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*About the Institute*

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.

Linn  
June 22, 1948

Dear Mr. Scott:

The other day I wrote hurriedly and with the worry of having lost my mail. I still hope I can find it, but in the meantime I hope you can recall the the correspondence. I do hope that no drawings were lost.

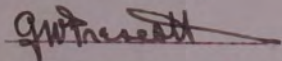
Looking over the list of South Australia desmids it seems to me that there is ample material for a good paper. The plates as you have them blue-printed are practically in reproduction condition, although I suppose a different proportion would have to be used for the cuts. They certainly are fine drawings (as usual). I am wondering if such a paper would be welcome with the Linn. Soc. of N. S. Wales, and whether one must be a member to have papers printed in that journal. Acta Hydrobiologica in Netherlands is looking for manuscripts and I think they would take a paper and print it as soon as received (or therabouts). In order to print such a paper in this country I think we would have to keep the number of plates down to 5. Even then it might be necessary to shop around to find a suitable journal which would not charge extra for plates. One alternative would be to present a paper at the Mich. Acad. Sci.- but that would delay publication by 2 years- (it would come out in June, 1950). I am marking (\*) the illustrations which I think should certainly be included in plates of illustrations. My first thought is that it would be much better to have say 5 plates showing practically all of the species, than to limit the number to 2 or 3 for I think that the value of a paper is increased 101% by having illustrations. If you are not too discouraged with me, I would be glad to help write up notes and descriptions of species on the list, if you wish to arrange the plates.

There is a substantial list of Euastra and Micrasterias from S. U. now, with several forms to be added to the previous listings. I suggest that we take all Euastra and Micrasterias known from the region; make up a check list (including all names published previously) and illustrate all forms not illustrated in the two previous papers, with possible inclusion of some that were previously illustrated wherever critical remarks are needed. Such a paper had better be submitted to Amer. Mid. Naturalist (do you think so?) in order to keep it at least in part in series with the other papers. I would rather see it there than in the Pap. of the Mich. Acad. Sci. where the Micrasterias paper appeared.

As I mentioned, I would like to add such desmids from the arctic circle as I have to the collection which you have already worked up and then beg of you to make up the plates for the entire group. My figures will be drawn X about 780 however which is the best I can get at present. Is this agreeable to you?

I sent off both the Australian and the Southern U. S. desmid drawings- thinking that you might wish to see both sets. I remember all too well that you requested the Australian drawings quite some time ago. I did want to look them all over again and to check them with my iconograph (which operation was unexpectedly and unavoidably held up.) The collections are intriguing and I have enjoyed looking at the material- although I must confess that I have not been able to check on all of the things contained in them yet. Please let me know what I may do, and where I should start first in preparing some manuscript material.

Yours very truly,



G. W. Prescott

P. S. The last Krieger Lief. to reach this country was the one on Micrasterias. But the last Lief. on the Conjugales was the one on Mougeotia. Have you been able to complete the set on desmids yet? Some of our phycological society members in Europe should be able to help us. I am writing to them about the possibility of having Rebenhorst sent.

GWP

July 25 1950

Dear Friend Prescott,

I am enclosing a picture of a phenomenon which seems really phenomenal, - a desmid giving birth to twins. I never heard of such a thing, did you? Must be just about as rare as human quintuplets.

It is a teratological 4-radiate semicell of *M. pinnatifida*, which originally was joined to a perfectly normal semicell. In the process of division, two normal semicells have been formed between them, and in addition a third normal semicell has been formed from another opening in the base of the abnormal semicell. I was unable to see the exact details of the junction, and because of the shallowness of the mount I was unable to turn the assemblage on end for a top view, which might have revealed more details. However I got good front and side views. Also I was able to deal the slide with melted vaseline, and have sent it to you under separate cover. There is a red dot on the label; if you will center this dot in the field and then traverse the slide to the left until the inner margin of the right hand side of the lacquer ring appears in the field, the specimen ought to appear, if has not moved. It is located close to the edge of the lacquer ring at about five o'clock on the slide, or about eleven o'clock as reversed in the field.

What do you suppose is the previous history of this combination, and what would have been its future course if I had not captured it?

It might be worth writing up, which would be for you to do, since I could not offer any intelligent comments on the cytological and genetical aspects of the case.

Sincerely yours,

Mch 28 1950

Dear Dr. Prescott,

Its too bad that you could not get down here as you had hoped, but perhaps you can make it at Easter. If you can make the trip, let us know a week ahead, otherwise we may go over to Florida for the weekend.

A few days ago I mailed you de Wildeman's book "Les Algues de la Flore de Buitenzorg". I saw it in a Dutch catalogue, and wrote for it, but it is useless for desmids. If you already have it, you may pass it along to someone else.

Tomorrow (Monday) I shall send you by express a box containing the collections from Arnhem Land. There are the five original tubes sent by Specht, and two additional ones containing coarse material which I separated from A-80 and A-108 because they were too concentrated to work with. I have retained sufficient material from each tube for my purposes. Will you please make arrangements with Ruth Patrick about the diatoms, and send her some of the stuff?

I now have about 225 different species and varieties of desmids from these five tubes. Not bad, considering that 75% came from two tubes, A-80 and A-108. The letter seems to be inexhaustible. Every night I find one or two desmids that I have not seen before in the material. Tonight I got *Microsteris sol* var. *elegans* or not previously reported from the Far East.

Enclosed is a sketch of a spiny *Pleurotaenium*, quite different from anything shown in Krieger. The nearest approach is *Pl. Keyei*, which is much smaller and has the spines arranged in double rows (I have *Pl. Keyei* in this Australian material). I propose to call this *Pl. Spechtii*, unless you tell me that Joshua also found this sixty years ago.

Another sketch enclosed shows a plant that I simply don't know where to place, and I don't think you will either. I suppose it could go in *Onychonema*, though it is totally different from any *Onychonema* that I have ever seen illustrated. Or it would fit into our *Spinocosmerium*. Anyway it is something for you to puzzle over. So far I have seen only the one specimen of two cells interlocked.

Sincerely yours,

MICHIGAN STATE COLLEGE  
EAST LANSING

March 28, 1950

DEPARTMENT OF BOTANY AND  
PLANT PATHOLOGY

Dear Mr. Scott:

I am back in the 'swim' again after running headlong into a number of unexpected things, including an eye infection. It has been irritating and otherwise exasperating to have to hold back on work when I am so far behind anyway. I did so much want to go to New Orleans and have a visit and trip with you, and had my heart set on getting away for a few days. I can work along rapidly now so shall try to get caught up, at least with correspondence.

Your very interesting book of deWildeman arrived yesterday and I certainly am delighted to have it- if you are sure that you have no use for it. It gives a very useful distribution list for that part of the world, if nothing else. I shall try to find something here that I can send you in exchange- meanwhile I am thanking you very much. I am afraid this must have cost quite a number of pennies. I wish that there had been more illustrations for such a substantial list (especially of desmids and diatoms). Did you receive Skuja's latest tome? It is a beautiful piece of workmanship (a little overdone if anything) and represents a tremendous amount of work. He certainly shows fine skill in portraying perspective.

Your good letter arrived this morning and I was of course interested in seeing more of your never-ending curiosities. That is a beautiful Pleurotaenium- a species of which I have no record in my iconography. I would be tempted to name it as new- although I have an uncomfortable feeling of having seen the plant illustrated someplace. But inasmuch as neither Krieger nor my iconograph contain it, it would seem safe to describe it as new. I have felt that the wall character in Pleurotaenium (verrucae, spines, etc.) are highly distinctive and so would be inclined to not describe it as a new variety of P. Kaye, with which it has, as you say, only a remote resemblance.

For the other plant you have illustrated, I can come to no other conclusion but that it is either to be considered as a new variety of Arthrodesmus Bulnhemi, or perhaps a new species of the genus. It has all the 'ear marks' of an Arthrodesmus in your drawings, and apparently is not a filamentous plant. I hope you see more- but of course as Flint always says- one giraffe is as different from a zebra as 2 giraffes.

Thank you again for your letter and your many kindnesses. I shall let you know in plenty of time if I see a way clear to get down this Spring- but it looks now as though I would have to forego. I have gotten into a 'mess' with the manuscripts for the book on algae culture because authors have not kept to their schedule in rewriting- and I do wish to see that book go to press within the next two weeks.

Cordially,

FW. Prescott

your plant too small to be  
of the typical, of course.

Apl 7 1950

Dear Dr. Prescott,

I am sorry to hear that you have been bothered with an eye infection, and still more sorry that you were unable to make the trip down here. One of these days we shall be able to get together again, I hope. Pretty soon it will be too hot for you down here. We have had a peculiar spring; hot, rain, cold, warm, hot, rain, cold; almost in that order on successive days. We did not go away for Easter; instead I am spending Good Friday, Saturday, and Easter Sunday at home, catching up with my correspondence. I am now learning something of what your correspondence must mean in time consumed. In response to a request which I inserted in the reprints on *Spinococcurium quadridentis* which I sent out, I have received papers from several new sources, and each of them must be acknowledged suitably. Skuja sent me his large work on Burmese algae, and I wrote him in thanks, and telling him that I had found two of his new species in the Australian material, *Rhazstrum diplostaurum* and *Staurestrum octodontum*. His drawings are good, but too black, too dark with unnecessary stippling which detracts from their clarity. Nygaard had to be thanked for his "Hydrobiological Studies", and a reprint of his "Algae from Gatun Lake". Bourrelly sent me some reprints, but unfortunately had no more copies of his paper on Madagascar. Minoru Hirano of Kyoto, Japan, sent me three papers on Japanese desmids.

A few months ago I asked Dr. Krieger if he could obtain a copy of his 5th Lieferung (on Microsterias) for you, and he now tells me that he has sent you a copy. De Wildemann's book on Algae of Buitenzorg is useless to me, and I am glad if you find it of some service. In New York you mentioned that you thought you could induce someone to part with a copy of Wille's 1892 edition of Desmids of the U.S., and if you can do so I should be very grateful. My 1884 edition is falling apart, and I don't want to spend the money on having it rebound if I can get the 2nd edition.

Some days ago I sent you by express my original drawings of the South Australian desmids collected by Ivan Ophel, together with five new plates which I have condensed from the original ~~plates~~ eight plates by omitting some of the commoner forms, as you suggested. I also enclosed a list of names for the plates, differing in a few instances from your determinations, but you have the final say-so, of course. I hope that you can find time this summer to write them up.

Like you, I had a vague recollection of having seen the "new" *Pleurotaenium* somewhere, and I have now solved the problem. Krieger had transferred it to *Triploceres*, under the name *Tr. australianum*, on the somewhat scanty justification that Borge's original figure (*Austral. Susswass.-chlorophy. Pl. 4, figs. 61 & 62*) does not clearly show the rounded apex. He might have given Borge credit for being able to distinguish between *Triploceres* and *Docidium*. There is not the slightest doubt, in my opinion, that my plant is the same as Borge's *Docidium australianum*; mine is a trifle longer and wider, but the shape, number of undulations, number and arrangement of spines, correspond perfectly. It will now have to be named *Pleurotaenium australianum* (Borge) Scott, comb. nov., with synonyms *Docidium australianum* Borge, and *Triploceres australianum* (Borge) Krieger. But Krieger never did believe in a spiny *Pleurotaenium*; in his last letter he says, a propos *Pl. spinulosum* (Wille) Brunel, "Ich habe bei meiner Bearbeitung nicht so recht an eine Bestachelung geglaubt". It is surprising that he approved *Pl. Keyei*, but that is too well authenticated for doubt. And a funny thing about this mix-up is that Borge's figures of this plant on Plate 4 are right next to three others that I have been working on, figs. 63, 64, and 65, all of which occur in the Australian material. Shows how you can overlook obvious things, even when the association is in the back of your mind.

Concerning the curious *Arthrodesmus*-like plant: - I think it has too many "earmarks" for this genus. The tightly closed sinus, the sharp, mucronate basal angles, the almost hemispherical protuberance in the center of the face, and the spines twisted out of the median plane, are characters which do not agree at all with the generic diagnosis. It seems to be one of those "missing link" desmids like *Spinocoenarium*. I have not yet found another specimen.

But there are plenty of other curiosities: *Xanthidium bifurcatum* Borge, a broken and distorted semicell that I believe belongs to *Microsterias anomala* Turn., *Staurostrum Rosei* Playf., *St. botanense* Playf., *St. fontense* Playf., *Buastrium divergens* in two different forms, *B. spinulosum* var. *burmense*, three small *Buastria* which appear to be new species, etc., etc., etc. Perhaps by this time you have seen some of them. I am having the time of my life, and only wish I could go to work on the plates, but I don't know who is going to edit the report, nor the size of the page, so I don't know what size to draw the plates. I wrote to Specht two months ago asking for this information, but have not yet had a reply.

I have just made arrangements with a professional collector in Lima to send me some algal collections from Peru, but it may be several months or a year before I get them. I am just taking a chance, and have no idea what I shall get, though I have given him some pointers on how to tell promising habitats from the unfavorable ones. If I have any luck there ought to be some highly interesting desmids.

Here are some additional titles for your bibliography:

- Nielsen C.S., and Madsen, Grece C. 1949? Preliminary check list of the Algae of the Tallahassee area. *Quart.Jour.Flac.Acad.Sci.* Vol ?, No ?  
~~pp. 111-117.~~  
\_\_\_\_\_ and \_\_\_\_\_ 1949. Check list of the Algae of Northern Florida. *Ibid.* Vol 2, Nos. 2-3, 63-66.

These are very preliminary. The determinations were made by Francis Drouet, who has listed a hundred or more Cyanophyceae and Chlorophyceae, but only a dozen genera of desmids, and in only eight desmids is the determination carried as far as the species, and these are species that a child could identify. Yet there are more than 60 different desmids in a small pond only 2 miles out from Tallahassee. In one collection from Lake Iamonia, *Triploceras gracile* is the only desmid listed !!

- Samano-Bishop, A. 1948. Observaciones preliminares de la Flora Algologica de la Region de Tuxtepec, Oaxaca. *Anales del Instituto de Biologia.* Tomo XIX, No. 2, 317-331.  
\_\_\_\_\_ 1935. Algunas Zygnemataceas de Chapultepec. *Ibid.* T.VI, No.2, 167-171.  
\_\_\_\_\_ 1938. Los Criaderos Invernales de Anopheles *Pseudopunctipennis* en el Estado de Oaxaca. *Ibid.* T.IX, Nos. 1 & 2, 181-192.  
\_\_\_\_\_ 1938. Nota acerca de los Criaderos Invernales de Anopheles *albimanus* Wied. en los Pantanos de Veracruz.

The habitats described in all Dr. Samano's papers are of the Myxophycean type, and contain plenty of blue-greens, but very few desmids and these of the common species found in such places. This confirms what you told me, that Mexico is a desert as far as desmids are concerned. I had thought that the swamps near Vera Cruz might be favorable, but the photos in the last paper above look very similar to the Cuban swamps, where I was much disappointed.

That's all for this time. Best regards from Mrs. Scott and me.

Apl 16 1950

Dear Dr. Prescott,

If you can spare a copy, I wish you would mail a reprint of our first paper, Desmids from Mississippi 1942, to:

Mr. M. Sechlan,  
Laboratory of Inland Fisheries,  
Tjikeumseh 99,  
BOGOR, JAVA.  
United States of Indonesia.

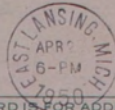
He is one of the authors of a paper "on the Ecology of some small Lakes near Buitenzorg, Java", Hydrobiologia Vo. 1, No.3. I wrote asking for a reprint of this paper, which he kindly sent, and in exchange I have sent him reprints of our last three papers, but my supply of the first is exhausted.

He also sent me five photomicrographs of desmids from Borneo, showing such forms as *M. foliacea*, *Pl. nodosum*, *St. Wildemansii*, etc., and asked for an identification of two Xanthidis, which of course is impossible from a photograph. One of them has 6 or 8 pairs of spines on each semicell, somewhat similar to *M. scanthophorum* Nordst., or *X. octoserium* Nordst. The other resembles an *Arthrodesmus*, since most of the specimens have only four single spines per semicell, but a few of them seem to have two pairs of spines on the apical surface in addition to ~~two~~ a single lateral spine on each side. I have written asking him to send some of the material.

Sechlan and Vass are interested in fresh-water algae as fish food, and apparently don't know much about desmids, just enough to recognize some of the easily identifiable species, like those shown in the photos in their paper. Sechlan writes a very nice letter, and I think the contact is a valuable one. I shall keep up the correspondence and see if I can get him to send me some other desmid material.

Sincerely,





THIS SIDE OF CARD IS FOR ADDRESS

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

Dear Mr. Scott: I am glad to send a copy of Desmids of Mississippi to Mr. M. Sachlan (as from you). I also included two or three other papers in which he may be interested. He will be an interesting correspondent, especially inasmuch as he seems to be active. He may be able to send you some very worthwhile material from Java which apparently is a "garden spot." We should have him on our exchange list and possibly on our membership list in Phyc. Soc. I am working on the plates of Australian desmids. I am having trouble with 2 or three Staurostra because I do not know the names which you have attached in my iconography and have not located them yet. In time I probably shall. You certainly have some beautiful forms displayed on these plates; and some that are going to have to be described as new, I feel sure. Cordially,

GW Prescott

May 2 1950

Dear Dr. Prescott,

Thanks for your postal card, and for sending the papers to Mr. M. Sechlen. I am confident that he will be able to send some interesting material from Java, and I have placed his name on my mailing list.

Sorry that an error occurred in my listing of the forms depicted in my plate 5 of the South Australian desmids, by the accidental omission of three lines, which made "hash" of the remainder. Enclosed is a corrected list, and I am also returning your original tentative list of determinations. Of course, the plate and figure numbers in your list refer to the original eight plates, and you will have to do some manipulation to relate them to the figures on the new five plates. Note that *St. contortum* G.M.Smith should now be called *St. Smithii* (G.M.Smith) Teiling, since Teiling has shown that the name "contortum" had been used previously.

You did not acknowledge receipt of the package I sent you in March containing the material from Arnhem Land. I should like to know that you received it, because it would be difficult to replace. Also when you have had a chance to look at it, please tell me whether you will be able to work up the algae other than desmids, and if you can make arrangements with Ruth Patrick to handle the diatoms. I have just about exhausted the desmids in these collections, with a total of 243 different species, varieties and forms. *Staurastrum sexangulare* occurs in two forms, one with smooth and the other with granulate processes, and each of these forms is found in 4-, 5-, 6-, and 7-radiate versions. *St. sagittatum*, previously known in the 8-radiate form originally described, also is found in 6-, 9- and 10-radiate forms. There are many that I am completely unable to identify.

