[No. 75]

JOURNAL

of the

Straits Branch

of the

Royal Asiatic Society

April, 1917

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1917

THE

STRAITS BRANCH

OF THE

ROYAL ASIATIC SOCIETY

Council for 1917.

Hon. C. J. Saunders - - -	*President.*
W. Makepeace, Esq. - - -	*Vice-President for Singapore.*
Lieut.-Col. the Hon. A. R. Adams	*Vice-President for Penang.*
Hon. A. H. Lemon - - -	*Vice-President for F. M. S.*
I. H. Burkill, Esq. - - -	*Hon. Secretary.*
Dr. R. Hanitsch - - -	*Hon. Librarian.*
C. Bazell, Esq. - - - -	*Hon. Treasurer.*
Professor J. Argyll Campbell	*Councillors.*
Hon. H. Marriott - -	
Capt. J. C. Moulton - -	
H. Robinson, Esq. - -	

PROCEEDINGS

of the

Annual General Meeting.

Minutes of the Annual General Meeting of the Straits Branch of the Royal Asiatic Society, held at the Society's rooms in the Raffles Museum, at 5 p.m. on Tuesday, February 27th, 1917.

PRESENT:—Hon. C. J. Saunders, President, in the Chair, Rev. A. J. Amery, Messrs. C. Bazell and A. W. Bean, Professor J. Argyll Campbell, Captain A. R. Chancellor, Drs. J. A. R. Glennie, J. M. Handy and R. Hanitsch, Mr. W. Makepeace, Hon. H. Marriott, Rev. W. Murray, Messrs. Ong Boon Tat, H. Robinson, See Tiong Wah and S. G. Williams, Dr. R. van Bemmingen van Helsdingen, Messrs. H. N. Ridley, and I. H. Burkill (Hon. Secretary): also several visitors.

The minutes of the meeting of February 10th, 1916, were read and confirmed.

The Annual Report and Statement of Accounts which had been circulated in print were accepted on the motion of Mr. H. Robinson, seconded by Dr. J. A. R. Glennie.

The Hon. C. J. Saunders moved, and the Hon. H. Marriott seconded that, as recommended by the retiring Council, Dr. D. J. Galloway, a past-president, be elected an Honorary Member on account of his notable service to the Society. Dr. Galloway was elected an Honorary Member upon a show of hands.

The Hon. Treasurer explained that the Council had determined to place two thousand two hundred dollars ($2,200) from the Society's reserve funds into the Colonial War Loan and to earmark the interest therefrom for use in connection with the Library.

The following were elected consecutively office-bearers for 1917:—

Hon. C. J. Saunders	..	President.
Mr. W. Makepeace	..	Vice-President for Singapore.
Hon. A. R. Adams	..	Vice-President for Penang.
Hon. A. H. Lemon	..	Vice-President for the F. M. S.
Mr. I. H. Burkill	..	Hon. Secretary.
Dr. R. Hanitsch	..	Hon. Treasurer.
Mr. C. Bazell	..	Hon. Librarian.

A ballot was next taken for the election of four Councillors.

On the motion of Dr. J. A. R. Glennie, seconded by Captain A. R. Chancellor the meeting returned a vote of thanks to the retiring Council.

The President asked Mr. H. N. Ridley to give an address on the subject of the Scientific Exploration of the Malay Peninsula, while the result of the ballot for councillors was being ascertained. Mr. Ridley spoke as recorded in the Society's Proceedings:* and a discussion followed upon the means by which further work might be encouraged.

The President proposed a vote of thanks to Mr. Ridley for his address, which was accorded: and he announced that as the result of the ballot the Hon. H. Marriott, Captain J. C. Moulton and Mr. H. Robinson had been elected Councillors, that Dr. W. G. Shellabear and Professor Argyll Campbell had received an equal number of votes for the fourth place and that five other members had received votes. He suggested that as Dr. Shellabear had not returned to the Colony and as the date of his return appears uncertain, Professor Argyll Campbell should be asked to serve. On a show of hands this proposal was adopted.

* pp. vii—xi.

The Scientific Exploration of the Peninsula.

An address at the General Meeting of February 27th, 1917.

By H. N. Ridley, F.R.S., C.M.G.

The Object of the Scientific exploration of a country is to get a clear systematized knowledge of the *Fauna*, *Flora*, *Ethnology*, *Anthropology* and *Geology* of the country,—in fact of the whole of the Natural History of the area,—and to publish it in such form that it may be accessible to everyone.

To get a clear idea of the whole of Nature, its origin and development, it is not sufficient to study one group alone: for all the various sections of Natural Science have a more or less close relationship with each other; and before we can come to any satisfactory deductions from the facts in one part of the subject, we must know or be easily able to find out the stories of the other parts.

In the early days of the development of a Colony, such as ours, the study of Natural History is usually commenced by a few Amateur Naturalists, who collect specimens and observations on all branches of the subject. Later we get a few to take up special groups or subjects, individually; for it is nor possible for any one man in a lifetime to study every group in detail in so rich an area as a tropical region.

Later still a Museum or Museums are formed, with scientific men attached who, assisted at least by the Government, are able to devote their time to collecting and preserving specimens, as well as recording observations and data, and storing the specimens in the Museums for reference, and publishing the information obtained in reports or publications. And here comes in the great value to the world of such societies as ours which record facts of Natural history, the geography of the country, and all that belongs to a complete knowledge of the country we live in.

Now in the beginning of these researches we find that certain groups of animals are more popular than others, such as birds and butterflies, and we therefore find a larger number of collectors of these animals, and consequently we get sooner a good knowledge of these groups than we do of say beetles or molluscs; and we require a number of collectors and students of these more difficult groups to collect. In many of the country Natural History Societies at home the members contrive to get one or other of

their numbers to take up a single group and devote himself to collecting that group, assisted of course by others who send him any specimens they chance upon. I do not know how far some such system could be adopted here, but there are many of our members living in distant parts of the country who could materially help by catching and sending insects or other such easily collected animals to the various naturalists who in this country are studying them.

When I first arrived in this country in 1889, large areas of forest and mountain, now easily reached by train and motor car, were only accessible by long and difficult marches, and the few naturalists in the country found it impossible to get to these remote spots in the time and with the funds at their disposal. But the rapid development of agriculture of late years has resulted in the increased accessibility and in the settling of Europeans in parts of the Peninsula at that time out of reach. Many of these Europeans would assist in collecting if shown the way, I am sure, and indeed I have great cause to be grateful to very many who in the course of my wanderings into their districts have given me the greatest assistance in collecting plants.

But the wide developments of agriculture of late years has not been, alas, all to the advantage of the Naturalist, for the felling and burning of the forest has caused the disappearance of many plants and probably many insects and other animals: and as this work is still continuing, it becomes of more and more importance to save specimens (which is all we can do) of the vanishing flora and fauna, ere they become as extinct as Dodos.

I would now like to run over the various branches of Natural Science and see how far we have progressed towards a systematic investigation and record of the separate groups as far as regards this country.

In Zoology we have already published the account of the *Reptiles* and *Batrachia* by Boulenger, and I understand the works on the Mammals and Birds are nearly complete. These have been done by the zoologists of the Federated Malay States Museum.

In fishes we have an account of those of fresh-water by Dunck, a Naturalist who was here some years ago. In Marine fish we have no separate work; but those of our seas have been mentioned in works by Bleeker and Weber, dealing with the fishes generally of the Indian and Malayan Seas.

A complete separate account of those occurring in our own waters is required.

On Molluscs papers have been written by De Morgan.

Of Insects *Butterflies* have been well done many years ago by Distant in the well known book *Rhopalocera Malayana* but of course there have been since then many additions and corrections made.

The *Cockroaches* have been well described and figured by Dr. Hanitsch in our journal lately and I believe the *Mosquitos* are pretty well known.

But of the rest of the insect fauna we have only scattered papers and descriptions in journals and other works which are often inaccessible to the local student and in any case entail a lot of work in searching among descriptions of species from all manner of countries to find the ones recorded from the Malay Peninsula.

The same state of affairs rules also in nearly all the other groups of invertebrates from centipedes, and spiders to Corals and Marine organisms generally. It would be highly desirable to collect all the notes and descriptions of the various groups applying to the Malay Peninsula, and put them together and publish them in an accessible form so that we might have an idea of what amount of knowledge on these animals had been obtained already and form a base for further work.

In *Botany*, at least that of flowering plants and ferns, progress is being made as fast as possible. Before my arrival in the East in 1889, it was proposed by the F. M. S. Government to publish a flora based on the plants collected by Kunstler, Scortechini and Wray in Perak, Sir Cecil Clementi-Smith very wisely urged that the flora should not be confined to these collections, which were practically limited to the Perak mountains: but that a flora of the whole of the Malay Peninsula should be taken in hand.

The work was to be done by Dr. King and Sir Joseph Hooker: the number of plants known or collected in the Peninsula at that date was small: and King arranged to publish a preliminary series of papers known as the Materials for a Flora of the Malay Peninsula in the *Journal of the Asiatic Society of Bengal*. This took many years: and in fact 2 orders *Euphorbiaceae* and *Urticaceae* are not yet published. In the meantime extensive collections were made all over the Peninsula and the work got fuller and fuller as it went on. Sir George King died some years ago and Mr. Gamble, and Major Gage of the Calcutta Gardens continued the Materials, while I did the Monocotyledons and some other orders. I am now engaged in re-writing the whole flora, to be published as soon as may be in book form, condensed and largely revised and added to, so that the public may in a few years, I hope, possess a work in a few volumes so written and illustrated that they will have no difficulty in identifying any plants that they may meet with. The work will take some time as there are known between 8,000 and 9,000 species: and all that have been already described will have to be checked over and carefully re-examined. However the greater part of the *Polypetalae* and *Monocotyledons* are already finished, and I hope in a few years to complete the work.

The Cellular plants.—Mosses, Lichens, Fungi and Algae, have not been entirely neglected: but such as have been described have been published in scattered papers in various journals: and there

is a large field for work both in collecting and investigating in these groups.

Considering the importance of tin and other minerals to the Peninsula, it seems remarkable that so long a period elapsed before any attempt was made to study the *Geology* of the country. Practically nothing of importance was published till the arrival of Mr. Scrivenor. Logan in Logan's journal published indeed some papers on the rocks of Singapore, but he was no geologist and the work was extraordinarily erroneous.

We have now at least several extremely valuable papers by Mr. Scrivenor; and we shall hope for many more such researches as he has made.

Ethnology and *Anthropology* we are well advanced in, thanks to the works of Skeat, Wilkinson, Robinson and many others.

But there is one branch of Natural Science which has been curiously neglected, that of *Meteorology*. It is true that rainfall readings have been taken and published for many years in some parts of the Peninsula; but the returns are in many cases I fear dubious; and in the earlier days of Singapore when the returns would have been exceptionally valuable, as showing us if there had been any change in the climate at all, there are so far as I know no records. The late Mr. Knight was the only person I know of who took an interest in the subject at all. Unfortunately he published little; but he may have left notes behind him which would be worth preserving, if they could be obtained by the Society. It would be very desirable if some member of the society would take up the subject of the meteorology of the Malay Peninsula collecting and utilizing such returns and reports published during the last 50 years. The subject is one of much interest and importance.

When I arrived in Singapore in 1889, the greater part of the Peninsula was still a blank as regards Natural History research, the few Naturalists we had then, had only been able to collect in a few of the accessible parts such as Singapore, Malacca, Penang and parts of Perak. Even the geography of the Peninsula was very far from complete as may be seen by referring to our first editions of the Map, and even now large areas of the centre and East coast have not yet been visited by any Naturalists. When this is done without doubt very many more new species will be collected in almost every group.

Taking Botany again as a sample of how far we have collected specimens of all our flowering plants, I may say that by far the largest number of the plants of the low country are now well known, and it is not easy to get big additions of novelties in the low lands of either coast, and that thanks very largely to Messrs. Robinson and Kloss who have greatly added to our knowledge of the botany of the highest accessible mountains we have obtained the greater part of the flora of above 1,000 feet elevation. This does not mean that we know all the plants in our forests. It is

a poor collecting trip still which does not yield some novelties even in the low country. But we have in our 9,000 known species a very large proportion of the flora, and enough to base at least some deductions as to the origin and history of the flora of the Peninsula.

We have practically a sample collection, not a complete one.

The same thing applies, I take it, to most of the zoological groups; but I believe that I shall not be wrong in stating that in Mammals, birds, reptiles and batrachians and butterflies we have now an almost absolutely complete knowledge of the species. The number of novelties to be added is probably small. Further explorations in out of the way localities will probably yield important results in most groups. We have not enough naturalists to get over the whole ground in a short time so that the residents in these distant parts may often be able to assist in sending specimens to our museums of insects or plants or other such things that they may accidentally come across. As an example I may mention that of two new kinds of bats which some years ago I accidentally obtained I believe that neither have ever been caught again.

I have now I think given some idea of the progress in Natural History that we have made here in the past quarter of a century. It is very considerable; but a great deal remains to be done. The Society by its Journal and by indirectly and directly interesting residents in the knowledge of the Natural History of the Peninsula has played an important part in this work, and I trust that it may continue to do the same for very many years to come.

ANNUAL REPORT

of the

Straits Branch, Royal Asiatic Society

for 1916.

On November the 4th the Society entered upon its fortieth year, having the name of one founder and of two who joined in the first year, still on the Member list,—the Right Rev. Bishop Hose, the Hon. Datoh Mahomed bin Mahbob of Johore, and the Ven. Archdeacon J. Perham of Chard, Somerset. The rules under which the Society works have been little altered since they were passed at the general meeting of January 21st, 1878. On July 15th of the same year, the Society having 142 members, issued its first Journal and in December a second, making the year's output 166 pages. The Society stands, this day, with 297 names on the member list.

The number of pages in the Journal of the year under review was 358. The average for the thirty-nine completed years of publishing has been 305.

The Society in the first year of its existence met frequently for the reading of papers: but it was found impossible to maintain these meetings: and when the practice fell into disuse, it became necessary to vest in the Council powers which councils of Societies rarely possess, asking the members to meet but once a year to regulate their affairs, by the election of a new council and by the ratifying of the proceedings of the retiring body. The arrangement tends to create an aloofness on the part of the members which the Council has been most anxious to dispel: and with that intention in 1915 two steps were taken: in the first place an offer was gratefully accepted from a member, Mrs. Legrew Watkins, that at the annual meeting she would exhibit her collection of objects used by the Ainus of Japan: and in the second place it was arranged that the Journal should appear oftener, if possible, than twice a year. The attendance at the last annual meeting was gratifying and Mrs. Legrew Watkins' exhibit most interesting. The Journal, which had appeared thrice in 1915, has appeared again thrice in 1916.

The Journal is now paged into an annual volume, and has been issued complete for 1916, with title page and index. It contained xxx + 328 pages, with six plates and two line blocks in the text. Its cost to the Society was $1,217.66 or 58% of the Society's income.

Of the income a further 22% was absorbed by salaries, stationery, postages, and other small charges essential to the running of the Society's office, leaving only 20% for the purchase of books, furniture, and for unusual causes of expense. A larger member-list, meaning a larger income, is desirable.

Also a larger inflow from members of short papers for publication is desirable.

The Hon. Treasurer's balance sheets for the last and the preceeding four years show the following figures:—

	1912	1913	1914	1915	1916
By member's subscriptions including life-members	1,356.08	1,195.00	1,293.68	1,329.68	1,110.00
By sales of Journals	503.13	542.41	425.96	175.98	478.26
By sales of Maps	3,274.80	565.20	513.60	292.00	446.15
By investments	189.92	125.49	86.48	385.75	250.40

Nearly half of the receipts in 1916 by sales of parts of the Journal came from the Hikayat Sri Rama, of which 51 copies were taken.

The Society's invested funds are less than a year ago by $1,500, in consequence of withdrawals from fixed deposit to meet the cost of printing the Hikayat.

The price of printing has unfortunately been raised against the Society: but this, it is trusted, will be but temporarily.

The Council has no new undertakings to record. The rule which lays it down that the object of the Society is to increase and to diffuse knowledge concerning British Malaya and the neighbouring countries has been strictly observed. One of the papers in the Journal treats of the Malay language, five of the History of the Peninsula, one of Malay customs, two of Malay plants, one of the action of a Malay poison, and two of Malay zoology. It may be recalled that the inception of the Society occurred just when the interior of the Peninsula was opened to exploration and many accounts of Journeys reached it; but such papers are rarer now. There were none in the Journal for 1916.

It has been stated above that the member list carries 297 names: that is the same as the last published list carried. By death the Society has lost two Honorary members, Sir Cecil Clementi Smith and Mr. A. Knight: and two, who were members, have lost their lives at the front in France—Messrs. H. E. Pennington, and P. Gold.

The Council elected during the year the following as members:

Mr. H. W. Ford,	Mr. J. W. Cundell Ellis,
Prof. J. Argyll Campbell,	Mr. A. Rogers,
Mr. J. G. Watson,	Mr. G. B. Kellagher,
Mr. Shiva Prasad Gupta,	Mr. Ong Boon Tat.

Mr. L. Rayman.	Mr. G. F. C. Woollett.
Mrs. Legrew Watkins.	Mr. H. C. Abraham.
Mr. Frank H. Myers.	Mr. H. H. Banks.
Mr. W. E. Mann.	Mr. W. G. Stirling.
Mr. E. Stuart Young.	Rev. William Cross.
Mr. Arthur Mitchell Goodman.	Mr. R. Balfour Blair.

His Highness, the Raja Muda, of Sarawak, was elected an Honorary member at the last Annual meeting.

Council. During the year Dr. R. D. Keith resigned from the Council, and in his place Captain J. C. Moulton was co-opted. The office of Vice-President, Singapore, fell vacant by the departure of the Hon. W. G. Maxwell from the Colony, but was not filled.

Library. The following books have been added to the library in addition to the serials received as exchanges:—

Brandstetter, R., An introduction to Indonesian languages, translated by C. O. Blagden .. ..

Hale, A., The adventures of John Smith in Malaya, 1600-1605 .. ..

Shellabear, W. G., An English-Malay dictionary .. ..

Skeat, W. W., Malay Magic .. ..

Posewitz, Theodor, Borneo, its Geology and Mineral Resources .. ..

Furness, W. H., Folklore in Borneo .. ..

Swettenham, Sir F., British Malaya (presented by H. Robinson Esq.) .. ..

A Set of "Papers on Malay Subjects" published by the F. M. S. Govt. (presented by Hon. C. J. Saunders)

Wilkinson, R. J., Malay Beliefs .. ..

Winstedt, R., An English-Malay Dictionary .. ..

The Ramayana, translated by Manmatha Nath Dutt ..

Malay texts:

Kitab Gemala Hikmat .. ..
Pelayaran Abdullah .. ..
Hikayat Hang Tuah .. ..
Hikayat Abdullah .. ..
Hikayat Awang Sulong Merah Muda .. ..
Cherita Jenaka .. ..
Hikayat Malim Dewa .. ..
Hikayat Malim Deman .. ..
Sejarah Melayu .. ..
Hikayat Raja Muda .. ..
Hikayat Anggun Che' Tunggal .. .. ..
Pantun Melayu .. ..
Hikayat Pelandok .. ..

Skeat, W. W., and Blagden, C. O., Pagan Races of the Malay Peninsula (presented by the Hon. H. Marriott) ..

McNair, J. F. A., Prisoners their own warders .. ..
Baring Gould, S., History of Sarawak .. .. ..
St. John, S., Earlier adventures of a Naval Officer ..
Hubback, T. R., Elephant and Sladang in Malaya ..
Cowie, A., English, Sulu, and Malay vocabulary ..
Keppel, H., A visit to the Indian Archipelago ..
Davies, R. D., Siam in the Malay Peninsula .. } Presented by
Ross, J. D., The Capital of a little empire .. } the Singapore
Read, T. H., Across the Equator .. .. .. } Free Press.
Batten, G. G., Glimpses of the Eastern Archipelago
Maryatt, F., Borneo and the Indian Archipelago ..
Hudson, H. H., Malay Orthography .. .. ..
Boys, H. S., Some notes on Java .. .. ..
Fokker, A. A., Tidong dialects of Borneo .. ..
Van Daventer, M. L., Daendels-Raffles .. ..

It has been decided not to print the index to Malay Pantuns which Mr. H. Overbeck prepared and made over to the Society: and as it was considered inadequate by itself the Hon. H. Marriott has prepared another which he has presented to the Society, so that both may be preserved in the library together. Mr. Overbeck's index is by the third line, but Mr. Marriott's by the leading words. The Council's intention in preserving these is that members who interest themselves in the collection of Pantuns may easily ascertain whether such as they meet with are published or unpublished: and they consider that unpublished pantuns might well find a place in the Society's Journal.

I. Henry Burkill,

Hon. Secretary.

STRAITS BRANCH ROYAL ASIATIC SOCIETY.

Receipts and Payments Account for the year ended 31st December, 1916.

Receipts.	$	c.	$	c.	*Payments.*	$	c.	$	c
To Balance Brought Forward from last Account:					By Printing Journal No. 69 & 71 ...	1,993	28		
On Fixed Deposit: Mercantile Bank...	4,700				,, do. do. No. 72 ...	376	64		
do. Chartered ,, ...	1,560				,, do. do. No. 73 including annual Report	458	75		
Current Account Mercantile ,, ...	633	17			,, Illustrations for Journal ...	640	—		
do. Chartered ,, ...	151	63			,, Furniture	80	—		
From the Executors of the late Hon. Treasurer, ...	203	18	7,247	98	,, Bookbinding	101	45		
					,, Stationery	63	91		
To Subscriptions					,, Salaries	225	—		
For the year ended 31st Dec. 1913	5	—			,, Postages and Petties	167	52		
Do. do. 1914	20	—			,, Books for Society's Library ...	14	14	4.120	69
Do. do. 1915	65	—			,, Balances carried forward:				
Do. do. 1916	900	—			On Fixed Deposit:				
Do. do. 1917	20	—			Mercantile Bank			4,700	—
2 Life Memberships	100	—	1,110	—	On Current Account.				
To Sale of Journals			478	26	Mercantile Bank			429	24
,, Sale of Maps			446	15	Chartered Bank			284	39
,, Refundments			1	53					
,, Bank Interest, Mercantile Bank ...			188	—					
Do. Chartered Bank			62	40					
			9,534	32				9,534	32

Audited, vouchers and counterfoil receipts and F/D receipts seen and found correct.
W. MAKEPEACE.

R. HANITSCH,
Hon. Treasurer.
January 12th, 1917.

List of Members for 1917.

*Life Members. †Honorary Members.

Patron His Excellency Sir Arthur Young, G.C.M.G., Governor of the Straits Settlements and High Commissioner for the Malay States.

Date of election.

18 Jan., 1903. Abbott, Dr. W. L., 100 South 15th Street, Philadelphia, U. S. A.
21 Sept., 1916. Abraham, H. C. Survey Dept., Kuala Lumpur.
24 June, 1909. Adam, Frank, The Straits Trading Co., Singapore.
— 1907. Adams, Lieut.-Col., the Hon. A. R. Messrs. Adams and Allan, Penang [Vice-President, 1910; 1917].
14 Dec., 1910. Adams, H. A. Superintendent of Police and Prisons, Kuching, Sarawak
20 June, 1910. Adams, H. Powys, Imber Cross, Thames Ditton, Surrey, England.
22 March, 1917. Adams, Dr. J. W., Moulmein Road Hospital, Singapore.
22 March, 1917. Adams, R. H., c/o Messrs. Topham, Jones and Railton, Ltd., Singapore.
10 March, 1909. Adams, T. S. District Officer, Kuala Krai, Kelantan.
7 Feb., 1910. Aldworth, J. R. O. Kuala Lumpur.
17 Feb., 1913. Allen, Rev. George Dexter, Singapore.
3 May, 1914. Allen, H. C. W., c/o Messrs. Boustead & Co., Singapore.
22 March, 1917. Allen, P. T., Chinese Protectorate, Singapore.
24 June, 1909. Allen, Rowland, Beacon Hall, North Cranbrook, Kent, England.
16 Feb., 1914. Amery, Rev. A. J. Victoria Bridge School, Singapore.
— 1907. Anderson, E. Messrs. Mansfield and Co., Singapore.
22 Feb., 1911. Anderson, J. W., Hendra Estate, Sungkai, Perak.
— 1899. Anthonisz, J. O., C.M.G. England. (Hon. Treasurer, 1894-1896; Vice President 1913).
12 Oct., 1911. Armstrong, W. R., L. L. D., D. C. L., Messrs. Logan and Ross, Penang.
27 Oct., 1908. Arthur, J. S. W., Assistant Adviser, Kedah.
4 June, 1908. *Ayer, C. F. C. High School, Malacca.
3 May, 1915. Baddeley, F. M., Postmaster General, Singapore.
1 Feb., 1915. Bain, Norman K. Kuala Langkat.

