha Aiyar, C. V.—The Story of the Life of Buddha. [*Viveka Chintamani Series,*] 1897, 8vo.
——— Life of Her Majesty Queen Victoria, Empress of India. [*Viveka Chintamani Series,*] 1898, 8vo.
——— Kamalambal or the Fatal Rumour. [*Viveka Chintamani Series.*] 1896, 8vo.
——— The Encouragement of Vernaculars, 1898, 8vo.
——— Vernacular studies in Madras, 1898, 8vo.

Swaminatha Aiyar, C. V.—Viveka Manjari: A Tamil Miscellany, Vol. I. [*Viveka Chintamani Series.*] 1897, 8vo.
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Theobald, W.—Note on Symbols found on the punch-marked Coins of Hindustan. *Illust.*, Reprint, Calcutta, 1890, 8vo.
——— Note on some of the Symbols on the Coins of Kunanda. Reprint, Calcutta, 1886, 8vo.
——— Notes on early Coinages in North-West India and in the Konkan. Reprint, Calcutta, 1894, 8vo.
——— On certain Symbols or Devices on the Gold Coins of the Guptas. Reprint, Calcutta, 1884, 8vo.
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——— Sethupati coins. *Illust.*, Reprint, Madras, 1896, 8vo.
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Watt, G.—Pests and Blights of the Tea Plant: Report of Investigations in Assam and Kangra. Calcutta, 1898, 8vo.

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Arnold, Sir E.—The Light of the World: or the great Consummation. *Illust.*, 1896, 8vo.
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Ball, W. P.—Are the effects of Use and Disuse inherited? [*Nature Series.*] 1890, 8vo.
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Bartlett, A. D.—Wild Animals in captivity. *Illust.*, edited by E. Bartlett, 1899, 8vo.
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Beddard, F. E.—Elementary practical Zoology. *Illust.* [*Longman's Practical Elementary Science Series.*] 1898, 8vo.
Bernard, H. M.—Apodidæ: A Morphological Study. *Illust.* [*Nature Series.*] 1892, 8vo.
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Buchanan, W. M.—Dictionary of Science and Technical Terms. *Illust.*, 1884, 8vo.
Carlyle, T.—Works. Centenary edition, 17 vols., 8vo.
——— French Revolution, 3 vols.
——— Heroes and Hero worship.
——— History of Frederick the Great, 6 vols.
——— Life of John Sterling.
——— Oliver Cromwell's Letters and Speeches, 4 vols.
——— Past and Present.
——— Sartor resartus.
Cartailhac, É.—La France préhistorique d' aprés les Sépultures et les Monuments. *Illust.*, Paris, 1889, 8vo.
Cecil, E.—Primogeniture: History of its Development and Practical Effects, 1895, 8vo.
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Church, A. H.—English Earthenware. *Illust.*, 1894, 8vo.
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Cox, S. H.—Prospecting for Minerals: practical Hand-book. *Illust.*, 1898, 8vo.
Crookes, W.—Diamonds. [*Royal Institution Lecture*] 1897, 8vo.
Daffnfr, F.—Das Wachstum des Menschen: Anthropologische Studien. Leipzig, 1897, 8vo.
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——— American Notes; Italy; History of England.
——— Barnaby Rudge.
——— Bleak House.
——— Christmas Books; Hard Times.
——— Christmas Stories and others.
——— David Copperfield.

Dickens, C.—Dombey and Son.
——— Edwin Drood; Reprinted Pieces.
——— Great Expectations; Un-commercial Traveller.
——— Little Dorrit.
——— Martin Chuzzlewit.
——— Nicholas Nickleby.
——— Old Curiosity Shop.
——— Oliver Twist; Tale of two Cities.
——— Our Mutual Friend.
——— Pickwick Papers.
——— Sketches by Boz.