Recently I wrote Dr. Watersley in Adelaide asking if he could ascertain who will edit the report on the Arnhem Land Expedition, and to try to find out in what format it will be published. If I had this information I could be working on the plates. Also I asked him if he knows of any Australian journal which would publish the paper on South Australian desmids. When I hear from him I will let you know.

1949

In the December 1948 number of the National Geographic magazine there was a good article on the Arnhem Land expedition, with a large-scale map showing the stations. Look this up and read it; it is worth while.

Enclosed is a copy of Nordstedt's *Symbolae ad floram Brasiliae centralis cognoscendam*, sent to me by Teiling. I have this already, so am passing it on to you. If you have it, please hand it on to someone else. One plate has been cut up, apparently by Teiling for mounting in his iconograph.

With best regards from Mr. Scott and myself,  
Sincerely,

June 6 1950

Dear Dr. Prescott,

After a long wait, I have received a letter from Ray L. Specht reading as follows:

"I must apologize for my delay in replying to your letter of the 31st January. The publication of the Expedition reports was in the hands of our Dept. of Information of the Commonwealth Govt. of Australia. This Dept. had been formed by the previous Labor Party, and was removed from Ministerial status when the new Liberal government came in power at the beginning of the year. This almost threw a spanner in the works, but now the publications are on a sound footing. I can now safely give you all the details you require.

I was overjoyed that you found such a collection in my small samples. Your results were rather a surprise to me. Chatting with Brian Womersley, he thought it would be a good idea if you could illustrate all these species and varieties (as well as any new species and varieties) in your report. This would give anyone in Aust. who may become interested in this group a good starting point. If you feel inclined to undertake this task, I feel that it would be of great value. I guess that you could put several species per plate.

Mr. C. P. Mountford, 25 First Avenue, St. Peters, South Australia, is editor of the publications. The plates will be 8" x 5", i.e. equal ~~xxxxx~~ in size to the printed page. 100 reprints will be provided gratis and more can be obtained at a cost to cover the price of printing. Mr. Mountford suggests that your report be ready in 12 months time for the second volume of reports.

As regards the diatoms, Brian Womersley suggests that Dr. Ruth Patrick may do them. If you think this a good idea, would you be good enough to forward her samples".

Now comes the big question, can we get our report ready in time? I have about 245 species and varieties of desmids, which means 16 or more plates, and these would take me not less than 3 months to prepare. Of course, I could send you a print of each plate as soon as I finished it, accompanied by the original sketches of the desmids on the plate, so that you could be working on the identifications and descriptions. I think you will have to rely almost entirely on my sketches, since in many cases I have found only one or two specimens, and it would be pure luck if you were to search for them and find them. However, I don't think you will have too much trouble with the identifications, since most of the desmids are well characterized.

And what about the other algae? You have not told me whether you could undertake them.

Did you ask Ruth Patrick if she could do the diatoms?

A couple of months ago I wrote Mr. H. E. S. Womersley and asked him if he knew of any Australian journal which might publish our paper on the South Australian desmids (Ophel's material). He replied "Much as I would like to see anything on Australian algae published in Australia, I think you would probably do better to have it done in America, as few of our journals are anything like up-to-date, and most do not realize how taxonomic papers need to be printed. I know that this is a poor state of affairs, but I'm afraid it does exist".

I hope you will write me in detail soon, telling what you can do.

Sincerely,

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

June 14, 1950

Dear Friend Scott:

My impoliteness is exceeded only by desperate lack of time these days. The grand rush of final exams, grades, term papers, audition of excuses from lame-brain students, more grades, orders for next year; programs for the Phycological Society meetings, etc., etc. is just about over and I finally have found a few minutes to write the letter I have been planning on writing you these several weeks.

First, I want to thank you for the useful paper of Nordstedt's which I had never hoped to own, although I had photostated the plate. I shall regard this as a lona for you may wish to use it too, unless you have a duplicate copy. You did not say- but if you do have a copy it is remarkable that one should obtain 2 copies of so rare a paper. I received the book catalogues and read them with wistful eyes. There are several interesting items listed- but I suppose they have all been picked up by this time. In any case I am glad to have the addresses of these companies. I think I shall write and find what they do have still available.

Ruth Patrick did not say that she could not or would not work over the diatoms- so I am supposing that she will. I think she must be busy just now getting their summer program under way. I shall write her again if she does not get in touch with either you or myself in the near future. Perhaps I should have her write directly to you. I am taking the Australian material to Montana with me to finish up this summer. Should be able to do this in not too much more time, unless I should run into some new species or troublesome forms.

I am sending your 5 plates on Austalian desmids and am inclosing another check list of the forms together with measurements and notes, and descriptive remarks for the new species. In a few cases I changed the names somewhat and in doing this I used my best judgement after puzzling for a long time over the intermediate characteristics possessed by some of them. One realizes more and more how confused the terminology is on some of the desmids and how badly some species need to be grouped. In a few cases I threw the intermediate form to the name which seemed to be the most agreeable of two or three alternatives. You may wish to revise these and of course you must not feel the least bit concerned about my being in disagreement. If you wish to have me help in preparing the manuscript for a paper on this set of desmids I shall be only too happy to do so. On the other hand you may wish to work this paper up alone. You have the habitat notes and the information regarding the history of the collection. Write me in Montana if I can be of any help. Inclosed is a list of the forms which you had drawn but which were not included on the plates. Do you wish to have these returned? I shall have these ready for mailing back to you, as well as the forms figured on the plates, so just give the word. I thought I had better hold them until I learn what your next step will be, and whether you wish me to work over the material some more.

Naturally I was pleased to learn of the possibility of having a report on the Australian plants published. I shall prepare plates according to dimensions given. I had not thought of illustrating all of the forms, but if that is desirable I shall keep a drawing record of all of the things that show up which are clearly identifiable. It would certainly seem that we could have this report ready within a year. I may not be able to get all identifications made by fall because my literature is going to be limited there in Montana and I shall have to defer some things until I return for naming. Am taking a minimum amount of literature with me (am sending much of it by parcel post because books weigh down the car so badly). I think your idea of sending a plate or two at a time of the material you will be working over is a good one. Two hundred and forty-five species!! Where do you find the time to get so much done? I have just about finished with the Euastrum-Micrasterias plates and specimens and shall send notes from Montana. I thought surely I would have that all ready to go to you- but at the last minute decided that some additional new variety descriptions would have to be written and so am taking the material to Montana with me to finish. It should take me only a few more days (working at odd times) to get these done.

Must get back to the packing. Have just one more day to do 2 weeks work. We leave early Friday morning (that is what we think, but I know it will not be so early). Please let me hear from you soon and please forgive me for being so slow in writing you. Address below.

Yours very cordially,

G. W. Prescott

G. W. Prescott  
University of Montana Biological Station  
Flathead Lake  
Big Fork  
Montana

June 26 1950

Dear Friend Prescott,

You sure know how to pick nice spots for your summer vacations. Wish I could join you up there in Montana. The last few days here have been almost unbearable; temperature 94 and humidity about the same. I have been unable to work on my drawings, because my hands and arms perspired so much, though a fan was blowing directly on me. I had contemplated a week-end trip over July 4th, to SE Georgia, Savannah and Brunswick and Jacksonville, but I think we shall have to stay home to keep reasonably cool with the 36" window fan.

I have another copy of Nordstedt's paper, sent to me either by Grönbald or Telling, so you may keep it permanently. Telling has been very generous in sending me old desmid papers; apparently he has had the disposal of someone's collection, maybe Bohlin's, since many of the papers bear that name. Also I have purchased a number from Nordiska Bokhandeln, and from the Univ. of Lund, whose addresses were given me by Ruzicka. It is no good ordering any books from the catalogues that I sent you; I wrote for some for myself and for Ruzicka, but got nothing, - all had been sold. I have another copy of Krieger's Lieferung on Microsterias, which I will sell for \$5.00, a few cents less than I paid for it. I had originally ordered it for you, but in the meantime Krieger writes me that he has sent you a copy direct. I am sending some CARE food parcels to Krieger, for which he is very grateful; says that food in the Russian zone is very scarce, expensive, monotonous and frequently insufficient.

I think it would be better for you to handle the correspondence with Ruth Patrick, because you are so likely to get replies from her. She won't answer my letters. A year ago I sent her two samples containing diatoms which I thought were unusual, with sketches; not even an acknowledgement. And I still don't know if she found anything of value in the 200 or so collections that I loaned her 4 or 5 years ago.

So I wish you would send her some of the North Australian material, and ask her to work it up whenever she can. Also tell her the size of the plates, 6" x 8", and that Mr. Womersley is very anxious to have all forms illustrated, not merely the new and rare ones. However, if she should want me to handle the completed MS with the editor in Australia, I shall gladly do so.

Today I sent you blueprints of the pencil layouts for Plates 1, 2, 3, 4 and 6 of the North Australian desmids, with a list of my tentative determinations. I think you will find most of them correct, but there are several Diastrea on Pl. 3 that I simply don't know where to place. You will find plenty of specimens in A-20, and a few in A-109 if you are lucky. The latter collection is a peculiar one, consisting largely of colonial Myxophyceae, Microcystis etc., and there are a number of desmids entangled and embedded in the sticky mucilaginous mass, some of them very rare. In several instances I have been unable to get complete information on these desmids because they were obscured, or in unfavorable positions for drawing. So when you have had a chance to look at A-109 I wish you would tell me the names of some of the colonial algae, so that I may mention them in explanation of the fact that some of my drawings are not as complete as they might be. For instance, on Pl. 4 there is a drawing of a semicell of E. pulcherrimum, the only specimen seen, and I was unable to manipulate it into position for the other views.

Also I am mailing you my original sketches of the forms illustrated on the plates mentioned above, giving the dimensions, the collection numbers, and in some cases the range of variation. I shall follow with the other plates and sketches as fast as I complete the plates.

Many thanks for the notes and descriptions of the South Australian desmids, and the plate drawings. I shall write the MS for this paper, and submit it to you for criticism before submitting for publication. I shall need the original sketches because they contain my only notes on the forms that are not illustrated, as to dimensions, collections numbers, etc. I notice some unusual features in your notes, namely that you give the width first instead of the length. If you prefer it this way I will adhere to it, but it seems to me that the conventional way of putting the length first is better. Also you have placed some of the dimensions in parentheses, sometimes the smallest and largest figures, sometimes only the smallest. What is the significance of this? I think Krieger originated it, but I am not sure just what it means. What journal do you suggest for publication? Is it necessary to provide Latin diagnoses for the new forms? I know, of course, that it is required for new species and varieties.

I have 2 new plates of *Microsterias* that are now being inked, and I will send you prints of them in the next few days. They show some new and interesting varieties and forms. Perhaps it may be too late to include with those you are now writing up; if so they will have to wait until later, or maybe the paper can be split into two parts, as there will be a total of 8 plates.

A few days ago I received 38 samples of algal collections from Minoru Hirano, of the Univ. of Kyoto, Japan, in exchange for some that I sent him. But I was very much disappointed to find that nearly all of them are of the diatom-rich type, with few other algae, and especially poor in desmids. If he is accustomed to this kind of material I'll bet he will be surprised when he looks at my very rich desmid collections, which should reach him in a few days. Nevertheless I have seen some very interesting desmids in his material, and when I get time I shall draw some of them, not for publication of course, since he is working up the algae. He was quite generous in the amount of material, and I am going to ask him for permission to distribute some of it to my friends, you and Irene-Marie and Teiling and Grönbled.

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

Sincerely,



MONTANA STATE UNIVERSITY

MISSOULA

Univ. Montana Biol. Station,  
Flathead Lake, Big Fork, Montana

July 2, 1950

Dear Friend Scott:

Received your good letter yesterday and with it the plates of desmids. I see some fine-looking old acquaintances among them, and some that are unfamiliar. I can check many of these but I am afraid that I shall have to see my iconograph before I can be sure of others. This will make a fine contribution to the little-known region down under. Naturally I was surprised to see *Closteriopsis* in the 'picture' for I had forgotten, if you had mentioned it, that that form had made its appearance.

How I wish we could drain off some of this cold air to you down there. Although we are having weather much warmer in the daytime, there is a great down-draft of cold air from the mountains in the evening and the nights are delightfully cool and fine for sleeping- the which I am doing much of (more or less) having gone without sleep for several weeks before leaving for the summer. Perhaps by now the thermometer has dropped so that you can make your trip to Georgia. In any case I imagine you can enjoy the high temperature much more than you did the cold in New York.

We are delightfully located here on the very shores of this beautiful lake, dotted with islands and bordered along one side by high mountains and by forested hills on the other. Although the laboratories are set in a dense pine woods with all manner of wild life on the place a busy highway runs nearby and here and there all along the lake are cherry orchards and cottages. It seems a little paradoxical to here bears rumaging about in the woods and the sound of auto horns at the same time. Although this is an old laboratory (started in 1899) it has been idle for many years and has only since the war sprung to life again with the new buildings and cottages. Our place is high on a bluff of "Yellow Bay" which has a big picture window looking out through the big ponderosa pines to the water below and across to the mountains, still spotted with snow banks. I have made two 'conditioning' trips to the Mission mountains and although they were quite a strain to my desk-ridden frame I found them intensely interesting, and certainly 'conditioning.' Expect to do some real climbing in the next few weeks to some of the higher alpine lakes, especially after there has been an opportunity for an algal flora to develop. The first week we climbed up to a cirque but picked the wrong day for it rained torrents and the trail was too badly overgrown with brush to make progress so we only got to the first waterfall. We were deep in the mountains and for safety's sake the fore and aft men each carried a gun just in case. We saw plenty of grizzly 'signs' and once got in range of the smell of one but did not see any- for which I am just as much obliged. We did see (in all) 11 Rocky Mountain goats skipping about on the face of a cliff like flies on a window pane- and that was a thrill to me for I had never seen them in the wild before. Last week we climbed a little higher in another cirque and I managed to get to two lakes, each beautifully set among crags and snow banks. The algae were poorly represented- but perhaps a negative collection is as meaningful as a positive one. There are a few things but I did not get the desmids I was hoping for such as I have found in other subalpine lakes in the west. I have a small class in aquatic flowering plants which takes us to many of the lakes and ponds (at least at low altitudes) and of course I am on the lookout for desmids here.

MONTANA STATE UNIVERSITY

MISSOULA

I certainly appreciate your thinking of me in ordering Krieger's work on *Micrasterias*. You mentioned having an extra copy for sale and I think I have a customer for you. I shall check again and write as soon as I know definitely. I am pleased to have the copy from Krieger, but hardly know how to repay him unless I do the thing you are doing which is very kind and helpful, certainly. I imagine the east Germans are still having a rough time indeed.

Cannot understand why I have not heard from Ruth Patrick. I shall drop her a line again. I am afraid she has gone off 'the deep end' in limnological work. She seems to be in charge of some kind of survey that the Academy is making and I suspect that she is side-tracking her diatom studies. Even so, I think she would be more help (eventually) than Paul Conger, who is a meticulous worker but never gets work turned out, and who is not so interested in such collections as you have as is Ruth Patrick. She certainly is mightily inattentive to her contributors, apparently. She is always saying that she is anxious to get collections from anywhere in the world. I shall try to get a statement from her before I send on the collections from North Australia.

Going back to your plates- I believe your determinations are quite accurate, but as indicated, some of them (especially *Euastrum* spp.) do not strike a familiar note. I have borrowed a Krieger for the summer so can check some of them, but inasmuch as you have already done that it means that I shall have to see the iconograph for the 'oddities.' I shall send you names of the Myxophyceae (as many as I can). The "original sketches" you mentioned sending have not arrived. Perhaps they did not go out in the same mail. Hope that is the case. No doubt they will arrive tomorrow or soon.

I shall have the original drawings of the South Australian desmids sent to you in the immediate future. I wrapped them and left them ready to be mailed to you before I came away- but did not mail them myself because I thought I should wait to see whether I would need to check any forms again (after hearing from you). The sequence of giving cell measurements that I used is perhaps 'unconventional' when compared with some schemes, but not with others. Apparently it is a matter of choice. I have fallen into the habit of giving the width of an object first, just as one usually states that a tree has such a diameter, and is so tall. You will no doubt wish to follow Krieger (et al) in stating the longer dimension first.

Your new species and varieties should be written in Latin to make them valid according to the International Code. I wish I could write acceptable Latin, but simply do not trust myself any more with Latin descriptions and have found that it takes me so much time that I turn it all over to Dr. Hannah Croasdale. She likes to do it and by insisting she will take a nominal sum for doing the translating. She has asked me over and over to send her descriptions to be translated and has asked me to tell others. If you cared to write her she is at the Marine Biological Laboratory again, Woods Hole, Massachusetts (unless she has had to change her plans). If you prefer I would be glad to write her. I think you met her at New York.

I have finished with the *Micrasterias* descriptions but perhaps they can be interpolated (I am referring to the new plates you mentioned). I would like to see all of the *Micrasterias* grouped, although it would make a rather large paper. Also I have just sent to you the *Euastrum* descriptions. I have carbon copies of these descriptions and so can check back on any descriptions about which you may have questions. In anycase I shall be glad to see the new *Micrasterias* plates and if you wish

I shall check these over immediately and send back any notes that I can so that you may include them in the *Micrasterias* paper. I have taken the liberty of suggesting titles to these two papers, having in mind that they might 'fit' into the series of reports on the southeastern flora, but of course you are the boss and can treat these titles in anyway that you wish. To date there are three papers in joint authorship, and one of my own (4) which would make the *Micrasterias* paper No. 5 and another *Euastrum* paper No. 6. Of course there is the other joint authorship paper on *Spinocosmarium* which I did not consider to be in the same series, although it might be so considered. It was not given any sort of a number, however. Where had you thought of publishing the study on *Micrasterias*, and the one on *Euastrum*? *The Trans. Amer. Microscopical Soc.* would be a suitable place in view of the fact that 2 other papers of the series appeared there. But then there is the time element. There is the *Amer. Mid. Nat.*, and *Hydrobiologia*, the latter seems to take papers more promptly and I am going to keep sending material there myself.

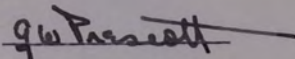
In sending you the notes on *Micrasterias* and *Euastrum* you will note that I took the liberty of arranging the species alphabetically. You can easily rearrange these if you wish to, according to the genera sections. In some cases I did not have the collection site, but entered the numbers of the collections so that you could insert other habitat notes if you wished to. I think you will find that in almost all cases the names that you or I had first attached to the forms were left standing. In others there were changes, in which I used whatever judgement I could muster up. I just could not bring myself to write a description of *M. conferta* var. *choctawhatchensis*. Perhaps I am wrong, but after studying and comparing, and doing it all over again I decided to hold to my original conviction that it should be a new species and separated from *M. conferta*. I gave some of my reasons in the notes. If this seems quite out of order to you, please feel free to change the name when you write your paper.

was interested to learn of Hirano's collections. I must write him and send some change. Someone purchased a set of his algae which was advertised for sale in the *Phyc. News Bulletin*. Naturally I shall be pleased to see some of his material if you do have an opportunity to separate it out.

