

## FEDERATED MALAY STATES.

### REPORT ON THE MUSEUMS DEPARTMENT FOR THE YEAR 1913.

#### FINANCIAL.

##### PERSONAL EMOLUMENTS.

1. The total amount voted for the service of the Federated Malay States Museums under "Personal Emoluments" was \$20,347, while the expenditure was \$20,208.73, the small balance being mainly due to savings on duty allowance.

Expenditure was distributed as follows:

	Estimated.	Expended.	Saving.	Excess.
Director ... ..	\$16,867	\$16,730.67	\$136.33	
Perak ... ..	1,572	1,589.46	...	\$17.46
Selangor ... ..	1,908	1,888.60	19.40	
Total ... ..	\$20,347	\$20,208.73	\$155.73	\$17.46

##### OTHER CHARGES (ANNUALLY RECURRENT).

2. The total vote for "Other Charges, Annually Recurrent," including supplementary provision, was \$13,880, which was distributed and spent as follows, details being given under the various sections:

	Estimated.	Expended.	Saving.	Excess.
Director ... ..	\$ 5,400	\$ 3,512.90	\$1,887.10	
Perak ... ..	4,120	4,105.76	14.24	
Selangor ... ..	4,360	4,216.45	133.55	
Total ... ..	\$13,880	\$11,835.11	\$2,034.89	

##### OTHER CHARGES (SPECIAL EXPENDITURE).

3. Under "Special Expenditure" (including supplementary votes) \$66,189.29 was provided, which was distributed and spent as follows. The large saving shown is due to the fact that \$60,000 provided for the capital expenditure for the proposed Kuala Lumpur Zoological Gardens was not utilized in 1913.

	Estimated.	Expended.	Saving.	Excess.
Director ... \$	514.29	\$ 417.31	\$ 96.98	
Perak ...	350.00	144.83	205.17	
Selangor ...	65,325.00	3,990.01	61,334.99	

The total expenditure on the Museums, therefore, amounted to \$36,592.61 on an estimate (including supplementary and re-votes) of \$100,416.29, showing a saving of \$63,823.68.

##### REVENUE.

4. The revenue collected in the Museums for the year 1913 amounted to \$1,039.61, derived as usual from Taxidermist's fees and the sale of publications and duplicate specimens, against \$131.36 in 1912, and \$942.85 in 1911.

The large increase is due to the sale of considerable numbers of duplicate bird skins, which was effected through advertisement in the local Press. Of the amount realised, \$864.29 was utilized, by permission, in part for defraying preliminary expenses in connection with a proposed expedition to the highlands of West Sumatra and in part for additional ethnographical specimens for the Perak Museum.

The net cost of the Museums for 1913 was, therefore, \$35,553, against \$34,971.41 in 1912, and \$23,813.35 in 1911.

##### STAFF.

5. Mr. C. B. Kloss, Assistant Director, returned from leave on 23rd August, after a very successful expedition to Dutch New Guinea, during which Mt. Carstenz, the highest mountain between the Himalayas and the Andes, was ascended to a height of about 14,800 feet, a little above the line of permanent snow.

Mr. I. H. N. Evans, Assistant Curator and Ethnographical Assistant, was in charge of the Perak Museum throughout the year.

The work of the clerical staff improved during the year but the large increase of copying and financial work pressed hardly on them.

Attendants and watchmen of a satisfactory type were difficult to obtain, especially in Selangor, the watchmen being exceedingly unsatisfactory. In Perak a peon was convicted of petty pilfering of articles from the Museum workshop, and received a sentence of six months' hard labour.

The Dyak collectors worked well and though a larger amount of jungle work than usual was undertaken suffered but little from malaria.

A total of seven months and twenty-one days' half-pay leave, thirteen days' casual leave, one day's no-pay leave and ten days' sick leave was recorded against the European members of the staff during the year. For the clerical staff the corresponding figures are seventy-four days' vacation leave and thirteen days' sick leave.

#### GROUNDS AND BUILDINGS.

6. In Perak, \$299.81 were expended on the Museum grounds which were kept in good order throughout the year. Five hundred and ninety-eight dollars and ninety-five cents was similarly spent in Selangor, but the gardens were practically ruined by building operations in progress, though so far as possible ornamental shrubs were transplanted for subsequent use when the extensions are completed and the grounds laid out again.

