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The Hunt Institute for Botanical Documentation, a research division of Carnegie Mellon University, specializes in the history of botany and all aspects of plant science and serves the international scientific community through research and documentation. To this end, the Institute acquires and maintains authoritative collections of books, plant images, manuscripts, portraits and data files, and provides publications and other modes of information service. The Institute meets the reference needs of botanists, biologists, historians, conservationists, librarians, bibliographers and the public at large, especially those concerned with any aspect of the North American flora.

Hunt Institute was dedicated in 1961 as the Rachel McMasters Miller Hunt Botanical Library, an international center for bibliographical research and service in the interests of botany and horticulture, as well as a center for the study of all aspects of the history of the plant sciences. By 1971 the Library's activities had so diversified that the name was changed to Hunt Institute for Botanical Documentation. Growth in collections and research projects led to the establishment of four programmatic departments: Archives, Art, Bibliography and the Library.

Oct 26 1959

Mr. Mas Bachlan,
1 Mr. Granville H. Bressler,
I.C.A., Room 603, 806 Connecticut Ave., N.W.
Washington, D.C.

Dear Bachlan,

Soon after you left New Orleans early in June I wrote to Dr. Anwapi Dilny telling him that the large paper *INDONESIAN DEWIDS* was completed and ready for submission. I told him the number of pages of typescript, the number of plates of illustrations, and a brief description of the paper's scope, and I asked him to write and let me know if he could publish it in *Reinwardtia*, and if so when it could be printed.

We did not reply at once, and then my wife and I went away on a vacation. On my return I wrote him again, and today I received his answer. It appears that through some unfortunate circumstances the manuscript of our short paper No. 4 has been lost, but they have the two plates of illustrations. This matter has been settled, I hope, by my sending him a duplicate of the manuscript, which he should receive shortly.

I have also enquired if it would be possible to obtain some additional reprints of our short paper No. 3, of which Prescott and I each received only 50 copies, instead of 100 for me and 200 for Prescott that I had asked for. To this he replies that we have not paid for the extra copies of short papers Nos. 1 and 2, in excess of the 100 free copies. As to this I can assure you, and I shall write him tomorrow, that neither Prescott nor I have received any invoice or any request for such payment, although I had requested that an invoice be sent with the parcels. At the time I received the reprints I thought it rather strange that there was no invoice, but I concluded that the amount was probably small and that they did not want to be charged. However, this misunderstanding can easily be straightened out, and as soon as they tell me how much money is due I will send them a remittance immediately.

The worst news is contained in the final paragraph of his letter, which reads as follows:

"As to your ultimate large paper: there is very little possibility to have it published in *Reinwardtia*, as our printing allowance has been curtailed severely. We advise you to look for another publisher, but you understand how much we do regret this".

This was not entirely unexpected because the paper proved to me so much larger than I had originally estimated, and also because I have read something about the reduction in the revenues of the Indonesian Government.

There is little chance of getting the paper published by any of the botanical papers in this country, because they are all suffering from the greatly increased costs of printing, unless the author is willing to stand the expense, and neither I nor Prescott can afford this.

There are some other possibilities that occur to me, as follows:

1. It might be possible to obtain a grant from the National Science Foundation to defray the publication costs. I know almost nothing about this, but I shall start an enquiry into the matter.

2. I believe that Prof. van Oye would accept it for publication in Myrdobiologia as a special issue, but you told me a long time ago that that this is objectionable because the journal is published in the Netherlands.

3. A new journal of cryptogamic botany, Nova Hedwigia, was started in Germany this year. It is a continuation of a very old one, Hedwigia, which had to stop publication during World War II. I have the first issue, and it is beautifully printed on fine paper and with excellent illustrations. The publisher has invited me to submit papers, and he has announced that large and important papers, such as ours, can be handled as supplements. They are going to publish the remainder of Krieger's work "Die Desmidiaceen", and the first part, "Die Gattung Cosmarium" will appear in about 6 to 8 parts, of which the first is to be published late this year. It ~~seems~~ appears to me that this offers the best chance of getting INDONESIAN DESMIDS printed.

If you have a chance to write me before you leave Washington, please do so; otherwise I will expect to hear from you return to Bogor.

I hope that your long stay in the U.S.A. has been pleasant as well as profitable to you, and that you have learned not only about fishes and algae, but also something about our ways of life and Government, which you will be able to discuss with your friends and colleagues in Indonesia.

With my best wishes and regards,

Sincerely yours,

THE UNIVERSITY OF KANSAS
LAWRENCE

DEPARTMENT OF BOTANY

29 July 1959

Dear Mr. Scott,

I know the paper you cite was to come out but I didn't know when and don't have a copy. Dr. Chapman is to be at the Montreal Congress and possibly will have brought some copies with him. I shall certainly try to get one for you. I myself did nothing with *Desmids* while I was in New Zealand but Miss Segar may have.

Sincerely yours,

Digitized by Hunt Institute for Botanical Documentation

Rufus A. Thompson

Nov 28 1961

Dear Sachlan,

Since I wrote you last March I was seriously ill with heart trouble during ~~June~~ and July, and at one time the doctor told my wife that it was doubtful if I would survive it. However, I am glad to say that ~~now~~ I have recovered, at least for a time, but I have no ambition nor energy to do any work. In fact I have done nothing with desmids for nearly two years, and I don't know if I shall ever go back to them again.

I am greatly surprised that you have not received the four copies of the paper "Indonesian Desmids", which you ordered from Belgium; I suppose you ordered them from Prof. van Oye, and perhaps he forgot to send your order to the publishers in Holland. The paper was published in Hydrobiologia Vol. XVII, Nos. 1 & 2, dated March 1961. I received the reprints that I ordered in June this year, but at that time I was confined to my bed, so I did not mail them out until August. I did not send you a copy because I knew you had ordered four copies, and thought you would have received them by August. You should now write again to Prof. van Oye, or better to the publishers, Uitgeverij Dr. W. Junk, 13 van Stolkweg, Den Haag, Nederland, and ask what has happened to your order.

Today I am sending you one reprint by airmail and hope you will like it. After all the troubles that I had with the publishers, the final paper came out pretty well, though there are a few orthographical errors, and they did not print the names of the new taxa in bold-face type as I had requested. The invoice for the reprints came to more than \$500, including the \$200 that I agree to pay them to print the explanations of the plates on the reverse side of the preceding plate. Quite expensive.

So far we have had no cold weather here. Yesterday the high temperature was 20° C., today a little cooler, but no doubt the winter will be coming soon. but they have had some snow in Washington, New York and Michigan.

My wife is doing very well now, but neither of us is able to exert ourselves much. I hope that you and your family are ~~in~~ good health, and that everything is going well with you in your profession. Have you had any success in the cultivation of desmids?

Sincerely yours,

March 14 1961

Dear Sachlan,

Thanks for your letter Of February 17, and the many pretty stamps that you placed on the envelope. My young friend will be delighted with them.

After re-reading my letter of November 17 1960 I will admit that it does appear pessimistic, but at my age (73) and poor state of health there is not much to be optimistic about. Early in January this year my wife became seriously ill and had to go in the hospital for two weeks, and then spent some more weeks at home in bed. I am thankful to be able to say that she has now recovered and is now able to get around again, though she has not yet recovered all her strength.

I received the page-proof of the large paper on Indonesian desmids last December, and I was so disgusted and furious at the poor typography, the unusually large number of typesetter's errors, and the many departures from the style indicated in my typescript, that I wrote a 4-page letter of protest to Prof. van Oye with a copy to the publisher. Prof. van Oye had promised to print the entire paper in a single issue of *Hydrobiologia*, but it is much longer than their regular issues, so the publisher has tried to keep the number of pages to a minimum and to save a few hundred guilders by compressing the text in every way possible; by omitting line spaces between separate items, omitting letter spaces where they were clearly indicated in my typescript, and by printing the "Explanations of the Plates" in solid paragraphs on a group of pages preceding the plates, instead of placing the legend for each plate on the back of the preceding one, for which I had made a special request.

After several letters had been exchanged, the publisher has agreed to make some of the changes that I demanded, but to make all of them would require the re-setting of nearly all of the text. I have agreed to pay them \$200.00, for which they will print the legend for each ^{plate} on the back of the preceding one. This will be a big improvement, but I am afraid that the appearance of the finished paper will be far from my expectations, and not at all what should have been accorded it as the most important paper ever published on desmids of Indonesia. By the time I pay for the reprints it will have cost me about \$1500.00 in cash, in addition to all the work that I have put into it, and unfortunately there is no chance of my obtaining reimbursement from any source. In one of his letters Prof. van Oye wrote that I would be better pleased with the second proof, but so far I have not received this, and I assume that the paper will be printed from the corrected first proof. So it ought to be published soon, and I can only hope that ^{they} will make no further errors.

Recently I had a letter from Franz Eckert, Ingolstadt, Germany, in which he said that he had not received the desmid samples that you had promised to send him. So please send him some material when you have an opportunity, particularly if it contains some of the large and handsome species of *Micrasterias*, *Staurastrum*, *Euastrum*, and especially *Streptonema*. I have done no work on desmids during the last year, but of course I shall be glad to help you with the identification of any new ones that you may get.

All of our friends were much interested in your Christmas card, with the photo of *Amorphophallus titanum*, a truly extraordinary plant. If you took this photo yourself would you lend me the negative, so that I can have some enlargements made from it?

Best regards from my wife and myself.
Sincerely,

November 17 1960

Dear Sachlan,

Yes, Mr. Anward Dilmy wrote me several weeks ago that next year he would have sufficient funds to publish the big paper in Indonesia. But as you know, it had already been accepted by *Hydrobiologia*. Prof. van Oye told me that he would try to print it in about eight months after he received the manuscript, which would make it about February or March next year. I have not yet received the proof for correction, but I expect to get it soon.

I received the reprints of Paper No. 4 from Reinwardtia, and have sent you two copies. But once more there was no invoice, and naturally I cannot pay for them until I know how much they cost. I don't know if an invoice was sent to Dr. Prescott, because he has not answered the letter in which I asked if he had the invoice.

My wife and I have not been well all this year; first one thing and then another, with high doctor's bills and expenses for medicines. Early this year she had vertigo (dizziness) which took three months to cure. Then she got a skin infection on her feet, for which the doctor prescribed one of the new antibiotic ointments, at \$4.50 for a small tube containing 5 grams. After using several tubes without much result he tried another antibiotic at about the same price. This also failed, so then he told her to soak her feet twice each day in a solution of potassium permanganate ($KMnO_4$), which costs only 30 cents for several gallons, and this did the trick successfully. For several years I have had trouble with my heart, lungs, bladder, and gall-bladder, and all these ailments are gradually getting worse; in fact my doctor had told me that I cannot expect to live much longer.

So it seems that my work on desmids is coming to an end, and I shall be lucky if I live long enough to finish the work that I now have on hand, that is the Brazilian and Australian material, and even the unpublished part of my own USA collections. I am sorry to say, therefore, that I cannot undertake the study of any more new material, though I shall be glad to help you, if I can. When you get the big paper you ought to be able to identify pretty near any Indonesian desmids, but if you need help just send me some of the material and drawings of those that you cannot identify, and I will see what I can do.

I am returning your envelope with the pretty stamps, but if you can get any more of the new ones showing the rice paddies, the tea, rubber, and tobacco plantations, and the "kelapa" and "kelapa sawit", I would like you to send me some for my young friend who collects stamps.

Sometimes your letters are delayed in being delivered to me, because you write the numerals 2824 in a rather unusual way that the postman seems not to understand. If you will try to write them more like the printed numerals it would be easier for him.

With best regards from my wife and myself,

Sincerely,

Bogor, 17 February 1961

Dear Scott,

I think your last letter dated 17 Nov. 1960 is your most pessimistic letter I have ever received. I hope this year (1961) you and your wife will have a good health. By the way I have received the reprints of the paper No. 4 from Reinwardtia; in fact it is not necessary for sending me the copies, because I can get them very easily from Mr. Sonwar. Dill my.

What about the big paper on Indonesian Desmids? I think you received the proof for correction, is not it? I received from the secretary of Dr. Van Oye, a note asking me how many copies I would like to possess; I order not more than four copies! I hope that this paper will be issued in March or in April this year.

It may be that you will be one of the pioneers in the field of the Indonesian Desmids, and the first desmidologist who works on Kalimantan's Desmids; in this case I, my Country and the science in desmids

are very thankful to be able to
I hope that you will assist me for
the identifications of the Indonesian des-
mids for the following years.

Is it still cold at the end of February
in New-Orleans?

It is not necessary more to send back
the stamps; give them to your
new young friend who collects stamps.

Again I wish you and your wife
a good health for the whole year.

My best wishes.

Cordially.

SACHLAN

Bogor, 3^d Nov. 1960

Dear Scott,

It is exactly one year ago that I left U.S.A., but freshly I still remember the silhouettes of the American Sky-scrapers. Frankly speaking I would like to visit again this big country, particularly the West-coast, yes I have what you call "Globe-trotter's Hood"! I think it is getting cold now in Orleans; it is $\frac{1}{2}$ month before Christmas and I hope you will receive my Christmas-Card.

By the way, now about desmids. One month ago I met Mr. Wilby and told me that he wrote you and Dr. Prescott that next year there will be funds enough to publish the big paper in Reinwardtia, is this true? If this is the case, it is a pity!, because Dr. Van Oye has already accepted the paper. How is the progress with the printing of the paper? Is it possible to publish the paper in Hydrobiologia at the end of this

Year? I hope so. Three months ago I wrote
Dr. Van Oye, asking him some reprints
for me, but up till now I receive no
reply from him!

At this moment I am trying to culti-
vate algae, particularly the desmids,
with all my knowledge and some
experience obtained during my study-
tour in U.S.A. But it is really a
difficult problem--

What about the health of Mrs. Prescott,
I hope she will be getting better now
and in a good condition.

Have you received the reprints of "The
Notes on Indonesian Algae IV"?

Further I hope, that this small paper
not the last paper is in Reindwanti. In
the near future I will send you again
Indonesian desmids of other parts of
the country. My best wishes to you and
your wife.

Cordially,

J. M. -

Bogor 23 May 1960

Dear Scott,

Do you remember that you wrote me a letter dated Oct. 26 1959 via Mr. Granville - P.C.A in Washington D.C. I have not received this letter in Washington, but in Bogor on May 10th 1960; the P.C.A in Washington forwarded it to me. In this letter you told me that Mr. Dillmy wrote you about: "the very little possibility to publish the "Indonesian Desmids in Reinwardtea". Yesterday I visited Mr. Dillmy, and he told me that he will try to get funds from our "National Academy of Science" for printing this Desmids-paper. Further, he told me that the "Notes on Indonesian Desmids No. 4" will be published in the next issue, if you send back the corrected-print. What about your attempts to publish this big paper in Nova-Hedwigia? Also you can try to write Prof. v. Oye about this matter. Hydrobiologia is not written in Netherlands but only in English-German and French. He is a good friend of Dr. Jaen and have been working in Java in 1917 and is a good Phycologist. By the way, in the next Pacific-Science Congress in Hawaii 1961, I will send a Contributed-paper about "Desmids flora" in general of Kalimantan. Can you tell me how many new species, varieties & forms you have found in the few samples I sent to you? Can I say, that the biggest desmids-paper in Asia is in press?

I am very glad to hear that you were on a vacation with your wife on October in 1959; this means that your wife has recovered from her diseases

My best wishes to you and your wife.

Cordially

Wan

Bogor, 3 Feb. 1950.

Dear Scott,

I would like to tell you that I have already received the *D. desmidsii*-leaves-plates from Mr. Franz Eckert. They are in very good condition. But it is a pity that the specimens are not transparent enough to make a good photo's of them; about this matter I have already sent a letter to him.

A week ago I met Mr. Dilmay and he told me not able to publish to big *desmidsii*-paper in *Reinwardtia* because of the fact that the budget is not enough this year for printing the paper; Is this true? Of course you will find another publisher, but it is better that the paper issued in Indonesia since I come back in Indonesia. I make preparation for alga-culture special *desmidsii*-culture; from now on I am in contact with the famous Dr. Provasoli in New-York.

What about the Health of Mrs Scott? I hope she is getting better now.

Further I hope that the biggest trap for about *Asian-desmidsii* will be made within not a long distance.

With best wishes.

Cordially.

P.s. Please send back the stamps to me!
Thanks.

J. H. S. -

June 15 1960

Dear Sachlan,

Immediately on receipt of your letter of May 23, I wrote to Prof. van Oye and I delayed answering you until I received his reply, which came yesterday. He has accepted the Ms. and will try to publish it in one issue, in about 8 months from now. This is even better time than I had expected and I am very pleased.

I have ordered 100 reprints for myself and 200 for Prescott, and Prof. van Oye requests that you inform him of the number that you will require, so please write to him direct. In case you do not have his address handy, it is:
St. Lievenslaan 30, Ghent, Belgium.

If my letter of October 26 1959 had not been lost in the jungles of Washington, this paper could have been in print by now, and it would have saved me and my friends a lot of trouble and some expense. About three weeks ago I went to Philadelphia to meet Prof. Prescott and Dr. Hannah Croasdale, for a conference on the North American Desmid-Flora project, for which Prescott has received a second grant from the N.S.F. From Philadelphia I went to New York, principally for the purpose of visiting the N.Y. Botanical Garden to see Dr. H.W. Rickett, their editor, about the possibility of his publishing the big paper. He was in Europe, but the Director of the Garden, Dr. W.C. Steere, received me very cordially and gave me some encouragement. So I was just about to send the Ms and drawings to New York when your letter arrived.

From Borneo I have recorded 11 new species, 28 new varieties, and 7 new forms of desmids, but a few of them have also been found in your material from Java, and others from Sumatra. But Borneo is not the richest country; Sumatra is the best. Of the total of 526 desmid taxa that I have recorded, more than 70% come from Sumatra, though many of them also occur in the other islands. The region around Palembang and especially the swamp at Menggala are especially rich in desmids. Perhaps when travel becomes easier in Borneo it will be possible to find places in that island with similar ecologic and edaphic conditions to those of the swampy East Coast of Sumatra.

It would not be quite correct to say that the "biggest" paper on Asian desmids is in press; it would be better to say the "most important" paper. Physically Turner's 1892 paper on India is larger, and also it has 536 desmid taxa against our 526. But as I have mentioned in the paper this total number in Turner's work is much too large, because many of his "species" have been reduced to synonymy by later writers, and because some of his drawings are so poor that they are unidentifiable. A similar criticism applies to the papers by Charles Bernard, 1908, 1909.

My wife went with me to Philadelphia and New York, as she does on all my trips. Both of us found it very tiring because ~~we~~ we are old, and simply cannot do things as we used to. From New York we flew back to New Orleans by a new jet plane that travels at close to 600 miles per hour, but since it flies at 31000 feet (twice the usual elevation) there is no more sensation of speed than in the old planes; however there is less noise and hardly any vibration.

Best regards from my wife and myself,
Sincerely,

June 15 1960

Dr. H. W. Hickett,
New York Botanical Garden,
Bronx Park, New York.

Dear Dr. Hickett,

Among your "mail of mail" you have no doubt seen a personal note from Prof. Joseph Ewan, in which he recommended for your consideration a paper on Indonesian Beesids by Scott & Prescott.

On May 23 I was in New York, and I phoned to Dr. H. G. Steere, to whom I had an introduction from Jerry Prescott, and explained that I would like to visit the Garden to make his acquaintance and yours also, and to enquire about the possibility of your publishing the paper mentioned above. Dr. Steere told me that you were in Europe, but invited me out anyway, so I went and he received me cordially and we had a nice chat. After listening to my story he glanced through the Ms. and at a previous paper that I brought as a sample; then told me that though the decision necessarily rests with you he thought there was a possibility of handling it.

After several disappointments with other journals this was encouraging news, and on my return to New Orleans I reported it to Prof. Ewan who has been most kind in helping me. I told him that I would send the Ms. and a set of drawings to you for your consideration on your return to N.Y. about the middle of this month, and that was the occasion for his recommendation to you.

In the meantime the situation has changed completely. The collector in Java who formerly was strongly opposed to my proposal to publish in *Hydrobiologia* (because it is published in Holland), has changed his attitude, and wrote me that he would like to see the paper. I wrote by airmail to Prof. Ewan and got an immediate reply from him accepting the paper "sight unseen", but based on my synopsis, and saying that he would try to print it in about eight months; of course he has published previous shorter papers by both Prescott and me and knows our work. The Ms. and drawings are now on the way to Ghent by airmail, and a big worry is off my mind.

I am sorry that I could not meet you in New York, for it is only about every five years or so that I get there. If you ever come to New Orleans I hope that you will phone me. How about scheduling the next Conference of Biological Editors for this city; I think some of them had a good time here three years ago.

With my best regards,

Sincerely,

Go to Prof. Ewan,
San Marino, Calif.

TULANE UNIVERSITY
College of Arts and Sciences
NEW ORLEANS 18

Department of Botany

4 June 1960

Dr. Harold W. Rickett
New York Botanical Garden
Bronx Park
New York 58

Dear Harold:

Orchids to you! or am I mistaken about the nature of your English flight this time? Gordon DeWolf wrote last winter that an orchid conference was planned for May and expected an American invasion for the occasion.

Well, you will find among your mail of mail a manuscript from a fellow townsman, Arthur Scott, desmidiologist of wide affiliations, and I am writing simply to say that we here at the University know Mr. Scott well, admire his achievements and heartily recommend his works to the botanical tribunals.

I presume that matters are taking form at the Hunt Library, though I've not heard lately from George Lawrence. It would be a pleasure to talk to you at Stillwater in August of this and many matters but now it looks as if I shall be "old Pacific's rolling waters"---our UCLA pep song!---looking into the Joseph Banks' materials at the Sutro Library. I do not expect a great deal bearing on his journal of 1764 for Labrador and Newfoundland, now in hand, but it must be checked. We are sending off John Banister's Natural History of Virginia, 1679, to Cappon of the IEAH&C, Williamsburg, and this should be a prelinneesen item of Americana of the greatest interest.

by
Tomorrow we are set to drive to California; until July 31st, I shall be at
Henry E. Huntington Library
San Marino 9,
Calif.

Best wishes, and hope to see you in December (AAAS time),

Hastily but
very cordially,

Joseph Ewan
Joseph Ewan
Prof. of Botany

✓ c: Mr. Arthur Scott

TULANE UNIVERSITY

The College of Arts and Sciences

NEW ORLEANS 18

Department of Botany

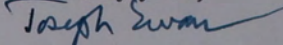
9 April 1960

Dear Mr. Scott:

Dr. Robbins wrote the other day that your ms. had been safely rec'd and will be submitted to the Committee on Publications at its meeting in May. Your publication will be retained and returned after the Committee has met.

I'm encouraged that there will be so little delay in the editorial decision--and, D.V., we may yet be successful!

Cordially yours,



Joseph Ewan

This list may be of interest for some of your contacts or for your own reading; I'll be pleased to assist in locating any wanted title.

AMERICAN PHILOSOPHICAL SOCIETY
held at Philadelphia
for Promoting Useful Knowledge
104 South Fifth Street
Philadelphia 6, Pa.

April 21, 1960

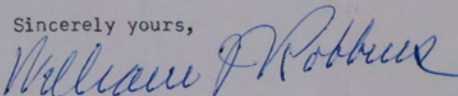
Mr. Arthur M. Scott
2824 Dante Street
New Orleans 18, La.

Dear Mr. Scott:

This will acknowledge receipt of your letter of
April 18 and the blueprints of the illustrations to your
paper on Indonesian desmids.

It will not be necessary for you to appear
before the Committee on Publications at its meeting. We will
notify you shortly after the meeting of any action taken
by the Committee.

Sincerely yours,



William J. Robbins
Executive Officer

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TULANE UNIVERSITY

College of Arts and Sciences

NEW ORLEANS 18

Department of Botany

24 March 1960

AIR MAIL

Dr. William J. Robbins
Executive Officer
American Philosophical Society
104 South Fifth Street
Philadelphia 6, Pa.

Dear Doctor Robbins:

This is to introduce my friend and fellow townsman, Mr. Arthur M. Scott, of 2824 Dante Street, New Orleans 18, who has pursued the study of the desmids to the point where he now numbers among the acknowledged authorities in this plant group. He has published either alone or in association with Drs. G. W. Prescott, R. Grönbjlad, and W. Krieger twenty papers on desmids not only of this country but of Australia, Indonesia, Peru, Brazil, and the Sudan.

Mr. Scott has prepared for publication a monograph of the Indonesian Desmidiaceae illustrated with sixty-three plates. It seems to me that this scholarly study might well be a candidate for the Society's publication program, though which of the media is best suited to it I am not sure. In any event, I'm sending the ms under separate cover at this time for the attention of the Committee on Publications. It seemed desirable to withhold the posting of the illustrations to spare them handling at this time; two copies of the plates are included with the ms, however, of the two sizes in which they have been prepared. It is the intent that they should all be reduced to approx. 4 1/2 x 7 inches in publication. There has also been sent with the ms and the two copies of plates a reprint of a recent Australian monograph to demonstrate the nature of the finished publication; this paper also indicates the high quality of the original drawings which will accompany this ms.

I hope that it may be possible to find a place in your publication program for this paper of Mr. Scott and your consideration and that of the Committee of its acceptance is appreciated.

Our secretary is ill this week and I apologize for the typing annoyances.

Very sincerely,

Joseph Ewan

Joseph Ewan
Prof. of Botany

✓ c: Mr. A. M. Scott

January 18 1960

Dr. Murray F. Buell,
Chairman, Dept. of Botany,
Rutgers - The State University,
New Brunswick, N.J.

Dear Dr. Buell,

Many thanks for your letter of January 8, informing me that you would consider my paper for publication in Mem. Torrey Bot. Club.

The prospect of a 2-year delay is rather discouraging, for my age and declining health lead me to suspect that I may not live that long, and unfortunately I am not financially able to subsidize the paper. I have already spent about \$700 on it for such items as inking my pencil drawings for the plates, Latin translations of the diagnoses for new taxa, cost of a special trip to Michigan State University, and other smaller items, and that is about as far as I feel able to go.

However, I have just written to Dr. David D. Keck at the National Science Foundation in Washington, making an informal enquiry as to the possibility of obtaining an N.S.F. grant to defray the publishing costs. If his answer is favorable I will make a formal application, and should a grant be awarded I should be very glad to have you publish it.

I am not sending the manuscript to you at present, and shall have to take my chances on priority. This would be unimportant if I should get the grant, though I must confess that I am rather doubtful about it.

Sincerely,

Digitized by Hunt Institute for Botanical Documentation

December 7 1959

Dr. Murray F. Buell,
Dept. of Botany,
Rutgers University,
New Brunswick, N.J.

Dear Dr. Buell,

I have on hand the manuscript of a fairly long paper entitled "INDONESIAN DESMIDS", by Arthur M. Scott and Gerald W. Prescott, for which I am seeking a medium of publication. Dr. Prescott, whom you undoubtedly know by reputation if not personally, suggested the *Memoirs of the Torrey Botanical Club*, and I have obtained your name as editor from another friend, Prof. Joseph Ewan of Tulane University, to whom I went for advice.

It was intended for publication in *Reinwardtia*, the journal of the Herbarium Bogoriense at Bogor, Java, in which have appeared three short preliminary papers, and a fourth is now in press, under the title "NOTES ON INDONESIAN FRESHWATER ALGAE I-IV". Some four years ago the editor, Mr. Anwari Dilmy, promised that he would print the final large paper in a single issue of *Reinwardtia*, perhaps as a special issue or supplement, but recently he wrote me that he would not be able to do so, much to his regret, because their budget had been drastically reduced. This is easily understandable in view of the political events in that country during the last two or three years, but it leaves me in a predicament.

The paper is purely taxonomical, and is the result of eight years of intermittent work on a series of 49 collections of freshwater algal material from Borneo, Java, Bali and Sumatra, that were specially collected for desmids by Mr. Mas Sachlan, who is Deputy Chief of Research at the Inland Fisheries Dept., at Bogor. It describes and illustrates 526 desmid taxa, of which 152, or 29% are new to science. The only comparable paper for Indonesia is one by the late Dr. W. Krieger, "Die Desmidiaceen der deutschen limnologischen Sunda-Expedition", 1933, which described 380 desmid taxa. Thus the present paper will be the most important ever published not only for Indonesia but for the entire Indo-Malayan-Australian desmid-flora.

The typescript is ready for the printer, with only a small amount of editorial work to indicate the sizes and styles of type for title, sub-title, section headings, etc. Italics are indicated, and bold-face for epithets of the new taxa. There are 169 double-spaced pages of text, including Latin diagnoses of the new taxa, bibliography and explanations of plates. There are 63 full-page plates of illustrations, this large number being due to a special request of the collector that I should illustrate each and every taxon, even the well-known ones, because he hopes the paper will be used extensively for teaching in his country. I may mention, without too much egotism (I hope), that my desmid illustrations have been acclaimed by several prominent phycologists in this and other countries, as being among the best that are being produced in the world today.

Because I am probably unknown to you, some biographical data may be of interest. Next month I will be 72 years old; a structural engineer by profession: retired since 1953 after 44 years of continuous employment by one firm in New Orleans, in various capacities from office boy to Chief Engineer and Vice-President. For the last 20 years I have devoted nearly all my spare time, and not less than \$15,000 of my own money, to the hobby of collecting and studying of desmids. I did not attend college, and biology was not taught at the prep school that I went to in London, Eng. Desmids are the only plants that I know anything about, and my knowledge of them was gained the hard way, by self-study, and with only such assistance as I could get from

2.
correspondence with authorities like Prescott in this country, Teiling in Sweden, Grönblad in Finland, and Krieger in Germany. I have been working entirely alone, for there is nobody else in New Orleans, or in the whole of Louisiana as far as I am aware, who knows (or cares) anything about desmids. For 15 years I collected extensively in southeastern U.S.A., and have also made a few collections in Cuba, Guatemala, and Panama. By correspondence I have obtained many valuable gatherings from other parts of the world; Brazil, Peru, the Sudan Republic, Uganda, Tasmania, South, Central and North Australia, Indonesia, and Japan. All told, I guess that I have made something like 6000 sheets of camera lucida drawings, many showing the same specimen in two or three positions to give the front, side and top views, all of which are necessary for proper identification in some cases. These represent close to 2000 taxa, out of a world total of about 5000. Of the tropical and subtropical species I have probably seen, drawn, and identified more than anyone else now living, including several hundred new taxa.

All of the work on the present paper was done by me, including the obtaining of the material from the collector; its microscopical examination; making about 850 camera lucida drawings; search of the literature for identifications; drawing the plates; and writing the paper. Prescott's collaboration consisted in the checking of many of my identifications, assistance with the obscure and difficult species, and in the determination and naming of the novae. For this collaboration I made a special trip to East Lansing and spent a week in his laboratory, wading through the many thousands of sheets of desmid illustrations in his iconograph.

From my conversation with Prof. Ewan I gather that you publish only papers written by members of the Club. Prescott may be a member now, and I would gladly join if that would help. I don't know if the Torrey Botanical Club has published much on desmids in recent years. Formerly they printed a good many important ones, including the pioneering papers of the Rev. Francis Wille, from 1876 to 1886.

If you think there is a good chance that you may be able to publish the paper I will gladly send the manuscript for your examination, with prints of some representative plates of illustrations, and I await your reply with a great deal of interest.

Sincerely yours,

DEPARTEMEN PERTANIAN
LEMBAGA PUSAT PENJELIDIKAN ALAM
(KEBUN RAYA INDONESIA)



BOGOR, December 5 19 59.-

No : MX/ 410
Lampiran :
Perihal :

Dr. A.M. Scott
2824 Dante Street
New Orleans 18, La

Dear Dr. Scott,

Referring to your letter of Oct. 27. 1959 to the Director, Kebun Raya Indonesia Bogor, I have the honour to tell you that the amount due to us is \$ 18,90.

In 1957 (see copy attached) De Prescott announced, that he had dispatched photographic paper to the amount of \$ 9.- in exchange for the cost of reprints.

So far we have received no photographic paper at all. If it suits you, could you please sent us the total amount of \$ 18.90 to the following address:

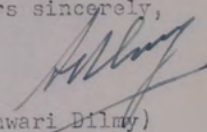
Mr. H.M. Burkill, Director Botanic Gardens, Singapore.

You understand, that with the tight-money policy of our Government, we are unable to send you reprints without charge (except the first 50 copies for each author).

As to your request of another 50 copies for you and 150 extra copies for Dr. Prescott of "Notes on Indonesian Freshwater Algae III", I am sorry to have to inform you, that only 150 copies are available.

If you want these, we shall send them immediately and will you please send the amount of \$ 15.- dollar for these 150 copies to the same address as above.

Yours sincerely,


(Anwari Dilmay)



KEMENTERIAN PERTANIAN
DJAWATAN PENJELIDIKAN ALAM (KEBUN RAYA INDONESIA)

HERBARIUM BOGORIENSE

All communications
to be addressed to
The ~~Kebun~~ Director
Herbarium Bogoriense
Bogor, Indonesia.

BOGOR, Oktober 16 1959.-

No. M2/345

Lampiran:
Enclosure:
Perihal :
Subject:

Dr. A. M. Scott
2824 Dante Street
NEW ORLEANS.-

Dear Sir,

Your letter, ddo 30/9-1959 to the Director Kebun Raya Indonesia, Bogor.

We received your short paper: "Notes on Indonesian freshwater Algae IV", together with the two illustrations.

Due to a mix-up in dispatch of papers, a very unfortunate thing happened; the ~~msc~~ was sent to another address and so far we have not been able to recover it.

We wrote to Dr. G.W.Prescott in East Lansing (letter ddo 6/10-1959, No. M2/336) for a duplicate of the manuscript; the illustrations are still here.

As soon as we shall have the duplicate, we shall proceed with printing.

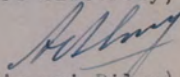
Customarily Reinwardtia gives 100 copies of reprints free of charge.

On request we have sent you already twice extra reprints (50 to Dr. Prescott and 150 to you) for the two former articles in Reinwardtia but so far we have received no refund for these, as requested by us.

As our funds for printing are limited, we shall be able to comply with your wishes, as soon as we shall have received your remittance for the 2 x 50 and 2 x 150 copies sent before.

As to your ultimate large paper: there is very little possibility to have it published in Reinwardtia, as our printing allowance has been curtailed severely. We advise you, to look for another publisher, but you understand how much we do regret this.

Yours sincerely,


(Anwari Dilmy)

Copy: 1. Dr. Prescott
2. Director Kebun Raya, Bogor.

Digitized by Hunt Institute for Botanical Documentation

March 10 1960

Dear Sachlan,

Thanks for your letter, and also for your Christmas card with the beautiful photo of the giant water-lily (Victoria regia?). I have only seen this lily on one occasion, in a hot-house at the Golden Gate Park in San Francisco, though I believe it is grown at some of the other large botanical gardens in this country.

Last June, soon after you left here, I wrote Mr. Anwar Wilny telling him that the large paper on Indonesian desmids was ready, and asking him to let me know if and when he could publish it. I had no reply for the next two months, and then my wife and I went away on a vacation. When we returned at the end of September there was still no answer, so I wrote him again, and finally I received his answer dated October 16th, saying that much to his regret he would not be able to publish it, because of a drastic reduction in their budget. I had more or less expected this, on account of the political events in your country during the last few years.

The paper is too large and has too many plates of illustrations for any of the botanical journals to handle in their regular issues, so it will have to appear in one of the "occasional" journals. Prescott suggested Memoirs of the Torrey Botanical Club, so I wrote the Editor. He replied (after one month's delay), that he would be glad to consider it, but stated that their funds for publishing the Memoirs are sufficient to print only one paper about every two years, and as they have one paper now on hand it would be at least two years and perhaps four years before mine could be printed. He added that if the paper were subsidized it would be printed much quicker. Such a long delay is not acceptable, because my age and declining health make it seem possible that I may not live that long. Neither I nor Prescott is financially able to spend \$2500 to \$3000 to publish the paper. I have already spent about \$700 on it, and that is as far as I feel able to go.

Early in January this year I sent a copy of the Ms. to the National Science Foundation in Washington, and asked them to give me an informal opinion as to the possibility of obtaining a grant to defray the publication cost. Also I asked them, in the event of its being possible, to tell me informally whether they thought my chances would be good, or moderate, or small, so that I could be governed accordingly. Again there was a long delay, while I was waiting anxiously day by day for their answer. Finally I had to write them a second time to stir them up. Only two days ago I got their reply, which was "halfway" favorable, but they declined to express any opinion as to whether my chance would be good or poor, because all the requests for grants that they receive must compete against each other for the amount of money available. Yet in 1957 they awarded grants to a total of more than \$38,000,000 !!!

They do not like to make grants to individuals like me, but would rather have the money handled by a sponsor such as an established scientific journal, or a University. That is easily understandable and I don't think I would have much difficulty about it. But that is where the fun and the red tape starts. After getting a sponsor I must obtain a firm offer in writing from a publisher that he will agree to print the book provided a grant is awarded, accompanied by a written estimate of the cost of editing, printing and ~~six~~ distributing the book. Before any publisher would do this I would have to send the Ms. to his editor, who would examine it in a general way, and then sent it to his reviewers for evaluation and recommendation that it be either accepted or rejected. Again I have no doubt as to its acceptance, provided the reviewers know anything about algology, but it all requires time, time, TIME. Then

I must obtain from two other estimates from printers or publishers of the same costs mentioned above, and if either of these happens to be lower than the first one I imagine there would be a lot of explaining to be done.

After getting all these documents in order I must submit a formal request in TWENTY COPIES to the N.S.F. in Washington, and then sit back and wait not less than four months, and maybe six months, before they can reach a decision as to whether a grant will be awarded or not. If I were successful there would ensue all the business of editing the paper, setting it in type, proofreading, and final printing, so I guess that with all this rigmarole it would not be much less than two years before the paper could appear in print.

So I am really in a quandary, and don't know whether to apply for a grant, or to look elsewhere for a journal than can print it more quickly. I tried to telephone a friend who is Professor of Botany at Tulane University in New Orleans, but he is out of town and will not return for a few days. He is familiar with most of the botanical journals and knows several of their editors personally. Also he has himself received an N.S.F. grant of \$10,000 for research in historical botany, so perhaps he can give me some advice.

Glad to hear that you received Eckert's slides in good condition. On some of those that he sent me the specimens were opaque from the particular stain that he had used, but other slides had specimens that were quite transparent and suitable for photographing. I would like you to repay his efforts by sending him some Indonesian material containing large desmids, such as *Cosmarium*, *Euastrum*, *Microsterias*, and particularly *Streptonema* which has probably not been seen by more than a dozen persons in the whole world. I sent him 48 collections, including some of mine from U.S.A., some of yours from Indonesia, and others from Sudan, Australia and Brazil. In return I got a long letter that was literally overflowing with joy and gratitude for what he said were the finest, rarest, and most beautiful desmids that he had ever seen in his whole life, and he has been studying and mounting diatoms and desmids for more than 30 years.

On these slides there are undoubtedly some desmids that you will not be able to identify because they are new to science, particularly those from North Australia, which are from material that I received after the Arnhem Land paper was sent in for publication. If you want them identified I suggest that you send me photos or sketches of them and I will supply their names. I can undoubtedly recognize them from their shape, even though they are opaque.

My wife has recovered, of course, from the illness that she had when you were here last year, but I am sorry to say that for the last two months she has been suffering from vertigo (dizziness), caused by some malfunctioning of the labyrinth and semicircular canals of the inner ear, and this no doubt is the reason for several unexplained falls that she has had in the last couple of years. She is being treated by a specialist who is giving her intramuscular injections twice a week in addition to medicine taken orally. This is effecting a gradual but very slow improvement, and both the specialist and our family physician say that it may take several months more before she is cured. My health is apparently fairly good, but my heart and lungs are weak and I must be careful to avoid any considerable exertion.

I hope that you and your family are all well, and both my wife and I send you our best regards and good wishes.

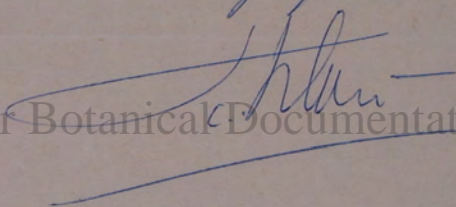
Sincerely,

Auburn, June 9

Dear Scott,

I arrived safely in Auburn, after
a train-travel of 12 hours. Further
I thanked you very much for
everything what you have done
for me, and I enjoyed very
much during my stay in
New Orleans. I hope Mrs Scott
will be better soon

Sincerely yours



May 3 1959

Dear Sachlan,

So at last you have met the famous Dr. Prescott with whom you have been corresponding for so many years, and I am sure you like and admire him, as everybody does.