I must get back to work on the Australian material. Have been working that it with an unexpected job of reviewing and 'editing' a book manuscript for the press. I really had no time for it but when the opportunity came I thought I should profit in one way or another by doing the work. It has been interesting, if time-consuming. I am going to try and finish the Australian material before proof begins to come in on the algal culture printing.

Please let me know if there any ways that I can be of help, and if you wish to send the South Australian manuscript I would be glad to look it over.

With kind regards to you and Mrs. Scott. Cordially,



G. W. Prescott

July 10, 1950

Dear Mr. Scott:

If you look just a little longer in Florida and Mississippi you will probably find every known species and variety of the genus *Microrhus*. You have certainly been successful in bumping to light an amazing number. If the enclosed notes can be incorporated with those for the other plates a very substantial paper will result. The fairly large number of plates may cause a managing editor of a journal to hesitate but the series of 8 makes such a fine contribution to the previous paper on *Microrhus* from the region that it would be unfortunate to have this present "lot" broken up into 2 short papers.

I hope I have not written these descriptive notes too hurriedly. You probably will want to edit them some more.

Was surprised to see that Japanese variety show up in your collections. It is a

turn and next species (as most *Hieracium*  
are, of course.)

Have you heard anything from Grönblad?  
I am wondering if he were able to complete  
his plans for an expedition to The Hudson  
Bay subarctic. I hope so.

Have gotten into a few subalpine ponds  
here - but so far no desmids have appeared.  
I think partly because the reason is too  
"young" as yet and the ponds are little more  
than ice water. Quizzily bears are more  
prevalent than desmids up in The Mission  
Mountains just now - but I do not care  
for them.

Have just received a bulky paper from  
Nygaard on plankton, in which he describes  
a number of new species & varieties of  
desmids (by stretching small points).

Hope the temperature has moderated for  
you by now.

Get me hear from you when you can find time  
to write. Cordially of W. Prescott

July 15 1950

Dear friend Prescott,

This time I have quite a number of things from you to acknowledge. First your long and very interesting letter of July 2; then your second letter of July 11; the descriptions of *Micrasterias* for the two additional plates (that was certainly quick work); and the package of my South Australian drawings from Larsing.

We did not make the trip to Georgia because of the extreme heat which continued up to June 30th. Then after we had decided to stay home, the weather man decided to turn off some of the heat, and it has been fairly cool and rainy ever since. That's the way it goes. So I had four days to work on my beloved desmids, and I spent them in redrawing the first six plates for the North Australian material. I made a damn fool mistake in the size. In my mind I had the size 6" x 8" for the printed plate, but chancing to reread Specht's letter I found that he gave the size as 5" x 8". So I had to redraw all of those that I had finished, condensing and rearranging the figures. I finished the sixth plate today, and will get blueprints of them tomorrow and send to you. Enclosed is a new list of tentative identifications for the revised plates; please destroy the previous ones and also the blueprints. I note that I asked you to tell Ruth Patrick that the size of the printed plates was to be 6" x 8". If you have done so please be sure to correct it to 5" x 8".

Plate #6 concludes the genus *Euastrum*, and I added a few small *Cosneria* at the bottom to fill up the space. The next ones will be *Micrasterias*, which is my favorite genus for two reasons, it is the most beautiful and also one of the easiest. Note that I added one *Closterium* on Plate 1, fig 10, which was not shown on the original plate.

This week I shall send the South Australian descriptions to Dr. Hannah Croesdale for the Latin translations. I am glad you told me that she will accept some remuneration for her work; this makes me less hesitant about asking her to do it, though she has always been very cordial in inviting me to "send her more Latin to write". This work takes a lot of time and I shall be glad to pay her for it.

There are a few questions regarding your descriptions of *Micrasterias* and *Euastrum* for the new papers on Southern U.S., and a few differences of opinion, which I want to get straightened out before I write the papers in final form, but since it is 11 pm I shall have to postpone it until tomorrow.

Minoru Hirano has sent me another package of samples, making 49 in all, but the second lot is no richer in desmids than the first. You mentioned that you wished to buy a set of the slides offered for sale in the April Bulletin, but these were prepared by Dr. Sinsuke Hattori, not Hirano.

Sechlan writes from Duitenzorg that he has sent me some desmid material from Java, Bali, and Borneo. The letter he calls "the island of desmids".

Just two days ago I received a short note from Grönblad, the first in five months, together with a newspaper clipping showing a photograph taken at the conferment of an honorary Ph.D. degree, on the same day that Telling received the same honor at Lund in Sweden. I am sending his letter and the clipping for your perusal; please return them at once, because I have not yet answered him. I don't know what to do about the proposed collaboration with Grönblad. In view of the serious danger of another war in Europe I would not want to send me original drawings over there, and copying them would be a very long task if done by hand, or very expensive if they were reproduced photographically.

Sincerely yours,

## Plate 1.

1. *Closterium aciculare* T. West
2. *acerosum* (Schrank) Ehrbg.
3. *dianae* Ehrbg.
4. *dianae* var. *erectum* (Breb.) Reb.
5. sp.
6. *libellula* var. *interruptum* (W. & W.) Donst.
7. *cynthia* De Not.
8. *porrectum* Nordst.
9. *Ehrenbergii* var. *Melinvernianum* (De. Not.) Reb.
10. sp.
11. *striolatum* var. *Borgei* (Borge) Krieg.
12. *nematodes* Josh.
13. *Ralfsii* var. *hybridum* Reb.
14. *Kuetzingii* Breb.
15. *Kuetzingii* var. *vittatum* Nordst.
16. *Delpontei* var. *Nordstedtii* (Gutw.) Krieg.
17. *cuspidatum* Beil.
18. *Hyalotheca dissiliens* var. *tetrica* Reb. ?
19. *mucosa* (Dillw.) Ehrbg.
20. *Penium cylindrus* (Ehrbg.) Breb.

## Plate 2.

1. *Docidium baculum* Breb. (var. *inflatum* var. nov.?)
2. *Pleurotaenium Ehrenbergii* (Breb.) de Bary. var.?
3. *excelsum* (Turn.) Gutw.
4. *trabecula* (Ehrbg.) Naeg.
5. *trabecula* var. *rectum* (Depl.) W. & W.
6. *coronatum* var. *nodulosum* f. *constrictum* (not -te). Krieg. Esn. Eur.  
Pl. 49, fig. 4. Author of form name not given.
7. *gloriosum* (Turn.) W. & W.
8. *burmense* (Jish.) Krieg.
- 9.10. *burmense* var. nov. ?
11. *subundulatum* Borge, var. *apicegranulatum* var. nov.?
12. *nodosum* var. *Borgei* Grönb. (or var. *Gutwinski* Krieg.)
13. *nodosum* var. *Borgei* Grönb. Drawn in tilted position, embedded in mucus.
14. *verrucosum* (Beil.) Lund.
15. *Kaye* (Arch.) Reb.
16. *australianum* (Borge) Scott, comb. nov.  
= *Docidium australianum* Borge  
= *Triploceras australianum* (Borge) Krieg.

## Plate 3.

- 1.) *Euestrum* sp. nov. ? (Cf. *E. intermedium*)
- 2.)
- 3.4. sp. nov. ? (Cf. *E. Jenneri*)
5. *sinuosum* var. *scrobiculatum* Nordst. Fa.
6. sp. (Cf. *E. obesum*)
7. *bidentatum* Naeg. var. nov. ? (Compare with var. *quadriculatum* P. & S. from Florida).
8. *Triploceras gracile* Beil. var. *lobuliferum*, var. nov.
9. *verticillatum* var. *superbum* (Mask.) Nordst.  
3-radiate form with 3 spines on apical processes.
10. 3-radiate " " 2 " " " "
11. 2-radiate " " 2 " " " "
12. End view of a broken section.
13. *Conostozyon sculectum* Hest.
14. *monotenum* var. *pilosellum* Nordst. ?

North Australia, revised Plates 1 to 6.

Plate 4.

1. *Metrium digitus* var. *Naegelii* (Breb.) Krieg.
2. *Euastrum* sp. (*Tetmemorus* sp.?)
3. *cuscutum* Ehrbg. var.?
- 4.5. *cuscutum* Jena. var.?
6. *didelta* var. *bengelicum* Lagerh. Fa.
7. " " " small form
8. *longicollis* var. *capitatum* W. & W.

Plate 5.

1. *Euastrum spinulosum* var. *burmense* (W. & W.) Krieg.
- 2.3.4. *divergens* Josh. Formae.
5. *divergens* var. (Cf. var. *rhodesiense* Rich)
6. *evolutum* (Nordst.) W. & W. var.
7. *preemorsum* (Nordst.) Schn.
- 8.9. *cuscutum* var. *solum* Nordst. Fa.
10. *asperum* Borge
11. *Boxgeamun* Scott, *max* sp. nov. (Borge 1896c). This must be checked with E. Borgei Schn. which Krieger rejects as deformed. I do not have Schmidle's paper.

Plate 6.

1. *Euastrum denticulatum* var. *quadrifarum* Krieg. Fa.
2. *denticulatum* var. *stictum* Borge. (Borge, *Exsicc. Algen aus Queensland 1911*, p. 202, Tafel 2, fig. 8). I have also found this plant in Florida, which you determined as *E. umbonatum* var. *granulatum* var. nov. This does not strike me as being a very good choice; I would prefer *E. Turneri* var. *floridense* var. nov. Note the horizontal, undulate apical margins, the three undulations of the lateral margins, and the elliptical group of verrucae on the facial swelling. Krieger makes Borge's name a synonym of *E. Turneri*.
3. *Cleistanii* Racib. Fa.
4. sp. nov.?
5. *elegans* var. *compactus* (Wolle) Krieg.
6. *elegans* var. nov.?
7. *diplostauron* Skuja, var. My plant is closer to Borge's original figure than Skuja's Burmese version. Note shape of polar lobe in vertical view, and the apical verrucae not shown in Skuja's drawing. Krieger excludes Borge's plant from *Euastrum*, and says it is a *Cosmarium*.
8. *insulare* var. *lateropunctatum* var. nov.
9. *dubium* var. nov. (Cf. var. *tropicum* (W. & W.) Krieg.)
10. *dubium* var. *asymetricum* var. nov. This is more common than the form shown in Fig. 9.
11. sp. (Cf. *E. Litzkmuelleri* var. *carniolicum*)
12. *octogibbosum* Krieg. Fa.
13. *exile* Josh. var. *triporum* var. nov.
14. *pulcherrimum* W. & W. Fa.
15. *sibiricum* Boldt, Fa.
16. *validum* W. & W.
17. sp.
18. *binae* var. [or *Cosmarium*]
19. *Cosmarium* sp.
20. sp.
21. sp.
22. *tinctum* Hells
23. sp.
24. sp.



Tentative identifications of Desmids from  
North Australia

7/16/50

PLATE I.

1. *Closterium aciculare* T. West
2. *acerosum* (Schrank) Ehrbg.
3. *diana* Ehrbg
4. *diana* var *arcuatum* (Bréb.) Rab.
5. sp.
6. *libellula* var *interruptum* (W. & W.) Donat
7. *cynthia* De Not.
8. *porrectum* Nordst.?
9. *Ehrenbergii* var *Malinvernianum* (De Not.) Rab.
10. sp.
11. *striolatum* var *Borgei* (Borge) Krieg.
12. *nematodes* Josh
13. *Ralfsii* var *hybridum* Rab
14. *Kützingii* Bréb
15. *Kützingii* var *vittatum* Nordst
16. *Delpontei* var *Nordstedtii* (Gutw.) Krieg
17. *cuspidatum* Bail.
18. *Hyalotheca dissiliens* (var *taticau* Rab?)  
*meosa* (W. & W.) Ehrbg.
20. *Penium cylindricum* (Ehrbg) Bréb.

PLATE 2

1. *Docidium baculum* Bréb (var. *inflatum* var. nov.?)
2. *Pleurotaenium Ehrenborgii* (Bréb) de Bary (var.?)
3. *excelsum* (Turn.) Gutw.
4. *trabecula* (Ehrbg.) Naeg.
5. *trabecula* var. *rectum* (Peep.) W+W.
6. *coronatum* var. *nodulosum* fa. *constrictum* (not - ta)  
(Krieg. Desm. Eur. Fl. 49 fig. 1. (author of form name not given))
7. *gloriosum* (Turn.) W+W
8. *burmense* (Dosh) Krieg
- 9, 10. *burmense* var. nov.?
11. *subundulatum* Borge, var. *apice granulatum* var. nov.
12. *nodosum* var. *Borgei* Grönb. (or var. *Gutwinskii* Krieg)
13. " " "
14. *verrucosum* (Bail) Lund
15. *Kayei* (Arch) Rab
16. *australianum* (Borge) Scott, comb. nov.  
= *Docidium australianum* Borge  
= *Triploceras australianum* (Borge) Krieg

Digitized by Hunt Institute for Botanical Documentation

PLATE 3

- 1, 2. *Evastrum* sp. nov. ? (cf. *E. intermedium*)
- 3, 4. " sp. nov. ? (cf. *E. Jenneri*)
5. *sinuosum* var. *serobiculatum* Nordst. Fa
6. sp. (cf. *E. obesum*)
7. *bidentatum* Naeg. var. (Compare with var. *quadrioculatum* P. & S. From Florida)
8. *Triploceras gracile* <sup>Bail</sup> var. *lobuliferum*. var. nov.
9. *verticillatum* var. *superbum* (Mask) Nordst  
3-radiate form with 3 spines on apical processes
10. 3- " " " 2 " " "
11. 2 " " " 2 " " "
12. end view of a broken section.
13. *Gonatozygon aculeatum* Hast.
14. *monotaenium* var. *pilosellum* Nordst.?

PLATE 4

1. *Netrium digitus* (var. *Naegelii*?)
- 2 *Evastrium* sp. (*Tetmemorus* sp?)
- 3 *ansatum* Ehrbg var ?
- 4.5 *cuneatum* Jenn var. 2
- 6 *didelta* var. *bengalicum* Lagerh Fa
- 7 " " " small form
- 8 *longicolle* var *capitatum* Wr W

PLATE 5

1. *Evastrium spinulosum* var. *burmense* (Wr W.) Kreeg
- 2.3.4 *divergens* Josh formal.
- 5 *divergens* var. (of var. *rhodesiense* Rich)
- 6 *evolutum* (Nordst) Wr W. var.
- 7 *praemorsum* (Nordst) Schum
- 8.9. *cuneatum* var. *solum* Nordst. fa
- 10 *asperum*
- 11 *Borgeanum* Scott sp. nov. (Borge 1896c)

Digitized by Hunt Institute for Botanical Documentation  
 This must be checked with F. Borelli Schum  
 I do not have Schumidlis paper.

PLATE 6

1. *Euastrom denticulatum* var. *quadriflorum* Krieger?
2. *denticulatum* var. *strictum* Borges.  
(Borges, Süsw. Algen aus Queensland 1911, p 202  
Tafel 2 fig 8.) I have also found this plant  
in Florida, which you have determined as  
*E. umbonatum* var. *granulatum*, var. nov., which does  
not strike me as being a very good choice.  
I would prefer *E. Turneri* var. *floridense*, var. nov.  
Note the horizontal undulate apical margins,  
the three undulations of lateral margins,  
and the elliptical group of verrucae on the  
facial swelling.
3. *Giastonii* Racib., Fa
4. sp. nov. ?
5. *elegans* var. *compactum* (Wille) Krieger
6. *elegans* var. nov. ?
7. *diplostauron* Skuja, var. My plant is closer  
to Borges original figure than Skuja's  
German version. Note shape of polar lobe  
in vertical view, and the apical verrucae  
not shown in Skuja's drawing. Krieger  
excludes Borges plant from *Euastrom* and  
says it is a *Cosmarium*.
8. *insulare* var. *laterepunctatum* var. nov. ?
9. *E. dubium* var. nov. Cf. var. *tropicum* (Wr W.) Krieger
10. *E. dubium* var. *asymmetricum* var. nov. This  
is more common than the form shown in fig 9.
11. sp. (Cf. *E. Lütkenmülleri* var. *carnolicum*)
12. *E. octogibbosum* Krieger, Fa
13. *exile* Jostl var. *triporum* var. nov.
14. *pulcherrimum*
15. *sibiricum* Bolot, Fa.
16. *validum* Wr W
17. sp.
18. *binale* var. (or *Cosmarium*?)
19. *Cosmarium* sp
20. sp
21. sp
22. *finctum*
23. sp
24. sp

July 22 1950

Dear friend Prescott,

Here are the notes on the *Microsterias* paper:

*Microsterias arcuata* Bailey (fa.) Pl. 6, Figs. 1, 2. It seems to me that there is a decided difference between the plants shown in figs. 1 and 2, and that the former represents the species, while the latter shows a small form of the var. *gracilis*, a large form of which is shown in fig. 3. I think there is some confusion between the species and var. *gracilis* as interpreted by various writers, and I drew figs. 1, 2 and 3 with the thought of adding some remarks which might help to clarify the situation. Here is my idea of the differences between the species and var. *gracilis*, based on my observations over several years on specimens of the variety from quite a number of habitats in Mississippi and Florida (the specific form is very rare and I have seen only a few examples). The species is of stouter habit, with strongly curved lateral lobes, the sinus quite narrow at the inner end and closed with a smooth curve at the isthmus; length and width approximately equal, but the cell may be longer than wide or vice versa. The var. *gracilis*, in its larger sizes, is of much more slender habit, the lateral lobes are less strongly curved, the sinus is very wide at the inner end (frequently almost as wide as the lateral lobes at their junction with the body) and in optical section the sinus is closed at the inner end by two straight lines forming an included angle of about 120°, with a small fillet between them; the cell usually very much wider than its length. However, there are small forms of var. *gracilis* (I believe) in which the relative measurements is less apparent, and which approach the species in their proportions. However they can be distinguished, according to my view, by the wide sinus closed by the two straight lines. As I have noted on my original drawings, which are still in your possession, one of my Florida collections contains both the small form and the large form of var. *gracilis*, in considerable quantity, where they can be easily compared. They check very closely in all respects except the ratio L/W, and if I remember correctly my figs. 2 and 3 were drawn from specimens from this collection.

Now all this is based, as I have said, on the plants from Miss. and Fla. It is quite possible that those from other localities may not display such decided differences. In this case my conclusions would not be correct, and I should be glad if you will tell me so. There are very few illustrations available for comparison. I do not have Bailey's original figure, nor the one by Nordstedt (1877). Wolle figure (1884) shows *MEY M. arcuata* with a very narrow sinus quite similar to my fig. 1. Taylor (1935) shows the species with a wider sinus and the angular closure. Your own figure of var. *gracilis* shows the wide sinus but the angular closure is not clearly indicated. The original figure of var. *gracilis* by West & West is poor and it is not possible to see what the inner end of the sinus looks like. But as they do not mention a wide sinus nor the angular closure in their original description, it is necessary to assume that these features were not present in the plants that they examined. Note that while you give dimensions of L. 105 and W. 70 for the variety, or a ratio of 1.5, scaling your figure gives a ratio of only 1.17.