20 May,	1912.	BAKER, A. C., c/o W. Evans, Esq: The Limes, Crowmarsh near Wallingford, Berks, England. (Hon. Librarian 1912-1913).
3 June,	1909.	BANKS, C. W., c/o Messrs. John Little & Co., Singapore.
28 Nov.,	1916.	BANKS, H. H., Sanitary Board, Seremban.
10 Jan.,	1899.	*BANKS, J. E., c/o the American Bridge Co. Ambridge, Pa., U. S. A.
23 June,	1904.	BARTLETT, R. J., Inspector of Schools, Singapore.
21 May,	1910.	BARTLEY, W., Civil Service, Singapore.
20 July,	1914.	BAZELL, C. Raffles Institution, Singapore. (Hon. Librarian 1916—17).
24 June,	1909.	BEAN, A. W., c/o Messrs. Robinson & Co., Singapore.
27 Jan.,	1910.	BEATTY, D. Tavoy, Burma.
16 June,	1913.	BELL, V. G., Forest Department, Kuala Lumpur.
25 Feb.,	1910.	*BERKELLY, H., F. M. S. Civil Service.
14 Aug.,	1912.	BICKNELL, J. W., c/o General Rubber Co., Medan, Sumatra.
—	1885.	BICKNELL, W. A., Nork House, 4 Earls Road, Bournemouth, W., England.
4 June,	1908.	*BISHOP, Major C. F., R. A.
27 Jan.,	1890.	*BLAGDEN, C. O. India Office Library, Whitehall, London, S. W. (Hon. Secretary, 1896).
13 Feb.,	1917.	BLAIR, R. Balfour, Sungei Talam Estate, Kuantan, Pahang.
—	1884.	BLAND, R. N., C. M. G. Broadfields, Letchworth, Herts, England. (Council, 1898-1900: Vice-President, 1907—1909).
5 May,	1911.	BLUETT, H. A. Newton, Lebong Loetit, Benkoelen, Sumatra; or Oaklea, Chaucer Road, Bedford, England.
14 Dec.,	1910.	BOULT, F. F., Bintulu, Sarawak.
17 Jan.,	1910.	BOYD, D. T., c/o Messrs. Boustead & Co., Singapore.
16 Aug.,	1915.	BOYD-WALKER, J. W., Atbara Estate, Kuantan, Pahang.
13 Jan.,	1913.	BRADDELL, R. St. J., Messrs. Braddell Bros., Singapore.
7 Feb.,	1910.	BRISON, Clifford S., 32 Archfield Road, Cotham, Bristol, England.
23 Sept.,	1897.	BROCKMAN, Sir Edward L., K. C. M. G., Kuala Lumpur.
1 April,	1910.	BROOKE, J. R., Government Monopolies Department, Keppel Harbour, Singapore.
13 Jan.,	1909.	BROOKS, C. J. Lebong Tandai, Benkoelen, Sumatra.

8 Sept., 1909. Brown, A. V., Johore.
16 Aug., 1915. Brown, C. C., F. M. S. Civil Service, Kuala Lumpur.
27 Jan., 1910. Brown, D. A. M., Messrs. Brown, Phillips and Stewart, Penang.
1 Dec., 1913. *Bryan, J. M., Kuching, Sarawak.
26 March, 1887. Bryant, Hon. A. T., (Council, 1907; 1910: Vice-President, 1912, 1914-1916).
28 Oct., 1912. Burkill, I. H., Botanic Gardens, Singapore. (Council, 1913: Hon. Secretary, 1914-1917).
29 Sept., 1913. *Caldecott, Andrew, Secretariat, Kuala Lumpur.
16 Jan., 1916. Campbell, Professor J. Argyll, M. D., D. Sc. Medical School, Singapore (Council, 1917).
16 Feb., 1914. Cardew, G. E., 3 4th Devon Depôt Battalion, Exmouth, Devon, England.
3 Jan., 1909. Carver, C. I., Messrs. Donaldson and Burkinshaw, Singapore.
27 Jan., 1910. Chancellor, Capt. A. R., Police Office, Singapore.
15 Jan., 1906. Chapman, W. T. Ipoh, Perak.
1 Dec., 1913. *Choo Kia Peng, Kuala Lumpur.
16 March, 1911. Clayton, T. W., Temerloh, Pahang.
2 Feb., 1914. Clement, W. R. T., Sarawak.
22 March, 1917. Clifford, G. F. W., Kuala Pilah, Negri Sembilan.
13 Jan., 1913. Chulan, Raja, bin Ex-Sultan Abdullah, Taiping, Perak.
30 Jan., 1894. †Collyer, W. R., I. S. O. Hackford Hall, Reepham, Norfolk, England. (Council 1904: Vice President, 1897-1900, 1902, 1904-1905: Hon. Member, 1906).
1 March, 1897. *Conlay, W. L., Kuala Lumpur.
27 Jan., 1899. Cook, Rev. J. A. B., Gilstead, Singapore.
— 1910. Cook, Hon. W. Wallace, c/o The Straits Trading Co., Singapore.
22 March, 1917. Crichton, R., The Secretariat, Singapore.
13 Feb., 1917. Cross, Rev. W. Cavanagh Road, Singapore.
14 Aug., 1912. Crossle, Frank J., New Zealand Malay Rubber Co., Kota Bharu, Kelantan.
27 Jan., 1910. Croucher, Dr. F. B., General Hospital, Singapore.
22 March, 1917. Cubitt, G. E. S., Conservator of Forests, S. S. and F. M. S., Kuala Lumpur.
13 Jan., 1905. Dallas, Hon. F. H. Sarawak.
24 May, 1910. Daly, M. D., Batu Gajah, Perak.
18 July, 1891. Danl. Dr. R., Penang.
27 Jan., 1910. Darbishire, Hon. C. W., c/o Messrs. Paterson Simons & Co., Singapore.

—	1907.	DENT, Dr. F. Government Analyst, Singapore.
1 Dec.,	1911.	DERBY, R., 57, Ennerdale Road, Kew Gardens, Surrey, England.
5 Nov.,	1903.	*DESHON, H. F., Southfield, Combe Down, Bath, England.
23 Sept.,	1897.	DICKSON, E. A., Grik, Upper Perak.
28 July,	1905.	DOUGLAS, Hon. R. S. Baram, Sarawak.
30 Nov.,	1914.	DUNCAN, W. Wallace, Assistant Censor, General Post Office, Penang.
27 Jan.,	1910.	DUNMAN, W., Grove Estate, Tanjong Katong, Singapore.
16 Aug.,	1915.	*DUSSEK, O. T., Malay College, Malacca.
13 Oct.,	1899.	EDMONDS, R. C., F. M. S. Civil Service, Seremban.
—	1885.	EGERTON, His Excellency Sir W., K. C. M. G., Government House, British Guiana.
13 Nov.,	1901.	ELCUM, J. B., Singapore.
27 Jan.,	1910.	ELLERTON, H. B., F. M. S. Civil Service, Kuala Kangsar, Perak.
3 June,	1909.	ELLIS, Sir Evelyn C., Messrs. Drew and Napier, Singapore.
16 Jan.,	1916.	ELLIS, J. W. Cundell, F. M. S. Civil Service, Kuala Lumpur.
27 Jan.,	1910.	ENGEL, L., Netherlands Trading Society, Batavia.
25 March,	1913.	ERMEN, C., Kuching, Sarawak.
27 Jan.,	1910.	EVANS, W., The Limes, Crowmarsh near Wallingford, Berks, England.
17 March,	1890.	EVERITT, H. H., Santubong, Sarawak.
7 Feb.,	1910.	FALSHAW, Dr. P. S., Government Veterinary Department, Singapore.
8 Sept.,	1909.	FARRER, R. J., Kota Bharu, Kelantan.
28 Oct.,	1912.	FAULKNER, Dr. S. B. Christmas Island.
26 Jan.,	1911.	*FERGUSON-DAVIE, Rt. Rev. Dr. C. J., Bishop of Singapore (Council, 1912-1913).
8 Sept.,	1909.	FERRIER, J. G., c/o Borneo Company, Soerabaya, Java.
22 March,	1917.	FINLAYSON, Dr. G., Singapore.
24 May,	1910.	FIRMSTONE, H. W., Education Department, Singapore.
12 Jan.,	1900.	FLEMING, T. C., Larut, Taiping, Perak.
2 Sept.,	1897.	*FLOWER, Capt. S. S., Zoological Gardens, Ghizeh, Egypt.
23 June,	1904.	*FLOWER, Lieut.-Col. V. A., 12, Earls Court Square, London, S. W. (Council 1905-1912).
16 Jan.,	1916.	FORD, H. W., Municipal Offices, Malacca.

19 Aug.,	1908.	FREEMAN, D., 9, Court of Justice, Kuala Lumpur.
—	1897.	FELFR, Dr. G. D.
27 Jan.,	1910.	*FROST, MEADOWS, S. S. Civil Service.
14 Aug.,	1912.	GALLAGHER, W. J., General Rubber Co., Medan, Sumatra.
23 Jan.,	1903.	†GALLOWAY, Dr. D. J., British Dispensary, Singapore. (Vice-President, 1906—1907; President, 1908—1913; Hon. Member, 1917).
26 May,	1897.	*GERINI, Lt.-Col. G. E.
8 Sept.,	1903.	GIBSON, W. S., High Court, Kedah.
28 May,	1902.	*GIMLETTE, Dr. J. D., 5, Merton Road, Southsea, England.
4 Jan.,	1916.	GLENNIE, Dr. J. A. R., Municipal Offices, Singapore.
21 Sept.,	1916.	GOODMAN, A. M., Ipoh, Perak.
18 March,	1909.	GOULDING, R. R., Survey Department, Kuala Lumpur.
27 Jan.,	1910.	GRAY, N. T., Taiping, Perak.
13 Jan.,	1916.	GUPTA, SHIVA PRASAD, Nandan-sahu Street, Benares City, United Provinces, India.
14 Sept.,	1911.	GRIFFITHS, J. Superintendent of Surveys, Johore Bahru.
12 Jan.,	1900.	HAINES, Rev. F. W.
—	1886.	HALE, A., Dacburst, Hildenborough, Kent, England.
15 July,	1907.	HALL, G. A., Alor Star, Kedah.
5 May,	1914.	HALL, J. D., Batu Pahat, Johore.
26 Jan.,	1911.	HALLIFAX, F. J., Municipal Offices, Singapore.
12 April,	1915.	HAMILTON, A. W. H., Central Police Office, Penang.
16 March,	1911.	HANDY, Dr. J. M., St. Mary's Dispensary, 75, Hill Street, Singapore.
11 Sept.,	1895.	HANITSCH, Dr. R., Raffles Museum, Singapore. (Council, 1897, 1907-1909; Hon. Treasurer, 1898-1906, 1910-1911, 1914-1916; Hon. Secretary, 1912-1913).
3 June,	1909.	HARRINGTON, A. G., Municipal Offices, Singapore.
5 Jan.,	1904.	*HAYNES, A. S., Kuala Kangsar, Perak.
24 June,	1909.	HENNINGS, W. G., c/o Messrs. Mansfield & Co., Singapore.
—	1910.	HEWAN, E. D., c/o Messrs. Boustead & Co., Singapore.

—	1878.	HILL, E. C., The Manor House, Normandy near Guildford, England.
12 Oct.,	1911.	HOOD-BEGG, Hon. A., c/o Messrs. Guthrie and Co., Singapore.
22 Nov.,	1897.	HOSE, E. S., District Officer, Lower Perak.
A founder,	1878.	†HOSE, Rt. Rev. Bishop G. F., Wyke Vicarage, Normandy near Guildford, England. (Vice-President, 1890-1892: President, 1894-1907).
7 Oct.,	1891.	HOYNCK VAN PAPENDRECHT, P. C., 83, Antonie Duyckstraat, The Hague, Holland.
20 Oct.,	1909.	HUBBACK, T. R., Pertang, Jelebu, Negri Sembilan.
20 Oct.,	1909.	HUGHES, J. W. W., Temerloh, Pahang.
15 July,	1907.	HUMPHREYS, J. L., Trengganu.
27 Jan.,	1910.	JACKSON, Col. H. M., c/o the Survey Department, Kuala Lumpur.
21 Sept.,	1916.	JAMES, Hon. F. S., C. M. G., Colonial Secretary, Singapore.
27 Jan.,	1910.	JAMIESON, Dr. T. Hill, 4 Bishop Street, Penang.
26 March,	1907.	JANION, E. M., c/o English, Scottish and Australian Bank, 38, Lombard Street, London, E. C.
1 Dec.,	1911.	JELF, A. S., Ipoh, Perak.
—	1910.	JOHNSON, B. G. H., Telok Anson.
15 June,	1911.	JOHNSON, Hon. H. S. B., Limbang, via Labuan.
27 Jan.,	1910.	JONES, H. W., Kuantan, Pahang.
17 Feb.,	1913.	JONES, S. W., Kuantan, Pahang.
26 May,	1912.	JONES, Wyndham, Miri, Sarawak.
16 April,	1912.	JONES, W. R., Geological Department, Batu Gajah, Perak.
21 Sept.,	1916.	KAMARALZAMAN, Raja, bin Raja Mansur, Rembau.
5 Oct.,	1897.	KEHDING, Dr.
20 Oct.,	1909.	KEITH, Dr. R. D., Medical School, Singapore. (Council, 1911-1912, 1914-1916).
10 Feb.,	1916.	KELLAGHER, G. B., S. S. Civil Service, Singapore.
3 June,	1909.	KEMP, W. Lowther, c/o Messrs. F. W. Barker and Co., Singapore.
13 Jan.,	1913.	KEMPE, John Erskine, Kuala Kangsar, Perak.
23 May,	1906.	KINSEY, W. E., Forest House, Seremban.
27 Jan.,	1910.	KIRK, Dr. J., Penang.
29 Jan.,	1900.	KLOSS, C. Boden, The Museum, Kuala Lumpur. (Council, 1904-1908).

12 April, 1915. KNIGHT, Valentine, Raffles Museum, Singapore.
26 March, 1907. KRIEKENBEEK, J. W., Taiping, Perak.
31 Jan., 1902. LAIDLAW, G. M., Pekan, Pahang.
16 Feb., 1914. LAMBOURNE, J., Castleton Estate, Telok Anson, Perak.
5 May, 1914. LAVILLE, L. V. T., Balik Pulau, Penang.
28 May, 1902. †LAWES, Rev. W. G., Port Moresby, New Guinea.
5 Oct., 1906. LAWRENCE, A. E., Kuching, Sarawak.
29 Sept., 1913. LEICESTER, Dr. W. S., Pekan, Pahang.
22 March, 1917. LEMBERGER, V. V., c o United Engineers, Ltd., Singapore.
28 March, 1894. *LEMON, Hon. A. H., Seremban. (Vice-President, 1916-17).
30 May, 1890. LEWIS, J. E. A., B. A., 698, Harada Mura, Kobe, Japan.
16 Aug., 1915. LEWTON-BRAIN, L. Director of Agriculture, Kuala Lumpur.
20 May, 1897. LIM BOON KENG, Hon. Dr. M. D., c o The Dispensary, Singapore.
12 April, 1915. LIM CHENG LAW, Millview, Penang.
27 Jan., 1910. LLOYD, J. T., c o Messrs. Powell and Co., Singapore.
16 Feb., 1914. LORNIE, J. Land Office, Singapore.
8 June, 1909. LOW, H. A., c o Messrs. Adamson, Gilfillan and Co., Penang.
22 Jan., 1896. LUERING, Prof. Dr. H. L. E., Wittelsbacher Allee, Frankfurt am Main, Germany.
27 Jan., 1910. LUPTON, Harry, Bukit Mertajam, Province Wellesley.
26 June, 1907. LYONS, Rev. E. S., 82, Isla de Remere, Manila.
3 June, 1909. MCARTHUR, M. S. H., Kuala Lumpur.
23 Sept., 1897. MCCAUSLAND, C. F., Port Dickson.
25 Feb., 1910. *MACFADYEN, Eric, Kuala Lumpur, Selangor.
24 July, 1908. MACKRAY, W. H., Kuala Lumpur.
1 April, 1910. MACLEAN, L., Kuala Lumpur.
21 April, 1904. MAHOMED, Hon. Datoh, bin Mahbob, Johor Bahru, Johor.
8 Sept., 1903. MAKEPEACE, W., c o Singapore Free Press, Singapore. (Council, 1914-1916; Hon. Librarian, 1910-1912; Hon. Treasurer, 1909; Vice-President, 1917).
15 April, 1908. MAIN, T. W., Cheng Estate, Malacca.
10 Feb., 1916. MANN, W. E., Hotel Pavillon, Samarang, Java.
12 Feb., 1902. MARRIOTT, Hon. H., The Treasury, Singapore. (Council, 1907-1908, 1910-1913, 1915-1917).
24 June, 1909. MARSH, F. E., Municipal Offices, Singapore

12 May, 1909. MARSHALL, Harold B., Bintang Estates, c/o Messrs. F. W. Barker & Co., Singapore.
15 July, 1907. *MARRINER, J. T., Kuantan, Pahang.
5 May, 1914. MARTIN, T. A., c/o Messrs. Kennedy and Co., Penang.
18 June, 1903. MAXWELL, Eric, Boulogne.
5 Nov., 1903. MAXWELL, W. George, C. M. G., Taiping. (Council, 1905, 1915: Vice-President, 1916).
16 Dec., 1909. MAY, C. G., Deputy Colonial Engineer, Penang.
16 Feb., 1914. MEAD, J. P.
24 July, 1908. MILLARD, H., c/o Messrs. Donaldson and Burkinshaw, Singapore.
7 Feb., 1910. MILLER, T. C. B., Fairlie, Nassim Road, Singapore.
29 Sept., 1913. MOLLETT, H. B., Tiroi P. O., Negri Sembilan.
7 Feb., 1910. MONEY, A. W. Kirle, Asiatic Petroleum Co., Kuala Lumpur, Selangor.
8 Sept., 1909. *MOULTON, Capt. J. C., Fort Canning, Singapore.
11 Oct., 1915. *MUNDELL, H. D., c/o Messrs. Sisson and Delay, Singapore.
15 June, 1911. MUNRO, R. W., Morib, Selangor.
17 Feb., 1913. MURRAY, Rev. W., M. A., 1 Gilstead Road, Singapore.
10 Feb., 1916. MYERS, Frank H., Asiatic Petroleum Co., Singapore.
22 March, 1917. NAGLE, Rev. J. S., M. A. Principal, Anglo-Chinese School, Singapore.
8 Sept., 1909. NATHAN, J. E., Raub, Pahang.
25 Feb., 1910. NIVEN, W. G., 11, Derby Crescent, Kelvinside, Glasgow, Great Britain.
9 May, 1900. NORMAN, Henry, Kelantan.
5 Jan., 1906. NUNN, B., Malacca.
26 Jan., 1911. O'MAY, J., Kuala Kangsar, Perak.
10 Feb., 1916. ONG BOON TAT, 29, South Canal Street, Singapore.
17 Feb., 1913. OVERBECK, H., Trial Bay, N. S. W., Australia.
2 Feb., 1914. PANYARJUN, Samahu, The Royal State Railways Dept. Standard Gauge, 196, Hluang Road, Bangkok, Siam.
27 Oct., 1908. PARR, The Hon. C. W. C., Residency, Kuala Lipis, Pahang.
20 Oct., 1909. PEACOCK, W. Chinese Protectorate, Singapore.
22 March, 1917. PEARS, R., c/o Messrs. F. W. Barker & Co., Singapore.
4 Jan., 1910. PEIRCE, R.
5 May, 1914. PEPYS, W. E., Pasir Puteh, Kelantan.
— 1878. †PERHAM, the Ven. Archdeacon J. Chard, Somerset, England.

3 June, 1909. PLUMPTON, M. E., c/o Messrs. Adamson Gilfillan and Co., Singapore.

25 Feb. 1910. PRATT, E., The East India United Service Club, 16, St. James' Square London, S. W.

22 Jan., 1912. PRICE, William Robert, B. A., F. L. S. Pen Moel, Chepstow, England.

22 March, 1906. PRINGLE, R. D., The Y. M. C. A. buildings, Singapore.

5 Oct., 1906. PYKETT, Rev. G. F., M. E. Mission, Kuala Lumpur.

3 May, 1915. RAGGI, J. G., Phlab Phla Jai Road, Bangkok, Siam.

10 Feb., 1916. RAYMAN, L. Assistant District Officer, Raub, Pahang.

27 Jan., 1910. *REID, Dr. Alfred, Parit Buntar.

27 Jan., 1910. REID, Alex., c/o Messrs. McAlister and Co., Singapore.

30 Oct., 1909. RICHARDS, D. S.

15 June, 1911. RICHARDS, R. M., The Caledonia Estate, Province Wellesley.

27 Jan., 1890. †RIDLEY, H. N., C. M. G., F. R. S., 7, Cumberland Road, Kew Gardens, Surrey, England. (Council, 1894-1895: Hon. Secretary, 1890-1893, 1897-1911: Hon. Member, 1912).

14 Sept., 1911. ROBERTSON, G. H. M.

14 Aug., 1912. ROBERTSON, J., c/o Messrs. Guthrie and Co., Singapore.

16 March, 1911. ROBINSON, H., c/o Messrs. Swan and Maclaren, Singapore. (Council, 1916-17).

17 March, 1904. ROBINSON, H. C., The Museum, Kuala Lumpur. (Vice-President, 1909; 1913).

10 Feb., 1916. ROGERS, A., Public Works Department, Singapore.

22 Jan., 1896. ROSTADOS, E., Gali Rubber Estate, Raub, Pahang. (Council, 1901).

1 March, 1897. *ROWLAND, W. R., Pulau Bulang, via Singapore.

29 Sept., 1913. RUNCIMAN, Rev. W., M. A., B. D.

7 April, 1909. SANDERSON, Mrs. R.

— 1878. †SARAWAK, His Highness The Raja of, Kuching, Sarawak.

30 Feb., 1916. †SARAWAK, His Highness The Raja Muda of, Kuching, Sarawak.

— 1885. †SATOW, Sir Ernest M., Beaumont, Otterv St. Mary, Devon, England.

22 Jan., 1896. SAUNDERS, Hon. C. J., Official Assignee, Singapore. (Vice President, 1910-1911, 1914-1915; President, 1916).

17 March, 1904. SCHWABE, E. M., Cheras Estate, Kajang, Selangor.
27 Jan., 1910. SCOTT, R., District Court, Singapore.
5 Oct., 1906. SCRIVENOR, J. B., Batu Gajah, Perak.
26 March, 1888. SEAH LIANG SEAH, c/o Chop Chin Hin, Singapore.
12 April, 1915. SEE TIONG WAH, c/o Hongkong and Shanghai Bank, Singapore.
30 Jan., 1894. SHELLABEAR, Rev. Dr. W. G., D. D. 805 Beaumont Avenue, Govans, Maryland, U. S. A. (Council, 1896-1901, 1904: Vice-President, 1913: President, 1914-1915).
3 June, 1909. SIMS, W. A., c/o Commercial Union Assurance Co., Singapore.
22 March, 1917. SHILLITOE, G., Kuantan, Pahang.
10 Nov., 1909. SKINNER, Capt. R. McK.
20 May, 1912. SMITH, Prof. Harrison W., Massachusetts Institution of Technology, Boston, Mass., U.S.A.
27 Jan., 1910. SONG ONG SIANG, c/o Messrs. Aitken and Ong Siang, Singapore.
27 Jan., 1910. SPAKLER, H. Netherlands Embassy, New York, U. S. A.
20 June, 1910. ST'CLAIR, W. G., c/o Singapore Free Press, Singapore. (Council, 1889, 1901, 1903-1906).
10 Nov., 1909. STEADMAN, V. c/o Messrs. Swan and Maclaren, 5, Raffles Place, Singapore.
21 May, 1910. STEEDMAN, R. S., Duff Development Co. Ltd., Kuala Tui, Kelantan.
27 Jan., 1910. STEVENS, K. A. c/o Messrs. Caldbeck, MacGregor and Co., Singapore.
27 Jan., 1910. STILL, A. W., c/o Straits Times, Singapore. (Council, 1914-1915).
13 Feb., 1917. STIRLING, W. G., Government Monopolies Department, Malacca.
3 May, 1915. STRICKLAND, Dr. C. Malaria Bureau, Kuala Lumpur.
11 Sept., 1911. STUART, E. A. G., Alor Star, Kedah.
24 May, 1910. STURROCK, A. J., Batu Gajah, Perak.
22 March, 1917. SUMNER H. L. Inspector of Schools, Perak, Taiping.
25 Feb., 1910. SUNNER, J. H., c/o The Straits Steamship Co., Singapore.
22 Jan., 1912. SWAYNE, J. C., Limbang, via Labuan, Sarawak.
1 June, 1908. TAN CHENG LOCK, 59, Heeren Street, Malacca.
27 Jan., 1910. TAN JIAK KIM, C. M. G., Panglima Prang, River Valley Road, Singapore.