And now that you have seen his iconograph you can appreciate the great difficulty in correctly identifying many desmid species, because of the poor drawings of the original authors, and the many differing interpretations of subsequent writers. Yet it is a fascinating study that has kept me deeply interested for more than 20 years. It is a pity that I did not get started on it until I was fifty years old.

The reprints of the 3rd short paper, that you said were dispatched from Bogor before you left there, have not yet arrived. That is almost 3½ months ago, and I hope nothing has happened to them. I am still typing on the large paper, and it should be nearly finished by the time you get here. It will be much larger than I had anticipated, and I shall want your advice as to how and where it can best be published. Perhaps the Herbarium Bogoriense can print it as a special supplement to *Reinwardtia*, or in one of their other two journals, *Annales Bogorienses* or *Treubia*; I have not seen either of these publications.

For the last year or so I have been corresponding with a man in West Germany who makes permanent slides of desmids. I sent him some of my own collections from USA, some of your very rich ones from Indonesia, and others from Australia, Brazil, etc. Yesterday I received from him 23 slides which he has prepared from this material, and they are the most wonderful and beautiful that I have ever seen. On one slide, for example, he has mounted 20 different *Micrasterias* from Indonesia, all very clearly and perfectly preserved. Another slide contains another 12 different *Micrasterias* from Australia; and another has 22 *Micrasterias* from Florida. It is really the most astonishing work, and I have little idea how he does it. You will enjoy looking at them, and I shall ask him to make some for you.

I suppose you are having somewhat warmer weather in Michigan now: down here it is getting hot, 85 to 87° F. the last few days, and by the time you get here summer will be on us.

Best regards until later,

Sincerely,

East-Lansing, April 29.

Dear Scott,

I am now in East-Lansing and enjoy very well in the laboratory of Dr. Prescott. You are right, he is a very busy man and active. I came Saturday April 25 in East-Lansing and already the following day (Sunday) he took me on a field trip to a lake 60 Miles from East-Lansing to collect desmids. I have seen also his monographs, it is marvellous.

Also I attend his lectures in Algae, because in Indonesia I teach also in Algae.

As you know, I have worked in the lab. of Dr. Starr for $1\frac{1}{2}$ month, and know how to cultivate desmids; I hope later on I can cultivate *Hydrocoleum*, he has helped me, to know the vegetative reproduction.

I hope I can visit New-Orleans just in time according the program and able to accompany you if you collect desmids in the environment of New-Orleans.

My best wishes, Cordially.

J. Allen

BORNEO.

No.	Habitat.	Collector.	Date.
A.	Bandjermasin, S. Borneo.	K. F. Vaas	1941
H.	Lake Kenohan djempang, E. Borneo.	"	"
S.	Squeezings from Sphagnum, River Kapoeas region, W. Borneo.	" ?	June 1949
X.	A lake in E. Borneo.	"	1941
38.	Lake Semedo, W. Borneo.	"	June 1949
38A.	" "	"	" "
270.	Lake Wmpangau, W. Borneo.	"	" "
108-135-146.	One tube. Sitoe Tawang, River Kapoeas region, W. Borneo.		
206-212.	One tube. Danau Loear, W. Borneo.		
213.	Danau Loear, W. Borneo.		
134.	Several lakes, River Kapoeas region, W. Borneo.		
43.	Lake Tajan. " " " "		
401.	Swamp along the River Bangan, south of the village of Muara Muntai, S. Borneo.		July 1952
402.	Same habitat as No. 401.	"	"
403.	Danau Panggang, near Amuntai, 150 km. west of Bandjarmasin, S. Borneo		1953
404.	Fishpond at Sekadau, on Kapoeas River, W. Borneo.	M. Sachlan	Aug. 1956
405.	" " Andjungan, 60 km. NE of Pontaniak, W. Borneo.	"	" "
406.	" near Andjungan, W. Borneo.	"	" "

JAVA.

P.	Swamp Tembaga, near Djakarta.		1941.
K.	" " " "		"
O.	Laboratory pond, Bogor.		1942.
Z.	" " " "	May	1942
T.	A lake in the environs of Bogor.		1944
M&P.	A mixture of 2 collections from Tembaga swamp, near Djakarta.		
501.	Situ Loss, a lake in Pengalengan, W. Java, elevation 1400 meters. Plankton collection.	M. Sachlan	Nov. 1951
501A.	Situ Loss, squeezings from <u>Hydrilla</u> .	"	" "
502.	Situ Tjibuntu, a lake near Situ Loss. Plankton.	"	" "
503.	Situ Goenong Poetri, a lake in the environs of Bogor. Squeezings from <u>Utricularia</u> .	"	Mch. 1951
504.	A new artificial pit near the experimental pond in Bogor.	"	Mch. 1950 ?
505.	Pond near Pengalengan, W. Java.	"	Apl. 1954

BALI.

F.	Lake Bratan, Island of Bali.		Jan. 1941.
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SUMATRA.

100.	Lebak Danau, a lake in the boggy environs of Palembang, S. Sumatra. Squeezings from <u>Hydrilla</u> .	M. Sachlan.	Sept 14 1950
101.	Lebak Danau. Plankton.	"	" " "
102.	River Pedamaran, a tributary of the River Ogan, near Palembang.	"	" 6 "
105. 103	Lebak Penukang, Palembang, S. Sumatra.	"	Aug. 1951.
106.	Lebak Petai, " "	"	" " "
107.	Lebak Danau, " "	"	" " "
108.	Danau Teloko, " "	"	" " "
109.	Air Klekan (a small stream), near Palembang, S. Sumatra.	"	" " "
110.	Swamp near Menggala, S. Sumatra. Surface plankton.	"	Apl. 12 1954
111.	" " " " Squeezings from <u>Hydrilla</u> .	"	" " "
112.	Swamp Pang-pangan, near Danau Teloko, south of Palembang.	"	" " "
113.	Swamp at Batang-Toru, near Padang-Sidempuan, about 100 km south of Lake Toba, E. Sumatra.	"	" " "

SUMATRA (Contd.)

- | | | |
|-----------------|--|-----------------------|
| 114. | Mixture of 12 collections from the swamp near Menggala, the same habitat as Nos. 110 and 111. | M. Sachlan. Apl. 1955 |
| 130x | | |
| 115. | Same habitat as No. 114. | " July 1957 |
| 130. | Lake Kerintji, Central Sumatra, in the mountains about 75 km from the west coast. pH 6.5-7.4 pH 6.5-7.4 | " Mch 1954 |
| 147. | Kaju-Agung, Sumatra near Palembang, S. Sumatra. | " Dec. 1956 |
| 148. | " " " " " " | " " " |
| 149. | " " " " " " | " " " |

Note. "Situ" (or "Sitos") and "Danau", all mean "Lake" in English. "Lebak" is overflowed land on a river's flood-plain, and "Lebak Danau" is a depression in the flood-plain which remains as a pond after the water has retreated from the flood-plain to the river channel. (Sachlan: Please tell me if these definitions are correct).

Samples of freshwater Algae sent to A. M. Scott by Mr. M. Sachlan, of Bogor, Java.

- BORNEO. 403. (Recd Apl 3 1954). Danau Panggang, near Amuntai, 150 km N. of Bandjarmasin S. Borneo.
38. Lake Semedo, West Borneo, June 1949
38A. " " " " " "
270. Lake Empangau, West Borneo, June 1949
108)
135) One tube. Siteo Tawang, R^{iv}er Kapoeas region, West Borneo. 5
146) 403 Danau Panggang, near Amuntai, East Borneo. 1953
206) One tube. Danau Loear. 404. Fishpond at Sekadau, on Kapuas River. Aug 1956
212) 405. Fishpond at Andjungan, abt. 60 km NE of Pontianak. Aug 1956
406. Fishpond near Andjungan. Aug 1956
213. Danau Loear.
134. Several lakes, River Kapoeas region, West Borneo. June 1949.
A. Bandjarmasin, in southern Borneo. Squeezings from aquatic plant. 1941.
X. A lake in East Borneo. 1941.
H. Lake Kenohan djempang. East Borneo. 1941.
401. Swamp along the River Bangan, south of the village of Muara Muntai. July 1952.
402. " " " " " " " " " " " "
43. Lake Tajan, River Kapoeas region, West Borneo. 1949.
S. Squeezings from Sphagnum, River Kapoeas region, West Borneo. June 1949.
JAVA.
P. Swamp Tembaga, near Djakarta. 1941.
K. " " " " " "
O. Laboratory pond, Bogor. 1942.
Z. " " " " May 1942.
T. A lake in the environs of Bogor, 1944.
501. Situ Loss, a lake in Pengalengan, West Java. Elevation 1400 metres. November 1951.
Plankton collection.
501A. 502. Situ Loss, squeezings from Hydrilla. November 1951.
502. Situ Tjibuntu, a lake near Situ Loss. Plankton. November 1951.
503. Situ Goenoeng Poetri, a lake in the environs of Bogor. Squeezings from
Utricularia. March 1951.
504. A new artificial pit near the experimental pond in Bogor. March 1950.
M + P. A mixture of two collections from Tembaga swamp, near Djakarta.
BALI
F. Lake Bratan, Island of Bali. January 1941.

SUMATRA.

100. Lebak Danau, a lake in the boggy environs of Palembang, South Sumatra, Sept 14 1950.
Squeezings from Hydrilla.
101. Lebak Danau. Plankton. Sept 14 1950.
102. River Pedamaran, a tributary of the River Ogan, near Palembang. Sept 6 1950.
105. Lebak Penukang, Palembang, South Sumatra. August 1951.
106. Lebak Petai, " " " " " "
107. Lebak Danau, " " " " " " Squeezings from Hydrilla.
108. Danau Teloko, " " " " " "
109. Air Klekar (a small stream) near Palembang. " "

SINGAPORE.

601. Pond in the Botanical Gardens, Singapore. 1952.
602. " " " " " " " "
These two collections were obtained by Mr. Sachlan through the courtesy
of Mr. Sinclair, Curator of the Herbarium in Singapore.

Note. "Situ", "Siteo", and "Danau", all mean "Lake" in English. "Lebak" apparently is
overflowed land on a river's flood-plain.

Somatra 110 Surface plankton
111 Squeezings from
Utricularia
Swamp near Menggala

Java 505 Swampy pond
near Pengalengan, ± 30 km S of
Bandung, 1300 M above sea level

Borneo 403. Danau Panggang
near Amuntai

N. Australia X-104
Slough near Oenpelli.
Coll. Gregson Apr 29/54
Above taken to Prescott
Oct 8/54

LONE STAR PORTLAND CEMENT
LONE STAR AIR-ENTRAINING CEMENT



'INCOR' 24-HOUR CEMENT
LONE STAR MASONRY CEMENT

Samples of freshwater Algae sent to A. M. Scott by Mr. M. Sachlan, of Bogor, Java.

- BORNEO. 403. (Recd Apl 3 1954). Danau Panggang, near Amuntai, 150 km N. of Bandjarmasin
38. Lake Samedo, West Borneo, June 1949 S. Borneo.
38A. " " " " " "
270. Lake Empangau, West Borneo, June 1949
108) "
135) One tube. Siteo Tawang, R^{iber} Kapoeas region, West Borneo.
146) "

206) One tube. Danau Loear.
212) "

213. Danau Loear.
134. Several lakes, River Kapoeas region, West Borneo. June 1949.
A. Bandjermasin, in southern Borneo. Squeezings from aquatic plant. 1941.
X. A lake in East Borneo. 1941.
H. Lake Kenohan djempang. East Borneo. 1941.
401. Swamp along the River Bangan, south of the village of Muara Muntai. July 1952.
402. " " " " " " " " " " " "
43. Lake Tajan, River Kapoeas region, West Borneo. 1949.
S. Squeezings from Sphagnum, River Kapoeas region, West Borneo. June 1949.
JAVA.
P. Swamp Tembaga, near Djakarta. 1941.
K. " " " " " "
O. Laboratory pond, Bogor. 1942.
Z. " " " May 1942.
T. A lake in the environs of Bogob, 1944.
501. Situ Loss, a lake in Pengalengan, West Java. Elevation 1400 metres. November 1951.
Plankton collection.
501A. 502. Situ Loss, squeezings from Hydrilla. November 1951.
502. Situ Tjibuntu, a lake near Situ Loss. Plankton. November 1951.
503. Situ Goenoeng Poetri, a lake in the environs of Bogor. Squeezings from
Utricularia. March 1951.
504. A new artificial pit near the experimental pond in Bogor. March 1950.
M + P. A mixture of two collections from Tembaga swamp, near Djakarta.
⁵⁰⁵ Pond near Pengalengan
BALI F. Lake Bratan, Island of Bali. January 1941. ^{Apr 1954}

SUMATRA.

100. Lebak Danau, a lake in the boggy environs of Palembang, South Sumatra, Sept 14 1950.
Squeezings from Hydrilla.
101. Lebak Danau. Plankton. Sept 14 1950.
102. River Pedamaran, a tributary of the River Ogan, near Palembang. Sept 6 1950.
105. Lebak Penukang, Palembang, South Sumatra. August 1951.
106. Lebak Petai, " " " " "
107. Lebak Danau, " " " " " Squeezings from Hydrilla.
108. Danau Teloko, " " " " "
109. Air Klekar (a small stream) near Palembang. " "

SINGAPORE.

601. Pond in the Botanical Gardens, Singapore. 1952.
602. " " " " " "

These two collections were obtained by Mr. Sachlan through the courtesy of Mr. Sinclair, Curator of the Herbarium in Singapore.

Note. "Situ", "Siteo", and "Danau", all mean "Lake" in English. "Lebak" apparently is overflowed land on a river's flood-plain.

Borneo

Sachlan A.

H.

S.

X.

38.

38A.

43.

134.

135. Includes 108+146

206. Includes 212

213.

401

402

403

404

405

406

Java

Digitized by Sachlan K Institute for Botanical Documentation

M+P

O

Z

T

501

501A

502

503

504

505

Soehlan's samples.

BORNEO.

- June 1949
- ~~Broken 17.~~ Lake Tjempede, River Koetai region, West Borneo
 38 + 38A Lake Semedo, West Borneo, June 1949
~~Broken 42.~~ Lake Tajan, River Kapoeas Region, W. Borneo 1949
~~Broken 327.~~ Lake Montrado, W. Borneo, 1949
 270. Lake Empangau, W. Borneo, June 1949
 108 } Siteo Tawang, River Kapoeas region, W. Borneo.
 135 }
 146 }
 312 } Danau Loear.
 213 do do.
 134 Several lakes, Riv. Kapoeas region, W. Borneo
 A. Banajermasin, South Borneo.
~~Broken E.~~ River Koetai region, East Borneo
 X. A lake in East Borneo.
 401. { Swamp along the River Bangau, south of the village
 402. { of Muara Muntai July 1952
 H. Lake Kenohan djempang, E Borneo. 1941
~~Broken R.~~ " " " River Koetai region, E.B. 1941
~~Broken S.~~ River Kapoeas region, W. Borneo June 1949

JAVA

- ~~Broken M.~~ Swamp "Tembaga", near Djakarta
 Digitized by Hunt Institute for Botanical Documentation 1941
 K 1949
~~Broken L.~~ Laboratory Pond, Bogor, 1941
 O. " " " 1942
 Z. " " " May 1942
 T. A lake in the environs of Bogor, 1944
~~Broken N.~~ Lake Lenteng Agung, in the environs of Bogor, Feb 1942
 #1 Situ Loss plankton Nov 1951
 #1A. " " sponges from Hydrilla " "
 2. Situ Tjibuntu, near Situ Loss, Plankton " "
 3. Situ Gaenoeng Poetri, lake environs Bogor. Plankton, Melu 51
 4. New artificial pit, Bogor Melu 1950

SINGAPORE

601. Pond in Botanical Garden
 602. " " " "

BALI

F. Lake Bratan Jan 1941

SUMATRA

100. Lebak Danau. Sgu. from Hydrilla Sept 14 1950

101 " " Plankton " " "

102 River Pedamaran Sept 6 1950

105 Lebak Penukang Aug 1951

106 Lebak Petai " "

107 Lebak Danau " "

108 Danau Teloko " "

109 Air Klekan (a small stream) " "

110 Swamp near Menggala, surface plankton Apr 12 1954

111 " " " squeezings from Utricularia " "

112 Swamp Pang-pangan, near Danau Teloko, South of Palembang Apr. 1954

A
B
E
F
H
K
L
M
N
P
R

113 Swamp at Batang-Toru, near Padang-Sidempuan, about 100 km south of Lake Toba

114 Mixture of 12 collections from Swamp near Menggala, same habitat as 110 + 111, April 1955

115 Same swamp July 1957

147 Kaju-Agung near Palembang. Dec 1956

148 " " " " "

149 " " " " "

130 Lake Kerintji, Central Sumatra, in the mountains Mch 54 about 75 km from the west coast. pH 6.5-7.4

Samples of freshwater Algae sent to A. M. Scott by Mr. M. Sachlan, of Bogor, Java.

- BORNEO. 403. (Recd Apl 3 1954). Danau Panggang, near Amuntai, 150 km N. of Bandjarmasin
38. Lake Semedo, West Borneo, June 1949 S. Borneo.
38A. " " " " " "
270. Lake Empangau, West Borneo, June 1949
108)
135) One tube. Sítőe Tawang, Ríber Kapoeas region, West Borneo.
146)
206) One tube. Danau Loear. 404. Fishpond at Sekadau, on Kapuas River. Aug 1956
212) 405. Fishpond at Andjungan, abt. 60 km NE of Pontianak. Aug 1956
406. Fishpond near Andjungan. Aug 1956
213. Danau Loear.
134. Several lakes, River Kapoeas region, West Borneo. June 1949.
A. Bandjermasin, in southern Borneo. Squeezings from aquatic plant. 1941.
X. A lake in East Borneo. 1941.
H. Lake Kenohan djempang. East Borneo. 1941.
401. Swamp along the River Bangan, south of the village of Muara Muntai. July 1952.
402. " " " " " " " " " " " " " " " "
43. Lake Tajan, River Kapoeas region, West Borneo. 1949.
S. Squeezings from Sphagnum, River Kapoeas region, West Borneo. June 1949.

JAVA.

- P. Swamp Tembaga, near Djakarta. 1941.
K. " " " " " "
O. Laboratory pond, Bogor. 1942.
Z. " " " " May 1942.
T. A lake in the environs of Bogor, 1944.
501. Situ Loss, a lake in Pengalengan, West Java. Elevation 1400 metres. November 1951.
Plankton collection.
501A. 502. Situ Loss, squeezings from Hydrilla. November 1951.
502. Situ Tjibuntu, a lake near Situ Loss. Plankton. November 1951.
503. Situ Goenoeng Poetri, a lake in the environs of Bogor. Squeezings from Utricularia. March 1951.
504. A new artificial pit near the experimental pond in Bogor. March 1950.
M + P. A mixture of two samples from Tembaga swamp, near Djakarta.

BALI

- F. Lake Bratan, Island of Bali. January 1941.

SUMATRA.

100. Lebak Danau, a lake in the boggy environs of Palembang, South Sumatra, Sept 14 1950.
Squeezings from Hydrilla.
101. Lebak Danau. Plankton. Sept 14 1950.
102. River Pedamaran, a tributary of the River Ogan, near Palembang. Sept 6 1950.
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106. Lebak Petai, " " " " " "
107. Lebak Danau, " " " " " " Squeezings from Hydrilla.
108. Danau Teloko, " " " " " "
109. Air Klekar (a small stream) near Palembang. " "

SINGAPORE.

601. Pond in the Botanical Gardens, Singapore. 1952.
602. " " " " " " " "

These two collections were obtained by Mr. Sachlan through the courtesy of Mr. Sinclair, Curator of the Herbarium in Singapore.

Note. "Situ", "Sítőe", and "Danau", all mean "Lake" in English. "Lebak" apparently is overflowed land on a river's flood-plain.

Feb 22 1959

Dear Sachlan,

I received the letter that you wrote just before leaving Bogor, and also the one from Washington dated Feb 12. I am sorry I could not reply sooner, but all last week I was very busy getting up a small paper that must be printed quickly in the journal "Taxon", so as to be in time for consideration at the Botanical Congress at Montreal next August. The paper is in opposition to a proposal made to the Congress by F.C. Silva, who wants to abolish what are called "Later starting points for nomenclature in the Algae", and put back to the year 1753 all starting points for all algae, mosses and fungi. In the case of desmids the starting point is the classical work of Ralfs 1848, who was the first to publish correct illustrations of them. In 1753 the very existence of desmids was probably unknown, and none of them received any botanical names until about 1810, so Silva's proposal is simply foolish, and it would result in utter confusion in the nomenclature. But in order to combat it I had first to telephone to Prescott in East Lansing to get his opinion which is the same as mine and Grünblād's, then go to Tulane University here to borrow some books and journals, and then do a lot of digging into old works as far back as 1790.

I was surprised that you arrived in the U.S. as early as Feb. 4, for I thought you were not coming until Spring, which is not until the end of March in the northern States. You are probably experiencing some disagreeably cold weather in Washington. Down here we have been having our usual mixture; one week ago the temperature went up to 82°F. (28°C.) almost a record for that particular date. Then yesterday morning it was down to only 2°F. above the freezing point, and some few snow flakes were reported in various parts of New Orleans, though we did not see any around our house.

Yes, I have some proposals to make, and you will have to visit Prescott for two weeks in April and May. You ought to be able to learn quite a lot from him in that time, though you will find that he is an extremely busy man, as I have written you before. How he manages to keep up with all of his projects I simply do not know. However, he has an assistant, Mr. Schindler, who is working on desmids, and you will also meet Dr. Wm. E. Wade, who also is very much interested in them.

It is good to know that the third short paper has been published in Reinwardtia; I was beginning to get worried about it. No doubt the reprints will arrive in the next few weeks. I have sent a fourth short paper to the editor, which should be printed in advance of the large one. I am now typing on the big paper, but it is a slow and difficult job, and I am neither so fast nor accurate on the typewriter as I used to be. The fact is that I am an old man now (71 years old last month), and I simply cannot do things like I used to.

I am looking forward to seeing you here at the end of May, and I am sure we shall have a pleasant time together.

Sincerely,

Washington. Feb. 12 - 1959

Dear Scott,

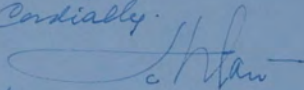
On Feb. 4th I arrived in Washington D.C. and will stay for about one month for orientation. I think you have already received my complete training-program and itinerary from the T.C.A. Headquarters in Washington D.C. It is very nice of you to give me the opportunity to visit New-Orleans from May 31 to June 5 to see your serious work in desmids!

Do you received my last letter from Bogor, telling you that your paper on *Indroserion dermid* (ill.) is already printed and that the 100 reprints is going on way to you and the 200 ones to Mr. Prescott. As you know already ^{secondary} from the program, I will visit

East Lansing from ~~Bogor~~ ^{Manila} in U.S.A.
I have had a very nice trip from Indonesia to San-Francisco, with stopovers in Manila and Honolulu (3 days).

I hope that nothing will happen between now and May 3, and will reach New-Orleans without troubles. With kind regards

Cordially,



My address during my stay in U.S.A. is:

Sachlan
c/o Dr. Stillman Wright
Dept. of the Interior
Fish and Wildlife Service
18th and C. Street. N.W.
Washington D.C.

SACHLAW.
2106-R-Street
Washington - D.C.



Mr. A. M. Scott
2824 Dante Street
New-Orleans
Louisiana

AIR LETTER • AÉROGRAMME • PAR AVION

FIRST FOLD

SECOND FOLD

Bogo. 28-1-1959.

Dear Scott,

Your letter dated Jan. 19 came just in time because the following day (Jan. 29th) I must leave Indonesia for U.S.A; I will arrive on February 4th.

I am very surprised to know a little about my trainings program, because frankly speaking officially I still hear nothing about the program, besides that I must attend the 6 weeks-summer course in Woodshole-Massachusetts as suggestion from Dr. Starr.

Further I am very happy to know that I must visit New-Orleans in June to see you; of course I must also see Dr. Prescott in

East-Lansing (also according to the plan). Regarding his the short paper in Reinwardtia it is already published and within a short time you will receive the uprints.

I bring living material for Dr. Starr because I am afraid that they may die because of the severe winter now in Bloomington.

My best regards, and hope seeing you in August.

Cordially,

J. W. M.



UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
WASHINGTON 25, D. C.

January 16, 1959

Mr. Arthur M. Scott
2824 Dante Street
New Orleans 18, Louisiana

Dear Mr. Scott:

Many thanks for your cordial and helpful letter of January 2, 1959 concerning the projected visit of Mr. Mas Sachlan to New Orleans. I have just received letters from other persons in that area which makes it possible to plan a definite itinerary.

I note that the dates which I had proposed in August would not be suitable and have grasped your suggestion that he visit you earlier in the summer. According to present plans, he could arrive in New Orleans from Little Rock on May 31, and be available for consultations on Monday, June 1. You suggested that a stay of three days would be adequate and I have taken the liberty of adding one more, with departure for Auburn, Alabama on June 5. In the event that this proves to be more time than you can use conveniently, I suggest that he might find it interesting to visit the large shrimp processing plant in New Orleans. This could be arranged by making contact with our representative in New Orleans, Mr. Charles H. Lyles, U. S. Bureau of Commercial Fisheries, Room 609 Federal Building; telephone Express 2411, extension 6151.

In the near future, we shall prepare a document giving the entire program for Mr. Sachlan and a copy will be sent to you. I am very much pleased that you will be able to receive him, and I am confident that the experience will be most valuable to him. Your assistance in providing guidance for Sachlan is greatly appreciated.

Sincerely yours,

Stillman Wright
Stillman Wright
Assistant Director
Office of International Relations

January 25 1959

U. S. Fish & Wildlife Service,
Washington 25, D.C.

Gentlemen,

The dates mentioned in Mr. Stillman Wright's letter of Jan 16, for the visit of Mr. Mas Sachlan to New Orleans, are quite satisfactory, and I shall look forward to seeing him on May 31 to June 5.

Sincerely yours,

January 19 1959

Dear Sachlan,

Earlier this month I had a letter from the U.S. Fish & Wildlife Service in Washington, saying that the International Cooperation Administration (I.C.A.) had requested them to arrange a program of training for you. They wanted to know if August 23rd would be a convenient date for you to visit me in New Orleans, but I had to reply that this would not be a suitable date because I expect to attend the Eighth International Botanical Congress at Montreal, Canada, which will be held from August 19th to 29th, but that a date about two weeks later would be OK. However, I added that August and September are our worst months of the year for heat and humidity, and that perhaps you could come here earlier in the summer.

Today I received another letter from them, saying that according to their present plans you could arrive here from Little Rock, Ark., on May 31st, and see me on June 1st through June 4th, leaving for Auburn, Alabama, on June 5th. So I am writing them that these dates are OK, and I really think that this time of year will be more suitable, for though the weather will probably be hot, it will be just at the beginning of our hot season, and not so bad as late August. They wrote that they would send me a copy of your complete schedule when they get it finally arranged.

Dr. Frowse visited us for two days just before Christmas, and we enjoyed seeing him again. He also went to Auburn, but he could not have stayed there more than one day. Then he went to East Lansing to call on Prof. Prescott, and found it very cold up there, with lots of snow and ice. In fact he wrote from London that when he was travelling to New York, the bus in which he was riding had a narrow escape from an accident when it slid off the ice road and tumbled over the rolling of an overpass.

When you write again don't forget to tell me whether the last short paper (No. 3) has been published in Reinwardtia, and if so whether the reprints have been sent to me and Prescott.

With best regards, and looking forward to seeing you next June,

Sincerely yours,



ADDRESS ONLY THE DIRECTOR,
FISH AND WILDLIFE SERVICE

UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
WASHINGTON 25, D. C.

December 30, 1958

Mr. A. M. Scott
2824 Dante Street
New Orleans, Louisiana

Dear Mr. Scott:

The International Cooperation Administration has asked the Fish and Wildlife Service to arrange a program of training for Mr. Mas Sachlan, Deputy Chief of Research, Bogor, Indonesia.

The prospectus which we received from Indonesia states that Mr. Sachlan has had contact with you and indicates that he would like to have an opportunity to confer with you during his stay in the United States. If you are agreeable to this suggestion, I should like to have your opinion on the best time for his appearance in New Orleans and the duration of his visit. According to present plans, Mr. Sachlan will be in Auburn, Alabama during the summer and up to about August 23, and will go from there to Galveston, Texas. It would be possible to schedule him for a stop in New Orleans on his way to Galveston or on his return about two weeks later.

Your assistance in providing guidance for Mr. Sachlan will be greatly appreciated.

Sincerely yours,

Stillman Wright

Stillman Wright
Assistant Director
Office of International Relations

January 2 1959

U. S. Fish & Wildlife Service,
Washington, D.C.

Gentlemen,

This is in reply to Mr. Stillman Wright's letter of Dec 30, concerning the proposed visit to New Orleans of Mr. M. Sachlan, of Bogor, Indonesia.

For the last seven or eight years I have been in active correspondence with Mr. Sachlan, and shall be delighted to make his personal acquaintance. He has sent me numerous valuable samples of freshwater algae, and at the present I am writing the final draft of a rather lengthy paper describing more than 500 species and varieties of Desmidiaceae from Borneo, Java and Sumatra, all from his samples. These microscopic algae are of interest to him because they form one of the foods of his freshwater fishes.

A two-day stay in New Orleans would be sufficient for me to show him my laboratory, instrumentation, drawings, collections, and library, and for a discussion of the subject. A third day, if it could be managed, would enable me to take him out in the country and show him some of our scenery. I don't know what means of transportation he will use, but if he travels by bus, a good way to route him from Auburn, Ala., to New Orleans would be via Montgomery, Mobile, and Gulfport. This would show him our beautiful Gulf Coast. From New Orleans to Galveston he would ride through our sugar-cane and rice growing country, which ought to interest him as a comparison with similar plantations in Java.

The date you mention of August 23 would not be suitable, for at that time I expect to be in Montreal, attending the International Botanical Congress which will be held Aug. 19-29. However, it is not likely that I shall remain in Montreal for the full ten days, and I can make a point of being back in New Orleans by Sept. 4 or 5, or any day close thereto that you may select, so that Sachlan's visit here could be on his return from Galveston.

Another possibility occurs to me, if he arrives in the U.S. on the West Coast. From San Francisco to Auburn, Ala., the best routing would be via New Orleans, so that he might be able to visit me earlier in the summer. He ought to be used to hot weather because he lives not far from the equator, but I believe Bogor is situated at an elevation of a few thousand feet and therefore cooler than the coastal plain. In New Orleans August and September are our worst months for heat and humidity, almost as bad as Washington!

When you get his itinerary worked out, please let me know more about it.

Sincerely yours,

Bogor, August 17th 1958

Dear Scott,

Excuse me for the delay of my reply to your last letter; the reason is: I am very busy in connection with my projected visit to U.S.A. Thank you very much in anticipation for your willingness to accept me as your guest during my visit to New-Orleans.

Enclosed you will find the corrected list of the collections.

I have received the paper: "Sudanesse desmids" in which are described the very interesting specimen:

M. subclavensis and *M. incredibilis*

Dr. K.F. Vaeas is now in Holland as secretary of the New-Guinea problem between Holland and Indonesia. The present address of Dr. Van Steenis is: Ryks herbarium, Leiden - Holland.

Further I hope you are always in good conditions and have no troubles with your health

Cordially,

W. Han-

P.S. I receive regularly stamps from you, but not the Indonesian stamps!

Is one of your friend now collecting Indonesian stamp?

SUMATRA (Contd.)

114. Mixture of 12 collections from the swamp near Menggala, the same habitat as Nos. 110 and 111. M. Sachlan. Apl. 1955
- ~~115.~~ 115. Same habitat as No. 114. " July 1957
130. Lake Kerintji, Central Sumatra, in the mountains about 75 km from the west coast. ~~PH 6.5-7.4~~ elevation 783 meters " Mch 1954
- f South of* 147. Kaju-Agung, ~~Sumatra~~ ~~near~~ Palembang, S. Sumatra. PH. 6-6.5 " Dec. 1956
148. " " " " " " " " " "
149. " " " " " " " " " "

"Kenohan"

Note. "Situ" ~~for "Situ"~~ and "Danau", all mean "Lake" in English. "Lebak" is overflowed land on a river's flood-plain, and "Lebak Danau" is a depression in the flood-plain which remains as a pond after the water has retreated from the flood-plain to the river channel. (Sachlan: Please tell me if these definitions are correct).

*According to the "New-Spelling" se is changed in a
(Acception name of Human being)*

Kalimantan (BORNEO.)

No.	Habitat.	Collector.	Date.
	a swamp near	G. M. HOEKES	
A.	Bandjarmasin, S. Borneo.	K. F. VAAS	1941
H.	Lake Kenohan Djempang, E. Borneo. (Djempang)	"	"
S.	Squeezings from Sphagnum, River Kapéas region, W. Borneo.	K. F. VAAS	June 1949
X.	A lake in E. Borneo.	"	1941
38.	Lake Semedo, W. Borneo. PH 5.5-6	"	June 1949
38A.	" " "	"	" " "
270.	Lake Kumpangau, W. Borneo. PH 5-5.5	"	" " "
108-135-146.	One tube. Situ Tawang, River Kapéas region, W. Borneo.	"	" " "
206-212.	One tube. Danau Loeér, W. Borneo. PH 5.5	"	" " "
213.	Danau Loeér, W. Borneo.	"	" " "
134.	Several lakes, River Kapéas region, W. Borneo. PH 5-5.5	"	" " "
43.	Lake Tajan. " " " " PH 5-5.5	"	" " "
401.	Swamp along the River Bangan, south of the village of Muara Muntai, S. Borneo.	"	July 1952
402.	Same habitat as No. 401.	"	" " "
403.	Danau Panggang, near Amuntai, 150 km. west of Bandjarmasin, S. Borneo. North	"	" " 1953 } F
404.	Fishpond at Sekadau, on Kapéas River, W. Borneo. PH 5.5	M. Sachlan	Aug. 1956
405.	" " Andjungan, 60 km. NE of Pontaniak, W. Borneo. PH 6.5	"	" " "
406.	" " near Andjungan, W. Borneo. PH 6.5	"	" " "

JAVA.

P.	Swamp Tembaga, near Djakarta. PH 6-6.5	"	1941.
K.	" " " " "	"	" "
O.	Laboratory pond, Bogor. PH 6.5-7.	"	1942.
Z.	" " " " "	"	May 1942
T.	A lake in the environs of Bogor. PH 6.5-7	"	1944
M&P.	A mixture of 2 collections from Tembaga-swamp, near Djakarta.	"	"
501.	Situ Losg, a lake in Pengalengan, W. Java, elevation 1400 meters. Plankton collection. PH 6.5	M. Sachlan	Nov. 1951
501A.	Situ Losg, squeezings from Hydrilla. PH 6.5	"	" " "
502.	Situ Tjibuntu, a lake near Situ Losg. Plankton. PH 6.5	"	" " "
503.	Situ Geendang Peetri, a lake in the environs of Bogor. PH 6.5-7 Squeezings from Utricularia	"	Mch. 1951
504.	A new artificial pit near the experimental pond in Bogor. PH 6.5-7	"	Mch. 1950 ?
505.	Pond near Pengalengan, W. Java. PH 6.5. Elevation 1200 m	"	Apl. 1954
<u>BALI.</u>			
F.	Lake Bratan, Island of Bali. PH 6.5-6.8. Elevation 1231. m.	"	Jan. 1941.

SUMATRA.

100.	Lebak Danau, a lake in the boggy environs of Palembang, S. Sumatra. Squeezings from Hydrilla. PH 5-5.5	M. Sachlan.	Sept 14 1950
101.	Lebak Danau. Plankton.	"	" " "
102.	River Pedamaran, a tributary of the River Ogan, near Palembang.	"	" 6 "
105.	Lebak Penukang, Palembang, S. Sumatra. PH 5-5.5	"	Aug. 1951.
106.	Lebak Petai, " " " "	"	" " "
107.	Lebak Danau, " " " "	"	" " "
108.	Danau Teloko, " " " "	"	" " "
109.	Air Klekax (a small stream), near Pelambang, S. Sumatra.	"	" " "
110.	Swamp near Menggala, S. Sumatra. Surface plankton. PH 5-6.	"	Apl. 12 1954
111.	" " " " Squeezings from Hydrilla.	"	" " "
112.	Swamp Pang-pangan, near Danau Teloko, south of Palembang. PH 5.5-6	"	" " "
113.	Swamp at Batang-Toru, near Padang-Sidempuan, about 100 km south of Lake Toba, W. Sumatra.	"	" " "

F We don't know the name of the collector

Dec 16 1958

Dear Sachlan,

Thanks for your Christmas card which arrived this morning. I think you were wise to postpone the visit to USA until next Spring, because the winter weather in most parts of the United States is very severe. Already they have had two big blizzards in the northern States, causing many accidents to auto drivers on the icy roads. In one small town in New York State they had seven feet of snow, which caused some roofs of buildings to collapse from the unexpected weight.

The last two nights we have had our first freeze in New Orleans; only two or three degrees below the freezing point, but enough to kill the banana trees and poinsettias. Too bad that it had to happen just before Christmas.

Dr. Prowse from Malacca is going to stay with us for two days, on December 21-23, on his way home to England on leave. I shall be able to show him the drawings for the big paper on Indonesian desmids, which are all finished and inked; 63 plates in all, illustrating something like 530 desmid taxa. I am now waiting on the Latin diagnoses for the new taxa, which are being prepared by my friend Dr. Hannah Croasdale, at Dartmouth College, at Hanover, New Hampshire. She tells me that they are nearly finished, about 140 new taxa. When I get them I can start writing the final draft of the paper.

On May 10 1958, more than 7 months ago, I returned to the Kebun Raya Indonesia, the corrected proof of a short paper "Notes on Indonesian freshwater algae III", and I thought that by this time I should have received the reprints that I ordered, the usual 100 for me and 200 for Prescott. I have heard nothing from them since, so I wish you would enquire if it has been published and whether the reprints have been sent, and let me know.

I have heard nothing from the I-C-A (what is the full name?), but when I do I shall gladly write a letter of recommendation on your behalf. A couple of months ago I wrote such a letter for Dr. Prowse, who hoped to get a grant from the Carnegie Corporation to pay for his travel in this country, but in his last letter he informs that his application was not successful. I hope very much that you will have better luck!

Best wishes for Christmas and the New Year, from your friend

A friend of mine has a young son who has started collecting stamps, and I had been giving him most of my foreign ones. However, I am returning one of your envelopes with a nice lot of new Indonesian stamps, together with some new American ones.

May 25 1958

Dear Sachlan,

I am sorry you feel that I have neglected you; but I had nothing special to write you about, and even now there is not much news to tell you.

I have not been ill since I was in the hospital a year ago, but my health is not very good. I have several minor ailments, and two serious ones that affect my heart and lungs, so I have to be careful not to overexert myself. There is not much that can be done about these troubles, because they are the natural concomitants of old age, and I was 70 years old last January.

About 10 days ago I returned to the Editor of Reinwardtia the corrected page proof of the third short paper on desmids, dealing with some little-known species of Staurostrum and some new varieties.

Every day I am working for three or four hours on the plates of illustrations for the big paper. Now I have drawn 36 plates in pencil and they are being inked by Mrs. Ferine. There still remain to be drawn the genera Xanthidium, Staurostrum, and the filamentous genera, so there will be at least 50 plates, perhaps more, by the time I finish them. This will make the paper the most important one on Indo-Malayan desmids since Turner's 1892 paper on Indian FW Algae, and far better than his because many of Turner's drawings are so poor that they are unidentifiable and have simply caused a lot of trouble for subsequent workers.

Prescott has been in Ecuador since January; his third expedition down there. He will be back in USA early in June, and will leave soon thereafter for Montana, where he will again teach a summer course at the Univ. of Montana's Biological Station.