In Perak a small external store was completed in the early part of the year and in both States less damage than usual was done by storms and leakage.

The extension to the Selangor Museum, which will more than double the existing floor space, made excellent progress during the year. Ground was broken in February and at the end of December the masonry and roof of the new building was practically completed and the reconstruction of the older portion well in hand.

A new approach road to the Director's quarters rendered necessary by the new building was also completed.

#### ADDITIONS TO THE COLLECTIONS.

##### A.—ZOOLOGICAL.

7. Expeditions were made to the following places :

The islands of Koh Samui and Koh Pennan and the province of Bandon in the north-east of the Malay Peninsula ;

Gunong Kerbau in Perak ;

Bagan Datoh in Lower Perak ;

Gunong Mengkuang Lebah in Selangor ;

Gunong Tampin in Negri Sembilan ;

Benom Foothills in Pahang.

In the course of these expeditions the following vertebrates new to the collections were obtained, those marked with an asterisk being hitherto unrecorded from the Peninsula, while those marked with a dagger are new to science :

##### MAMMALS.

† <i>Petaurista nitida</i> cicur	† <i>Epimys surifer</i> spurcus
† <i>Ratufa melanopepla</i> decolorata	† <i>Epimys surifer</i> manicalis
† <i>Sciurus concolor</i> fallax	† <i>Tupaia operosa</i>
† <i>Sciurus concolor</i> samuiensis	† <i>Tupaia ultima</i>
* <i>Menetes berdmorei</i>	† <i>Crocidura negligens</i>
† <i>Epimys orbus</i>	† <i>Cœlops robinsoni</i>
† <i>Epimys remotus</i>	* <i>Eptesicus pachyotis</i>
† <i>Epimys jerdoni</i> pan	

##### BIRDS.

* <i>Pseudotantalus leucocephalus</i>	* <i>Anthipes submoniliger</i>
* <i>Collocalia merguiensis</i>	† <i>Cryptolopha</i> sp. nov.
† <i>Rhinomyias</i> sp. nov.	* <i>Thringorhina guttata</i>
† <i>Pericrocotus zanthogaster</i>	† <i>Geocichla interpres</i>
† <i>Pyrotrogon orrôphæus</i>	* <i>Acrocephalus bistrigiceps</i>
† <i>Hierococyx nanus</i>	* <i>Acrocephalus agricola</i>
* <i>Cyanops davisoni</i>	* <i>Æthopyga sanguinipectus</i>
* <i>Anthipes olivacea</i>	* <i>Pncepyga pusilla</i>

##### REPTILES.

† <i>Mimetozone craspedotus</i>	† <i>Lycodon fasciatus</i>
* <i>Tropidonotus conspicillatus</i>	† <i>Calamaria gimletti</i>
* <i>Tropidonotus saravakensis</i>	* <i>Hypsirhina indica</i>

The collection of terrestrial vertebrates from the Malay Peninsula in the possession of the Federated Malay States Museums is now so nearly complete that it may be of interest to give some comparative figures concerning it.

In 1899 and 1900, Capt. Stanley Flower, then in charge of the Bangkok Museum, devoted much attention to the mammalian fauna of Siam and the Malay Peninsula, and, after studying all the available collections both local and in the British Museum, compiled a list which is published in the *Proceedings of the Zoological Society of London*, 1900, pp. 306-379. A summary of his list gives the following figures :

	Species.
Primates ... ..	10
Carnivora ... ..	28
Ungulata ... ..	14
Rodentia ... ..	30
Insectivora ... ..	6
Cetacea ... ..	5
Sirenia ... ..	1
Edentata ... ..	1
Chiroptera ... ..	39
Total ...	134

The intensive study of mammals can only have said to have begun with the opening days of the present century, and since 1899 very great attention has been paid to the Malaya Peninsula and region, principally by Doctor W. L. Abbott, of Philadelphia, whose collections have been worked out by Messrs. G. S. Miller and M. W. Lyon of the United States National Museum at Washington, and by the Federated Malay States Museums. It had been pointed out by English naturalists and by the authorities of the British Museum that it was unfortunate that the proper study of the fauna of a British Possession could only be effectively carried out in a foreign Museum, owing to the lack of modern material in the national collection. As a result, since 1908 very much of the energy of the Museum staff and considerable sums of money have been devoted to removing this reproach. After five years' work, figures dealing with the mammalian fauna of the Malay Peninsula now stand as follows :

NUMBER OF RACES OF MAMMALS KNOWN FROM THE MALAY PENINSULA  
AND ADJACENT ISLANDS, 1913.