Doyley, C.—The European in India; with Preface and Descriptions by T. Williamson, and brief History of Ancient and Modern India by F. W. Blagdon. *Illust.*, 1813, 14to.
Duncan, J. M.—Clinical Lectures on the Diseases of Women. 4th edition, 1889, 8vo.
Eha.—The five Windows of the Soul, 1898, 8vo.
——— The Tribes on my Frontier. *Illust.*, 6th edition, 1897, 8vo.
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Evans, A. H.—Birds. *Illust.* [*Cambridge Natural History.*] 1899, 8vo.
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Featherman, A.—Social History of the Races of Mankind, 2 vols., 1885–87, 8vo.
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Geiger, W.—Ceylon: Tagebuckblatter and Reiseerinnerungen. *Illust.*, Wiesbaden, 1898, 8vo.

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APPENDIX E.

Classified List of Expenditure of the Government Museum during the year 1898–99.

	Actuals, 1898–99.	Revised estimate, 1898–99.
	Rs.	Rs.
Salaries—		
Superintendent	9,600	9,600
Exchange compensation allowance	626	645
Local allowance	2,400	2,400
Total	12,626	12,645
Permanent establishment—Government Museum—		
First assistant, second assistant, first, second and third taxidermists, herbarium-keeper, artist, writer, assistant writer, thirteen hamals, six gallery attendants, superintendent's peon, door-keeper, chickledar and two peons—33 persons	7,024	7,117
Temporary establishment—Government Museum—		
Collecting taxidermist, three gardeners, three sweepers, five watchmen, water-pandal Brahmin, punkah-puller and chokra—15 persons	1,073	1,075
Permanent establishment—Connemara Public Library—		
Sub-librarian, three attendants and two peons—6 persons	2,230	2,281
Temporary establishment—Connemara Public Library—		
Servant (sweeper)—1 person	40	48
Total, Establishment	10,367	10,521
Allowance—		
Travelling allowance	962	1,047

	Actuals, 1898–99.	Revised estimate, 1898–99.
	Rs.	Rs.
Supplies and Services—		
Cost of specimens purchased on tour	847	900
Objects of interest and coins purchased at head-quarters	701	700
Fittings, furniture, &c., for the collections	2,833	2,853
Cost of books and publications	2,256	1,800
Library	1,589	2,000
Lithographing plates	506	500
Ammunitions	15	15
Charges for feeding live animals	193	120
Expenses—		
Reading coins	19	10
Measurement	16	35
Total, Supplies and Services	8,975	8,933
Contingencies—		
Purchase of country articles each costing less than Rs. 50	94	100
Subscription to newspapers	28	25
Cost of Europe stores (including freight)	13	15
Freight landing and shipping charges	63	35
Repairs to furniture	81	100
Gardening expenses	204	200
Wages and cooly	142	135
Cleaning charges	38	50
Supply of drinking water	3	5
Scavenging expenses	45	45
Advertisements	7	..
Postage charges	191	180
Telegraph charges	12	20
Rents, rates and taxes	3,843	3,843
Binding charges	303	300
Lighting charges	81	85
Petty carriage and cooly charges	212	156
Clothing of servants	75	100
Office expenses, including such articles as gum-pots, rat-traps, mixture to prevent destruction of records, brooms, nails, firewood, umbrellas for peons, mats, chalk, food for cats, soap, vinegar, water-pots, ropes, match-boxes	17	35
Total, Contingencies	5,452	5,429
Grand Total	38,382	38,575

APPENDIX F.

Anthropology in Madras.

When recently on furlough in England, I was greatly interested in hunting up the facilities for the study of anthropology in London, and in the scheme for the establishment of a bureau of ethnology for the British Empire. And it has been suggested to me that it may interest those concerned in the development of anthropological research to know what is being done, in a mild way, in a remote possession of the Empire, the Madras Presidency, viz., the southern portion of the Indian peninsula. I add this geographical explanation, inasmuch as a friendly critic, in a recent review of my work, got hopelessly mixed between Madras and Bengal, reminding me of the story of the Viceroy-elect, who was overheard murmuring to himself, "Bombay in the west, Calcutta in the east, Madras in the south." Wide as is the area, and numerous as are the tribes, castes and races included within my limited beat of 150,000 square miles, I have set myself the task, which must perforce occupy many years, of carrying out a detailed anthropological survey. This survey was, with the approval of the Madras Government, inaugurated in 1894. In that year, equipped with a set of anthropometric instruments obtained on loan from the Asiatic Society of Bengal, I commenced an investigation of the hill-tribes of the Nilgiris, the Todas, Kotas, and Badagas, bringing down on myself the unofficial criticism that "anthropological research at high altitudes is eminently indicated when the thermometer registers 100° in Madras." From this modest beginning have resulted: (1) investigation of the various classes which inhabit the city of Madras, during my residence at head-quarters, (2)

