MALAYAN FLORA

CYTOLOGICAL INVESTIGATION

No Minutes should be written on this page. A separate half-sheet to
be used if required.

Treasurer.

Forwarded for payment.

11.5.
14/2/8.

C. S.

Bill for \$310 - retained
for payment.

By Treasurer 35
18-5-28.

Def. V. }
And Genl. } To note.
18-5-28.

C. S.

Noted.

Ed. R. E. Holtman
19/2/28.

**BOTANISCHES INSTITUT
DER UNIVERSITÄT KIEL**

-Dr. Wulff-

January 5th, 1939

The Director,
The Botanic Gardens,
Singapore / Straits Settlements.

Dear Sir,

I am occupied with a cytological investigation of *Acorus Calamus* in the course of which it turned out that a comparison with tropic, fruit-bearing exemplars of the species would be desirable. Prof. Tischler told me that he saw fruiting plants of *Acorus Calamus* in the Singapore Gardens about 30 years ago. - If you are still possessing such plants I would greatly appreciate receiving a) a small quantity of fruits, b) some fresh pieces of rhizome, and c), if possible, some root-tips (about 12-20) fixed in Navashin's solution (10 parts of 1% chromic acid, 1 part glacial acetic acid, 4 parts of 40% formalin, mixed immediately before use).

I would be greatly obliged to you if I could get this material by your kindness and I may assure you of my deep sense of gratefulness in advance.

Yours very truly,

H. D. Wulff

H. D. Wulff

hm J. J. J.

I have never seen one plant in flower.

Have you?

13.1.39.

I have not seen in flower here. Rhinot says that it flowers in Kampungs. BHF 14/1/39

B7.3/2

T

F m

Not obtainable
affordably -
Now no good seed

MEMORANDUM

Oct. 1939
Will

To

Mr. Henderson

Pl see attached.

Thomas will look round & secure flowering or fruiting materials when he can. If he doesn't get anything within a week or so you might pl. reply & explain.

I take it that he wants ripe seeds to grow, and also rhizomes in living condition; also \$ & only the root-tips fixed. This is however not quite clear.

We could get roots easily from our plants. I think Postart could make up the fluid as requested. Note that it must be freshly mixed.

Dist

14.1.39.

Formo-Acetic-Alcohol:

Formalin (commercial)...	5 cc.
Glacial Acetic acid ...	6 cc.
Alcohol 70% ...	90 cc.

The material should contain very young flower buds and also ovaries of different stages, including those of fully opened flowers.

I shall be glad to pay all costs in this connection as soon as I hear from you.

Yours faithfully,

J. Banerji

for Ghose Professor of Botany,
Calcutta University.

J. M. S. S. S.

for attention please

19.8.35

The material to be fixed in the following fixative :-

Glacial Acetic Acid	...	...	...	7 cc.
Commercial Formalin	...	...	...	5 cc.
Alcohol 50 %	...	...	...	90 cc.

Mr. Phipps
Phipps up
about 200 cc.
Phipps
Lund

Mr. Henderson

Can you deal with this job?

13.5.35

C. J. Phipps

Lund, Sweden, 20-2-1936.

2180/100

No.	465/84
Received	30/3/36
Replied	<i>Adhewitz</i>

To the Curator of the Herbarium,

Botanic Gardens, Singapore.

Dear Sir,

I wish to express my respectful thanks for Your kindness to send me 11 fixed specimens of flowers, which were all of very great interest to me. I have already studied and am printing one of them. As before I send one shilling and three pence for each species to include cost of work and materials and postage extra.

11 species at 1/3 @ 13 s 9d.

postage 5s

Total 13s 9d.

With many thanks

Yours respectfully

Johan Maurifon

Academical Decent

Botanical Laboratory LUND, Sweden.

I have sent the money today. I am very grateful for any other fixed flower.

Mr Furtado

Have you former letters please?

30.3.36

Rer

with Sir

K.I.V. pl.

We should receive mo.

30.3.36

TO FILE in Herbarium
with
7/4/36

L und 10-4-1935.

To the Director of Botanic Gardens, Singapore.

Dear Sir,

I am glad to hear You have got the money, I sent for the flowers, You so kindly sent to me. In two months I hope to be able to send You some new papers of mine. And in half an year I hope a paper of some of the flowers I got from Singapore is ready. I have studied 4 of them and they were all very good fixed, and I found all stages in the development of embryo sac and endosperm.

I will be very glad, when I get new flowers from You.

Yours respectfully.

Johan Mauritzon

Johan Mauritzon
Academical Docent
Botaniska Laboratoriet
University of Lund
LUND, Sweden

attach former letters pl.

with Mr Henderson?

send this for him to see pl.