	Total Number.	Number in Federated Malay States Museums.
Primates ... ..	20	19
Carnivora ... ..	34	32
Ungulata ... ..	22	19
Chiroptera ... ..	63	46
Insectivora ... ..	26	24
Rodentia ... ..	118	112
Cetacea ... ..	8	4
Sirenia ... ..	1	—
Edentata ... ..	1	1
Total ...	293	257

Of the additions to the list 71 races have been described either from material actually in the Federated Malay States Museums or from specimens collected and sent to the British Museum.

The 36 forms not represented in the local Museums with the localities from which they were obtained are as follows :

1. <i>Macaca capitalis</i> , Elliot...	Trang
2. <i>Arctonyx dietator</i> ... ..	Trang
3. <i>Lutra macrodus</i> ... ..	?
4. <i>Bos sondaicus butleri</i> ... ..	Perak
5. <i>Tragulid stanleyanus</i> ... ..	Uncertain
6. <i>Rhinoceros sondaicus</i> ... ..	—
7. <i>Sciuropterus genibarbis malaccanus</i> ... ..	Malacca
8. <i>Pteromyscus pulverulentus</i> ... ..	Malacca
9. <i>Sciuropterus phayrei</i> ... ..	North Malay Peninsula
10. <i>Sciurus caniceps epomophorus</i> ... ..	Sālanga Island
11. <i>Epimys pullus</i> ... ..	Tioman Island
12. <i>Gunomys varius varillus</i> ... ..	Penang Island
13. <i>Ptilocercus lowi continentis</i> ... ..	Klang Gates, Kuala Lumpur

14.	<i>Gymnura gymnura</i>	...	...	...	South Malay Peninsula
15.	<i>Balaenoptera indica</i>	...	...	...	} Surrounding seas
16.	<i>Physeter macrocephalus</i>	...	...	...	
17.	<i>Steno plumbus</i> ...	...	...	...	
18.	<i>Sotalia sinensis</i>	...	...	...	
19.	<i>Halicore duyong</i>	...	...	...	
20.	<i>Pteropus intermedius</i>	...	...	...	Trang
21.	<i>Rhinopoma microphyllum</i>	...	...	...	Ghirbi
22.	<i>Taphozous saccolæmus</i>	...	...	...	Peninsula
23.	<i>Charephon plicatus</i>	...	...	...	Peninsula
24.	<i>Charephon johorensis</i>	...	...	...	Johore
25.	<i>Myotis oreias</i>	...	...	...	Singapore
26.	<i>Myotis emarginatus</i>	...	...	...	Biserat
27.	<i>Pipistrellus inebriatus</i>	...	...	...	Peninsula
28.	<i>Pipistrellus ridleyi</i>	...	...	...	Selangor
29.	<i>Pipistrellus tenuis</i>	...	...	...	Penang
30.	<i>Hesperoptenus tomesi</i>	...	...	...	Malacca
31.	<i>Chilophylla hirsuta</i>	...	...	...	Port Swettenham
32.	<i>Rhinolophus cœlophyllus</i>	...	...	...	Kedah
33.	<i>Hipposideros stoliczkanus</i>	...	...	...	Penang
34.	<i>Nycteris javanica</i>	...	...	...	Peninsula
35.	<i>Kerivoula picta</i>	...	...	...	Penang
36.	<i>Kerivoula bicolor</i>	...	...	...	Jalor

The original specimens of Nos. 2, 4 and 13, which were at the time unique, have been deposited in the National Museum at South Kensington.

Of the remaining 33, 26 species are of marine or nocturnal habits and are, therefore, difficult to obtain, *Gunomys varius varillus* is an introduced form in Penang. *Epimys pullus* is a small rat from Tioman known from one specimen only, while *Tragulus stanleyanus*, though said to occur in Batang Padang, has never been obtained of late years. The last species *Gymnura gymnura* in the southern race of the common *tikus bulan* found throughout the Peninsula.