periodical tours to various parts of the Presidency, with a view to the study of the more important tribes and classes; (3) the publication of bulletins, wherein the results of my work are embodied; (4) the establishment of an anthropological laboratory, equipped with the apparatus necessary for carrying out anthropometric research; apparatus for testing sight, hearing, vital capacity, hand-grip, &c.; a small series of Hindu, Muhammadan, Burmese and Sinhalese skulls; and an anthropomorphic series, still in a very early stage of development, but including the finger-print impressions of an orang-utan; (5) a collection of photographs of native types, arranged in albums; (6) a series of lantern-slides for lecture purposes.

A museum, such as that of Madras, the visitors to which sign their names in Tamil, Telugu, Kanarese, Malayalam, Nagari, Hindustani, Mahrati, Guzarati, Bengali, Burmese, Sinhalese and Chinese, lends itself to the requirements of the anthropologist, as it is resorted to by very large numbers of the poorer classes, who, in return for a small fee, are oft-times willing to lend their bodies for the purposes of anthropometry. And, nearly every morning, I am to be seen measuring Hindus or Muhammadans, amid an admiring crowd of native visitors (the females dressed in gaudy English piece-goods), in the surrounding corridor. Quite recently, when I was engaged in an enquiry into the Eurasian or half-breed community, the booking for places was almost as keen as on the occasion of a first night at the Lyceum, and the sepoys of a native infantry regiment, quartered in Madras, entered heartily into the spirit of what they called the "Mujeum gymnashtik shparts," cheering the possessor of the biggest hand-grip, and chaffing those who came to grief over the spirometer. Anthropological research in the city of Madras, where the native community has become accustomed to the European, and discovered that, if his ways are peculiar, he is at any rate harmless, is all plain sailing. But, in the jungles and places remote from civilisation, one has to deal with simple-minded folk, unfamiliar with the eccentricities of the investigator, and suspicious of his motives. Well do I remember a native remarking at a pearl-fishery camp, "Mr. Thurston is a pleasant man, and it is a great pity he is so mad." The fact indicating insanity being that I used to sit outside my tent in the sun, at mid-day in the month of April, examining oyster after oyster in connection with the pearl-producing area.

The essential ingredients of a successful campaign in the wilds are tact, patience, 4-anna pieces, cheap cheroots, and as a final resource, raw whiskey or brandy. The Paniyan women of the Wynaad, when I appeared in their midst, ran away, believing that I was going to have the finest specimens among them stuffed for the museum. Oh, that this were possible! The difficult problem of obtaining models from the living subject would then be disposed of. The Muppas of Malabar mistook me for a recruiting sergeant, bent on enlisting the strongest of them to fight against the Moplahs. An Irula of the Nilgiris, who was "wanted" for some ancient offence relating to a forest elephant, refused to be measured on the plea that the height-measuring standard was the gallows. A mischievous rumour found credence among the Irulas that I had in my train a wizard Kurumba, who would bewitch their women and compel me to abduct them. The Malaialis of the Shevaroys got it into their heads that I was about to annex their lands on behalf of the Crown, and transport them to the penal settlement in the Andaman islands; and one of them informed me that he would rather have his throat cut than be measured. On one occasion I casually photographed a group of Badagas in their bazaar, and, on the following day, a deputation waited on me with a petition to the effect that "we, the undersigned, beg to submit that your honour made 'botos' of us, and have paid us nothing. We, therefore, beg you to do this act of common justice." The deputation was made happy with a *pour boire*. Would that official deputations could be disposed of as easily!