In your letter of March 1st you commented on the Irian question and the rebellion in Sumatra. In my correspondence with persons in countries all over the world I have to avoid political discussions, but if you want to know the views that are held in this country you should try to see some of the news-magazines, like TIME, particularly the issue of March 10th. Perhaps you can find it at the USIS.

I hope very much that your application to the IGA for a grant to visit and study in this country will be successful, and if I receive an enquiry from them I shall certainly give you a high recommendation. You ask for my opinion regarding your tour, but I have no information whatever as to the amount of the grant that you would get, nor what it would permit you to do in the way of visits to the wonderful scenic places. I do not know Dr. Starr personally, though I have exchanged a few letters with him. He has a very high reputation, and the best collection of algal cultures outside of Europe. Auburn, Alabama, is about 750 km from New Orleans, a long day's drive. I do not know what they have at the Polytechnic Institute there, or why you wish to go there, but in this connection there is a rather delicate question that I think I should mention. No doubt you know that all the southern States of the USA have laws requiring the segregation of "coloured people" (meaning Negroes only), so that they must be separated from white people on trains, busses, in schools, hotels, restaurants, etc. The feeling in these southern States is rather high just now, because the negroes are attempting to have enforced a recent decision of the Supreme Court of the U.S. that declared they are entitled to all the privileges of white people, and in my opinion this is not more than just and fair. These State laws would not apply to you, because you are not a negro, but there have been embarrassing incidents where dark-skinned visitors have been refused admittance to hotels or restaurants. In New Orleans I have seen visitors from

India who wore turbans, and others wearing turboushes, and I have assumed that they wore this headgear to distinguish them from negroes. Perhaps you can talk to some Indonesians who have travelled in the southern States, and can tell you of their experiences.

My wife and I will be happy to welcome you to New Orleans, and to have you stay in our home during our visit. The weather in New Orleans at Christmas time is quite unpredictable. ~~It can~~ The temperature may be as high as 25° C., or it may be down to the freezing point or a few degrees below. Last winter just before Christmas we had a slight freeze that was just cold enough to kill the foliage on such subtropical plants as Bananas, poinsettias, and hibiscus; and last February we had a snowfall of 1" (2.5 cm) that stayed on the ground for 24 hours, something that I have seen only once before during the 52 years that I have lived here. But there is one small consolation:- when it is cold here it is even colder in other nearby places, because New Orleans is almost completely surrounded by water in lakes, swamps and marshes.

I am enclosing duplicate copies of a list of the collections that you have sent me, as it will appear in the paper. I wish you would look this over and see that I have all the names spelled correctly, and the names of the collectors, and the dates. Also add any other information that would be of interest, such as the pH of the water, and return one copy to me.

Do you know if Dr. C.G.G. Van Steenis, the editor of "Flora Malesiana", is still at the Herbarium Bogoriense?

With best regards and good wishes,

Sincerely,

I have just seen a book published in 1957 entitled "Water Hyacinth obstructions in the waters of the Gulf and South Atlantic States", issued by the Government Printing Office in Washington. If Dr. Vaas does not have this book, and would like me to get it for him, please let me know. Or he might be able to get it through the USIS.

Bozou. March 1-1950.

Dear Scott,

Thank you very much for sending me the pamphlet and the list of frog-dealers. I am sorry I can't write you soon, because of my trips in Central-Java who takes several weeks - Speaking about frog-farms, I realize that frog-raising will be never lucrative. As you know the Japanese imported also in 1919 from U.S.A the bull-frog (*Rana catesbeana*) they are no frog-farms too at present in Japan; but the bull-frog flourish now in a certain prefecture not far from Tokyo. They know the life-history of the new-imported frog in their new habitat and so they are able now to export regularly to USA - frozen froglegs. It is interesting to know that the Japanese don't like frog-meat because of their religion! - They are more than 10 species of *Rana* in Indonesia and sure in the future we will study the life-history of one of the most economic *Rana*-species. The general frog-meat are served only in Chinese restaurants - but very expensive and eaten only by not fanatic Moslems. In some places however in Central- and East-Java not fanatic Indonesians sell them to the village-people. - By the way, now a bit about our policy. As you know from the newspaper there are some troubles between Indonesia and Holland regarding West-part of New-Guinea with as effect: many Dutch officials going home now to Holland. - Further a little "massing" in West-part of Central-Sumatra caused by fanatic Moslems and lead by by some corrupt leaders. They accuse the government in Jakarta as Communism. Misguided. But believe me as long as Dr. Sukarno is our president Indonesia will be never a Communist-state. By the way the Editor of Reinwardtia is still waiting for your paper. I think it is still winter in New-Orleans, and I hope that your state of health and that of your wife are all right during this cold-season!

My best regards and wishes.

Sincerely yours

TIME
Mch 10

J. C. Mun - 10/11

Bogor, May. 11th 1958.

Dear Scott,

Your letter dated Dec. 14-1957, concerning frog-farm information etc, is your last letter and since that time I don't receive any letter from you. I hope your health is in good condition and have no troubles with the last winter. Do you receive my letter dated March. 1th 1958 as a reply of your last letter? - As I told you before, I have a chance to visit the States (a fellowship of the P.-C.-A) for 8 months beginning about Mid-October this year. The aim is to get practical training in the field of All- limnological-activities, including Plankton-culture, in connection ^{with} the Inland- and Brackishwater fisheries. The question is now, in my statement to the P.-C.-A head quarter in Wash. D.C I call your name and those of the Messrs Prescott and Starr as persons who Coöperated with me to increase the knowledge of Indo-Asian Algae-systematic. In the statement there are suggestions regarding the training-programm. e.g. I would like to work in the Lab. of Dr. Starr to get training in Algae-culture. and further to visit you in connection with the fact that you are now working on a trip to the States during the Christmas-New-Year (not too cold at that time I think); when begins the Winter in New-Orleans? There is a great possibility that I will visit the Poly-technique School in Auburn - Alabama - and this is not so far from New-Orleans. Of course I would also like to see some of the world-famous sight seeing-objects, for. ex. the Niagar-falls - Grand-canyon etc and further Science Institute, as Museum of Nat. Hist. in New-York etc. I hope you will write me soon, I would like to hear your opinion regarding my training-tour in the "New-World" beginning in October.

with kind regards.

J. J. Van-

Bogor 2 Nov. 1957.

Dear Scott,

Your letter dated Oct. 14. arrived safely in Bogor and I am glad to hear that you received the mums in good condition although they are very cheap ones. - As you see the laboratory's address is changed; yes we removed a week ago to the new Laboratory, built, as I say by T.C.A. / International - ^{Ministry} Administration, one of the many ¹⁹⁵⁴ organizations for Underdeveloped Countries.

Regarding your suggestion using my name as var. name for the new var. of *Mier. Torreyi* here I agree, while Scott & Prescott are the names of the authors! I think this is the best way to solve this difficulty. In our photo-archives, we find only one size viz. the length of the semi-cel: 197 μ .

By the way, is it true that in New-Orleans is a farm for frog-culture? (Bull-frog: *Rana Catesbeana*!). If there is a booklet for frog-culture, would you like to lend me one? Thank you very much in anticipation.

Cordially,
J. H. S.

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Cordially,
J. H. S.

Dec 14 1957

Dear Sachlan,

About 10 or 12 years ago a so-called 'frog-farm' was established in New Orleans, but at the time I thought it was merely a money-making scheme for the promoters. They erected a rather fancy little building for an office, and surrounded a plot of ground with a high wooden fence; what there was behind the fence I do not know. The venture was not a commercial success and went into bankruptcy after one or two years, and I believe the people who had invested in it lost all or most of their money.

Somewhere in my general reading I gained the impression that raising bullfrogs on a commercial scale was impracticable, because they do not like the crowded conditions that would be necessary, and it would be difficult to supply a large number of them with the living food that they require. This is confirmed by the enclosed pamphlet that I obtained from the Louisiana Wild Life & Fisheries Dept., though it was published by the U.S. Fish & Wildlife Service in Washington. Also they gave me a list of dealers in New Orleans and other towns who are licensed to sell living frogs.

I expect that you do not want to raise the frogs commercially, but rather to introduce them into natural habitats in Indonesia, where they might be expected to multiply and eventually form an additional source of food. If your Dept. of Inland Fisheries wishes to import some of these bullfrogs I would be glad to assist in any way that I can, though I know nothing about the possibility of shipping them such a long distance, and would have to seek further advice.

The only parts of the frogs that are used are the hind legs. These are sold regularly in our markets and are served in our larger restaurants. I have eaten them occasionally, though do not care for them especially. The meat is white and usually tender but sometimes stringy, and tastes a little like chicken meat. The only way I have heard of them being cooked is fried in a coating of 'batter', which is a mixture of flour and milk with the addition of salt, pepper and other seasonings.

Prescott has finally returned to me the rough draft of my short paper on *Staurastrum freemani*, etc., with some small changes. Also I have received from Dr. Croasdale the Latin translation of the diagnoses for the new varieties. So in the next few days I shall rewrite it in final form and send it to the editor of *Reinwardtia*. The large paper is coming along satisfactorily, but every once in a while I run into difficulties some of which take considerable time to straighten out. Thus recently I had to send a batch of *Arthrodesmus* drawings to Grönblad and ask for his advice, because they are remarkably like some of my American forms, though with some differences which raised in my mind a doubt whether they should be assigned to *A. curvatus* or to *A. maximus*.

You did not tell me whether you received the paper that I sent you about four months ago, Scott & Grönblad, Desmids from the southeastern United States.

My wife joins me in wishing you and your family a very happy Christmas and
New Year.

Sincerely yours,

Oct 14 1957

Dear Sachlan,

Your parcel arrived just three days after I mailed my letter to you last week. The cardboard box was crushed and one end broken open, but fortunately the contents were in good condition.

The bone carving is a beautiful piece of workmanship. I have never been able to comprehend how your oriental craftsmen can work with such precision in bone and ivory, and to such a small scale. Many years ago I used to do some fine cabinet work in rare woods and veneers, using such exotic woods as padauk, Makassar ebony, East Indian rosewood, etc., but this was all flat work; I never tried my hand at carving, though I have a set of wood-carving tools.

The two scarves that your wife selected are also very pretty and highly unusual, quite different from anything made over here. My wife and I thank you most sincerely for your gift.

Enclosed is a blueprint of a new variety of *Micrasterias Torreyi* enlarged from one of your photomicrographs. I do not know the size of the plant, and I wonder if you can calculate the dimensions from the magnification of your photo. If you can establish one dimension I can easily obtain the others. You had suggested the name var. javanica, but I would like to make it var. Sachlanii. In this species there are already the varieties Nordstedtiana, Gramerii and Doveri, so Sachlanii would seem to be appropriate. However if you wish we can keep it as var. javanica and show your name as the author of the new variety.

Just heard from Prescott that he is going to Ecuador again soon. I wonder how he manages to wangle all these trips, and who pays for the cost, for I don't think he has the money to spend on them.

That's all for the present. With best regards and thanks,

Sincerely,

Oct 8 1957

Dear Sachlan,

Glad to have your letter of Sept 9th. The parcel which your wife sent has not arrived, but no doubt will get here in the next week or two.

Yes, I received a reprint of the paper by Krieger & Bourrelly on desmids from Venezuela, but I was rather disappointed that there were not very many desmids in it. There are two reasons for this, I believe; first that the collections were made in mountainous country, and second that they were not made specially for desmids. I think that a lot of desmids could be obtained in the flat swampy region in the south of Venezuela, and have often thought of going there to see what I could find, but there have been several obstacles. Venezuela is a very expensive country; there are no roads in the southern part, and I do not speak Spanish. So I had to abandon the idea, and now I am too old to undertake such a journey.

I spent most of last week correcting the proof of the large paper by Prescott and myself on FW Algae from Arnhem Land; just five years since it was sent to the editor. This is only one of several papers that will be included in the botanical volume, so I don't expect to see it in print until next year, even if there no more unforeseen delays.

Prescott now has for approval the manuscript of the 3rd Notes on Indonesian Algae. I wrote it in July, but he has been away all summer, in Virginia, California and Alaska, so it was useless sending it until he returned to East Lansing. After his approval it must go to Miss Crossdale for the Latin diagnoses, and then I will write the final copy and send it to Reinwardtia.

About a month ago I sent you a reprint of a large new paper on USA desmids by Grönblad and myself, which I believe is the most important addition to USA desmid literature in the last sixty years. It is also a beautiful example of the printer's art, and since it was published in a large size, about 22 x 30 cm., it allows a much better and clearer reproduction of my plates of illustrations.

It is very good to know that Dr. Anwari Dilmy will publish our large paper on Indonesia in a single issue of Reinwardtia, but after seeing the new USA paper I have wondered if the Kebun Raya perhaps published another journal in a similar large format. I believe that most of the large scientific institutions do have such larger-size journals which they reserve for the more important contributions.

Dr. Prowse has sent me a copy of his first paper on Malayan desmids. It is very good for an introduction, but unfortunately it had to be prepared in a hurry and he did not have time to consult Grönblad or me concerning the identity of his illustrations, with the result that some of them are wrong and others incomplete. As you have noticed, the desmid-flora of Malaya is quite like that of Indonesia, but already Prowse has found a few novelties, as he is bound to do in such a rich region.

It would be a very fine thing for Prescott if Dr. Dilmy could invite him to Indonesia for a couple of years, or even a shorter time. I am sure that every botanist in the world would like to visit the famous Botanical Gardens and see the wonderful collection of plants that are grown there. I have seen it in pictures, as you have seen New Orleans, but that it not like seeing it personally.

Also it would be wonderful if you could come to the USA next year, and both my wife and I would welcome you to New Orleans and be very happy to make your acquaintance in person. New Orleans is one of the oldest cities in this country and very interesting to a stranger, but it is old-fashioned and behind the times in many ways. I have lived here for 51 years and have become used to it, but often I have wished that my fate had directed me to a more progressive city. Yes, we have many palms here, of several kinds, but all of them are cultivated, though one of them, Sabal palmetto is said to grow wild in Louisiana. However, the only place I have seen it in the wild state is in Florida. This is a very tall tree with a crown of fan-shaped leaves. We do have a dwarf palmetto growing wild here, but it is a low bush or shrub, never more than about 2 metres tall. The date-palm is grown here as an ornamental plant and bears fruit, but the fruit does not ripen because the ripening requires a dry climate, so I have read. None of the palms shed their leaves in the winter, but once in 15 or 20 years we get a hard freeze that kills some of them, and occasionally the very strong winds in one of our hurricanes strips off most of the leaves.

My work on the bid Indonesian paper is coming along slowly but surely, and now that the weather has turned cooler I shall be able to work longer at it each day. Writing the scientific descriptions of the new species and varieties is a difficult job that previously has been done by Prescott.

Glad to say that both my wife and I are in reasonably good health, and I hope that you and your family are also.

With my best regards,

Sincerely,

Boger, 9 Sept. '57

Dear Scott,

Your paper about Desmids in Peru, arrived safely in
Bogn. So you already received a reprint of Bonally
& Sriege's paper about Desmids in Venezuela
collected by the Deutsche Kilmologische Expedition
in 1952. As you know in this paper are des-
cribed many new species and varieties.
And when will be published your big pa-
per about Desmids in Arnhemland
(Australia)? Speaking about Desmids-
publication, Mr. Duwar Dillmy - is agreed
that your big paper about desmids from
Borneo-Sumatra etc. will be published
as one issue of the "Reinwardtia". But
we mean while the editor is still
waiting your small paper about "Desmids-
series" as a "Note on Hedmerian freshwater
Algae" N^o III. I think within a short
distant Dr Prowse will also publish the
Malayan Desmids. He told me that you
and Dr. Grontala will check his men-
tifications. Have you received a reprint
of his first: "popular"-paper about
Malayan desmids. As you see, there is hard-
ly no difference between the Malayan and

Pogor July 15th 1957.

Dear Scott,

Your letters dated Jun 30 and July 1 arrived safely; also the envelope containing stamps, thank you very much! Reading your first letter, I know by anticipation that our letters cross each other. Meanwhile I received a letter from Dr. Prescott, telling me that he did not receive the 200 reprints. In the case that these reprints "lost at sea", may be I can still him send some reprints from the supply of the Herbarium. It is a pity that Dr. Prescott did not meet Mr. Anwar Dilmay. Do you know that Dr. Prescott would like to visit Indonesia for several months, if there is a task for him? Next week Mr. Dilmay will arrive from U.S.A and I will meet him about the possibilities to let him work in the Herbarium. Frankly speaking there is enough work for him, e.g. to investigate the desmids- or Chlorophyceae flora of the Bogor-district or Western-Java etc. I hope that my attempts to let him overcome in Indonesia will have success.

Regarding your big paper about Indonesian desmids, I hope that the Editor will accept this as a special issue of Reinwardtia; at any case it is much better than ~~the~~ paper split into 2 or 3 parts.

The parcel containing dress material for my wife arrived in good conditions at July 6th, somewhat a month later than the first parcel; I must pay for the tax. 57.50 rupiah (= ± \$ 2). My wife thanks you and your wife for the willingness to send these materials; she is looking now for little souvenirs from Bali for you and your wife.

Yours cordially.

J. H. S.

July 12 1957

Dear friend Sachlan,

Your last shipment of samples from Menggala arrived several days ago, but I am sorry to report that the smallest tube, containing 7 specimens of the new variety of *Micr. anomala*, was perfectly dry. The cork was in place, though not very tight. With a magnifier I could see some small specks of material adhering to the inside of the tube, so I added water and was able to recover two specimens. They were badly distorted from being dried, but I was able to recognize the peculiar shape of the processes which are much longer than in the other forms of *M. anomala* that I have seen from Borneo. Subsequently I found in tube No. 7 two more specimens in good condition, and was able to verify that they are the same as I had previously found in one of your Menggala samples.

The other tubes are very rich in desmids, but I have not seen anything that has not appeared in previous samples. However I am glad to have them because I have found additional specimens of some very rare desmids, including two on which my former drawings were not complete enough for complete identification; one of them is a new species of *Staurostrum*, and the other a new variety of *Euastrum incavatum*. The region of South Sumatra, including Menggala, Kaju Agung and Palembang is by far the richest in number of desmid species of any of your collections. It is true that Borneo has some very large and spectacular desmids, but the total number of different species is smaller.

Now I am going through my drawings and preparing index cards for each desmid species, variety, or form; then alphabetically arranged lists have to be made for each genus; all this is preparatory work to ensure that none of them will be overlooked. In my last letter I said that there would be about 420 desmids total; now it appears that there will be considerably more, between 500 and 600, a remarkably large number for a comparatively small number of collections.

Prescott is teaching summer school at a Biological Station in Virginia, where he will remain until the end of August. He told me that he will be much busier there than is usual in summer schools. He has to teach five days a week, all day, leaving only Saturday and Sunday for his own research work, his extensive correspondence, his editing of the *Jour. Am. Microsc. Soc.*, interspersed with continual interruptions from his students. How he manages to keep up with all of it is more than I can understand.

By this time I hope you have received the second parcel containing the dress materials for your wife. It is hard to comprehend why the customs authorities should hold it up for so long.

Perhaps you may have read about hurricane Audrey that struck the Louisiana coast two weeks ago, and caused terrible destruction and some 500 deaths. In New Orleans, 250 miles away, we had no damage, merely high winds, but the city has been hit on some previous occasions, and I do not want to go through another one.

Best regards and goods wishes.

Sincerely,

June 12 1957

Dear friend Sachlan,

Next Tuesday, June 18th, my wife and I will fly from New Orleans to Lansing, Mich., and return on June 27th. The only purpose of this trip, which will cost between \$500 and \$600, is so that I can work with Prof. Prescott in checking my drawings of your Indonesian desmids. For several weeks I have been going over these drawings and identifying the desmids as nearly as I can from the literature in my own library, but Prescott's library is far more complete, and it is always possible that his iconograph may contain some of the forms that I believe (at present) to be new species or varieties.

Of course I could send the drawings to Prescott and ask him to check them. The objections to this are that he is so busy with his own work that there is no telling when he would be able to do it; also that I am more familiar with the Indonesian and Australian desmid-flora than he is, because I have been working on these two regions since 1950. Also it is much more satisfactory to be able to discuss things viva voce than by letter-writing, and some of these desmid-series are extremely puzzling and will require lots of conversation and arguments. By 'desmid-series' I mean several different but obviously related forms all of which apparently belong to one species; and it is quite strange that I have found such series in several species in which the specific form itself is not at all well known. I have drawn three plates for a new paper which will illustrate such series, in the cases of Staurastrum Freemanii West & West, Staurastrum saltans Joshua, and ~~xxx~~ Staurastrum subaltans West & West. As soon as Prescott approves the paper I will send it to you and you can hand it to the editor of Reinwardtia.

The 100 reprints of the Ichthyodontum paper arrived a couple of weeks ago, and I have already mailed them to my list of correspondents, together with a reprint of a short paper by K. Flegel & Scott on desmids from Peru, which I have also sent to you.

Glad to say that my health continues to improve, and I am now almost back to normal. My wife and I would have liked to drive our car to Michigan, but my doctor forbade it, since he thought it would tire me too much.

I hope by this time that the new expedition to Menggala has taken place, and that you have been able to get some living specimens of Ichthyodontum sachlanii to send to Starr and Kallio. Sorry that I cannot give you any advice on the cultivation of living desmids outside of what you can find in the literature. My own attempts have been failures, though some of the desmids will stay alive for a few weeks; but I do not call this cultivation. It seems that you have to possess a certain 'knack' as well as much skill and unlimited patience.

I returned the Indonesian stamps that you asked for, by ordinary mail, with some other stamps that I had accumulated. Perhaps they have arrived by this time, as well as the parcels from Sears Roebuck.

Best regards from your friend,

Bogor, June 24th 57

Dear Scott,

I am very glad to receive your letter dated June 12th, telling me that you recover again. I hope you and your wife arrive safely from the scientific journey in Lansing. Has Dr. Prescott any difficulties with checking the Indonesian desmids? I think Dr. Prescott told you my anxiety about your health; may be he received my letter when you are with him.

The distance from New-Orleans to East-Lansing is somewhat equal as the total length of the island Java and I think if you have a driver this tour is more interesting than a trip by plane is not it? I see from the movie that U-S-A is an ideal country for motor-tour, because the roads are excellent!

By the way, two weeks ago I received a letter from Dr. Prowse in Malacca telling me that he also regularly send desmid to you for identification. Further he told me that ^{he} found a "forced" dichotypical species of *Microsterias* in Sunda and that you have also seen the stage of division. Is it the same case as the genus *Purseottia*? Is there any news that Dr. Rastbach are able to obtain living ^{new} specimens? It is a pity that our ^{new} attempts to get living *Zelthyodontum* have no success; next time better! ← F
Three days after sending this letter, I will send you again the best samples from Mungala to complete the desmid-flora of this swamp; I think they contain a ^{new} variety of *Micr. anomala*. The genetic problem of the *Zelthyodontum* must be solved in the future; I am practising now in desmid-culture according the system of Kallio
F The question is, they gathered samples only once time!

I think, it is better that you send the manuscript of your new paper regarding "Desmids-series" directly to the editor of *Reinwardtia*, while you send me the copy of this manuscript. Mr. Anwar-Dillny is now in U-S-A for study-purposes during three months; he will back again in July or August.

Glad to say you that I received one parcel containing the Pilgrim-shirt on June 4th but the other parcel is not yet arrived up till now; may be the import-authorities still hold them for a moment to fix the tax. I do not know!

I hope you will not overwork yourself for the sake of Desmids-science and for you in connection with your health.

Yours cordially.

J. C. W. M.

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P.S. From now on, will you send the Indonesian Stamps back to me, at least if nobody in New Orleans will want them!

J. C. W. M.

Pogon May 5th 1957

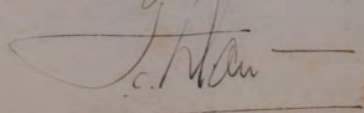
Dear Scott,

Your last letter dated April 25 arrived safely in Pogon on May 4th and I am very glad to hear that you are recovering rather quickly; again in your case is a good "rest" the only medicine for your health. I am sorry that you have so much troubles in obtaining the dress material; my wife is very happy knowing that this material is on way to Indonesia. She thanks you and your wife in anticipation for the willingness for sending this material to us.

I think our letters cross each other in these last weeks because of the your suddenly sickness. President Vorosilov of the Soviet Union is visiting now Indonesia for two weeks and we hope that Pres. Eisenhower will accept president Soekarno's invitation to visit Indonesia. You know Indonesia is what you call a neutral country. Meanwhile I hope you will be all right within a few weeks so that you are able to visit Prof Prescott for the sake of the Indonesian desmids. As I promise you I will send you ^{again} a more complete desmids flora from Keenggala

Will you write me if you leave New-Guinea for visiting Prof Prescott in East-Lansing and for how long you will stay there.

My best regards



P.S.

It is not necessary to send back this Indonesian stamps!

21

Bogor 27 April 1957-

Dear Scott,

At the instance of mine, the Physiological division of the Agricultural research station in Bogor, will send an "expedition" in May this year to Manggala to obtain *Ichthyodontium*, for genetic purposes. I told the head of this division (my grand!) the problem of the dichotomous cell and I give him too your paper about *Ichthyodontium*. I hope they will have success in obtaining many specimens of this interesting genus. The question is now, how to cultivate these specimens, because none of us have no experience in algae-culturing. We will try to cultivate them with solutions used by Paul Kallio. If it is possible I will send again living material to Dr. Starr and Dr. Paul Kallio; are they still respectively in Bloomington and in Turku? By the way, do you receive one reprint of your paper sent by Kebeun Raja?

May be in August this year our new Laboratory building will be ready; it will be a great building, built with aid of the S.C.A (International Cooperation Administration), one of the many U.S.A.'s Corporations, who give aid to the many Asian - underdeveloped countries.

If you write me, please send back these Indonesian stamps to me (at least if some none of your friends would not like to collect Indonesian stamps).

My best regards.

J. M. M.

P.S.

Do you receive my letter a month ago with including the blank of Sears-Roebuck?
enclosed filled

Monday, July 1 1957

Dear Sachlan,

When I wrote you yesterday (Sunday) I wondered if perhaps the Monday morning mail delivery would bring a letter from you, and sure enough it did. Glad to know that my letter did not go astray, and also to know that you have received the shirt. But I am anxious about the other parcel, which was sent simultaneously with the shirt, and ought to have arrived at the same time in Bogor. I think you should make enquiries immediately at your postoffice and ask them to check with the customs in Djakarta.

A similar thing has happened at this end. I received my 100 reprints of the Ichthyodont paper about the end of April, but Prescott has never received his 200 copies. I did not know about this until last week when I was with him, and as he is exceedingly busy this week I thought I would tell you about it. He is going to Virginia where he will teach a summer course on Algae and Aquatic plants, and tells me that he will be even busier there than in East Lansing, so he may not get time to answer your letter immediately. I am literally amazed at the amount of work that he undertakes and manages to finish. Almost every night he works in his office at the University and practically all day Saturday and Sunday as well!!!

Dr. Prowse has sent me five samples, 3 from Singapore which are fairly good, and 3 plankton collections from the river at Malacca after rainstorms. Each of the 3 latter is supposed to contain a new and curious desmid presumably carried down the river from some swamp or marsh, but so far I have not been able to find them. In his last letter received last week he invited me to collaborate with him (and Grönblad?) in a paper on desmids of Malaya, but I am afraid I shall have to decline. I have enough work ahead to keep me busy for the next five years, when I shall be 75, and in view of my health which is slowly but surely declining, I doubt if I shall be able to do much more work on desmids.

There is not one but two *Micrasterias* species from the Sudan with "fixed" dichotypical cells similar to those of *Amscottia*, but I did not see any stage of division. Perhaps Prowse or Grönblad saw it, for all three of us examined the samples. You should be able to see them in a few months; Grönblad has just written me that he has almost finished the Ms., and that the 23 plates have been drawn in Finland from my drawings and his own; he hopes that it can be printed this summer, but I doubt it.

There is no news that Dr. Rzeska has been able to get living specimens of these two *Micrasterias*, and I think it is very unlikely that he will be able to do so, unless he can arrange for a helicopter flight. The habitat is some hundreds of miles up the Nile from Khartoum, the nearest city, and the only way they can get there at present is by motor launch.

I shall be glad to have the new samples from the Manggala swamp and hope to find some new desmids in them. I have seen two specimens of a very large new variety of *M. anomala* in one of your former Manggala collections; it seems very much like one found in Malacca of which Grönblad sent me a photo and sketch. It is different from another new variety that occurs in Borneo.

Enclosed are the Indonesian stamps; there is nobody whom I know in New Orleans that collects stamps, except a couple of small boys who will be just as well satisfied with stamps from some of the European countries.

Sincerely yours,

June 30 1957

Dear Sachlan,

On June 27 my wife and I returned from East Lansing, where I spent eight days with Prof. Prescott. While I was there he received your letter expressing your anxiety about me, and saying that you had not heard from me for some time. But I wrote you on June 12th and you should have received it about June 19th, telling you the exact dates of our trip to Michigan. So apparently this is another letter that has gone astray.

I spent seven full days in Prescott's laboratory, working from 9 am to 6 pm, with 45 minutes out for lunch, wading through the many thousands of sheets in his iconograph, comparing my drawings with all of the illustrations that he has. This was a wearisome job, and at the end of the day I had a severe backache from bending over the desk for eight hours continuously. Then Prescott and I went over all the drawings together, and we have arrived at mutually satisfactory determinations in all cases except one, a small *Arthrodesmus*. We have a pretty good idea what this is, but to be sure I have sent my sketches of this desmid to another friend who is now at the very large Marine Biological Inst. at Woods Hole, Mass., and asked her to look it up in the library there.

I estimate that there are about 420 desmids shown on my drawings, which may be compared with the 377 described by Krieger in his Sunda paper. Krieger required 24 plates of illustrations, and if I illustrate all of mine I estimate that between 30 and 35 plates will be necessary, because many of my new or rare desmids are very large. Prescott would like very much to have all the desmids depicted, and so would I, for that would make a complete and highly valuable paper. However, that is a matter which you will have to discuss with the editor of *Reinwardtia*, to see how much space he can devote to us. I do not know how many pages of text will be required, but I think the editor can form a pretty good idea from the number of plates. It would be possible to split the paper into two or three or even four parts, if necessary, each part containing a certain number of genera arranged in their usual taxonomical order. Will you please see the editor about this, and let me know his decision as soon as possible.

Shortly I will send you a small paper describing a series of new varieties of *Staurastrum saltans*, *St. subsaltans*, and *St. Froemanni*, with 3 plates, which will constitute the third paper in the series "Notes on Indonesian freshwater algae".

Prescott told me that Dr. Anwari Dilmy passed through East Lansing recently and tried to see him, but that through some unfortunate mixup they did not meet. That is a great pity, for I am sure Prescott would have liked to make his acquaintance.

With my best regards and good wishes,

Sincerely,

Bogor, April 29th 1957.

Dear Scott,

I received your letter dated April 20th on 29th April in the morning. Two days before on 27th April I sent you a letter, regarding a new attempt to obtain living *Tecthyodontium*; I think this letter is already in your hands. Frankly speaking I am afraid that you did not receive my last letter. But now I know the reason about the delay of your reply. I hope you will get better as soon as possible and I think "rest" is the best remedy for you at present. Thank you very much for sending the two parcels; I hope I can receive them a month later. What about my suggestion regarding a little small paper on Indonesian desmids? As you know Danau Kerinci and the swamps in Menggala are not investigated by the Sunda-Expedition in 1928/29. ^{May be the desmids flora of this location} is good enough for a small paper. I will send you desmids-samples as much as possible to complete the desmids-flora in Menggala. I am very happy to hear that Prof Prescott visited and discussed about the Indonesian desmids included your 1200 drawings; frankly speaking it is unbelievable about ^{the} great number of drawings. Again I hope that you will be recovered as soon as possible. My best regards

P.S. Send back to me this Indonesian stamp, too, thank!

J. W. M.

April 25 1957

Dear Sachlan

The doctor has now allowed me to go downstairs to my laboratory once a day, and to work for not more than 2 hours at a time. He says that my heart and lungs are in a weakened condition and that I must be extremely careful not to overexert myself. But I expect I shall be allright again in a couple of weeks.

As I wrote you by hand last week, there are two parcels on the way to you, one containing the shirt, and the other the dress materials. The enclosed shipping tickets will show you exactly what has been shipped, and what items were not available because they were ordered from an old catalogue. Both packages are marked "Gift parcel" and I hope you will not have any trouble with your customs authorities. Getting this order filled involved more difficulty than I had anticipated. I took your order form myself to Sears Roebuck New Orleans store, and expected that all I had to do would be to turn your order over to them and they would do the rest and send me a bill. But it does not work that way. Their New Orleans store has no export license, and all export orders must be sent to either their Baltimore or Los Angeles branches. Then I asked them to send the order to one of these cities, and have it charged to my account at W.O. But that could not be done either. So I finally decided to order the materials from their Memphis warehouse and have it shipped to me, and I reracked it and dispatched it to you. On the next occasion I shall know better how to handle it; but I think it will be well to wait and see how you receive these parcels before ordering any more.

The reason for Prescott and myself ordering a total of 300 reprints is for the purpose of exchanging papers with other algologists, not all of whom are desmidiologists, but they sometimes publish on desmids. From various sources I have compiled a list of about 75 names with whom I exchange papers, and Prescott of course is much better known and has a correspondingly larger list. It is quite true that a good many of the papers that I receive from these persons are of not much interest to me, and equally likely that my papers on desmids may be wasted on them, and it seems to be the best way of keeping in touch with the leading algologists, and receiving their papers as soon as they are published. I did not know that the Kebun Raya keeps on hand 50 reprints of each paper published in Reinwardtia; but this knowledge is of no use to me unless someone tells me that a certain paper on desmids has been published in a certain journal, as you and Teiling told me about Behre's paper on the Wallace expedition. I wrote to Behre and received his paper a month or so ago, and to my regret I find that he has described one new species and several new varieties which I had also described under other new names in the still unpublished Amhem Land paper. So now I must make a number of changes in the manuscript and send them to the editor in Australia, who wrote me that this paper may be published by the end of this year. But I do not place too much reliance on this, because there has already been a delay of 4½ years since I sent him the manuscript.

I think your suggestion of another short paper describing some of the new and rare desmids from your collections is a good one, and I will start on it as soon as I have regained my strength and have caught up with my arrears of correspondence. Further, I hope the doctor will allow me to go to Michigan during the latter half of June, so that Prescott and I can work together on the identification of the large number of my drawings of Indonesian desmids. This will be much more satisfactory than either of us doing it alone.

Now I must stop and go upstairs again for my afternoon rest.

Best regards, from,

Bogor. 5th March. 1957.

Dear Scott,

Your letter (+ the copy of the previous letter) dated on Feb. 12 '57 arrived safely in Bogor. I am glad to know that you received the samples from Kayu-Agung in good conditions. Yes I am wondering too why your previous letter did not reach me. Enclosed you will find the order-blank filled up with our desires (better said, the desires of the whole family!) We thank you very, very much for the willingness to send us these dress-materials. As you see, these materials are still very scarce and expensive in Djakarta. I think, it is better that outside on the parcel will be written "present or gift"; may be in this case, we will have no troubles with the Indonesian import-authorities.

By the way, have you already received some reprints of your paper? The Botanical Garden (Kebun-Raya) sent them 10 days ago to you by air-mail; the other 100 reprints will be sent by sea-mail, so that you will received them about two months later. But why you and Dr Prescott order so many reprints? (300 total); are they so many Ulsmidicologists and botanical institutes in the world? Our laboratory, received except the periodical itself, two reprints

2) of the paper. You must know, the Herbarium bogoriense has also always, so reprints in petto of every paper occurring in every issue, so that every one in the world who interested in this matter can order them from the Kebun-Raya.

What is your following paper about Indonesian desmids? Of course, you are still not yet ready ^{with} the publication of all the desmid-materials I sent to you. I realize that this is a work for a long term. So I suggest that you will publish again a little paper about, for example: some new interesting and scarce desmid-species and varieties, in connection with their distribution, etc²

(e.g. the specimens: *Euastriidium*, *Str-calyxoides* and *Micrasterias arcuata* etc.)

This is only a suggestion of mine; may be you have already an ~~that~~ other short press-ready manuscript about this matter, I hope so.

Give me if it is possible a copy of the manuscript, when you send them to Mr. Anwar-dilmy (born in Borneo!) He is very anxious to know your following paper.

As far as we know, this is the first time that articles about Indonesian freshwater-algae publish in "Indonesian" periodical.

I am sorry, up till now I do not encounter that strange little new *Staurastrium* species in sample N^o 149, according to your sketch. Of course as soon as I encounter them, I will send you

immediately on a slide.

Now about your health; are you really ~~now~~ in good condition after that surgical operation? What is the opinion of your doctor about your work at your age? I think he will give you advise not working every day, and every day not more than 2 or three hours microscopical work, because it is really a very tiresome work. In my case, I work every day not more than three hours through the microscope.

Further I thank you in anticipation for the troubles by sending me the dress-materials.

Cordially.

J. C. Han-

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36.H.0220	3	Acetate satin	turquoise		0.54	1.62		1 1/2
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"	2	"	N° 45		0.79	1.58		4
36.H.0590	4	Dacron prints	N° 11		1.29	5.16		12
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PAGE E

Mch 16 1957

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Gentlemen,

Enclosed is an order for a quantity of dress materials, etc., which were selected from an old catalog, by a friend in Indonesia to whom I am going to send them. As far as I can check the items from your latest catalog the present prices seem to be somewhat lower, so I have not filled in the total amounts. The order is to be charged to the 30-day charge account in the name of my wife.

Please note that a memorandum invoice showing the exact cost of each item must be enclosed in the package, or mailed to me at the same time, so that I can make out the customs declaration properly.

Very truly yours,



Digitized by Hunt Institute for Botanical Documentation

Dear Scott,

Pos. udara

Circa 2 months ago, I sent you three desmids. samples from Palembang across the letter concerning this matter. Have you received them in good condition? If it is not the case, I can send you the rest of the samples.

Further you can see the interesting photo of pseudo-artrodesmus ?? occurring in one of these samples. I have already received your sending stamps. Scientific American. Thanks cordially.

Sachlan
Ipikeumeb 99
Progor
Indonesia!

Mr. A. N. S. J. C. 1944
RECEIVED
MAY 28 1944

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PAR AVION

Feb 12 1957

Dear Sachlan,

This morning I received your postcard of Feb 6th, which shows that you did not receive a letter that I wrote you on Dec 21st, acknowledging receipt of the three samples from Kaju Agung. As a matter of fact I had been wondering why I had not heard from you, in response to my offer to send you some articles from the Sears Roebuck catalogue. I am enclosing a copy of this letter. This is the second of my letters that has failed to reach you, and about a year ago a letter that I sent to Australia also went astray. I wonder what happens to them; I am quite certain that they are properly addressed and stamped, and all of them bear my return address so that they ought to be returned to me if they cannot be delivered.

The three new samples have proved to be even better than I thought on my first examination. No. 148 is especially good, and it is one of those curious collections which contain a very wide assortment of desmids, though some of them are in very small numbers. In addition to those mentioned in my letter of Dec 21st, I have found several specimens of *Euastrum serratum*, which are the specific form and slightly different from those found in Borneo. Also there are *Micrasterias Torreyi* var. *Cramerii*; *M. tropica* var. *polonica* forms *evoluta* very similar to a form that I have found in Australia but with even more highly developed ornamentation. The most remarkable find is a very strange *Staurastrum*, shown in one of the enclosed sketches, quite different from any species that I have ever seen or heard of. Unfortunately I have found only one semicell of this plant, so if you ever run across it I hope you will try to send me specimens, either in bottles or on a slide.

I have been working on these three samples ever since they arrived, not every day of course, but pretty steadily, and I am still turning up an occasional desmid that has not appeared previously.

Digitized by ^{with my best regards} Herbarium Institute for Botanical Documentation

Sincerely yours,

Dear Scott, 11/26/56

Two or three days after sending this letter I will send you three desmid-samples, squeezed from aquatic plants in Raju-Agung (near Palembang - South Sumatra). All these tubes contain several little specimens of *Euastrea* and other genera, I have never seen before. For instance in tube 148 contain a specimen looking like *E. serratum* Joshi; in tube 149 occur a specimen looking like *Pseudo-arthodesmus* or *Staurastrum curvatum*, but each semi-cell of the specimen with a extreme long 4 spines. I hope you will find back these rare specimens.