The total number of birds ascribed to the Malay Peninsula on any evidence, good, bad or indifferent, is now 654. Of these, 26 are either species identical with other forms or which have been recorded from the region erroneously or on the strength of wrongly identified or captive specimens, leaving 628 species about which no doubt exists.

Of these the Federated Malay States Museums possess specimens of 589, leaving 39 species still to be procured. Of these 39, we have at different times possessed examples of six, which have either been transferred to the British Museum or perished from defective preservation. Of the remaining 33 forms, four are oceanic birds, rarely approaching land, six are marsh or shore birds, nine are migratory species only resting in the Peninsula for very short periods on their way north or south, two are owls of extreme rarity, one (*Acridotheres torquatus*) is known from one specimen only which ought to be in the Singapore Museum but cannot now be found, while the remaining eleven are known almost entirely from the extreme north of the Peninsula, though one (*Cyornis ruecki*) of very doubtful validity is described from Malacca.

The only additions to be looked for are, therefore, either occasional migrants or actual novelties, which are necessarily few and far between, as, ornithologically speaking, the Malay Peninsula is better known than almost any other area of equal extent in Asia.

As showing the advance that has been made in the last thirty years, Hume, in 1880, gives the number of birds actually known from the Malay Peninsula as 459, of which he had procured 415. The corresponding figures are now 628 and 589, or increases of 34.6 and 41.9 per cent., respectively.

SPECIES RECORDED FROM THE MALAY PENINSULA BUT NOW REMOVED FROM THE LIST  
FOR VARIOUS REASONS.

28.	<i>Carpophaga griseicapilla</i> (Wald.)	...	Wrong identification, <i>C. badia</i> (Temm.)
34.	<i>Turtur humilis</i> (Temm.)	...	Specimens almost certainly caged
53.	<i>Seena seena</i> (Sykes)	...	Specimens examined = <i>Sterna media</i> (Horsf.)
55.	<i>Sterna longipennis</i> , Nordm.	...	<i>Sterna tibetana</i> , Saunders
80.	<i>Himantopus himantopus</i> (Linn.)	...	Transposed label
130.	<i>Nyroca fuligula</i> (Linn.)	...	{ Alleged collector obtained the dry skin only ; { real locality therefore doubtful
175.	<i>Falco severus</i> , Horsf.	...	No definite locality
183.	<i>Scops sunia</i> , Hodgs.	...	= <i>Scops malayana</i> , Hay
220.	<i>Haleyon humii</i> , Sharpe	...	Identical with <i>H. armstrongi</i> , Sharpe

307.	<i>Iyngipicus pumilus</i> , Hargiit	...	...	Not separable from <i>I. canicapillus</i> , Blyth
310.	<i>Dendrocopos analis</i> (Horsf.)	...	...	No authentic locality or collector
316.	<i>Micropternus phaeiceps</i> , Blyth	...	{	Specimen identified as such is <i>M. brachyurus</i> (Vieill.)
353.	<i>Cyornis tickelliae</i> , Blyth	...	...	Specimens identified as such are <i>C. sumatrensis</i> , Sharpe
354.	<i>Cyornis frenata</i> , Hume	...	...	Female of <i>C. erythrogaster</i> , Sharpe
357.	<i>Cyornis turcosa</i> , Bruggem	...	...	Female of <i>C. elegans</i> (Temm.)
384.	<i>Stoparola melanops</i> (Vig.)	...	...	Specimens identified as such are <i>S. thalasinoides</i> (Cab.)
425.	<i>Pyenonotus blanfordi</i> , Jerd.	...	...	<i>P. robinsoni</i> , Grant
390.	<i>Pericrocotus fraterculus</i> , Swinh.	...	...	Specimens identified as such are <i>P. flam-mifer</i> .
455.	<i>Setaria melanocephala</i> , Davison	...	...	Type and topotypes are indistinguishable from <i>S. affinis</i> (Blyth)
463A.	<i>Stachyris nigriceps</i> (Hodgs.)	...	...	<i>S. davisoni</i> , Sharpe
476A.	<i>Myiophonus temmincki</i> , Vig.	...	...	<i>M. crassirostris</i> , Robinson
557.	<i>Sturnia malabarica</i> (Gm.)	...	...	Escaped cage bird or transposed label
558.	<i>Sturnia nemoricola</i> (Jerd.)	...	...	" " " "
562.	<i>Sporæginthus amandava</i> (Linn.)	...	...	" " " "
563.	<i>Sporæginthus flaviventris</i> (Wall.)	...	...	" " " "
	<i>Ruticilla aurea</i> , Temm.	...	...	No authentic locality

SPECIES UNDOUBTEDLY OCCURRING IN THE MALAY PENINSULA BUT NOT REPRESENTED  
IN THE FEDERATED MALAY STATES MUSEUMS.