16 June, 1913. TAYLOR, Lt. Clarence J., 11th Battalion King's Own Yorkshire Light Infantry.
10 Nov., 1909. THUNDER, M., Tekka Ltd., Gopeng, Perak.
14 Aug., 1914. TRACY, F. D., c/o The Standard Oil Co., Penang.
— 1887. VAN BEUNINGEN VAN HELSDINGEN, Dr. R., 484-2, Bukit Timah Road, Singapore. (Hon. Librarian, 1914-1915).
3 June, 1909. WARD, A. B., Semanggang, Sarawak.
6 July, 1896. WATKINS, A. J. W., c/o Messrs. Swan and Maclaren, Singapore.
10 Feb., 1916. WATKINS, Mrs. Legrew, c/o Messrs. Watkins & Co., Singapore.
13 Jan., 1916. WATSON, J. G., Forest Department, Kuala Lumpur.
18 Oct., 1916. WATSON, Dr. Malcolm, Klang, Selangor.
27 Jan., 1910. WELD, F. J., Johore Bahru.
15 July, 1907. WELHAM, H., c/o The Straits Echo, Penang.
15 April, 1912. WHARTON, S. L., c/o The Singapore Club, Singapore.
27 Jan., 1910. WHITEHEAD, C. B., Police Office, Butterworth, Province Wellesley.
28 Oct., 1912. WILLIAMS, F., Rose Cottage, St. Agnes, Cornwall, England.
25 March, 1913. WILLIAMS, R. B., Bau, Sarawak.
27 Jan., 1910. WILLIAMS, S. G. Municipal Offices, Singapore.
27 Jan., 1910. *WINKELMANN, H. Malacca Street, Singapore.
24 Nov., 1904. WINSTEDT, R. O.
25 Feb., 1910. WOLFERSTAN, L. E. P., The Residency, Malacca.
28 May, 1902. WOLFF, E. C. H., The Secretariat, Singapore.
1 June, 1908. *WOOD, E. G., Batu Gajah, Perak.
16 June, 1913. WOOD, W. L., Jin Jang Estate, Kepong, Selangor.
21 Sept., 1916. WOOLLETT, G. F. C., Klagaw, Labuk and Sugut District, B. N. B.
11 Sept., 1911. WORSLEY-TAYLOR, F. E., c/o Messrs. Vade and Co., Singapore.
12 April, 1915. *WORTHINGTON, A. F., Kuantan, Pahang.
5 May, 1914. WYLEY, A. J., Lebong Tandai, Benkoelen, Sumatra.
25 Feb., 1910. WYMODZEFF, A de.
26 April, 1916. YOUNG, E. Stuart, Kinarut Estate, via Jesselton, B. N. B.
24 Nov., 1904. *YOUNG, H. S., Bau, Sarawak.

RECIPIENTS of the Society's PUBLICATIONS, not being MEMBERS. (Exchanges with enemy countries, with Belgium and with the German Asiatic Society, Tokyo, being in suspense).

AMSTERDAM. Nederlandsch Aardrijkskundig Genootschap, Domselaerstraat, 19, Amsterdam, Netherlands, in exchange for that Society's Tijdschrift.

AMSTERDAM. Koloniaal Instituut, Amsterdam (formerly of Haarlem), in exchange for that Institute's publications.

BALTIMORE. The Johns Hopkins University, Baltimore, U. S. A. in exchange for the University's Circulars, Studies, and American Journal of Philology.

BANGKOK. The Vajeranana National Library, Bangkok, in exchange, for the Library's publications.

BATAVIA. Bataviaasch Genootschap van Kunsten en Wetenschappen, in exchange for that Society's Tijdschrift voor Indische Taal Land- en Volkenkunde and other publications.

BATAVIA. Mijnwezen in Nederlandsch-Indie, Batavia (Chef van het Mijnwezen), in exchange for the Jaarboek of the Department.

BERKELEY. University of California, Berkeley, Cal. U. S. A. (Manager of the University Press), in exchange for the University's "Publications."

BERLIN. Gesellschaft für Anthropologie, Ethnologie und Urgeschichte, Berlin S. W., Königgratzer Strasse 120, in exchange for the Zeitschrift für Ethnologie.

BERLIN. Gesellschaft für Erdkunde, 23, Wilhelmstrasse, Berlin, in exchange for that Society's Zeitschrift.

BOMBAY. Royal Asiatic Society, Bombay Branch, Town Hall, Bombay, India, in exchange for the Branch's Journal.

BREMEN. Geographische Gesellschaft, Bremen, in exchange for that Society's Geographische Blätter.

BRUSSELS. Société Belge d'Etudes Coloniales, Rue de Stassart 34, Bruxelles, Belgium, in exchange for that Society's Bulletin.

CALCUTTA. Geological Survey of India, Indian Museum, Calcutta (Director) for the Survey's Records and Memoirs.

CHICAGO. Field Museum of Natural History, Chicago, U. S. A. in exchange for the Museums "Publications."

COLOMBO. Royal Asiatic Society, Colombo Branch, Colombo, Ceylon, in exchange for the Branch's Journal.

GIESSEN. Oberhessische Gesellschaft fur Natur und Heilunde, Giessen, Germany, in exchange for that Society's Berichten.

GOA. The Government of the Portuguese Indies, Goa, India (O Director, Imprensa National), in exchange for the Journal "O Oriente Portugues."

HAMBURG. Hamburgische Wissenschaftlichen Anstalten, in exchange for the Jahrbuch.

HANOI. Ecole Française d'Extrême Orient, Hanoi, Indo-China (Director), in exchange for the School's Bulletin.

HALLE. Kaiserliche Leop.-Carol. Deutschen Akademie der Naturforscher, Halle, Germany, in exchange for that Society's Abhandlungen.

HAGUE. Koninklijk Instituut voor de Taal, Land- en Volkenkunde van Ned.-Indie, van Galenstraat 11, 'S-Gravenhage, Netherlands, in exchange for that Society's Bijdragen.

HAVRE. Société de Geographie Commerciale du Havre, 131, Rue de Paris, le Havre, France, in exchange for that Society's Bulletin.

HONOLULU. Bernice Pauahi Bishop Museum, Honolulu, Hawaiian Islands, (Librarian) in exchange for the Museum's Occasional Papers, and other publications.

KEW. Royal Botanic Gardens, Kew, Surrey, England, in exchange for official publications of the Gardens.

HELSINGFORS. Finska Vetenskaps Societaten, Helsingfors, Finland, in exchange for the Society's Bidrag till Kannedom, Acta and Öfversigt.

KUALA LUMPUR. The Selangor Museum, Kuala Lumpur, in exchange for the Journal of the F. M. S. Museums.

KUALA KANGSAR. Committee for Malay Studies (pays for publications).

LAHORE. The Panjab Historical Society, The Museum, Lahore, Panjab, India, in exchange for that Society's Journal.

LINCOLN. University of Nebraska, Lincoln, Nebraska, U. S. A. in exchange for that University's publications.

LEIPZIG. Museum fur Völkerkunde, Leipzig, Germany, in exchange, for the Museum's Jahrbuch.

LISBON. Sociedade de Geographia de Lisboa, Rue Eugenio dos Santos, Lisboa, Portugal, (Secretary), in exchange for the Society's Bulletin.

LONDON. Royal Anthropological Society of Great Britain and Ireland, 50, Great Russell Street, London, W. C. in exchange for the Society's Journal.

LONDON. Royal Asiatic Society, 22, Albemarle Street, London, W. (Secretary) in exchange for the Society's Journal.

LONDON. Royal Colonial Institute, Northumberland Avenue, London, W. C. (Librarian) in exchange for "United Empire."

MALACCA. The Malacca Library, Malacca (pays for publications).

MANILA. The Bureau of Science, Manila, (Director) in exchange for the Philippine Journal of Science.

MARSEILLES. Société de Geographie et d'Etudes Coloniales, Rue de Noailles 5, Marseille, France, in exchange for the Society's Bulletin.

MEXICO. Instituto Geologico de Mexico, Mexico City, in exchange for their Parergones and Boletin.

NEW YORK. American Philosophical Society, 104, South Fifth Street, New York, U. S. A. in exchange for the Society's Proceedings.

OTTAWA. The Geological Survey, Department of Mines, Sussex Street, Ottawa, Canada (Librarian) in exchange for the Department's publications.

PARIS. Société Asiatique de Paris, Rue Bonaparte, 28, Paris, in exchange for the Journal Asiatique.

PARIS. Société de Geographie, 120, Boulevard St. Germain, Paris, in exchange for the Society's Bulletin entitled "La Geographie."

PARIS. Société de Geographie Commerciale de Paris, 8, Rue de Tourron, Paris, in exchange for the Society's Bulletin.

PHILADELPHIA. Academy of Natural Sciences, Philadelphia, U. S. A. (Secretary) in exchange for the Academy's Proceedings.

ROME. Reale Societe Geografica, Via del Plebiscito, 102, Roma, Italy, in exchange for the Society's Bolletino.

ST. LOUIS. Academy of Natural Sciences, St. Louis, Mo., U. S. A. in exchange for the Society's Transactions.

ST. LOUIS. Missouri Botanical Garden, St. Louis, Mo. U. S. A. (Director), in exchange for the Garden's Annals.

SARAWAK. The Sarawak Museum, Borneo, in exchange for the Museum's Journal.

SIMLA. Director-General of Archaeology, Simla, India, in exchange for the Archaeological Survey's publications.

SINGAPORE. The Raffles Museum, Singapore.

SHANGHAI. Royal Asiatic Society, N. China Branch, Shanghai, China, in exchange for the Society's Journal.

SYDNEY. Royal Society of New South Wales, Elizabeth Street, Sydney, New South Wales, in exchange for the Society's Proceedings.

TOKYO. Asiatic Society of Japan, 6, Babasaki, Kojimachi, Tokyo, Japan. (Hon. Treasurer) in exchange for the Society's Transactions.

TOKYO. Deutsche Gesellschaft fur Natur und Völkerkunde Ostasiens, Tokyo, Japan, in exchange for the Society's Mittheilungen.

UPSALA. The University, Bibliothèque de l'Université Royale, Uppsala, Sweden, in exchange for that University's Aarskrift.

VIENNA. Anthropologische Gesellschaft in Wien, I. Burgring 7 (An die Anthropologisch Ethnographische Abtheilung der K. K. Naturhistorischen Hofmuseums, Wien I. Burgring 7—für die Anthropologische Gesellschaft)—in exchange for the Society's Mittheilungen.

ZURICH. Naturforschende Gesellschaft (Bibliothéque centrale, Bureau d'échange de la Société d'histoire naturelle), Zurich, Switzerland, in exchange for that Society Vierteljahrschrift.

[Closed March 24th, 1917.]

RULES
of the Straits Branch
OF THE
Royal Asiatic Society.

I. Name and Objects.

1. The name of the Society shall be 'The Straits Branch of the Royal Asiatic Society.'

2. The objects of the Society shall be:—

(a) The increase and diffusion of knowledge concerning British Malaya and the neighbouring countries.

(b) the publication of a Journal and of works and maps.

(c) the formation of a library of books and maps.

II. Membership.

3. Members shall be of two kinds—Ordinary and Honorary.

4. Candidates for ordinary membership shall be proposed and seconded by members and elected by a majority of the Council.

5. Ordinary members shall pay an annual subscription of $5 payable in advance on the first of January in each year. Members shall be allowed to compound for life membership by a payment of $50.

6. On or about the 30th of June in each year the Honorary Treasurer shall prepare and submit to the Council a list of those members whose subscriptions for the current year remain unpaid. Such members shall be deemed to be suspended from membership until their subscriptions have been paid, and in default of payment within two years shall be deemed to have resigned their membership.

No member shall receive a copy of the Journal or other publications of the Society until his subscription for the current year has been paid.

7. Distinguished persons and persons who have rendered notable service to the Society may on the recommendation of the Council be elected Honorary members by a majority at a General meeting. They shall pay no subscription, and shall enjoy all the privileges of a member except a vote at meetings and eligibility for office.

III. Officers.

8. The officers of the Society shall be:—

A President.

Three Vice Presidents, resident in Singapore, Penang and the Federated Malay States respectively.

An Honorary Treasurer.

An Honorary Secretary.

An Honorary Librarian.

Four Councillors.

These officers shall be elected for one year at the annual General Meeting, and shall hold office until their successors are appointed.

9. Vacancies in the above offices occurring during any year shall be filled by a vote of majority of the remaining officers.

IV. Council.

10. The Council of the Society shall be composed of the officers for the current year, and its duties and powers shall be:—

(a) to administer the affairs, property and trusts of the Society.

(b) to elect ordinary members and to recommend candidates for election as Honorary members of the Society.

(c) to obtain and select material for publication in the Journal and to supervise the printing and distribution of the Journal.

(d) to authorise the publication of works and maps at the expense of the Society otherwise than in the Journal.

(e) to select and purchase books and maps for the Library.

(f) to accept or decline donations on behalf of the Society.

(g) to present to the Annual General Meeting at the expiration of their term of office a report of the proceedings and condition of the Society.

(h) to make and enforce bye-laws and regulations for the proper conduct of the affairs of the Society. Every such bye-law or regulation shall be published in the Journal.

11. The Council shall meet for the transaction of business once a month and oftener if necessary. Three officers shall form a quorum of the Council.

V. General Meetings.

12. One week's notice of all meetings shall be given and of the subjects to be discussed or dealt with.

13. At all meetings the Chairman shall in the case of an equality of votes be entitled to a casting vote in addition to his own.

14. The Annual General Meeting shall be held in February in each year. Eleven members shall form a quorum.

15. (i) At the Annual General Meeting the Council shall present a Report for the preceding year and the Treasurer shall render an account of the financial condition of the Society. Copies of such Report and account shall be circulated to members with the notice calling the meeting.

(ii) Officers for the current year shall also be chosen.

16. The Council may summon a General Meeting at any time, and shall so summon one upon receipt by the Secretary of a

written requisition signed by five ordinary members desiring to submit any specified resolution to such meeting. Seven members shall form a quorum at any such meeting.

17. Visitors may be admitted to any meeting at the discretion of the Chairman but shall not be allowed to address the meeting except by invitation of the Chairman.

VI. Publications.

18. The Journal shall be published at least twice in each year, and oftener if material is available. It shall contain material approved by the Council. In the first number in each year shall be published the Report of the Council, the account of the financial position of the Society, a list of members, the Rules, and a list of the publications received by the Society during the preceding year.

19. Every member shall be entitled to one copy of the Journal, which shall be sent free by post. Copies may be presented by the Council to other Societies or to distinguished individuals, and the remaining copies shall be sold at such prices as the Council shall from time to time direct.

20. Twenty-four copies of each paper published in the Journal shall be placed at the disposal of the author.

VII. Amendments to Rules.

21. Amendments to these Rules must be proposed in writing to the Council, who shall submit them to a General Meeting duly summoned to consider them. If passed at such General Meeting they shall come into force upon confirmation at a subsequent General Meeting or at an Annual General Meeting.

Affiliation Privileges of Members.

Royal Asiatic Society. The Royal Asiatic Society has its headquarters at 22, Albemarle Street, London W., where it has a large library of books, and MSS. relating to oriental subjects, and holds monthly meetings from November to June (inclusive) at which papers on such subjects are read.

2. By rule 105 of this Society all the Members of Branch Societies are entitled when on furlough or otherwise temporarily resident within Great Britain and Ireland, to the use of the Library as Non-Resident Members and to attend the ordinary monthly meetings of this Society. This Society accordingly invites Members of Branch Societies temporarily resident in Great Britain or Ireland to avail themselves of these facilities and to make their home addresses known to the Secretary so that notice of the meetings may be sent to them.

3. Under rule 84, the Council of the Society is able to accept contributions to its Journal from Members of Branch Societies, and other persons interested in Oriental Research, of original articles, short notes, etc., on matters connected with the languages, archaeology, history, beliefs and customs of any part of Asia.

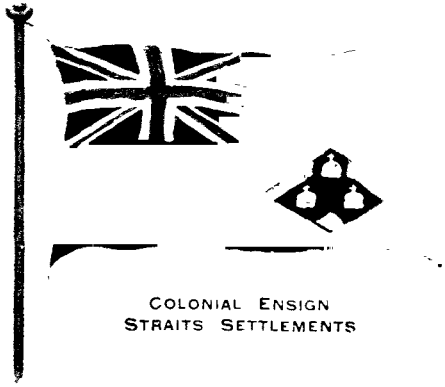
4. By virtue of the afore-mentioned Rule 105, all Members of Branch Societies are entitled to apply for election to the Society without the formality of nomination. They should apply in writing to the Secretary, stating their names and addresses, and mentioning the Branch Society to which they belong. Election is by the Society upon the recommendation of the Council.

5. The subscription for Non-Resident Members of the Society is 30 - per annum. They receive the quarterly journal post free.

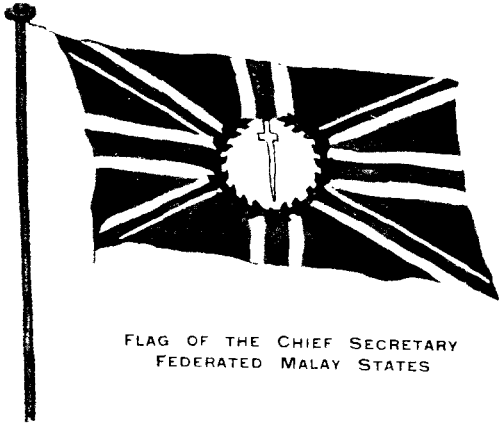
Asiatic Society of Bengal. Members of the Straits Branch of the Royal Asiatic Society, by a letter received in 1903, are accorded the privilege of admission to the monthly meetings of the Asiatic Society of Bengal, which are held usually at the Society's house, 1 Park Street, Calcutta.

JOURNAL

FLAG OF THE GOVERNOR OF THE
STRAITS SETTLEMENTS



COLONIAL ENSIGN
STRAITS SETTLEMENTS



FLAG OF THE CHIEF SECRETARY
FEDERATED MALAY STATES

The Flags of the Malay Peninsula.

In response to a request made some little time ago, the Council of the Society has decided to publish here seven plates illustrative of the flags generally recognised in the Malay Peninsula. The drawings from which the plates have been prepared were in most cases procured through members of the Society, who are at the same time Officers of the State serving in different parts of the Peninsula. For the ready way in which they gave their help, the Society's best thanks are due.

The ensign of the Straits Settlements is constructed as those of all British Colonies from the Blue Ensign, by the addition of the Colonial emblem in the fly. The same Colonial emblem wreathed in oak leaves in the centre of the Union Jack makes the Governor's flag. The device of the emblem is three crowns embayed on white in a lozenge the ground of which is red, the crowns representing the three Settlements.

The Chief Secretary of the Federated Malay States has a Jack corresponding to the Governor's in which a kris is the emblem.

Very recently all the Malay States used flags as emblems which were of one colour; but as it became known in them that the self-coloured flags at sea and elsewhere had special significances for the purpose of signalling, the desirability of using something more distinctive was realised and a change has been made in every State except Trengganu. Trengganu still retains its plain white flag.

Pahang, its neighbour, used a plain black flag, until, as symbolical of the Union of the ruler with his people, white was associated with the black,—first a narrow white band along the inner edge then an upper white half. This final design was fixed by the State Council on the 28th of December, 1903. As far as can be ascertained the flag of Kelantan was plain white up to the time when the State came under British Protection. Being white, it would not be distinctive as regards Trengganu. After the State had come under protection, a figure of a tiger was added in mid-flag coloured in the case of the State flag a very dark blue, and in His Highness the Sultan's own flag yellow, the ground remaining white as before. Similarly the Perak flags used to be self-coloured, but now the three colours, formerly employed, are combined into the one flag. In Kedah up to six years ago self-coloured flags were used. The Sultan used a plain yellow one, the Malay emblem of Royalty, the State flag was a plain red one and the late Raja Muda's a plain black. When the Sultan and his suite went to Europe for the corronation of their Majesties King George V. and Queen Mary, the

Malays were chagrined to find that none of their old flags could be flown as they were the nautical symbols for quarantine, gunpowder and piracy, and then the device called by the Malays the "Kedah Crown" as superimposed on the old grounds of the Sultan's, and the State's flags: and the President of the State Council was given a green flag instead of the old black one.

The crescent of Muhammedanism appears in the Kedah flag; and the crescent and star in those of Selangor and Johore. The Selangor State flag is yellow and red in quarters with a yellow crescent and star in canton. It was devised in the reign of Sultan Abdul Samad: and the yellow and red quarterings are symbolic of flesh and blood: for, as the body is of flesh and blood so is the State a combination of necessary parts.

The Johore flag is white with the crescent and star red in canton on blue.

The Negri Sembilan flag is yellow with red and black diagonal in canton: red for the Government, yellow for the Raja, and black for the Undang or States' rulers. "Negri Sembilan" means "Nine States."

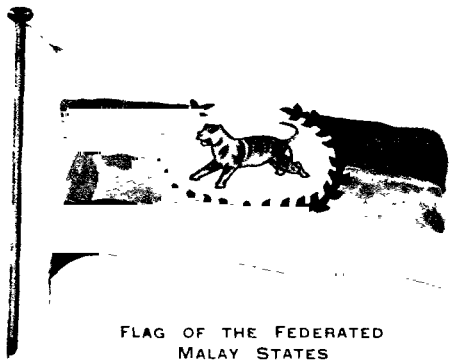
The device of the Kelantan flag reads:—

كراجأن كلنتن

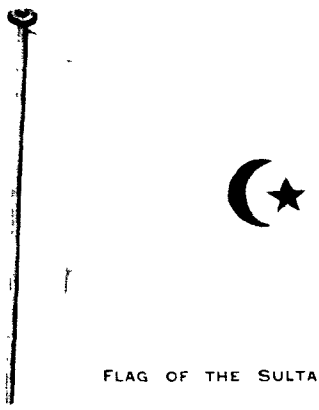
نَصْرٌ مِنَ اللهِ وَفَتْحٌ قَرِيبٌ وَبَشِّرِ الْمُؤْمِنِينْ

KERAJA'AN KELANTAN.

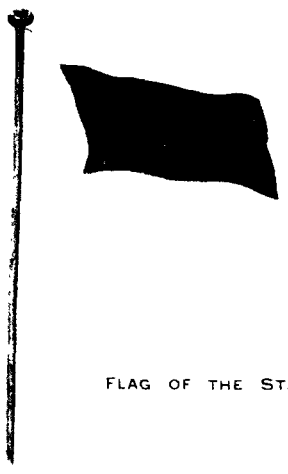
Nasrom minallah-hi wafat-hung karibun wabasshiri mo'minin.