Further here you already seen the paper of Karl Behre: "Die Süßwasseralgen der Wallacea-Esep" published in *Archiv für Hydrobiologie, Suppl. Band XXIII, Trop. botanogewas. XI, Heft 1* (Stuttgart 1956). In this paper he describes also ^{some} desmids from Celebes (the new name is Sulawesi) and the Philippine.

By the way, I have already received the ^{Commissioning the American} ~~handwritten~~ a large book about household-articles; my wife thanks you very much for this. Looking all this beautiful American woman dresses, now my wife would like to

get a couple of yard special American
maid nylon-acetate etc? Is it possible
to send these things to Indonesia via
parcel-post?

"Scientific American" however is a popular
American periodical in Indonesia and
our laboratory receive regularly from
the "United State of Information Service"
in Djakarta. I think Indonesia get
hardly any American periodical
via the "U.S.L.S." in Djakarta.

May be next year we have a New-
laboratory, built by the "International
Cooperation Administration" one of the
many kind of American aid for
Indonesia.

I hope in the next "Third great War",
Indonesia will maintain their Neutrality-
policy, so that American will continue
their aid for this new state!

Further I hope this coming winter
will not be too cold for you and
your wife.

Cordially.

[Signature]

Oct 1 1956

Dear Sachlan,

Your letter of Sept 15 and the three samples from Borneo arrived about a week ago; many thanks for them. One of the tubes was cracked and all the water had leaked out, but fortunately all the sediment remained in the tube and was still damp, so that the addition of a preservative solution restored it to its original condition. The desmids are in much better condition than in some of your previous samples; the chloroplast retains its structure and green coloration, making the material a good deal easier to work with.

The collection from Sekadau is the best of the three; it contains a large number and a wide assortment of species, some of them very rare, though so far I have not seen any that are not also contained in your former collections. Some of these very rare desmids are *Microsterias Torreyi* var. *Doveri*, previously seen from Muara Muntai; *Xanthidium bifurcatum*, of which I have seen only one specimen from Menggala, and somewhat different from the original Australian plant. Hitherto *X. bifurcatum* has been known only from Australia, but within the last few weeks my friend Dr. Grönblad has found it in some material sent to him from Malacca. In the tube from Sekadau there are also many specimens of a large and handsome new variety of *Mastrum turgidum* which I had seen previously in only one specimen from your collection No. 38 from Borneo. This I think is one of the most elaborately decorated desmids in the world, and I am very happy to get these additional specimens.

The two tubes from Andjungan contain fewer desmids and not so many species. They are notable chiefly for the number of different species of *Closterium*, though I think that all of them are well known. However, there is no telling what I may find in a systematic examination; so far I have only looked at a few slides from each tube.

I should think that generally speaking, fish-ponds are not the most favorable habitats for desmids, especially if they are fertilized with chemicals, as many of them are in this country. Also if they are near towns or villages the ponds may be used by domestic animals, cattle, pigs, etc., which would cause some pollution, to which desmids are particularly susceptible.

Your job of transporting 500 clams from Borneo to Bogor could not have been an easy one, and I am glad you accomplished it successfully; also I hope that you can cultivate them and induce them to grow many pearls. Your use of the word 'clam' seems a little peculiar; I have never heard or seen this word applied to freshwater molluscs, only to saltwater ones. In USA and England the freshwater genera are called 'mussels', and the *Encyclopaedia Britannica* in an article on 'Pearl' refers to *Quadrula* and three other genera as 'freshwater mussels'. Also in an article on 'Clam' it says "The American 'freshwater clams' are freshwater mussels (*Unionidae*)".

Yes, I am glad to say that the paper by Grönblad and myself on "New and interesting desmids from southeastern USA" is finished, and I hope it may be printed by the end of this year. It is a big load off my mind; I recorded the first of these new desmids 16 or 17 years ago. Of course this is only the beginning; we still have to publish my records of known desmids from USA, of which I guess there are more than 500. But we have made no start on this, and I expect it will be some years before we can start.

For the last couple of months I have been working steadily on your Indonesian material, and have made good progress, though it turns out that there are a good many more desmids to be recorded than I had thought were left. Your many collections from Menggala are very rich, and many of the desmids are extremely small, and correspondingly

difficult to see and draw correctly; I like the large ones much better, but the small species cannot be ignored. I am beginning to see the end in sight, and hope that by the end of the year I shall be finished with my examination.

The 150 reprints of the first paper on *Staurastrum Wildemani* arrived here in the middle of July, having taken exactly three months in transit. I was beginning to get worried, and thought the parcel might have been lost, but perhaps it just missed one steamer and had to wait a month for the next one. The paper is very well printed and I am happy to see that many small errors which I had corrected in the proof that I sent to Dr. Donk in Holland have been eliminated.

About two months ago I returned the corrected proof of the second paper, on *Ichthodontum Sachlanii*, so I expect that this will appear in print soon.

Last month I had a visit from Mr. Ray Specht, the Australian botanist who sent me the remarkable collections from Arnhem Land in North Australia, which are described in a paper by Scott & Prescott that I submitted just three years ago. He said that the book in which our paper will be published is now in the printer's hands, but there have been so many delays that I have given up speculating on when I may see it. He has been in the USA all this year, on a grant from some scientific society, and has been studying the 'chaparral', which as nearly as I can make out is an association of many kinds of small plants that grow in semi-arid regions like those in Australia. He has promised to send me more material when he returns home next year.

That's all the news I have at present. With renewed thanks for your cooperation and the beautiful demands that you have sent me,

Sincerely yours,

I have sent you by ordinary mail a few copies of the "Scientific American", also a large book that I think will interest not only you, but also your wife and children.

July 30 1956

Herbarium Bogoriense,
Kebun Raya Indonesia,
Bogor. Java.

Attention of Mr. J. van Borssum Waalkes.

Gentlemen,

I am returning herewith the corrected proof of the paper "Notes on Indonesian Freshwater Algae II", by Scott & Prescott. You sent the proof to Prescott but he had to forward it to me, because I prepared the manuscript and he had no copy. He made a few corrections in red ink of some obvious errors that he noted; those in blue ink are by me.

Please order 100 reprints to be sent to me, and 200 more to be sent to Prof. G. W. Prescott, with the invoice.

Very truly yours,

April 14 1956

Dr. Anwar Dilmy,
Botanical Garden,
Bogor, Java.

Dear Dr. Dilmy,

Enclosed are two copies of the manuscript of a second paper on Indonesian freshwater algae, which I hope you will accept for publication in *Reinwardtia*. Under separate cover I have sent the drawing for a plate of illustrations, which I ask that you have reduced to full-plate size, not any smaller please. I request that you order from the printer 300 reprints of the paper, 100 of which are to be sent to me with the invoice for the cost, and the other 200 are to be sent to Prof. G. W. Prescott with another invoice. His address is given in the paper. Also I would like to have the privilege of correcting the proof, and if you will send it by airmail I will check it immediately and return it, by airmail, within one or two days. The reason for this request is that although Dr. Donk had made a number of corrections on the proof of our first paper, I found quite a good many other small typographical errors.

Has our first paper been printed yet? Dr. Donk wrote me that before he left Bogor he had scheduled it for the issue of September 1955, and Mr. Sachlan wrote that he thought it would be printed about the end of last year. If it has been published please send me a copy of the issue in which it appeared, and also I would like to have news about the 300 reprints (as above) that I asked Mr. Sachlan to order.

Mr. Sachlan spoke to you a year or so ago concerning a much larger paper on the algae in all of his collections from Borneo, Java, Bali, and Sumatra. Unfortunately the work on this report has had to be laid aside temporarily in order to get out a paper on my own material from the USA, which has been waiting for a much longer time, so that at present I cannot say when the Indonesian paper will be ready. I shall communicate with you again when I can give more definite news.

A couple of months ago I wrote to Dr. Donk at The Hague, Nederland, but the letter remains unanswered. Have you had any news about him recently?

Sincerely yours,

Copy to Mr. M. Sachlan.

NOTES ON INDONESIAN FRESHWATER ALGAE. II.

ICHTHYODONTUM, A NEW DESMID GENUS FROM SUMATRA.

*ARTHUR N. SCOTT AND GERALD W. PRESCOTT.**

Ichthyodontum Scott & Prescott gen. nov.

Cells elongate-cylindric and rectangular in front view, the poles truncate and bearing at each angle a blunt spine or tooth which may be either vertically or laterally directed, the apical margin with a shallow median notch or depression; semicells slightly swollen at the base, with a circumferential supraisthmal row of blunt teeth, the two series of teeth intermeshing and completely enclosing the shallow median incision; side view of cell elongate subfusiform; basal view broadly elliptic.

Cellulae a fronte visae elongato-cylindricae rectangularioresque, polis truncatis et in utroque angulo spinam obtusam vel dentes verticaliter lateraliterve directum ferentibus, margine apicali incisuram medianam non profundam vel depressionem praebente; semicellulae ad basim subinflatae dentibus obtusis in ordine circumferentiali supraisthmalia praeditae, dentibus suborum ordinum implexis et incisuram medianam non profundam omnino includentibus; cellula a latere visa elongato-subfusiformis; a basi visae late ellipticae.

Ichthyodontum Sachlanii Scott & Prescott sp. nov. Fig. 1.

Cells of medium size, length 6 to 7 times the width, in front view elongate-cylindric and decidedly curved, apices truncate with a shallow median subcircular notch with a prominent tubercle at each side on the margin, each apical angle bearing a stout upwardly directed tooth that is prolonged into a sharp fine spine; semicells slightly swollen at the base with one lateral margin more inflated than the other,

Footnote:

*2824 Dante St., New Orleans 18, La., U.S.A.

**Dept. of Botany, Michigan State University, East Lansing, Mich., U.S.A.

and bearing a ~~xx~~ supraisthmian row of 10 longitudinal folds (5 showing) which bear each a prominent basally directed tooth, the teeth of one semicell intermeshing (not interlocking) with those of the other, thus completely enclosing the shallow median incision of the cell; cell wall sparsely punctate and having a pair of horizontally disposed mucilage pores just below the apical margin; lateral view elongate-subfusiform with the poles broadly rounded and showing an apical spine, and with a pair of opposite mucilage pores in the wall, the bases of the semicells slightly tumid, with a row of intermeshing teeth encircling the median incision; basal view broadly elliptic with 10 marginal undulations, an intramarginal ellipse of 10 small circles representing the end view of the basal teeth, and an inner ellipse representing the opening of the isthmus; chloroplast a plate or ribbon (?) containing a row of 5 or 6 prominent pyrenoids. Length including spines 142-150 μ , maximum width 19-22 μ , maximum thickness about 2 μ less than the maximum width, width at poles 22-24 μ , size of opening in isthmus (1 specimen) 12x10 μ . The type of the species is designated as the plant shown in our figure 1.

Cellulae mediocres, 6-7 plo longiores quam latae, a fronte visae elongato-cylindricae et perspicue curvatae; apices truncati incisura media ~~sub~~circulari non ^{/b} profunda, tuberculum prominens utrimque in margine habente, praediti, utroque angulo apicali dente, crassum sursum directum, in spinam acutam tenuem productum, ferente; semicellulae ad basin subinflatae, uno margine laterali plus inflato quam altero, et ordinem supraisthmialem 10 plicarum longitudinalium (5 visibilium) praebentes, plica quaque dentem prominentem basaliter versum ferente, dentibus unius semicellulae illis alterius, ut incisionem medianam non profundam omnino includant, alternantibus ac implexis; membrana cellulae sparse punctata, pari pororum mucosorum horizontaliter dispositorum, admodum infra marginem apicalem praedita; cellulae a latere visae elongato-subfusiformes, polis late rotundatis, spina apicali atque ^{/e} pari pororum mucosorum oppositorum in membrana praeditis; basibus semicellularum ^{/s} subtumidis, ordinem dentium implexorum incisionem medianam cingentium habentibus. Semicellulae a basi visae late ellipticae, 10 undulationes marginales, et ellipsam ^{/e} intramarginalem 10 circulorum parvorum (aspectum a polo dentium basalium) et ellipsam internam (foramen isthmi) praebentes; chloroplastus laminaformis taeniaformisve (?)

ordinem 5 vel 6 pyrenoideorum prominentium continens. Longitudo cellulae cum spinis 142-150 μ , latitudo maxima 19-22 μ , crassitudo maxima ca. 2 μ minor quam latitudo maxima; latitudo ad polos 22-24 μ , magnitudo foraminis in isthmo (uno in specimine) 12x10 μ . Typus speciei ut planta in figura nostra 1 depicta designatur.

Ichthyodontum Sachlanii var. parorthium Scott & Prescott var. nov. Fig. 2.

Cells of medium size, length about 6 times the width, in front view elongate-cylindric and almost but not quite straight, apices truncate and slightly elevated with a shallow median depression, each apical angle produced laterally into a stout tooth that bears ~~xx~~ a sharp, fine, downwardly ~~curved~~ spine; semicells slightly swollen ^{/c} at the base with one lateral margin more inflated than the other and bearing a ~~xx~~ supraisthmian row of 10 longitudinal folds (5 showing) which bear each a prominent basally directed tooth, the teeth of one semicell alternating and intermeshing (not interlocking) with those of the other, thus completely enclosing the shallow median incision of the cell; cell wall sparsely punctate and having a pair of horizontally disposed mucilage pores just below the apical margin; lateral view elongate-subfusiform with the poles broadly rounded with a tubercular swelling, and with a pair of opposite mucilage pores in the wall, the bases of the semicells slightly tumid, with a row of intermeshing teeth encircling the median incision; basal view broadly elliptic with 10 marginal undulations, an intramarginal ellipse of 10 small circles representing the end view of the basal teeth, and an inner ellipse representing the opening of the isthmus; chloroplast a plate or ribbon (?) containing a row of 5 or 6 prominent pyrenoids. Length 132-136 μ , maximum width 22-24 μ ; maximum thickness about 2 μ less than the maximum width, width at poles 17-21 μ , size of opening in isthmus about 12x10 μ . The type of the variety is designated as the plant shown in our figure 2.

Cellulae mediocres, ca. 6 plo longiores quam latae, a fronte visae elongato-cylindricae, fere sed non omnino rectae; apices truncati et aliquantulum elevati, depressionem medianam non profundam habentes, utroque angulo apicali lateraliter producto in dentes crassum, spinam tenuem acutam deorsum curvatam ferentem; semicellulae ad ^{/a} basin subinflatae, uno margine laterali plus inflato quam altero, et ordinem supra-isthmialem 10 plicarum longitudinalium (5 visibilibus) praebentes; plica quaque dentem

prominentem basaliter versum ferente, dentibus unius semicellulae illis alterius
 tam alternantibus et implexis ut incisionem cellulae mediae non profundam omnino
 includant; membrana cellulae sparse punctata, pari pororum mucosorum horizontaliter
 dispositorum admodum infra marginem apicalem praedita; cellulae a lateae visae
 elongato-subfusiformes, polis late rotundatis inflatione tuberculari et pari pororum
 mucosorum oppositorum in membrana praeditis; basibus subtundis, ordine dentium
 implexorum incisionem ^{mediam} circumdantium praeditis; semicellulae a basi visae late
 ellipticae, 10 undulationes marginales, et ellipsem intramarginalem 10 circulorum
 parvorum (aspectum a polo dentium basium), et ellipsem interiorum (foramen isthmi)
 praesentes; chloroplastus laminaformis taeniaformisve (?) ordinem 5 vel 6
 pyrenocidiorum prominentium continens. Longitudo cellulae 132-136 μ , lat. max. 22-24 μ ,
 crass. max. ca. 2 μ minor quam lat. max., lat. ad polos 17-21 μ , foramen isthmi ca.
 12x10 μ . Typus varietatis ut planta in figura nostra 2 depicta designatur.

Among the many samples of freshwater algae sent to us by Mr. E. Sachlan, of
 the Laboratory for Inland Fisheries at ~~Kanungu~~ Bogor, Java, there were two of special
 interest, not only for their content of many unusual and little-known desmids, but
 because they contained the strange new genus described herein. These samples were
 collected from a swamp near the town of Menggala, South Sumatra, about 75 km. north
 of Talukbetung, at the extreme southern end of the island. One sample was taken from
 open water, whereas the other was collected just above submerged vegetation; the pH
 of both was 6.5. There was not difference in the desmid-content of the two vials.

During our preliminary examination of this material we came upon the very
 peculiar desmid shown in Figs. 3, 4 and 5. It is extremely rare, and a search of
 perhaps 25 slides revealed only 7 specimens. All of them were alike, except for
 very small variations in size. There are several peculiarities that are apparent
 at first glance. First is the unusual curvature of the whole cell, and the different
 degree of curvature of the two semicells, one being almost straight and the other
 decidedly and asymmetrically curved. Second, the ~~structure~~ structure of the two poles
 is different, one of a fishtail shape with a small circular incision nearly but not
 quite in the center, and the other having the angles produced laterally, the center

slightly raised and with a small shallow depression in the center. Third, the large intermeshing teeth at the base of the semicells. (Note that we have intentionally used the word 'intermeshing' instead of 'interlocking'. Even in the filamentous desmids like Onychonema and Micrasterias foliacea, whose apical processes are described as interlocking, there is not, and cannot be, any real 'lock' between adjacent cells). Fourth, the existence of two large mucus pores just below the apices. Such a combination of characters is not possessed by any existing desmid genus, though the individual characters are to be found in several different genera. Curved cells are almost universal in Glosterium, in certain species of Mesotaenium and Roya, in some local forms of Triploceras gracile, and one or two species of Pleurotaenium. The 'fishtail' pole suggests Ichthyocercus, and indeed the overall appearance of the plant has a certain general resemblance to this genus, particularly Ich. longispinus. Semicells of Docidium and some species of Euastrum have basal teeth; in Euastrum the teeth sometimes overlap slightly, but they never intermesh completely as in the new plant. In Euastrum there are also some species with polar structures similar to those illustrated, and the two pairs of mucus pores are a Euastrum characteristic.

In all the specimens seen by us the chloroplast had deteriorated to such an extent that its structure could not be determined, though it seems to be an axile plate or ribbon. Two or three examples still showed the pyrenoids, which appear to be either five or six in each semicell, arranged along the axis.

Because of the discovery by Scott, about a year previously, of the genus Amscottia from Brazil, of which all the 100 or more specimens possessed unlike semicells, it was thought that the new plant from Menggala was of a similar nature. Sketches of it were sent to the late Dr. W. Krieger in Germany, to Dr. Rolf Gr nblad in Finland, and to Lektor Einar Teiling in Sweden, all of whom replied that in their opinions the unique features of the plant justified the creation of a new genus. In the meantime our examination had been continuing, and altogether we had found 14 specimens, while another 10 specimens had been seen by Sachlan, providing a total of 24 all alike and with differing semicells. But the 25th specimen, shown in our Fig. 1,

proved a surprise, because both semicells were alike, with poles of the fishtail type. It then became evident that there probably existed another form with both poles of the slightly elevated type and with laterally produced angles, so a deliberate hunt for it was started. After several days of rather tedious search a single example was found, illustrated in our Fig. 2. Clearly, then, the first 24 specimens were dichotypical cells, combinations of what may be called the two different 'basic' types.

In view of the exceptional interest of this plant, we asked Mr. Sachlan to try to obtain some living material that could be submitted to experts for culture. We suggested that he take a number of samples from various places in the swamp, and particularly squeezings from as many different aquatic plants as possible, since squeezings generally yield a greater number of individuals and a wider diversity of desmid species than do plankton collections. In April 1955 Mr. Sachlan very kindly revisited the swamp at Menggala and made 32 collections from different places, including squeezings from Limnanthemum indicum, Najas, Cabomba, Utricularia, and grass, also some plankton samples. He sent 13 of the best collections to us, two tubes containing living specimens of the new desmid to Dr. Paavo Kallio at the University of Turku, Finland, and two more with living specimens to Dr. Richard C. Starr at Indiana University, U.S.A. Although they were sent by airmail, the samples when received in Finland were in poor condition, with many of the desmids dead or dying. Dr. Kallio found a few specimens of the dichotypical cells but they failed to survive when transferred to a culture medium, though some other larger and apparently more robust desmids lived and were thriving nicely at last reports. The material in the two tubes sent to Dr. Starr was in even worse condition, no doubt owing to the longer time in transit, and he was unable to induce any of the desmids to develop.

In the 13 samples received by us during 1955 the new plant is still so extremely rare that it is not possible to draw any conclusions as to whether one of the macrophyte habitats was more favorable than others. Specimens of the new desmid have been found in Sachlan's collections marked E, K, P and R (Our numbers Sumatra 112, 113, 114, 115).

No specimens have been found so far in the other vials, but it is ~~xx~~ still possible that they may appear after further examination.

The situation at present is this: in the two original collections made in 1954 and the 13 from 1955 a total of 59 dichotypical specimens has been seen, 28 by us and 31 by Sachlan. Of the basic type, symmetrical with fishtail poles, 5 specimens have been seen, 2 by us and 3 by Sachlan, and of the other symmetrical type with elevated poles 4 have been seen, 2 by us and 2 by Sachlan. The dichotypical cells therefore are about 7 times more plentiful than the two basic types combined, which shows that the dichotomy must be a genetic character, as it evidently is in Amscottia and in the varieties of Staurostrum Wildemani described by us (Scott & Prescott 1955 ?).

From an examination of our illustrations, Figs. 3-5, it will be noted that in the ~~xx~~ dichotypical form of this plant the semicells of the fishtail type differ from those with the somewhat elevated poles, being more curved, more slender, and longer, with a less pronounced basal inflation. This is borne out in the individuals with similar cells, but because only 2 specimens of each have been seen by us, it is not certain that this always would be true. The unequal and asymmetrical curvature of the lateral margins in both the species and the variety is a very peculiar feature, quite unknown in any other genus except Glosterium.

Bipolarity in desmids in artificial (culture) conditions has been demonstrated and discussed by Kallio (Ortoft & Kallio 1954) and by Ward (1950-1951). The "cytoplasmic structural units" postulated by Kallio (l.c.) would satisfactorily explain asymmetry in Micranterias with which he is working. Whether such "units" are universally operative in desmids is of course open to conjecture and worthy of experimental studies. It will be of interest, should Ichthyodontus Sachlanii be brought into culture, to follow the behavior of cells undergoing division and to trace the appearance of bipolarity following conjugation. We need to know whether polarity that may exist at or immediately after zygospore ~~formation~~ germination persists through successive generations of new semicells. Does the semicell with an incised polar lobe, for example, produce a similar semicell (as in the case of Micrasterias), or is the new daughter cell dichotypical? The large number of bipolar specimens indicates that the latter is true. Thus, if cytoplasmic structural units are operative

in this plant, it follows that there must be polarity within the units themselves. When they are severed at division of a bipolar cell the portion of the unit near the base of the semicell may retain a character or an 'influence' possessed by the other half of the unit. Thus, when the new semicell is constructed on the two asymmetrical old semicells, they each form a new semicell similar to their previously possessed semicells, continuing bipolarity therefore through successive generations. Inasmuch as it is inconceivable that the properties of the "cytoplasmic structural units" are not under the control of the nucleus and its genetic composition, there remains the obvious necessity of studying such dichotypical plants through genetic union. Therein lies a field of research replete with possibilities of contributions to our knowledge of genetics in the algae.

In order to differentiate between the two basic forms it has been necessary for us arbitrarily to designate one of them as the species and the other as a variety, though there is nothing to indicate which of them, if either, is entitled to the higher rank. We recognize, of course, that a desmid species is not one particular form exemplified by one or a few specimens or by a single drawing, but a population in which the individuals may exhibit considerable variation in size, shape and ornamentation, or in other cases may be so nearly alike that microscopical examination fails to reveal any appreciable difference between them. Although the dichotypical form of our plant was first seen and has occurred in larger numbers, it seems necessary to treat the asymmetrical plant as the type for diagnostic purposes. It is hoped that at some future time it may be possible to obtain additional living material that can be cultured successfully and submitted to experimentation that may reveal the relationship between the two different forms and the causes that are responsible for the dichotomy.

Explanation of the illustrations.

- Fig. 1. Ichthyodontum Sachlanii Scott & Prescott gen. et sp. nov.
 2. Ichthyodontum Sachlanii var. parorthium Scott & Prescott var. nov.
 3-5. Dichotypical specimens combining the species and the variety.
 6. Ich. Sachlanii. Front, side and basal views of a semicell.
 7. " " Larger detail of the polar structure.

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- Grönblad E., and P. Kallio. 1954. A new Genus and a new Species among the Desmids. *Bot. Notiser* 1954:2, 167-178, and correction 1954:4, 433.
- Scott, A.M., and G.W.Prescott. 1955 ? Notes on Indonesian freshwater algae I. *Staurostrum Wildemani* Gutw. (*Desmidiaceae*). *Reinwardtia* _____

Insert at end of text.

We wish to acknowledge with many thanks the assistance rendered by Dr. Hannah Croasdale, who made the Latin translations of the diagnoses, and by Mrs. Dorothy Perine, who inked Scott's pencil drawings.

NOTES ON INDONESIAN FRESHWATER ALGAE. II.

EUASTROIDES, A NEW DESMID GENUS FROM SUMATRA.

ARTHUR M. SCOTT AND GERALD W. PRESCOTT.

Among the many samples of freshwater algae sent to us by Mr. M. Sachlan, of the Laboratory for Inland Fisheries at Bogor, Java, there were two of special interest, not only for their content of many unusual and little-known desmids, but because they contained the strange new genus described herein. These samples were collected from a swamp near the town of Menggala, South Sumatra, about 75 km north of Telukbetung, at the extreme southern end of the island. The water of the swamp was clear, with a pH of 6.5, and one sample was taken from open water, while the other was taken just above submerged vegetation. There was not much difference in the desmid content of the two vials.

During our preliminary examination of this material we came across the very peculiar desmid shown in our Figs. 3, 4 and 5. It is extremely rare, and a search of perhaps 25 slides revealed only 7 specimens. All of them were alike, except for very small variations in size. There are several peculiarities that are apparent at first glance. First, the unusual curvature of the whole cell, and the different degree of curvature of the two semicells, one being almost straight and the other decidedly and asymmetrically curved. Second, the different structure of the two poles, one of a 'fishtail' shape with a small circular incision in the center, and the other with the angles produced laterally, the center slightly raised and with a small shallow depression in the center. Third, the large intermeshing teeth at the base of the semicells. Fourth, the existence of two large mucus pores just below the apices. Such a combination of characters is not possessed by any existing desmid genus, though the individual characters are to be found in different genera. Curved cells are almost universal in Closterium, in certain species of Mesotaenium and Roya, in some local forms of Triploceras gracile, and one or two species of Pleurotaenium. The 'fishtail' pole suggests Ichthyocercus, and indeed the overall appearance of the plant has a certain general resemblance to this genus, particularly Ichth. longispinus. Docidium and some species of Euastrum have basal teeth; in Euastrum the teeth sometimes

overlap slightly, but they never intermesh completely as in the new plant. In Euastrum there are also some species with polar structures similar to those illustrated, and the two pairs of mucus pores are a Euastrum characteristic.

Because of the discovery by Scott, about a year previously, of the genus Amscottia from Brazil, of which all of the 100 or more specimens possessed unlike semicells, it was thought that the new plant from Menggala was of a similar nature. Sketches of it were sent to the late Dr. W. Krieger in Germany, to Dr. Rolf Grönblad in Finland, and to Lektor Einar Teiling in Sweden, all of whom replied that in their opinion the unique features of the plant justified the creation of a new genus. In the meantime our examination had been continuing, and altogether we had found 14 specimens, plus another 10 specimens seen by Sachlan, a total of 24 all alike and with differing semicells. But the 25th specimen, shown in our Fig. 1, proved a surprise, since both semicells had poles of the fishtail shape. It then became evident that there must exist another form with poles of the slightly elevated shape and with laterally produced angles, so a deliberate hunt for it was started. After several days of rather tedious search a single example was found, illustrated in our Fig. 2. Clearly, then, the first 24 specimens were dichotypical cells, combinations of what may be called the two different 'basic' types.

In view of the exceptional interest of this plant, we asked Mr. Sachlan to try to obtain some living material that could be cultured and submitted to experiment by experts in this line. We suggested that he take a number of samples from various places in the swamp, and particularly squeezings from as many different aquatic plants as possible, since squeezings generally yield ~~xxx~~ a greater number of individuals and a larger variety of desmid species than plankton collections. Also we hoped that perhaps one of these aquatic macrophytes might afford a micro-habitat that because of slightly different physico-chemical characteristics would prove somewhat better for this particular desmid, and thus provide more specimens. In April 1955 Mr. Sachlan very kindly revisited the swamp at Menggala and made 32 collections from different places, including squeezings from Limnanthemum indicum, Najas, Sabomba, Utricularia, and grass, also some plankton samples. He sent 13 of the best samples to us, and also

two tubes containing living specimens of the new desmid to Dr. Paavo Kallio at the University of Turku, Finland, and two more with living specimens to Dr. Richard C. Starr at Indiana University, U.S.A. Although they were sent by airmail, the samples ~~xxxxx~~/when received in Finland were in poor condition, with many of the desmids dead or dying. Dr. Kallio found a few specimens of the dichotypical cells but they failed to survive when transferred to a culture medium, though some other larger and apparently more robust desmids lived and were thriving nicely at last reports. The material no doubt owing to the longer time in transit, in the two tubes sent to Dr. Starr was in even worse condition, and he was unable to get any of the desmids to grow.

In the 13 samples received by us during 1955 the new plant is still so extremely rare that it is not possible to draw any conclusions as to whether one of the macrophytes was more favorable than the others. Specimens of the new desmid have been found in Sachlan's collections marked E, K, P and R (our numbers Sumatra _____). No specimens have been found so far in the other vials, but it is still possible that they may turn up on further examination.

The situation at present is this: in the two original collections made in 1954 and the 13 from 1955 a total of 59 dichotypical specimens has been seen, 28 by us and 31 by Sachlan. Of the basic type with fishtail poles 3 specimens have been seen, 2 by us and 3 by Sachlan, and of the other basic type with elevated poles 4 have been seen, 2 by us and 2 by Sachlan. The dichotypical cells therefore are about 8 times as plentiful as the two basic types combined, which shows that the dichotomy must be an inherited character, as it evidently is in Amscottia and in the varieties of Staurostrum Wildemani described by us (Scott & Prescott 1955?).

From an examination of our illustrations it will be noted that in the dichotypical forms of this plant the semicells of the fishtail type differ from those with the somewhat elevated poles, being more curved, more slender, and longer, with a less pronounced basal inflation. This is borne out in the cells with similar semicells, but since only 2 specimens of each type have been seen, it is not certain that this is always true. The unequal and asymmetrical curvature of the lateral margins in both the species and the variety is a very peculiar feature, quite unknown in any other genus except Closterium.

In all the specimens seen by us the chloroplast was deteriorated to such an extent that its structure could not be determined, though it seems to be an axile plate or ribbon. Two or three examples still showed the pyrenoids, which appear to be either 5 or 6 in each semicell, arranged along the longitudinal centerline.

In order to differentiate between the two basic forms it has been necessary for us ~~to~~ arbitrarily to designate one of them as the species and the other as a variety, though there is nothing to indicate which of them is entitled to the higher rank. We recognize, of course, that a desmid species is not one particular form exemplified by one or a few specimens or by a single drawing, but a population in which the individuals may exhibit considerable variation in size, shape, and ornamentation, or in other cases may be so nearly alike that microscopical examination fails to reveal any appreciable differences between them. It is hoped that at some future time it may be possible to obtain additional living material that can be cultured successfully and submitted to experimentation that may reveal the relationship between the two different forms and the causes that are responsible for the dichotomy.

References.

1954. Grönblad, R., and P. Kallio. A new Genus and a new Species among the Desmids. *Bot. Notiser* 1954:2, 167-178, and correction 1954:4.
 1955. Scott, A.M., and G.W.Prescott. Notes on Indonesian freshwater algae I. *Staurastrum Wildemani* Gutw. (Desmidiaceae). *Reinwardtia*

Explanation of the illustrations.

- Fig. 1. *Euastroides Sachlanii* Scott & Prescott, Gen. et sp. nov.
 2. *Euastroides Sachlanii* var. *parorthius* Scott & Prescott, Var. nov.
 3, 4, 5. Dichotypical specimens combining the species and the variety.
 6. Front, side and basal views of a semicell of the specific form.
 7. Larger detail of the polar structure of the specific form.

Note: I have suggested the name EUASTROIDES because when they are tabulated, nearly all of the characteristics are seen to be *Euastrum* features, and that there is only a superficial resemblance to *Ichthyocercus* or *Docidium*. Please check whether *Euastroides* is masculine or neuter.



KEMENTERIAN PERTANIAN
DJAWATAN PENJELIDIKAN ALAM (KEBUN RAYA INDONESIA)

HERBARIUM BOGORIENSE

All communications
to be addressed to
The Keeper
Herbarium Bogoriense
Bogor, Indonesia.

BOGOR,

May 8,

19 56.

No. *12/240*

Lampiran:
Enclosure:
Perihal :
Subject:

Dr. Arthur M. Scott
2824 Dante Street
New Orleans 18, L.A.
U.S.A.

Dear Dr. Scott,

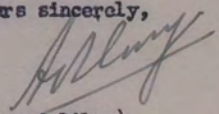
I have received the two copies of your second paper on Indonesian freshwater algae as well as the drawing, which I shall have reduced according to your request.

The last number of *Reinwardtia*, which contains your first article, has just been published. The 100 reprints for the author, free of expense, have been sent to your address by surface mail and the 200 reprints for Prof. Prescott with the invoice will be sent to him separately. In both dispatches a specimen of the *Reinwardtia* instalment has been enclosed.

I will send you the proofs immediately for the correction and the 300 reprints of this article will be ordered as requested.

We have not heard from Dr. Donk since he left. He is still an honorary collaborator of *Reinwardtia*. According to Mr. M. Jacobs he indeed keeps letters some time before answering them.

Yours sincerely,


(Anwaril Dilmy).

New Orleans, May 25 1956.

Dear friend Sachlan,

I was glad to get your letter of Apr 17th, advising that the paper on *St. Wildemani* has been printed and that the reprints are on the way. No doubt Prescott and I will receive them in the next couple of weeks.

This is the first opportunity I have had of replying to you, because for more than three months I have been working intensively on the new paper by Scott & Grönblad which I mentioned in my last letter. Only two days ago I finished the last of 37 plates of drawings illustrating about 160 new desmids that have accumulated during the 17 years I have been collecting in southeastern USA. In addition I have typed the Latin and English diagnoses for them, and have added comments on their affinities in many cases. The last of the drawings and descriptions will go to Finland in the next few days, and it will be published there, I hope by the end of this year. It will be a very important contribution to the desmid literature of the USA, and is the biggest job of illustrating that I have yet undertaken.

I am glad to get this work out of the way before the start of hot weather, which is just now starting. It is not very pleasant trying to make nice drawings in a temperature of 95 to 100°F. (35 to 38°C.) and with the humidity so high that perspiration just drips from your face. Even with an electric fan blowing directly on you, your arm sticks to the paper and causes it to wrinkle, and all the sketches and notes have to be weighted down to keep them from blowing away.

After I have cleaned up some arrears of correspondence and have attended to one or two other small pieces of work, I can go to work again on your Indonesian collections, and I do not know of anything that can interfere with the finishing of this work.

About a week ago I received a nice letter from Dr. Anwari Dilmy acknowledging the receipt of the manuscript of the paper on *Ichthyodontum Sachlanii* and my drawing of the plate of illustrations. He will send the proofs to me for correction. I am glad of this, because apparently the corrected proof of the *St. Wildemani* paper, which I returned to Dr. Donk in Holland, was not sent to Bogor, for Dr. Dilmy wrote that he has not heard from Dr. Donk since he left Indonesia; he has not answered my last letter either, so perhaps something has happened to him.

It is good news that you are going to visit the River Kapuas region in Borneo and that you will collect more desmids from that very rich locality. In addition to the plankton samples that you will take for your own investigations, I would suggest that you also get as many squeezings as possible, from aquatic plants in shallow water around the edges of the lakes, ponds and swamps. I have found that squeezings give not only a larger quantity of material, but they are less encumbered with rotifera, crustaceans, etc., and also contain a wider assortment of desmids. I think that in some of your former collections you perhaps have used too much formalin; at least that is the only explanation I can find for the deterioration of the chloroplast, which in some samples has turned to a greyish-green amorphous mass completely filling the cell, and preventing the observation of the surface ornamentation on which identification largely depends. 4% to 5% formalin is quite sufficient. I don't suppose there will be any chance of your sending any living material from that rather remote region to Dr. Kallio or Dr. Starr, but if you do, remember to use larger tubes half-filled with water, and containing only about 5% to 10% of sediment. I shall look forward with great interest to receiving some new material from Borneo.

Your President, Dr. Soekarno is now in this country and has been received by President Eisenhower. The newspapers and magazines have given him excellent write-ups and I am glad to know more about him, for we get comparatively little news from your country.

Sincerely yours,

Dec 29 1955

Dear Sachlan,

Thanks for your Christmas card, which I received on our return from a brief vacation over the Christmas holidays.

Yes, I received your letter of Nov 13th, but delayed answering it until I could get a reply from Prescott concerning our next paper. He answered one of my letters, but I had to write him again two weeks before Christmas and he had not yet replied, no doubt because of the rush of work at the University just before the holidays. At this time of the year he usually visits his daughter and son-in-law, who had a baby a few months ago. I think the University opens again about January 15th, so I ought to get a letter from him soon thereafter, and then I can proceed to draw the plate for the next paper, which will deal with the new *Ichthyocercus*-like desmid from Menggala.

From your letters it is evident that you are getting anxious about the publication of a larger paper dealing with all your collections, which is only natural. When I first got started on desmids, 17 years ago, I used to wonder why it took so long to get results into print. The reason is simply that there are so few specialists in desmid taxonomy that all of them (including me) have more material on hand for study than they can handle at one time. When I saw Prescott a year ago he told me that he had on hand fairly extensive collections from India, Fiji, and the Philippines, in addition to his own very large series of gatherings made during two expeditions to northern Alaska, two to Ecuador, and one to Mexico, plus some others that he had made in Montana and Oregon. Grönblad has material from southern Alaska, Labrador, Uganda, the Sudan, and his own collections from Italy and Finland, in addition to my very large series from southern USA, Cuba, Mexico, Central America and Panama. In addition to your material I have 50 collections from Brazil partly worked up, some from Uruguay untouched, a few from Peru almost ready for publication, and others from south, central and north Australia, Queensland, and Tasmania on which I have done some work.

Of my own material from USA, collected during each of the last 17 years, I have succeeded in getting into print only the genera *Spinocosmarium*, *Euastrum*, and *Micrasterias*, plus a few odds and ends. One of the principal reasons for my visit to Europe last summer was to try to speed up publication of my own desmids. In this I have been successful to some extent; Grönblad is now writing up descriptions of about 160 new species and varieties that we found in my more than 3000 drawings, and I hope this paper can be finished next year. But this is only 160 out of a total that I estimate to be about 1000 desmids; when the remainder can be published I simply do not know; it will probably take several more years.

When I returned from Europe I brought back with me about 100 of my desmid drawings on which Grönblad required more information or additional specimens for exact determinations; some of them are new species or varieties that have to be included in his paper. Since my return I have spent all my spare time hunting for specimens, but it is a very lengthy and tedious business searching for one certain desmid, which is probably extremely rare, among many thousands of others. However, this work is nearly completed, and I expect to return the drawings to Grönblad within the next couple of weeks. Then I can resume work on your material.

What remains to be done in your collections is that I have to go through them once more to pick up a number of desmids that I know I failed to record, for one reason or another, during my previous examinations. Most of them are common species

but there are others on which I was unable to get all the information previously. This should not take very long, and then I can send the whole lot of drawings to Prescott for checking of my identifications and writing of the formal descriptions.