What do you think? In rewriting the paper for publication, should I leave figs. 1 & 2 as you have them, both referred to the species, or should I separate them, making fig. 1 the species, and fig. 2 a small form of the variety? In either case I think that mention should be made of the wide sinus and angular closure, because these prominent features have not hitherto been described.

*Microsteris choctawhatcheeensis*. How do you like this name? I selected it purposely in revenge for such other monstrosities as *mahebulahwarensis*, *tohopekaligense*, *niedzrzyceense*, and the Greek concoctions that the Wests liked so much, *oligogonrus*, *trachytithophorum*, *didymoprotupsum*, etc. Brunel grumbled at the "jawbreaking mouthful", and demanded to know where I got it. Choctawhatchee is the name of a good-sized river and also of a large land-locked bay in northwest Florida, both of which are familiar to those who have travelled in that region. "Hatchee" seems to be an Indian word meaning "river", and there are a number of other "hatchees" in Florida, for instance the Steinhatchee river, Caloosahatchee river, etc. But I'm perfectly agreeable to changing it if you don't like it. How about ~~*Microsteris*~~ *M. bullata* or *M. bullifera*? (bubble-bearing).

*Microsteris Johnsonii* var. *ranoides* fa. *duospina* fa. nov. Pl. 3, fig. 2.  
This is not var. *ranoides*, which is smooth, while our plant has the well-developed spination of the species. The name, therefore, should be *M. Johnsonii* fa. *duospina* fa. nov. I imagine that Salisbury intended "ranoides" to mean "smooth like a frogskin".

*Microsteris radiata* var. *gracillina* fa. *brevis* fa. nov. Pl. 3, Fig. 3.  
I tentatively identified this as *M. radiata* var. *simplex* (Wolle) Smith., and it seems to me to agree very well with Smith's and Irene-Marie's figures of var. *simplex*. Krieger does not recognize this variety, considering it merely a form of the species. The plant occurs in several of my Florida collections, and is a most distinctive and graceful form, quite different from the rather ungraceful form of the species. Further it is a strictly acid-water form, never found in the kind of habitats that yield the species. Like all other varieties of *M. radiata*, occasional specimens are seen in which one or more of the lobules are divided, but such variations are comparatively rare.

*M. radiata* var. *gracillina* fa. *lexata* fa. nov. Pl. 1, Fig. 2. I am very much inclined to believe that this is the plant which Wolle described as *M. dichotoma* (1847, Pl. 32, Fig. 2), now known as *M. radiata* var. *dichotoma* (Wolle) Cushman. Note the very great width, 226  $\mu$ , which agrees with Wolle's ~~figures~~ figures, and is not approached by the present-day var. *dichotoma*. However, it would cause a lot of confusion to try to change names now.

*M. Torreii* fa. *stypica* fa. nov. Pl. 3, Fig. 6.  
I doubt whether it is worth while to assign a new form name to this illustration, which is only one of half-a-dozen atypical versions. Wolle illustrated several different forms, and I could add more. The species, as found in a territory, is highly variable, so much so that I do not think it would be possible to group the forms and assign names to them. I would simply say that this shows one of the many differing versions.

*M. floridensis* var. *subjohnsonii* fa. *spinosa* fa. nov. Pl. 8, Fig. 3.  
This is not a new form. The lower semicell with the spines agrees exactly with *M. floridensis* var. *spinosa* Presc. & Scott. I would refer to this illustration as a dichotypical specimen combining the two varieties, var. *subjohnsonii* and var. *spinosa*. I do not recall having seen any attempt at an explanation of the probable cause of these combination forms, or "dichotypical" forms as Telling calls them.

I shall be glad to have your comments on these points, and hope you won't think that I am inclined to be too argumentative.

him

Krieger has asked me to send ~~me~~ some samples containing representative American species and varieties of *Cosmarium*, so that he may make some original drawings for the next installment of his monograph, so next week I am going to make up a box of 24 vials which will contain at least that number of *Cosmaria* which do not occur in Europe, as far as I know. Perhaps you would like to send him some from your gatherings, when you return home.

Sincerely yours,

August 8, 1950

Dear Mr. Scott:

I thought I could complete the checking of the Australian desmids here but I find I do not have quite enough literature, nor my iconograph to complete the review in a satisfactory way, so if you do not mind I would like to take your drawings and notes back to East Lansing and write you from there. Hope this will not interrupt your work too much.

I was glad to have your notes and criticisms of the descriptions and names assigned to the *Micrasterias* species and forms. No, I certainly do not mind your comments and appreciate your critical remarks. That is as it should be. In respect to those of your letter of July 22 on the *Micrasterias* paper I find that I concur fully with some; some raise the same problems that I considered and decided for an 'on the fence' position because of nature's variability; some I am not in agreement, but leave the final decision up to you and your judgement as the author of the paper.

1) *Micrasterias arcuata* Bailey (fa.) Pl. 6, Figs. 1, 2.

These specimens definitely are intermediate between the typical expression and some of the named varieties (especially var. *gracillima*.) My assignment was based on size and also on form and proportions of the apical lobe (a portion of the desmid cell which I think should be taken into account more than lateral lobes and other lateral features). To be sure the varieties which you show (two different forms of course) lean toward the var. *gracillima* in some respects, but have the relative stoutness of apical lobe and the cell proportions somewhat like the typical. Upon examining the many drawings and assignments of others (iconography), and your own drawings, and from my own observations, I have come to the tentative conclusion that the difference you note in the sinus is related to cell division; the wider, more open sinus showing as the semicells separate in division. Perhaps I am wrong. Do you have evidence to the contrary? Please separate these two as you see fit. Fig. 1 is nearer the typical and fig 2 nearer var. *gracilis*, I think. I grouped them under (f.) of the typical on the philosophy that they were habitat forms and variations of the typical, but the differences, as you note, are worthy of mention, and can be designated by name, depending upon ones conviction. Fig. 2 especially might be deemed worthy of a new form name under var. *gracilis*.

2). *Micrasterias choctawhatcheensis*. I like the name. I like the historical (or geographical) implication. Why not leave it so? In general I think we all appreciate species names which make reference to a specific morphological or physiological characteristic, however. In this case the rather bizzare name seems to agree with the bizzare plant.

3). *Micrasterias Johnsonii* var. *ranoides* fa. *duspinia* fa. nov. Pl. 3, f. 2. of Krieger and note the apical lobe in the typical and in the var. *ranoides*. I think spines are incidental (in general) and are of minor significance. Lateral lobules are more like var. *ranoides* also.

4). *Micrasterias radiata* var. *gracillima* fa. *brevis* fa. nov. Pl. 3, f. 3.

In checking the iconography and in following Krieger it seems to me that this form is nearer var. *gracillima* than any other. It is as you say, graceful enough to be var. *gracillima*. I do not see how var. *simplex* and var. *gracillima* can be separated. I do not have Smith here for checking. I cannot help but regard your plant as a very graceful and little-divided var. and it seems more like *gracillima* to me than any other of the very many described and illustrated varieties and forms.

5). *Micrasterias radiata* var. *gracillima* fa. *laxata* fa. nov. Pl. 1, f. 2.

This is the name which you assigned this expression. See Krieger Pl. 117, f. 5-6 for var. *dichotoma*. The cells are nearly circular and are 2 times dichotomous!

6). *Micrasterias Torreyi* fa. *atypica* fa. nov. Pl. 3, f. 6.

I can agree with you fully in this respect (i.e., inadvisability of assigning a different name. It certainly is unlike the typical but I suppose that there are so many intermediate forms that it is not practical (as in so many cases it is not) to try to draw a line and limit the form by a particular description).

7). *Micrasterias floridensis* var. *subjohnsonii* fa. *spinosa* f. n., Pl. 8, f. 3

Compare lobules of our Pl. 3, f. 10 with your Pl. 8, f. 3. (sorry)

Of also lateral sinus, stoutness & apex of lobules which influenced my decision because the var. *subjohnsonii* has slender lobules, the typical short, stout lobules. Please do not be influenced by my opinion too much and if you feel that the spines are of more significance than the shape of the lobules you should use the varietal name *spinosa* Pres. & Scott.

I am glad to learn that Krieger seems to be keeping on with his treatment of the desmids. I shall certainly be glad to send him some of my mixtures when I get back to East Lansing, if he is still in the market. I wonder if he plans to publish in the Rabenhorst series. I had understood that that had met its end, but I hope not.

Cordially,

G. W. Prescott



Aug. 8, 1950

Dear Mr. Scott:

Your abnormal *Micrasterias pinnatifida* is a monstrosity to end all monstrosities in the desmid world. No, I never did see such a derangement of semicells as you have found. Unfortunately the slide you sent apparently went through the cancellation machine at P.O. and was cracked through in about 4 places. I searched the pieces but the plant had been shifted and lost in the smash. Am certainly sorry. Your drawing is very clear, however, and would be quite adequate of course for an illustration. It certainly would be interesting to have such a *gnome* alive and in culture and try to follow the sequence of cell divisions from the 'upper' and more abnormal semicell to see whether its physiology was such as to cause it to give off generations of abnormal semicells. Apparently one of the 'lower' semicells has been able to give rise to normal semicells again and perhaps only the 'upper' semicell from some much earlier cell division retains the abnormal morphology. Someplace in the same pond there is, no doubt, the other half of this original abnormal cell also carrying on in a similar fashion. Do you not want to write about this occurrence? I would be glad to make a note about it if you really wish me to do so.

Thank you for the interesting information about Grönblad. Apparently he went to the Congress for I had, as you probably did too, a card from him and Teiling and Cedercreutz. I am inclosing the news article. I dropped Grönblad a line. Sorry he did not come to N. A., but possibly he will another year. I did not learn what had happened to his application for a grant. Dr. Grönblad misconstrued my letter to him in respect to your cooperation. I tried to make it very clear that I had no mental opposition of any kind to your plan, but only indicated that I would be ready to assist you in any small way that I could by supplying information from the iconography, etc. Please do continue with your good work and coordinate your studies with Grönblad (if he is willing and he seemed to be quite so).

Hope the weather has been kind to you. We are still enjoying cool (and sometimes too rainy) weather here, with the advantage that the forest fire danger is slight and increased freshness of vegetation, etc. Cherries have been wonderful here, although expensive because so much of the crop was lost by frost earlier.

Am leaving here in a few days and am taking the desmid notes with me so that I can write you later. Address until further notice is given below.

I heard from Dr. Patrick. Said she was busy but would be glad to examine the diatoms from Australia. She is in Europe for the Congress but probably will return soon.

With kind regards to you and Mrs. Scott.

% Prof. M. E. Peck  
1552 Court Street  
Salem, Oregon

J. W. Truescott

1936  
Salisbury, Robert K. The Desmids of Florida  
Ohio Journal of Science XXXVI, 1, 55-61

Microsterias ranoides, n. sp. (Pl. I, fig. 1)

Cells large; a little longer than broad, circular, deeply constricted, sinus open; semicells S-lobed with deep, fairly open interlobular incisions; polar lobe cuneate with apical margin reflex with the lateral margins drawn into spines at each corner. Lateral lobes equal and cuneate, each divided into lobules by a wide open sinus about half as deep as the interlobular sinus; each lobule drawn into 2 long diverging spines. Side view of cell fusiform with polar lobe about half as thick as cell. Cell wall smooth.

L 208-269

Length polar lobe 102-118

W 30-35

W polar lobes base 11-20

T 21-25

W apex 12-14

T 45-50

Length of spines 20-24

Keytone Lake near Odessa, Fla.; Okiechobee, Fla.

Sept 23 1950

Dear friend Prescott,

I did not write to you in Oregon because I did not know how long you were going to stay there, and because I expected to see you in person at the AIBS meeting in Columbus, where I also hoped to renew my acquaintance with Brunel, Taylor, Taft, Hughes, Crossdale, Eggleton, Oscar Richards, and others. But the only one of these whom I saw was Taft, with whom I chatted for ten minutes. I introduced myself to Prof. Transeau, who was kind enough to say that he knew of me.

From my viewpoint, the meeting of the Phycological Society was a fizzle. Of the eight papers scheduled for the morning session only three were read. The other five authors neither put in an appearance, nor delegated anyone else to read their papers, nor offered any explanation of their absence, so far as I know. Only one of the papers, on Chlorococcales, was of any interest to me, but I was unable to hear more than half of what the speaker said, because of his rather low voice, the wretched acoustics of the classroom, and reverberating noises in the corridor coming through the open door. Prof. Transeau was obliged to announce at 11 o'clock that the morning session was at an end, since there were no more papers available, and he also said that the proposed informal luncheon could not be held because all the campus restaurant facilities had been booked by the larger societies. I was so greatly disappointed that I returned to the hotel, and did not bother going back to the University for the afternoon session. Taft and Transeau were the only persons to whom I spoke during my visit.

However, my wife and I had a pleasant 10-day vacation. We drove back from Columbus through West Virginia, Virginia, North and South Carolina, Georgia and Alabama, seeing a part of the country that neither of us had visited before. I took the opportunity of going to Savannah and Brunswick, Ga., and as I had thought, the region around these towns has many habitats suitable for desmids. I made about twenty collections, all of which are good, though the desmid flora is quite similar to that of Florida, as might be expected. One of these days I hope to go back there and explore the country in more detail.

In writing up the *Microsterias* paper I shall follow most of the suggestions in your letter of Aug 8th, but I am going to change the name *M. choctawhatcheensis* to *M. physelophora*, which is descriptive and not quite so barbarous.

I would have liked to talk over with you some things in the *Euastrum* paper, since I think I could present my arguments better verbally than by writing. They are as follows:

*E. umbonatum* var. *granulatum* var. nov. Pl. 1, Fig. 9. This plant agrees almost exactly with *E. denticulatum* var. *stictum* Børges., as originally figured by Børgesen, and as illustrated by Borge in *Süssw.-algen aus Queensland* 1911. I also found it in the North Australia material, and I have shown it on Pl. 6, fig. 2, North Australia. Krieger lists *E. denticulatum* var. *stictum* as a synonym of *E. Turneri* W. West. The plant itself seems to me much closer to *E. Turneri* than to *E. umbonatum*, because of the three undulations on each lateral margin (*umbonatum* has only two); the two small undulations on each apical margin (*umbonatum* has none); the two quadrifid verrucae just below the apex; and the elliptical group of five or six verrucae on the central swelling, not possessed by *umbonatum*. I think, therefore, that we should list the plant as *E. Turneri* W. West, Pa., calling attention to the agreement with *E. denticulatum* var. *stictum*.

*E. invaginatum* sp. nov. In your remarks you say "The combination of characteristics in this rare desmid make it quite unlike any known species of *Euastrum*". This is not exactly correct, since there is some resemblance in shape and depth of incision

to *E. bilobum* Lütken. In fact Grönblad, who saw a print of my original sketch, wrote a couple of years ago that in his opinion it is *E. bilobum*, or at least a new variety of it. I am in favor of making it a new species, but I think that mention should be made of the superficial resemblance to *E. bilobum*, which Krieger (p.109) says is an Arctic species.

*E. platycerum* var. *scutibulum* fa. *dentiferum* fa.nov. Pl.3, Fig.12. )

*E. sphyroides* fa. *granulatum* fa.nov. Pl.3, Fig.11. )

*E. hypochondrum* fa. *prominens* fa.nov. Pl.3, Fig.13. )

Perhaps I used poor judgement, but I selected the plants depicted in Figs. 11, 12, and 13, as representing the approximate extremes of variation in what I am convinced are not three different species, but merely varying expressions of one, or perhaps two, new varieties of *E. hypochondrum*. Actually there are many intergrading forms connecting all three of the shapes that I have shown. I'll willingly admit that Fig. 11 superficially resembles *E. sphyroides*, but if you had seen the Australian specimens of *E. sphyroides*, as I have, I am sure you would not say the Florida plant belonged to the same species. I am enclosing a sheet with three rough outline sketches of the plant shown in Fig.11, showing some of the variations. Note the "hump" on the upper lateral margins, and the tendency towards an inward slope of the lower lateral margins, also the supraisthmial granule.

Likewise I'll admit a strong resemblance of Fig. 12 to *E. platycerum* var. *scutibulum*, and I would agree to its assignment to that species if it were not for the existence of intergrading forms connecting it with Fig. 13, and especially by the presence of the supraisthmial granule. I have not had time to dig out specimens of the intergrading forms, but I can assure you that they exist.

I expect that you will be inclined to minimize the importance of the "humps" on the upper lateral margins, and the supraisthmial granules, but to me they appear strong characteristics. They are present in *E. hypochondrum*, and they are not present in any other Eusstrum in any of the groups to which the plants could possibly be assigned, as shown in Krieger's Plates 90 and 91. That I should like to do, therefore, is to describe Fig. 12 as *E. hypochondrum* var. *prominens* (not fa. *prominens*) var.nov., and tentatively to name figs. 11 and 12 as local variations of this new variety, while awaiting further information as to their relationships. To forestall criticism I would, of course, note the resemblances mentioned above; in fact I would embody most of the foregoing remarks.

Will you please let me know what you think of these proposals?

Sincerely yours,

Sept 24 1950

Dear Friend Prescott,

I am writing a separate letter on this, as you may wish to file it under a different heading.

Enclosed is a photostat of a letter just received from M. Sechlan of Buitenzorg (or Bogor as it seems to be called now). The two boxes of samples from Borneo and Java, with the photomicrographs, also arrived a couple of days ago, but I am sorry to say that nine out of nineteen vials were broken and contents lost. This was due to poor packing. The wooden boxes were plenty strong, in fact one of them was the same that I made myself and sent him some of my samples. But his material was in very thin shell vials with rubber stoppers, unwrapped, which he had forced tightly into the boxes, so that any rough handling would be certain to break some of them. In only one case was there sufficient sediment left to make an attempt at salvage worth while, and I have spent a couple of hours this morning boiling the glass fragments in a weak lactic acid solution. The resulting material is only fair; much of it is still agglomerated in small flakes, but they can be broken up, more or less, when placed on the slide. Some of the desmids are recognizable, and such an apparently delicate form as *Streptonema trilobum* has survived the drying and boiling without much distortion.

I have looked at the material in some of the unbroken tubes. It is highly interesting, with many strange and beautiful desmids. Some of them occur in my North Australian stuff, including *Microsterias ceratophora*, and others I can recognize from the Australian and East African literature that I possess. But many are absolutely strange to me, and undoubtedly there will be a good many new species or varieties. The material is not quite so rich in number of individual desmids as the North Australian; as a wild guess I should think there might be 150 different kinds all told.