FLAG OF THE FEDERATED
MALAY STATES

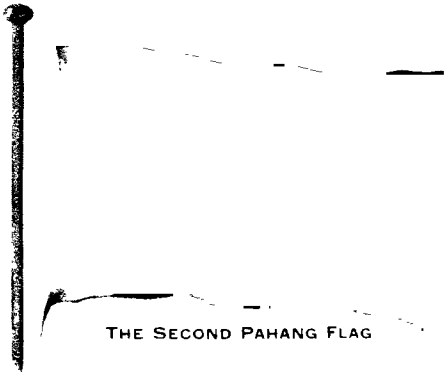


FLAG OF THE SULTAN OF JOHORE

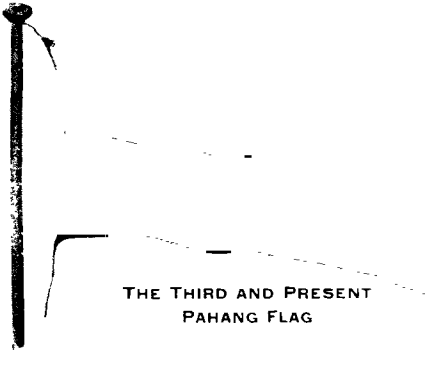


FLAG OF THE STATE OF JOHORE

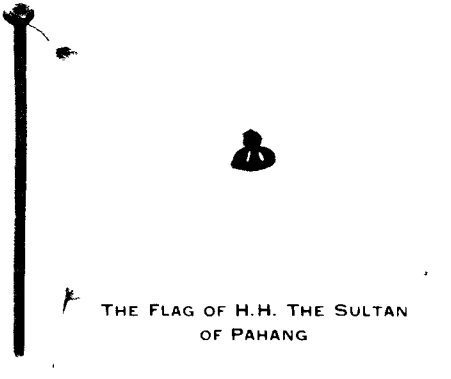
THE ORIGINAL PAHANG FLAG



THE SECOND PAHANG FLAG

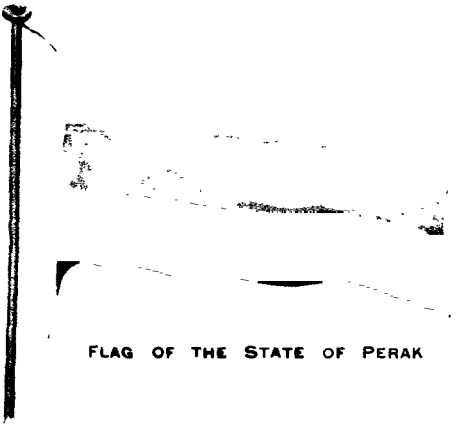


THE THIRD AND PRESENT
PAHANG FLAG



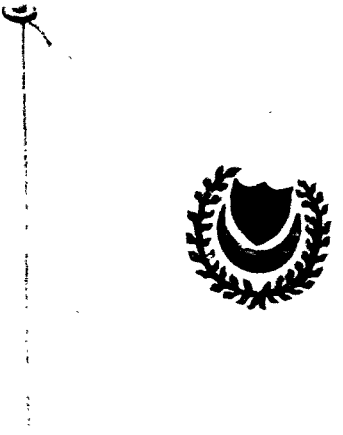
THE FLAG OF H.H. THE SULTAN
OF PAHANG

FLAG OF THE STATE OF
NEGRI SEMBITAN

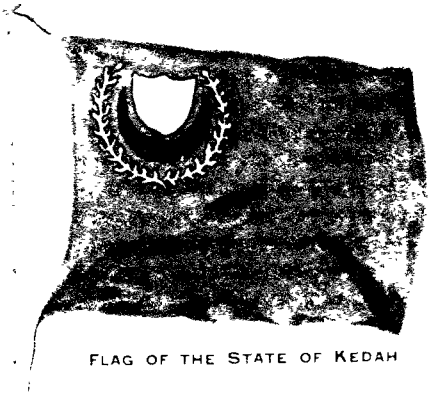


FLAG OF THE STATE OF PERAK

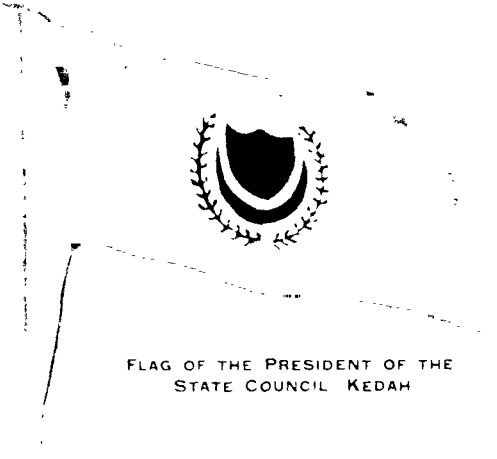
FLAG OF THE STATE OF TRENGGANU



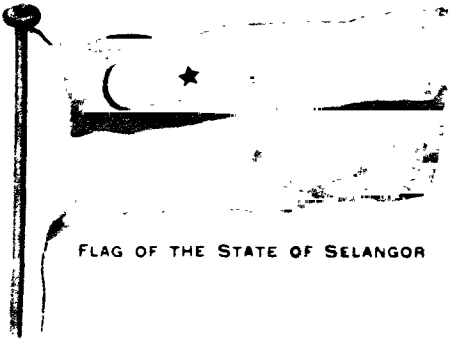
FLAG OF H H THE SULTAN OF KEDAH



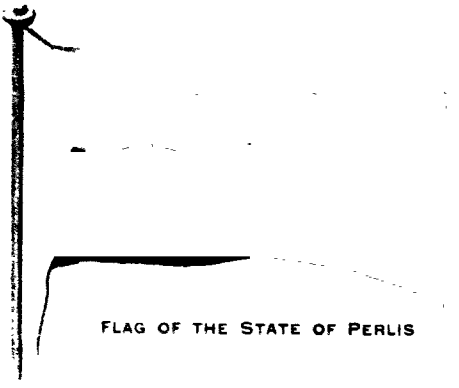
FLAG OF THE STATE OF KEDAH



FLAG OF THE PRESIDENT OF THE STATE COUNCIL KEDAH



FLAG OF THE STATE OF SELANGOR



FLAG OF THE STATE OF PERLIS

FLAG OF H.H THE SULTAN OF KELANTAN

FLAG OF THE STATE OF KELANTAN

THE TIGER OF THE KELANTAN FLAG

New and Rare Malayan Plants.

Series IX.

By H. N. Ridley, F.R.S.

In continuing my work on the Flora of the Malay Peninsula, I find a number of plants in the earlier collections which have been overlooked and not described, as well as several genera in which the species, chiefly described from more or less inadequate dried specimens, seem to have been much confused: such genera are *Glycosmis*, *Ventilago* and *Allophyllus*. In critical genera like these a really big series of specimens is required and this we seldom possess in any tropical genus. Some also differ more in habit than in what may be called herbarium characters. In the field one could not mistake the one for the other: but specimens without adequate notes as to height, and form of growth may look so far similar that a botanist who has not seen the plants alive may easily be led into thinking that they are all mere forms of one somewhat variable species. We really want more collecting and observation done. I have been surprised to note how very badly many of our commonest plants are represented in herbaria. The collections of an amateur who, just commencing the study of botany collects every weed he can find, are often extremely valuable, as the plants he gathers are just the plants that others neglect.

ANONACEAE.

Unona. Safford in Bull. Torrey Club, xxxix. p. 502, shows that the original species of this genus was an American plant to which were later added among others the species known as *Unona* in the East Indies: and eventually the original *Unona discreta*, Linn. fil., was actually excluded from the genus. This plant proves to be a Xylopia. The East Indian plants are quite distinct from it so that the generic name *Unona* disappears as a synonym of *Xylopia*. The earliest name for the East Indian "Unona" is *Desmos* of Loureiro and the following are the names of the Malay species of Unona now referred to that genus.

Desmos cochinchinensis, Lour. Fl. Cochinch. I. 352. *Unona desmos*, Dunal.

Desmos chinensis, Lour. l.c. p. 352 = *Unona discolor*, Vahl.

Desmos Dunalii, Safford l.c. p. 506. = *Unona Dunalii*, Wall. Cat.

Desmos dumosa, Safford l.c. p. 506. = *Unona dumosa*, Roxb.

Desmos dasymaschala, Safford l.c. 507. = *Unona dasymaschala*, Bl.

Desmos filipes, Ridl. = *Unona filipes*, Ridl.

The genus when confined to the shrubs with large rather thin flowers with two series of unequal petals and moniliform fruiting carpels forms a well-defined genus: but to it has unfortunately been added a section *Stenopetala* including *Desmos Wrayi*, *D. desmantha*, *D. crinita*, *D. stenopetala* all Unonas of Hook. fil. & King, and kept in *Desmos* by Safford. These are small trees about 20 feet tall with the flowers and fruit exactly of *Polyalthia* and closely allied to *P. Beccarii*. The ovaries in the species referred to *Unona* (*Desmos*) contain from 2 to 5 ovules. The distinction given to *Polyalthia* from *Unona* is that it has but one or two ovules. None of the species of this supposed section of *Unona* have moniliform fruit, but 3 seeds are often developed.

I propose to remove all of them to their correct genus *Polyalthia* and transfer them to their real affinity with *P. Beccarii*, under the names of **Polyalthia Wrayi, P. desmantha, P. crinita** and **P. stenopetala.**

Unona pycnantha, Hook. fil. only known from Maingay's specimen looks to me to be a young specimen of one of these species probably *P. desmantha*, in which the flowers are not fully developed.

Polyalthia cauliflora, Hook. fil. and Thoms., Fl. Ind. 138; Hook. fil., Fl. Brit. Ind. I. 60, was based on Wallich's *Uvaria cauliflora* (Wall. Cat. 6476) a plant collected in Singapore. King omitted it altogether from the "Materials for a flora of the Malay peninsula" but quoted the description in the Annals of the Botanic Gardens of Calcutta (*Unonaceae*) and said it was indeterminable. I have examined the type in Wallich's herbarium and find it to be identical with *Polyalthia Teysmanni*, Boerl., Fl. Bogor. I 103; *Guatteria Teysmanni*, Miq. Fl. Ind. Bat. Suppl. 378.

This species is very common in Singapore and much resembles *P. Beccarii*. It is a small tree with a stem 3 inches through with transversely wrinkled bark. The flowers are orange yellow, and not cinnamon brown as in *P. Beccarii*; the fruit is larger and sometimes at least pubescent.

It occurs in SINGAPORE, at Chan Chu Kang (6231 of my collection), Toas river and Changi (5980); also on Gunong Panti in JOHORE; at Sepang in SELANGOR; and on the Tahan river in PAHANG, usually in rather sandy open woods.

Unona latifolia, Hook. fil., Fl. Brit. Ind. I, 60.

Unona Brandisana, Pierre, Fl. Forest Cochinch. p. 19 is referred by Safford to the genus *Canangium*, as *Canangium Brandesianum*, Safford (l.c. p. 504).

It is certainly closely allied to *Canangium Scortechinii* having the long conic anther appendage and elongated style of that species. The style of *Canangium odoratum* is however quite different.

It is regrettable that Safford published the name as *Canangium Brandesianum* as Pierre intended to associate the plant with Sir Dietrich *Brandis* and called it *Brandisana*. It should have been in correct Latin *Brandisianum*.

Canangium monospermum (Cananga monosperma, Hook. fil.). "A tree about 5 feet high: stem about the size of a man's thumb found on the top of Gov. Hill." "Large tree with a thick stem found about half way going up Government Hill" in Maingay's collections. This has been treated by Hooker and King as a doubtful plant: and the fruit with the specimens perhaps does not belong. It is no *Canangium* and I am very doubtful as to what it is. It has not been collected since Maingay's time: neither Curtis nor Mhd. Haniff nor I myself have been able to find it. It requires searching for again.

Sphaerocoryne, Scheff. ms. in Boerlage, Ic. Bogor. LXIX.

The species on which Scheffer apparently intended to base this genus, *S. siamensis*, was put by Boerlage into the genus *Polyalthia* as *P. siamensis*, when he described Scheffer's species. It had however been already described by Pierre, Fl. Forest. Cochinch., as *Unona Mesnyi* (Pl. 17). Pierre seemed doubtful as to where to place the plant, as in Herb. Kew he writes notes on it referring it also to *Popowia*: and Craib (Kew Bulletin, 1914, p. 5) makes a new combination of this as *Popowia Mesnyi*. *Popowia edulis*, Pierre, seems to me the same thing. Two other species closely allied to this species are *Polyalthia affinis*, Teijsm. and Binn., in Tijdschr. Nederl. Ind. xxvii (1864) 37: Boerlage, Ic. Bogoriensis, t. LXIII, of unknown origin cultivated at Buitenzorg and *Polyalthia aberrans*, Maingay in Hook. fil. Fl. Brit. Ind. i. 67 of Malacca and Perak.

It does not seem possible to refer these three plants to any of the genera suggested, and I therefore propose to keep up the proposed genus of Scheffer's *Sphaerocoryne* which I define below. The affinities of these plants are obscure, but they are certainly allied to Scheffer's *Rauwenhoffia* from which *Sphaerocoryne* differs mainly in its small stigmas, cylindric style and single or 2 ovules. *Rauwenhoffia* has very large stigmas, a very short style and many ovules.

Sphaerocoryne, Scheff. ms. genus med.

Shrubs erect or scandent or small trees. Leaves coriaceous. Flowers axillary, solitary. Sepals small, ovate, valvate. Petals outer ovate, inner ones much smaller, flat not excavate at the base. Stamens oblong, numerous, connective flat, truncate. Torus globose. Pistils projecting beyond the stamens. Ovary hairy. Style cylindric, glabrous. Stigma small bilobed. Ovules 1 basal or 2, lateral. Carpels subglobose on long stalks. Seed 1 oblong.

Species 3.

S. aberrans, Ridl. *Polyalthia aberrans*, Maingay ex Hook. fil., Fl. Brit. Ind i. 67; King, in Journ. As. Soc. Beng. lxi. pt. 2. p. 63; and in Ann. Calc. Bot. Gard. IV., 78, pl. 109a.

PERAK.

S. siamensis, Scheff. *Polyalthia siamensis*, Boerl., Ic. Bogor. LXIX. *Unona Mesnyi*, Pierre, Fl. Forest. Cochinch., t. 17. *Popowia Mesnyi*, Craib, in Kew Bull. 1914, p. 5. *Popowia edulis*, Pierre.

SIAM, CAMBODIA.

S. affinis, Ridl. *Polyalthia affinis*, Teijsm. and Binn. ex Boerlage, Ic. Bogor. t. LXIII.

Cult. in Hort. Bogor. origin unknown.

TILIACEAE.

Elaeocarpus acmosepalus, Stapf. ms.

A tree with young parts silky pubescent. Leaves thinly coriaceous drying brown, glabrous, elliptic acute or acuminate, base cuneate, margins entire, slightly thickened, nerves 3 pairs inarching within the margin, elevate beneath, reticulations wide not conspicuous, 7 cm. long, 4 cm. wide; petiole slender, geniculate .75 m. long. Racemes slender in upper axils, 6—7 cm. long, puberulous. Pedicels 6—7 mm. long. Sepals 5, lanceolate acuminate, sparsely hairy or glabrous, 6 mm. long. Petals cuneate, fimbriate, edges ciliate, nearly as long. Stamens 20–25, filaments glabrous, as long as the anthers which are awned, the awn nearly as long as the anther and tipped with hairs. Torus of 5 rounded tomentose glands grooved on the back. Ovary ovoid cone silky pilose, 3-celled, 2 ovules in each cell. Style glabrous above, pilose at base.

JOHORE. Pengerang (*N. Cantley*). Also in SARAWAK (*Beccari* 3433), and Bau (*Haviland* 2035).

Allied to *E. parvifolius*, Wall., and *E. robustus*, Roxb., which latter it resembles in having some of the leaves shewing signs of pustulations, but the leaves are quite entire and dry

dark brown above and red brown beneath. The sepals are very narrow and when dry at least are curiously hooked at the long acuminate tip. Haviland's plant is more pubescent and the leaves show slight signs of crenation.

Dr. Stapf recognized this species as distinct in the Kew Herbarium but never published his description of it.

GERANIACEAE.

Connaropsis glabra, n. sp.

Tree? branches with pale bark, glabrous. Leaves simple, thinly coriaceous, oblong acuminate acute, base rounded, nerves 5—6 pairs ascending marching within the margins, reticulations conspicuous beneath, not glaucescent, 4 in. long, 1.6 in. wide, petiole .5 in. long, petiolule .2 in. Panicles axillary and terminal, erect, 3.5 in.—4.5 in. long, lax; branches short .2—.3 in. long; pedicels .01 long. Sepals ovate acute, glabrous. Petals oblong, narrower at the base, obtuse. Stamens 10 in 2 whorls of unequal length; ovary glabrous, ovoid, obscurely angled.

PERAK. On Hermitage Hill at 1000 feet, alt., flowering in December. (*Curtis* 1345).

This species has thinner and longer leaves, (not glaucous on the backs,) than *C. monophylla*, Planch. The panicle is laxer and the whole plant glabrous.

Connaropsis laxa, n. sp.

Tree 40 to 50 feet tall, the bark of the branches pale. Leaves simple, coriaceous, lanceolate acuminate, shining, the base rounded; nerves 6 pairs slender, marching within the margin, elevated beneath, reticulations fine conspicuous beneath, .3—4.5 in. long, 1.1—2 in. wide, petiole .5 in. long, petiolule .2 in. long. Panicles terminal and axillary, slender, lax, puberulous 2.5 to 6 in. long; branches distant 2—3 in. long with the branchlets crowded at the tip. Sepals connate at base, 5, oblong, obtuse, glabrous. Petals 5, cuneate truncate, cherry red. Stamens 10, 5 short alternating with 5 long. Ovary oblong ovate. Styles 5, short. Fruit globose, 2-celled, dark red. Seed 1.

PERAK. Taiping Hills, within 300 feet of Sea level (*Kunstler* 2384); Tea Gardens (*Curtis* 2896).

The appearance of this plant suggests a *Dapania* but it appears to be a tree and to have indehiscent fruits.

Impatiens polycycla, Hook. fil. ms.

A branched herb with nearly glabrous stem. Leaves in whorls of 2 to 5, lanceolate acuminate, narrowed to the base, serrate spinulose, with scattered long hairs on the upper sur-

face, glaucous beneath and glabrous, nerves hardly visible 1 to 1.5 in. long, .4 in. wide, petiole .2 in. long. Stipules filiform. Peduncle 1.5 to 2 in. long. Flower patent 1 in. across, rose pink. Sepals .2 in. long, ovate caudate, glabrous, spurred one ovate lanceolate, flat, spur long and slender, 1.5 in. long. Capsule ovoid dilate in middle .5 in. long. Seed obovoid, compressed hairy .1 in. long.

PERAK. Temengoh on a sand bank in the river (*Ridley* 14591). I could find but a single plant anywhere.

Allied to *T. Griffithii*, Hook. fil. but a more branched stouter plant, with broader leaves, hairy above with the nerves almost invisible, in whorls of 5, the lower ones in pairs. The spur is also much longer and more slender.

Impatiens exilipes, Hook. fil. ms.

A branched glabrous herb about 2 feet tall. Leaves opposite or in whorls of 3, broadly lanceolate acuminate, narrowed to the base, serrate spinulose, quite glabrous, beneath glaucous, nerves 6 pairs conspicuous, 3 to 4.5 in. long, .7 to 1 in. wide; petiole .5 in. long. Pedicels 2 to 3 in. long. Flowers rose pink, centre darker. Sepals ovate oblong, cuspidate, spurred one boat-shaped, mucronate, .4 in. long, spur slender 1.3 in. long. Standard obovate, cuneate, truncate with a short point and a short rounded keel, wings broad bifid, basal lobe oblong retuse, upper one obovate retuse. Capsule short .6 in. long, broadly fusiform, beaked. Seed obovoid, flattened, glabrous.

PERAK. On the road between Tapah and Jor, abundant at one spot (*Ridley*).

I got this pretty balsam in the return from the expedition to Telom. Like the last species Sir Joseph Hooker examined it and made notes on it shortly before his death and gave it the above manuscript name. It belongs to the same section as the last but is distinct in being quite glabrous like *I. Curtisii* of the Taiping Hills but has lanceolate not ovate leaves. *I. Wrayi*, Hook. fil. from the same district has hairy leaves, an orbicular standard not narrowed at the base and a central raised line with an erect tooth in the centre, the wings are very unequally lobed and the seed is hairy. *I. sarcantha*, Hook. fil. from the Telom river has broad hairy leaves and an obovate standard, emarginate with a strong central keel running the whole length, and oblong truncate unequal lobes to the wings. The seeds are glabrous.

RUTACEAE.

Glycosmis. The various species of this genus of shrubs or small trees occurring in the Malay Peninsula have been reduced

first by Oliver, Journ. Linn. Soc. V. Suppl. II. 37, and later by Hooker in the Flora of British India and King in the Materials who have followed Oliver's classification, into three species only *G. pentaphylla*, Correa, the *Limonia pentaphylla* of Retz. and Roxburgh, *G. sapindoides*, Lindl. and *G. puberula*, Lindl., the greater number of the Indian and Malayan species being reduced to forms of *G. pentaphylla* "a very variable and most perplexing species."

The typical *G. pentaphylla* is based upon what appears to me a very distinct species which is confined to India, and does not occur at all in our area. After examining the various plants included under the names of this and the other two species, I have come to the conclusion that the various forms, perhaps a little difficult to make out from poor herbarium specimens can be quite well distinguished into species, and are not really so variable as would at first sight appear.

G. citrifolia, Lindl. Hort. Soc. Trans. VI. 72. *Limonia parviflora*, Bot. Mag. t. 2416. *G. simplicifolia*, Spreng. Syst. Veg. IV. 2, p. 162; Miq. Fl. Ind. Bat. I. II. 521.

A short stiff shrub about 5 feet tall, with thinly coriaceous 1- to 3- foliolate leaves, elliptic lanceolate or oblanceolate, narrowed to the base, shortly blunt apiculate; nerves very fine, nervules nearly as conspicuous, usually distinctly gland-dotted, 4—5 in. to 6 in. long and 1.5 in. wide; petiole 1—2.5 in. long, petiolule .1 in. long. The panicles are axillary and terminal, erect and spike-like about .5 to 2 in. long, the peduncle .1—.15 in. long, but occasionally much longer. The flowers fairly numerous, are sessile or nearly so, .1 in. long. Sepals ovate acute, stiff; petals about twice as long, oblong obtuse. Stamens with linear-subulate filaments and very small anthers elliptic or elliptic lanceolate. Ovary 3—4-lobed, flask-shaped on a small disc, papillose, glabrous. Fruit as big as a pea, pale pink, translucent.

This plant does not appear to be very common in the Malay Peninsula, but I have it from Tanglin in SINGAPORE from the heaths in SETUL, and Kampongs at Kota Bahru, KELANTAN.

It is abundant in HONGKONG, and JAVA, Bandong (*Forbes* 1215); and also occurs in DUTCH BORNEO, Banjermasin (*Motley* 271), BRITISH NORTH BORNEO (*Fraser*); PHILIPPINES (*Cuming* 1200; *Loher* 215), Manila (*Merrill* 112778).

The form with unifoliolate leaves, has usually stiffer and larger leaves and is probably the *G. lanceolata*, Spreng. It occurs also in French Guyana (*Glycosmis americana*, Sagot) and Jamaica. "According to Dr. Broughton it was introduced into Jamaica from England under the name of Mandarin orange in 1788 by Hinton East, Esq." (note in Herb. Kew). These American forms, undoubtedly both introduced, resemble

the Hongkong plant in having a tomentose inflorescence. The Malayan form is quite glabrous.

G. macrocarpa, Wight, Ill. i. 109.

A tree or shrub quite glabrous. Leaves 1- to 5-foliolate on the same plant, subcoriaceous, the trifoliolate leaflets are lanceolate, distant acuminate, shortly narrowed to the base, 3 in. long, .7 in. wide, petiolule .1 in.; the unifoliolate leaflets elliptic lanceolate, acuminate, base shortly narrowed, 4.5 in. long, 2.1 in. wide, very finely gland-dotted, nerves often distinctly elevate beneath in the larger leaflets, 8 pairs. The flowers white are .2 in. long 2 to 3 on very stout axillary racemes in the only Malay specimen I have seen, in terminal clusters .5 in. long in the Indian type, rachis and calyx scurfy. Sepals short ovate. Petals quite 3 times as long, linear oblong, subacute. Stamens with broad truncate linear filaments and short oblong anthers. Ovary glabrous, cylindric on a moderately large disc. Berry .75 in. long, globose with 2 large planoconvex seeds.

Perak. At 1500 feet, "a tree, flowers white" (*Wray* 264). South India: Courtallum (*Wight*).

A very distinct plant in its large flowers and very large fruit as big as a cherry. Wight gives it as shrubby, Wray as a tree.

G. malayana, n. sp.

A glabrous shrub, about 6 feet tall, with light green leaves. Buds red tomentose. Leaves 5-foliolate, thin, submembranous, leaflets elliptic, bluntly acuminate, shortly narrowed at the base, nerves 5 pairs impressed above conspicuously elevate beneath, inarching .3 in. within the margin, very finely gland-dotted above, sometimes but not always beneath, 3.5—5.5 in. long, 1—2 in. wide, petiole .5—1 in. long, petiolules .1—.2 in. long. Panicles axillary and terminal 2—3 in. long, branches spreading 1 in. long, glabrous, rarely red scurfy. Buds globose. Sepals orbicular ciliate on the edges. Filaments broad, flat. Ovary cylindro-conic, 5-celled, glabrous. Fruit white, globose, narrowed at the base, .2 in. through.

Singapore. Chan Chu Kang (*Ridley* 3912). Johore. Bukit Murdom (*Kelsall*), and Sedenah (*Ridley* 13508). Selangor. Kuala Lumpur. Perak. Larut (King's Collector 2035, 2839). Penang. (*Wallich* 6373D); Muka Head (*Curtis* 722); Government Hill (*Maingay*).