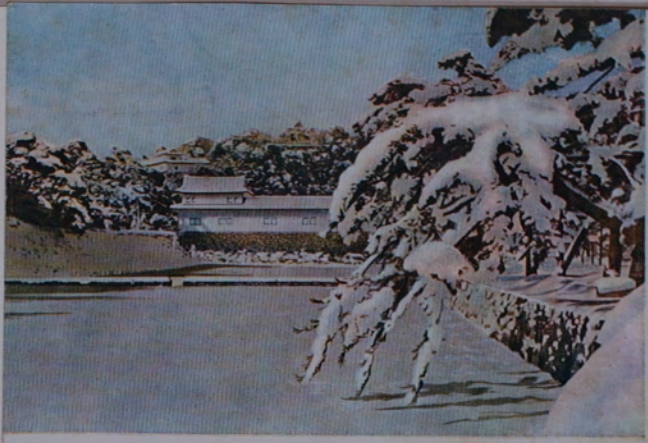
I am quite in agreement with your suggestion to omit illustrations of the well-known species in order to reduce the length of the paper and the number of plates. But I hardly see how we could make an exception to this in the case of Borneo unless we make a separate paper for Borneo along, which could be done easily enough. But even then there would not be much use illustrating the well-known species, by which I mean the cosmopolitan ones that occur all over the world, and of which dozens of illustrations are available. I should think that if they are listed, without illustrations, it ought to be sufficient. Generally speaking the desmid flora of Borneo is quite similar to those of Java and Sumatra as shown in your collections. Of course there are some exceptions, but not so many as you might think.

I shall be glad to write to Dr. Anwar Dilmy if you wish, but Dr. Donk very kindly offered to see our future papers through the press. He is undoubtedly a very careful and meticulous editor, and since he is a specialist on fungi perhaps he knows more about the other classes of cryptogams than Dr. Dilmy, also perhaps more about the special requirements and procedures of Reinwardtia.

I have been able to examine the 11 samples from Menggala, and have found a good many examples of the dichotypical form of the new genus, but only one specimen each of the two basic forms with symmetrical semicells. Enclosed is a photo of one of them.

With my best regards,

Sincerely yours,



雪のいろは松

"Iroha-matsu" Pine-trees in Snow

Digitized by Hunt Institute for Botanical Documentation

Dear Scott, Pos 40A
RA
Wishing you and your
wife, a merry Christmas
and a Happy-New-year



Greetings from -
Indonesia -

Sachlan -

P.S. Do you receive my
letter 1 1/2 month. ago?

SACHLAN.
Lab. for. Inl. fisheries
Tjikeumuh 99 Born Indonesia

Mr. A. M. Scott
1824 Dantesti
New-Orleans
Louisiana
LI-S-A

Dear Scott,

Bogor, April 17, '56

It is now just 4 months ago since I sent you my last letter and during these months frankly speaking I have nothing to say any importance to you.

According to the News-paper, there was a "Cold-wave" in U-S-A too and I hope that you and your wife have no any troubles during this extreme winter! I think, it is spring now. Dr Prescott send me now regularly "The Michigan state Univ. magazine" and further "Majestic Montana".

By the way, the paper about "St. Wildemanii" is just printed now, and within a short distance you will receive the reprints; I hope you are satisfied with the "shape" of the reprints. Meanwhile I send you me copy of the journal itself by ordinary mail.

Further I will inform you that on the second week of June I will make a tour along the river Kapuas in Kalimantan (Borneo) during $\pm 1\frac{1}{2}$ months for the possibilities of pearl-cultures in freshwater clams occurring in the lakes in the environs of the great river. Of course I will take plankton-samples to complete our collection particularly the desmids material. May be you will make any suggestions about taking desmids-samples before I go to the Kapuas-River. As you know Dr Voss took the first plankton-samples of this region.

Our President, Dr Soedarwo is invited by Pres. Eisenhower, and will be a guest of your government during the month May. He will visit several big cities in the U-S-A, but I don't think, that he will visit New-Orleans.

I hope you will write me too.

Sincerely yours

J. Han

Dear Scott,

Bogor Nov. 13rd 1955

I am very delight in receiving your letter. Frankly speaking I expect your letter more earlier, because you write several times that you will be back in New-Orleans in Sept. 1st. So three days before receiving your letter, I wrote Mrs Nixon (I don't know that she is your sister!) asking information about you and your wife. I was afraid that there is something wrong with you. From her I got a letter telling me that you are all right and going back to New-Orleans a month later.

Ofcourse I received your two letters, one from Paignton and one from Karis-Finland and also the lovely stamps from Monaco etc - I thank you very much. It is a pity that the "Peltogy-cercus" can not survive. Next time better, if I have the opportunity to send them to Dr Kallio & Dr Starr. At any rate I am able to keep them alive during three months but unfortunately they won't like vegetative cell-division has not taken place.

By the way, now about your next paper on Indonesian desmids, which according you will require $\pm 1\frac{1}{2}$ issues. I have met the new-editor Anwar Dilmy (Head of the Herbarium in Bogor) and promises me that he would

like accept your next paper - and will be
printed next year, if you will ^{send} the manuscript
There is a "budget" for next-year for printing
several several issues. It is better that you
write Anwar-Wilmy himself and call my
name in the letter. Dr Donk is still working
as scientific adviser of the Reinwardtia. I
will suggest you, if it is possible to submit
only the drawings the well-known species,
except these from Borneo, because the desmids
of Borneo is never investigated before.

Your paper about *Str. Waldemanni* will be
printed at the end of this year. A week ago I
received a letter from Dr. Prescott asking me being
"Ichthyocercus".

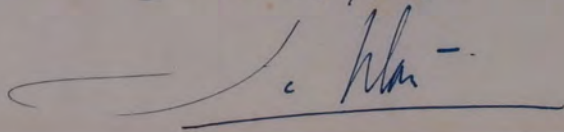
At this moment International Seminar on Inland-
fisheries is held in our laboratory and one of the
lecturer from abroad is Dr. David S. Frey Zoolo-
gist at the Indiana-University - Bloomington.

He is a good limnologist too and is a friend of
Dr. Starck and Dr. Prescott. He and I will visit the
Lake of Poali to investigate some Crater-lakes.

His specialité is to investigate the total
thickness of the lake-sediments and in this
way he can make out the "age" of the lake.
- a very interesting-work "

I hope you write me soon about your
next-paper.

Sincerely yours -


C. Wilmy

Oct 13 1955

Dear Sachlan,

We got back to New Orleans from England two weeks ago, and since then I have been quite busy getting things straightened out after our absence of five months. In the large accumulation of mail that awaited us I found your letter of April 26th, and a week ago there arrived your letter of July 23th, in the box with the 70 empty tubes and the 6 tubes containing the remainder of the material from Menggala. Also the reprint of the paper by Dr. Vaas and yourself had arrived sometime during our absence. Many thanks for your trouble in sending these things.

You do not mention having received a letter which I mailed to you ~~from~~ early in July from Finland, telling you that Grönblad and I had visited Kallio at the University of Turku. In case this letter went astray I will repeat that we talked with Kallio in his laboratory for a couple of hours, and he showed his cultures and demonstrated his methods of manipulating single desmids and centrifuging them. Unfortunately, the living material that you sent him arrived in poor condition, and the two or three specimens that he found of the dichotypical form of the new "Ichthyocercus" failed to survive after he had transferred them to a nutrient solution, though two other desmids, *Dysphinctium Lagerheimianum* and *Micrasterias foliacea* were growing nicely.

Dr. Starr wrote to me last May, when I was in England, that of the two tubes that you sent him one was broken and the other was full of liquid and the desmids in bad condition, and that he was doubtful if any of them would revive in a culture medium. I have not heard from him since then, so I shall write and ask if by some miracle he has found the "Ichthyocercus" and been able to cultivate it. If the tubes that you sent him are the same size as the small ones that you sent to me, may I point out that they are quite unsuitable for living material. The ones that Kallio uses for shipping are regular test-tubes about 18x125 mm, only half-filled with water, and a very small quantity of algal material in the tube.

I got my microscope back a few days ago, but found that the lenses and prisms are clouded with a growth of mould or fungus, because of our very humid and hot climate. Before I can do any serious work with it I shall have to clean these things, and this is a difficult job because of the complicated arrangement of prisms in the minocular body. So I have not yet had an opportunity of examining the new material from Menggala. After I have done so, and seen what additional evidence I can find, I shall send it on to Prescott and ascertain his opinion as to how we shall handle it. At present I think we shall have to describe the two "basic" forms as two new species, or perhaps one species and a variety, with the dichotypical form as a combination of the two. Then I will write it up and after obtaining Prescott's approval I will send the paper and drawings to you so that you may handle it with the new editor of *Reinwardtia*.

Before he left Java, Dr. Donk sent me the corrected proof of the paper on *St. Wildemani*, and said that he had been able to squeeze it into the September issue. There were still a few minor errors in spelling but they were not important, and anyway it was too late to do anything about them. I hope that the reprints will get here in the next month or so, and I would like you also to send me a copy of the journal containing the paper. My wife and I were in The Hague for two days, but apparently it was about a week before Dr. Donk arrived there. I should liked very much to have made his acquaintance. He wrote me a nice letter, and said there was a possibility that he might continue editing the journal for the *Cryptogams*.

Your photograph of *Micrasterias mahabuleshwarensis* with long spines seems to be the same as a new variety that I had already seen in your collection from Lake Semedo in West Borneo, of which I am enclosing a sketch. There is a slight difference in the shape of the upper lateral lobes, but the division of the lobes into two unequal parts makes it almost certain that the two are the same. It is a very distinctive variety, and I propose to call it var. *spiculifera*.

Five or six weeks ago I sent you from England a package of stamps from various countries that I picked up during my travels, and I hope that some of them will be of interest. You had asked for some stamps of Monaco, particularly low values, and I enquired for them at a large stamp shop in Paris. But there are so many issues that I could not tell which to send, and thought the best thing to do was to send you a mixture. If you can describe more clearly the issues and values that you want, I can doubtless obtain them from a very good stamp shop here in New Orleans.

With my best regards,

Sincerely yours,

April 30 1955

Dear Sachlan,

Today I received your letter of April 23rd, and the box of samples from Menggala, all in good conditions. Please accept my sincere thanks for the trouble you went to in securing this material, and your care in sending it to me and to Dr. Starr.

Of course it is unfortunate that the "Ichthyocercus" is not to be found, but this was not entirely unexpected, for I have had similar experiences in revisiting a habitat in the hope of getting more specimens of certain desmids, but found when I returned home that none of them were in the catch. Anyway there are plenty of highly interesting species, and I am sure that Dr. Starr will be amazed when he sees them, for I think his experience has been with American desmids and some European species that he got from across the Atlantic. Did you know that he has a very large assembly of living cultures, not only of desmids but many other freshwater algae?

I am not able to do anything with this new stuff at present, for as you will have seen from the letter that I mailed earlier this week, my wife and I are leaving the day after tomorrow for Europe. My microscope was already packed away, to be taken to another place for safekeeping, but I took it out again and had a quick look at three slides of the living material in tube "H". All of the microfauna was dead, and some of the desmids; others were in poor condition but would possibly revive when transferred to a nutrient solution and better conditions; still others were quite healthy and will undoubtedly succeed well in culture. I think you put too much material in the small vial and did not leave enough airspace; I hope you sent larger tubes to Dr. Starr. The *Ichthyocercus longispinus* (= *I. angolensis* var. *longispinus*) is quite different from the "Ichthyocercus"-like new genus; if there is any genetic relationship it must be a very remote one.

I have written to Dr. Starr and sent him photos and sketches of the "Ichthyocercus" that I hoped to find, so that he may recognize, if by some miracle he should encounter some specimens in the two tubes of living material, and have urged him, if should find it, to make every effort to get it into cultivation. In one way I am glad that you sent the material to Starr instead of Kallio, because he is in close touch with Prescott. Kallio seems not to like letter-writing, though a few weeks ago he sent me some living cultures of two *Micrasterias*-species from Louisiana that he has cultivated from samples that I sent him last year.

Thanks also for the new stamps of the Afro-Asian Conference. Since the death of my friend who collected stamps, the only other one I know is Prescott, so I am sending him your envelope intact with the stamps. Enclosed is a new stamp from Brazil, unfortunately defaced with a heavy cancellation stamp.

With my best regards,

Sincerely yours,

Bogor, May 22nd

Dear Scott,

At first, I wish you and your wife an enjoyable trip through Europe; your sending stamps of Euro arrived on May 16th. And now I am, obliged to write you again, because I know that you received my letter dated on April 23rd, but not my letter on April 26th, telling you that I do have seen "Schthyococcus", after having examination again the samples more seriously. Further I received your registered letter containing the manuscript. Dr Donk promises me that the article will be printed in August-Sept this year. As I tell you before, the authors, will get free 100 reprints, the price of the 200 reprints, Dr Donk cannot tell me at this moment. He is very glad to receive the manuscript, because there is now more variation in the content of Reinwardtia. It is a pity that he will leave Indonesia in August, but if it is possible he will try to continue the work as Editor in Holland.

By the way, now about the Botanical Document, I have seen 31 this specimens; one specimen of this symmetric "fish-tail" cel in Sample "K" and two specimens of the symmetric "apple-cart" cel in Samples in E and R. Enclose you will find the micro-photographs; it is a pity that the microphotographs of the fish-tail-cel is very bad. Immediately after seeing the asymmetrical-cel, I send living material to Dr Kallio. A week later, I received a letter from him, telling me that he has seen several specimens of the asymmetric-cel. But according to them it seems that it is difficult to cultivate this cel with

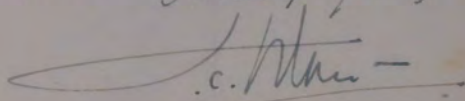
the U-S solution. He is being now to make several cultures in media and hope be able to cultivate this very interesting desmid. At this moment, 1½ months after taking the samples, I have seen some specimens still living in the natural media. - You are right, the curvature of the cell is not caused by formaline, but a genetic property. I realize now, this interesting genetic problem. If it is a case of a "combination" between the two basic types, why are these basic types very scarce? And these two symmetric forms, are they already known before? But in the other case, if we suppose the asymmetric cell is a special genus like the *Amseottia*, are the two symmetric cells varieties of the asymmetric genus? I personally, I don't think so and it seems very improbable. What is your opinion now about this problem? I think the vegetative-reproduction of the asymmetric cell will be solved this problem.

I received a reply from Dr Starr, saying that one tube is empty; he does not tell me or he has seen the asymmetric cell. Next time I will send him living desmids from their habitat, which many investigations are occurring.

I hope that at the time you meet Dr Kallio, the asymmetric cells are not only still living but also undergoing a vegetative-reproduction.

Again I wish you and your wife a very nice trip through Europe - (also through the Iron-Curtain!?)

My best regards. Sincerely yours,


C. Starr -

97
Hagen. 26-th 1955. April 26

Dear Scott,

I think you have already received my air-letter and the samples dated on April 23rd. The reason I write you soon again is this: As I say in my previous letter, I have not seen any asymmetrical desmids in the samples. I am sorry to say that. The day after sending you the samples, I investigated again the samples but now more seriously, and have found in the still living-material "P#" the asymmetrical desmid, exactly the same as the one of one year ago. I think you have also ^{found} these specimens in sample "N" and may be also in the other samples; in sample H I have also found the asymmetric one but not so much as in sample "N". In sample E however, I have found one symmetrical cell of which the semi-cell like that of the one semi-cell of the asymmetrical cell: ~~the one without the spines at the end~~ shall you ^{see} later on the photo-micrograph. May be you have already found this symmetric cell in sample E. So the question is now: is the asymmetric cell the basic cell or a hybrid. In total I have found 30 specimens of the asymmetric cell. As you know in the samples of one year ago, you have seen one symmetric cell like ^{the} "Leptothoceres-type". On April 26th I sent by air a part of the living-material P# to Pr. Kallio requesting him to cultivate this cell to know the vegetative reproduction. I hope this asymmetric desmid will be the second asymmetric genus of the Desmids. (the first is the *Amiscotlia*) I have already received the paper concerning the pair *Puszcassia mira* Grönbl. and the

stamps, thanks. My the way, have you already written
Mr. Donk? in September 1955 he will retire and go
back to Holland.

My best regards and wishes
Sincerely yours.

Mar-

[The following text is a mirror image of the handwritten letter above, appearing as bleed-through from the reverse side of the page. It is written in cursive and is largely illegible due to the bleed-through effect.]

Bogor, Jan 24 - 1955

Dear Scott,

I am sorry for the delay of my answer at your letter dated on November 24th 1954. The reason was, at that time I was going to Eastern-Java to investigate the lakes Sarangan and Ngabel (residency Madiem) for fishing purposes. There is a bloom of little species of *Staurastrum* and *Cosmarium* in both lakes but it is a pity that these organisms are not digestible for the fishes occurring in the lakes; may be because of the thick mucus they have. Yes, we have experiences that many species phytoplankton particularly blue-green-algae are not digestible for fishes.

By the way, I see you have had an enjoyable trip and were able to meet some of the greatest algologists of the world in East-U.S.A and Canada. I hope that Mr. Prescott will be able to check ^{soon} your identification on Indonesian desmids.

With the \$50. cheque I was going to Djakarta and received for it 50x Rp 11.30 = Rp. 565. - [Rp = rupiah = Indonesian dollar]; the black-market rate of 1 U.S. dollar is \pm 20 Rupiah!!

I have not expected that you can send money so easily to Indonesia; in the contrary, I say you before, it is

really difficult to money from Indonesia to
any foreign-country.

I think on April 17th I will go to Muggala
and hope be able to catch many species
of "Zethyocercus" as much as possible.
I will take also with^{me} a "pocket-microscope"
to investigate the living-sample in the spots
I hope in this way be able to send living
"Zethyocercus" as quick as possible to Dr. P.
Kallis, for further investigation concerning
the problem of propagation.

Dr. Donk the editor of *Reinwardtia*
may be will receive his pension this year
and will go back to Netherland, his
home-country. But I shall talk
with the new-editor of *Reinwardtia*,
about the possibility to publish your
papers ~~out~~ on Indonesian desmids, etc
in this periodicle

Enclosed, I send you dried Hy-
drilla. It is a very important sub-
merged plant and cosmopolite in
whole Indonesia. Some of our eco-
nomic fishes feed on this plants and
its epiphyton, and further a good
place for the accumulation of some
desmids-species. Do you know that
many Aquarium-holders in New-York
and Philadelphia etc, receive regularly
living Hydrilla for from Indonesia,
it is one of the best plant for the
"Tropical"-aquarium.

Speaking about the white material

where you can seal the cork with, it is a solution of the formerly combustible film in acetone ($\text{C}_2\text{H}_5-\text{C}(=\text{O})-\text{H}$). But the percentage of this solution, "it is a secret" "the man say working in a dispensary". Formerly you can buy this material in every dispensary; but now in connection with the fact, that they can not import again this film from abroad, the dispensary won't like to sell them to the public. As you know, they seal the cork of medicine-bottles with this material. The white color is caused by adding of some white-color. I am sure that you can buy this material in every dispensary in U.S.A. It is a pity we have no more in store of this material, so that I can ^{not} send you a little of this material. As regards the little tubes, also this material is not for sale more in the shops. Three weeks ago I send you some "Self-making" tubes by ordinary mail (as parcel-post) and also a little corn-stable, made by the people of the small town Sidlungkang in Middle-Sumatra (near Padang); it is a famous handiwork in whole Sumatra. I hope you will receive them in good condition; may be in the month: February or March.

Sincerely yours.

C. W. Allen



Digitized by Hunt Institute for Botanical Documentation

Swamp Henggala.

April 1954

5
C. Allen

April 25 1955

Dear friend Sachlan,

At last here is the first paper on your Indonesian desmids! I am sorry for the delay, which has been due to several causes. More than six weeks ago I sent a rough draft of the paper to Prescott for his approval, but it seems that at that time he was away at Woods Hole Biological Laboratory in Massachusetts, and then went to the Farlow Library at Harvard University, doing some research work. After he returned to Michigan he apparently overlooked my letter, and as I did not hear from him I telephoned last week to Michigan to find out what had happened to it. I got the paper back two days ago with only a couple of small changes, and immediately typed it in final form.

I am sending the paper and drawings to you instead of to the editor of Reinwardtia because you said that Dr. Donk might retire this year and return to the Netherlands. Also I shall have to ask you to check the proof when it is ready, for just one week from today my wife and I will start on our delayed trip to Europe, that we were supposed to take last year. We shall be gone four months, returning about September 1st.

You will see that I have made a pencil notation on the drawings that they are to be reduced to a width of 12.5 cm, which is the full-page width of Reinwardtia, and I do not want them reduced to any smaller scale. I mention this simply because an Australian editor, without consulting me, had my drawings reduced to such a small scale that they were entirely unsatisfactory, and it cost me a good deal of money to have the paper reprinted with full-page plates. Probably this question will not arise with Reinwardtia, which has excellent typography and illustrations. If any other problem should arise while I am gone, please handle it with Prof. Prescott, to whom I have sent prints of the drawings and a copy of the final draft of the paper. Note that the name Michigan State College has just been changed officially to Michigan State University. Please order a total of 300 reprints of the paper, of which 100 are to be sent to me with the invoice stating the cost in US dollars, and 200 copies to go to Prescott also with the invoice in dollars.

Now I must thank you very much for the table cover from Silungkang. This is a really beautiful piece of work, with such fine and regular weaving that I had a hard time convincing my wife that it was made by hand and not by machine. It is now on a small table in our living room, and all our visitors admire it. Also I thank you for the small vials which are exactly what I need for sending samples by airmail to my friends in Europe, and this supply will last me for a long time. I have not been able to buy any this small in the USA. The white sealing compound is unknown to two pharmacists whom I have asked about it, because corks are very seldom used nowadays. The reason is that practically all the cork formerly used was imported from Spain, and during World War II the supply was cut off, because cargo ships had to be used for more important cargoes, and the bottle manufacturers were forced to develop screw caps. So now all bottles, from the smallest up to those holding 20 litres now have screw caps made either of metal or plastic, and they are used for everything from medicine to whiskey. I believe that the combustible film is no longer made, but I wonder why the non-combustible (safety) film would not work as well. I think I shall try it and see what happens; if it doesn't work there are plenty of other plastics that are easily soluble either in acetone or other solvents.

I sent a piece of your dried Hydrilla to Prescott, and he replied that it is so much like a species of Elodea (*E. canadensis*) that he was unable to see any difference either in the plant or the illustration that you sent. He was going to check Hydrilla in the University library, but I heard no more from him about it. Elodea also is used as an ornamental plant in small aquaria and can be bought from dealers. I do not know much about aquatic plants so I can offer no opinion.

It is rather surprising to learn that your Indonesian fishes don't eat desmids, or blue-green algae. Perhaps it is only certain species that are strictly carnivorous, or maybe they just don't care for salads! (I never eat raw green vegetables). In 1939 Frere Irene-Marie reported from Canada that he found plenty of desmids in small minnows and tadpoles, and gives the following examples: "Dans une Epinoche de 1 pouce de longueur, 519 desmid cells of 6 genera. Dans un Vairon de 1 pouce de longueur, 1110 cells of 8 genera. Dans un Umbra limi de 1 pouce de longueur, 1000 cells of 9 genera". I don't know the scientific names of "Epinoche" or "Vairon"; my French dictionary gives "stickleback" and "minnow" respectively. He also says that he got similar results from small carp and from "gougeons a cornes".

A couple of months ago I read in our newspaper about some severe floods that had occurred in South Sumatra near Palembang. I hope that this did not spoil the desmid habitats around there, and especially the swamp at Menggala, not interfere with the trip that you expected to make this month. I shall visit Dr. Kallio at Turku in the early part of July, and it will be extremely interesting if you have been able to send him some living specimens of "Ichthyocercus" from Menggala. Last year I sent him some material from Louisiana, and already he has been able to cultivate two or three species of Micrasterias and produce diploid cells of them.

My addresses in Europe will be:

May 25 to June 19, c/o Mrs. E.M. Nixon, "Greenhow", Roundham Gdns., Paignton, S. Devon., England.

June 25 to July 14, c/c Dr. Rolf Grönblad, Centralgatan 86, Karis, Finland.

The remainder of the time we shall be on the move from place to place, and it will hardly be possible for us to receive any mail. We shall return to New Orleans about Sept. 1st, and then I hope to start work on the plates for the next paper on Indonesian algae.

I would like you to speak to the new editor of Reinwardtia about this next paper. If I illustrate all of the algae, I estimate (or rather guess) that the paper will require two complete issues of the journal, or at least 1½ issues, and perhaps the editor might not be willing to devote that much space to it. If the well-known species are omitted from the plates, and their descriptions reduced to a minimum, it would be possible, I think, to get it into one issue, though possibly some more pages than usual would be required. I must know in advance the editor's ideas about this, for I should not like to do all the work and spend the money, and then find that the paper was too long for the editor's acceptance. It costs me \$7.50 per plate to have my pencil drawings inked, and as there will be 25 to 30 plates you can see that it runs into money, and since my retirement I cannot afford to spend as freely as I used to.

With my best regards and good wishes,

Sincerely yours,

Nov 24 1954

Dear Sachlan,

Two weeks ago my wife and I returned from our month-long vacation, during which we travelled some 6500 km, and I found your letter of Oct 23rd in the large accumulation of mail that awaited me. Unfortunately your letter disappeared a couple of days later, and though I searched high and low for it, only this morning did it come to light again.

We had a very enjoyable trip in spite of rather bad weather, much rain and cold, even the first snowfall of the season at one point. We are not used to this kind of weather, and I do not like driving under such conditions.

First we went to East Lansing and stayed at a beautiful hotel on the Campus of Michigan State College. Prof. Prescott and his wife treated us royally and we had a wonderful time; also I was able to talk over a number of problems with him, and to use his iconograph to identify some of your desmids, but there were many that I could not find and which therefore are probably new species. However, the iconograph is so voluminous that I could not possibly make a thorough check of all the genera in the time at my disposal. Prescott is much more familiar with the iconograph, and will have to make a recheck when he writes the descriptions.

We went to other cities in Michigan, including Ann Arbor (Univ. of Michigan) where I had a chat with Dr. Wm. Randolph Taylor, one of the 'big shots' of algology in this country, though he is now working on marine algae. Then we crossed into Canada and drove through Toronto to Montreal, where we visited Dr. Jules Brunel at the Institut Botanique. He has done some good work on desmids, but since he was made Director of the Institute he does not have much time for research work.

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Then we came into the USA and went to Dartmouth College, in New Hampshire, where we spent a day with Dr. Hannah Crossdale. She is a desmidiologist, and also she does all the Latin diagnoses for Prescott and myself, as well as for other botanists. Leaving there we went to Boston, passing Harvard University on the way, where I stopped for a talk with Dr. Lamb, Curator of the Farlow Herbarium, in which I have deposited duplicates of all my collections, and yours also. We spent a few days in Boston seeing the sights, and I had expected to visit New York and Washington, but the weather became bad and we came straight home. Not until we reached 200 miles from New Orleans did we find warmth and sunshine again.

Both Prescott and I agreed that we cannot publish the new desmid from Sumatra on the basis of the present evidence, so I am glad to know that you will be able to go to Menggala again next Spring and get more material. Let us hope that there will be plenty of specimens, so that we can determine which is the basic form, and which the variety, for that is how they will have to be described. I am enclosing a banker's cheque for \$50.00 on the Nederlandsche Handel Maatschappij of Djakarta, to pay your expenses. There was not the slight trouble in obtaining this cheque, no questions of any kind asked. But I expect that you would have difficulty if you wanted to send money to this country.

I hardly think it will be possible to complete the paper on Indonesian desmids in time for it to be printed and ready for the meeting in Tokyo next October. It is a big job, as big as our North Australian paper, which, by the way, has not

yet been published, though it is more than two years since I sent the completed manuscript and drawings to the Editor. However, we can get ready the preliminary paper "Notes on *Staurastrum Wildemani*", describing the dichotypical specimens from your collections which show that *St. subtrifurcatum* var. *majus* really belongs to *St. Wildemani*. I have made two rough drafts of the paper, and now have it in such shape that I can send it to Prescott next week for his approval. After that is received I can write it in final form, prepare the one or two plates of drawings, and send all of it to Dr. Donk for publication in "Reinwardtia". If he prints it with reasonable promptness you ought to be able to present it at the Council meeting in October.

The next time you see some *Hydrilla*, I wish you would get a small piece and send it to me. The plant does not grow in America, and I am told that it is confined to the southeast Asia and southwest Pacific areas. I simply want to see what it looks like, and for this purpose it would be sufficient if you would dry it between blotting-paper or newspaper for a few days, with weights to flatten it, and a piece large enough to go in a letter envelope would be enough.

Thanks for the photo of Menggala swamp. It is quite similar to the ones over here where I have obtained some remarkably rich finds. I suppose the dark forked object in the foreground is a tree stump, though it has a peculiar shape.

You did not answer my question about the very small tubes in which your last samples were sent. I should like to know where I can get some, and also the white material that you sealed the corks with.

I hope that Dr. Kallio's papers will be of help to you in cultivating desmids. In one of them he gives a formula for a nutrient solution that he says will work with all the species he has tried it on, though other experimenters seem to think that numerous modifications are necessary for the different genera. If you succeed, I would like you to try to cultivate *Streptonema trilobatum*, which you said is fairly common around Bogor. I should like to see some filaments with cells showing various stages in the process of cell-division, which might help to solve a problem concerning the possible relationship of this plant with *Spondylosium pulchrum*.

With my best regards and good wishes,

living material from Tado Bogor 23 Oct. 1954.

Dear Scott,

I think you and your wife are now coming back again from East-Lausing, to visit Prof. Prescott. Are you satisfied after discussing with Dr. Prescott about desmid-problems? I hope so!

Oh yes, do you think that your paper in collaboration with Dr. Prescott "Note on Indonesian desmids" *F.* can be published in 1955? The question is that I become a member of the Phycological section of the Indo-Pacific Fisheries Council, and this Council will hold their 6th meeting in October 1955 in Tokyo - you know U.S.A. is also a member of this Fisheries Council.

So when the paper can be published next year, I can send a copy to the Phycological section and in the same time to introduce you and Dr. Prescott as the two American *Phycologists* who are working now in Indonesian desmids. I think this paper will be a very good contribution to the knowledge of the Indonesian desmids and at least equally extensive as the paper of Dr. Krüger. I know of course to publish a paper like this is not easy, especially when there are many new varieties, where their morphology must be written in Latin etc. Meanwhile I have received an answer from Dr. Kallio, and wrote me that he of course should like to receive

Sept 16 1954

Dear friend Sachlan,

Your letter and the four tubes of samples arrived safely, and I wish to thank you very much for them. The samples are especially good, with several desmids that have not appeared in your former collections.

Before proceeding further I should like to ask where I can get some of the miniature test-tubes, $3/8" \times 1\frac{1}{4}"$, or about 9×33 mm, with the corks for them. I have not seen these before, and they would be very handy for sending small samples to my friends in Europe. Also what is the white composition with which you sealed the corks? It seems to be very good, adhering tenaciously to both the glass and cork. I should like to get 50 or 100 of them.

The Micrasterias ceratophora shown in your photo is a somewhat stouter form than those that I have seen previously in one of your collections from Sumatra and also in two collections from Borneo, and quite similar to the form from North Australia. However, it does not differ sufficiently to make a new variety.

As to the Micrasterias Torreyi from Pang²-an, I am somewhat puzzled. I have seen three specimens, all of which were different. One was like your photo with 6 lateral lobules on each side of the semicell; another had 4 lobules on each side of one semicell and 3 lobules (abnormally divided into 6) on the other semicell; the third specimen seemed to be very close to var. Doveri. Because of this variability I cannot tell what to do with it unless I can find more specimens, but the amount of material in this sample is so small, and the plant so rare, that it seems unlikely that I can find enough of them. It probably will have to be assigned to var. curvata, perhaps as a new forma. M. Torreyi is a highly variable plant, as I stated in the paper by Prescott & Scott on Micrasterias, Trans. Am. Micr. Soc., July 1952.

Answering your question about the curvature of the new Idithyocercus-1484 desmid, which you think is caused by the formalin, I am reasonably certain that this curvature is the natural shape of the living plant. If it were caused by formalin, a similar effect ought to be noticeable in other elongated desmids such as Pleurotaenium. There is no mention of any such effect in the literature to my knowledge, and I have never seen it any of the thousand or more collections that I have examined. Some varieties of Pleurotaenium verrucosum are always slightly curved, both living and dead, and in the genus Glosterium all except two of the 100 or more species are curved in a crescent shape, sometimes to more than half a circle.

I have found a few more specimens of the new genus (not "many" as you stated), making a total of 15. Of these, 14 were all alike with only minor variations in size and shape, and with the two poles dissimilar. But the other one has 'upset the apple-cart' completely, by having both poles alike, as shown on the enclosed sketch. Since this one turned up I have been searching assiduously for others, but unsuccessfully. Have you seen any specimens like this?

What this signifies, I don't know, and probably the question cannot be settled until many more specimens are available. Perhaps the most likely explanation is that there must be two different forms of the plant, one with both poles of the slightly elevated type shown on the enclosed sketch, and the other (not found so far) with both poles of the 'fishtail' type shown in my first sketches and the photos that I sent you. On this assumption, the 14 specimens that I have seen, and the 10 that you have seen, would be dichotomical combinations having one semicell belonging to each of the two basic types.

Such dichotypical specimens are well known in other genera; they occur not infrequently in *Micrasterias* (See Presc. & Scott, 1952, Pl. VIII, Fig. 3). But in the cases that I have seen personally, and those that I have read about, the dichotypical specimens are much rarer than the basic types, while in the present case the reverse is true; the dichotypical ones outnumber the basic form by something like 24 to 1, so far as we know at present.

I don't think we can publish the plant at present, though we were all set to do so. Prescott has written the diagnosis, and I had the Latin translation made. We were waiting for the publication in *Botaniska Notiser* of my new genus from Brazil, so that we could refer to it. At the end of this month my wife and I are going to drive up to Lansing, Michigan, to visit Prescott for a week, so this problem is one of the many things that I have to discuss with him, and I am very curious to see what his opinion will be.

From the foregoing you will see the great desirability of getting additional material for study, and I have a suggestion that I hope you will take in the friendly spirit in which it is offered. The trip by airplane from Bogor to Djakarta to Teloekstoeng, and by auto to Menggala seems to be something like 300 km, and could not cost very much. I would be willing to pay your expenses if you could find time to go there; you should tell me the cost in US dollars and I would send you a money order or banker's cheque.

If you go there I would suggest that you get at least 10, perhaps 20, collections from various parts of the swamp, and I would make separate squeezings from *Utricularis*, from *Hydrilla*, from *Ceratophyllum*, and from any other plants such as *Myriophyllum* and *Ceratophyllum* and aquatic mosses that may be growing on the bottom. Each one of these plants may harbour a different association of desmids, and the desired one might be more abundant on one plant than another. I think the '*Ichthyocercus*' is more likely to be found in squeezings than in the plankton, for it is a compact solid form that would not float as readily as the long-rayed *Staurostra* which are typical plankton desmids.

I am glad you wrote to Dr. Paavo Kallio, and I am sure that he will be happy to get any living material that you can send him, either from Sumatra or Java. At present I am most interested in sending him living specimens of '*Ichthyocercus*', especially in view of the puzzling situation, because with his experimental procedures of subjecting desmids to artificial conditions of heat, cold and light, also centrifuging, he has been able to induce both natural and unnatural mutations which might throw more light on our problem. I cannot promise that you will get many letters from him; he seems to be too busy. This Spring I sent him some living material from Louisiana containing 9 species and varieties of *Micrasterias*, of which he was able to find 8 and placed them in cultivation. A few weeks ago he sent me some of his living cultures, but unfortunately all the tubes were smashed when they arrived here.

Your sample from Pang²-an contained several other interesting desmids that constitute new records for Indonesia. Among them are *Xanthidium trilobum* var. *calcarato-aculeatum*, previously known only from Africa; *Micrasterias tropica* var. *polonica* fa. *australiensis*, and *M. mahabuleshwariensis* var. *reducta*, these two known only from Australia. Also there is a curious desmid that I take to be *Euastridium staurastroideum*, described in 1925 from India by Miss Nellie Carter. I do not have her paper, and shall have to wait until I visit Prescott to check it. The genus *Euastridium* is a peculiar one that is not recognized by everyone; you will not find it in Krieger's monograph. I hope you have more of this material available, or that you will obtain more the next time you go to Palembang.

Sorry I have to tell you of the sudden death of Dr. W. Krieger, two months ago. I am afraid this means the end of his desmid-monograph. Just two weeks before his death he wrote me about the new genus from Menggala, and told me of his hope that I could meet him in Europe next year. My ankle is nearly well again, and I can walk without crutches, though not for any considerable distance.

With best regards and good wishes, sincerely,

Scott

July 13 1954

Dear friend Sachlan,

By this time I had expected to be in England, but three weeks ago I fell and broke my ankle, which is now in a plaster cast. It will be a couple of months before I shall be able to walk properly and for any considerable distance, and by that time it will be too cold for me to think of visiting Finland, which was one of the principal objects of my trip. So I have decided to postpone my European voyage until 1955, though it is a bitter disappointment to both me and my wife.

I can now hobble around the house on crutches, and even, with a little difficulty, get downstairs to my laboratory and typewriter. But I cannot work for very long, because my foot swells and becomes painful after it has been on the floor for 15 or 20 minutes; then I must stop and rest it by raising the foot on to another chair.

I now have replies from Prescott, Grönblad and Krieger concerning the new desmid from Menggala. All of them agree that a new genus is justified, though Prescott seems to want to place it in *Ichthyocercus*, to which it does show some general resemblance in shape. But I am going to hold out for the new genus. Because of its strange feature of bipolarity I feel that Prescott is better able to write it up, and I have asked him to do so. He is now teaching a summer course at the Univ. of Montana Biological Station, and sometime next month he is going to Chihuahua, Mexico. So he may not be able to write the paper until he returns to Lansing in September. In the meantime, if you have any other data on the habitat, such as the exact location of the swamp at Menggala, the water chemistry and pH, the associated squatic plants, etc., please forward them to me.

Enclosed are a few more photos of additional specimens; they are not very good because they were developed and enlarged in a commercial photo-shop which runs them through the mill along with thousands of others. I could make much better prints myself by using a high contrast developed and high contrast paper, and next winter I hope to buy some equipment and set up a small darkroom for this work. It is hardly possible to do such work here in the summer on account of the great heat and humidity.

I shall be here for the balance of this year, except perhaps for brief absences of a few days, so when you get ready to send the balance of your samples from Sumatra, I shall be delighted to receive them.

With my best regards,

Sincerely yours,

Dear Scott,

I have already received your letter dated on Feb. 6
and I am sorry I cannot write you soon,
because I am just coming from a fishery-
biological trip through the island of Sumatra.

It was a very lovely trip of fifty days
from the North to the South of Sumatra
(a trip of ± 3500 km) to investigate all the
lakes for fishery-proposes. Of course I

Collect desmids as possible I can,
to complete the desmids-inventarisation
and distribution of this great island.

I send you some desmids as scientific
samples by air-mail. In the sample from
Menggala, I have found *Spirio-closterium*,
but it is very scarce (only seen twice) and

I hope you will find back this species.

I hope you will be able to investigate
these samples, when you come back from
your tour in Europe and ~~it~~ publish in
the future as "Note on Indonesian desmids".
Part II, as you require.

The other desmid-samples I shall
send them you immediately, when

Bean Scott

To investigate them further biologically.
I have seen the micro-photographs of the
Unique desmid; it is really a very
interesting desmid. So a desmid is not
necessarily a cell consisting of two
symmetric semi-cells, is not it; or is
it in this case an exception?

Together with the desmid-samples I
send you as souvenir a fil-pin,
provided with freshwater-pearls,
cultivated in clams from Japan.
I have got them. When I visited
the Biwako-Pearl-Company, situated
at the lake-Biwa near Otsu.
I hope you will take it with you, when you
make a trip to Europe. Do you know, that
you can visit Indonesia from Europe
within 36 hours by plane? They are
always many American-tourists every
year, who visit Indonesia.

I hope you and your wife will make
a nice trip to Europe, and let me know
when you return in New-Orleans.
My kind regards and good wishes.
Sincerely yours,
J. Schimper

June 12 1954

Dear Sachlan,

Your letter and the box of samples arrived safely, and I thank you very much for them, and also for the tie-pin. This is very unusual. Of course I know of the pearls that the Japanese cultivate in oysters, but I never heard that they were doing the same thing with fresh-water clams. By the way, are they clams or mussels? In this country a few pearls are obtained from fresh-water mussels that grow in some of the rivers in the northern States, but they are not artificially cultivated.