Sechlan has sent lists of his tentative identifications for each of the vials, but there are many more desmids than he lists. Some of his identifications are correct; most of them I cannot pass judgement on. His photos are good and in some instances identifiable, such as *M. ceratophora*, *M. anomala*, *M. spicalata* var. *lacerata*, etc., but generally they will serve only to point out the particular desmid in his listings.

It is not quite clear to me from Sechlan's letter, whether he expects to have all the desmids written up and published, or just the new ones. Also the matter is complicated by his sending 7 tubes of the same material to Dr. J. Heimans; but these things can be straightened out later.

Now in view of the termination of our collaboration on my American material, ~~frankly~~ though not of our friendship I sincerely hope, I am perfectly willing to turn all of Sechlan's material to you, for you to handle alone and directly with him, leaving me out of the picture entirely. If you would rather have it this way please do not hesitate to say so, and I shall not be in the least offended. But I should be tickled pink to have an opportunity of illustrating these wonderful desmids. Please tell me frankly what you think.

With best regards from Mrs. Scott and myself,  
Yours sincerely,

MICHIGAN STATE COLLEGE  
EAST LANSING

October 20, 1950

DEPARTMENT OF BOTANY AND  
PLANT PATHOLOGY

Dear Friend Scott:

I owe you several letters and several apologies. Operations and activities have been rather complicating here the past few weeks, but even so I have been thinking about you very often and of your work, and about the talks that I would like to have with you. First, I want to thank you for the especially signed copy of your paper on *Staurastrum ophiura* Lund. I am glad that you have this paper finished and in print, for it is not only a highly critical and clarifying delineation of a desmid but it shows how well you can write. I hope that you will have more of this and other types of analyses. In this connection, I had a letter from Grönblad who was still a little concerned over collaborating with you, thinking that I might have my professional feelings hurt. He also suggested that it would be helpful, possibly, if I should cooperate in his studies with you in such cases where North American species (unknown or little-known to him) were involved. I assured him that I was highly in accord with the plan for you two to cooperate, and of course said that I was willing to supply any suggestions that I might be called upon to give, based on my iconography. Grönblad wrote a very nice letter which made me wish all the more that I might meet him. He did not say anything about the prospects of making the Hudson Bay expedition about which he wrote last year and for which he made application to the Arctic Foundation.

I was sorry to learn of the wreck that occurred to the material that Sachlan sent. I had the same experience last summer with a big box of specimens from India (perhaps I wrote you about this). The desmids are not too conspicuous in the collections that I was able to salvage. I thought once that I might discuss the proposition of your working them over, but decided that it would not be worth while in view of the nature of the material. In respect to the Sachlan specimens- I had a letter from him also and gathered from his brief note that he had intended that you would work over the samples and publish on them. I did not know that he had sent material also to Heimans. Perhaps you have heard more recently just what he does wish- but it seems to me that in view of your previous correspondence with him that you were going to do the work (and I believe he said something once about my being in on the job someplace). He never gave me the idea that he was sending the material to me and I most certainly think that you should do the illustrating of the forms- and I hope you have already undertaken this. In his letter (A, B, C, D) he certainly gives one the impression that he would like to have us report on the collections, and not Heimans.

I am sorely disappointed in the way that the Phycological Society meetings failed. Naturally, I regret that I was not able to get back in time to be of some assistance to Dr. Transeau. The 'job' of running the meetings was to have been borne in part by Dr. Tiffany who was prevented by illness or death in the family from going (at the last minute). The speakers who failed to materialize after the program was all planned and published certainly gave the session a black eye- but there was nothing that I could do about it so late it was that they decided they could not appear. Of course that time of year is a bad time in any case to hold such meetings- and the

MICHIGAN STATE COLLEGE  
EAST LANSING

DEPARTMENT OF BOTANY AND  
PLANT PATHOLOGY

results bear out my contention that September is not the month to hold such meetings. On the contrary, I understand that the convention as a whole was well-attended. But too many of our people are away for the summer; many are just starting school at that time; those who may have research papers in progress have not had time to complete them because of other work that they have been carrying on over the summer period, etc. There are many objections to the December meeting time also, but of the two times I have always felt that we would have better sessions in the winter than at the end of summer. In any case, I planned according to the directive from our Executive Committee, even though I was not in favor of having the meetings in the fall. I note that they are scheduled for September again- at Minneapolis next year and this will give us a chance to see whether it is going to be feasible to hold our annual meeting at this time of year. Of course next year there will not be the complications arising from the fact that many botanists were in Europe for the International Congress.

For you, I am especially sorry that you had a disappointing time inasmuch as you had made the trip up to Columbus expecting much more than ever developed there. And I am all the more sorry that I did not get there because I would have enjoyed so much having another visit with you and Mrs. Scott. Let us hope that you will feel like taking a longer drive and going to Minneapolis next fall, when we can get together on a few field trips and I can show you the desmid haunts in our northern bogs. Perhaps you are quite familiar with the Tamarack-Northern Spruce-Sphagnum-orchid type of quaking bog which is so characteristic of the glaciated region throughout the northern section. If not, I am sure both you and Mrs. Scott would enjoy a short tramp out onto some of them. Of course the orchids and swamp beans and callas have gone by at that time of year- but the pitcher plants, sphagnum, leather leaf and cranberries are in full sway.

Glad you had your trip through Virginias and Georgia. Judging from papers and lists from the Georgia country there should be some fine desmid havens there and no doubt there are many new items and curiosities that might be turned up from there now even though it has been the old tramping ground of collectors for a long while. I do not suppose we know enough about desmid distribution yet to draw any pictures, but it does seem that there is an Atlantic coastal plain combination of species that may be quite unique. I have a collection of Georgia desmids sent me by Dr. James Lackey which are not too luxuriantly sprinkled with desmids. If you have some collections from there that prove to be interesting and would like to study the same; as that I have along with them, I would be glad to send them down. I went through a number of the jars and did not happen to see anything that was not well-known and common- but I must confess that I never actually "studied" the collections seriously.

Did I return to you both your original drawings of the Euastrum paper, together with your plates? I have been wanting to discuss the points you raised in your last letter but seem to not have either your 5 x 8 nor your plates. Please tell me so that I will know whether to look further for them. I think from your remarks that you must have some good points but I cannot comment on them without seeing what I had in mind when I wrote as I did. With kind regards, until later.-

J. W. Prescott

Nov 18 1950

Dear friend Prescott,

This seems to be the first chance I have had to answer your letter of Oct 20th. For the last several weeks I have been busy sending all my stuff to Grönbled; 525 samples specially made up, packed in 7 wooden boxes also specially made. Then I have sent him all of my original drawings of American desmids, more than 3000 of them. I had 2500 of them photostatted for safety in case anything should happen to the originals. He has started the examination of the material, but says that things look "chaotic" at present, because of the large quantity of collections and drawings.

Have just received from Miss Crossdale the Latin translations for the South Australian and Microsterias papers. It took longer than I expected, since I sent them to her last summer when she was at Woods Hole. So now I am going to work on retyping these two papers, arranging the genera in the proper order, arranging the species alphabetically, inserting the names and measurements and station records of those which are not illustrated, etc. This looks like a fair-sized job to me because I am not accustomed to it, and I am beginning to realize what a lot of work is involved in getting up even a comparatively small paper. I feel kinda sorry for Grönbled.

I am going to send the South Australian paper to the Editor of Botaniska Notiser, who will probably accept it according to Telling. A couple of months ago I had a postal card from Dr. Eggleton about my Staurostrum Ophiure paper, and asking for more. So I asked him if he would take the Microsterias paper with 8 plates and print it all at once without breaking it up, but have not heard from him. I shall send it to him anyway.

You asked whether you returned my original drawings and plates for the Eusstrum paper. Yes, you did, but my original 7x8 $\frac{1}{2}$  sheets are now in Grönbled's hands, and the photostats that I had made are not in a very convenient form for reference. To save expense I had 16 of these 7x8 $\frac{1}{2}$  sheets photostatted on 18x24 sheets, about 160 of the large sheets. They are negatives, and the contrast is poor due to my faint pencil drawings. So the only thing I can send you now is prints of the large Eusstrum plates, which are enclosed herewith. I hope you can find time to give some consideration to the various points in my letter of Sept 23rd, and particularly to the three plants shown on Plate 3, figs. 11, 12 and 13, all of which I think are varieties of *E. hypochondrum*. Note, by the way, that "hypochondrum" means "granule below" or something equivalent, undoubtedly referring to the suprasthmal granule below the central rosette of verrucae. This granule is present on all three of my plants, and it is not possessed by any other Eusstrum to which they might possibly be assigned on the basis of morphological resemblance. The small form, Pl. 3, fig. 11 has shown up again in one of my new collections from Georgia; at least I saw one specimen in my preliminary examination, but I can't find another one just now. As far as I remember it was pretty much like fig. 11.

The Georgia material is fairly rich in desmids, but practically all of them are well-known species. I did find a new variety of *Docidium undulatum*, in which the margins are not continuously undulate, but each inflation is separated from the next by a straight cylindrical portion of the body.

I don't think there is any chance of my attending the meeting at Minneapolis next year. It's too far and too expensive for what I get out of it. Perhaps this winter or next spring you may be able to make the trip down here that you contemplated early this year.

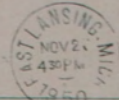


Enclosed is a blueprint of a letter just received from Mr. Sachlen, which clarifies some of the points on which I was in doubt. It is a relief to know that there will be no complications with Prof. Heimans also publishing on the same material, though it seems strange that he should not have more literature available. I have asked Sachlen to send the new Sumatra collections to me, and I shall work them up along with his others. In my few spare moments I have been looking at his material and have made about 40 drawings, most of which I can identify. Fortunately a majority of the desmids are large and boldly characterized forms; there are comparatively few of the small and obscurely marked *Cosmaria* and *Staurostrea* that are so troublesome. There are however some puzzlers, dichotomical forms apparently combining two distinct species:

With best regards from Mrs. Scott and myself,

Sincerely

P.S. Note Sachlen's request for some bolting silk for making a plankton net. Please tell me where I can buy this, and what I should ask for. I have never bought any myself; my own net, which I very seldom use, was made from a piece of silk that my wife gave me, but the thread and mesh are too coarse for real plankton work.



THIS SIDE OF CARD IS FOR ADDRESS

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

Dear Mr. Scott: So very glad to get your letter and the inclosed drawings. Am glad to know that I had returned the originals- so now I can stop searching my files and boxes for them. Shall get at the notes and queries regarding them at once. (Fortunately for my peace of mind we have a rather long Thanksgv. vacation. You must have been very busy indeed getting all that material off to Grönblad.

As for Bolting Cloth No. 20. Alyce-Chalmers Co., Milwaukee, Wis. I believe they surely have bolting cloth. If not, I can look up an address of a firm in New Jersey (exact location I do not recall at present).

With best regards until I have time to write-

*QW Prescott*

Nov. 22 - 50

MICHIGAN STATE COLLEGE  
EAST LANSING

Nov. 23, 1950

DEPARTMENT OF BOTANY AND  
PLANT PATHOLOGY

Dear Mr. Scott:

I hope that today you and Mrs. Scott are having a most cheery time, with plenty of sunshine- and perhaps a long, languid drive through some of that beautiful Louisiana country side. Here we are putting up with normal Michigan weather for November and are having a quiet time at home. We have a couple of the boys in for our dinner- boys who were left over from the general exodus that occurred Tuesday night when the long holiday began. For some curious reason the President promised the student body an extra day tacked onto the Thanksgiving recess if they would behave themselves (no more riots following football rallies in the streets of East Lansing), and if our team won two more games. The students behaved themselves! and the team won all of the remaining games so of course the holiday materialized. I do not know whether it is good psychology to try and reward people for doing what they should do without any reward- but anyway I am thankful for the extra day myself because it means getting a little more nearly caught up with left over jobs.

Last evening I checked over your *Euastrum* plates and my descriptive notes and identifications (the latter made last summer when I was out of touch with my iconography).

1) Pl. I, Fig. 9. In making the assignment to *E. umbonatum* I was influenced (probably too strongly) by the fact that *E. denticulatum* var. *stictum* had been transferred to *E. Turneri* by Krieger. I do not think that Borgesen's plant and the ones that Borge assigned to this name are typical *E. Turneri* and certainly Krieger's figure of what he calls *E. Turneri* is not the same as Borgesen's original. Hence, I looked for a described species which had the very characteristic apical notch (broadly open and fairly deep), and a species which had an upper, lateral lobule below the polar angles. I agree with you that your plant does have more features of some expression of *E. Turneri* than it does have with *E. umbonatum*. The margin of the semicells and also the proportions of the cell are more nearly like those characters of *E. Turneri* than *E. umbonatum*. I think yours should be described as a new variety, or at least a new form, because (at least in my iconography) there is no expression of *E. Turneri* that is like yours in all respects. *E. Turneri* var. *polonicum* Krieger has basal lobules like your plant (simple, not retuse or invaginated at the margin as in most forms of *E. Turneri* which have been illustrated or described). But most of the features of var. *polonicum* do not agree. Your plant is, in other words, almost a "hybrid" between typical *E. Turneri* and its variety *bohemicum* Lütkm. At the same time, fa. *subfennica* Jao has some features in common with yours, but not enough to make an assignment of this name to your plant.

2) Pl. I, Fig. 8. *E. invaginatum* has some resemblance to be sure to *E. bilobum*, more so to Grönblad's and Krieger's incorrect figures of what they call *E. bilobum*. Lütkemüller's plant (according to his description and illustration) is different from theirs and from yours, and I know of no species which is like yours. That is why I stated "quite unlike any known species." Perhaps that is too strong and should be qualified by simply "unlike any known species." *E. bilobum* has a biundulate basal lobe and the wall is smooth (not crenate or undulate) from the basal lobes (above which there is a small but conspicuous indentation or invagination) to the poles. In your plant the walls are evenly and equally undulate throughout. Dick has a figure

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which he calls bilobum that is more nearly like yours. In fact it may be a poor drawing of the same plant as yours- has same apical notch (which is not like Grönblad's figure). In describing this plant you may wish to refer to Dick's plant and its similarity to yours. Dick's figure is in Krypt. Forsch., 1, Pl. 14, f. 8. 1919.

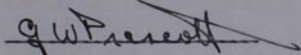
3). Pl. 3, Figs. 11-13. These plants were assigned to presently recognized species names. A monographer undoubtedly will reduce all of these (*E. platycerum*, *E. sphyroides*, *E. hypochondrum*) to *E. platycerum* Reinsch 1875. Using your arguments (your letter of Sept. 23) which are good, you could just as easily assign your plants to *E. platycerum* rather than to *E. hypochondrum* on the basis of the agreement of intergrading forms with that species. Your fig. 13 most certainly is a form of what is now called *E. hypochondrum*, and your fig. 11 ties this to *E. sphyroides*; your fig. 12 is tied to *E. platycerum* through var. *breviceps* (Nordst.) Grönblad.

I am glad too to see that there is clearance for working over the Borneo desmids. If I can be of any help on these collections please let me know. You certainly should find some mighty interesting things among them. I would like to see the samples, including the plankton from Palembang if Sachlan sends them.

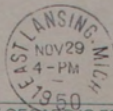
I do hope that Eggleton will take your *Micrasterias* paper- although it may be a long time in coming out. I have a paper in his hands that was sent in over a year ago. I must write and check with him on that.

Best regards to you and Mrs. Scott.

Yours very truly,



G. W. Prescott



THIS SIDE OF CARD IS FOR ADDRESS

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

Dear Mr. Scott:

Just received the set of curious desmids from Borneo. Thank you very much. A, just about through with the Australian plates. Sorry to say I have no record of *Euastrum diplostauron* (at least not that I have been able to locate in my files) and I do not know where <sup>Frieger</sup> changed this to *Cosmarium*. Was this done through correspondence?-- or where? I would appreciate your citation for *Euastrum diplostauron*. It certainly seems that I must have obtained this from the literature- but have finally given up looking for it here.

With kind regards-

gwt.

Bailey, 1898, Dept. Agr.  
Bull. 15, Pl. 14, f. 9  
has this same plant,  
listed as a *Euastrum* sp.

Dec 2 1950

Dear Friend Prescott,

I have your letter of Nov. 23rd and your two postal cards, some of which were delayed, no doubt by the big blizzard last week. The cold wave reached New Orleans, where we had the first freeze of the season, not severe however, just got down to 32°. It has warmed up now, thank goodness.

Though I am sorry my arguments failed to convince you as regards the *Euastrum* on Pl. 3, figs. 11-13, I am writing them up in accordance with your descriptions. As you say, someone will probably revise them in the future, but he will be judging merely by these illustrations, and will not have the benefit of seeing the actual plants with their intergrading forms. Krieger has done this on several occasions, with incorrect results.

I think a good solution for Pl. 1, Fig. 9 would be to name this plant *E. Turneri* var. *stictum* (Boergesen) comb. nov., referring of course to his original paper and to Borge's illustration from Queensland, and pointing out the differences from the specific form of *E. Turneri*.

Here is the reference on *Euastrum diplostauron* Skuja. Zur Süßw.-algenflora Burmas, 1949, p. 112, Pl. 24, Fig. 1. This is the same plant (though with some differences) as the unnamed *Euastrum* in Borge, Austr. Süßw.-chlorophyceen, 1896, p. 14, Fig. 64. Krieger, Desm. Europas, p. 659, in his list of "Auszuschliessende und zweifelhafte Arten", excludes it as a *Cosmarium*, by analogy, I suppose, with *C. commissurale*. I do not have Bailey's 1898 paper, but his figure and description are in correct form; his name should take precedence over Skuja's. My specimens from N. Australia agree better with Borge's from Queensland than does Skuja's plant from Rangoon. I am inclined to agree with Skuja's arguments in favor of assigning it to *Euastrum* rather than *Cosmarium*.

I have 8 or 10 more plates to draw for the N. Australian paper, but have not been able to touch them for some time. I realize that I shall have to get busy on them, and will do so as soon as I get rid of the S. Australian and *Micrasterias* papers. It was necessary to write to Ophel in Australia for additional information on some incomplete references to Australian algal literature, which are not given in any bibliography at my disposal. They will be new to you, I think.

By the way, in your list of corrections to the Index Desm. you deleted 't' previously added to Herfordshire, in Rowland 1931. But "Herfordshire" is incorrect, since there is no English county with that name. There are two English counties with closely similar names, Herefordshire and Hertfordshire, so you would have to refer to the original paper to see which one it deals with. Krieger also misspells it Hertfordshire, and I imagine you copies from his work.