This is our commonest species. The very smooth leaves with strong elevate nerves beneath and very inconspicuous nervules and reticulation beneath are very characteristic points. Frequently they are not at all gland-dotted but in the more northern Perak and Penang specimens conspicuously so.

Kunstler's specimen No. 2035 described as a tree 20—30 feet tall has a tomentose inflorescence. This is unusual though the buds in all specimens are red tomentose. The Penang plants have more distinct nervules and reticulations and are gland-dotted on both sides, and the branchlets are pustular, while the inflorescence is much more copiously branched and compact. In this it approaches *G. sapindoides*, Lindl. In the Kew herbarium specimens have been tentatively named *G. chlorosperma*, Spreng., the description of which is too incomplete to identify any species by, but as the type was obtained in Java where this species does not seem to occur, it is probable that that species is something else.

G. sapindoides, Lindl. in Wall. Cat. 6373; Hook. fil. Fl. Brit. Ind. I. 501, was collected by Wallich in Penang in 1822. The leaves are 5- to 7-foliolate with 11 or 12 pairs of fairly well elevated nerves and conspicuous nervules and reticulations, the branches are pustular, the inflorescence fascicled racemose axillary short and red tomentose, the ovary is rufous tomentose at the base.

The plant collected by Maingay on Government Hill, Penang, described in his field note as 30 feet high and as thick as a man's thumb, is quite glabrous, and has a terminal inflorescence; so I refer it to *G. malayana*. No one has apparently seen *sapindoides* since Wallich's time.

G. macrophylla, Lindl. Wall. Cat. 6377, not of Miquel.

A shrub 2—3 feet tall. Leaves always simple, thinly coriaceous, elliptic, narrowed slightly at the base, acuminate, frequently not gland-dotted, pale beneath, nerves strongly elevate beneath 10 pairs inarching shortly within the margin, reticulations conspicuous, 8 in. long, 3.5 in. wide, petiole thick .2—1 in. long. Panicles terminal, or 1 axillary in the uppermost leaf axil, 2.5 in. long with very short branches .1 in. long. The flowers very small in umbels at the end of the branches. The sepals ovate not ciliate. The petals short oblong. Ovary conic cylindric, glabrous on a very large disc.

Penang. (*Wallich* 6377; *Curtis* 89).

var. *macrorachis,* King.

An erect shrub 2 to 4 feet. Leaves lanceolate acuminate, 13 in. long, 3—7 in. wide, narrowed to the base. Panicle slender elongate, 6 in. long, quite glabrous, base 1 in. wide, floriferous part 6 in., branches distinct .1—.4 in. long with small terminal umbels of flowers at the ends. Fruit round and white.

Penang. Waterfall and Pulau Butong (*Curtis* 89).

A very distinct plant peculiar apparently to Penang.

G. tomentella, n. sp.

Shrub. Buds red tomentose. Leaves 5-foliolate, rhachis finely tomentose, 4 in. long; leaflets elliptic ovate bluntly acuminate, base rounded, submembranous, nerves 5 pairs elevate beneath, marching within the margin, 1 in. long, 2 in. wide, terminal one 3 in. long 2.25 in. across, petiolule tomentose .1 in. long. Panicle terminal; peduncle 1.5 in. long, floriferous portion 1.5 in. long, lower branches 1.2 in. long, patent, rhachis scurfy, flowers .1 in. long, sessile in small clusters on the branches. Sepals ovate obtuse. Petals oblong obtuse. Stamens: filaments linear, flat, oblong, anther elliptic. Ovary conoid on a rather large cushion-like disc, glabrous.

SELANGOR. Menuang Gasing, Langat (*Kloss*).

A very distinct plant in its ovate leaflets with rounded bases, and finely scurfy tomentose rhachis, petiolules and inflorescence: a little scurf occurs too on the midrib and back of the leaves generally.

G. crassifolia, n. sp.

Branches stout, woody. Leaves simple, very coriaceous, oblong, elliptic lanceolate, narrowed to the base, bluntly acuminate, gland-dotted above, less conspicuously beneath, nerves fine not elevate inconspicuous, 10 pairs, nervules nearly as conspicuous, reticulations very inconspicuous, 8 in. long, 2.1 in. wide, petiole thick .5 in. Flowers small sessile in very short axillary clusters .1 in. long, very few in the cluster, rhachis and ovate sepals red tomentose. Petals broadly lanceolate blunt, glabrous. Stamens short "connective of anthers with a glandular blunt apiculus." Ovary conoid cylindric, glabrous. "Fruit fleshy."

MALACCA. (*Maingay* 3374).

A very curious plant of which I have only seen a single specimen of Maingay's with one open flower. The coriaceous simple leaves and small flowers in very small axillary clusters distinguish it readily from any other species. Hooker referred it to the var. *longifolia*, Oliv. of *G. pentaphylla*, an Assam plant which I think is distinct though allied.

G. monticola, n. sp.

Shrub glabrous. Leaves 5 in. long, leaflets 5, coriaceous, dotted above, narrow lanceolate, acuminate cuspidate tip blunt, base long, narrowed, cuneate, nerves 6 pairs faint, 3 to 4 in. long, .5 to 1 in. wide, petiolules .1 in. long. Panicle terminal 1 in. long, branches .2 in. long, few flowered. Sepals rounded. Petals ovate. Stamens: filaments very short, anthers apiculate. Pistil cylindric.

MALACCA. Mt. Ophir (*Ridley* 3285).

Distinct in its very narrow elongate, coriaceous leaves, gland-dotted above, finely reticulate beneath ending in a long blunt tipped point and much narrowed to the base.

G. puberula, Lindl. Wall. Cat. 6375; Oliv. Le. 39; Hook. fil. Fl. Brit. Ind. I. 501.

A small leaved shrub with usually trifoliolate leaves and red tomentose inflorescence and ovary. Fruit as big as a pea, globose, glandular.

PENANG. (*Wallich* 6375 A and B); Government Hill at 500 feet (*Curtis* 88). PERAK. (*Scortechini*). A variety with stiff coriaceous leaves with a broad blunt point, nerves invisible above.

Wallich 6375B is labelled Singap(ore) but it may be doubted if it too did not come from Penang, as it has never again been found so far south.

G. rupestris, Ridl. is allied to *G. puberula*, but its ovary is always glabrous, as is the whole inflorescence.

KEDAH. On Gunong Geriang, Pulau Adang, Rawei Island; PERLIS, on Bukit Lagi. (*Ridley* 15552).

var. *tomentosa,* n. var. has the inflorescence red hairy though the ovary is glabrous, but glandular.

KEDAH. Lankawi, Pulau Segai (*Ridley* 15566). Pulau Adang (*Ridley* 15844 and 15843) both larger leaved than type. SOUTHERN SIAM. Koh Samui (*Robinson*).

A plant very closely allied to *G. rupestris*, if not identical specifically, was collected at Montalban in the Philippines in the Province of Rizal (*Loher* 6767 and 6774) but the leaves are all unifoliolate.

BURSERACEAE.

Santiria laxa, King. *Canarium laxum*, Benn.

The female flowers of this tree have not been described. They are distinctly larger than the male flowers, the blunt oblong petals being .3 in. long and are borne on longer slender pedicels, .5 in. or more in length. The stamens (abortive) are as long as the pistil, the anther thick linear and blunt, longer a little than the filament. The ovary is thick oblong and somewhat distinctly 3-lobed. The stigma sessile, large three-lobed, thick and overlapping the ovary.

Icicaster Planchoni, n. gen.

I found the genus Icicaster for the plant formerly known

as *Santiria Planchoni*, Benn. Fl. Brit. Ind. I. 536 and Engler, Mon. Phan. IV. 154. *Canarium Planchoni*, King, Mat. Mal. Pen. p. 182.

Planchon named it *Icicopsis* in Herb. Hook., but this generic name was never published and Engler unfortunately used it for certain American plants now reduced to *Icica*. In the Pflanzenfamilien it is put as a section of *Santiria* under the name *Icicopsis*, and *Trigonochlamys* is also put as a section of *Santiria*.

The plant in fruit resembles *Trigonochlamys Griffithii* except for the small calyx lobes but the flowers are small and resemble those of a *Santiria* except that they have but three stamens.

The characters of the genus *Icicaster* may thus be given. A tree with pinnate leaves of 7 to 13 leaflets, unisexual. Panicles axillary, shorter than the leaves. Flowers small crowded near the tips of the branches. Calyx campanulate deeply cleft into 3 ovate triangular lobes, small. Petals 3, slightly larger, deltoid. Stamens three, anthers ovate, filaments shorter, flat, inserted on the edge of a large cupular fleshy disc. Ovary in the female flowers small, ovate, three-lobed. Style terminal, short. Stigma 3-lobed. Drupe ovoid globular, slightly gibbous, style persistent, slightly lateral.

It appears to be not rare in the south of the Peninsula in SINGAPORE, MALACCA and PERAK as far north as Taiping. The fruit is yellow and bead-like.

MELIACEAE.

Amoora malaccensis, n. sp.

Tree, bark of branches wrinkled, young branches red pubescent (when dry). Leaves 9—12 in. long, imparipinnate, rhachis scurfy puberulous: leaflets 11—13, opposite, elliptic or elliptic-lanceolate, acuminate, base cuneate or rounded, slightly inaequilateral, coriaceous, glabrous, smooth, slightly shining above, red brown beneath when dry, nerves about 16 pairs, very fine and inconspicuous, depressed above, faint beneath, 2.1 to 4.25 in. long, .75—1.8 in. wide, petiolules .1—.2 in. long. Panicles axillary 6—8 in. long with ascending branches 1—2 in. or less long, scurfy, pubescent. Flowers male .05 in. long in threes or fours at the ends of the branchlets, sessile. Calyx lobes short, rounded base thick campanulate, pustular Petals ovate obtuse longer incurved. Stamen-tube nearly as long as the petals, broadly oblong globose, wide open at the top, lobes rounded, short, anthers 6, not exserted. Ovary glabrous, oblong. Fruit globose, 2 in. through, densely minutely velvety tomentose, pericarp very thick, woody.

MALACCA. Ayer Panas (*Goodenough: Ridley* 1797) flowers: (*Maingay* 1455) fruit.

Nearest to *A. lanceolata*, Hiern, but the leaves are thinner, larger and less coriaceous with more distinct nerves, the flowers are smaller and glabrous, the staminal tube has rounded short lobes.

Aglaia rufibarbis, Ridl.

I find that the plant described by me in the Journ. Roy. As. Soc. Str. Branch vol. 54, p. 32, as *Aglaia rufa*, Miq. is not that species but is a distinct and previously undescribed one. I therefore give it the name of *A. rufibarbis*.

Dysoxylon pulchrum, n. sp.

A small tree, glabrous except the flowers. Leaf over a foot long, rhachis stout. Leaflets more than 11, alternate, rather distant, coriaceous, oblong, rather abruptly blunt acuminate, base cuneate or broadly rounded, equilateral or very nearly so, midrib stout, prominent beneath, nerves 11 pairs, slender but prominent beneath, 8—9 in. long, 3—3.5 in. across, petiolules .2—.3 in. long, stout. Panicles large over a foot long, branches 8—12 in. long, stout, scurfy, branchlets scattered, 1—2 in. long with short terminal cymes of 1—3 flowers. Pedicels .1 in. long. Flowers nearly .2 in. pure white, buds truncate, oblong. Calyx flat, saucer-shaped with 4 or more irregular lobes. Petals much longer, oblong obtuse, glabrous outside, puberulous inside. Stamen-tube cylindric, thick pubescent outside, villous inside, mouth nearly entire, anthers included 10. Disc cylindric, hairy, longer than ovary. Style very stout, glabrous above. Stigma large capitate.

PENANG. At the top of the hill, 1800 feet alt. (*Ridley*) in thick forest.

A beautiful plant which was a mass of white bloom when I collected it in March 1915.

The leaves closely resemble those of *D. thyrsoideum*, Griff. but the panicles and flowers are far larger, the petals broader, the stamen-tube quite hairy inside and out.

Walsura tenuifolia, n. sp.

A tree glabrous except the flowers. Leaves 5 in. long; leaflets 5, thin membranous, glaucous beneath, elliptic acuminate acute, base rounded or shortly cuneate, nerves about 8 pairs, elevate beneath, reticulations fine, conspicuous when dry, 2—4 in. long, 1—1.5 in. wide, 1.5 in. apart on the rhachis; petiolules .2 in. long. Panicles long, 12—14 in., lax with distant branches 1.5 in. long, glabrous below, scurfy above. Flowers few .2 in. long, pedicels .05 long. Calyx minutely puberulous, short;

lobes acute 5. Petals oblong obtuse puberulous outside, glabrous within. Stamens connate for half their length, pubescent on both sides, filament (free part) linear subulate, anthers small. Ovary cylindric, glabrous. Style stout, shorter than the stamens. Stigma capitate. Disc thick fleshy annular.

PERAK. Kamunting (*Ridley* 3022).

Allied to *W. neurodes*, Hiern. but with much thinner leaves, the stamens much more united, and ovary glabrous.

OLACACEAE.

Gonocaryum crassifolium, n. sp.

Shrub with flexuous branches, glabrous except the inflorescence. Leaves alternate, stiffly coriaceous, ovate acuminate or oblong acuminate, base rounded, midrib above channelled, beneath strongly elevate, almost keeled, yellow, nerves elevate beneath, 5 pairs ascending, rather slender, 3 in. long, 3.5 in. wide, petiole thick rugose .75 in. long, yellow. Spikes 3—4 together in an axil, slender, pubescent, 2—2.2 in. long. Flowers .05 in. long, scattered. Bracts small ovate. Calyx base campanulate, 5-lobed, lobes ovate obtuse, pubescent outside, imbricate. Petals twice as long hardly cohering, glabrous, ovate oblong, apex incurved, fleshy edges thickened, concave. Stamens 5, filaments much shorter than the anther, which is oblong obtuse, red. Disc small annular undulate. Pistillode small, pilose. Female flowers and fruits unknown.

SELANGOR. Sempang mines (*Ridley* 15695).

In foliage this resembles *G. pyriforme*, Scheff. but the flowers are very much smaller and the rhachis and calyx pubescent.

CELASTRACEAE.

Celastrus malayensis, n. sp. *C. Championii*, King, Mat. Mal. Pen. p. 353 (not of Bentham).

A glabrous woody climber with black stem. Leaves usually stiffly coriaceous, elliptic to ovate, acute or acuminate, serrate or nearly entire, base shortly cuneate; nerves 5 to 6 pairs, prominent beneath, 3.5 to 4.5 in. long, 1.5 to 1.7 in. wide, petiole .25—.5 in. long. Racemes several from one axil 2 in. long with the flowers in small lax cymes, pedicels .01. Flowers nearly .1 in. across. Calyx very small, obscurely 5-lobed. Petals very small, oblong round-tipped. Fruit on pedicels 2 in. long, three-valved, orange colour, valves ovate .3 in. long and as wide. Seed 1.

PAHANG. Sungei Jelai (*Ridley* 11581); Telom (*Ridley*). PERAK. Gunong Batu Putih (*Wray*), Maxwell's Hill (*Ridley*). PENANG. Penang Hill (*Ridley*); Penara Bukit (*Curtis*). PATANI. Tomoh (*Machado*).

Native name "Akar Surukop."

This plant appears to me to be quite distinct from the Hongkong plant, the flowers of which are larger and in umbellate cymes on the ends of branches, not as in this case in racemes of small cymes. The petals are smaller and narrower, and the fruit smaller, the valves being as long as they are wide.

Microtropis valida, n. sp.

Branches stout. Leaves thickly coriaceous, shining, elliptic, acuminate acute, base cuneate, 3.5 to 6 in. long, 1.5 to 3 in. wide, nerves 6 to 8 pairs, slender, nervules and reticulations equally prominent on both sides, petiole thick grooved .5 in. long. Cymes stout, 3 in. long, peduncle 1.5 in. long, branches .5 in., branchlets .2 in. long. Flowers clustered in threes on the end of each branchlet, .4 in. across, sessile. Sepals 4, imbricate, rounded in two unequal pairs, glabrous, coriaceous with thinner edges, the inner pair the largest. Petals connate below, lobes 4, short, broad, rounded. Stamens 4 inserted on the tube, filaments broad. Pistillode truncate.

PERAK. Hermitage Hill (*Curtis* 1331).

Euonymus rufulus, n. sp.

Small tree with grey rather knotted branches. Leaves opposite, coriaceous, glabrous, elliptic, blunt, acuminate at both ends, base subacute, nerves about 5 pairs, invisible above, obscure beneath, midrib elevate on both sides, 1.5—4 in. long, .5—1.5 in. wide; petiole .25 in. long, thick, grooved. Cymes several in an axil, slender, peduncle .4 in. long, pedicels as long, about 3. Flowers dull red, .15 in. across. Sepals orbicular 5. Petals transversely rounded, oblong, minutely denticulate punctate. Stamens 5, very short, filaments subtriangular, flat; anthers transversely oblong; style short.

PAHANG. Gunong Tahan at 5000 ft. alt. (*Robinson and Wray* 5332). Small tree, flowers dull red.

A very distinct species with more coriaceous leaves, and smaller flowers with shorter, broader petals than *E. Wrayi* which is probably its nearest ally.

Salacia rubra, Lawson in Hook. fil., Flora of British India, I. 627.

Of this dubious plant collected formerly by Maingay, who had only fruiting specimens, we have now adequate material, collected in the garden jungle in Singapore by me, (No. 10164 of my collections), so I give a complete description of it.—A climbing shrub with whitish bark. Leaves opposite, elliptic cuspidate, narrowed to the base entire, coriaceous and drying dark brown, nerves 5 to 6 pairs, faint inarching far from the

margin, 3.5 in. long, 2 in. wide, petiole .2 in. long. Flowers .15 in. across in fascicles of 5 or 6, peduncle 2 in. long, slender. Calyx flat, lobes short, blunt, rugose. Petals lanceolate, obtuse, rather fleshy with a keel on the back. Stamens 3 from the top of the disc which is tall and fleshy: filaments short, linear recurved rather broad, anthers rounded, elliptic. Ovary quite immersed in the disc. The fruit about 1 in. through, rugose bright red.

S. verrucosa, Wight Ill. i. 131 (1851). This is identical with *S. polyantha*, Korthals, Flora, XXXI (1848) 379, and is the earlier name. It is a native of Mergui and Borneo and has been collected also at Tongkah, and Lankawi by Curtis.

S. ovalis, Lawson l.c. 627: *S. Lawsonii*, King in the Materials, appears to me to be nothing more than a state of the common *S. flavescens*, Kurz.

S. Lobbii, Lawson, seems to be merely a form of *S. Maingayi*, Lawson.

Salacia Korthalsiana, Miq.: *S. radula*, Hassk. Pl. Jav. p. 231 (not of Don.).

A climbing shrub with rather large alternate coriaceous leaves, oblong with a short blunt point; nerves elevate beneath the 7 pairs, 3 in. long and 2.75 in. wide. Flowers in small cymes at the ends of axillary panicles with rather thick dichotomous branches, 1.5 in. long, including the rather long peduncle. Sepals rounded, 5. Petals oblong, yellow, .1 in. long. Disc rather large and thick. Fruit ovoid blunt, .75 in.

SINGAPORE. Bukit Timah Road at 7½ miles (*Hullett* 905). Also occurs in Java.

This plant has been omitted by King from the Materials. It does not appear to be common anywhere. The branches are in Javanese specimens especially dotted over with raised lenticels hence the name *S. radula*, but Hullett's plant hardly shows them. The long stalked inflorescence is peculiar, and gives it the appearance of a *Hippocratea*.

Hippocratea nigricaulis, n. sp. *H. macrantha*, King l.c. 351, not of Korthals.

Slender climber 10 to 30 feet long, stem black, rough. Leaves coriaceous, shining, bright green, elliptic, blunt, rounded at the base, crenulate sometimes very slightly, nerves 6 pairs, elevate beneath, 2—5 in. long, 1.3 to 2.75 in. wide, petiole .01 in. long. Panicles 1 in. long, red puberulous. Flowers .3 in. across, pale yellow or greenish yellow. Calyx cupular with broad shallow teeth. Petals triangular lanceolate, minutely puberulous, outside, quite glabrous within. Disc deep fleshy,

glabrous with some minute hairs on the upper part. Fruit elliptic oblong of 2 carpels 3.2 in. long, .75 in. wide, thin woody striate. Seeds 2.25 in. long.

MALACCA. In forests, (*Griffith*). SELANGOR. Rawang Camphor forest (*Ridley*). PERAK. Larut Hills (*Kunstler* 7570, 5118). PENANG. Government Hill (*Ridley*). BURMAH. ASSAM. Duffla Hills (*King's collector* 83). BENGAL. Chittagong (*Lister*).

This plant was referred by King to *H. macrantha*, Korth. Verh. Nat. Gesch. 187 t. 39 which plant is undoubtedly the same thing as *H. Cumingii*, Laws. Flor. Brit. Ind. I. p. 624. Korthal's figure and a specimen from him in Herb. Kew clearly represent the river-bank plant known as *H. Cumingii*. The black rugose stem, crenate leaves very variable in size, red pubescent inflorescence, absence of hairs on the petals and larger fruit distinguish *H. nigricaulis*, Korth. readily from the true *H. macrantha*.

H. macrantha, Korth. is not rare in the south of the Malay Peninsula, Borneo and the Philippines. There is a specimen from the Hookerian Herbarium at Kew labelled Ceylon collected by Colonel Walker. It does not seem to have been met with in Ceylon again and the specimen was perhaps from Singapore where also Colonel Walker collected. It occurs on the banks of tidal rivers and is called Akar Bintang by the Malays from its yellow star-shaped flowers.

H. ferruginea, King. An examination of the type plant of *Salacia Griffithii*, Lawson Fl. Brit. Ind. I. 628, shows that this plant collected by Griffith in Malacca is no *Salacia* at all but *Hippocratea ferruginea*, King.

RHAMNACEAE.

Ventilago. The species of this genus have been very much confused in the Flora of British India and in King's Materials for a Flora of the Malay Peninsula, and the whole genus confined to the Indo-Malayan region with outliers in China and Formosa requires revision. The type of the genus is *V. madraspatana*, Gaertn. a native of India as far as Mergui. It has not been met with apparently in Java, for the plants so identified belong to a distinct species. *V. calyculata*, Tul. has much the same distribution, but occurs also in Siam and Cochinchina. Its curious yellow fruits covered half way by the cupshaped calyx and entirely pubescent distinguish it readily.

Ventilago leiocarpa, Benth. in Journ. Linn. Soc. V. 77; Fl. Hongkongensis was described shortly from plants from Hongkong collected by Champion, some of Griffith's Malacca plants and

a West African plant collected by Barter. All these separate gatherings belong to distinct species, which merely have in common the covering of the nut half way up by the calyx. It seems probable that Bentham first employed the name *leiocarpa* for the Hongkong plant and for that it had better be kept. It has nearly entire small leaves, branches quite glabrous, flowers in cymes of 3, axillary in the axils of full-sized leaves; the fruit has the nut covered for a quarter of its length only by the cup-shaped calyx and its wing is slightly narrowed towards the base and acute at the tip.

V. malaccensis, n. sp. *V. leiocarpa*, Benth. in part. (Malacca specimens).

A big climber, branchlets velvety pubescent. Leaves elliptic acuminate, rather abruptly and bluntly, base shortly narrowed, edge bluntly serrate, 2.5 to 3.5 in. long, 1.25 to 2 in. wide, thinly coriaceous, drying dark brown, nerves 4—8 pairs, prominent beneath, faint and sunk above, petiole pubescent thick grooved .2 in. long. Flowers in compact axillary cymes of about 12 or more, and about .15 across on slender pubescent branches with small leaves about 1 in. long soon caducous so that the branches eventually appear as panicles often over 6 in. long. Bracts ovate acute, pubescent, pedicels .1 in. long, glabrous. Buds flattened at top, bluntly 4-angled, glabrous. Calyx campanulate, lobes 5, triangular acute, glabrous with a keel on the inner face near the tip. Petals much smaller, spathulate bilobed, lobes rounded. Stamens a little longer, filament slender, anthers small. Ovary immersed in disc, hairy. Styles 2. Nut globose, covered half way by the calyx, .2 in., wing oblong linear blunt, glabrous, not narrowed at the base, 2 in. long, .3 in. wide.