Despite the trifling obstacles at the outset, confidence was eventually established with the various tribes just referred to, though not without a good deal of palavering and mild bribery, and a sufficient number of individuals for statistical purposes were investigated.

The main objects, which are systematically kept in sight during my wanderings, are:—

(1) To record at least the essential measurements of men and (when they will permit) women.

(2) To study the characteristics of external anatomy.

(3) To record "manners and customs," tattoo-marks, clothing, personal adornment, &c.

(4) To take photographs of typical individuals, dwelling-huts, &c.

(5) To acquire by purchase "specimens" illustrating clothing, jewellery, musical instruments, games, &c.

As a general rule the traveller, who makes collections in any branch of science, hands them over, as a gift or by purchase, to some national or provincial museum, and honours are divided; the museum securing the collection, and the collector being immortalised on a label or in a monograph. Possibly, with luck, a new species, or even genus, is named after him, and his reputation is enhanced in the family circle. Looking recently, on a depressing November day such as we in the East know not, at a collection of sponges which to the casual visitor possess no special attraction, exhibited in or by my name at the British Museum (Natural History), I recalled to mind the many pleasant hours spent in a dug-out (canoe) on the coral reefs, an attack by a saw-fish, and a severe sun-head. And the museum, whose destinies I have steered since 1885, teems with happy memories of camp and jungle life; for, by the fortune of circumstances, it falls within my province not only to make collections, but to preside over their arrangement for exhibition. And the advantages of this dual function are self-evident. A tour concluded, the work of museum

arrangement commences; and here one is met with an obvious difficulty at the outset. For two systems of arrangement are possible, each with much to be said both for and against it, and a selection of one or the other has to be made, for the material collected, and available space will not, as a rule, suffice for both. Either the collections may be arranged according to the nature of the exhibit, *e.g.*, models of boats, sacrificial utensils, musical instruments, games, images, &c; or each tribe or community may be represented in its various aspects, animal and social, in a single case or in adjacent cases. For myself, I give the preference to the latter system, mainly on the score of convenience and finality of arrangement. Very effective, I remember, in one of my galleries were some life-size photographic transparencies of Andamanese heads, presented by Mr. Portman to the ethnological section of the Indian Museum, Calcutta, when I was in temporary charge thereof some years ago. So, too, were the models of the Andamanese, executed, if my memory serves me rightly, by a Bengáli modeller. But the utility of most models, which I have seen, is marred by the want of care in representing the colour of the skin, and in decorating the model with the proper jewellery, which, in many cases, is absolutely characteristic of a particular tribe.

Writing elsewhere, I said "the more remote and unknown the race or tribe, the more valuable is the evidence afforded by the study of its institutions, from the probability of their being less mixed with those of European origin". Tribes which, only a few years ago, were living in a wild state, clad in a cool and simple garb of forest leaves, buried away in the depths of the jungle, and living like pigs and bears, on roots, honey, and other forest produce, have now come under the domesticating, and sometimes detrimental influence of contact with Europeans, with a resulting modification of their conditions of life, morality and even language. The Paniyans of the Wynaad and the Irulas, who inhabit the slopes of the Nilgiris, now work regularly for daily wage on Planters' estates; and I was lately shocked by seeing a Toda boy studying for the third standard, instead of tending the buffaloes of his "mand". Ample proof can be adduced in support of the fact that European influence, import-trade with other countries, and the struggle for existence, are bringing about a rapid change (sad from an ethnographic standpoint) among the natives of Southern India, both tame and wild. It has recently been said that "there will be plenty of money and people available for anthropological research when there are no more aborigines"; and it behoves our museums in Great Britain and its dependencies to waste no time in completing their anthropological collections.