Thanks for the note on bolting silk. But the Allis-Chalmers Co. in Milwaukee is a very large corporation manufacturing heavy electrical machinery, turbines, diesel engines, etc. I hardly think they would handle bolting silk. So if you would be good enough to look up the address of the New Jersey firm I would appreciate it. I should think some biological supply house could supply it, and I would rather get it from such a firm than order one square yard from the silk manufacturer.

Do you have Ström's 1921 paper "Some Desmids from North Australia", and

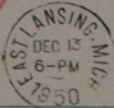


Joshua's two papers, 1986 and 1986. If you do, I should like to borrow them for a few days, whenever you can spare them.

My wife and I will probably make another automobile trip between Christmas and New Year, when I can get away for 10 days. I should like to go to Mexico again, but there are no deserts down there. I had hoped to fly to Panama, as I told you last winter, but the finances are not quite equal to it. So I guess it will have to be Georgia and Florida again.

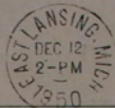
Sincerely yours,

*Via Air Mail*



THIS SIDE OF CARD IS FOR ADDRESS

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



THIS SIDE OF CARD IS FOR ADDRESS

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

*Cosmarium rectangulare* var. *australe* Playfair, Proc.  
Linn. Soc. New South Wales, 35(2), Pl. 13, f. 14-15.  
1910.

*Staurostrum crenulatum* var. *continentale* Messikommer, Inaug.  
Dissert. 1927, p. 107, Pl. 1, Fig. 6. (Biol. Stud.  
im Torfmoor von Roben.)

Sorry for these omissions. Let me have others pronto if there  
are any. Bad news. The bindery doing the work on the  
symposium papers is so tied up with a strike that we have  
finally had to pull the job out and transfer to another  
outfit. Why don't we all belong to a union- then the world  
would be just 'fine and dandy.'

gwp.

Dear Friend Scott:

*Staurostrum lapponicum* Grönblad in Soc. Sci. Fenn.  
Commen. Biol., 2: 1-39. 3 Pls. 8 Figs. 1926.  
Pl. 2, Figs. 106-107. (Do not have page reference  
for the description of this sp.)

*Staurostrum punctatum* should read *St. punctilatum* Breb.  
Some of my sheets in the iconograph carry the misspelling  
because records are taken from lists published by authors  
of articles in which the name has not been spelled cor-  
rectly. Duceklier, e.g. spells the name *punctatum* for  
a plant which is most certainly *punctilatum*. Sorry I  
sent this incorrect name to you.

gwp.

Dec 18 1950

Dear friend Prescott,

Your two postal cards arrived yesterday, and this morning (Saturday) I inserted the author's names in the ~~final~~ rough draft of the South Australian paper, which was then ready for the final re-write and submission to the Botanische Notiser.

But then the mailman arrived with an airmail letter from Mr. H. B. S. Womersley, Univ. of Adelaide, reading as follows:

"Since I wrote you last (May 8) I have been able to visit Mt. Compass and make a good collection of desmids. These, together with a tube of material from Waterfall Gully, near Adelaide, I have posted to you by surface mail.

I hope you find material of interest in this collection. It seems rich to me, with the genera Glosterium and Cosmarium in abundance, and also Pleurotaenium, Eusstrum, Microsterias, Staurostrum, Eyalotheca, Netrium and Spirotaenia. These were in such abundance that I have been able to make a series of nicely stained and permanently mounted slides of most of them.

In my last letter I suggested that you should consider publishing your report on previous South Australian collections in America. However, on further consideration I would like to suggest the following. Over the next few years Ophel and I intend to make collections of desmids whenever and wherever possible, and these will be sent to you. Both Ophel and I would like to see the report (s) published in Australia, and if you are agreeable it might be best to publish a large combined report of past collections and any future ones we can send you, in say 2 or 3 years time. I think that such a report would be accepted without difficulty by our Royal Society of South Australia Journal, which has become more up to date in recent months. One large report seems to me to be better in many ways than several small ones. However, I will be glad to hear how you feel about this".

Of course, he is right that a single large paper is much more valuable than a series of short ones, so I suppose we shall have to agree to his proposal, though it means considerable waste of time for you and me, and \$65.00 that I paid for inking the 8 original and 8 revised plates that I drew.

So I have stopped work on the paper, and shall wait to hear what you think. My wife and I are probably leaving for a trip on Friday Dec. 22nd, and shall be gone until Jan 2nd. It depends, however, on whether one of the partners in our firm gets out of the hospital where he has been for three weeks. I don't know yet where we are going; maybe the northern part of Mexico, - Brownsville, Tex. - Monterrey - Seltillo - Torreon - Chihuahua - El Paso and home. Or if we don't have time to prepare for this trip it will have to be Florida again.

With best wishes for Christmas and the New Year,

Sincerely yours,

MICHIGAN STATE COLLEGE  
EAST LANSING

Dec. 27, 1950

DEPARTMENT OF BOTANY AND  
PLANT PATHOLOGY

Dear Mr. Scott:

Glad to hear that you can get away for a change and (I hope) a little relaxation. No doubt the weather will be kind to you (which it certainly is not to us here). Please watch the highway- and I know you will after your painful experience on another Christmas holiday drive.

Herewith are the arranged notes and descriptions for the <sup>North</sup>Australian desmids. I do not know exactly what you may have had in mind, but it seemed to me that full descriptions of the species were not called for except in the case of new forms and species. Under another cover I am sending your original drawings.

Both my first thought and my second thought on Mr. Womersley's suggestion is that we urge him to agree upon a divided report on his collections. Conditions being what they are (time; publication possibilities, financial factors, etc.) it would seem to me to be better to get into print what there is ready or what can be prepared within the very near future, and not defer for two or three years. This is especially true when one takes into account the expense to which you have gone in preparing plates, etc. But leaving that angle out of the picture altogether, I still think it better to capitalize on what you have done. When and as another report is prepared it can be named or numbered so as to synchronize with the earlier report. I hope that Dr. Womersley might agree to this, but of course he has some good arguments for delayed publication with which I would sympathize. I vote for early publication of material on hand.

With kind regards,

gwp.

G. W. Prescott

Jan 28 1951

Dear friend Prescott,

This winter has been unkind to me. On Dec. 30th I was taken with a severe attack of cholecystitis, due to gall-bladder trouble, and the doctor send me to the hospital at 4 o'clock in the morning. I only had to stay there two days, but then I had to stay at home for several days, and I am now on a "no-fat" diet which doesn't suit me very well. You may perhaps remember how fond I am of the rich foods for which New Orleans is famous. And no alcohol !!!

Well, I had no sooner partially recovered from that, when I went down again with laryngitis and bronchitis. This time the doctor kept me in bed for nearly two weeks, and it is only within the last few days that he has permitted me to get up for a few hours each day. He gave me some shots of penicillin which cleared up the bronchitis quickly, but left some peculiar after-effects. My fingers and toes are swollen, and the skin is hardened as if I had spilled strong formalin on them. But I suppose all these things will right themselves in due course of time. But meanwhile I am way behind on my work and correspondence.

I received your letter of Dec 27th with the notes and descriptions for the North Australian desmids, for which many thanks. These 11 plates, though, are only about one-half of the total number. I had made a start on Plate #12, but am afraid that I shall have to wait for warmer weather. The basement of my house, where I do all my desmid work, is not heated properly, and the doctor says I must be extra careful not to catch cold, nor to tire myself.

Dr. Eggleton has accepted our *Microsterias* paper, but says it will be some time before it can be published; he has a large number of MSS awaiting their turn. Yesterday I received from Miss Crossdale the Latin translations for our *Euastrum* paper, and when I get a chance I shall write this up in final shape.

I wrote Mr. Womersley at Adelaide, giving him your views, and also my own, on the subject of deferring publication of our South Australian paper, urging him to agree to publication as soon as possible of the material that we have already worked up; to be followed by another paper at some future date on any additional collections that he and Ophel may be able to send. I have not yet had a reply.

Just before I went down with bronchitis I attended a meeting of the N.O. Acad. Sci., at which the speaker was Dr. F. M. Setzler, U.S. Nat. Museum, who was deputy leader of the Arnhem Land Expedition. He gave an extremely interesting lecture illustrated by colored motion pictures, describing the expedition from start to finish, and I saw at least one of the stations from which our collections were obtained, a lagoon at Oepelli (Collection A-109). This gathering was the most interesting of the lot, but also the most exasperating, since it consisted largely of masses of *Microcystis* colonies in which many rare desmids were embedded. I think this may be have been caused by the fact that it was collected during the dry season, when the water level in this lagoon was probably low, and the colonial algae unusually abundant. I would dearly love a chance to wade into this lagoon in the wet season and get some more collections.

I had a few minutes chat with Dr. Setzler, who told me that none of the results of the expedition have yet been published. There will be several volumes, and they hope to get the first one out this year. Have you done anything with the other algae, and do you know if Dr. Ruth Patrick has worked on the diatoms?

Sincerely yours,

MICHIGAN STATE COLLEGE  
EAST LANSING

Feb. 15, 1951

DEPARTMENT OF BOTANY AND  
PLANT PATHOLOGY

Dear Mr. Scott:

Events have conspired here to prevent me from writing you immediately upon receiving your most welcome but disturbing letter. I am so very sorry that you have had so much misery and I do hope that you are fully recovered by this time. All the while that I thought you were away on an interesting collecting trip some place you were right there fighting it out. That was really bad luck, especially for one so active as you and I know it must have been a most frustrating time. Judging from radio reports the Deep South has been having the kind of weather that is not helpful also. You should have Spring down there by now, or at least very soon, which should be a boon to you. Here we have been having one grand mess right after the other. Actually I do not see why human beings live in Michigan at all. Give me the West Coast. I can stand a little (or a lot) of rain in place of these icy days, icy streets, ic-covered windshields, and snow-shoveling operations.

I finished the Australian vials and sent them on to Dr. Patrick. I do not have the plates completed yet but hope to before long. (Honestly, this recent job of getting some 275 copies of the symposium papers mailed out has thrown my microscope program into a tail spin- that and getting the invoices all mailed- and the book keeping that is entailed.)

My kind regards to you and Mrs. Scott. Will write you later in respect to publication plans.

Cordially,

*G.W. Prescott*

Surely hope you do not  
have to stay on that  
totalitarian diet long.  
Most disconcerting!

MICHIGAN STATE COLLEGE  
EAST LANSING

April 16, 1951

DEPARTMENT OF BOTANY AND  
PLANT PATHOLOGY

Dear Friend Scott:

I hasten to answer your good letter received this morning and to acknowledge receipt of the interesting algal collection which arrived (still alive) on Friday. Some of the crustaceans in the pond were still swimming about in the sample. The tufted, branched filaments is a sprig of one of the freshwater red algae, a juvenile stage of a species of *Batrachospermum*. It is in a good healthy condition and at a stage where it is producing, and cutting off from lateral branches, the monospore type of reproductive element. This stage of the plant is often mistaken for *Audouinella* which is very similar in general habit but is supposed to have a different type of chromatophore. In your specimen there seems to be the *Batrachospermum* type of organization so I am willing to stick my neck out and call it that. Thank you for sending it. My students, who seldom have an opportunity to see this plant in the juvenile condition, are glad to have it too. I scanned through the sample but found no desmids- as you say, it is a somewhat unorthodox habitat, being so acid and yet so lacking in a acidophilous flora.

I have been intending to write you for a very long time to acknowledge several things, among other things, the illustrations and the catalogue which (as my physiological glands drip a little). There were some fine items listed and I marked them for future consideration. I appreciate your sending the photographs. Are they on loan (probably) or am I to keep them? At about the time I was planning on writing you I had to take off for the Ozarks to lay out the itinerary for the Bot. Soc. foray in June. That took a week. Then I arrived home Easter morning, very early, at just the time, one might say, to meet Tess falling down the stairs. Actually I was asleep on the davenport, having driven all night. She did not know I was in and was coming down rather sleepily to stoke the furnace- slipped and crashed to the bottom, breaking her back. Fortunately no nerves severed so we have hopes (and strong ones) that she can come out all right. She is just home from the hospital in a cast and is able to be up a little while at a time. The extra housework and dining service that has to go on has crowded almost everything to one side- but I do apologize for not having gotten around a little sooner to write you.

I am glad to learn that the *Micrasterias* paper is about to take off. Would you think that *Lloydia* might handle the *Euastrum* paper? It has a fairly wide circulation- and I believe is not so far behind in its publishing program as *Trabs. Amer. Micros. Soc.* Then there is the *Amer. Mid. Nat.* I know you do not care for *Hydrobiologia*, but I believe that journal could take a Mes. right promptly.

I would like to have 50 copies of *Micrasterias* with cover and about 100 without- when it comes time to order. Thank you. You will find many desmids in Panama which need to be reported- if you will only go there. I will draw you a map to show you where you can get some excellent collections without too much trouble.

My kind regards to both you and Mrs. Scott. More later.

J. W. Prescott



April 25 1951

Dear friend Prescott,

Edith and I were distressed to learn of Mrs. Prescott's accident. We can appreciate what it means, since both of us have been through similar experiences, though not so serious. It is reassuring to hear that she is making progress towards recovery, and we sincerely hope that the progress will continue. But such an injury takes a very long time to heal completely.

Thanks for the identification of the alga that I sent. There is little doubt that you are right in saying that it is a juvenile stage of *Batrachospermum*.

The photos that I sent are for you to keep. I have copies for myself, and have also sent them to Dr. Brunel.

When I write the final draft of our *Euastrum* paper I shall take the liberty of sending it to you, and asking you to handle it with any journal that you may select. I know nothing whatever about *Lloydia* and have never seen it. I have no objection to *Hydrobiologia* except its high price, but I think that since our paper deals entirely with American desmids it would be better to publish in this country. Later we may have some other papers (on Indonesian desmids) which would be quite appropriate for *Hydrobiologia*.

Recently I have received two tubes of samples from Mr. H.B.S. Womersley; one from an unnamed gully near Adelaide, evidently a hard-water habitat and with only a few rather uninteresting desmids. The other is from the Mt. Compass swamp, with quite a few desmids, but much less interesting than the previous sample sent by Ophel. One curious desmid is a form of *Spirotaenia condensata* that appears to be "hairy", but I think the "hairs" are mucus threads. But *Spirotaenia* is one of the saccoderm desmids (or is it placoderm? I never can remember which is which) and is not supposed to have any pores through which the mucus threads could be extruded!

From another correspondent I have three tubes of material collected in Lake Hobson, Tasmania. These are fairly good, with many of the same desmids that we found in the South Australian collections. So far I have only examined a couple of mounts from each tube, and have seen a form of *Micrasterias truncata* that differs from anything shown in Krieger; and a new variety of *Euastrum holocystis* Nordst. The material consists largely of filamentous algae and vegetable detritus, so when I get time I am going to wash it and try to separate the smaller algae and desmids so it will be easier to examine. This material can be included in our contemplated future paper on the additional South Australian collections that Womersley and Ophel expect to send me.

Enclosed are two photostats of a letter just received from Ray Specht regarding his North Australian gatherings, giving some additional information on the expected time of publication of the official report on the Arnhem Land expedition. You will note he says

that the third volume, which is to include the marine algae by Womersley and the Charophyta by Ophel, is to be in the printer's hands by two years from now. Specht says our stuff could be put in the first volume, but it would seem more appropriate to keep all the botanical papers, and especially all the algal papers, together in the third volume. I shall be glad of the additional time to prepare the rest of my plates.

Specht also notes a slight change in the page size, and gives the style for citing references, which differs somewhat from American usage.

Will you please send one of these photostats to Dr. Ruth Patrick so that she may be informed.

Dr. G. M. Smith's Manual of Phycology has just arrived, and I must confess that I am quite disappointed in it. It seems to me that he has attempted to include far too much in a single volume, with the result that everything is so condensed and compressed that I fail to see what class of phycologists can use it. Of course it is completely useless to me, and I shall send my copy to one of my friends abroad.

With best regards and wishes to Mrs. Prescott and yourself,

Sincerely yours,

July 18 1951

Dr. Ruth Patrick,  
Academy of Natural Sciences,  
Philadelphia, Pa.

Dear Dr. Patrick,

About a year ago a friend of mine who had visited Peru gave me the name of a professional collector of biological materials, whom he recommended highly as being a well-educated man, speaking and writing several languages, possessor of a Doctor's degree from some European (probably Polish) University, with an extensive knowledge of entomology, and a considerable knowledge of botany, though not of the cryptogams. His name and address are:

Dr. Felix Woytkowski,  
Francesco Zela 1067, (Francesco?)  
Letra "L".  
Lima, Peru.

Peru is not represented at all in desmidological literature, to the best of my knowledge, so I wrote and asked if he would be willing to collect desmids for me. Receiving an affirmative reply, I took a chance and sent him \$50.00, because he was at that time trying to raise funds for a collecting expedition. This expedition did not materialize, for various reasons, but he now has, apparently, assurance of at least the minimum amount of financial backing necessary, and is preparing to start collecting again.

In the meantime he has sent me four vials of material, which he regards as merely "trial" collections, to see if he had followed my collecting instructions correctly, and to determine whether the material was of value to me. I have sent you samples from these four vials under separate cover. From my point of view, three of the vials contain very few desmids and are of little value; the fourth contains a pretty fair selection of desmids, including a few which may be new varieties

Since three of the vials have a considerable number of diatoms, it occurred to me that perhaps you might like to get some more gatherings from Peru. So I should appreciate it if you would tell me whether you would be prepared to pay for such material. If you cannot do so yourself, perhaps you could wangle a small appropriation from the Academy. In the last few years I have obtained, by correspondence, desmid gatherings from several distant parts of the world, North and South America, Australia, Tasmania, Japan, and Indonesia, but all of these have been gifts, and this Peruvian stuff is the first I have tried to purchase. So I have not the faintest idea of what it is worth.

You will note that he has collected for an entomologist, Mrs. Leonora E. Gloyd, for 17 years, and he seems to be under the impression that I am going to pay him a yearly retainer to collect desmids. This is decidedly not the case. I would probably spend another \$100.00 or so, but first I should have to see some good results from my first \$50.00.

At any rate, I should be glad if you would give this matter some consideration, and let me know whether you can or cannot do it. If you should decide to go into it, no doubt it would be preferable for you to correspond with him direct, since diatom collecting requires a somewhat different technique from desmid collecting. Also if you know any other specialists who might be interested in getting material from Peru, particularly insects, would you be good enough to mention the matter to them?

Sincerely yours,

July 22 1951

Dear friend Prescott,

Both Edith and I are anxious to hear how Mrs. Prescott is getting along after her accident. We hope that she has recovered sufficiently to be able to make the trip to Montana with you, and that the mountain air and climate will help her.