23.4.35

465/34.

15th January,

6

Dear Sir,

With further reference to your letter of 1.1.35,
a further consignment of fixed material is being sent
you. I hope that you still require them after this
considerable delay.

They are:-

Quisqualis indica
Shorea bracteolata
Shorea macroptera
Symplocos fascicularis
Salacia prinoides
Salacia flavescens
Cochlospermum gossypium
Knema missionis
Xanthophyllum Curtisii
Elaeodendron glaucum
Sterculia rubiginosa.

Yours faithfully,

Curator of the Herbarium.

Mr Johan Mauritzon,

Botaniska Laboratoriet,

Lund, SWEDEN.

Mr. H. H. H. H.

The following have been fixed:

Myristica civalis - buds and mature fls.

Myristica argentea - " "

Bixa orellana - buds to very young fruit

Mimusops Elengi - young buds to mature fls.

Matthaea pumila - buds to mature fls.

Moringa pterygosperma - buds to mature fls.

Tecoma capensis - buds to young fruit

Tecoma Smithii - young buds to mature fls.

Bignonia diversifolia - young to mature fls.

In all 12 tubes (of some spp. 2 tubes)

Sent to Pestana to be sealed,

1/2 sp.

13/11

To the Director of the Botanic Gardens
Singapor.

The undersigned have for five years worked in plant-embryology in several families, and I have got the flower-material from many botanic gardens in Europe. But most plants in European gardens are now examined or of no embryological interest. In order to get material for coming examinations it is necessary for me to get the flower-material from the tropics or from the south hemisphere.

Therefore I wish to make a respectful inquiry to You, if it is possible for me to get embryological material from Your garden and if You would be so kind as to arrange, that the flowers can be fixed in the garden by persons there and then in the fixing-fluid be sent to me for working.

Of course I will give You my best thanks in my papers for Your help to me. Further I wish to pay You for the expences for postage, fixing-fluids, tubes and - if You wish - for the extra-work by fixing in the institute. If there are many species of the wanted families in the garden, the fixing of all these will take a long time. But if I pay a person for this work, I hope You will permit, that the flowers may be fixed for me and send to me. I will send the wanted sum immediately, when I have got the material.

I enclose a list of the families of which I want fixed flowers, and a description of the process I myself use by fixing my flowers. Of every plant in the wanted families I wish - if it is possible - many stages of ovules and young seeds in order to study the embryosac- and endosperm-development.

I would be very grateful to You, if You as fast as possible would give me an answer, if You would be so kind as to give me embryological material in this way for my coming studies. In case of affirmative answer, I would be glad to hear, which species of the wanted families I can get from Your garden (and how much it perhaps will cost).

Yours respectfully

Johan Mauritzon

Johan Mauritzon
Academical docent in Botany at
the University of LUND
Sweden

adress Botaniska Laboratoriet
LUND, Sweden.

If it is possible, I wish flowers fixed of all plants of the families on my enclosed list, that grow in Your garden. If any of these genus is represented in the garden of many species, I only wish 2-3 fixed of each genus.

Of all species I wish - ~~if~~ if it is possible - all stages in the development of flowers and seeds (thus not too few flowers), I mean buds of all sizes, flowers and fruits of many sizes, however most of the fruits taken a few days (2-7) after the flowers have withered.

Of all flowers I only use the ovaries. Before fixing, large petals eventually can be taken away, and if the wall of the older ovary is very hard, it can be ripped up or perhaps cut in to halves. Or a bit of the wall may be taken away. Of large fruits the seeds may be taken out and fixed single. All that in order to let the fixing-fluid into the ovary.

The flowers (overies) may be put in a tube of glass and the fixing-fluid filled upon them, 3-5 ^{times} so much fluid as flowers. I wish that Karpeschenkos fixative-fluid may be used, either of Your own recipe or the following:

Fluid 1	Fluid 2
Chromic acid (CrO_3) 1 gr.	Formalin (40%) 30 c.c.
Acetic acid (100%) 10 c.c.	95% alcohol 10 c.c.
Distilled water 65-85 c.c.	Distilled water 35-55 c.c.

These two fluids can be kept in two bottles for an unlimited time. By fixing, the same volume of fluid 1 and fluid 2 are mixed together and this mixture (=Karpeschenkos' fixing-fluid) is ready for use, to fill upon the flowers in the tubes. Then a bit of paper, on which the name of the flower is written with lead-pencil (not ink), will be put into the tube. The ovaries (flowers) can be treasured up for several months in this fluid. When several tubes are ready, they can be packed in carefully and be sent to me under address docent Johan Mauritzon, Botaniska Laboratoriet, LUND, Sweden.