I gathered from observation when in London (1) that man as a social and intellectual being is illustrated, with the unavoidable want of proportion, when no systematic scheme for the regular expansion of the collections is at work, at the British Museum, Bloomsbury; (2) that it is under contemplation to illustrate man and the varieties of the human family from a purely animal point of view at the British Museum (Natural History), South Kensington; (3) that skulls must be sought for at the Royal College of Surgeons, Lincoln's Inn fields; (4) that lectures and anthropological literature are available to members at the Anthropological Institute, Hanover square. To this must be added (5) Mr. Galton's laboratory. Surely a great want of centralisation, such as might well be remedied, is indicated here. And as I wandered, both in and out of the London season, through the deserted galleries of the Imperial Institute, I could not refrain from speculating whether, with a radical change of policy for good, this much-discussed building could not be converted into our great National Museum of Ethnology, where man shall be represented fully and in every aspect, and where those interested in ethnological research could find under one roof a skilled staff to appeal to in their amateur difficulties, collections, literature lectures, and anthropological laboratory. For the great mass of visitors to popular museums, who come under the heading of sightseers, it is of primary importance that the exhibits should be attractive And I feel convinced that, were an ethnological museum up to the high standard of the British Museum (Natural History) established, it would, when its reputation became known, be, like Madame Tussand's, widely resorted to by the general public, and that, by an admixture of free and paying days, and by the charge of a small fee for examination in the laboratory, it might be made to a certain extent self-supporting, and not entail a great burthen of expenditure on the State—*Nature*.

APPENDIX G.

Fishery Investigations.

In returning the papers and map relating to fish-curing forwarded to me for consideration, I may state at the outset that I entirely agree with the statement that it is of importance to gain some knowledge of the habits of the most valuable kinds of fish, and of the movements of shoals, and that accurate particulars of the takes of the most valuable descriptions of fish, or of those most abundantly caught, would be of more value than doubtful statistics regarding many different kinds.

2. What is really wanted is, as Professor Ray Lankester has expressed it, "a specially detailed knowledge of the life-history of those species of fishes which are valuable to man, and are the subject of fisheries; a knowledge of their food, and its

history in detail ; of their enemies in the shape of other fishes, birds, &c., which prey upon them and their young ; a knowledge of their parasites, injurious or harmless, and of their diseases. Such knowledge may be termed the special biology of economic fishes ".

3. In this connection I may quote from a prize essay on " The Relations of the State with Fishermen and Fisheries," London Fisheries Exhibition, 1883. Mr. C. E. Fryer therein states that " only the most careful and continuous investigation will discover the manifold laws of nature, which govern the migrations of fish, their spawning times and places, their development, the nature of their food, and all the other secrets of their economy. If, when the fishermen are lamenting the absence of the accustomed shoals of herring on their coasts, and fruitlessly throwing the blame on their neighbours, the State could step in with the assertion that the fish had disappeared because of certain conditions, either of temperature, of food, or of currents, which the fishermen could hardly be expected to take cognizance of, and could tell them where they, or others like them, could be found, it would be giving the most substantial form of encouragement to the fisheries ". Mr. Fryer further remarks that " the State should neglect no opportunity of mastering, through the agency of a duly qualified department, armed with all needful powers, every detail, natural as well as artificial, of the fishing industry. Norway and the United States have taken the initiative in thus combining scientific research with practical administration in a single department, charged with the superintendence of the fishing industries ".

4. I am asked to draw up a draft of instructions to officers in charge of fish-curing yards for the record of such information regarding the movements of migratory fishes round the coast as will, in my opinion, be most valuable. Bearing in mind that the instructions are for petty officers, in the receipt of small pay, for the most part ignorant of English, and incapable of appreciating subtle specific characters, I would suggest that, as an initial experiment detailed observations should be carried out in connection with the following well-known, but economically important species of fishes, and information concerning them collected for a provisional period of two years, commencing, if possible, at all fish-yards in the Presidency, synchronously with the renewal of fishing operations on the West Coast after the present south-west monsoon :—

Clupea ilisha, sable fish or hilsa.
Clupea fimbriata, " sardine ".
Clupea lile, " sardine ".
Clupea longiceps, oil " sardine " (synonym, Sardinella neohowii).
Cybium guttatum, seir.
Cybium commersonii, seir.
Stromateus sinensis, white pomfret.
Stromateus cinereus, { grey pomfret (when adult). / silver pomfret (when immature).
Stromateus niger, black pomfret.