14.*	<i>Rheinwardtius nigrescens</i> , Rothsch.	245.	<i>Collocalia gigas</i> , Hartert
48.	<i>Porphyrio edwardsi</i> , Elliot	268.	<i>Cuculus canorus</i> , Linn.
64.	<i>Anous stolidus</i> (Linn.)	275.	<i>Chalcococcyx basalis</i> (Horsf.)
65.	<i>Micranous leucocapillus</i> , Gould	302.	<i>Gecinus robinsoni</i> , Grant
67A.	<i>Hoplopterus ventralis</i> (Wagl.)	324.	<i>Hemicercus canente</i> (Less.)
73.	<i>Ochthodromus veredus</i> (Oust.)	351.	<i>Cyornis ruecki</i> , Oust.
104.	<i>Thaumatibis gigantea</i> (Oust.)	414.	<i>Microtarsus cinereiventris</i> (Blyth)
107.	<i>Leptoptilus dubius</i> (Gm.)	416.	<i>Criniger salangæ</i> , Sharpe
131.	<i>Plotus melanogaster</i> (Gm.)	441.	<i>Timelia jerdoni</i> , Walden
133.	<i>Phalacrocorax javanicus</i> (Horsf.)	491.	<i>Oreocichla affinis</i> , Richm.
134.	<i>Fregata aquila</i> (Linn.)	507.	<i>Sutoria sutoria</i> (Forst.)
136.	<i>Phæthon indicus</i> , Hume	517.	<i>Acanthopneuste trochiloides</i> , Sundev
138.	<i>Pelecanus roseus</i> , Gm.	520.	<i>Acanthopneuste magnirostris</i> (Blyth)
142A.	<i>Neophron ginginianus</i> (Lath.)	544.	<i>Dicurus nigrescens</i> , Oates
145.	<i>Circus pygargus</i> , Linn.	560.	<i>Acridotheres torquatus</i> (Davison)
157.	<i>Circætus hypoleucus</i> (Pall.)	572.	<i>Chlorura</i> sp.
179.	<i>Asio otus</i> (Linn.)	576.	<i>Motacilla feldeggii</i> , Mich.
192A.	<i>Glaucidium radiatum</i> (Temm.)	579.	<i>Motacilla taiwanus</i> , Swinh.
194.	<i>Strix javanica</i> (Horsf.)		
203.	<i>Coracias affinis</i> , McClell		
208.	<i>Pelargopsis burmanica</i> , Sharpe		

BOTANY.

S. A considerable amount of attention was devoted to Botany during the year, and two large collections and several smaller ones were made and forwarded to Kew, where they are in course of examination by Mr. H. N. Ridley.

Reports to hand on the collections made in 1912 on Menuang Gasing by the Assistant Director indicate the following species new to science, the full list appearing in the *Journal of the Linnean Society*, Botany, Vol. XLI, July, 1913, pp. 285-304:

<i>Begonia Klossii</i>	<i>Blastus pulverulentus</i>
<i>Brassaiopsis elegans</i>	<i>Litsea cinerascens</i>
<i>Ophiorhiza Klossii</i>	<i>Balanophora truncata</i>
<i>Vaccinium breviflorum</i>	<i>Oberonia grandis</i>
<i>Pseuderanthemum parviflorum</i>	<i>Phreatia linearis</i>
<i>Leda lancifolia</i>	<i>Thrixspermum montanum</i>
<i>Unona filipes</i>	<i>Goodyera gracilis</i> var. <i>unicallosa</i>
<i>Polyalthia montana</i>	

\* Numbers are those of a *Hand-list of the Birds of the Malay Peninsula, south of the Isthmus of Kra--Kuala Lumpur, 1910.*

The collection from Mengkuang Lebah from heights of between 5,000 feet and 5,800 feet, which is the first of any importance made on this interesting mountain, yielded the following novelties. The district is remarkably rich in very beautiful rhododendrons and besides the three new species three others were obtained.