I have been in rather poor health ever since Christmas, with gall-bladder trouble, and have not felt like doing much work on desmids. Now that I am feeling somewhat better, the weather is too hot to do any drawing. Last Friday it was 98°. However, I have drawn 10 more plates for the North Australian paper, and have about 2 or 3 more to draw, making a total of 22 or 23. I will save these until you return to Michigan, because I expect that you will not have all your reference works with you, and the determination of some of the *Cormaria* and *Staurostra* will require considerable research.

Our *Euastrum* paper has been accepted by *Hydrobiologia*, and Prof. van Oye writes that it should be published early next year.

Womersley writes that he will present our South Australian paper to the Roy. Soc. of S. Australia at the next meeting, and anticipates no difficulty in having it accepted. But he has come up with a new request; he wants for each species a reference to either a general work such as Wests' Monograph, or to the original paper. This is for the reason that original literature is so scarce in Australia, and he wishes to facilitate desmid study by reference to large and general works wherever possible. I can easily understand this, since I was, and still am, up against the same problem. So I shall compile the list of references as far as I can go, but no doubt I shall have to ask for your assistance in the case of rare species not included in my small library.

Perhaps you may remember that about a year ago I told you that I had made arrangements with a professional collector in Peru to collect some desmids for me. This man was highly recommended by a friend who visited Lima and made his acquaintance. At that time he was raising funds for a proposed collecting expedition into the almost unexplored region of southeastern Peru, which, however, did not materialize. In the meantime he has sent me four vials, which he regards as merely "trial collections", to see whether he had followed my instructions, and to ascertain whether the material was of any value to me. Three of the vials are poor in desmids, evidently from hard water, since they contain plenty of diatoms. The fourth contains a fairly good assortment of desmids, mostly well-known species, but with a few that may be new varieties. Several of them are Brazilian species, including *Cosmerium denticulatum* var. perspinosum Grönb., with spines over the entire surface.

Enclosed is a photostat of a letter from this collector, Dr. Woytkowski, which may give you some idea of his capabilities. Note that he asks how much money I can spend a year for his services. Evidently he has the wrong idea, for I have told him nothing that would indicate such an intention. I sent him \$50.00 last year, and told him that I would expect to receive a dozen or more collections. However, I would like to help him, so I am willing to send him another \$50.00 or perhaps \$100.00, but first I would like to see some better material. Would you will be willing, and are you able, to contribute financially to this cause? I have made a similar request to Ruth Patrick, asking if she would be willing to pay for some diatom collections from Peru.

You will note from Woytkowski's letter that he specializes in entomological collections. Do you know any entomologists who would be interested in getting specimens from Peru? If so, I should be glad if you would give me their names and addresses so that I may write to them, or if you see them personally perhaps you would mention the matter to them. It seems like an unusual opportunity.

At present I am playing with an interesting problem concerning Spondylosium pulchrum and Streptonema trilobatum Wall. These two plants show such close similarities in size, shape, and method of formation of the zygospores, that I believe it is more than merely coincidence. Furthermore I am inclined to doubt whether division in Streptonema follows the same pattern as Desmidium and Bambusina, with infolding of the walls of the new semicells. For one thing, the distance across the apical swellings in Streptonema is greater than the diameter of the isthmus. The only illustrations I have of Streptonema are those in Turner's F.W.Alg. E.India, which are fairly good, but show some internal discrepancies. Do you know of any other original illustrations of this genus?

Spondylosium pulchrum shows an infolding of the apical swelling, but so far I have not been able to find specimens in the early stages of division. If you should run across any specimens in this condition I wish you would be kind enough to sketch them, and pay particular attention to the stage at which the infolding begins.

With my best regards and wishes,

Sincerely yours,

MONTANA STATE UNIVERSITY

MISSOULA

Dear Mr. Scott:

Just a note before I take off. This is a busy time and as usual some things that I have intended to do for weeks have become pushed into the corner. Am finishing examinations tonight and catch a plane tomorrow. Was so very glad to get your letter of July 22- but sorry that you have not been well. I certainly do hope that the hot spell has passed by now and that you are getting some relief. You must come to Montana for your summers- delightfully warm and cozy (coolish at night only). I shall answer your good letter when I get settled. Have written Sachlan and sent him some material and reprints. The Phyc. Soc. can do something to help such a chap along- if nothing more than keeping him supplied with reprints. I doubt if many desmids will show in Peru- but the opportunity seems interesting. I would not (personally) invest anything more in such a venture if one is really interested in good desmids. (I might be mistaken, however.)

Best regards to you and Mrs. Scott. Terressa is getting along well- hopes to be out of her brace by September. One of the boys is going to drive our car back to Michigan for her and the youngster.

Cordially,

J W Prescott  
T

Aug 10-51

Write: % Arctic Research Laboratory  
Point Barrow  
Box 1310  
Fairbanks  
Alaska

Via air mail only

Aug 29 1951

Dear Dr. Prescott,

Tonight when I came home from the office, there was waiting for me a box from the Cranbrook Inst. of Science. Of course I knew what was in it, for I had ordered your book a couple of months ago. But judging from the size of the box, I thought they had made a mistake, and sent me two copies that I ordered, one of which was to go direct to my friend Einar Teiling. When I opened the box I was amazed to find only one volume.

Early tomorrow morning my wife and I are leaving for a trip to the Great Smoky Mountains in eastern Tennessee, to get away from the terrific heat in New Orleans, where we have had the hottest summer since the weather bureau was established here in 1874. But I could not resist writing you to express my very heartiest congratulations upon your magnificent work, which in my opinion surpasses anything that has been published in all the Americas on fresh-water algae. Though it covers less territory, I think most students will find it of far more value than Smith's F.W.Algae of the U.S., even his 2nd edition.

I think I wrote you some time ago that I was disappointed that you were not going to include the desmids in this work. Now I see the reason. The inclusion of the desmids would have increased the bulk of the work by perhaps 50%, which would have made it too unwieldy. But I surely hope that one of these days you will find it possible to publish a similar work on the desmids.

There is one aspect of this book that I do not like at all, i.e., the statement that neither the publisher, nor the printer, nor the author derives any profit from it. It seems to me eminently unjust that an author like you should have to publish, without pecuniary recompense, the results of 25 or 30 years of intensive research, many thousands of hours of hard work, and probably not a little out-of-pocket expense. Naturally, such a book cannot enjoy a sufficient sale to make you rich, even if you received a substantial royalty on each copy, but the whole set-up seems wrong. I'll bet that G.M.Smith receives a pretty good royalty from McGraw-Hill on his publications.

The Cranbrook Institute no doubt is sufficiently well endowed to dispense with a profit on its publications. I don't know who printed the book, but if it is a commercial firm, they must have been subsidized by Cranbrook. If you ever decide to publish a similar work on desmids, I suggest that you try other publishers, perhaps Franz Verdoorn of the *Chronica Botanica*, and see what they will do for you.

Edith and I are very happy to hear that your wife is making such good progress, that that she will soon be able to get around with the braces.

What the devil were you doing up in Point Barrow, and are there any desmids up there?

Sincerely,

P.S. I have ordered another copy to be sent to Rolf Grönblod.

Arctic Research Laboratory,  
Point Barrow  
Box 1310  
Fairbanks, Alaska

Sept. 8, 1951

Dear Friend Scott:

In the mail I found waiting for me after a week's absence in the field I found your good letter of Aug. 29. I had been wanting to write you for quite some time- but this is such a huge country- there is so much to do- and the season is so short. The waters of the tundra have not frozen yet but we can expect a heavy freeze almost any day now and when the ice once forms (so they tell me) there is no more thawing- and hence no more feasible collecting. I am sorry you have had such uncomfortable heat and I would welcome the opportunity to send you a few plane loads if you could remit with a little warmth. Actually we have not had such very cold weather yet but we notice the severe gales and the cold when we are working on the lakes or the tundra with our hands wet and the snow and rain going by us on the horizontal. Once in the Andes I remember I had a tough time when it rained up instead of down- for the wind used to sweep up rains up the sides of the mountains and smack us full in the face from below and not from above. Here the wind can be mighty strong and continuous and they say that in the winter the most difficulty is experienced from drifting snow- not the amount which is relatively light in this area.

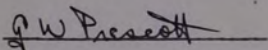
Apparently I did not mention to you that I was to work in Point Barrow this summer and fall. I am here with two very able assistants making a survey of the algae (freshwater of course) and the limnological features related to their distribution. As you may know, the whole Arctic slope is a great array of lakes and ponds, and besides these there are countless thousands of small tundra pools and puddles. Even the tundra itself of course is soaking wet and there are quite a few terrestrial algae growing among the Sphagnum moss, lichens and the tundra coverage, which is made up of minute herbs and shrubs, Willows being only a couple or three centimeters high. I have been so busy gathering that I have only vague notions as to the algal distribution. The larger lakes are nearly 'deserts' but the smaller ponds and the pools where a certain amount of organic matter collects and makes itself effective, there are fair to good collections to be had. In a few types of habitats, namely the small tundra pools where organic matter has accumulated, there are some relatively good desmids. The desmid flora is not rich and varied as you and I know it in the South and in the bogs of northern U.S., but the flora is extremely varied and would seem to make up in variety what it lacks in 'richness.' Micrasterias is poorly represented, and so is Euastrium, but Cosmarium, Staurastrum, and Closterium are here in prominent array. I shall be glad to send you some representative samples so that you may see what a gather from here is like. Other algae are interesting because of the familiar faces one meets and also because of the apparently new species that keep popping up. We are making chemical readings of the water and on a few lakes are running regular series of samplings for a check on the transitions of the flora as the lakes settle down for a long winter. I would like to be able to stay here for a month more and follow the thing right through- but the school bells are beginning to clamor and we shall have to return in another ten days at least.



Thank you for your kind words about the book. I am anxious to see it, of course. I do hope that it meets with some usefulness after all this time getting it out. To be sure, I would welcome a royalty of some kind- but the Cranbrook Press is a non-profit organization which publishes items for 'the advancement of knowledge' and so does not pay royalties. I tried in a place or two to interest a commercial company in the publication, but the title and the so-called 'limited region' seemed to be against it. Unfortunately, after I had made the arrangements with Cranbrook I did find an offer- but that is all over now. If the book serves a good purpose I shall be thankful- I wrote it for that and not for financial reasons. One of my chief regrets is that the price of the books has been put so high that I am afraid it is out of the student class of books. It was written for the student and for the investigator who did not have too much experience with algae- and was intended for an elbow book for those studying algae for identification purposes. Now I have my fears- but Cranbrook says that printer's wages, cost of this and that have gone up so since the publication was undertaken that they could not put it out for less. I have my own opinions on this and on the wisdom of publishing a small number of copies and placing the burden of the cost of production on a small number- rather than spreading it out over a larger edition, with the reasonable expectation that eventually the copies would find a market. Yes, Smith receives a good royalty from McGraw-Hill, but the McGraw-Hill people tell me that they publish such a book at a loss merely to round out their series and to use for advertising, etc. I am sorry that you bought a copy for I was going to send you one (at least I suppose that I shall at least have a few books for distribution). I have not heard about this yet. I do hope that the news I had that the printer had made a dumb-fool mistake at the last minute on one of the plates is not as bad as it sounds. Hatt thought that he was able to make a correction- but I am worried about it. It makes me just a little sick to think of such a mistake being made after so much checking and rechecking and double-checking down to the last comma. I shall be anxious to see just what was done to make the correction. Even if I did not make the mistake- the author will get the blame of course.

I do hope you have had a good rest in the Great Smokies. There, at least, should be a little coolness in the South. I would like to see them close up some time, especially after hearing so much about the Smoky flora. My kind regards to you and your wife, Edith. Take good care of yourself so that you will feel very fit for the coming winter. I shall be writing you from Lansing before long.

Yours truly,



G. W. Prescott

Forgot to mention that this work here is being done under the Office of Naval Research. Here on the Arctic slope they have a great enterprise involving gas and oil wells and there is a large crowd of men working here under the Arctic Contractors. The Arctic Research Laboratory is just one adjunct and makes use of the Contractor's facilities. These include excellent food, warm, comfortable quarters, free laundry, 24 cent movies, weasels for transportation over the tundra, etc. etc.

Sept 27th 1951

Dear friend Prescott,

For an algologist you certainly do get around. All the way from Ecuador to Point Barrow, and from Florida to Oregon. By thistime you ought to have an excellent idea of the distribution of FW algae in both North and South America. When you get a chance I wish you would send me a few of your Alaskan gatherings, particularly those with desmids. Did you ever do anything with the samples a sent you a few years ago from the Aleutians and southern Alaska?

A year or more ago in the program of the annual meeting of the Mich. Acad. Sci. there was a paper "Studies on American Desmids" or words to that effect. Was it ever published?  
by Prescott & Scott

Our trip to the Great Smokies was interesting, but extremely hot. The only cool place we found was in the mountains themselves. The scenery was delightful to lowland dwellers like ourselves, but the highest spot, Clingman's Dome, is only 6800 ft. high, nothing compared to the Rockies. The only water I saw in the Park was a few very small rapid mountain streams, which of course are no good for desmids. in fact on the whole trip of some 1800 miles I made only two collections, one of which I discarded, and the other had a very nice assortment of desmids but nothing of special interest.

I had no sooner returned from this trip when I had to fly to Washington on business for our firm, trying to get some steel. Though I was busy most of the time, I managed to call on Paul S. Conger at the Smithsonian Institute. We had a very enjoyable talk for a couple of hours, and he showed me some of his collections and apparatus. I drew a rough sketch of an unusual diatom that I had seen in one of the South Australian samples, and he was able to identify it from Schmidt's Atlas, but he did not have a specimen in the Smithsonian diatom collection, so I have sent him some of the material. Also I have sent him a dozen or so other samples from Tasmania, S. Australia and Peru, and later I shall send him a large number of my own gatherings from Florida, etc. He could not promise to write them up because he has too much other work on hand, but I am glad to have them in the hands of someone who will appreciate them.

I asked Dr. Conger if he knew Philip Wolle, to which he replied that he knew Wolle very well, had made several visits to his home, and on one or two occasions had stayed there for a few days. Sometime ago you told me that Wolle was printing the Bulletin for you, and from that I had assumed that Wolle was in the printing business and was probably well-to-do if not wealthy. But Conger tells me a very different story. It seems that Wolle is a farmer and in rather poor circumstances; that he and his family live principally on the produce of the farm, and that he seldom receives more than \$300 or so cash income in a year. Printing is his hobby, and Conger says that he is printing the Bulletin at only one-third of ~~the~~ what it would cost from a commercial printer.

It occurs to me that here is a case in which I can give a little help, so I am enclosing a check for \$100.00 which I would like you to use to increase the payments to Wolle for printing. Of course you won't let him know where the money comes from; just tell him that the Society's finances now permit you to increase the payments by say \$25.00 or \$30.00 per issue, depending on whether there are 3 or 4 in the year.

Also don't mention the amount when writing to me. My wife might get jealous!

Perhaps you will remember that Mr. Womersley wanted a list of references for each of the desmids in our South Australia paper. I have made up this list, but there are a few desmids that are not shown in my own literature, and I shall have to call on you to fill in the blanks. At his request I have given references to general works such as Wests' Monograph wherever possible, instead of to the original publication, because of the lack of literature in Australia. It will not take you long to supply the few missing references, and I should appreciate it if you can return the list fairly quickly, so that I can air-mail it to Womersley.

I have completed 21 plates for the North Australian paper, and the last few of them are now being inked. I will send you prints of the 10 plates containing figures of the specimens that are still to be determined, together with my original sketches. But I'll wait a few weeks and give you a chance to settle down after your long travels!

With best regards from Edith and myself to you and Mrs. Prescott

Sincerely yours,

Digitized by Hunt Institute for Botanical Documentation

P.S. I have sent a copy of your book to Teiling. Grönblad said he would like to have a copy, so if you can spare one you might send it to him. Please let me know, so that I may order one from the publishers if you cannot spare it.

MICHIGAN STATE COLLEGE  
EAST LANSING

Oct. 2, 1951

DEPARTMENT OF BOTANY AND  
PLANT PATHOLOGY

Dear Friend Scott:

Your letter this morning was indeed very welcome and a pleasant surprise. Yes, I am planning on sending you some samples from the far north so that you can see what the desmids are like- interesting sprinkles of them and indeed very interesting- but none of the purees which please the phycologist in these latitudes. The freight is on the way ( just received bills of lading yesterday) so it will be arriving some week and I shall get right at the collections. The freight had to be flown over the mountains from Barrow and the contractors fly very irregularly at this time of year. Yes, I worked over the samples which you sent from the Aleutians and have them on tap for inclusion with some samples from the same area taken by a navy man (which, however, need some more work). Looks as though I had better stay home and concentrate on collections here rather than dragging in more all the time- but it is always a great temptation of course to get out and collect when the occasion permits, against the time when collecting is not possible. Something happened that prevented me from attending the Academy meeting at which I was going to present a paper on American Desmids (that was 3 years ago wasn't it)- I am sorry to say. I have forgotten at the moment whether we had a manuscript all prepared or not. Help me out on my memory of this if you can. If there was a manuscript I must have it here in my files and shall have a look when I get a chance.

I do not know whether I mentioned it or not- but I had the opportunity of spending a week at McKinley National Park, attending the Alaska Science Conference. Here I was able to make some interesting collections of desmids from the highly acid bogs and these samples will give you more to look at than do the poverty-stricken ones from the Arctic Plain. I really did not have time to go over them much- but just enough to see what, in general, was there and whether the sample was worth preserving.

Sometime I would like to see the Smoky Mt. country- but not for algae. I have understood from what my student, Herman Silva, told me about the region that algae of most kinds were rather poorly represented- mostly because of the fact that all the water runs off and there are few, if any, catch basins and bogs or lakes in the area. I am glad you had your trip anyway- but sorry that it was not a cooling experience. No doubt you feel better in warm weather than you do in the cool to frigid temperatures we have here. Just to see what it is like and to see whether I could take it I would like to spend a winter at Barrow. The Director asked me to try and plan a year there- but of course I could not take it on this winter without any prearrangements here at the school.

Glad you had a chance to visit with Conger. He is a meticulous and slow worker- spending quite some time apparently in making identifications of specimens for people who send things in- but seems never to get around to writing up anything. The papers he has turned out are very interesting and thought-provoking and I only wish that he could adopt a different speed and philosophy so that he might get more in print for the benefit of others.