The trip through Sumatra must indeed have been a highly interesting one and I shall be delighted to receive the algal samples after you have finished your own work on them, but do not send them to arrive here before October 1st, which is when I shall be back from the European journey. Your idea of writing a supplementary paper on this material is a very good one.

Also I have received the copy of Dr. Vaas' paper on Fisheries in the Lake District along the River Kapuas, which is very interesting and informative. But I am somewhat puzzled by the rather scanty plankton catches from ~~two~~ some of these lakes. For instance there is one named Lake Luar or Luway, which I suppose to be the same as Danau Loear from which you sent me a sample that is quite rich in desmids.

Answering your question about the Brazilian desmid, - up to the time I discovered this strange plant it had been assumed that the two halves of a desmid cell must necessarily be exact duplicates of each other, for the reason that when the cells divides during the process of vegetative (asexual) reproduction, it splits at the isthmus, and a new semicell grows from each half at the isthmus opening. It was quite natural to suppose that the new semicell would be an exact replica of the parent semicell, and since no exceptions were known there was no reason to believe otherwise. The new Brazilian desmid, Scottia mira, shows that there may be exceptions to this theory, and it presents a problem whose solution can only be guessed at for the present. I shall have more to say about this later in this letter.

Your new samples from Sumatra are of very great interest, especially M, M₂, K and K₃. In the fifth one, B, from Batang-Toru I have so far found nothing of special interest; there are a few desmids but well-known species that occur in many of your other samples. I have found three specimens of Spinoclosterium in sample M, and I am convinced that it is the same as the plant described by Bernard from Singapore. In fact I can see nothing but very minor differences in the plants from Sumatra and those that I have found in southern USA, and with the illustrations by others from northern USA, Canada, and Japan. A Canadian desmidiologist has recently found this plant in abundance in the Province of Quebec.

In the samples K and K₃, from Lake Kerintji, there is a large number of specimens of a very rare desmid, Staurostrum Rosei, which I have found in material from North Australia, and also in one of your collections from Situ Loss, West Java. The new specimens differ somewhat from those that I have seen previously, and also ~~from those that I have seen previously~~ from the specific form, so they may be entitled to a new varietal name.

But the samples M and M_d from Meggala are the prize ones, especially the surface collection, M. This contains several rare desmids that I can identify from the literature, and others that I am pretty sure are new species. And also in this

sample I have found a new desmid that not only will require a new genus, but also possesses the singular character of DIFFERING SEMICELLS. Now this is an almost INCREDIBLE experience, - that one person should discover not only two new genera, but two that differ from anything previously known in having unlike semicells. I am enclosing a sketch and photo from which you will see the difference in the apices of the two semicells. In addition to this there are other characteristics that prevent its assignment to any existing genus, in my opinion. I sent a specimen to Prescott, with drawings, and he is somewhat undecided about it. He is halfway convinced that it might justify a new genus, and halfway believe that it might be assigned to Ichthyocercus, with which, however, I do not agree.

I have also sent a specimen and drawings to Grönblad in Finland, and am now trying to find another to send to Krieger in Berlin. Unfortunately the desmid is extremely rare, and after ten days of searching I have only succeeded in finding five specimens. But they are all alike, save for very small differences in size and curvature, proving that the plant is not an accidental monstrosity. It will be some weeks before I can hear from Grönblad and Krieger, so probably I shall not have another opportunity of writing you about it before my European trip.

I hope that you will be able to send me a larger quantity of these samples after you have completed your own investigations, so that I may distribute some to my friends, and also deposit some of them in the Farlow Herbarium at Harvard University, which is the principal depository in this country for cryptogamic plants. I have been very careful to wash the material off the slide back into the vial after examination, but there is an inevitable small loss at each of these operations, and already the quantity is showing a visible diminution.

Dept. of Botany,

There is another man in Finland, Dr. Paavo Kallio, University of Turku, who is doing remarkable work in the cultivation of desmids. By subjecting them to varying conditions of light, heat, and especially centrifugal force, he has succeeded in producing teratological forms, some of which are permanent, that give some insight into the causes of variation in desmid morphology. He is very anxious to obtain living specimens of the Brazilian Scottia mira so that he may place them in cultivation, and I am sure that he will be equally desirous of obtaining living specimens of the new Sumatran plant. So if you ever have an opportunity to revisit the swamps at Menggala I hope that you will try to get some living specimens. In case you do, I give directions for shipping: The tubes used should be ordinary test-tubes of 12x100 or 15x125 mm, or something of similar size. The tubes should be about two-thirds filled with clear water from the natural habitat, and then a small quantity of the desmid-containing sediment added, say two or three cubic millimetres. The corks for the tubes must be well impregnated with melted paraffin, for cork contains some substance that may be poisonous to the very delicate desmids. Do not use rubber stoppers. Corks must be secured by tying with string, or with adhesive tape. The tubes must be well protected with plenty of cotton, and shipped in wooden boxes, by airmail, to Kallio at the above address. Because of the scientific importance of such living specimens, and because of the possibility of leakage or breakage, I would suggest not less than six tubes, in two boxes. Of course, I know that the possibility of your doing all this is rather remote, and I am only suggesting it in case your duties might take you again to that neighbourhood.

In your last samples, as well as some previous ones, the chloroplasts of all the desmids and other algae are much deteriorated. The grass-green chlorophyllous cell-contents have degenerated into a greenish-gray amorphous mass completely filling the cells, so that the chloroplast structure cannot be determined, and the examination is made much more difficult. The only reason I can imagine for this is that you may have used too strong a solution of formalin, and this is evidenced by the strong smell of formalin. The samples should not contain more than 4 or 5% of formalin, and I should think this would be quite sufficient for your microfauna as well as the microflora.

As soon as I return from Europe I shall write up the new desmid in a separate paper and send it to the editor of Reinwardtia.

With my best regards and renewed thanks, Sincerely yours,

Dear Scott,

Dec. 9 - 1953.

I am very glad to receive your letter, saying that you are at the end of your examination of the Indonesian desmids. I hope you can publish this valuable paper within few months. ; of course it is an important paper, because the desmids of Borneo are never investigated before and further they are - as you say - many new species and varieties.

At your request I visit Dr. H.A. Donk, keeper Herbarium Bogoriense and Editor of "Reinwardtia" [formally "Bulletin du Jardin Botanique Buitenzorg"] to ask him the possibility to publish your paper in this quarterly periodical. He appreciate your proposal and would like to publish your paper in this periodical. Dr Donk and I too, suggest you, not to publish your paper in "Hydrobiologia", but only in "Reinwardtia" because it concerns Indonesian Flora. ; are you agree?

You know there are three (3) periodicals given out by the Botanical Gardens in Bogor. viz:

1) Trebisia (zoologi) 2) Les Annales du Jardin Botanique (F) / Bogor and 3) Reinwardtia (concerning Botanical Systematic), special given out by Herbarium Bogoriense -
If you publish your paper in Reinwardtia (spread over the whole world too!) the author(s) will receive 100 reprints.

To day I send you by ordinary mail a copy of Reinwardtia, so that you have an idea about the size of this periodical. and the letter type

F (concerning Phytology of Botany)

I hope you will send soon a letter to Dr. Donk; his
address is:

DR. H.A. DONK
Keeper Herbarium Bogoriense
Kebun Raya
Bogor.
Indonesia -

(Kebun Raya, means Botanical Garden, in
Indonesian)

And tell him about your plan to publish your
paper in *Reinwardtia*. Please call my name in
your letter to him. According to me, it is better that
you provide the paper with the drawings of all
the species - varieties and forms, you can find
in the samples. I show some copies of your
papers to Dr. Donk, and find your drawing very
beautiful and accurate.

I think Prof. Prescott know "*Reinwardtia*"
as exchange-number, and further I hope he will agree
the publishing of your paper in this periodical.

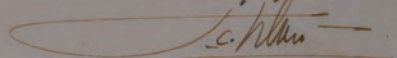
What about your paper concerning *Alomida*
of North-Australia? I think it is already published
and I hope you will send me copy -

Five days ago, I send you too by ordinary
mail "The fishy-biological report" of

South Indonesia, where you the desmids, etc.
ples.

With the best regards.

Sincerely yours.



Handwritten text on the left margin, mostly illegible due to bleed-through from the reverse side of the page. Some legible words include "Scott", "formally", "Dr. Donk", and "Herbarium Bogoriense".

Feb 6 1954

Dear friend Sachlan,

Your letter of Feb 8th has just arrived, together with the vial of material from Danau Panggang. This is a very nice collection, with an abundance of desmids. Most of them are the same forms that occur in your other samples, but I have noted a few that I have not seen before. One of them is the typical form of *Euastrum turgidum*, of which I had only seen a variety previously. Another is a large circular *Micrasterias*, but the only specimen I have seen so far appeared ~~to~~ to have been dried, because it was so crushed and deformed that I could not identify it. Also there are some small species of *Cosmarium* that are difficult to determine and require considerable checking; some of these may be new.

When you wrote on Feb 8th, apparently you had not received my letter of Jan 20th, though it should have reached you because I sent it by airmail. In case the letter has gone astray, let me say again that I received the copy of *Reinwardtia*, the first time I had seen the journal. I wrote to Prescott for his opinion, and he replied that he considers it a very suitable medium for the publication of our paper on Indonesian algae, and I agree with him. So when I can form a better opinion as to the size of the paper and the number of plates of illustrations, I shall write to the editor, Dr. M. A. Donk, and tell him about our proposal to publish the paper in *Reinwardtia*. Prescott is now working on your material, and when he sends me his lists and descriptions of the algae other than desmids, I shall be ready to start writing the paper.

I also received your paper on the Ecology of Inland Waters in S.E. Sumatra, which I found extremely interesting. It gives a lot of detailed information about these waters, and also explains a name that had puzzled me, "Lebak Danau". You had previously told me that both of these words mean "Lake". The desmids in your Sumatra collections are highly interesting, and I hope you will get more from there whenever you get a chance. The whole region around Palembang seems to be swampy or marshy, though I suppose that some parts of it are quite difficult of access; such places constitute my favourite hunting grounds.

A few weeks ago I sent you a reprint of a short paper on South Australian desmids. This not the one about which you enquired, which will deal with North Australian algae. The latter has not yet been published, though it is 16 months since I sent the manuscript to the editor; the latest information is that it will be the end of this year before the proof is ready, so I suppose it may be published sometime in 1955.

A few months ago I received from Brazil an important series of collections from the River Amazon region. I have not yet started serious work on them, but of course I have made some preliminary examinations. Some of them are not much good because they were taken in the running water of rivers which is unfavourable for desmids, but the others are quite valuable because they constitute the second lot of gatherings from the Amazon region. The first lot was described by my friend Dr. Rolf Grönblad in 1945, so I am going to collaborate with him in the study of this second lot. In one of the collections I found the most extraordinary desmid in the world; absolutely unique in that its two semicells are quite different from one another. And it is not a monstrosity, for I have seen a hundred specimens all alike. On account of its importance I sent samples to four of the world's best desmidologists, Prescott, Teiling, Grönblad, and Krieger, and all of them agree that a new genus is required for it.

To give you an idea of what it looks like I am enclosing two photomicrographs, taken in slightly different positions and at slightly differing focal points. You have taken many desmid photos yourself, so you will recognize the difficulties involved in photographing this plant which is 180 u long including processes, and in vertical view is 160 u diameter including processes. I made 77 exposures on several specimens, with many combinations of microscope objectives and eyepieces and extension tubes for the camera, with blue, green and red filters, and various diaphragm openings, and 3 or 4 exposures of different times for each subject, to be sure that one of them would be correct. But I think it is just about impossible, at any rate with my present equipment (a 35 mm camera), to get a sharp focus on all the processes at once. Perhaps a professional, with a larger camera and a very long bellows extension could do it, but I have no access to such equipment.

This summer my wife and I are going to Europe, partly for a vacation and to visit my relatives in England, and partly so that I may visit some of the European desmidiologists whom at present I know only by correspondence. So I shall be away from New Orleans from June until the end of September. I considered the possibility of going around the world, with the idea of visiting Indonesia, but the cost was a great deal more than I could afford to spend, and (unless a miracle occurs) it will never be possible for me to see your part of the world.

With my best regards and good wishes,

Sincerely yours,

P.S. You do not need to send me any more stamps. The friend to whom I gave them died early this year, and I do not know anyone else who is a philatelist. I am enclosing a few new USA stamps, and have sent a lot of cancelled ones by ordinary mail.

Nov 16 1953

Dear friend Sachlan,

Many thanks for sending me the paper by Dr. Vaas on Tilapia

mossambica and your own paper on fish parasites. Although I have little knowledge of fishes, and still less of their parasites, I found both papers very interesting, and I read them both from cover to cover. Recently I received from Mme. Gauthier-Lievre, of Algiers, North Africa, a copy of a paper on fresh-water fishes of Nigeria, in which she lists a number of algae that she found in the digestive tracts of certain fishes. However, the major portion of the paper deals with statistical information on the size of the fishes, and since it is of little interest to me, I am sending it to you by ship mail.

I am now approaching the end of my examination of your algal collections, though I intend to go through once more each of the vials, to pick up anything that may have previously escaped my attention. When that is done I shall send my drawings to Prof. Prescott, for checking of my identifications and for his determinations of the new species and varieties. The question now arises as to where our paper shall be published, and this in turn will determine how many plates of illustrations I shall prepare, and whether or not I shall include all the desmids, or if I shall omit from the plates the common and cosmopolitan species of which many illustrations and descriptions are available; in such case these common species would be merely listed in the text.

As a preliminary guess I should say that the size of our paper would be something like the size of Krieger's "Sunda" paper; there would be a similar number of plates; perhaps there would be less text because we do not have all the statistics that Krieger published. On the other hand we have a number of new species and varieties, each of which requires a Latin diagnosis to comply with the International Rules of Botanical Nomenclature; Krieger conveniently "forgot" the Latin (as I should like to do).

There would be great difficulty in getting a paper of this size published in any American botanical journal, for the reason that all American scientific journals are suffering from the enormous increase in the cost of everything connected with publishing, from the price of paper to printers' wages; therefore they prefer to publish several shorter papers instead of one long one.

I think that Prof. van Oye would accept our paper for publication in "Hydrobiologia", though it would mean combining two issues into one, as he did with Frere Irene-Marie's paper on Canadian desmids, in *Hydrobiologia* Nos. 1 & 2, 1952.

But before asking him about this, I would like you to see if the Indonesian Government would undertake the publication, perhaps ~~in~~ by your Department of Agriculture, or by the Botanical Gardens in Bogor (formerly Les Annales du Jardin Botanique de Buitenzorg). I think you have copies of all the papers published by Prescott & Scott, which you could use to demonstrate the quality of our work; in addition I may say that in my opinion our paper will be as valuable and important as Krieger's, because I have found most of the desmids illustrated by Krieger, also many new ones, and several rediscoveries of desmids that at present are known only imperfectly from the inadequate drawings and descriptions of the older authors.

Will you please investigate this matter, and let me know the result?

With my best regards, yours sincerely.

Tokyo: Aug. 3-1953

Dear Scott,

I received your last letter dated on June 7 and I am very glad that the package had been arrived in good conditions, although after a journey of more than three months.

On 7th Aug I will leave Japan, the Land of "Rising sun" and will arrive in Boga at 9th Aug. in the evening.

Japan is a very beautiful country with its strange people. I have also the opportunity to climb the world famous ~~17th~~ Mt. Fuji with other Indonesian students. During this summer more than 40,000 climbers (young girls + old women too) reach the top (3762 ft) where there is a complete hotel and restaurant -

It is a pity that I have not more the opportunity to visit Kyoto to meet Dr. H. Hiranuma, because of my other fishery-tour-program.

I shall write you soon from Indonesia, for I have heard that desmids-samples from Borneo were sending to me.

Sincerely yours,

Bogor. March. 9. 1953

Dear Cott,

I send you here with some little handiworks, made by the people in the environment of the town Bogor. I hope that you will receive them in good conditions. They are very cheap and the value of all these things is 12 rupiah (= ± \$ 2 ±). My meaning is, that you will have an idea about some Indonesian handiworks and I hope that you will accept them as a memory of an Indonesian friend.

The hand-bag is made from dried seeds of *Albizia montana*.

Is prof. Prescott already coming home from Alaska?

With kind regards.

Digitized by Hunt Institute for Botanical Documentation

P.S. I have already received your paper concerning the "Etiatum of N.S.A."!
h.

June 7 1953

Dear friend Sachlan,

The gift-package that you sent from Bogor last March finally arrived here, having taken more than three months for the journey. I wonder where it travelled during all that time.

Both my wife and I thank you and Mrs. Sachlan very much for your thoughtfulness in sending these presents, - the ivory letter-opener, the handbag made of Albizzia seeds, the small silver coffee spoons, and the fan, also the package of pretty stamps. My wife is curious about the fan, which seems to be quite old. I am unable to determine what it is made of; it seems to be parchment or an animal skin of some kind. And what do the decorations represent?

It is a pity that my letter did not reach you before you visited Kyoto, for I am sure that you would have enjoyed meeting Dr. Minoru Hirano, and I had written him to be on the lookout for you. Perhaps you may get another opportunity of going there. Just today, in the Sunday newspaper which is filled up with all kinds of irrelevant material, there was a short article describing the terrible condition of the highway from Tokyo to Kyoto. It appears that the distance is only about 150 miles, which would be a 3 or 4-hour drive in this country, but requires two or three days because of the poor condition of the road. The article went on to say that the Japanese Government does not maintain the highways because they do not want to encourage motor-truck competition with the State-owned railways.

Yes, Dr. Hirano has found "Spinoclosterium" curvatum in several of his collections. In fact, at my request, he was kind enough to go out and make a special gathering to obtain living specimens, of which he sent me a drawing. I have now seen this desmid from several different parts of the world, and it appears to be identical no matter where it comes from.

Your statement about the algologists at Otsu not having any experience in the cultivation of desmids, though they grow other algae, confirms my opinion that desmids are much more difficult to cultivate than the simpler forms of algae. I do not have much knowledge of this subject, but the only persons that I know of who have successfully grown desmids are those of the Laboratoire Cryptogamique at Paris, whose address I gave you some time ago. Even in their case, it seems to me that the majority of species that they have grown are hard-water forms, not the more delicate species that prefer soft-water with an acid pH.

Japanese cameras are being advertised in this country, but they are by no means cheap, because of the enormous import duty, something like 75%. Yet strange to say, Japanese microscopes are quite reasonable; there is one being advertised at \$39.00 that has 3 objectives in a revolving nose-piece, with magnifications up to 600x. This price is just 1/30 of what my instrument cost. Of course there cannot be any comparison between the qualities of the two instruments, but for many purposes not requiring very high magnifications, the Japanese microscope would probably serve quite well.

I think I told you that Prof. Prescott returned from Alaska, and went almost immediately to Quito in Ecuador, where he remained several months. Now he is back in Lansing, and I shall write to him tomorrow and ask him to drop you a few lines.

With my best regards,

Sincerely yours,

Tokyo. May. 21-1953

Dear Scott,

Just coming back from my tour in Kyoto and Otsu on May. 2nd I found your letter dated on April 20th. It was a pity that I read your letter after my tour in Kyoto, particularly regarding your request to meet Dr. Hirano. I visited Nara as a Centre of Gold-fish-Centre, who exports every year beautiful varieties of this fish to U.S.A. as an aquarium-fish. (see picture on one of the stamps), and also Otsu (near Kyoto) where is established the Hydrobiological Laboratory - a branch of the Kyoto-University. I worked here for a week, specialising the technical part of pure Algal-cultures, and also in Desmids-culture. In this laboratory work several taxonomist in Algae and from Mr. Yamaguchi also working on desmids, I heard that Dr. Hirano has many "Spino-closterium" in his collection. I think you know about this. I think I have no more the opportunity to meet Dr. Hirano during the rest of my remain in Japan.

Yes, you are right, Japan is poor in des-
mids, because of many limestone
hills and few swamps.

Your micro-photographs are very good
and very sharp. Speaking about cameras,
the Japanese cameras are very good, and
cheap and nearly all members of the
Occupation forces (Americans in Tokyo
and Yokohama) use these cameras.

In the future I will also try to make
Micro-photographs with color-films. It is
particularly good for the genus *Closterium*
regarding the different colors in con-
nection with their age and iron-depo-
sit. . . But color-film is still expensive
in Indonesia and developing only in
Australia-Japan or in Western-Europe. —

There are many several beautiful postcards
in Japan for botanical documentation
during my remain in this country post-
Cards, special for your friend who
Collect stamps of the Orient.

Best regards from your friend

S. Han

April 20 1953

Dear friend Sachlan,

I am very glad to have your two letters, one from Bogor and the other from Tokyo with the beautiful Japanese stamps. You are certainly lucky to get this wonderful trip, which ought to be both highly interesting and extremely valuable. I should like nothing better than to visit the countries of the Far East, and particularly your own Indonesian islands, but there is no chance of its ever being possible.

For the last two or three years I have corresponded occasionally with Dr. Minoru Hirano, Dept. of Botany, Faculty of Sciences, University of Kyoto, Kyoto, Japan. He is interested in fresh-water algae, and has published several short papers on Japanese desmids. His drawings of desmids are very good, and also his writing; but some of his papers are written partly or wholly in Japanese, which is quite unknown to me. In his last paper he gives a very short summary in English, but hardly sufficient to make the paper intelligible.

About two years ago he sent me about 60 collections of Japanese fresh-water algae, in exchange for an equal number of mine from southern USA. His material is not so rich in desmids as mine, and it was quite surprising to find that the desmid-flora of Japan is quite like that of the USA; in fact some of his collections might easily have come from my territory. Of course, there are a few desmids that are indigenous to Japan and which were unknown to me, but on the whole the material was not very interesting to me. (You do not need to tell him this). Your Indonesian collections are far richer and much more interesting. Rather strangely, Hirano has found in Japan several desmids that were supposed to be exclusively tropical, such as *Micrasterias alata*, *Euastrum gnathophorum*, etc.

If you have an opportunity to visit Kyoto, I am sure that Hirano would be glad to see you and talk things over with you. He writes good English, so I assume that he speaks it also. Since he is working actively on Japanese desmids I have no desire to intrude upon his territory, so it would be useless for you to collect for me. I should think that Hirano would be glad to get any material that you are able to collect from places that he has not visited.

The articles that you sent me from Bogor have not yet arrived, but it takes 7 to 8 weeks for ordinary mail from either Australia or Java; no doubt they will get here soon, and I shall be delighted to see them.

My wife and I were very much pleased with the photo that you sent at Christmas. Both of ^{us} exclaimed "What a good-looking family". Just now I do not have a photo of myself and my wife to send you, but recently I bought a new camera, and I shall get one of our friends to take a picture of us for you. My first attempt with the camera was taking photomicrographs of desmids in color, and I am enclosing a couple of samples, one of which is the typical form of *Micrasterias Torreyi* from USA, and the other you will recognize as var. *Doveri* from one of your collections made near Muara Muntai in Borneo. The films are not very good; I was using a blue filter on the microscope lamp to make it approximate to daylight, and there was too much blue for the daylight color film.

Prof. Prescott returned from Alaska about Christmas, but stayed in Michigan only a short time, and then went to Quito in Ecuador, where he still is, so far as I know. I had a letter from him about a month ago, telling about his explorations in the Andes mountains, at elevations of 17000 to 18000 feet (5000 to 5500 metres). That would be far too strenuous for me. When he returns I shall ask him to be sure to write to you.

Best regards from your friend,

Nov 16 1952

Dear friend Sachlan,

I am extremely glad to get the two samples of algae from the swamp near Muara Muntai, East Borneo, that you were kind enough to send by airmail. They are very valuable, and all the more interesting to me because I was unable to find even a single specimen of *M. Torreyi* v. *Doveri* in the previous collection from Sumatra. There are plenty of them in the new samples, and I am enclosing a sketch that I made today. It appears there is quite a large variation in size, from 356 to 444 microns in length, and from 216 to 252 in width. The large one corresponds very well with the specimens from Malacca found by Biswas.

The large *Fleurotaenium* that is so plentiful is not *Pl. undulatum* (which is a synonym for *Docidium undulatum*, a quite different plant), but is probably a new variety of *Pl. burmense*. I have noted a number of interesting desmids, including *Cosmarium Askenasyi*, *Buastrum gnathophorum*, *Micrasterias subincisa*, *M. Moebii*, etc.

A few days ago I received the Atlas of maps of Indonesia, which also will be quite useful to me, giving a much clearer idea of the geography of your part of the world than I can get from the smaller-scale maps that I now have, even though they are very good ones, published by the National Geographic Society. I see that the termites in Java are a smaller species than the ones we have here, which make much larger holes. They are a serious pest in many parts of USA, and very difficult to eradicate after they have made their way into a wooden building.

Thank you also for the reprint of your paper on *Tirapia mossambica*, which seems to be quite an unusual fish. I know nothing of ichthyology, so I am going to give your paper to one of the men in the Louisiana Dept. of Conservation in charge of our fish-breeding stations, who I think will be much interested.

A few weeks ago I sent you a reprint of a new paper on *Micrasterias*, by Prescott and myself. This is an example of how long it takes to get a paper into print. Most of the plates were drawn 4 or 5 years ago, and it is just 2 years since the paper was accepted for publication.

I have just finished and sent to Australia another paper, also written in collaboration with Prescott, on freshwater algae from Arnhem Land in North Australia. This is the longest paper we have yet produced, with 22 plates of desmids and 6 of other algae. It will be published next year (I hope) by the Australian Government. I am glad to get it off my hands, because it has taken practically all my spare time for the last two years. Now I can have some leisure, and an opportunity to work again on your material. Did I tell you that already I have made more than 300 drawings of four desmids?

No, I did not attend the meeting of the Phycological Society this year, because it was held in Ithaca, New York, about 1500 miles from New Orleans. Further, my friend Prescott did not attend, since he is in Point Barrow, the northernmost place in Alaska, and one of the coldest places in the world, I should imagine. I have no desire to go there, but I am curious to know what kind of desmids he is finding so near the North Pole. Tropical desmids are the ones I love, and you have certainly sent me a very fine assortment of them.

With my best regards and good wishes,
Sincerely yours,

Return to AM Scott

KEMENTERIAN PERTANIAN

BALAI BESAR
PENJELIDIKAN PERTANIAN

BOGOR, 27-5-1952
TJIKEMEUB 99.

BALAI PENJELIDIKAN
PERIKANAN DARAT

No. _____

LAMPIRAN:

Dear Scott,

PERIHAL:

I send you here with the copy of Joshua's paper and two plancton-tubes, containing desmids from the pond in the Botanical Garden, Singapore (squeezings from hydrilla). They contain many species of desmids, but I cannot find "Desm. cuspidatum". Maybe you have more luck in finding this specie in the sample.

With kind regards.

C. M. M.

N.B. No news from Prof. Prescott until now; no bulletin and "culturing on algae" received. Something wrong with him? S -

DINORMALISIR.

1616-52

New Orleans, June 14 1952

Dear Friend Sachlan,
Dear Friend Sachlan,

The two samples from Singapore arrived safely about a week ago, and I thank you very much for the trouble you went to in getting them for me. Like you, I have been unable to find any specimens of *Glosterium cuspidatum*, and it is probably not present in the samples. However, this was more or less expected, since it would have been slightly miraculous to refind the plant on the first trial, after nearly half a century. Nevertheless, I shall keep on searching, and it may turn up.

Also I am very grateful for the copies of Joshua's drawings that you made. These will be very helpful, and already they have enabled me to verify the identification of one diatom about which I was in some doubt. This is *Euastrum coralloides* var. *trigibberum* Lagerheim, which I have found in three of your collections, No. 9 from Air Klekag, Sumatra; No. 270 from Lake Bupengau, Borneo, and "K" from Tempaga Swamp, near Djakarta. In Krieger's monograph he rejects *E. coralloides* as "unsicher", and has given a new name, *E. octogibberum*, to *E. coralloides* var. *subintegrum* West & West, a form of which I found in North Australia. Now I am satisfied that *E. coralloides* is a good species, and shall describe the two varieties accordingly.

Another of Joshua's plants shown in these drawings is *Didium granuliferum*, which is really a *Pleurotsenium*, which I have found in one or two of your collections, and also in the two samples from Singapore. Krieger reduced this to synonymy with *Pl. trabeculum* var. *maximum*, evidently not putting much faith in Joshua's rather poor drawing. But the plant that I have seen is decidedly granulate and of a different shape, so it cannot belong to *Pl. trabeculum*. I have found a number of cases where Krieger's judgement was mistaken, similar to these. But this cannot be held against him, and must be blamed on the immensity of the task that he has undertaken, of comparing and trying to reconcile the descriptions and drawings of hundreds of authors, good, bad, and indifferent, over a period of more than a century.

I sent your letter to Prescott so that he could see that you had not received the book on Culture of Algae, and here is his reply, received yesterday: "Quite some time ago I sent Sachlan a second copy of the Culturing of Algae. He surely must have received it by this time. If he does not I shall feel sure that something is wrong with the mail service. I did not bill him for the book but sent it just as a complimentary copy because I feel that we should help him all we can. I am certainly sorry that he did not receive the first copy, for he must have thought that I was very forgetful. I sent it last winter or late autumn. I waited after you mentioned it the first time, thinking that the other copy was delayed and that it would eventually arrive. Then I sent off another after I had your letter a couple of months or less ago". If you have not received the 2nd copy, let me know and I will order one from the publishers.

Prescott is up to his neck in work. I have had to telephone him twice in the last few weeks, to make sure that he finished the descriptions for our paper on North Australia before he leaves Michigan. On June 18th he will go to Montana to teach summer school until about the end of July. Then he will go direct to Point Barrow, the northernmost point in Alaska, to continue the work he started a couple of years ago. About Christmas he will return to Michigan and leave almost immediately for Quito in Ecuador, where he was during the last war.

Although Prescott has written the descriptions, the job of assembling the North Australian paper falls on me, and it will not be an easy one, since there are more than 300 different algae, which must be arranged in the correct sequence, comments added on many of the new and rare species, references to the previous literature looked up or verified, etc, etc, etc. So I am going to be busy for the next few months. And our summer season started a couple of weeks ago. The temperature will be 90 to 98° F. (32 to 37° C.) continuously until the end of September, with a humidity of 80% or more. Not easy to work under

Easter Sunday, Apr 13 1958

Dear Mr. Sechlan,

Your two parcels containing the books and the samples arrived safely about a week ago, and since then I have spent almost every minute of my spare time in examining the material and admiring the beautiful desmids that exist in such profusion. Many thanks for both the samples and the books.

I am a little bit surprised to find that Bernard's drawings are not very good, and many of his identifications are wrong. Of course, he states in his introduction that he was unable to identify many desmids from the literature available to him, and in such cases he assigned a new name, expecting that future workers would have to change them. That has happened. I checked some of the genera in his 2nd paper with Krieger's monograph, and find that Krieger has changed nearly all of them.

My position is quite similar. There are many desmids that I cannot find in the papers that I have on hand. Particularly I lack the works of W. & G.S. West on Ceylon, Singapore, Koh Chang, etc., and I do not possess Joshua's work. It seems that old man Joshua must have seen a large proportion of the Indo-Malayan-Indonesian desmids, because many times I have thought I had found a new species, only to find on checking that it had been reported by Joshua nearly 70 years ago. That was the case with *Bustrum flammum*, apparently seen only by Joshua, and by Okada in Japan, until you and I saw it. But fortunately my friend, Prof. Prescott, has a very large library of desmid literature, probably the largest in this country, and can tell almost with certainty whether any given desmid has been published before.

The photos that you sent are very good, and clearly recognizable. I have found all of them in the samples except *M. Torreyi* var. *Doveri*; no doubt it will turn up later. I was particularly anxious to see this and compare it with the specific form which occurs in southern USA, of which I am enclosing a sketch. You will notice that your variety has the same number and shape of lobes as the type, but that it is very much compressed laterally. It makes you wonder what physical or chemical forces are at work to produce such a striking difference. What kind of camera do you use for these pictures? Is it a 35 mm camera of the Leica type, or a larger one? I have a Japanese camera, copied from the German Zeiss, that takes 9x12 cm films, but it is such a bother to use that I seldom set it up on the microscope. I should be glad if you will send me a photo of the variety of *M. Torreyi* that you found in the Bonorowo swamp; perhaps I can make an enlarged drawing from it, to include with my other drawings. I asked Prescott to lend it to me, but he forgot to do so, as he forgets many of my requests. Also I wrote him a couple of weeks ago, reminding him that you had not received the book on culturing of algae, and asking him to be sure to send it.

Concerning the desmids shown in your photos, I can tell you the following:

Microsterias Torreyi var. *Doveri* is, of course, unmistakable. A very beautiful form. *M. ceylanica* is possibly a new variety, though it does not differ very much from var. *Wallichiana*. *M. Moebii* is typical, I think, but this species shows many variations. The small *Bustrum* is not *B. indicum*, but *B. longicollis* var. *capitatum*, though your specimens are somewhat smaller and the polar lobe proportionately wider than in the type. I have found the type in North Australia, and also, strange to say, in Louisiana, USA. The photo of two cells, which you thought might be a *Cosmarium*, is *Arthrodesmus apiculatus* Josh. (Joshua again!). I found it in North Australian material. The peculiar desmid that you thought to be a *Xanthidium*, is actually *Staurastrum Rosei*, Playfair. It occurs in New South Wales and North Australia.

cells

The new dichotomically of *St. Wildemanii* in your sample No. 8, in which the other semicell has only one spine at each angle, have given me a clue that I think has solved the puzzle. *St. Wildemanii* combines with *St. subtrifurcatum* var. major, and with two other forms, one with 2 (or 3) spines in a horizontal plane at each angle, and another with only 1 spine at each angle. Further, the two latter forms combine occasionally, so it is evident that all four forms are closely related genetically. Now, *St. subtrifurcatum* var. major bears only a general resemblance to the specific form of *St. subtrifurcatum*, and there are important differences. So it seems to me that var. major is not related genetically to the species, and that it must be considered a variety of *St. Wildemanii*, and renamed *St. Wildemanii* var. *subtrifurcatum*. The other two forms, with 2 or 3 spines in the horizontal plane, and with only 1 spine at each angle, must also be named as varieties of *St. Wildemanii*. I propose to write a separate paper on this subject, because it will be necessary to make a considerable number of drawings to show all the combinations, which would be too many to include in a large paper. But before doing so, I shall have to ascertain whether the two latter forms have been published before; so far as I know they have not.

I am enclosing sketches showing all of the desmids of which you sent photos, except *M. Torreyi* var. *Doveri*, together with some others that I have identified. Please return the sketches by ordinary mail; it is not necessary to send them by airmail. If you wish, you could have prints made of them by the blue-print method.

I hope that you get the collections from Mr. Sinclair at Singapore, and that they contain the *Spinoclosterium*. Recently I wrote some notes on the subject of *Spinoclosterium curvatum* Bern., versus *Closterium cuspidatum* Bail., in which I brought to bear all the arguments that I could think of in favor of the latter name. Most of the authors who have actually seen the plant are in favor of it, but Prescott remains unconvinced. Frère Irénée-Marie, of Montreal Canada, had also published a paper on the subject, but I have not yet seen it.

It will be very interesting to read your account of the limnology of the artificial pit near the experimental pond in Bogor. It is quite surprising that a new pit like this should contain such a large variety of desmids.

With my best regards, and renewed thanks,

Sincerely yours,

Digitized by Hunt Institute for Botanical Documentation

March. 3 1952.

Dear M.Scott,

Five weeks ago, I sent you by ordinary mail a parcel containing 9 plancton samples and the two papers of C. Bernard as a printed matter. I hope that you will receive them in a good conditions. In my former letter, I told you that I have collected 20 plancton samples from Sumatra; but after investigated them, it appeared that only five samples contained desmids, which are worthwhile to send you for determination. So I am mistaken by thinking that waters with acid-reaction always contain desmids. The other four samples were taken from West-Java; at any case from waters where the desmids are never investigated before.

So I sent you the two well-known ^{papers} of C. Bernard about desmids in Indonesia which you asked for formerly; I have got them in the shed of the Botanical Garden in Bogor.

Further I will suggest you and Mr/Prescott to make also a list of all the desmids you have found in comparison with the desmids found by ~~the~~ the previous investigators (W. Krieger included) and I think that you will found many species and varieties ~~to~~ never seen before and may be "new" species and varieties.

Concerning the contents ^{of the samples} I am sending You now, I can tell you the following peculiarities:

I have seen for the first time the very beautiful shape of *Micrasteiarias Torreyi*; I hope that you will find back in the sample because this specie is very scarce. In 1941 I have found in Bonorowo-swamp (Middle-Java) a very rare variety of *Mic. Torreyi*. Mr Prescott already know about this new specie, because I sent him the microphotograph and suggested me to call preliminary *Mic. Torr var javanica* (Sachlan); It is only a pity that I have no more the sample/ I hope in the future to meet this rare specie again. If you like I shall ^{send} you the microphotograph.

In sample no 7, you can see again an other dicho-typical cel, which we have seen before and it is interesting to tell you that in the same sample occur also the dicho-typical cell, which we have seen before (*Str. subtrifurcatum + wildemanii*).

The Krieger monographien, which you sent me are very interesting and special for me; a good study book.

But meanwhile I have not yet receive the book: On the cultivating of algae which Mr. Prescott promised me in his last letter dated on Oct 15 1951. Will you write him about this subject; may be he has forgotten to send me the book. Thank you in anticipation./!

Two weeks ago I received an answer from Mr. Sinclair, curator of the Herbarium in Singapore, telling me that he will try to send me desmids samples from the botanic ponds. I hope they will contain the "*Spinoclosterium*" of Bernard.

Have you been in Central-America during the Christmass and the New-Year? Mr. Prescott told me in his letter about the grand and beautiful scenery in Montana and his ~~as~~ scientific ^{trip} in Alaska to investigate the algae in this area I have also got from him some addresses of somebodies who are working in the culturing of algae nl. Dr. Ralph Lewin and Dr. Harold Bold. I have just send a letter to Mr/ Bourrelly in Paris for information about culturing of algae.

Again I hope that You will received the samples in a good conditions

Sincerely yours

Oct 30 1951

Dear Mr. Sachlan,

Many thanks for your interesting letter of Oct 4th. It is indeed good news that you are going to send me about 20 more collections from Sumatra, and I shall be extremely glad to get them. In return I have some good news for you! After nearly two years of effort I have finally succeeded in obtaining a copy of the first five parts of Krieger's monograph "Die Desmidiaceen Europas", in Rabenhorst's Kryptogamenflora von Deutschland, Oesterreich und der Schweiz. It was only with Dr. Krieger's help that I was able to get them, and these 5 parts are all that have been published up to the present. He is now working on the next installment, which will deal with the large genus *Cosmarium*, and it may perhaps be published next year. I sent you these books by surface mail about a week ago.

Also I have arranged with Prof. Prescott to pay your dues in the Phycological Society until such time as you may be able to pay them yourself. I do not know of any souvenirs that you could send me from your country, except some more stamps from Indonesia and adjacent countries, for my friend.

Prescott's wife is progressing satisfactorily, and he tells me that soon she will be able to get along without the steel braces that she has had to wear since her accident. He tells me that he has sent you a book on the culture of algae, which may be of some value to you, though it contains nothing on desmids. Pringsheim's book "Pure Cultures of Algae, their preparation and maintenance", describes methods for preparing cultures containing only one species of alga, which is also free from any other form of life, such as fungi or bacteria. There is not much in the boom about desmids, but some of his methods might be adaptable. Everybody seems to agree that cultivating desmids is very difficult, requiring much time, patience, and experimentation. Most of the desmids that have been cultivated successfully seem to be the species that can tolerate hard water, with a pH over 7.0. The acidophiles which include many of the more highly elaborated and beautiful species, seem to be much harder to cultivate. A very good book on this subject is "Recherches experimentales sur le Polymorphisme et la Teratologie des Desmidiées", by M. Lefevre, 1939, published by Paul Lechevalier, 12 Rue de Tournon, Paris, France. This has a large number of drawings and photographs showing the curious and abnormal shapes assumed by desmids under artificial culture. Unfortunately his methods are not described in this book, but in a previous paper that I have not been able to obtain, namely, "Technique des cultures cloniques des Desmidiées" (Ann. Sc. Nat. Bot., 10 ser., t. XIX, 16 p., 3 planches microphoto., 1937). Perhaps you can see both of these works in the library of the Botanical Garden at Bogor.