5. I shall be glad, if the Board so wishes, to take charge of, work up, and summarise the information obtained, and suggest hereafter, in consultation with the Board, such modification of the list of fishes to be kept under special observation as may seem most desirable.

6. It will be observed that I have included among the fishes the several species of " sardines "—all, it may be noted, belonging to the Clupea or Herring family—which are the source of the fish oil industry and fish-manure. And their investigation seems to me of primary importance, as the Cochin merchants complained to me a few years ago that the " sardines " in some seasons arrive off the coast in enormous numbers, or, for several consecutive years, may be present only in quantities sufficient for purposes of food ; the result of this irregularity being that one important element of success in commercial enterprise—regular supply—is wanting. In some years, I was told, large shoals of " sardines " appear, and suddenly disappear. Contracts for the supply of oil are made on the arrival of the fishes, and, in the event of their speedy disappearance, the contractor loses heavily. The main practical questions which remain to be solved in connection with the " sardines ", are the reasons which attract them to our coast, where they spawn, and where they go to when they depart thence.

Fishing in the open sea with a steam-tug to enable the boats to get to and from the fishing-ground in spite of contrary winds, and readiness on the part of the fishing community to follow the movements of the fishes to greater distances than are possible under existing conditions, would probably lead to more prosperous and lucrative results. As I have pointed out elsewhere (Museum Bulletin No. 2, page 75) : " In the British seas trawl-fishing is carried on at a distance of 80 to 100 miles from the nearest port, whereas, in the Madras Presidency, *e.g.*, at Tellicherry, the " deep sea " boats only go out from 8 to 10 miles from the coast. Short, however, as is this distance, speed in reaching the shore after a take of fishes is an advantage, for the boats (in which no provision is made for protection of the fishes from the sun) are not allowed by the regulations to take salt to the fishing-ground ; and, as is well known, decomposition sets in, in tropical climates, with terrible rapidity." In an article on " the Natural History of the Herring " it has been pointed out that " it has been observed, on the east coast of Scotland, that the inshore fishes—say within the three mile limit—are subject to very great fluctuations, and that at distances of thirty, fifty, or seventy miles from the land, there is a far greater surety of encountering the shoals. When successful, however, the inshore fishing is by far the heaviest ; and nets are far more liable to be broken or lost through overloading near the land than at a distance out. The obvious explanation is that the vanguard of the shoal finds itself confronted by the land, and pulls up, while the main body are still pushing forward, and thus a concentration of the forces takes place ". The passage is quoted, as it can be applied to the Malabar herrings or " sardines ".

7. The main practical object to be kept in view in connection with the fishes to be specially studied, seems to me to be the acquirement of a complete natural history of the migratory and other economically important fishes. This would involve a complete acquaintance with the species of fishes, shell-fishes, crustacea, (crabs), fish eggs, &c., on which they feed, and with the conditions under which these species flourish and multiply (close inshore, on the surface, on the bottom, in the deep sea, etc.). The movements of migratory fishes are, it may be noted, largely influenced by search for food and the reproductive impulse. The stomachs of the fishes should, therefore, be examined, and the nature of the contents (or their empty condition) recorded, and samples of the various contents preserved, when possible, for examination by some one competent to identify them. The food of fishes is, as Mr. Yarrell has pointed out, very different at different periods of the year, and this may be one of the causes, among others, of the particular excellence of the flesh of some species of fishes at particular seasons. The reproductive organs should be examined with a view to ascertaining whether the males are full of milt and the females of roe. This can easily be determined by slitting the fish open on the lower surface from the vent or anal orifice, and examining the " guts." It has been noticed that, along the Coromandal coast, " sardines " (Clupea longiceps) are rarely fat as in Malabar. In the case of sharks and skates (rays) the cavity of the uterus (womb) should be examined for the presence therein of embryoes (young), and their number and size recorded. Further, the dates of arrival and departure, and the magnitude of the shoals should be carefully recorded, and the wind force and direction, and the condition of the sky (dull, heavy, or unclouded sunshine) and water (clear, disturbed, or muddy) should be noted. It might also be ascertained whether the fluctuations of the fishery for a particular migratory fish follow a definite periodicity or cyclical order at a particular locality, with regular periods of recurrence and disappearance of the most important migratory fishes. Moreover, the time of day most suitable for fishing under ordinary conditions, *i.e.*, in the absence of shoals, and the reason of the preference for a particular time, should be noted. It is well known that fishes, and other marine animals, seek deep and cool water in the heat of the day, and rise to the surface at early morn, and as evening sets in. It would also be advantageous that the various fishes, large and small, which are present in greatest abundance synchronously with the arrival of a big shoal, should be recorded, as indicating not only a possible source of attraction to the coast, but also the species which are in pursuit of the shoal for food. During a sojourn at Calicut I was much impressed with the terrible slaughter of small fishes by men fishing