SINGAPORE. (*Cantley* 190). MALACCA. (*Maingay* 1669, 1148, 406, 408, 1670; *Griffith*). PERAK. Larut (*Kunstler* 3461, 7644), Batang Padang district (*Kunstler* 7750). PENANG. Chalet (*Curtis*). BORNEO. Rejang (*Haviland* 2863).

There is a considerable amount of variation in specimens as to size of leaves, amount of serrulation and development of panicle. Some specimens have small but well developed leaves on the slender branches which bear the flowers, but these are never as large as the stem-leaves and appear to fall off very soon. In many specimens I see no trace of these leaves, so that the whole inflorescence forms a panicle with numerous branches bearing the small scattered cymes. Occasionally the branchlets appear to be glabrous.

V. gracilis, Rolfe and Merrill, is apparently closely allied but the flowers are pubescent. I am very doubtful about *V. lucens*, Miq. of Sumatra. The description is hardly adequate and the only specimen I have seen in Herb. Kew has rather

stiffy coriaceous leaves not narrowed to the petiole but with a short rounded point like a small form of *V. Maingayi*.

V. gladiata, Pierre, Fl. Forest. Cochinch. t. 314, C.

Leaves lanceolate acuminate, narrowed to the base, membranous, minutely serrulate and minutely pustulate on the back, nerves 6 pairs, slender elevate beneath, transverse nervules not seen, 2.6—3 in. long, 1—1.1 in. wide, petiole .15 all glabrous. Inflorescence axillary racemes the cymes very small and few flowered, rhachis puberulous. Flowers unknown. Fruit glabrous, pedicel .1 in. long, nut .2 in. globose enclosed in the calyx cup for ¾ its length, wing lanceolate narrowed to the base and acute at the tip, 2.5 in. long, .4 in. wide.

PERAK. Sungei Larut (*Wray* 2276).

Distrib. Cambodia.

V. oblongifolia, Bl. Bijdr. 1144: Miq. Fl. Ind. Bat. I. i. 640. *Smythea macrocarpa*, var. *pubescens*, King.

A stout liane with membranous lanceolate acuminate acute leaves, base rounded serrate, glabrous on both sides or tomentose beneath, nerves 7 to 9 pairs, strongly elevate beneath, 4 to 4.5 in. long, 1.5 to 1.75 in. wide; petiole .1 in. or less. Inflorescence axillary or terminal, rhachis rather stout, tomentose; branches 4 in. long with distant cymes of several flowers. Fruit glabrous, nut .2 in. long, ovoid: calyx not enclosing it: wing linear oblong obtuse twisted at the base 3.1 in. long, .5 in. wide.

SELANGOR. Batu Caves (*Ridley* 13349). PERAK. Waterfall hill (*Wray* 2211, *Scortechini*).

Distrib. Java and Philippines.

Smythea pacifica, Seem. Bonplandia, 1861, 255. *Sm. reticulata*, King, Mat. l.c. 381. *Berchemia trichantha*, Miq. Fl. Ind. Bat. Supp. 331.

This plant seems to be distributed over the sea shores from the South of the Peninsula, from SINGAPORE, Serangoon (*Ridley* 9151), Bajau (3592*a*), Toas (6379), JOHORE, Scudai river (12211), Tana Runto (1917) to PENANG, Pulau Jerajak (*Curtis* 2424) and also Pulau Sangian. BORNEO, TIMORLAUT, ARU, NEW GUINEA and PHILIPPINES to the FIJI ISLANDS.

AMPELIDACEAE.

Vitis pyrrodasys, n. comb. *Cissus pyrrhodasys*, Miq. Fl. Ind. Bat. Suppl. 517 is in King's Materials, put as a synonym of *V. adnata*, Wall. Cat. It seems to be abundantly distinct in its dense red tomentum covering the stem and the backs of

the leaves. *V. adnata*, Wall. having only a thin rusty pubescence in place of it. I have not seen it from the Malay Peninsula.

V. glaberrima, Wall. in Roxb. Fl. Ind. (ed. Carey II. 476) is given as a synonym of *V. hastata*, Miq. by King on the ground that Wallich distributed a mixture of this and another species which he described as *V. cerasiformis*, Teysm. var. *Wallichii* and that the description agrees with *V. hastata*, Miq. Carefully reading the description however I find that it does not apply at all to the latter species but it is a good description of the plant King describes as *V. cerasiformis* var. *Wallichii*. It seems to be a very distinct species and not very common. The fruit is by no means large.

V. hastata, Miq. is a common and conspicuous plant in Singapore, and occurs in Pahang at Pekan, in Malacca, Selangor, Province Wellesley, Perak and Langkawi, also in Sumatra and Borneo. It is easily recognised by its square-winged stem, almost white and succulent, and bright red tendrils. The flowers in moderately large cymes with red tinted peduncles, have a cup-shaped entire calyx of a pale green. The petals are oblong thick and shoe-shaped, excavate, reddish outside with a darker red spot at the tip, widely expanded in flower. The filaments narrowed upwards are green, anthers short, oblong, yellowish edged red. The disc is flat, rather thick with wavy margins, orange colour. The ovary immersed in it is pale green, the style stout and shorter than the stamens with a capitate yellow stigma. The flowers have a faint scent of cowslips. The fruit small and black. The glaucous stems and red tendrils with the red tinted flowers give it quite a pleasing appearance.

Vitis (Tetrastigma) Curtisii, n. sp.

Stem smooth, black, terete. Leaves trifoliate; leaflets coriaceous, glabrous, entire, obovate cuspidate, narrowed to the base, nerves about 8 pairs, nervules and reticulations as prominent, 2.5 to 3.6 in. long, 1.3 to 1.9 in. wide, petiolules .2 in. long, median one .4. Petiole .5 in. Cymes numerous .3 in. long, graceful, spreading, compound, puberulous. Flowers .1 in. long, pedicels as long. Calyx very short, cup-shaped. Petals oblong, apex incurved fleshy, 4. Stamens shorter; filaments broad linear. Ovary globose, free. Stigma large, conic, lobed.

Penang. Government Hill, close to Gun Hill (*Curtis* 3363).

Vitis polystachya, Wall. Cat. 6028.

King and Planchon both say "in part;" but the type is a single specimen from herb. Finlayson. *V. nitida*, Lawson

from Penang is the same. *V. polythyrsa*, Miq. a much more slender plant does not occur in the Malay Peninsula at all: nor does *V. thyrsiflora*, Miq. which resembles *V. polystachya*, but is very thickly tomentose instead of being nearly glabrous beneath the leaves. All the specimens put under these two species quoted by King, which I have seen, are *V. polystachya*, Wall.

V. capillaris, n. sp.

Slender vine: stem arachnoid hairy. Leaves compound, petiole 1.75 long, base thickened and red hairy, leaflets membranous, central one elliptic lanceolate rather abruptly narrowed to a broad or acute mucronate point 2.5 in. long, 1 in. wide, petiolule short red hairy, lateral petiolules .3 in. long, blade hairy trifoliate, uppermost leaflet biggest, lanceolate acuminate, laterals oblique narrowed to base, sparsely toothed on the outer edge, nerves 3—4 pairs, slender, hairy beneath, .5—1.5 in. long, .4—.9 in. wide. Peduncle 4 in. long, slender pubescent, panicle 2.75 in. long, branches .5 in. long or less, all pubescent, lower ones branched again. Flowers distichous, .05 in. sessile. Calyx cup-shaped, obscurely 4-toothed, glabrous. Petals 4, oblong. Ovary conic, style conic, stout.

Borneo. Sarawak (*Beccari*, 748).

Nearest to *V. polythyrsa*, Miq. but much more slender, much less hairy, leaves thinner, leaflets fewer-nerved and toothed and more oblique.

V. pterisanthella, n. sp.

A slender vine nearly completely glabrous except the inflorescence. Leaves trifoliate, membranous, petiole 1.2—2 in. long, leaflets thin, elliptic acuminate nearly entire with about three short obscure teeth towards the apex, narrowed at the base, median elliptic lanceolate, laterals with an oblique rounded base, nerves very fine and inconspicuous, 6 pairs, median 2.75—4 in. long, 1.2—2 in. wide; petiolule .4—.6 in. long; laterals smaller; petiolule .2, a few red hairs at the base of the petiolules. Inflorescence very slender, 3.5 in. long, peduncle nearly 3, bearing a slender tendril 1.5 in. long and sometimes twining itself. Spikes few, about 1, .4 in. long, pubescent, rhachis at base flattened broadly and narrowed to tip. Flowers distichous, pubescent, .05 in. long, sessile. Calyx lobes ovate, subacute. Petals 4, much larger, puberulous outside. Stamens 4, anthers large, oblong, filaments short. Ovary subglobose with a thick conic style, glabrous.

Borneo. Sarawak: Siul (*Ridley*).

I collected this very curious vine in September 1905 in the forests on the Siul Hill near Kuching. It seems most nearly allied to *V. capillaris*, Ridl., but is very peculiar in the

rhachis of the branches of the inflorescence being flattened as in *Pterisanthes* and the flowers distichous on the edge. It has the peduncular tendril of *Pterisanthes* which however occurs also in species of *Ampelocissus* and on the whole seems a connecting link between *Pterisanthes* and *Ampelocissus*.

Pterisanthes Dalhousiae, Planch.

This species was described by Planchon from a specimen from "Indes Orientales? Lady Dalhousie in herb. Delessert ex herb. Graham 1846." As no species of the genus has been met with except in the Malay Peninsula and Archipelago it is as he suggests improbable that it came from India. The description given is very short but it applies very fairly well to a plant collected by Mr. Curtis in Penang except that the leaves are smaller. Planchon gives no measurements of his specimen unfortunately, but says that they are much smaller than those of *P. cissoides*, "3—4 cent. de long sur ½—1 cent. de large."

I do not quite understand the passage. In the herbarium of Kew is a coloured drawing of a plant evidently this, of unknown origin from "Prince of Wales Island." Lady Dalhousie we know did collect in Penang.

Leea saxatilis, n. sp.

A low herbaceous plant. Leaves pinnate, petiole 18 in. long to 3 feet, smooth, red, leafy portion 12 in. or more, rhachis when young sparsely hairy, leaflets 9, oblong lanceolate acuminate with a long acute point, base rounded slightly oblique, terminal one larger narrowed to base, serrate or biserrate, submembranous above, glabrous with an elevate midrib beneath, the nerves 12—13 pairs elevate slender hairy tomentose, nervules and reticulations conspicuous, 4—7 in. long, 2 in. wide; terminal one 7 in. long, 2.6 in. wide; petiolules lowest .6 in., median .4, terminal 1 in. long. Flowers in a dense capitulum .75 in. through on a peduncle hairy .5 to 1.5 in. long, dull red, small globose. Bracts ovate acuminate hairy. Calyx thin, 5-lobed mucronate hairy. Petals as long, oblong obtuse, glabrous, calyptrate. Stamens with filaments long, anthers large oblong, urceolus with blunt rounded lobes. Fruit dull red, dry elliptic, depressed, .3 in. across, 5-lobed on a peduncle 3 in. long and a cyme of 1 in.

SELANGOR. On limestone rocks at the base of the Batu caves, (*Ridley* 305, 8260); also PAHANG on the Tahan river and at Kuala Dipang in PERAK and Lankawi (KEDAH).

SAPINDACEAE.

Allophyllus scandens, n. sp.

A woody climbing shrub with cinnamon brown bark densely covered with paler lenticels, glabrous except the very

young parts and inflorescence which are puberulous. Leaves trifoliate, petiole thick 1.5 in. long, leaflets coriaceous, obovate, narrowed to the base, apex shortly blunt acuminate, entire, nerves about 8—10 pairs conspicuous though slender beneath, midrib moderately stout, 4—6 in. long, 2—3 in. wide, the median leaflets biggest, petiolules .2—.3 in. long. Inflorescence extra-axillary, peduncle 1—1.5 in. long, stout, deciduously puberulous, racemes usually 2 (occasionally only one, rarely 3) widely divaricate 1—1.5 in. long, usually unequal, rhachis pubescent. Flowers numerous, crowded small on pedicels longer than themselves, glabrous. Bracts minute, acuminate. Sepals glabrous, suborbicular, imbricate. Petals shorter, claw and bifid limb glabrous, scale silky. Fruit unknown.

Singapore. Bukit Panjang, climbing on trees in swampy forest (*Ridley*). Borneo. Mt. Gading, Lundu (*Haviland* 987), Baram (*Hose* 123).

In spite of the number of species of *Allophyllus* described more or less insufficiently by Blume and Radlkofer I can find no description of any species that fits this; but it seems to be nearest to *A. timorensis*, Bl.

ANACARDIACEAE.

Gluta virosa, n. sp.

A large branching tree 50 to 70 ft. tall. Leaves coriaceous lanceolate 9 in. long, 2.5 in. wide, acuminate at both ends blunt, nerves about 18 pairs slightly raised beneath, reticulations small fine conspicuous; petiole 2 in. long. Panicles in the terminal axils short. Calyx tube red spathaceous, .2 in. long, split on one side. Petals twice as long, linear oblong, white. Ovary pubescent. Fruit obovoid, smooth, light brown, fleshy, 2.5 in. to 4 or 5 in. long.

Selangor. Rantau Panjang (*Ridley*). Perak. Gunong Pondok (*Kunstler*). Penang. Telok Bahang (*Curtis* 3005), and Penara Bukit (*Curtis* 1527), Monuts Road (*Ridley*).

Native name "Rengas Kerbau Jalang," *i.e.* Buffalo on the warpath, on account of its poisonous character.

I have seen no good flowers of this plant though it does not seem to be rare. Some of the specimens I at first thought were *Gl. Wrayi*, King, but having seen good specimens of that species at Kew, I am now sure it is a distinct species. Malay collectors are very shy of gathering specimens of any of the Rengas plants, *Gluta* and *Melanorrhea*, as they are apt to be poisoned by them.

LEGUMINOSAE.

Bauhinia monticola, n. sp.

A slender glabrescent climber. Leaves ovate deltoid, tip acuminate very shortly bifid or entire, coriaceous glabrous, nerves 7, 2—2.5 in. long, 1.5—2 in. wide, petiole 1 in. long. Racemes short 1—2 in. long lax glabrous or nearly so. Pedicels long slender 1.5 in. long sparsely hairy. Bracts minute caducous. Buds ovoid. Calyx tube cylindric .1 in. long red, appressed hairy; lobes ovate .3 in. long hairy. Petals oblong obtuse, conspicuously veined when dry, sparsely hairy on the back, claw .1 in. long, blade .7 in. long, .5 in. wide. Stamens very short hairy at base. Ovary stalked, cylindric red-hairy on the sutures, .2 in. long. Style almost half as long, hairy on the upper edge. Stigma large peltate.

SELANGOR. Gunong Menkuang at 5000 ft. (*Robinson*). PERAK. Gunong Kerbau, 4500—5500 ft. (*Robinson*).

This plant is certainly allied to *B. Kingii*, Prain, for which I at first mistook it and to *B. cornifolia*, Bak. but it has much larger flowers than either of these species. The flowers are apparently red. It belongs to the big set of showy Bauhinias which with their masses of yellow flowers turning red, make such a magnificent show in our forests, a group very characteristic of the Malay Peninsula for few of them seem to occur elsewhere.

Bauhinia holosericea, n. sp.

A big climber, branches, petioles and inflorescence densely red velvety. Leaves coriaceous, orbicular cordate, entire or retuse at the tip, nerves 7 or 9 elevated beneath, glabrous above, densely red velvety beneath on the nerves and reticulations, less so on the rest of the surface, 2—2.5 in. long, 2.4—3 in. wide, petiole 1.25 in. long. Panicles of a few stout axillary and terminal racemes from 2.5 lengthening to 5 in. long, the branches with numerous distinct elevated scars where the flowers have fallen, densely red, velvety. Bracts lanceolate acuminate, .1 in. long. Pedicels slender .6 in. long. Buds ovate acute with a shorter tube. Calyx tube cylindric, dilate at base, .2 in. long, lobes oblong 2 in. long, hairy. Petals oblong, rather short clawed, very red hairy .35 in. long, .2 in. wide, apparently red. Stamens fertile, 3, glabrous. Ovary hairy all over. Style about as long, slender, glabrous. Stigma peltate. Pod woody, firm, .8 in. long, 2.5 in. wide, oblong blunt, slightly narrowed at the tip. Seeds flat orbicular 1.1 in. long.

PERAK. Forests at Temengoh (*Ridley* 14674).

This also belongs to the same group as the last, but seems distinct from any species in its very velvety stem, round leaves, and thick velvety racemes of which the rhachis is rough with

the short processes from the base of the pedicel scars. The panicles are mostly really reduced to simple racemes, but occasionally have one or two branches.

Crudia lanceolata, n. sp.

A glabrous tree. Leaves with a rhachis 1.5 in. long; leaflets 3, subcoriaceous lanceolate or ovate acuminate obtuse, base rounded, quite glabrous, nerves fine 7 pairs, reticulations conspicuous beneath, drying grey 3.5—5.75 in. long, 1.5 in. wide, petiole .1 in. long thick. Raceme about 6 in. long, fairly stout, puberulous. Flowers distant, .3 in. across, on pedicels .3 in. long puberulous. Calyx tube short puberulous, lobes oblong reflexed puberulous outside, glabrous inside. Stamens glabrous. Ovary dense pale, woolly, stalk very short.

KEDAH. Lankawi: Gunong Ravah, (*Mohamed Haniff*).

This is allied to *C. gracilis*, Prain, but the leaves are lanceolate. The sepals, pedicels and rachis are pubescent, and the flowers are distinctly pedicelled.

ROSACEAE.

Parastemon spicatum, n. sp.

A glabrous shrub. Leaves coriaceous, elliptic, abrupt caudate acuminate, blunt, base long narrowed, nerves 6 pairs, 2.5 to 2.75 in. long, 1 in. wide, petiole .15 in. long. Spike axillary 3.5 in. long shortly pedunculed with many very small sessile flowers. Bracts linear oblong. Calyx tube short campanulate, interior pubescent. Petals 0. Stamens 2 glabrous, from the edge of the tube.

BORNEO. Sarawak, Rejang, Sibu, (*Haviland* and *C. Hose* 3240); and 2 miles from Kuching (*Haviland* 723).

This species differs from the only other one, *P. urophyllum*, in its being a shrub, (whereas the other is a large stout tree) and in its flowers being sessile.

Parinarium rubiginosum, n. sp. *P. costatum* var. *rubiginosum*, Ridl. in Journ. F. M. S. Mus. iv. 143.

A tree about 20 ft. tall, the branches rather thick and when young covered with velvety yellowish tomentum. Leaves stiffly coriaceous, ovate lanceolate, acuminate, base rounded, glabrous above, beneath pale reddish, woolly, nerves strongly elevated about 20 pairs, midrib strong beneath, depressed slightly above, 3.5—4 in. long, 1.25—1.75 in. wide, petiole red-woolly .2 in. long. Panicles .5 in. long densely red woolly. Flowers few hardly .2 in. long. Bracts ovate acute woolly and hairy on the back. Calyx tube funnel-shaped deep woolly red outside, densely villous with long hairs inside, teeth ovate acute. Petals a little longer white oblanceolate rounded, edges pubes-

cent. Stamens much shorter than sepals glabrous. Style very short with the ovary densely villous. Stigma discoid.

PAHANG. Gunong Tahan in woods across the Teku (*Ridley*).

The indumentum and short racemes and more coriaceous leaves are so different in this plant from those of true *P. costatum* that I consider it advisable to separate it specifically, though it is certainly allied to that species.

Pygeum coriifolium, n. sp.

Small tree, leaves coriaceous elliptic shortly blunt and acuminate, base very shortly narrowed, glabrous, nerves invisible above prominent beneath distant 5 pairs, midrib very prominent, reticulations invisible, 6 in. long 3.5 in. wide, petiole .5 in. long. Racemes solitary axillary .5 in. long, pedicels very short, puberulous. Calyx tube campanulate, pubescent, lobes 6 unequal, ovate acute pubescent, inside of tube glabrous. Petals 0. Stamens with filaments long, rather thick, 20. Style stout, shorter. Stigma clubbed, flattened, ovary short, globose, hairy.

PERAK. Temengoh and Kertau rivers; in forests (*Ridley*).

Allied to *P. parviflorum*, Teysm. but the leaves are larger and rather more fleshy, with distant and fewer nerves. The raceme is almost a spike, solitary, very short.

SAXIFRAGACEAE.

Polyosma grandis, n. sp.

A tree 40 to 50 feet tall with spreading branches. Stem 1.5—2 ft. through. Leaves membranous drying black, ovate elliptic, cuspidate, acuminate, base cuneate, margins denticulate, glabrous except the midrib and prominent 12 pairs of nerves beneath, secondary nerves nearly as prominent 6—7 in. long, 3—4 in. wide, petiole stout .5 long, flattened, pubescent. Raceme 6 in. long, peduncle 1 in. long, flattened, pubescent. Buds narrow cylindric blunt, pedicels .1 in. long, pubescent. Calyx-tube cylindric, lobes broad, ovate, acute as long as the tube. Petals subglabrous, narrow, linear, sparsely villous inside. Stamens shorter, filaments villous.

PERAK. Larut Hills at 3500 to 4000 ft. (*Kunstler* 3802). Flowers white, base greenish.

This plant was referred by King to *P. integrifolia*, Bl. but is clearly very distinct from that species and is most closely allied to *P. ilicifolia*, Bl. but from this it differs in its large size and very large ovate elliptic leaves and thick petals.

Polyosma conocarpa, n. sp. *P. mutabilis*, King in part.

Tree 20—30 feet tall, young parts appressed, hairy. Leaves membranous, elliptic lanceolate, acuminate, long narrowed to base, quite entire, glabrous, nerves about 8 pairs, conspicuous beneath marching well within the margin, 3.5—6 in. long 1.25—2 in. wide, petiole .2 in. long appressed and hairy when young. Raceme 5 in. long appressed hairy. Flowers white, scattered or in little groups; pedicels .1 in. in fruit .2 in. Calyx tube campanulate, hairy, teeth very small, subacute. Petals linear .2 in. long sparsely hairy outside, villous inside. Stamens nearly as long. Fruit conoid, truncate strongly 4-ribbed when dry, .25 in. across at base, narrowing upwards.

SINGAPORE. (*Wallich* 8472). PERAK. Larut Hills (*Kunstler*), Birch's Hill (*Wray*). KEDAH. Lankawi, Gunong Raya (*Mohamed Hanifi*). SUMATRA. Padang at Aver Mantjur (*Beccari* 524). Forests up to 1000 ft. Flowers scented like privet.

This is quite different from Blume's *P. mutabilis* of Java in the fruit, which resembles that of *P. velutina*, Bl. as figured in Koorder's and Valenton's Boomsorten.

P. glaucescens, n. sp.

A small tree 20—30 feet tall, or shrub. Leaves elliptic to lanceolate acute, base narrowed, thick, coriaceous, glabrous beneath, nerves very obscure 3—3.5 in. long, 1.75 to 1.5 in. wide, petiole 1 in. long. Raceme pubescent 2.5—3 in. long. Flowers crowded .2 in. long. Buds oblong, dilate at base. Calyx very short funnel-shaped, lobes acute spreading, pubescent: Petals oblong, blunt, sparsely strigose outside, densely villous at tip inside. Stamens shorter.

PAHANG. Gunong Tahan (*Robinson* 5388, 5493; *Ridley* 16260); on the Padang and on Skeat's ridge (*Ridley* 16018, 16019).

I originally referred this to varieties *intermedia* and *lanceolata* of King's *P. coriacea*, but on closely examining it conclude it to be specifically distinct not only in the foliage, the leaves being thicker with very inconspicuous nerves, and usually glaucous beneath, but with shorter, broader flowers less pubescent and dilate at the base. The leaves vary in form somewhat, perhaps according to the amount of exposure on these rocky ridges and growth of the plant.

P. fragrans, Benn. Pl. Jav. Rar. 196: *Hea fragrans*, Wall. 8472.

The only plants of this I have seen are those collected by Wallich in SINGAPORE (mixed unfortunately with *P. Wallichii* from Khasia distributed under the next number in many distributions by accident) and one which appears the same collected in PERAK without locality by Scortechini. In Havi-

land's SARAWAK collections are two plants I take to be this, though the flowers are rather smaller .15 in. long. Dr. Haviland notes "Ovary 2-celled, 3 in one case, several ovuled."

They were obtained at Kuching (*Haviland* 944 and 1886).

Polyosma velutina, Bl. Mus. Bot. Lugd. Bat. I. 261.