I suppose that every collector of desmids has tried to cultivate them, or at least to keep them alive. I have tried too, but have not had much luck, because I have neither the time nor the necessary experimental skill to devote to the task. Since you have the laboratory experience and facilities you may perhaps do better. But I would suggest that you reduce the amounts of calcium and magnesium in the formulgs for nutrient solutions to almost nothing. Desmids, or the majority of them, so not

like these elements. In my attempts I was able to keep the desmids alive, and sometimes multiplying, for some weeks or even months, but eventually they die out, being overpowered by the other algae which can better adapt themselves to the unnatural conditions. I used the water from the natural habitat, with the addition of a small quantity of one of the nutrient solutions, Knop's for example.

The Laboratoire Cryptogamique, 12 Rue Buffon, Paris, France, maintains a number of algae, including desmids, in permanent culture, and their technique differs somewhat from that of others. If you will write to Dr. Pierre Bourrelly at this address, he will no doubt send you some literature on the subject. Mention my name when you write him.

The meeting of the Phycological Society in Minneapolis was postponed, and will be held at Philadelphia on December 26th to 30th, in conjunction with the large annual meeting of the American Association for the Advancement of Science. I do not intend to go there, because it is expensive, and principally because the weather is too cold at that time of the year. My wife and I attended the meeting in New York two years ago, and nearly froze to death. We are not used to snow and blizzards, and have no clothing suitable for such a climate. If things turn out right, we hope to go to Central America at Christmas and New Year, to Guatemala and perhaps other places. But conditions are so uncertain that I am not sure that I shall be able to get away.

Here is something that you might be able to do for me, if you would be so kind. About 1908 Charles Bernard published a desmid that he obtained in a collection made from a large pond in the Botanical Garden at Singapore. He named it Spinoclosterium curvatum, because he thought it differed sufficiently from Closterium to be entitled to generic rank. This desmid is probably the same as the one found by Bailey in the United States, and published by Ralfs in 1849 as Closterium cuspidatum Bail. It has since appeared in several places. I have found it in Florida, in North Australia, and have seen one specimen in one of your samples, but I do not remember which one and shall have to wait for it to turn up again. It has also been found in Massachusetts, and Michigan, and also in Japan.

Now, there is a difference of opinion as to which name is correct, Spinoclosterium curvatum Bern., or Closterium cuspidatum Bail. Prescott maintains that the former is correct, while Grönblad, Irene-Marie, Teiling, myself, and others think that Bailey's name should stand. If I would get some specimens from the pond in the Botanical Garden at Singapore, and compare them with the American plants, perhaps I could convince Prescott that he is wrong; provided, of course, that the plants are identical, as I suspect. Would it be possible for you to ascertain the name of the Director of the Botanical Garden at Singapore, and write to him, explaining the case, and ask him if he would be kind enough to have some collections made in the pond and send them to you. Such collections should be made from squeezings from the larger aquatic plants, since this desmid is not likely to be found in the plankton, and samples should be made in several different spots, if the pond is a large one. Of course, there is no guarantee that after nearly 50 years this desmid will still be present in the pond; frequently I have gone back to a certain habitat to get more specimens, but there were none to be found. But that is a chance we would have to take.

With my best regards and good wishes,
Sincerely yours,

June 30 1951

Dear Mr. Sachlan,

I must apologize for taking so long to answer your letter of April 24th, but I have been ill again with gall-bladder trouble, and though I am now recovering, it has left me in a run-down condition so that I get tired very easily and do not seem to have the energy for working, even on my beloved desmids.

I am glad to know that the silk bolting-cloth arrived safely. If you ever want more of it I shall try to get the address of the manufacturers in Switzerland, where it can undoubtedly be bought for very much less than it costs in this country.

The reason you did not hear from Prof. Prescott is probably that about the time he received your letter his wife met with a very serious accident, by falling down the stairs at their house, and breaking her back. Of course this was an extreme worry to Prof. Prescott, and threw a great deal of additional work on him, so you must please excuse him. I understand that Mrs. Prescott is progressing favorably and that she will eventually recover entirely. I am writing to him asking that he enroll you as a member of the Phycological Society. However, the Society is a new one, only about four years old, and so far it has published only a Bulletin four times a year, which is small and does not contain anything of great value. However, you will receive a list of members that includes most of the phycologists of the U.S.A., and many in other countries, with notes on the branches of phycology in which they are specially interested.

Though I have not yet been able to do any active work on the material that you sent, I do take a look at it from time to time, and make some sketches. Thus I have been able to identify two more of the photos. Your photos No. 3 and No. 4 show Dysphinctium Lagerheimianum Turner, Fresh Water Algae of East India, Plate XXII, fig. 6. The genus Dysphinctium was an attempt on somebody's part to split up the very large genus Cosmarium, but it is no longer recognized, and your plant would therefore be called Cosmarium dysphinctum. I do not know if anyone has found since Turner described it in 1892.

Your Photo No. 7 is a new variety of Staurastrum turgidum Wellich, and I think it is one of the most elaborately decorated desmids that I have ever seen, a real beauty, but very difficult to draw. I was fortunate in finding an empty cell, so that the ornamentation of the cell-wall could be seen very clearly.

Dichotypical desmids are those in which one semicell belongs to a certain species, and the other semicell is of a different type, apparently belonging to another variety, or even occasionally to a different species. Such specimens are not uncommon, but nobody seems to have been able to give a good explanation of the phenomenon. Some think they are hybrids, but W. & G.S. West say that since sexual reproduction occurs so seldom in desmids, hybrids must be of extremely rare, if they occur at all.

There is another curiosity in desmids, in which one semicell of a Staurastrum has three arms, for instance, and the other semicell has four, or five, or six. Teiling has called these "Janus-forms", from the old Greek god Janus, who was said to have had two faces. This phenomenon also has not been satisfactorily explained.

I am sorry to say that I shall not be able to help you in obtaining a pen-friend from Louisiana. You see, both my wife and I are 64 years old; we have no children, nor any relatives in this country. All of our friends are about the same

age; their children are married, and many of them have moved away from New Orleans. In fact, we do not know any young people at all. I think that perhaps Prescott could help you to find a pen-friend among his students, who would be interested in the same kind of things that you are, and I shall ask him the next time I write. It would be advisable for you to write him also, because he is sometimes forgetful. At the present time he is teaching at the summer school of the University of Montana, and his address until the middle of August will be:

Prof. Gerald W. Prescott,
University of Montana Biological Station,
Big Lake, Montana, U.S.A.

This place is in very mountainous country, in the Rocky Mountain Range, so some of his students ought to be able to write to you about mountain-climbing.

Since you wish to improve your written English, I hope you will not mind if I make a suggestion. You start your letters "Dear Mr. A. M. Scott", which is not incorrect, but also not customary. The usual form is "Dear Mr. Scott, or Dear Prof. Prescott", omitting the initials.

I received the copy of "Three Centuries of Phycological Research in Indonesia" that you sent, and also from Dr. Zanefeld I have four copies, which I am distributing to some of my friends. I am writing to Dr. Zanefeld, who has returned to Leiden in Holland, thanking him, and giving him the names and addresses of the persons to whom I have sent the reprints.

Also from Dr. Veas I have received a reprint of his paper on Eichhornia crassipes, which is very interesting. I am writing to thank him, and also to give some additional bits of information about this plant from my own observations in southern USA.

Wish my best regards and good wishes,

Sincerely yours,

July 4th 1951

Dear Mr. Sachlan,

I made a mistake in Prof. Prescott's address that I wrote you
a few days ago. The correct address is:

Prof. Gerald W. Prescott,
University of Montana Biological Station,
Flathead Lake,
Big Fork. Montana, U.S.A.

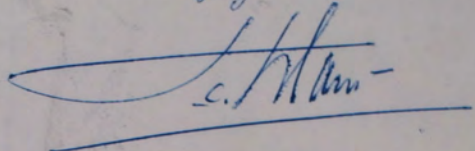
Sincerely yours,

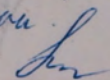
Further I am enclosing some stamps of several
countries in Asia; I hope, that your friends
will please with them.

Again I thank you very much for the sending of
Plancton-gauge.

With kind regards.

Sincerely yours.


C. Mann

P.S. will you please, when you write me again, send back
one of the stamp with the value of 45 Sen, because I do not
possess this one. Thank you


KEMENTERIAN PERTANIAN

DJAWATAN
PENJELIDIKAN PERTANIAN

BOGOR, _____ 19____
TJIKEMEUM 99.

BALAI PENJELIDIKAN
PERIKANAN DARAT

No. _____

LAMPIRAN: _____

PERIHAL: _____

Dear - A. N. Scott,

Herewith I send you stamps from Asia, for your friends, who are collecting stamps. I have received your sending of stamps, thanks!

Can you help me to a penfriend? I should like to have a penfriend from the State Louisiana. If it is possible of course one of your ^{or family} friends (Student or pupils of the high school).

My hobby is ^{collecting stamps} collecting stamps. Natural lover (tourism) - to make photographs of natural beauty - sports (especially to climb mountain

Dear Mr. A.M. Scott,

Bogor 24-IV-1951

I have received the parcel containing the "plancton-gauze" on Saturday, April 21st, and here with in the name of the Laboratory of Inland-fisheries as a government's Institute. I thank you very much for the sending of this gauze. We are very happy to receive this gauze; and so we can go now to take samples with plancton-net without holes. From now on I will begin to collect desmids-samples from all the lakes in the environment of Bogor, which we have not yet investigated. And we shall send them to you, when you are ready with the desmids from Borneo, Sumatra etc.

How is your health now, Mr. A.M. Scott? I hope, that you are quite well now and able to work again. Yes, I have read in the news-paper about arctic-wave in U.S.A. some month ago, which made many victims.

One month ago, I sent you by ordinary mail one copy of about "Three centuries Phycological research in Indonesia"; the other five copies, Mr. Lamfeld will send you itself. When Dr. Taft publishes his paper this year, I should like to have a copy of this paper, because I am anxious to know the desmids of New Guinea. As you know, I am also being to make a simple iconography of desmids occurring in Africa-Asia and Australia.

Do you know, that I have made a misdetermination in my paper (with Dr. Vaas) "On the ecology of small lakes etc"? The desmid in figure 5 is not *Hantzschia manii* etc but "*Coisynchenticulatum* var. *rotundatum* f. *latum*. f. *nov.* (Jacobson)". Prof. Prescott already knows about this - I wrote to him about this misdetermination - and suggest to give the new form a name as above-mentioned. I have found this new form again in the lake "Goenong Putri" at 30 K.M. distance from Bogor, and I shall send you in the future this sample, because Prof Prescott would like to see this new form itself. Is Prof Prescott still Secretary of the Phycological Society of America? Because two months ago, I wrote to him and said, that I should like to become a foreign-member of the Society. Till now, I have no answer from him. Will you write him about this?; may be he did not receive my letter; in this letter, I also asked him information about "atypical" specimens. I will also write to Einar Teuling about this subject; I have already received some interesting papers of his, such as about "Evolution of Plancton" etc.

Feb 25 1951

Dear Mr. Sechlen,

I have received your airmail letter of Feb. 5th, and also the two boxes of samples, both of which arrived in perfect condition, thanks to your careful packing in the wooden boxes, with plenty of paper and cotton. The collections are highly interesting, and I hope that I shall soon be able to start real work on them. So far I have been able only to glance through them. This winter I have been ill for several weeks with gallbladder trouble, and then with bronchitis, so have done practically nothing on my beloved desmids. Also the winter has been exceptionally cold, and since the room in which I do my microscopical work is not adequately heated, it has not been possible for me to do much work. Yes, we do have cold weather here occasionally, though New Orleans is supposed to have a sub-tropical climate. Two weeks ago the thermometer went down to 20°F (minus 9°C.) on two successive days, and for a week it was below the freezing point, which is much too cold for me.

Thank you also for the very pretty stamps with which your envelope was decorated. I gave the entire envelope to my friend who collects stamps, and he was much pleased with it. In return he has given me some stamps which I am enclosing herewith, and hope they may be of interest to you.

I can identify only a few of the new photos that you sent:

- No. 4. *Xanthidium antilopseum* fa. *maxima* Nordst., from South America. I have also found it in North Australia and even larger specimens from Florida, U.S.A. I think it should be described as a new species, because there are already too many described varieties of *Xanthidium antilopseum*, and the present one does not, in my opinion, show any marked resemblance with the others.
- No. 9. *Xanthidium superbum* Ellv. This was originally discovered in northwest Europe (Poland I believe), and since been found in several other places. I have found it is North Australian material. I do not possess a copy of Jac's paper on Desmids from Kwangsi.
- No. 10. *Micrasterias tropica* var. *polonica* Eichl. & Rac. Your plate is more slender than the Polish one, and is probably the same as some North Australian specimens that will be described as fa. *australensis* Fresc. & Scott.
- No. 58. Your photo shows a certain resemblance to *Austrum flammeum* Josh., but the apical incision in yours is much deeper and wider than in Joshua's drawing. Therefore it will probably have to be described as a new variety.
- No. 57. I cannot find a *Eusstrum beagalense* listed anywhere, but there is a *Cosmarium beagalense* of very similar shape to yours, but much larger. So yours will probably be a new variety.

In one of your letters you mentioned that the Indonesian islands are thought to have been connected, during Pleistocene times, with the mainland of southeastern Asia by a land bridge (the Sunda Shelf). There was also an almost complete bridge through Celebes and the Molucca Islands with New Guinea, and through Java and the Sunda Islands with Australia, though the bridges were interrupted by the deep Macassar Strait and Timor Strait. New Guinea and Australia were also connected by the large Sahul Shelf. Undoubtedly these bridges account for the fact that there

is such a decided similarity in the desmid flora all the way from India through Burma and Malaya, the Indonesian Islands, to North Australia and Queensland. I have seen nothing yet on desmids from New Guinea, and am very anxious to see a paper that Dr. C. E. Taft is preparing on this subject, and which he told me should be published this year. On the other hand, the desmid flora of south and southeastern Australia is quite different, owing to the colder climate.

It will be very interesting to read Dr. Vass' report on the Borneo habitats, and also I should like very much to have a copy of the paper "Three centuries of Phycological Research in Indonesia". In fact, if it is possible for you to obtain six copies of the letter paper I should like to have them for distribution to other algologists.

After writing several letters I finally found your bolting silk cloth in New York, and two weeks ago I sent you a piece measuring 40 inches by 36 inches (about one square meter). It is No. 25, the finest mesh obtainable in this country. After receiving the cloth I saw that it is stamped "Made in Switzerland", which no doubt accounts for the very high price I had to pay for it (\$24.90), since there is a very large import duty into this country. I have no objection to the high price, and fortunately I can easily afford to spend some money on presents for my friends. I think it is a fair return for your kindness in sending me the algal samples. It was necessary for me to put a valuation on the shipping papers, so I valued it at \$5.00, and also I addressed the parcel to the Laboratory of Inland Fisheries, and not to you personally, in the hope that since the Laboratory is a Government Institution, you may not have to pay any duty on it.

As regards your notes on my drawing No. 50, the word "besterd" is a very impolite one that is applied to the child of parents who are not married. The word you are thinking of is "hybrid", which means a cross between two different species of plants or animals. The best authorities on desmids say that true hybrids in the desmid family are very doubtful, since sexual reproduction is of such rare occurrence, and only a few instances of hybridism are recorded in the literature. But as any experienced desmidologist can confirm, there are many instances of desmids in which one semicell can be definitely identified as belonging to a certain species, and the other semicell apparently belongs to an entirely different species or variety. Einar Teiling has invented a new word to describe such specimens; he calls them "dichotypical". I have found many such examples, particularly in the genera *Euestrum*, *Microsterias*, and *Staurastrum*, but have never seen any plausible explanation of the phenomenon. In the particular case in question, *Staurastrum Wildemanii* and *St. subtrifurcatum* var. *major*, similar specimens of *St. subtrifurcatum* with only two spines in a vertical plane have been recorded from Africa (Lake Nyassa) by Schmidle, 1902, "Algen aus dem Nyassa-See", *Engl. Bot. Jahrb.*, XXXII. Fritsch & Rich, 1937, "Algae from the Belfast Pen, Transvaal", *Trans. Roy. Soc. S. Africa*, XXV, part II, say that *St. Wildemanii* should probably be regarded as synonymous with *St. subtrifurcatum* f. *bidens* Schmidle. In view of your dichotypical specimens I think this is correct, but I am not competent to decide such matters, and shall have to leave the decision to Dr. Prescott.

With my best regards,

Sincerely yours,

Bogor, Feb 5.

Dear A.M.Scott,

One month ago, I sent you by ordinary mail the algal collection from South-Sumatra, with photo's and list of the species occurring in the three tubes. I hope that you will receive this collections in good condition, because it is a valuable ^{collected} from a region, where the plancton is never yet investigated.

Next time I shall send you the summary of K.F.Vaas' report ^{concerning} of the boggy milieu of Borneo; you must read this before you publish the desmids of Borneo.

Only Kolkwitz in 1931 have investigated one plancton sample, in which occurred very few desmids. Have you seen the recent publication of J.S.Zeneveld concerning: "Three centuries of phycological work in Indonesia"? It was published by Organization for Scientific Research in Indonesia (Djakarta), publication No: 21. If you do not have a copy I shall be glad to send You.

May be Mr.G.W.Prescott and other members of the Phycological-Society of America will ~~interest~~ interest other group of the algae in the samples (Sumatra of Borneo) such as diatoms or chlorophyceae. In the sample of Sumatra, occurs a great specie of the genus Phacus (I sent him a photo of it), which he has never seen before and should like to see this specie, when you send the samples to him later on. Further I can tell you, that ^{the} collection from Sumatra occurs many very little species of the genus Staurostrum and Cosmarium, that I can not identify them and also very difficult to make a photo of them.

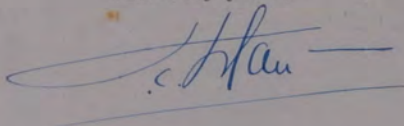
Meanwhile I have receive your interisting 50 drawings of desmids; I thank you very much for the trouble. I know now, that I have not seen all the desmids in the collection such as the two varietie, of *Microrhabdulus* *warrenensis*. And about the drawing No 50; what do you think about this plant? Can you say here a "bastard" and what is your experiencis about this bastards among this desmids? It is very interfisting to know in such case, what there happens by vegetative reproductions?

I hope that you will enjoy with this collection and can publish with Mr. G.W. Prescott this desmids from Sumatra and Borneo and other parts of Indonesia before -----(the outbreak of the third world-war!!)

We hope ofcourse that the war will never break out.

Please send me a note, when you receive the collection in good condition.

Sincerely yours.



P.S. Photo No= 58 is *Euastrum flammeum* Joshua (Burmese desmids)
No: 8 is *Xanthosira superbum* Elfv. (Jao, Desmids from Kwangsi 1949-
have you a copy of this paper?)

I know this afterwards after having to consult this two papers.
I am now also being to make a iconograph of the desmids figures, occurring in all the papers, which I can borrow from anywhere.

Dear A.M.Scott,

I have received your letter concerning the receipt of the algal collections; what a pity, that several tubes were broken. I confess my negligence about the way of packing. Fortunately I have still rests of the samples - M, S, and No. 43; I shall immediately these and the the rest of my collections of Borneo-desmids send to you. About the six broken tubes, I think, that is not so bad, because the greatest ^{part} of the species occurring in the broken tubes you will find back in the not broken tubes, I hope so!

Fourteen days ago I received a letter from Prof. Heimans, saying that several tubes (how many he did not ~~told~~) also broken. Further he told me, that he may be not be able to identify all the desmids, because he has also only three desmids-literature (Krieger - Bernard) And so I propose, that only You and Mr.Prescott will investigate and publish the Borneo-desmids; what do you think about this?

And now I should like to correct the mistakes, which I made on the list:

- a. Sample No 134 is not from Kutai but from Kapuas-region.
- b. In the sample A, not *Micrast. truncata* n.v.? but it must be *Micrasterias Ceylanica*

Further somewhat remarks on your ~~note~~ tentative identifications:

1. *Micrast. ceratophora* Joshua occurs in tubes 43 (broken) and also in tube 38 (under number 19) is very few. I am afraid, that you cannot find back in the tube. In this case, you see, how important it is to make photos of the rare desmids. The notes about this *micrasterias* is very interesting.
2. *Micrasterias apiculata*..., this variety differs from the figure of Tjitjoeroekensis (Tjitjoeroek is the name of a little town in the south of Bogor) Bernard or from the fig. No 19. in " On Japanese desmids " by Roy & Bisset.
3. I have also seen the figure of *Staurestrum saltans* Joshua in "Borneo desmids in the environ of Rangoon" but here are the spines on the brachia not so long
4. *Streptonema trilobatum* Wallich is very common in the environ of Bogor.
5. Concerning the varieties of *Staurestrum sexangulare*, I feel that one or two of the species are new varieties!

Yes, I have now (owned by Library of Botanical garden) more desmids-literature such as, *Lagerheimia* (Bengalen)- Roy & Bisset (Japan) - Joshua (Burma) - Gutwinski (Java) Schmidle (Sumatra)- West G&Ws (Singapoer- Ceylon- Magdagaskar) etc.

It is a pity, we have only one copy of the two papers of Bernard; I shall try to get a copy in Djakarta (the capital of the Republic of Indonesia) for you.

I have now plankton-samples, taken in the environ of the town of Palembang, the capital of South-Sumatra in October 1950, and it is seemed, that this plankton is very identical with that of Kapuas-river. You know, it is no wonder, because during the Pleistocene-period the islands of Borneo, Sumatra and Java formed a great landmass as peninsula of Asia, so-called " Sunda-plat " which river Kapuas and river-Musi (a great river in South-Palembang-, South-Sumatra) were branches of fossil-river, which discharged in to the South-Chinese sea. Ofcourse I found again many species, which I cannot identify in spite of I have more literature and made photos of them. And so I ask you: Shall I send these samples (3 tubes) to you or to Mr Prescott? You see, I think, you need several weeks or months to investigate and drawing the Borneo-desmids. I believe, that is better, that you and Mr.Prescott publish as a one paper, because ecological-speaking these plankton are the same. As far as I know, only Krieger, Schmidle, Lemmermann investigated Sumatra-algae, but not yet the environ of Palembang. But now a serious request:

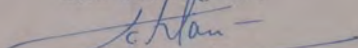
"If you have a gauze for plankton-net, available I should be grateful if you would to send 1/2 M² to me!"

You know during the revolution in 1948 the laboratory was burned ~~water~~ ^{out} and from that time we always use old plankton-net with many holes! Two years long we have taken the trouble to buy plankton-gauze from foreign-countries, but without succes. You can send them as a scientific sample without value.

When you receive this letter, would you write me again concerning the Sumatra plankton-sample.

Again I thank you in anticipation for your co-operation.

With kind regards.


(Sachlan)

P.S. I am also a stamp-collector, would you like to paste many stamps of several values necessary for an ordinary letter, thanks!

Bogor 25-2-1950

Dear Mr. Scott,

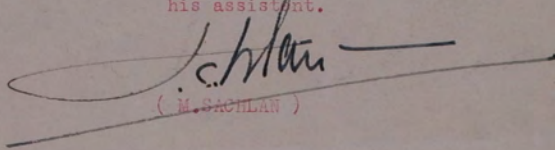
Herewith we send you a reprint, which you asked for. We have received your letter and we are very glad that you are interesting in the desmids of Indonesia. The laboratory of inland fisheries is the only institute in the States, who researches freshwater-algae as food of the fishes. At this moment they are very few books about desmids of Indonesia, and manytimes we find in the samples ~~several~~ sorts of desmids not yet illustrated in the books.

One month ago, we have read your paper about: "Spinocosmarium quadridens and his varieties" in- TRANSACTIONS OF THE AMERICAN MICROSCOPICAL SOCIETY- Vol 68. No 4. October 1949.

Now, on the occasion of your paper we send you photos of two sorts desmids before that time unknown in Indonesia. Are they Lanthidium, Staurastrum or Spinocosmarium? The name Spinocosmarium is unknown in Indonesia. These desmids are collected from the Ca-poore waters of West- and East-Borneo. One of the two sorts looks like much of Spinocosmarium quadridens *fa forficulata* Press & Scott (plate II No. 5) Next time we shall send you this materials.

Sure, in the future we shall collect desmids from Indonesia for you; and further we should like to receive your four papers: "On desmids of southern U.S.A."

In the name of the Head of the laboratory
his assistant.


(M. SACHLAN)

Nov 18 1950

Dear Mr. Sechlan,

I have received your airmail letter of Nov. 8th, and am glad to know that you will be able to send replacements for some of the tubes that were broken. As you say, many of the desmids occur in several of the samples, so that the loss of a few tubes will not be very serious.

The news that Prof. Heimans may not be able to identify all of your specimens is somewhat of a relief, because there would have been some complications if he were going to publish on your material as well as Prescott and myself. We shall be very glad to undertake the identification and publication of your desmids, including the new collections from Sumatra. It will be better if you send the Sumatra material to me instead of Prescott, because our arrangement is that I do the preliminary work of searching the samples, which takes a lot of time, and my time is less valuable than his. I make drawings of all the new or unusual species, and identify them if I can from my available literature, and then send my drawings and the samples to Prescott for checking and identification of those that I cannot determine. It will be desirable to publish all of your desmids, from Sumatra, Java, Bali and Borneo in one paper, since all of these places belong to the same region, and the desmid-flora is of the Indo-Malayan-Australasian type.

I have been examining your samples in my spare time, though I have not yet been able to start real work on them. Already I have made a number of drawings, and I shall obtain prints of these and send to you. But they will be too heavy to send by airmail. Here are some additional identifications that I have made:

Photos 3 & 12. *Dysphinctium Lagerheimianum* Turn. F.W.Alg. East India, Tab. XXII, fig. 6. This would now be called *Cosmarium Lagerheimianum*, since the sub-genus *Dysphinctium* is no longer recognized.

Photo 27. *Euastrum sinuosum* var. *dideltoides* Krieg. This seems to be a new form, which I propose to name *E. capitatum* because of the inflated polar semi lobes.

Photo 7. Apparently this is a new species of *Euastrum*. I have seen one specimen but was not able to draw it. It is a very beautiful plant, but will be very difficult to draw.

Photo 32. *St. saltans* Josh. var. In Turner's F.W. East India, Tab. XIV, fig. 5, there is an illustration of a desmid which he called *St. orientale* n. sp., and which resembles your specimens. But his drawing is poor and it would be difficult to say if it is the same species. However, the construction of your plant, with the four horizontal spines on the apical surface, and the two unequal spines at the ends of the processes, make me think that it must be assigned to *St. saltans*, as a new variety if it had not been found previously.

The *Xanthidium* shown on your sketch (enclosed herewith) and which also appears in several of the first lot of photos that you sent, is *X. sensibarense* Hieronymus, shown in Schmidle's *Desm. Ost-Afrika*, 1898, page 41, Pl. 3, fig. 6. Your specimens show considerable variation in the number of spines, some have 4, others 6, and others 8 spines on each semicell.

I have seen several examples of *Micrasterias ceratophora* Josh. in sample No. 38, and one in No. 270.

The silk gauze for the plankton-net cannot be obtained in New Orleans, and I shall have to write to Chicago or New York for it. But it will be sent to you.

I am not a stamp collector myself, but I give to a friend all of the foreign stamps that I receive. Therefore it would be very nice if you would put as many different stamps as you can on your letters. Also if you get letters from other countries in the East, like India, Burma, Malaya, etc., I should like you to send me some of the cancelled stamps.

With my best regards,

Sincerely yours,

DIENST VAN DE LANDBOUW
VAN HET DEPARTEMENT VAN LANDBOUW EN VISSERIJ

ALGEMEEN PROEFSTATION
VOOR DE LANDBOUW

LABORATORIUM
VOOR BINNENVISSERIJ

BUITENZORG. Bogor July 15th 1950
TJ.KR. MEUMH 99.

No. 295 / XII / 37

BIJLAGEN:

ONDERWERP:

Dear A.M.Scott,

As promised in my former letter, I have pleasure in sending you herewith the samples of plankton and the microphotographs. I have however also sent seven samples to Prof. Dr. J. Heymans, botanisch laboratorium, gemeentelyke universiteit Amsterdam, Nederland. The numbers and letters are similar to those used for the samples despatched to you namely "43-38-38a-270-34-and M".

These samples - collected by Dr. K.F. Vaas during high-level of the river Kapuas-area, West-Borneo - are richness in desmids, and I can therefore easily divide them into two portions. May I ask, that you send some of the samples on to Prof. G.W. Prescott, after you have studied them so that he too, can have the pleasure of examining the beautiful desmids of Indonesia. I have already written to him on the subject.

When you and Prof. Prescott have studied and determined the species, I should be very grateful you would do the following:

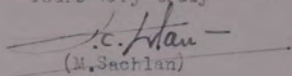
- A. Send us a list of all the species determined in each sample;
- B. State whether the species determined by myself agree with your own findings;
- C. Provide the really new species or varieties with a name. I realize that this request will entail quite a volume of work as you will have to look up all literature so you available on the subject of desmids. As regards the new species in the seven above-mentioned samples you will no doubt have to consult with Prof. Heymans. Dealing with the other new species in the remaining samples I can assume you, that you will both be the first to describe them;
- D. Advise on any possible similarity of the Indonesian species with those existing in the other part of the world.

As you are aware, desmids are still very little known in Indonesia and I am inclined to believe that the majority of the photographed desmids represent new species or varieties. With this in mind I propose then from now on to send you regularly samples of plankton, of which I know that they contain new species and bring these to the notice of scientists throughout the world through the medium of publications. When there is a limnological institute in Indonesia, we shall of course be able to deal with all these problems on the spot.

Within a not too distant future you will be able to read about the hydro-chemistry of the river Kapuas-area at the time of examination, in the journal of the laboratory.

Thanking you in anticipation for your co-operation and for the trouble,

I beg to remain,
Yours very truly


(M. Sachlan)

N.B. The books consulted in the determination work were:

1. Von W. Krieger: Die Desmidiaceen der Deutschen Limnologischen Sunda-Expedition
2. Ch. Bernard : Protococccacees et Desmidiées d'eau douce, recoltées a Java et décrites.
3. " : Algues unicellulaires d'eau douce, recoltées le domaine Malais

Tentative identifications of some of M. Sechlan's photomicrographs of desmids. Oct 4 1950

1. *Microsterias ceratophora* Josh. I found this very strange desmid in material from Arnhem Land in North Australia, collected in October 1948, and was so sure that it was a new species that I proposed to name it *M. Spechtii*, in honor of its collector. But Prescott found that it had been described and figured by Joshua in 1885, from somewhere in southeastern Asia (I don't know the exact locality). The Australian record is apparently the first one since the original report, and your record from Borneo in 1949 will be the second. It seems remarkable that this desmid should turn up twice within a year, from two different countries, after more than 60 years.
- 9.9a. *Microsterias anomala* Turner. Previously reported only from northeast India and Singapore.
10. *Microsterias anomala* Turn., probably a new variety. Have not yet seen a specimen.
11. *Microsterias apiculata*, near var. *lacerata* Turn.
15. *Microsterias truncata* var. *neodemensis* (Braun) Dick.
16. *Microsterias Jenneri* var. *simplex* W. West. Differs slightly from the figure in Krieger's "Sunda" paper, but agrees with European and American forms.
20. *Microsterias suboblunga* Nordst. Fa. Seems to be intermediate between the specific form and var. *tecta* Krieg.
14. *Microsterias lux* Josh.
- XX.
25. *Microsterias lux*, perhaps a new form, since it has 10 labules on each side of the semicell, instead of 8.
29. *Microsterias mahabuleshwarensis*, perhaps var. *surculifera*. The long central protuberance is not visible in the photo.
34. *Microsterias rotata*, var.
38. *Microsterias apiculata* var. Perhaps var. *tjitjeroekensis* Bern. Have not yet seen it.
31. *Microsterias Moebii*, perhaps a new variety.
36. *Microsterias pinnatifida*. This desmid varies considerably, and your photo shows one of the several expressions. I don't think it is a new variety.
23. *Xanthidium acanthophorum* Nordst.
24. *Xanthidium Burkillii* var. *alternans* Skuja. ?
8. *Pleurotaenium ovatum*, near var. *inermis* Moebius.
- 39.39a. *Staurastrum pinnatum* var. ~~robustum~~ *subpinnatum* fa. *robusta* Krieg, 5-radiate.
32. *Staurastrum saltans* Joshua, var. Perhaps a new variety. I have a closely similar form, but with longer processes, from Arnhem Land, North Australia.
- Sea.30. *Streptonema trilobatum* Wallich. This very rare desmid has a genus all to itself; there is no other known species. Originally discovered in India by Wallich in 1860, and very seldom reported since. Nordstedt records it from Australia, and I have found it in the Arnhem Land material.

Several of your photos show various expressions of *St. sexangulare*, but this plant occurs in so many different manifestations that I am quite unable to separate them.

Oct 4 1950

Dear Mr. Secklan,

327
The two boxes of algal collections, with your photos and lists, arrived a week or so ago, but I am sorry to say that nine of the 22 tubes were broken and the contents lost. This was evidently due to their having been packed too tightly in the boxes, and without wrapping. Each tube should be wrapped separately in soft paper (newspaper) to prevent glass-to-glass contact, and they should be placed loosely in the box, and then the surrounding space stuffed with cotton or crumpled paper to prevent movement. The broken tubes are Nos. 17, 43, 237, E, L, M, N, R & S, and if you have any more material available from these collections I should be very glad if you would send it. In the case of tube M there was some dried sediment adhering to the ~~nk~~ glass, and I attempted to salvage it by boiling the glass fragments in dilute lactic acid, which has been recommended for a similar purpose; but the resulting material is not very satisfactory, since some of the desmid cells are collapsed. In preparing my gatherings for preservation I always add a few drops of glycerine (about 5%) to each vial, which is said to prevent the complete drying out in case the water evaporates.

Your desmids are highly interesting and very beautiful. There are a good many which I can recognize from the literature and from having found closely similar ones in the North Australian material on which I am now working. But there are many more that are completely strange to me, and these will have to be identified by Prescott. My own small collection of literature contains many more papers on desmids from your region than you seem to possess, but there are a number that I have not been able to obtain, for instance the two papers by Bernard, and others by W. & G. S. West, Joshua, Lagerheim, Schmidt, etc. Prescott has what he calls an "iconograph", which is a collection of desmid illustrations, accumulated during the last 25 years or so, copied or photographed from the original papers which were borrowed from the large libraries in cases where he could not obtain the original papers. He thinks that this iconograph now contains something like 90% of all the desmid illustrations that have been published. Such a collection is indispensable for identification. Many times I have thought that I had found new species, but when Prescott checked them, he found that they had been discovered half a century ago by some of the old masters like Nordstedt, Borge, West, Joshua, and others.

I have written to Prescott asking him how he wants to handle the matter, particularly as regards the samples which you have sent to Prof. Heimans. I think it will be better for Prescott to write to Heimans, since he is much better known than I am. In the meantime I am afraid I shall have to put your material aside for a few weeks until I finish some other work; for if I once get to work on your desmids I shall not be able to tear myself away from them. I love desmids just as much as you do, and I am really delighted to have the opportunity of working on such beautiful and curious specimens.

Your photos are very clear in most cases, and many of them, particularly those of the *Micromastix* species, can be identified from the photos. Enclosed is a list of those which I can identify quickly. Probably you will be disappointed, as I have been many times, to find that what you thought to be new species, for instance your photos Nos. 1 and 9, 5a and 30, have been discovered by previous workers.

According to Krieger, the desmid-flora of the Indonesian region would be included in that of a much larger area, which he calls "des indo-malaisisch-nord-australische Gebiet". A number of papers have been published dealing with the

desmids of various countries in this area, including India, Ceylon, Burma, the Malayan Peninsula, Singapore, Sumatra, Java, Borneo, and north Australia, so that in its broad outlines, the desmid-flora is fairly well known. It is characterized by many species that are not found elsewhere in the world, such as *Streptonema trilobatum*, *Microsterias Thomassiana* var. *evoluta* and var. *javonica*, *M. lux*, *Pleurotsenium Keyei*, etc. Each of the great land-masses of the world possesses its own characteristic desmids, and W. & G.S. West have said that an experienced desmidologist, if given a desmid collection, could tell after a brief examination whether it came from the Arctic or the tropics, from North or South America, from Europe or Africa, from eastern or southeastern Asia, or from South Australia and New Zealand, merely from a consideration of the desmid species that it contained. Of course, in any region that has not been thoroughly worked, there are many new species and more new varieties to be found. That is the case in southern United States, where I am probably the first to have made a large number of collections, and I am pretty sure it will prove to be true of your collections from Indonesia.

There are two large works on desmids that are quite necessary for anyone who attempts to identify desmids. The first is "Monograph of the British Desmidiaceae" by W. & G.S. West, in five volumes, published in London from 1902 to 1921. Unfortunately it has been out of print for many years and is unobtainable except by a lucky chance. I was fortunate enough to get the first four volumes from a second-hand dealer in London, but have not been able to find the fifth one, though I have photo copies of the plates. Recently someone advertised in an English journal offering to pay one hundred pounds (£) for a complete set. I should think it ought to be in the library of the famous Botanical Gardens in Buitenzorg.

The second work is Dr. W. Krieger's "Die Desmidiaceen Europas, mit Berücksichtigung der süsereuropäischen Arten". This is the only work that attempts to cover the desmids of the whole world. Five parts (Lieferungen) were published from 1932 to 1939, when it was interrupted by the war, and it is only within the last couple of years that Dr. Krieger has been able to resume work on it. It treats each genus by itself, and the genera published up to the present are: *Spirotaenia*, *Mesotaenium*, *Ancyclonema*, *Reys*, *Cylindrocystis*, *Metrium*, *Penium*, *Closterium*, *Pleurotsenium*, *Docidium*, *Trioloceras*, *Tetmemorus*, *Euastrum* and *Microsterias*. The books were published in Leipzig, Germany, which is in the Eastern Zone, and it is very difficult for anyone in the U.S.A. to get anything from that zone. However, I obtained one of the Lieferungen through the Firma H. J. Brill, 33-35 Oude Rijn, Leiden, Nederland, and I have written to this firm asking them to try to get a complete set of the volumes and send them to you, with my compliments. If it is possible for you to obtain copies of the two papers by Ch. Bernard, which were published in Java, I should appreciate it very much if you would send them to me.

I shall write you again after hearing from Prof. Prescott. In the meantime please accept my best thanks for sending the collections.

Sincerely yours,

KEMENTERIAN KEMAKMURAN
DJAWATAN PERTANIAN

DJAWATAN
PENJELIDIKAN PERTANIAN
BALAI PENJELIDIKAN
PERIKANAN DARAT

BOGOR. June 26 th 19 50
TJIKUMEUH 99.

No. _____

LAMPIRAN:

PERIHAL:

Dear Mr. A.M.Scott,

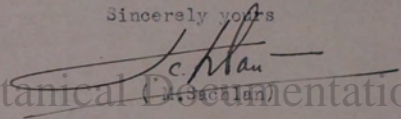
I have received the reprints of your three papers and also (on June 25 th) the parcel-post; I thank you very much for your kindness. I believe, that I can use these papers to identify the Indonesian desmids, for it appears, that some species of southern U.S.A. also occur in Indonesia, as the *Micrasterias-speci-gis: mahabuleshwarensis-laticeps-truncata-jenneri- etc* I see, that you have more varieties of mahabuleshwarensis, than in Indonesia according my experience.

In return I am sending you desmid-samples from the environs of Bogor-the island of Bali- from Borneo (the "Island of Desmids")

Further I send you the photos of the species, which I can not identify; may be they are new-species or new-varieties; you and Mr. G.W.Prescott must to decide this. Several samples contain the two *Xanthidium-species*, which photos I have already send you.