Calophyllum rotundifolium	Rhododendron calocodon
Elaeocarpus eriobotryoides	Rhododendron orion
Elaeocarpus leptomischnus	Marsdenia stellaris
Ilex myrtillos	Dischidia parviflora
Eugenia selangorensis	Fagraea gardenioides
Eugenia spissifolia	Filetis glabra
Eugenia rhomboidea	Justicia vegeta
Sonerila ramosa	Aeschynanthus longicalyx var. superba
Begonia monticola	Actinodaphne concinna
Argostemma debile	Lindera selangorensis
Cephalis subcoriacea	Quercus Robinsonii
Vaccinium decorum	Bulbophyllum areniferum
Vaccinium ardisioides	Bulbophyllum selangorensis
Rhododendron coruscum	Eria pyrrotricha

#### ETHNOGRAPHICAL.

9. During the year Mr. I. H. N. Evans, Ethnographical Assistant, made several short trips to places of interest, with a view to studying the aboriginal tribes and obtaining exactly localized specimens to replenish the collections of the Perak Museum.

The places so visited were Lenggong in Upper Perak, Ijok in Selama, and the Tembeling and Tekai rivers in Perak.

At Lenggong, material was obtained for a paper on the art of kris making and damascening, now almost extinct in the Federated Malay States, while in Pahang interesting observations were made on several groups of Semang and Sakai, and a small series of photographs secured. The district is of special interest as comprising an area in which Semang, Sakai and Jakun tribes meet and overlap and the culture and physical type is therefore correspondingly mixed.

Specimens, principally gold and silverware, were purchased to the value of \$1,459.72, a remarkably fine gold buckle, formerly the property of one of the major chiefs of Perak, accounting for nearly half this amount.

A few specimens of recently made jewellery from Sri Menanti were also acquired through the good offices of Mr. R. O. Winstedt, the District Officer. A bark canoe used by the Jakuns of the Endau, Johore, was presented by Dr. W. L. Abbott, but other donations were small and unimportant.

#### PUBLICATIONS.

10. One part of the *Journal of the Federated Malay States Museums*, consisting of about 60 pages of letterpress illustrated by thirteen plates, was completed by the end of the year, and was awaiting the printing off of one of the plates.

Mr. Ridley published an account of the plants obtained on Menuang Gasing in Ulu Langat in 1912 in the *Journal of the Linnean Society*, Botany, Vol. XLI, pp. 285-304, the results being summarized elsewhere in this report.

A paper entitled "On new Mammals, mainly from Bandon and the adjacent Islands, East Coast of the Malay Peninsula" was in course of publication in the *Annals and Magazine of Natural History*, and the whole of a very elaborate paper by Mr. Ridley on "The Botany of Gunong Tahan" is being printed as part of a special report on that mountain.

Five hundred and fourteen specimens, solely mammals, were catalogued during the year, and about 800 skulls cleaned and labelled for study purposes.

#### GENERAL.

11. Collections of various ethnographical and economic specimens were prepared for the Malay States Information Agency, the Imperial Institute and the Suez Canal Company's offices.

A set of coloured casts of Malay fruits and vegetables prepared from the moulds in the Perak Museum was exhibited at the Royal Agricultural Society's Show at Bristol, and attracted much attention.

An increasing number of scientific men now visit the Federated Malay States for purposes of study or to obtain material for research. During 1913, Prof. Campbell, of Leland Stanford University, California, United States of America, Mr. C. Buxton and Dr. Tempest Anderson passed through the States.

## ZOOLOGICAL GARDENS, KUALA LUMPUR.

12. A considerable sum of money was placed on the 1912 Estimates to provide for necessary capital expenditure in connection with the provision of a small collection of living Malayan animals.

A committee, including the two Selangor members of the Federal Council, was appointed to consider the question of the nature of the collections and to advise on the site. The committee reported at the close of the year, but effect has not yet been given to their recommendation.

## FAUNA OF THE MALAY PENINSULA.

13. No great progress has been made with this work owing to other demands on the time of the staff; the material on which it has been based has, however, been greatly added to, and two or three years' delay beyond the originally anticipated date will add to the completeness of the work, when eventually issued.

HERBERT C. ROBINSON,

*Director of Museums, F.M.S.*