from the beach with cast-nets, piles of these small fishes being left on shore as food for birds, &c., after the selection of the bigger fishes which were required for the family evening meal.

8. In the event of any doubt or difficulty arising in connection with the identification of the fishes which are to be specially examined, or others, I would suggest that, as has been repeatedly done in the past, salted and sun-dried specimens should be sent to me, with their local vernacular name attached, for identification. If this course is adopted, confusion, and the record of erroneous, and consequently valueless information, may be avoided.

9. I would suggest that, with a view to a comparison being made of the fishes caught off the East and West Coast—viz., the littoral fishes of the Bay of Bengal and Indian Ocean—a census should be held and record prepared, at each fish-curing yard, showing the names and relative abundance of the fishes caught during two entire weeks of the year, one before, the other towards the close of the south-west monsoon. Probably the end of February or early March, and the end of September or early October, would be found to be suitable as regards weather round the entire coast of the Presidency. But the exact dates could be fixed by one of our authorities on meteorological conditions.

10. Attached to this note is a specimen form for the record of observations on the lines indicated, and it would be well that, if my suggestions as to the special line of investigation are accepted, paragraphs 7 and 8 should be converted into Tamil, Telugu, Canarese and Malayalam, so that they may be intelligible to the petty officers responsible for the observations, and maintenance of the records. It is to be hoped, however, that officers of higher grades will take an active interest in the enquiry, and assist its practical outcome by the upkeep of notes and records of personal observations, in amplification of the stereotyped information contained in the columns of the official form.

[Statement.

Suggestion for Form to be maintained in connection with Fishes held under special observation.

Date.	Name of fish.	Distance from shore at which caught.	Depth at which caught — surface or deeper water.	Time of day at which caught.	State of weather — sky, wind, sea.	Net used.	Small or big catch — maunds.	All or majority — full-grown or young.	Stomach contents.	Milt and roe abundant or no; young in womb.	Sale-price, fresh; salted.	Other fishes most plentiful in the yard.	Other points which may occur to the observer.
1	2	3	4	5	6	7	8	9	10	11	12	13	14

(Signed) EDGAR THURSTON,
Superintendent, Madras Government Museum.

Order—No. 462, Educational, dated 14th July 1899.

Recorded.

2. The report on the administration of the Museum for the year 1898–99 submitted by Mr. Thurston is interesting and satisfactory.

3. The thanks of Government are due to the ladies and gentlemen and institutions mentioned in the report for their contributions of books and articles of interest made to the Museum and the Connemara Public Library.

4. The number of copies of the report asked for by Mr. Thurston will be forwarded to him by the Superintendent, Government Press.

(True Extract.)

for *Ag. Secretary to Government.*

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„ the Revenue Department.
„ Collectors of Districts.
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Ag. Secretary to Government.

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Museum Old Buildings.

Visitors from 1st April 1898 to 31st March 1899 on Sundays.