To this species King refers a plant which occurs in PERAK at Goping and in Larut (*Kunstler*), the DINDINGS, Bruas (*Ridley*) and in PENANG on Penang Hill and at Balik Pulau (*Curtis* 1165) with bright yellowish green leaves, like those of *P. laetevirens*. He had not seen specimens of Blume's plant, nor have I seen types of Blume's plant. But I have not seen anything like King's species from Java; and the plant identified with *P. velutina*, Bl. by Koorders and Valeton (Boomsorten Pl. 195) and distributed as this plant No. 24404b is entirely different, and belongs to the section of *Polyosma* with membranous and black drying leaves. I conclude therefore that King's *P. velutina* cannot be Blume's plant and give the name of ***P. flavovirens*** to it. Blume's description of *P. velutina* is short: but the only species I have seen from Java with velvety leaves is the above mentioned plant from Koorders' collections and one from Zollinger No. 886: and these agree with Blume's description as far as it goes. It has membranous black drying leaves densely fuscous velvety beneath and curiously angled branches. The fruit is ovoid and .2 in. long in these specimens. Specimens collected at Kuching in SARAWAK by Haviland (No. 2914) seem identical.

Polyosma fasciculata, n. sp.

Leaves sub-coriaceous, elliptic sparsely toothed along the edge, base blunt and shortly narrowed, tip subacute, quite glabrous, nerves 6 to 10 pairs branched at the tip, rather obscure and not elevate, 4—6 in. long thick. Spikes rather slender 6 in. long puberulous. Flowers numerous, .1 in. long, sessile, fascicled in groups of 2—4 or 5. Buds cylindric blunt very sparsely puberulous. Bracts hairy acute. Calyx tube very short sub-campanulate, lobes ovate acute spreading. Petals rather broad in proportion to length, sparsely villous inside. Stamens a little shorter.

KEDAH Gunong Jerai (*Ridley* 5219).

King refers this dubiously to *P. coriacea*, King, but it seems to me in its small very sparsely hairy flowers much more nearly allied to *P. Scortechinii* a very little known plant which has however quite entire leaves and distinct pedicels to the flowers. The flowers in this species are not evenly scattered over the rachis, but clustered together in small lots.

Polyosma pisocarpa, n. sp.

Stem pale not angled: young parts velvety hairy. Leaves stiffly coriaceous elliptic, acute or obovate blunt, nerves fine about 12 pairs very irregular faint on both sides, glabrous except at first the midrib slightly hairy, 3—4 in. long, 1.5—1.75 in. wide, petiole .5 in. long rather stout sometimes pubescent. Raceme 6—7 in. long dense many flowered pubescent. Flowers green, pedicels stout much longer than calyx, hairy. Calyx tube campanulate, lobes triangular acute. Petals .35 in. long sparingly pubescent linear subacute villous inside. Stamens distinctly shorter. Style very slender. Fruit pea-shaped globose, .2 in. long, glabrous "blue" on pedicels slender, glabrous, .2 in. long. Seed smooth globular.

BORNEO. Sarawak at Kuching and between it and Santubong (*Haviland*, 2911, 2912, 2913, 1464, 1988).

This species in nearest *P. coriacea*, King, but it has longer flowers on longer pedicels. The small pea-shaped blue fruit is peculiar. The raceme long and dense. The leaves as Haviland points out are of two forms, in one lanceolate and acuminate, in the other obovate and retuse, but there are more or less intermediate forms on the different specimens and in other respects the plants are the same.

HAMAMELIDACEAE.

Rhodoleia ovalifolia, n. sp.

A big shrub up to 10 feet tall with thick branches, the young parts densely red-hairy. Leaves, young lanceolate acute base acuminate, older 4 to 6 in. long 1.5 to 2 in. wide, rigidly coriaceous ovate with a rounded subcordate base, apex acute, at first red-scurfy beneath later becoming white-glaucous, nerves strongly elevate 6—8 pairs with some of the secondary nerves nearly as strongly elevate both nerves and reticulations depressed on the upper surface, 4—4.5 in. long, 2.5 in. wide, petiole at first densely velvety, later glabrous. Capitula solitary but often numerous axillary on the ends of the branches, one inch across. Peduncles thick decurved red, hairy. Bracts rounded, red, velvety, much larger than in *R. Teysmanni*. Petals narrow linear spathulate round at tip, .5 in. long, .1 in. wide, shorter than the stamens. Filaments .15 in. long, anthers oblong. Capsule .5 in. long, densely red-hairy.

PAHANG. Gunong Tahan (*Robinson, Ridley*).

This is the third described species of the genus. One species *Rhodoleia Championi* of Hongkong, a shrub, has flowers as large as this, but the petals are much broader, and the plant is much more glabrous. *R. Teysmanni* of Sumatra and of the mountains of the Malay Peninsula is a tree. It is

nearly glabrous, and the leaves are all lanceolate or oblong, capitula smaller, and fruit smaller all glabrous except a little pubescence on the bracts. *R. oralifolia* is remarkable for the dense red velvety hair covering the shoots, peduncles, bracts and fruit. The leaves in Robinson's flowering specimens are much the shape of those of *R. Teysmanni* but more acuminate the nerves hardly more visible, but the midrib is red-scurfy. In the fruiting plants the leaves are quite different; they are remarkably coriaceous with the nerves depressed above and strongly elevate beneath. At first these leaves are red beneath with a deciduous red scurf; but this at last disappears and the leaves appear pearly white beneath. There is a certain amount of variation in the leaves of *R. Teysmanni* but nothing at all like this. The capitula densely red-hairy, are as big as those of *R. Championi* or nearly so but the petals are quite as narrow as those of *R. Teysmanni*.

SAMYDACEAE.

Casearia albicans, Wall.

There has been a considerable amount of confusion about this species which requires clearing up. In Wallich's Herbarium are three sheets of plants under the number 3197, labelled 3197, 3197.2, 3197.3. The only one labelled *C. albicans* is 3197.3 from Penang; and it appears to be *C. esculenta*, Roxb. No. 3197.2 from Singapore is in fruit, and seems also to be *C. esculenta*, No. 3197.3 from Penang, is identical with another plant No. 7432; and this is probably the plant described by King as *C. albicans*, Wallich. It has no name in Wallich's Herbarium, and is not the same as the plant so named by Wallich. It, therefore, being a distinct plant, requires a name. I call it ***C. latifolia.*** I have collected the plant myself on the side of the track to West Hill in Penang. What Clarke called *C. albicans* in the Flora of British India, King has already altered to *C. Clarkei*. No specimens of it occur at all in Wallich's Herbarium.

Casearia velutinosa, n. sp.

A shrub. Branches velvety, flexuous. Leaves thinly coriaceous, oblong to ovate, abruptly acuminate, base rounded or shortly narrowed, nerves 12 pairs ascending prominent beneath and depressed above, glabrous above, soft, tomentose beneath, 6—10 in. long, 3—4 in. wide, petiole tomentose .2 in. long. Glomeruli .15 in. across. Flowers .1 in. wide. Sepals 5, imbricate, pubescent, suborbicular oblong, hairy outside. Petals 0. Stamens 10, glabrous, anthers small, forming a tube with the spathulate oblong hairy staminodes. Ovary conic, glabrous. Stigma large, capitate.

PERAK. Gunong Keledang (*Ridley*). DINDINGS. Lumut and Bruas (*Ridley*).

Allied to *C. latifolia*, Ridl., but differing in the very tomentose branches, backs of leaves and petioles.

Homalium spathulatum, n. sp.

A glabrous tree. Leaves thinly coriaceous, elliptic acuminate, tip blunt, base narrowed, entire or undulate on the edge: nerves about 7 pairs, very fine and rather obscure, as are the reticulations, shining, 4 in. long, 1.5 in. wide; petiole .2 in long. Racemes axillary, simple, 3 in. long, tomentose, slender. Flowers numerous, not clustered, subsessile .2 in. across. Calyx-tube funnel-shaped, tomentose .1 in. long; lobes very narrow linear, 10, edged with long white hairs. Petals 10, a little longer, linear spathulate. Stamens shorter, 2 opposite each petal. Glands villous. Styles 3, glabrous.

DINDINGS. Pangkor (*Curtis* 1370).

This differs from *H. myrianthum*, Bak. in Kew Bull. 1896, p. 23, of Sandakan in the panicled racemes, funnel-shaped calyx and nearly sessile flowers.

BEGONIACEAE.

Begonia phoeniogramma, n. sp. *B. pauperula*, Ridl. in Journ. Roy. As. Soc. Straits Branch, 54, p. 42, not of King.

This little plant I find, on seeing the co-type of King's *B. pauperula* in Herb. Kew, is not the species he intended. I therefore give it the above name which refers to the red stripes on the small flowers. It was formerly very common on the path leading up to the Batu Caves, Selangor: but at my last visit I noticed that it had become scarce owing to a series of steps having been made up the slope where it grew. I have seen it nowhere else.

Begonia tricornis, n. sp. *B. Roxburghii*, Ridl. in Journ. Fed. Malay States Mus. iv. 20, not of DC. This plant is really more near allied to *B. inflata*, Clarke, of the Himalayas, but is distinct from all species of the section. It is the only one in the Malay Peninsula of the section *Casparya*, (with pulpy 3-angled not winged green fruit).

Begonia longicaulis, n. sp.

Stem elongated, red, with internodes 2.5 in. long, glabrous. Leaves ovate cuspidate, base deeply cordate, very unequal, 3 in. long, 2.5 in. wide; petiole 4—6 in. long. Stipules persistent, oblong with a terminal setiform process, 1.1 in. long, .2 in. wide. Peduncle 6 in. long, with 2 terminal flowers on

peduncles 1 in. long. Flowers pinkish-white. Sepals of male flowers broad ovate rounded, .15 in. long and as wide: petals oblong-lanceolate, blunt, .3 in. wide. Stamens in a globose head on a short stalk.

PERAK. Gunong Kerbau (*Robinson*). PAHANG. Gunong Tahan (*Ridley*).

This plant is rather puzzling. It seems closely allied to *B. venusta*, King, with which species it occurred: but instead of having a creeping rhizome with leaves and peduncles arising directly from it, it has long erect stems with long internodes and large stipules with a long-setaceous point. In this, except for the form of the stipules which have no seta, it resembles *B. megaptera*. I cannot distinguish King's *B. megapteroidea* from *B. venusta*. Is it possible that this plant sometimes develops a caulescent stem, and that it is a form or state of *B. venusta*? The specimens are neither very complete.

Begonia eiromischa, n. sp.

Rhizome short, stout. Leaves fleshy, obliquely reniform peltate, acuminate, dark green, glabrous 3—3.5 in. long and as wide, nerves 7: petiole 2—3 in. long, with dense thick red wool. Peduncles glabrous, red, about 5 in. long. Flowers on two branches, small, .5 in. across, rose pink. Male sepals 2, broad, orbicular, rounded. Petals very narrow, linear. Style of female flower trifid: branches bifid. Capsule .6 in. long lateral wings very short, posterior rather thin, broad, oblong, rounded .3 in. long and as wide.

PENANG. Pulau Butong (*Curtis* 1028).

I have seen specimens of this and a good coloured drawing made in the Penang Gardens. It is undoubtedly near *B. Hasskarlii* but differs conspicuously in the woolly stalk of the leaf. In the drawing the fruits are figured as equally 3 angled and bright red: perhaps they were not ripe when drawn.

Begonia rhoephila, n. sp.

Rhizome stout, creeping, 1 in. long. Leaves nearly or quite glabrous, lanceolate, erect, caudate-acuminate, base decurrent on the petiole, sparsely distantly toothed, apex closely toothed, nerves 4 pairs, often hairy on the underside, midrib always hairy with appressed hairs, 5—6 in. wide, petiole 1.5—4 in. long, glabrous or hairy. Peduncle 1—2 in. long in flower, stouter and up to 12 in. in fruit, glabrous. Flowers few, short pedicelled white tinted on the back or all pink. Sepals of the male flower oblong-ovate, .3 in. long, .2 in. wide. Petals narrower, oblong. Stamens numerous, anthers oblong, apiculate as long as the free filaments. Female flowers 5-petalled.

Capsule 1.1 in. across, .5 in. long: lateral wings blunt, triangular: posterior .75 in. long, .3 in. wide, oblong rounded, thick ribbed.

SELANGOR. Ulu Gombak, on rocks in the stream (*Ridley*).

This belongs to the jungle stream set of Begonias with narrow lanceolate leaves hardly or not lobed or unequal at the base, viz. *B. Kunstleriana* (*B. Scortechinii*) and *B. perakensis*, King. The latter has the leaves rounded. The former has them narrowed but not decurrent on the petiole as in *rhoephila* and very hairy. I take *B. Scortechinii*, King, of unknown locality to be a narrow leaved form of *B. Kunstleriana*.

ARALIACEAE.

Schefflera, Forst. This genus was made by Forster for two species of plants, one from New Zealand and the other from Fiji. Later the genus *Heptapleurum* was founded by Gaertner, to which a considerable number of Asiatic species were attributed. The difference between the two genera is however, too slight to warrant their being kept distinct and Harms in the Pflanzenfamilien has placed the *Heptapleurums* under the earlier name *Schefflera*, in which I follow him, excluding however, the genus *Brassaia* which appears to me sufficiently distinct. It may however, be found necessary to separate from *Schefflera* such abnormal plants as *S.* (*H.*) *Wrayi*, with racemose not umbellate flowers: and I am rather dubious of the following new species which has the number of stamens double that of the perianth lobes and ovary cells.

Schefflera polyandra, n. sp.

Leaves digitate: petiole 9 in. long: leaflets 5, oblanceolate or oblong lanceolate acuminate, blunt, base narrowed, edge serrate, coriaceous, glabrous, smooth, nerves 7 pairs faint, reticulations faintly visible beneath, 4—6 in. long, 1.25 to 1.75 in. wide, petiolule 1.3 in. long. Panicle 5 in. long, branchlets .5 in. long, umbels of 4—5 flowers: pedicels .2 in. long, stout. Calyx campanulate, edge thin, truncate, entire .1 in. long. Petals shorter, ovate, 5. Stamens 14 to 16: anther as long as filament. Style conic, cylindric. Ovary 8-celled.

PERAK. Gunong Keledang (*Ridley* 9763).

Arthrophyllum pinnatum, Clarke. Under this name in King's Materials two plants have been combined, one the true *A. pinnatum* of the Penang Hills. The other a smaller plant with many more smaller leaflets and smaller flowers, *A. alternifolium* Maingay, MS. a native of Mt. Ophir.

Arthrophyllum lancifolium, n. sp.

Tree. Branchlets slender, angled, yellow, glabrous. Leaves coriaceous, lanceolate caudate at the tip, acuminate at both ends, edge crenulate, undulate, midrib winged on both sides, nerves and reticulations fine, 3—3.5 in. long, 1—1.5 in. wide; petiole 1—2 in. long only .3 in.; uppermost leaves jointed with the stem. Umbels 4—5, on short pedicels .4 in. long. Flowers 10—13 in an umbel, .05 in. long. Calyx short campanulate; limb undulate, not toothed. Petals 5, calyptrate valvate, oblong, connate at the tip. Stamens 5; anthers oblong, connate at the tip. Stamens 5; anthers oblong, longer than the filament. Style columnar, stout. Ovary 1-celled.

Perak. Ulu Batang Padang, at 4,900 feet (*Wray* 1528).

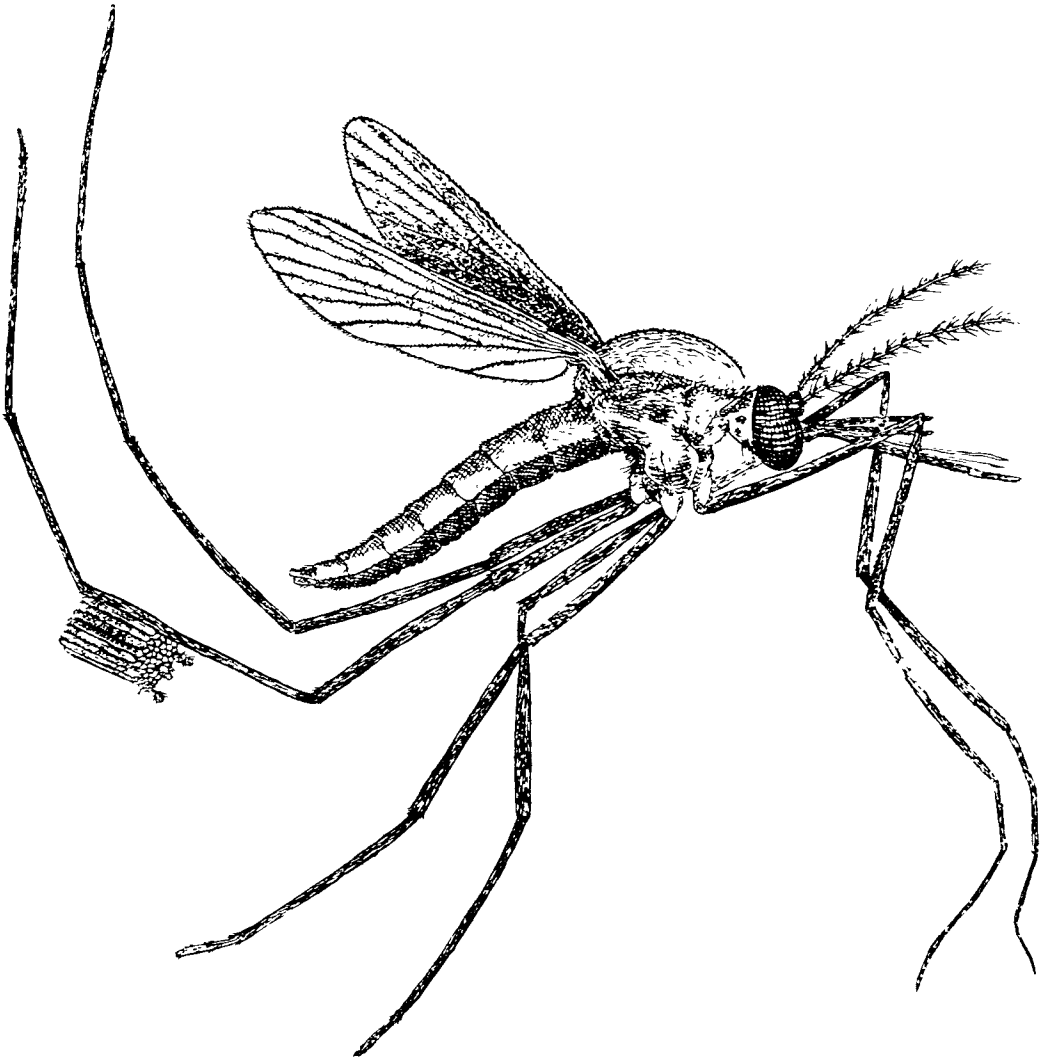
In the Kew Herbarium a sheet of this is written up by King as *Mastixia gracilis*, King, but the description of that species (based on a plant collected in Perak at 3,900 feet by *Wray* No. 1528) does not apply at all well, especially in the length of the petiole is given as .2—.25 in. long, and the inflorescence as cymose. This plant has umbellate inflorescence much resembling that of *A. alternifolium* and is clearly an Araliaceous plant.

Brassaia singaporensis, n. sp.

Leaves digitate, petiole over 6 in. long, base widely dilate; leaflets 15, stiffly coriaceous, oblong ovate, blunt,, rounded at both ends, 3—4 in. long, 1.75 in.—2.5 in. wide; petiolules 1.5 in. long. Panicle 18 in. long, stout; branches 1.5 in. long, thick, bearing heads of about 10 sessile flowers .5 in. through. Bracts 4, ovate, acuminate, longer than the calyx-tube. Calyx very short, margins undulate. Corolla calyptrate rounded, coriaceous. Petals connate 5. Stamens 9 to 12, filaments short, anthers oblong linear. Stigma subsessile conic.

Singapore. Bukit Timah (*Ridley* 8061).

When dry this plant resembles much *B. actinophylla*, Br. of Australia and the flowers are as big, but the leaves are quite different in form and size. The genus consists of four or five species ranging from Sumatra through New Guinea to Australia.



CHETOMYIA FLAVA

A curious adaptation of habit to its environment of a Malayan mosquito.

By C. Strickland, M.A., B.C.

Travelling Medical Entomologist, F. M. S.

During a recent visit to the Gap, on the Selangor-Pahang boundary, which is at 2,800 feet, I observed a curious and interesting fact in the life of mosquito which seems worthy of record.

This mosquito, kindly identified for me by Dr. Stanton as *Chaetomyia* (*Leicesteria*) *flava*, Leicester, which had been caught in the resthouse and was kept in a test-tube, was observed to have attached to a hind-leg a mass which until closer examination, seemed to be one of those *Ceratopogon* which have a habit of attaching themselves to mosquitoes to suck out their body-juices. On examination however with a microscope it proved to be an ova-mass, and what was very interesting, from each ovum the head of a young larva was sticking out, the whole thing looking like a miniature nest of young sparrows.

The mosquito was introduced to a bottle in which was some water, when it immediately flew down to the water and dipped its hind-leg methodically into it. Immediately all the larvae came out of the ova-mass and swam away as lively as a crowd of children coming out of school on a holiday.

On two occasions I observed this phenomenon and on another I caught a specimen of the mosquito with the ova-mass on its leg from which all the larvae had gone.

I think it seems clear that the mesquito ovideposits on its own leg and that the phenomenon represents a device by which the mosquito is enabled to deposit its larvae in collections of water which are inaccessible to it for ordinary deposition: perhaps in bamboos, or in the leafy axils of plants like common *kladi* or pig-lily,[1] or it may be to save the eggs from some danger which they might incur if they were laid on water.

I am much indebted to Mr. de la Mare Norris of the Agricultural Department, F. M. S., for the drawing which is given.

1. Leicester in his monograph on *Culicidae of Malaya* 1908 says that he has found the adult larvae in bamboos and in coconut shells lying in the jungle.

Elaeocarpus Barnardii,

a new Species described from Perak.

By I. H. Burkill.

The Elaeocarps are abundant in the Malay Peninsula and are on the whole very much of one type: to this type Elaeocarpus Barnardii in general conforms.

It occurs close to Taiping at low elevations: and it is there known by the name Jiha. It is a tree with reddish chestnut bark on the branches, and with relatively small somewhat crowded obovate bright green smooth leaves, the margins of which are slightly and distantly toothed. The flowers are of average size, and, as is always the case in the genus, face earthwards along horizontal racemes. The fruits are of a deep blue.

The affinity seems to be to *Elaeocarpus cuneatus*, Wight, a widely spread tree of India, which southwards reaches Tenasserim.

Elaeocarpus Barnardii, inter Diceras *E. cuneato*, Wight, affinis: differt praecipue ovario et putamine.

Arbor, ramorum cortice castaneo vel rufo-castaneo. *Folia* obovata, apice obtusa, minopere acuminata, glabra, obscure 7—8-dentata, ad 9 cm. longa, ad 4 cm. lata, sed pleraque fere dimidio minora: nervi laterales 5—6, inter quos 2 vel 3 basales ad originem in pagina inferiori domatiam ferent: petiolus ad 3 cm. longus. *Racemi* 12—20-flori, vel foliis breviores vel aequantes vel paulluio longiores. *Flores* Dicerarum. *Sepala* linearia, 6 mm. longa. *Petala* obcuneata supra medium laciniata, sepalis aequilonga. *Stamina*, plus minusve 20, 3 mm. longa: antherae apice barbatae, 2 mm. longae. *Ovarium* 3-loculare, pubescens. *Fructus* olivaeformis, ad 2 cm. longus vel paullulo longior, putamine laevi.

Perak. Haud procul ab oppido Taiping collegit H. B. F. Barnard, cum floribus mense Februario, cum fructu immaturo mense Martio, etiamque cum fructu sed maturo mense Januario.

Notes on Dipterocarps.

1. The Seedling of Anisoptera costata, Korth.

By I. H. Burkill.

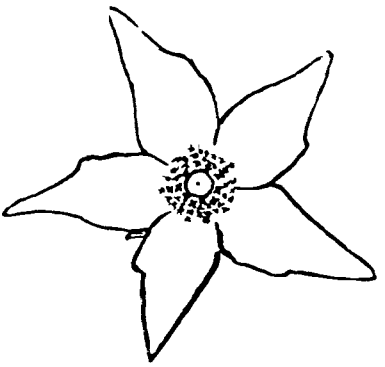


Fig. 1. Flower seen from below, × 2½.

It is proposed to clear the way for a general review of the Malayan Dipterocarps by a series of short papers, of which this is the first. It deals with the seedling of *Anisoptera costata*, Korthals.

Anisoptera costata is a tall forest tree wild in the Botanic Gardens, Singapore, where two individuals flowered freely at the commencement of April, 1916, producing with new foliage, panicles of pendent white flowers from the ends of the branches. The shape of the flower is given above (fig. 1): the corolla does not fall.