Again I am thanking for your kindness

Sincerely yours


C. Mau
(Assalana)

Digitized by Hunt Institute for Botanical Documentation

Tentative identifications of some of M. Seehlen's photomicrographs of desmids. Oct 4 1950

1. *Microsterias ceratophora* Josh. I found this very strange desmid in material from Arnhem Land in North Australia, collected in October 1948, and was so sure that it was a new species that I proposed to name it *M. seehlii*, in honor of its collector. But Prescott found that it had been described and figured by Joshua in 1865, from somewhere in southeastern Asia (I don't know the exact locality). The Australian record is apparently the first one since the original report, and your record from Borneo in 1949 will be the second. It seems remarkable that this desmid should turn up twice within a year, from two different countries, after more than 80 years.
- 9.9a. *Microsterias anomala* Turner. Previously reported only from northeast India and Singapore.
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15. *Microsterias truncata* var. *neodemansis* (Braun) Dick.
16. *Microsterias Jenneri* var. *simplex* S.West. Differs slightly from the figure in Krieger's "Sunda" paper, but agrees with European and American forms.
20. *Microsterias suboblonga* Nordst. f. Seems to be intermediate between the specific form and var. *tecta* Krieg.
14. *Microsterias lux* Josh.
23. *Microsterias lux*, perhaps a new form, since it has 10 lobules on each side of the sacicell, instead of 8.
29. *Microsterias mahabuleshwereensis*, perhaps var. *sarcularifera*. The long central protuberance is not visible in the photo.
24. *Microsterias rotata*, var.
26. *Microsterias spiculata* var. Perhaps var. *tjitjeroekensis* Bern. Have not yet seen it.
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- 29.29a. *Staurastrum pinnatum* var. *robustum* subpinnatum f. *robustum* Krieg, 5-radiate.
32. *Staurastrum saltans* Joshua, var. Perhaps a new variety. I have a closely similar form, but with longer processes, from Arnhem Land, North Australia.
- See 20. *Streptonema trilobatum* Wallich. This very rare desmid has a genus all to itself; there is no other known species. Originally discovered in India by Wallich in 1860, and very seldom reported since. Nordstedt records it from Australia, and I have found it in the Arnhem Land material.

Several of your photos show various expressions of *St. saxangulare*, but this plant occurs in so many different manifestations that I am quite unable to separate them.

Bogor, 4 October 1951.-

Dear Scott,

I have received your letter a month ago, but I can not answer you immediately, because I was going to Southern Sumatra with Dr. Vaas to investigate the marches fishery- biologically.

I have also received a letter from Prof Prescott, when he was still in Montana. He informed me that he will go to Alaska to collect Algae. How is it with his wife? Already getting better? Further I have received from him News- Bulletin No 14, containing all the members of Phycological Society of America; a very interesting list of all famous phycologists of the world. Have you attended the meeting in Minneapolis? It will be of course always an interesting meeting.

Speaking about the due, it is very difficult for me to pay \$ 2 every year and so I have a serious proposal:

"Would you like to pay for me the due every year and I shall repay you in the form of a souvenir from Indonesia. If you agree to my proposal, please let me know what kind of a souvenir would you like to have".

I have a surprise too for you:

"I am going to Southern Sumatra not only for fishery- biological investigation, but also to collect desmids; you know I have formerly already sent three desmid- samples from this area to you, but now I have * 20 desmids- samples in my possession". After investigating them limnological and fishery- biological I shall send them to you immediately.

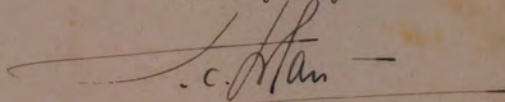
As you know Dr. Zaneveld went back to Holland and so there is not a official phycologist more in Indonesia and I, as an amateur- phycologist I have a moral task to bring Indonesian algae to the notice of the scientists throughout the world through the medium of publications with help of the P.S.A. In the future I will also send regularly other kind of algae to the experts of the P.S.A. for determination.

I have written to Prof. PRINGSHEIM to asked him the best method to cultivate desmids, to see the possibility the formation of Dichyo- typical cells and the vegetative reproduction of these rare cells. Is this according you possible?

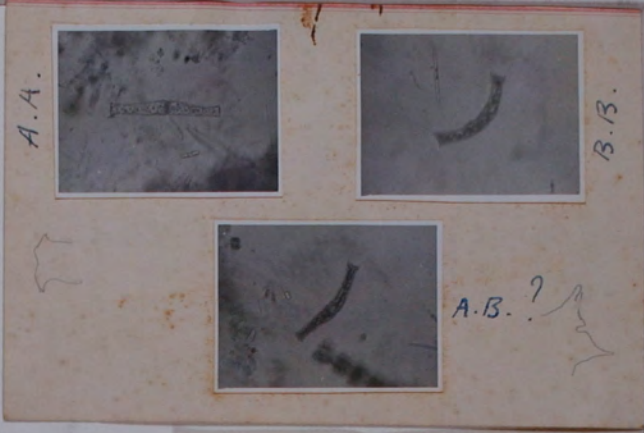
Oh yes, I am nearly forgotten to thank you for all the stamps (stamped and unstamped) which you regularly send me. But please do not take the trouble "to buy" stamps special for me! Herewith I send you a stamp with the picture of our first president (our "Washington"); ✓ believe you know him already from the news- papers.

I hope you will write me back soon in connection with my "proposal"
Thanking you in anticipation for your cooperation.

Yours very truly



(M. Sachlan).-



These microphotographs
are taken with the same
Ocular and objective; also
the enlargements are the same



pen

taken in March-April 1954

K: from lake Kerintji in Middle-Sumatra, ± 75 km from the West-Coast, in the mountain. P.H. 6.5 at 7.4 - clear water.

Sumatra 130
K₃: from 3 M. depth.

B = Swamp in Batang-Toru near the place Padang-Sidempuan ^{very few desmids} ± 100 KM in the south of Lake-Toba
Sumatra 113

M = from swamps in Menggala in South-Sumatra; clear water
Sumatra 110 P.H. 6.5 (open water)

M = idem; taken above submersive vegetation.

P₁ = from swamp. Pang-pangan Sumatra 112 (near Danau Teloko) South-Palembang.

P_n = from a little swampy pond Java, ± 30 km S. of Bandoeng near the city Pengalengan 505 (1300 M above sea-level - ± 5 km. from. Situ Kos)

M_p = Squeezing from Utricularia Sumatra 111 in Menggala (many Ichthyocercus!!).

M.R = Rest of the formerly Sumatra 110 Sample "M" (surface collection)

Sept 1954

J. C. Hall

KEMENTERIAN PERTANIAN

BALAI PENJELIDIKAN
PERIKANAN DARAT

BOGOR, Feb. 8 - 1954

LABORATORIUM
PERIKANAN DARAT
TJIKEMEUB 99
BOGOR.

Dear Scott, Borneo 403

77002.11A of

No. :

LAMPIRAN:

PERIHAL :

I send you here with a sample from "Danau Panggang" (near the little town Amuntai) ± 150 KM northern Bandjar masin, the Capital of South-Borneo. (you can find Amuntai on the map. I send you formerly) The meaning is to complete the knowledge concerning the distribution of desmids in Borneo.

By the way, do you receive my last letter suggesting you to publish your work on desmids of Sumatra, Borneo etc in "Reinwardtia"? Please let me know your opinion about this suggestion.

Sincerely yours.

A: fishpond in Sekadatu (along Kapuas-river) 204
B: " " Indjungan: 50 km North-Eastern 205
from Pontianak.
C: " in Pahuman (near Indjungan) 206

Borneo

Bogor 15 Sept-1956.

Dear Scott,

One month ago, I came back from my interesting trip in Central-"Kalimantan" (Kalimantan is the New Indonesian name for Borneo). I transported with success by plane \pm 500 clams from this region to Bogor and I hope these clams are convenient for pearl-culture. As you know the nuclei we will use for this experiment are made from the thick shell of the clam: "*Anadrula undulata*" occurring in the middle-course of the river-Mississippi.

It is a pity, that I have no time enough to take many desmid-samples. A week later after writing this letter, I will send 3 samples by air-mail to you to complete the knowledge of desmid-distribution in Kalimantan. May be next year I will make a trip again to Central-Kalimantan, because the real pearl-culture experiment must be done in the upper course of the Kapuas river, that habitat of the clam.

By the way I think you have already received the 150 reprints of your first paper, is not it?

According to Dr. Jacob, he has already sent the proof of your second paper to you for correction. May be this paper will publish at the end of this year.

I hope in the future to send ^{the} living dicho-typical cells ^{again} to the best experts in desmid-culturing, to solve the pro-

blem of the vegetative-col-division of these cells.

Are you ready with your great great work on desmids of Southeastern U-S-A? I hope so, and honestly speaking I wonder your energy in making a great work like this.

Meanwhile I received two papers from Dr. A. Crossdale concerning desmids in Alaska and it is very interesting to know that also *Closterium cuspidatum* occurs in this cold-region; a real cosmopolite!

Further I hope you will receive the desmid-samples in good condition.

Cordially

J. C. Har-

p. 5

the 3 samples:

A: Habitat *Japan in Sekadai along the Kuzun River*
B: " → " " Andjungan (60 K.M. north-east from Pontianak)
C: " → " near Andjungan.
(Date)



Digitized by Hunt Institute for Botanical Documentation

From Sample "B"
Meuggala, Sumatra.

Also from #38
Lake Sewedo, W. Borneo
Slightly different
shape.

Bogor, July 25th '35

Dear Scott,

I send you herewith 70 little tubes and I hope you can use them for sending plankton-material by air. 6 Tubes are filled with the rests of Plankton material B-E-H-K-R-S from Neugula. In samples:

B = you will find the *Micr. mahabubsh.* with the long spines (see photo!) (This species you will also find in other samples!)

E + R = I have ever find in these samples three specimens of the "straight" basic type.

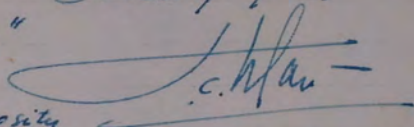
H + P = These samples contain many specimens of the asymmetric type

K = In this sample I have ever found one specimen of the "bent" basic type

I hope you will find back particularly the "bent" basic type.

Further I hope you will receive this parcel. post in good. condition.

Sincerely yours



P.S. : This colorless sealing-wax is self-made; negative-film dissolve in acetone: the viscosity of the ~~set~~ sealing-wax, this depends on of the quantity of the film! But before you must dissolve the emulsion-layer in 10% HCl or H₂SO₄!

Dear Scott,

Bogor April 23rd 1955

Under separate cover I sent you by air sample from Menggala; I have taken them on April 15th and 16th, just exactly one year ago that I have visited Menggala for the first time. But it is a pity that although in total I have taken 32 samples, in no one of the samples contain the "variety" of the genus *Tecthyocercus*.

But in the contrary nearly in every samples occur *Tect. angolensis* West. var. *longispinus* Bronze, the species described by Krieger in the Sunda-Exp. Do you think that this species the basic form is of the *Tect*-variety? I don't think so, because the habitus of the semicel of the "variety" is not exactly the same as that of the *Tect. angolensis*, I have seen this species for the first time.

Again I am sorry that I cannot find back the *Tect*-variety. The properties of the Swamp-water however are not exactly the same as one year ago; the water-level is ± 75 cm higher, but the clearness, the P_H of the water are quite the same, also the vegetations occurring in the water and on the surface. I investigated the samples immediately on the spot (I have

taken with me a microscope). I have sent you the most important samples (11) and not all the samples I have taken, because the other 21 samples contain the same species and genus and further qualitative and quantitative very few. - Also I send ^{some} you living-material (H), so that you an idea the species in natural condition. I hope you will receive them in good condition. I sent also living-material (F & H) to Mr R.C. Starr, (Indiana Univ) at his request, special for his comparative study on Pectinophthallosome, cytology and genetics. I think you have also receive his two recent papers, about this subjects. Further I think they are some species and varieties in some samples e.g.

Nahabuleshwaranensis an *Anomala*, recurring respectively in samples B and E etc.

By the way, have you receive my last letter ($\pm 3\frac{1}{2}$ month ago) plus a piece of the plant *Hydrilla* and further the parcel-post (send as a "letter" by ordinary mail) send 6 month ago?

I hope ~~for~~ you will receive them in good condition.

I hope physically speaking you are in good condition; I say this, because you do not write me for a long time, exception the envelopes,

containing beautiful stamps you send me regularly; thank you very much!

As you see, at this moment the Afro-Asian political conference attended by 29 countries is held in Bandung and for this occasion commemorative stamps are given out (see stamps on the envelopes!)

I hope you will write me soon, after receiving the samples.

With my best regards and good wishes

Sincerely yours.

J. H. S.

- L: squeezing from *Najas* spec occurring between *Rimnanthemum indicum*.

- R: squeezing from floating *Utricularia* near the bank (1/).

- E: squeezing from floating *Utricularia* near bank from R (± 100 m)

- A: squeezing from grass, near a bridge.

- F: squeezing from *Utricularia* $\pm 1/2$ m under the surface.

- B: Plankton between *Rimnanthemum* ^{*indicum*}

- M: squeezing from *Utricularia* between *Rimnanthemum indicum* (± 50 m at a distance of E).

- H: Squeezing from *Najas*, far from L (± 100 m)

- P: squeezing from *Calomba*, near the bridge

- N: squeezing from *Calomba* ± 50 from P.

- K: squeezing from several submerge plants.

Progr 16 Aug. '54

Dear Scott,

It is a pity for you and your wife that you must postpone your voyage to Europe because of the accident with your ankle. I hope you will get better within few weeks so that you can do again your daily work as before. In this case is "absolute rest" the best remedy for your broken ankle.

A couple a days ago I sent you by air-mail as scientific sample the rest of the Sumatra-samples and one sample taken from West-Java. I hope you will receive them in good condition:

P_n = sample squeezing from submerged plants in a little swampy pond \pm 4 mile distance from Situ Löss; \pm 1350 ft. above sea-level, streaming cold clear-water. It contain numerous little species of *Staurastrum*, *Cosmarium* and others.

P_1 = a sample from Pang-pangan, a swamp not far from Danau Teloko (see map on paper!). water-color like. thea caused by too much humus-acid. I found in this sample a variety of *Micr. torreyi* and I think it is not the same as *Micr. torreyi* v. *curvata* in Krügers "Europe desmids". Further a variety (?) of *Micr. Ceratophore*, because the shape something else as you find before in the previous Indonesian sample.!

M_2 = rest of the sample M.

M_p = sample from Meuggal squeezing from *Whiculiaria* and contain many "Schthyocercus"

As regards data on the habitat of this new genus I can tell you as follows:

1. The sample is taken on 12 April 1954 in the afternoon at 16 O'clock.
2. The habitat is situated \pm 4 mile South of Village Meuggala in South Sumatra.
3. The water is very clear and stagnant.
4. P_n 5, 8 caused by shortage of $CaCO_3$; it contains \pm 7 mgr. CaO (in solution in the form of $Ca(HCO_3)_2$)
5. Vegetation: submerged plants as *Hydrilla verticillata* and *Ceratophyllum* sp. (very common in Indonesia!); most of them are covered with threads of Chlorophyceae.

Further the surface is covered with extensive fields of *Utricularia* in full bloom.

b) deep: $\pm 1\frac{1}{2}$ ft. in dry season sometimes no water.

And now a question of mine regarding the general shape of this new genus. Why is the shape (I have seen more than 10 specimens) treated with formalin, always bent on the same manner and under the same angle? I think the shape of the living specimen is straight as the common *Ichthyocercus*.

I have already written Dr. P. Kallio in Turku three weeks ago for information about the methods of *Utricularia* cultivation, but up till now I have not yet receive answer from him. Of course I should like to send him living specimen if I have the opportunity to catch them again!

Again, I hope you will get better soon.

My best regards.
Sincerely yours.

	<u>tube:</u> No= 108	<u>tube:</u> No=206	<u>tube:</u> No= 213	Notes
	" 135	" 213		
	" 146			
Staurastrum longe-brachiatum (Borge) Gutw.	x	x	x	
St. sexangulare n.v.?	x	x	x	many varie-
" subtrifurcatum W & W var. major W & W	x	x	x	ties
" formosum Bernard	x			
" Wildemanii Gutw	x			
" Bullardii Smith?		x	x	
" species	x	x	x	
Triploceras gracile Bail	x	x	x	
Closterium Kitzingii Bréb	x	x	x	
Cosmarium moniliforme Ralfs	x	x	x	"
Athrodesmus arcuatus?	x			
Xanthidium spec	x			

No. 108 - 135 - 146 - originally sample from Siteo Tawang (Kapas-rivier region)

No. 206 - 212 - 213: from Danau Loear.

(Danau = lake)
(Situ = ")

J. M. M. - 8/10

"5" *M. suboblonga var.*

Algae from "Lebak Damau" a lake in the
boggy environs of Palembang
(South - Sumatra)-

11-9-1950.

(Occurring in the three tubes) #100, 101, 102

Desmids:

- 1) Xanthidium Brukillii var. altermans. S.Kuja?
- 2) " acaanthophorum Ndst.
- 3) " antilopeum f. angulatum Joshua
- 4) " " n.v.? (photo!)
- 5) " Freemaii West.
- 6) " " n.v.? (Photo)
- 7) Xanthidium? (3 photo)-
- 8) " spec. (photo)
- 9) " spec. (photo!)
- 10) Micrasterias tropicia n.v.? (photo)
- 11) " alata Wallich
- 12) " Crux-Melitensis. Ralfs.
- 13) " Moebii West
- 14) Cosmarium trachypleurum Lund spinosium W & W forma
- 15) " decachondrum? (photo)
- 16) " comatum Ereb.
- 17) " striolatum Nüg?
- 18) " obsoletum Reinsch var. sitvense Gutw.
- 19) " auticulatum Reinsch
- 20) " Tjibodense Bern?
- 21) " monoliforme
- 22) " pigmaeum?
- 23) " decoratum W & W.
- 24) Cosmarium little species (many)
- 25) Staurastrum Wildemaii Gutw.
- 26) " Gutwinskii Bern.
- 27) " sexangulare n.v.?
- 28) " columbitoides?
- 29) " dejectum Ereb forma
- 30) " orbiculare? (photo)
- 31) " sexangulare? (photo)
- 32) " spec. (photo)
- 33) " leptacanthum Ndst?
- 34) " sexangulare Lund var bidentatum Gutw.
- 35) " bifidum Ereb.
- 36) " pinnatum Turner var. subpinnatum West forma robusta n.f.
- 37) " longibrachiatum Gutw. var. javanica Gutw.
- 38) " setigerum Cleve var. tristichum Nygaard?
- 39) " excavatum W & W var. minimum Bern.?
- 40) " dejectum var. triangulatum Krieger
- 41) " protractum Raciborski?
- 42) " mucronatum Ralfs.
- 43) " tauphorum W & W var. Sumatranum Krieger?
- 44) " little species (many)
- 45) Arthrodesmus curvatus Turner.
- 46) " imcus Hass.
- 47) " arcuatus?
- 48) " hirudinella Krieger.
- 51) Desmidiium Baileyi (Ralfs de Barry forma tetragona Ndst
- 52) Spodylosum nitens Archer. var. triangulare Turner.
- 53) " tetragonum West.
- 54) Omychoneza leave Ndst.
- 55) Euastrum substellatum Ndst.
- 56) " spinulosum var. inermius Ndst?
- 57) " Bangalese n.v.? (photo)
- 58) " spec (photo)
- 59) Clósterium Ehrenbergi Menegh.
- 60) " Kuetsingii Ereb.
- 61) " spec.
- 62) Triphoceras gracile. Bail.

Dear Scott,

I send you here with two new des-
mids - samples from East-Borneo -
Special in tube N:1 you will find
many var? *Pter. Torr. v. Dor.*; further
P. undulatum variabilis, *Phodusa*,
Cladonia spp and other beautiful
forms.

Habitat: Swamp along the river
Bangas Southern the village
Nuara. Nuntai - (25-7-1952)

Bonorowo-Swamp is not in West-Java
but in Middle-Java - you have
written this as habitat of *Merc.*

Tor. var. Javanica (Sachlas) -

Have you already received the old map
of Indonesia? My meaning is, that you
will have an idea about geography
of Indonesia. -

Have attended the Meeting of the
F. S. A this year?


Yours truly,
S. H. S.

List of the samples

<u>No.</u>	<u>Date</u>	<u>Habitat</u>	<u>Note</u>
1.	Nov. 1951.	"Situ Ross" a lake, Pengalengan (W-Java) 1400 ft. above the level of the sea.	Plankton. Staurastrum Xanthidium etc.
1a.	"	"	Squeezings from Hydrilla
2	"	"Situ Tjibuntun" a lake near Situ Ross.	Plankton.
3	March 1951	→ Situ Gaenong Poetie a lake in the environs of Bogor	: squeezings from Utricularia contain ± 60 species of var.
4	" 1951	a new artificial pond near the experimental pond in Bogor	→ a binomological paper about this pit will be published in the future by Vaas and myself. Very interesting contain ± 60 species
5	Aug. 1951	^{Cosm. magnificum var.} "Rebak Penubang" Palembang Sumatra	→ Staurastrum species
6	"	"Rebak Petar"	" → Staurastrum "
7	"	"Rebak Danau"	" → Squeezings from Hydrilla Icthyocercus dictyo typical-cells
8	"	"Danau Teloko"	" ± 75 species. Micro. Torreyi!
9	"	"Air Klekar" (a little stream)	" Squeezings from Hydrilla

Kapuas region

Sample: 134 (from several lakes: River-~~lutei~~-region West Borneo June 1919).-

1. Staurostrum spec. (photo) - N^o 17 + 17a
2. " longibrachiatum n.v.?
3. " Bullardii Smith?
4. " formosum Bernard
5. " cuspidatum Bréb.
6. " subtrifurcatum W & W var. major W & W.
7. Arthrodesmus curvatus. Turner
8. " spec (photo!) ~~not yet~~ 
9. Triploceras gracile Bail
10. Cosmariium monoliforme
11. Anthidium antilopeum (Bréb) Kutz forma javanica Mdst. n.v.?(photo) N^o 18
12. " spec (photo!) N^o 2a

Sample No. 38a (from lake "Semedo" West-Borneo June 1949)

-----==ôô==-----

1. Desmidium coarctatum. Ndst.
2. Cosmarium obsoletum (Hantzsch) Reinsch var dorsitruncatum (Gutw). nob.
3. Cosmarium spec.
4. Penium species.
5. Closterium species.
6. Euastrum species.
7. Micrasterias subincisa.n. spec.
8. " truncata ? (Photo!) N^o 15
9. " jenneri Ralps. var. simplex.
West. n.v.? (Photo!). N^o 16
- 10 " spec N^o 34

Sample " F " (from lake " Bratan " island Bali Jan. 1941)

-
1. *Staurastrum Gutwinski* Bern
 2. " *pinnatum* Turner var.?
 3. " *Asterias Nygaard* (Photo!),
 4. " *corniculatum* Lund var *variabile* Ndst. f
biradata.
 5. " *cuspidatum* (Bréb) var *divergens* Ndst.
 6. " *exavatum* W & W varieties.
- ==O==

Sample " H " (from lake "Kenohan djempang"
East - Borneo 1941).

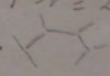
-----oOo-----

1. Xanthidium spec. (Photo!) *N^o 23*
2. " subtrilobum W & W forma.
3. Micrasterias radiata Hass var bogoriensis (Bernard). nob.
4. " foliacea Bail var. ornata. Ndst.
5. " spec. (Photo!) *N^o 25*
6. Staurostrum species.
7. Cosmarium decoratum W & W.
8. Pleurotenium species.

-----&&&-----

Sample " R " (from lake "Kenohan Djempang"
Koetei - river region 1941).

-----=oOo=-----

1. *Micrasterias falicea* Bail var *ornata* Ndst.
2. " *mahabuleshwarensis* (Hobs) var *surculifera* Lagerh.
3. " spec (Photo!) *N^o 25*
4. *Xanthidium* spec (Photo!). 
5. " *antilopecum antilopecum* (Bréb) **Kubz** forma *javanica* Ndst.
6. " *Subtrilobum* W & W forma
7. *Staurastrum* spec
8. " *sexangulare* Lund *bidentatum* Gutw.
9. *Pleurotaenium nodosum* (Bail) Lund forma *Borgei* Gronbl.
10. *Xanthidium armatum*(Bréb) Rab var *anguligerum* n.v.
11. *Staurastrum wildemanii* Gutw.

-----=000=-----

Sample " M " (from swamp "Tembaga" near Djakarta
squeezings from Utricularia).

-----oo-----

1. Staurostrum spec.
2. " sexangulare Lund var bidentatum Gutw.
3. Desmidiium Swartzii Ag.
4. " baiiyl (Hairs) de bary forma tetragona Ndst.
5. Artarodesmus curvatus Turner.
6. Casmarium margaritatum (Lund) Roy & Biss var quadrum n.v.
7. " pseudobroomei wolle forma
8. " strialatum var Nordstlii (Moebius) nob.?
9. Pleurotaenium subundulatum Borge var coronariferum Borge.
10. " species.
11. Euastrum spinulosum Delp. var iner/nius/Ndst.
12. " species
13. Closterium species
14. Micrasterias ~~species~~ *alata Wallich*
15. " mahabuleshwarensis Hobs. var surculifera Lagerh.
16. " foliacea Bail. var ornata Ndst.
17. Spondylosum nites (Wallich) archer var triangulare Turner
18. " tetragonum West.

Sample " P " (Swamp "Tembaga" near Djakarta 1941).


-----oOo-----

1. Onychonema leave Ndst.
2. Micrasterias alata wallich.
3. " mahabuleshwarensis Hobs var surculifera Lagerh.
4. Staurostrum sexangulare Lund n.v.? (Photo!) N^o 5a, 5b.
5. " furcatum (Ehrbg) Brèb n.v.?
6. " sexangulare Lund n.v.? (Photo!) *brachia short!*
seta N^o 37
7. " gladiusum Turner.
8. Arthrodesmus ~~ctervatus~~ Turner n.v.? (Photo!). N^o 19
9. Cosmarium monoliforme. var.
10. Micrasterias pinnatifida. n.v.? (Photo!). N^o 36

=====
Streptanema trilobatum Vall.

Sample " K " (from swamp "Tembaga" near Djakarta 1949)

-----oOo-----

1. Xanthidium spec (Photo!).  always send to you
2. " spec (Photo!). N^o 23
3. Onychonema leave Ndst.
4. Micrasterias alata Wallich.
5. Staurastrum species.
6. " sexangulare Lund var asperum Playfair.
7. " furcatum (Ehrbg) Brèb).
8. Micrasterias mahabuleshwatensis Hobs var surculifera Lagerh.
9. Desmidium Baileyi (Ralfs) de Bary forma ^{tr}teahagona Ndst.
10. Xanthidium antilopeum (Brèb) Kutz. forma javanica Ndst.
Streptonema trilobatum Wall.
=====

Sample " L " (from. Laboratory - pond. 1941)


-----oOo-----

1. *Micrasterias apiculata* (Ehrbg) Menegh. var *Nordstii* Bern²
(Photo!).
2. " *pinna~~lifida~~* (Kutz) Ralfs.
3. *Cosmarium margaritatum* (Lund) Roy & Biss var. *quadrum*.n.v.
4. *Cosmarium* species.
5. " *askenasyi*. Schmidle.
6. *Pleurotaenium* species.
7. " *ovatum* Ndst. var *leave* Bern.
8. *Xanthidium freemani* West. var *spinosissimum*. Bern.

-----&&&-----

Sample No. 43 (Lake "Tajan", river Kapoas region
West Borneo 1949).

-----oOo-----

1. *Microsterias foliacea* Bail var *ornata*. Ndst.
2. " *Thomasiana Archer* var *evoluta*. n.v. (Krieger)
2a " *apiculata* 138 (Photo!).
3. " spec. (Photo!). N^o 1.
4. *Xanthidium* spec (Photo!). N^o 2a + 2.b.
5. " spec. (Photo!). N^o 3
6. " spec. (Photo!). N^o 4.  already sent to you!
7. *Staurostrum* spec. (Photo!). not yet used, not for analysis in each material
8. " *longibrachiatum*.
9. " *subtrifurcatum* W & W var *major* W & W.
10. " *sexangulare* Lund n.v.? (Photo!) - N^o 5a + 5b
11. " *formosum* Bern.
12. " *gladiosum* Turner.
13. " *leptacanthum* Ndst.
14. *Gymnozyga monoliformis* Ehrbg.
15. *Triploceras gracile* Bail.
16. *Arthrodesmus* ~~tricus~~ *arcuatus*? (Photo!). N^o 6
17. *Pleurotaenium tessalatum* (Jashua) Lagerh. v. *coronatum* n.v.
18. " species.
19. " *tricus* (Bail) Lund. forma *formosa* Grunb.
20. " *Kayii* Rab.
21. *Desmidiium Baileyi* (Ralfs) de Bary forma *tetragona* Ndst.
22. " *coarctatum* Ndst.
23. " *Swartzii* Ag.
24. *Closterium Kuteengii* Beréb.
25. " species.

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Sample No. 17 (lake " Tjempede " river Koetai-region
West - Borneo June 1949).

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1. Staurastrum longibrachiatum n.v.?
2. " limneticum Schmidle var Mygaardii n.v.
3. " spec (Photo!). each terminal 4 brachia may get
wavy!
4. " formosum Bern
5. " spec (Photo!). N^o 17 + 17a
6. " sexangulare Lund n.v.? (Photo!). N^o 5a-5b.
7. " spec. (Photo!). N^o 41.
8. " tauphorum W & W var sumatranus n.v.
9. " cuspidatum Bréb.
10. Hyalotheca dissiliense (Sm) Bréb forma.
11. triploceras gracile Bail.
12. Arthrodesmus spec (Photo!) N^o 19
13. " curvatus Turner.
14. Micrasterias foliscea Bail var ornata Ndst.
15. Cosmarium monoliforme Ehrbg.
16. Closterium Kützingii Bréb
17. " spec.

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Sample " S " (Squeezings from sphagnum, river Kapoeas-region
Borneo June 1949).

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1. *Micrasterias suboblonga* Ndst var *tecta* (Krieger)
n.v.? (Photo!). *N^o 20*

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Sample " A " (Squeezings from aquatic plant Bandjermasin
South of Borneo 1941).

-----=oOo=-----

1. *Micrasterias truncata* n.v.? (Photo!) *has yet seen*
2. " *pinnatifida* (Kutz) Ralfs.
3. *Closterium* spec.

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Sample 327 (from. lake "Montrado" West-Borneo June 1949).

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1. *Xanthidium* spec.
2. *Staurostrum Gutwinskii* n.v.? (Photo!). *N^o 21*
3. " spec (Photo!). *N^o 22*

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Sample No 270. (from. lake: "Empangau" West-Borneo
June 1949, squeezings from aquatic plant).

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1. Euastrum spicatum Turner var Ceylanicum (W & W). nob,
2. " sinosum Lenormand forma. Schmidle.
3. " dideltoideus (Rac) W & W forma javanica Gutw.
4. " spinosum Delp. var inermius. Ndst.
5. " turgidum Wallich var Grunowii Turner.
6. " ~~spec~~ (Photo!). N^o 7
7. " gnathophorum W & W n.v.? (photo) N^o 9
8. " species!
9. Pleurotaenium ovatum n.v.? (Photo!) N^o 8 var. inermius Moeb.
10. " nodosum (Ball) Lund. forma Borgii Gronbl.
11. " subundulatum (Borge) var coroniferum. Borge.
12. " tessalatum (Joshua) Lagerh. var coronatum. n.v.
13. Pleurotaenopsias javanica (Ndst) de Toni.
14. Micrasterias. spec. and his variety.? (2. Photo's!) N^o 9, N^o 10
15. " spec. (Photo!)
16. " pinnatifida. Bern.
17. Penium elegans, Bern.
18. " species
19. Cosmarium obsoletum (Hantzsch) Reinsch var dorsitruncatum.
20. " Lundellii Delp var ellipticum West.
21. " decoratum W & W.
22. " auricularis Rensch var Bogorensis, Bern
23. " species!
24. " Askenasyi Schmidle.
25. Pleurotaenium species!.

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Sample No. 38 (from lake " Semedo" West Borneo
June 1949).



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1. Xanthidium spec. (Photo!) *N^o 4. already send to you!*
2. " spec (Photo!) *N^o 3*
3. " armatum (Brèb) Rab. var anguligerum. n.v.
4. Gymnozyga monoliformis Ehrbg.
5. Triploceras. gracile Bail
6. Desmidium coarctatum Ndst.
7. " Swartzii Ag.
8. " Baileyi (Ralfs) de Bary forma tetragona Ndst.
9. Staurastrum sexangulare Lund. n.v.? (Photo!) *N^o 12.*
10. " formosum .Bern
11. " wildemanii Gutw.
12. " spec. (Photo!) *N^o 2a, 2b*
13. Closterium species.
14. " Kutzingii Brèb
15. Mongeotèa? spec (Photo!) *N^o 13*
16. *Microterpas* foliaceus Bail. var ornata Ndst.
17. " mahabuleshwarensis Hobs. var surculifera. Lagerh.
18. " spec (Photo!) *N^o 14*
19. " spec (Photo!) *N^o 1.*
20. Pleurotaenium species.
21. " Kayei Rab.
22. " nodosum (Brèb) Lund forma. Borgei. Grönbl.
23. Arthrodesmus incus (Brèb) Hass var. validus W & W.
24. Euastrum spec (Photo!) *N^o 7*
25. Cosmarium decoratum W & W.
26. *Microsterias* spec. *N^o 34.*

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Sample "X" (from a lake
East-Borneo 1941).

-----606-----

1. Xanthidium subtrilobum W & W forma
2. " spec (Photo!)  already send to you!
3. " spec (Photo!) N^o 23
4. " spec (Photo!)  already send to you
5. " antilopeum (Brèb) Kutz. forma javanica
Ndst. n.v ? (Photo) N^o 24
6. " spec (Photo!) N^o 25 (comparison with N^o 14!)
N^o 2a
7. Micrasterium moebii West
8. " spec (Photo!) N^o 25 (comparison with N^o 14!)
9. " foliacea Bail. var. ornata. Ndst.
10. " Mahabuleshwariensis Hobs. var surculifera
Lagerh.
11. Pleuretaenium. nodosum (Bail) Lund
12. " spec!
13. Desmidium Swartzii Ag.
14. Cosmarium mansangense. W & W.
15. " spec (Photo!) N^o 26
16. " decoratum W & W.
17. " monoliforme var!
18. Arthrodesmus curvatus. Turner
19. " incus. n.v.? (Photo!) N^o 6
20. " convergens. Ehrbg.
21. Hyalotheca dissiliense (Sm) Brèb forma
22. Staurostrum. cuspidatum (Brèb) var divergens, Ndst.
23. Euastrum spec. (Photo!) N^o 27
24. Cosmarium spec (Photo!) N^o 28

Sample " E " (from East - Borneo: river Koetei region
June 1941)

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1. Hyalotheca dissiliens (Sm) Brèb forma
2. Stauroastrum species
3. " spec (Photo!)
4. " spec (Photo!)
5. " Wildemanii Gutw.
6. Xanthidium subtrilobum W & W forma.
7. " antilopeum n.v.? (Photo!) N^o 24
8. " spec (Photo!) ~~YY~~
9. " subtrilobum W & W forma. N^o 23
10. Ongchonema leave Ndst.
11. Pleurotaenium species
12. " Kutzingii Brèb.
13. " nodosum (Bail) Lund forma Borgei. Gröñbl
14. Micrasterias spec (Photo!) N^o 25.
15. " mahabuleshwarensis Hobs var Surculifera Lgerh
n.v.? N^o 29
16. Cosmarium spec (Photo!).

Sample "O" (from laboratory-pond 1942)

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1. *Microsterias alata* Wallich.
2. " *radiata* n.v.?
3. " *foliacea* Bail var ^{an} *ornata* Ndst.
4. " *mahabuleshwariensis* Hobs. var *surculifera* Lagerh.
5. *Onychonema leave.* Ndst
6. *Staurostrum leptacanthum* Ndst.
7. " *formosum.* Bern.
8. " spec. (Photo!) *N° 32*
9. " *sexangulare* Lund var *bidentatum.* Gutw.
10. " " " *asperum* Playfair.
11. " *gladiosum.* Turner.
12. " *furcatum* (Ehrbg) Brèb n.v.? (Photo!).
13. " *quadricornutum* Roy & Biss (Photo!).
14. *Xanthidium* spec (Photo!). *N° 23*
15. " spec (Photo!).
16. *Spondylosum (tetragonum)* West.
17. *Cosmarium monoliforme* var.
18. " *margaritatum* (Lund) Roy & Biss var *quadrum* n.v.
19. *Pleurotenium Kayi* Rab.
20. " species.
22. *Euastrum* spec (Photo). *N° 31*
23. " *spinulosum* Delp var *inermius* Ndst.
24. *Arthrodesmus* species.
25. *Triploceras gracile* Bail.
26. *Unknown species N° 30 + 30a*

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Sample " T " (from a lake in the environs of Bogor 1944).

-----#006-----

1. *Cosmarium* varieties
2. " *moniforme* Ehrbg.
3. " *obsoletum* (Hantzchi) Reinsch var *dersitruncatum* (Gutw) nob.
4. " *obsoletum* (Hantzsch) Reinsch var *Sitvense* Gutw.
5. *Stauroastrum* Species
6. " *Gutswinskii* Bern
7. " *sexangulare* Lund var *bidentatum* Gutw.
8. " " " var *asperum* Playfair } *great and*
(2 varieties Photo!) } *noty*
9. " spec (Photo!) N^o 32 } *a great and*
10. " *Wildemanii* Gutw. } *a little spec!*
11. " spec (Photo!) N^o 33
12. " *leptacanthum*? (Photo!)
13. *Microsterias mahubuleshwarensis* Hobs var *surculifera* Lagerh.
14. " species (Photo!) N^o 25
15. " *Alata* Wallich
16. " species (Photo!) N^o 35
17. " *radiata* Hass. var. *bogoriensis* (Bernard) nob.
18. *Utricularia nodosa* (Baill) Hutchins & Sorley
19. " species
20. *Triploceras gracile* Bail
21. *Penium* spec
22. *Gymnozyga moniformis* Ehrbg.
23. *Desmidiium Swartzii* Ag.
24. *Xanthidium antilopeum* (Bréb) Kutz forma *javanica* Ndst.

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Sample " Z " (from. Laboratory - pond. Mai 1942).

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7a *Stauroastrum* *Kanabicum*? N° 40
1. *Stauroastrum furcatum* (Ehrbg). Bréb. n.v.? (Photo!).
 2. " *gladiosum* Turner
 3. " *sexangulare* Lund. var. *bidentatum*. Gutw.
 4. " *senarium* (Ehrbg). Ralfs.
 5. " spec ! N° 35 85 N° 69 + 39 a
 6. *Micrasterias Moubii* var *javanica*. Gutw.
 7. " *pinnatifida* (Kütz) Ralfs. n.v.? (Photo!) N° 36
 8. *Cosmarium margaritatum* (Lund) Roy & Biss var *quadrum* n.v.
 9. " *Auricularis* Reinsch var *Bogorensis* Bern.
 10. " *pinnatum* Turner var *hydra* n.v.?
 11. " *mangangense* W & W.
 12. *Arthrodesmus curvatus* Turner.
 13. *Xanthidium subtrilobum* W & W forma.
 14. *Pleurotaenium ovatum* Ndst var *leave*. n.v.
 15. " species.
 16. *Euastrum spinulosum* Delp. var *inerminus* Ndst.
 17. *Closterium Kutzingii* Bréb
 18. *Desmidium Baileyi* (Ralfs) de Bary forma *tetragona* Ndst.
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Sample " N " (from lake " Lenteng Agung " in the environs
of Bogor : Feb 1942).

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1. *Cosmarium monoliforme* var.
2. " *obsoletum* (Hantzsch) Reinsch var *dorittruncatum*
Gutw. nob.
3. *Staurastrum formosum* Bern.
4. " *longibrachiatum* (Borge) Gutw ?
5. " *wildemani* Gutw.
6. " *species*.
7. *Micrasterias mahabuleshwariensis* Hobs var *Surculifera* Lagerh.
8. " *radiata* Hass var *bogorensis* (Bern) nob.
9. " *alata* wallich.
10. " *foliacea* Bail var *ornata* Ndst.
11. *Pleurotaenium species*.
12. " *nodosum* (Bail) Lund forma *Brrgei* Grönbl.
13. *Penium spec*
14. *Triploceras graeile* Bail.
15. *Onychonema leave* Ndst.
16. *Desmidium Swartzii*.
17. *Staurastrum leptacanthum* Ndst.
18. *Xanthidium antilopeum* (Bréb) Kutz forma *javanica* Ndst.
19. *Euastrum spinolosum* Delp. var *inermius* Ndst.

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