1898-99.	Signatures made in											
	English.	Telugu.	Hindustani.	Tamil.	Mahratta.	Nagari.	Guzerati.	Canarese.	Chinese.	Sinhalese.	Malayalam.	Bengali.
1	2	3	4	5	6	7	8	9	10	11	12	13
April	337	109	55	263	..	..	..	4	..	..	7	..
May	370	104	34	255	2	..	4	..	..	..	3	8
June	491	131	46	259	..	..	..	6	..	..	5	..
July	611	182	44	520	..	..	4	10	..	..	1	7
August	444	114	66	297	..	..	5	10	..	..	27	..
September	431	126	56	308	..	..	6	6	..	..	7	..
October	320	80	51	202	..	..	..	..	..	..	4	..
November	345	100	32	265	..	..	..	5	..	..	..	..
December	478	151	53	436	..	..	..	9	..	..	4	2
January	642	244	67	1,695	2	..	11	2	..	..	12	..
February	334	101	212	390	..	..	6	2	..	..	5	6
March	380	109	60	320	..	..	1	9	..	..	..	..
Total ..	5,183	1,551	776	5,210	4	..	37	63	..	..	75	23

1898-99.	Total number of signatures.	Unable to sign.	Total number of visitors.	Number of		Total number of visitors.
				Males.	Females.	
	14	15	16	17	18	19
April	775	1,031	1,806	1,331	475	1,806
May	780	1,108	1,888	1,369	519	1,888
June	938	1,597	2,535	1,703	832	2,535
July	1,379	2,310	3,689	2,567	1,122	3,689
August	963	1,508	2,471	1,740	731	2,471
September	940	1,835	2,775	1,933	842	2,775
October	657	1,314	1,971	1,363	608	1,971
November	747	1,125	1,872	1,391	481	1,872
December	1,183	2,186	3,319	2,241	1,078	3,319
January	2,675	58,640	61,315	24,608	36,707	61,315
February	1,056	2,187	3,243	2,360	883	3,243
March	879	2,551	3,430	1,970	1,460	3,430
Total ..	12,922	77,392	90,314	44,576	45,738	90,314

Museum New Buildings.

Visitors from 1st April 1898 to 31st March 1899 on Week days.

1898-99.	Signatures made in											
	English.	Telugu.	Hindustani.	Tamil.	Mahratta.	Nagari.	Guzerati.	Canarese.	Chinese.	Sinhalese.	Malayalam.	Bengali.
1	2	3	4	5	6	7	8	9	10	11	12	13
April	1299	461	97	1,421	2	..	2	33	..	..	19	4
May	1731	564	293	1,573	2	3	24	86	..	..	20	2
June	2310	751	176	1,870	3	..	22	88	..	..	41	1
July	1800	593	154	1,866	5	2	15	80	..	..	35	..
August	1740	435	182	1,532	4	..	23	57	..	2	48	1
September	1384	362	115	1,334	13	1	7	62	..	1	32	1
October	963	236	124	1,109	6	..	12	49	..	..	21	..
November	1065	272	92	1,213	2	2	17	46	..	..	12	..
December	2468	619	165	2,334	8	15	13	80	..	..	47	1
January	2169	487	121	2,504	5	2	48	102	1	..	30	2
February	1253	284	442	1,625	2	..	16	56	..	..	33	4
March	1125	275	109	1,334	5	..	15	65	..	2	38	2
Total ..	19,307	5,339	2,070	19,715	57	25	214	804	1	5	376	18

1898-99.	Total number of signatures.	Unable to sign.	Total number of visitors.	Number of		Total number of visitors.
				Males.	Females.	
	14	15	16	17	18	19
April	3,338	8,025	11,363	7,050	4,313	11,363
May	4,298	12,855	17,153	11,055	6,098	17,153
June	5,262	16,679	21,941	13,521	8,420	21,941
July	4,550	15,757	20,307	12,365	7,942	20,307
August	4,024	14,302	18,326	11,082	7,244	18,326
September	3,312	13,918	17,230	10,157	7,073	17,230
October	2,520	11,402	13,922	8,105	5,817	13,922
November	2,721	10,294	13,015	8,243	4,772	13,015
December	5,750	43,939	49,689	25,181	24,508	49,689
January	5,471	35,069	40,540	21,274	19,266	40,540
February	3,715	16,047	19,762	11,711	8,051	19,762
March	2,970	13,706	16,676	9,472	7,204	16,676
Total ..	47,931	2,11,993	2,59,924	1,49,216	1,10,708	2,59,924