The seeds from this flowering ripened about the end of June: and when they fell, a leaf-fall occurred, followed by a more abundant production of new leaves than had been the case when the flowers appeared.

The seeds germinated at once, lying on the ground. In germination the radicle is extruded, curves earthwards, and anchors itself; then the cotyledons are pulled out of the capsule by the straightening of the hypocotyl. The process is seen in progress in Figs. 2 and 5 below.

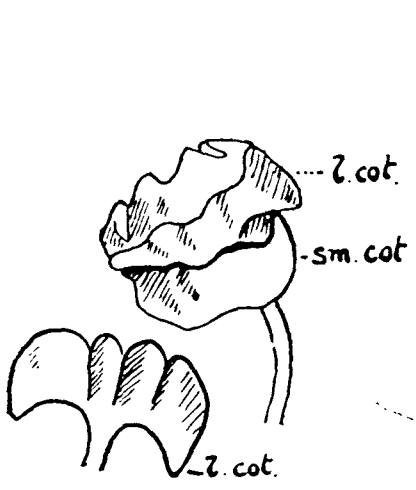


Fig. 2. Seedling at the time when the cotyledons have just been withdrawn from the capsule *l. cot.* larger cotyledon: *sm. cot.* lesser cotyledon.

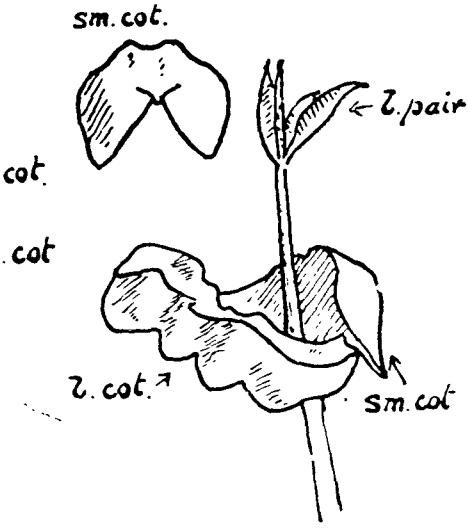


Fig. 3. Seedling at the time when the whorl of leaves is expanding. *l pair* the two larger of the four leaves.

The figures show how unequal are the two cotyledons: the larger is markedly four-ridged on the back (figs. 2, 3, and 5): the lesser is only obscurely four-ridged and is sagittate-reniform is outline. This inequality though very evident in *Anisoptera*, is yet greater in some other genera of the order, e.g. *Dryobalanops*.

During germination the petiole of the cotyledons elongates only a little. Brandis and Gilg, in Engler's Pflanzenfamilien, III. 6, (1895) p. 242, from very imperfect knowledge stated that great elongation is a character of the order, an error due to familiarity with the genus *Dipterocarpus*, where it occurs, and want of knowledge of other genera.

In several if not all of the species of *Dipterocarpus*, the cotyledons do not function as green leaves in the nourishment of the seedling and are not drawn out of the capsule. But in *Anisoptera costata* as well as in other genera the seedlings are greatly injured, if the withdrawing is prevented, or if they do not reach the light: for instance if the capsules are buried under the surface of the ground, so that the cotyledons are imprisoned, the seedlings in *Anisoptera* either die or languish: while the seedlings of *Shorea*, of several species at least, under the same circumstances die.

The cotyledons when they have been freed, and as the hypocotyl completes its straightening, part and come to stand more or less horizontally (fig. 6). Then from between them, the shoot pushes out and bears four leaves in a whorl. These leaves are to be seen in figure 3 with their faces folded together. The fifth leaf and all

which follow are solitary. The four leaves of the whorl were fully developed in September, *i.e.* at three months and the fifth leaf generally in December or January, *i.e.* at six months.

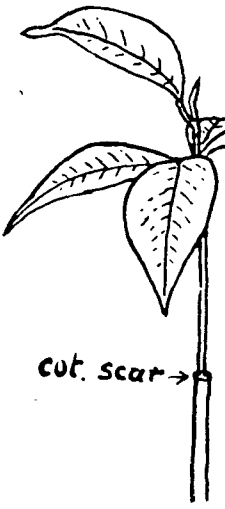


Fig. 4. Seedling a the time of the unfolding of the fifth leaf: Cot. Scar, the scar whence the cotyledons have fallen is seen below.

It is of particular interest that among the four leaves, inequality is found, that two are commonly larger than the others,—two which are not opposite, but contiguous, being those over the lesser cotyledon (fig. 6). The inequality is already obvious before the leaf-blades have expanded, and persists through life (figs. 7, and 8); but is sometimes very slight (figs. 9 and 10).

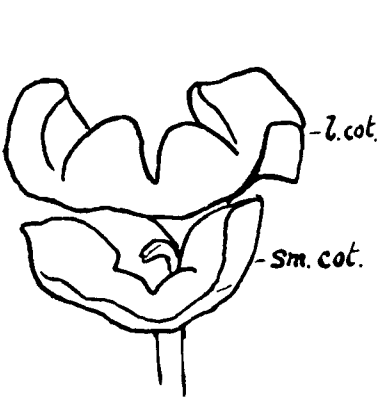


Fig. 5. The seedling as the cotyledons separate, seen obliquely from above. *l. cot.* larger cotyledon; *sm. cot.* lesser cotyledon.

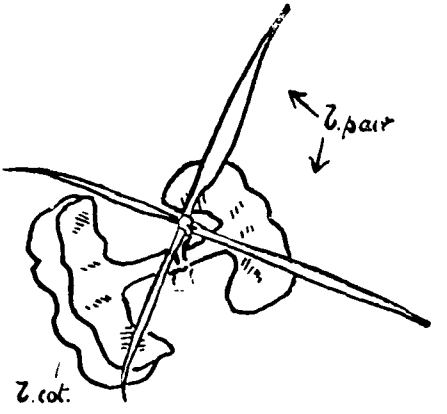


Fig 6. Seedling as the leaves of the whorl separate, seen from above. *l pair*, larger pair of leaves.

The inequality of the cotyledons is apparently connected with the way in which they are packed in the seed. A compromise has been made in them there between the stress for the storage of food, and surface for assimilation later, resulting in extension beyond the diameter of the seed and in a rolling of the embryo on itself which places one cotyledon outside the other; and probably therefrom comes their inequality; but why the inequality should be repeated in the whorl which succeeds the cotyledons is not evident. *Shorea*s have

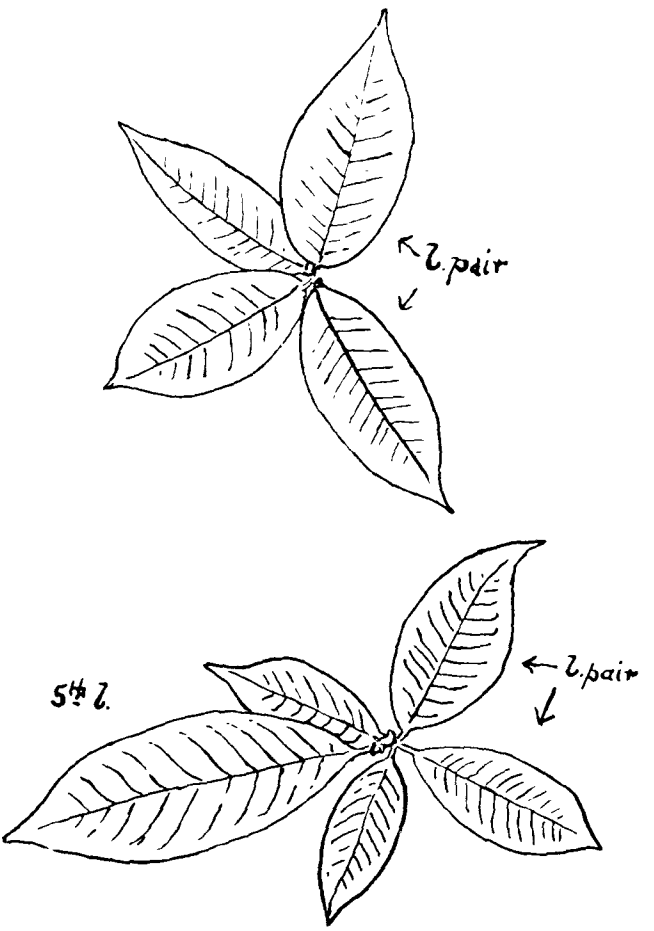
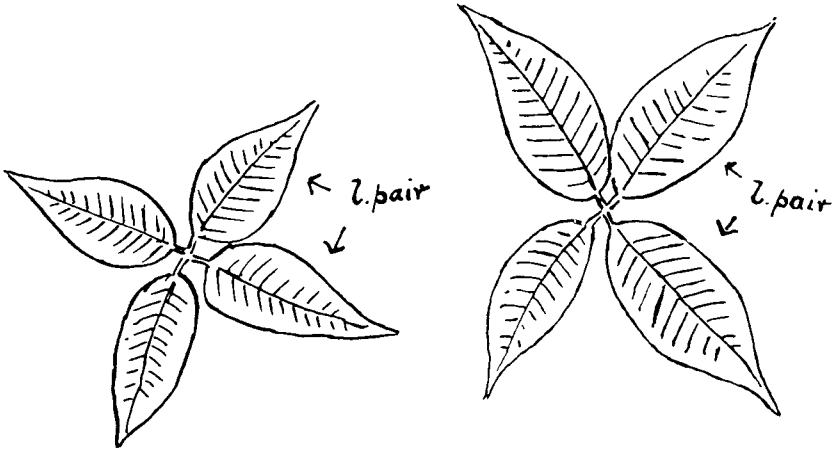


Fig. 7. above. The whorl of leaves expanded, showing the inequality: *l. pair*, the larger pair; and

Fig. 8. below. The whorl and the fifth leaf, seen from above.

more simple equal cotyledons and the first two leaves are equal. *Shorea* cotyledons are sagittately bilobed, and the first leaves are paired: but *Anisoptera* cotyledons are four ridged, and the first



Figs. 9 and 10. Two cases in which the leaves of the whorl diff red from each other in very little.

leaves are in a whorl of four. In both genera with the next leaf, the alternate condition sets in which persists through life.

There is no important difference in the microscopic structure of the petiole of a leaf of the whorl and of the fifth leaf: both in section about the middle exhibit (see fig. 11) a ring of normal cortex enclosing a ring of sclerenchyma within which is phloem and xylem, and an included bundle with the xylem towards the face of the leaf as drawn. Associated with the largest xylem vessels are resin ducts to the number of five. Close under the blade,

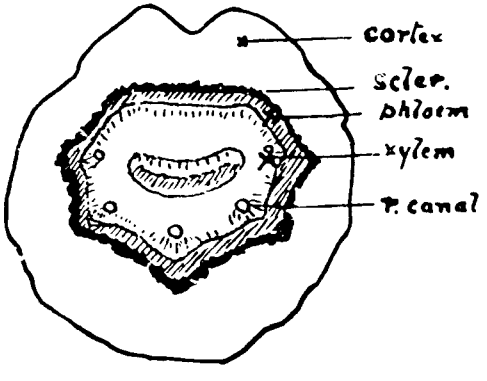


Fig. 11 Petiole in transverse section.
Scler., sclerenchyma: and *r. Canal*, resin canal.

through that part of the petiole which is a pulvinus, the sclerenchyma is wanting, while the ring of bundles is a little irregular and the cortex is thicker. Such changes are of course connected with the mobility required of the pulvinus: they take place in the petioles of the whorl in the same way as in the fifth leaf. And there is nothing further peculiar about these whorled leaves beyond the circumstances of their association and their irregularity.

Compared with the adult leaves, they are of course much smaller, up to 8.2 cm. long by 4.1 cm. wide, and the vascular elements in the petiole, etc., in the large leaves are altered by the increased number of groups of larger xylem vessels in the ring, and by the space within this ring being completely occupied by a complex of bundles with much sclerenchyma. At the pulvinus the sclerenchyma is interrupted, and the ring somewhat irregularly broken up. But beyond the pulvinus, in the midrib of the leaf, the included bundles form up into orderly lines in concentric semicircles, which get less in numbers of their parts until near the tip of the leaf a condition is reached closely resembling the condition found in the petiole of the seedling leaves.

Brandis (in Journ. Linn. Soc. Bot. xxxi, 1895, p. 201) suggested sectioning the pulvinus for the study of generic characters: but the middle of the petiole promises more.

Some Rare Words.

Kutaha; nakas; turap; tĕtĕrapan; kop; biram; ganteh; Sĕri Mĕnanti.

By R. O. Winstedt.

Kutaha. In the *Hikayat Raja-raja Pasai* (No. 66, March, 1914, of this Journal) there occurs a word كتاه several times (pp. 30, 35, 39, 41). Obviously from the contexts it is an interrogative particle. Mr. Mead romanized it wrongly *kĕtah*: it is found fully pointed in vowels—*kutaha*—in one of the 6 old Malay MSS. in the Cambridge University Library: vide p. 38 of Dr. Ph. S. van Ronkel's 'Account' of those MSS. in the "Bijdragen tot de Taal- Land- en Volkenkunde van N. I. 6e Vol. II." "Briefly" he observes, "after *apa, mana*, and *adakah*, this interrogative is seldom wanting," in those MSS. He suggests it may be compared with the Sundanese *kutan*.

Nakas. On p. 31 of Mr. Mead's transliteration of the same work there occurs a word نكس: *mĕngĕnakan sangga nakas bĕpĕrmata*. This word occurs also in a passage from the *Bustanu's-salatin* quoted by a Javanese scholar, Raden Dr. Hoesein Djajadiningrat on p. 570 of the "Tijdschrift van het Bataviaasch Genootschap, deel LVII, afl. 6." *Batu puteh di-ukir pĕlbagai warna dan nakas dan sĕlimpat dan tĕmbosa dan mega arak-arakan*. Klinkert gives it as ناكس It is possibly a motive in art,—where figures face one another perhaps: and derived from the Arabic *naks*.

Turap. In Perak painted wicker-work panelling for houses is called *tĕpas bĕrturap*. In Achinese *turab* means *to do masonry*. *Turap* occurs several times in the aforesaid passage from the *Bustanu's-salatin*:—*di-sisi gunong itu kandang baginda dan dewal kandang itu di-turap dĕngan batu puteh*:.....*sapohon nyiur gading bĕrgĕlar Sĕrbat Jinuri di-tambak dĕngan batu bĕrturap dĕngan kapur*:.....*jambangan batu bĕrturap*. In one passage a variant MS. gives *di-tĕrapi* for *di-turap*; and in the same context as the above sentences occurs *dan ada-lah dewal yang di-dalam itu bĕrtĕtĕrapan batu puteh*

bĕlazuardi pĕrbuatan orang bĕnua Turki. There is also a *kĕris tĕtĕrapan*, which Wilkinson translates 'a creese with a groove running up the blade': but *kĕris tĕrapang* means 'a creese with a sheath covered with metal,' and in Achinese *tĕrapan* is 'a metal envelope.' Wilkinson is certainly right in his explanation of *turap*, which must mean 'to dress, plaster, line.' His Dictionary says, "Covering; plastering; lining; giving a surface (of a different material) to anything, as a coat is lined or as a table is covered with green baize;"—I cannot state the authority for his instances. And perhaps *tĕterapan* is connected with *turap*.

KOP 'the cupola of the howdah of an elephant: *Hikayat Marong Mahawangsa* Wilkinson. In Achinese *khob* means "to cover with a dome, a cupola." And the same passage from the *Bustanu's-salatin* has *dan pintu-nya mĕngadap ka-istana, dan pĕrbuatan pintu-nya itu bĕrkop; di-atas kop itu batu di-pĕrbuat saperti biram bĕrkĕlopak dan bĕrkĕmunchakkan dari-pada sangga pĕlinggam.*" *Kop* means any kind of 'dome, cupola.'

BIRAM. Wilkinson gives this word as meaning only 'elephant.' In the passage quoted under *kop*, it means 'a mythical snake with a head at both ends,'—a meaning it bears also in Achinese: a ring in the form of such a snake being called *anchiĕn tumpa biram*. This meaning of the words explains *chinchin patah biram*, a Malay 'puzzle-ring'—vide p. 89 "Circumstances of Malay Life" by myself.

GANTEH. In the folk-tales of *Sĕri Rama* and *Awang Sulong* occurs the lines

Anjong perak, gĕnaka ganti
Bĕratap tila bĕrdinding kacha.

For *ganti* we should read *ganteh*, which means, 'thick in the centre, of pillars: barrel-shaped: round.' On p. 16 of Mr. Wilkinson's *Sĕri Mĕnanti* occurs *kĕrbau bungkal ganteh ia-itu bulat ujong tandok-nya, kadang-kadang jatoh bungkal-nya tĕtapi bĕrganti balek* (App. B. 5) and on p. 17 *Mungkal ganteh tiang tangga kĕchil di-atas di-bawah*. These two quotations corroborate the meaning given, except that *kadang-kadang jatoh bungkal-nya tĕtapi bĕrganti balek* has been added by some Malay philologist, to whom the real meaning of *ganteh* was unknown.

SĔRI MENANTI. The name of the seat of H. H. the Yamtuan of Negri Sembilan is explained by Malays as a place where the early settlers found rice of the kind called *sĕri* awaiting them. I would suggest that it is more probable it is a name reminiscent of *sĕri mĕnganti* (= *mĕnanti*) the 'waiting-hall' in the palace of Javanese princes.

The Malay Rice Cycle.

By R. O. Winstedt.

In Kedah there is a phrase *bĕrtĕmu kop* for the 'completion of a cycle of years.' It is pretty certain that *kop* is derived through the Siamese *kab* from the Pali *kappa*, which in turn is the Sanskrit *kalpa*. It is used by Hindus and Buddhists to express an aeon during which the physical universe is destroyed. In Malay, it is applied to a cycle of a few years, generally to the 12 year cycle of the rice *pawang*, the years of which are designated by animal names. The cycle is common to Siamese, Cambodians, Chinese and Japanese. But both the word *kop* and the Malay names for the animals are from the Siamese and not from the Cambodian. The Cambodian form is *kalba* = *kalpa*, and the Cambodian words for the animals are more remote from the Malay words, while the Siamese words are almost identical:—

Malay	Siamese	Cambodian
chuat	*chuot*	*chut*
chalu	*chalú*	*chhlou*
kan	*khán*	*khal*
tau	*tho*	*thoh*
marong	*maróng*	*roung*
maseng	*maséng*	*mĕsañ*
mamia	*mamiă*	*momi*
mameh	*mama*	*momê*
wauk	*wòk*	*woc*
raku	*rakú*	*rokú*
chaw	*cho*	*cha*
kun	*kun*	*kor*

The cycle is not known to the Mons.

This settles the problem discussed by Mr. Shaw on p. 7 of his paper on 'Rice Planting.' The linguistic evidence proves conclusively that the cycle was borrowed directly from the Siamese, who in turn may have borrowed from the Cambodians.

The Teaching of Malay in Europe.

By R. O. Winstedt.

It is commonly held that the best place to learn an Oriental language is in the country where it is spoken. To that facile contention Sir Charles Lyall gave an admirably considered answer in a memorandum addressed to the committee appointed in 1907 to consider the organisation of oriental studies in London. "In the first place, it is not the view which has dictated the establishment of the flourishing schools established by our commercial rivals in Germany and France. These nations have been quick to perceive the advantages of providing, in their own country, centres where persons intending to make a career for themselves in Asia may prepare themselves for their task: and, so far as Germany is concerned, it is generally admitted that they have been strikingly successful. In trade, it is found that German agents, owing to their knowledge of the languages and the habits and customs of the East gained at home, are liable to outstrip their English competitors even in our own dominions. The amount of trade which is carried on between India and the nations of continental Europe is immense and growing: and in this expansion it is scarcely open to doubt that the Germans owe much of their advantage to the training which they receive in Oriental methods in their own country. Secondly, much time is lost by persons, who defer until they land in the East the commencement of the study of Oriental subjects. Europeans require, in order to overcome the initial difficulties presented by Oriental languages, the guidance and assistance of Europeans who have already encountered and surmounted those difficulties. The genius of Oriental speech is so different from that of European languages that a student, if left to his unassisted efforts, is likely to waste both time and labour in approaching his task. Moreover, so far as my experience goes, the art of teaching is little understood in the East. The ordinary *munshi* of India, at any rate, does not understand how his pupil's intelligence should be directed or stimulated, on what points stress should be laid, how differences of idiom between the two languages should be explained and other like matters which make the difference between good teaching and bad." And then Sir Charles Lyall goes on to lay stress upon the personal influence of a European teacher as compared with a *munshi*; and again, on the value of European libraries with their stores of comparative literature. Every one of his points is corroborated by our experience in the Malay Peninsula.

Before the same committee the late Lord Cromer expressed the view that almost as important as instruction in language is instruction in "Oriental history, in religion, in all the social customs and the things that cluster round religion."

The result of the recommendations of the committee was the establishment of the School of Oriental Studies at Finsbury Circus, which was opened by His Majesty the King-Emperor in February (1917). On the faculty is a Lecturer in Malay, and Mr. C. O. Blagden, late of the Straits Settlements Civil Service, has been appointed first Lecturer.

The Report of the Committee has been published as an official blue-book and affords very profitable reading to all interested in Oriental languages. Sir Frank Swettenham is quoted as favouring preliminary training in England for six months or a year for cadets in our civil service. Sir Cecil Clementi Smith, also gave evidence, especially on the study of Chinese. Mr. Addis, joint manager of the Hongkong and Shangkai Bank gave evidence of the value of Chinese in commercial circles and the rarity of the self-denial required to master the drudgery of learning it in men once launched on business careers abroad. Mr. Ray writes a memorandum on the study of Melanesian languages.

The Report gives brief accounts of the instruction provided in Malay at Paris and Leiden.

Mr. Blagden has published the curriculum at Paris in Journal 50 of September 1908, and I have nothing to add to his account, except that the *Pancha-Tandaran* and *Chĕrita Jĕnaka* are now text-books, for pupils in their first year and that 'Papers on Malay Subjects,' Skeat's 'Magic,' Wilkinson's 'Dictionary' and my own 'Malay Grammar' are books consulted. In 1906-1907 there were 24 regular students of Malay at the École Spéciale des Langues Orientales Vivantes.

At Leiden are taught (*a*) a general knowledge of the Indonesian languages, (*b*) Malay, (*c*) Javanese, (*d*) Old Javanese, (*e*) Sundanese, (*f*) Madurese, (*g*) Minangkabau (*h*) Batak. Synoptical lessons are given in history, religion, geography and ethnography, especially for students destined for the Dutch colonial civil service. The courses in Malay are designed for

(i) candidates for the administrative civil service of the Dutch East Indies

(ii) doctors of law who desire to become magistrates in the Dutch East Indies

(iii) candidates for the degree of Doctor of Languages and Literatures of the East Indian Archipelago.

For students in groups (i) and (ii) a practical knowledge of Malay is the aim of the course; for students in (iii) a more profound comparative study of Malay and the general linguistics of the Indian Archipelago.

The School of Oriental Studies in London is designed "to give instruction in the languages of Eastern and African peoples, Ancient and Modern, and in the Literature, History, Religion and Customs of those peoples, especially with a view to the needs of persons about to proceed to the East or to Africa for the pursuit of study and research, commerce or a profession." Special inter-collegiate arrangements with the London School of Economics will be made for instruction in the sociology and anthropology of the less civilized races. Inter-collegiate arrangements will also be made for instruction in phonetics, and modern phonetic methods will be used to facilitate the acquirement of correct pronunciation.

It is to be hoped that large local commercial firms and estates will recognise the value of preliminary instruction in Malay for young men embarking on careers in the Malay Peninsula: a value fully recognised by prominent business men acquainted with colonial needs. Cadets, too, might well spend the few months they pass in England between their selection for the service and their departure for the East in attending the School. For such students elementary practical teaching is provided. I had the pleasure of reading Mr. Blagden's opening lecture and can attest its illuminating simplicity. But, it is hoped that an advanced course also may be wanted. The library, the comparative method of teaching, the lectures on Arabic and Sanskrit at the same School would all be profitable to any man, on leave in London, who might desire to perfect his knowledge of Malay linguistics, literature and history. Sanskrit and Pali and India must always be to us what Malay and Javanese and the Dutch Indies are to Holland: but it is high time that some of us at least should get to know the best that is written about things Malayan, to recognise that there is a best, a standard of scholarship, in Malay studies. For those, who have that ambition, I can say confidently that a course of the lectures provided will dispel the hallowed notion that the highest authority on Malay matters is a *kampong* elder.