6. List of Families. (WETTSTEIN)

Santalales	~~Balanopsideae~~ <i>Balanops</i>	Opiliaceae (ENGELER-PRANTL in Olacaceae)	Opilia	Lepionurus
	Olacaceae	<i>Several later</i>		
	Octocnemataceae	(" ")		
Tricoccae	Dichapetalaceae	Dichapetalum		
Hamamelidales	Eupteleaceae	Euptelea		
✓ Polycarpicae	~~Myristicaceae~~ <i>several</i>			
	× Nepentaceae	<i>occasionally</i>		
	Hernandiaceae			
	~~Monimiaceae~~ <i>Matthea</i>			
	Himantandraceae	(ENGELER in Anonaceae)		
	Eupomatiaceae	(" " ")	Eupomatia	
✓ Rhodales	~~Moringaceae~~ <i>Moringa</i>			
✓ Parietales	<u>Cochlospermaceae</u> <i>Cochlospermum</i>			
	× Violaceae	not Viola		
	✓ <u>Bixaceae</u> <i>Bixa</i>			
Guttiferales	Actinidiaceae	<i>Saurauia later</i>	<i>Garcinia</i>	
	× Dipterocarpaceae	<i>later</i>		
Rosales	Cunoniaceae			
Myrtales	Sonneratiaceae			
	Lecytidaceae			
	× ~~Combretaceae~~ <i>later</i>			
✓ Columniferae	~~Sterculiaceae~~ <i>later</i>			
	Bombacaceae			
	× Gonystylaceae	× Gonystylis		
✓ Terebintales	<u>Xanthophyllaceae</u>	Xanthophyllum	<i>later</i>	
	Sabiaceae	×	Liliiflorae	Stemonaceae
✓ Celastrales	<u>Hippograteaceae</u> <i>later</i> <i>E. bodiniana</i>	Flagellariaceae	<i>Stratia</i>	
	Salvadoraceae		Philydraceae	
✓ Diospyrales	<u>Symplocaceae</u> <i>later</i> <i>Symplocos</i>			
	✓ Sapotaceae	<i>Mimusops</i>		
✓ Tubiflorae	<u>Bignoniaceae</u> <i>several</i>			
	Pedaliaceae	× <i>later</i>		
	Martyniaceae			

Families sent:		Sent Jan 1936
Myristicaceae	2 spp.	Quisqualis
Monimiaceae	1 sp.	Shorea 2 sh
Moringaceae	1 sp.	Symplocos
Bixaceae	1 sp.	Salacia 2 sp
Sapotaceae	1 sp.	Cochlospermum
Bignoniaceae	3 spp.	Kucena
		Xanthophyllum
		Eleocharis

Lund, Sweden, 1-1-1935

To the Director of the Botanic Gardens
Singapore.

I only wish to express my respectful thanks for the sending
of fixed flowers, which I got a fortnight ago, The same day I sent
the sum for the work, 16s 2d. with post-office order, which I hope
You have got now. *recd.*

I am very glad for Your promise to send me further flowers
afterwards.

Yours respectfully

Johan Mauritzon

Botaniska Laboratoriet
LUND, Sweden.

*in the garden
any more for to send now?*

6.2.35

*from letter to
Mrs. recd*

1.2.35

465/34.

13th November,

4

Dear Sir,

In reply to your letter of the 1st inst., material of the following species is now available, and has been collected for you:

Myristica bivalpis - buds and mature flowers.

Myristica argentea - buds and mature flowers.

Bixa orellana - buds to very young fruit.

Mimusops Elengi - young buds to mature flowers.

Matthaea sancta - buds to mature flowers.

Moringa pterygosperma - buds to mature flowers.

Tecoma capensis - buds to young fruit.

Tecoma Smithii - young buds to mature flowers.

Bignonia diversifolia - young to mature flowers.

These are today put into fixing fluid prepared according to your directions and will be despatched by the next mail.

The present time is unfavourable for flowering, as the wettest season is just approaching. It is probable that a number more flowers and fruits will be available about February and March next, of the families Olacaceae, Myristicaceae, Nepenthaceae, Actinidaceae, Dipterocarpaceae, Combretaceae, Sterculiaceae, Xanthophyllaceae, Hippocrateaceae, Sapotaceae, Pedaliaceae, Flagellariaceae.

As regards expenses, I would ask you to pay one shilling and three pence for each species, to include cost

Mr. Johan Mauritzon,
Botaniska Laboratoriet,
LUND,
Sweden.

of work and materials, and postage extra. The present consignment is nine species, and the charges therefore are:

9 species at 1/3	=	11s 3d.
postage	=	<u>4 11</u>
Total	=	<u><u>16s 2d.</u></u>

Yours faithfully,

Director of Gardens, S.S.