MICHIGAN STATE COLLEGE  
EAST LANSING

DEPARTMENT OF BOTANY AND  
PLANT PATHOLOGY

Yes, I have understood from what Conger wrote me, and from reading between the lines of Wolle's letters, that he is just barely scratching out an existence. He has a small print shop set up in his home and does some job work along with and in between his farming jobs. He is a great philosopher and a great scholar- and one of the world's finest gentlemen, I am sure. He is so very generous that he is almost embarrassing. I have tried my best to get him to submit a larger bill for his work. I can write checks against the society account only for bills that I receive- and when I have tried to raise the 'ante' he has balked- and even acts a little offended. He must- and should receive more for his work, especially now that prices of paper are up- and everything else. You may be interested to know that the treasury of the society is in good shape now and is able to pay more of its share of obligations to Mr. Wolle- thanks to the returns that have come in from members. At our membership fee scale we could not afford to get even this small amount of publishing done if it were not for Wolle, because the cost of just one issue would, if printed commercially, consume almost a year's income from fees. But we have been building up a back log and thanks to the interest of some of our members we are definitely not in the red. Wolle, as he says, "loves to print" and he insists that he make this sort of a contribution to the progress of phycology- but he is also proud, and having made a commitment does not want to go back on it. I think I have a way to make an end run on this attitude of his however- and I know that he will appreciate anything that the society does to help him out financially. I would like to visit him and see his library and his grandfather's old microscope, etc.

Inclosed is the list of references, completed but for one item, I believe. I shall have to check in a library some place for *Cos. capitulum* var. *australicum*. I have all of the reference except the page number in my files (one of those disconcerting blanks that appear now and then, even when one is trying to be careful to have a complete record). I shall forward this to you as soon as I can.

Will not write more now as it is getting late and I wish to drop this in the mail so that you can get it off to Womersley as soon as possible. Many things I would like to talk to you about. Will try to send a book to Grönblad soon. I surely will receive a few more copies from Cranbrook- which is all the pay I get. Very kind regards and many thanks.

G.W.P.

G. W. Prescott

MICHIGAN STATE COLLEGE  
EAST LANSING

October 9, 1951

DEPARTMENT OF BOTANY AND  
PLANT PATHOLOGY

Mr. A. M. Scott,  
% Ole K. Olsen Co.,  
New Orleans, Louisiana

Dear Mr. Scott:

Please permit me to write again and do a little exploding. I have felt like it since receiving your last letter but have had no time. Your recent move has caused me to gasp, and it would Mr. Wolle also if he knew. I shall respect your wishes in regards to mentioning the matter to him, but I must express my admiration to you for your recent action. This is indeed a fine gesture, and one about which the Society members should know, especially inasmuch as records must be kept. You may be sure that this is going to be a great boon to the Society and especially to Mr. Wolle who really has contributed much more than his share of work and interest to the welfare of the organization. As I mentioned before, he is quite insistent that he do something to further the operation of the society- insists that printing is the only thing he can do- and yet he has gone all out and has sacrificed much of his time and effort in doing a job which has made the bulletin possible. One reason of course, and THE reason why the Society treasury is in as good shape as it is (at least not in the red) is that our printing bill has been so low. We cannot go on like this forever. Soon we shall have to either give up the idea of printing a bulletin and go in for mimeographing- or we shall have to merge our interests with another organization which is desirous of using a printed journal as an official organ, and go all out for publication. For the Society and for Mr. Wolle by proxy I wish to thank you most sincerely for this and other helpful things that you have done. I do hope that in some way we can make some reciprocation to you. It is certainly cheering to ones heart to find that there is a full measure of human kindness and generosity here and there in this idiotic world.

Have just had a good letter from Sachlan, who has probably written you also- saying that he is sending what he believes to be some highly interesting samples of desmids from Sumatra, etc. I hope they arrive in good shape. It will be quite a thrill to see what curious plants may appear in that little-collected place on earth.

Cranbrook (in their great generosity) has let me have 14 books, of which I have 10 for distribution. I shall send one of these to Grönblad with pleasure. I hope to have a few more copies at an author's discount (whatever that is) so that I can distribute a few more to my friends and colleagues to whom I owe volumed. Frankly, I did expect to get more than 10 books in return for the several hours of work that were required to get that thing together. Of course if it proves to be helpful I shall or could feel paid for having helped out in this field of study. Coming as late as it does in my activities it can have no professional gains to offer.

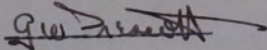
MICHIGAN STATE COLLEGE  
EAST LANSING

DEPARTMENT OF BOTANY AND  
PLANT PATHOLOGY

As you have noticed, we are going to have a phycological meeting in Philadelphia, and I am pleased to see that we have not a bad response to the call for papers. It will not be a long program- but there will be enough to keep interest in such activities of the society alive. The fact that there is this much response as compared to that which we received for the proposed September meeting in Minneapolis is further proof to me that winter meetings will be better attended and will attract more interest than fall meetings- coming at the time of year when so many are busy getting started in school, or have not yet returned from summer operations.

The proof for the *Euastrum* paper is in my office and I have finished checking over it. There are only minor (but important) corrections to make. I am taking the liberty of changing isthmial to isthmian. Although isthmial has been used frequently in the literature, I cannot find a dictionary substantiation for it. What is your opinion? The plates are excellent and I feel sure you will be pleased with them. It makes a nice paper. I thought you were going to publish this without a 'senior' author. I feel that I have not done enough to warrant being given an authorship position. You made all the collections and did all the drawing and much of the identification. Of course I am pleased to be tied in with a paper of this kind- but it should be Scott and Prescott. I am sending the stuff along under a separate cover- all (or I suppose all of it) to be forwarded to Van Cye. He did not send a letter with the mss and the proof to explain what, if anything, he wanted done with the plates, etc.- so I suppose it would be better to return all of the material for possible editorial book keeping- and ask him to return portions that he does not need. I would like to have a copy of the mss. for my files.

Yours very truly, and gratefully,



G. W. Prescott

Oct 13th 1951

Dear friend Prescott,

Many thanks for the two nice letters and your complimentary remarks. I have no objection to your telling the other members about my contribution provided you say simply that it was intended to help defray the cost of publishing the Bulletin. Please do not let it appear that it was intended specially for Woëlle, because that would inevitably get around to him, and since he is proud he would not like it.

The title "Studies in American Desmidiaceae" on the program of the Mich. Acad. Sci., was probably just a title that you sent in, intending to write a paper to suit, but never got around to it. I had nothing to do with it, and know no more about it.

I ran down the confusion concerning Cosmarium pyramidatum var. transitoriu Heimerl. You wrote it thus in your list of descriptions, but you got it from my original sketch, and I in turn got it from Irene-Marie's Flore Desmidiée, p. 169. To clear the matter up I have asked Womersley to change it to C. pachydermum f. transitoria Heimerl. The plant certainly is closer to pachydermum than to pyramidatum. The list of references has gone to Womersley, and also my drawings for the plates, so I hope everything is now in order for publication.

Yes, I had a letter from Sechlen a week or so ago, saying that he had 20 samples from Sumatra that he is going to send me after they have completed their own study, in connection with fish food I suppose. These ought to be highly interesting, as is all of the material that he has sent me. I am afraid that you will have to wait until I finish the examination, because some of the samples contain only an extremely small amount of material, far too small to split. To avoid wasting it I am careful to wash the material off the slide and back into the bottle, after I have examined a temporary mount. Sechlen is very anxious to be retained as a member of the Phy. Soc. even though he cannot remit his dues, so I am telling him that his name will be kept on the roster indefinitely, or until such time as the regulations permit him to send the money. Some months ago I sent him a yard of bolting silk for making plankton nets, which he and Dr. Veas were very glad to get. Now I am getting from Germany a complete set of Krieger's Desm. Bur. which I am going to send to Sechlen. I have been trying for two years to get them from various European booksellers, without success. It appears that the first two parts of Vo. 1 are out of print, but may be reprinted next year. It was only through the courtesy of Dr. Krieger, who managed to round up the missing parts, that I was able to get them. One of the plants that I have recently found in the Indonesian material must be the most elaborately decorated desmid on earth. It is a new variety of Russtrum turgidum and I am enclosing a couple of sketches herewith.

Grünbled has sent me a photo of the European form of Microsterias fimbriata, which he wished me to send on to you. He calls attention to the difference from our American form in the matter of the extended basal lobules, and the spination of the lateral lobules. You will notice that the spines arise from the rounded apices of the lobules, and are not continuations of the margins of the sinuses as ours are.

I am amazed at what you tell me concerning the Cranbrook Institute and your book. It seems utterly unfair that 14 free copies should be your total reward for the vast expenditure of work and time in writing this extremely valuable volume. I really feel like writing to Cranbrook and telling them what I think, in plain unvarnished terms.



The proofs of the *Eustrum* paper will no doubt arrive in the next few days, and I shall look them over and then forward them to Prof. van Cye. It is very generous for you to offer to reverse the order of our names as authors, and I shall ask van Cye to do so, if it can be done without too much trouble. Apparently you are correct about the adjective "isthmian" instead of "isthmial". My old Webster's dictionary, dated 1899, gives "isthmian" as applied to the Isthmian games, an old Greek festival. Also there are the Isthmian Canal Commission, and the Isthmian Steamship Company. But it seems to me rather a matter of hair-splitting, and I would be inclined to continue using the term "supraisthmial" which has been so frequently used. It reminds me of the argument about the plural "micra" versus "microns". In my opinion the latter is correct because the word has been Anglicized. The Greeks may have had the word micron, but if so it was probably applied to any small particle, and certainly didn't mean the thousandth of a millimeter. Also the word millimeter was originally spelled "millimetre". Also, by the way, "mss" is the plural form of the abbreviation MS for manuscript, which, I think, is generally written with caps. I am sending a copy of the MS under separate cover.

If you see Dr. Eggleton or write to him, you might enquire what has happened to our *Micrasterias* paper, which he accepted more than a year ago. I know that he has a stack of papers on hand, enough to fill the *Trans.* for 2 years, but it seems ours ought to be getting near the proof stage. Is he going to resign at the end of the year? I can't blame him for quitting; some time ago he told me that he spends 30 to 40 hours a week on this unpaid editorial and secretarial work, which is too much to expect from anyone. I have sometimes put in nearly as much time on my demands for weeks on end, but that's a hobby and a very gratifying one.

I hope the Philadelphia meeting will be very successful. I am not going there; in fact I hope to be far away in the other direction at Christmas. But that is very uncertain for business reasons. Our firm is entirely dependent upon the building industry, and the Government is putting such severe restrictions on construction work, and it is so extremely difficult to get steel to keep our shop running, that I may have to stay here and try to hold things together.

With best regards from Edith and myself to you and Mrs. Prescott,

Sincerely yours,

MICHIGAN STATE COLLEGE  
EAST LANSING

Oct. 17, 1951

DEPARTMENT OF BOTANY AND  
PLANT PATHOLOGY

Dear Friend Scott:

Your letter this morning brought the most artistically beautiful desmid I think I have yet seen, and one of the most faithful drawings. That really is a fine plant- and of biological interest as well. It is, as you indicate, a novelty, not only because it has some features that are new, but also has a different combination of characteristics than found in the typical or in any of the described varieties. Except for a report by Schmidle in the European mountains, this plant seems to have a South Pacific distribution rather definitely. I wonder where it will turn up next. If Borneo and Sumatra have these gems to offer, collections from there certainly should be very exciting to work through. I wrote to Sachlan the other day- sending some printed material and a copy of The Culturing of Algae.

About the *Euastrum turgidum* drawing- I am wondering if you would permit me to use this as a center piece for a design that we have been looking for as an ensignia. Inasmuch as it presents such a finely balanced pattern it would fit ideally into a design. Wolle has been after me for a long time to get something fixed up for the Phycological Society Bulletin and for letterheads. We would have to have three cuts probably, of different sizes for different uses. The design would probably include a marine seaweed.

I shall drop a note to Grönblad about the *M. fimbriata* photomicrograph. That extension of the basal angle oposs up not infrequently- as in *M. sol*, for instance, a plant that very frequently shows the much loner lobules at the basal angles. I hope that I may keep this illustration for the iconography.

I sent Wolle a small check in advance mentioning that it was for obtaining new paper supplies- and he was very grateful for it. He never would have said, however, that he needed something in advance to get the paper. When I pay for the printing of the next number of the bulletin I can make out the receipt for him to sign in such a way that he will have the advantage of the extra amount.

I am glad to learn that you were able to locate a Krieger set. That means there is still some hope of locating copies. I have just heard from a book dealer in Berlin who lists a copy and I am going to see if it is still available and how much gouging he is going in for. He politely left the book unquoted in his list. That certainly was mighty thoughtful and generous of you to send bolting cloth and literature to Sachlan who seems very desirous of carrying on there under difficulties.

I shall write Eggleton immediately- although I think his job has gone elsewhere.

With kind regards-

G W Prescott

Nov 1 1951

Dear friend Prescott,

Of course you have my permission to use my drawing of *Euastrum turgidum*. But there are two possible objections. First, this new variety will not be published for a couple of years. Second, for use in a design for the Society's insignia, the drawing would have to be reduced to such a small size, perhaps 1" diameter, that the decoration might not show up very well. For such a purpose I should think that a less ornate desmid might be more suitable; for instance one of the large *Microsterias* such as *M. alata*, *M. Johnsonii*, or *M. Torreyi*, which are some of my favorites.

You may keep Grönblad's photo of *M. fimbriata*. As you say, the extensions of the basal lobules occurs frequently in American examples, but the marginal spination of ours is different. This is brought out very well by two of Grönblad's sketches of *M. fimbriata* and *M. rotata* f. *evoluta* from Finland which I am enclosing. You had better return these sketches to me, after copying them if you wish, since I think he wants them back.

Glad to know that you can find a way to pass the money on to Wollie by degrees. I am sure he can make good use of it.

A few days ago I sent you the remainder of my drawings of the North Australia desmids, together with blueprints of the corresponding plates. I have not attempted to make any lists for the plates, because too many of the specimens are quite unknown to me. When you get time to work these up, I would like you to give some consideration to the following notes in connection with your determinations of the first batch.

In naming new varieties or forms, I notice you do not give the author of the original species or variety. I think this is customary, and also helpful.

*Arthrodesmus convergens* Ehr. Pl.9, Fig.7. I do not think this plant should be referred to *A. convergens* without qualification, because it differs so markedly from the typical. My Florida collections contain many examples of closely similar forms, and they are common also in Sechlan's Indonesian material. Laporte (1931) figures a number of varying shapes of *A. convergens*, to most of which he has attached varietal names. Among them is var. *depressum* Wolosz., which is the nearest I can find to the Australian plant. If you still think it belongs to *A. convergens* my preference would be to call it a form of var. *depressum* Wolosz.

*Xanthidium bengalicum* Turn. Pl.11, Fig.4. You remark "This should be compared with *X. antilopeum* var. *condense* Josh., from which it scarcely can be distinguished". I do not understand this comparison. Illustrations of var. *condense* which are available to me show a quite different plant, with a stout spine arising from the center of the face. See Irene-Marie's *Flore Desm.*, Pl.43, Figs.1-3, and Borge (1925) Pl.4, figs. 1-11. I do not have Joshua's illustration.

*Euastrum dubium* var. *incisum* var. nov. I'll admit there is some resemblance between this plant and var. *tropicum* W&W, as shown by Krieger, Pl.79, figs.28-29. But by no stretch of the imagination can I conceive that it belongs in the same species as *E. dubium* var. *poriferum* Presc. & Scott 1945.

*Euastrum monstrosus* sp. nov. Pl.5, Fig.11. This is the same as the unnamed *Euastrum* described and figured by Borge (1896) *Austr. Süßwasserchlorophyceen*, p.14, Pl.4, fig.63, and must, therefore, by courtesy and custom, be named in honor of



Nov 6 1951

Dear Dr. Prescott,

Here's a copy of my "dissertation" on Glosterium cuspidatum Ball. I am also sending copies to Gilbert M. Smith, Roy M. Whelden, and Minoru Hirano, asking for their opinions. When I hear from them I shall let you know what they say.

To me it seems that my arguments ought to be fairly convincing, but perhaps you can dig up equally good ones on the other side.

Sincerely,

Nov 10 1951

Dear Dr. Prescott,

Dr. Smith was very prompt in answering my letter of enquiry but his reply, of which I am enclosing a copy, does not seem to clarify the matter very much.

In my letter to him I said there were two matters to be settled:

- a) The validity of Bailey's name, Closterium cuspidatum.
- b) The value of the spines as a generic character in creating a new genus, as was done by Bernard.

I also asked him if his reason for omitting Spinocoasmerium quadridens (Wood) Presc. & Scott, from his 2nd edition of the F.W. Algae of the U.S., was because he did not think it was a good genus.

Now, it seems to me that if there is "good believing" that Bernard's desmid is the same species as Bailey's, then Bailey's name should not be rejected, because the desmid is recognizable from the description and figure in Ralfs. Of course, Bernard ought to have named his plant Spinoclosterium cuspidatum (Bail.) Bernard, and no doubt would have done so had he not been confused by de Toni's transfer to Reinschiella, which made him think that Bailey's plant was perhaps not a desmid.

Smith does not answer directly my question as to the generic value of the spines, but an answer is implied (I think) in his recommendation that the name Spinoclosterium cuspidatum (Bail.) Bern. be used.

But this does not seem to be consistent with his opinion that Spinocoasmerium quadridens, which he thinks is not a good genus. You removed this desmid from Arthrodesmus because it was wrongly assigned there, and created the new genus for reasons very similar to those of Bernard regarding Spinoclosterium.

I had hoped to get a clear expression of opinion from Dr. Smith, but the matter is still confused to me.

Next Thursday, the 15th, Edith and I are leaving on a 3 weeks trip by plane through Central America, stopping for a few days in Guatemala, Salvador, Costa Rica, Panama, and Barranquilla in Colombia. I shall take my collecting outfit along and hope to get some material, though on these quick trips there is no chance of selecting the most favorable places for desmids.

With best regards to you and Mrs. Prescott,

Sincerely

MICHIGAN STATE COLLEGE  
EAST LANSING

Nov. 26, 1951

DEPARTMENT OF BOTANY AND  
PLANT PATHOLOGY

Dear Friend Scott:

Although you are on a delightful cruise and will not receive this for some time, I thought I better answer a few of your many interesting questions now, while some of the thoughts about them are fresh in mind. Others can be discussed later after you return and after I get squared around after a seige of work resulting from my freight from Alaska having arrived. This called for a lot of attention. How I envy you and Mrs. Scott. That certainly sounds like a most interesting and scenic tour through some of the most fascinating countries of Central America. You probably will not be able to do much collecting- unless you have plenty of time at stops to make runs out into the country. If you had time at San Jose, Costa Rica our friend Quiros Calvo of the University of Costa Rica would have been very glad to have taken you to some good collecting places. I shall hope to hear much about your cruise when you return and find time to write.

Naturally, I was much interested in your review of "*Closterium cuspidatum*" and in your remarks about the question regarding synonymy. I wrote Dr. Smith that inasmuch as my published remarks on the plant had been responsible for much of the confusion and disagreement about the plant, that I too ought to burst forth with some additional notes on it.

First, I do not quite know what Smith means by saying that I hold that Bailey's name should be considered nomen nudum. I have never mentioned Bailey's (Ralfs') name in print. To be sure, it might be inferred that I was treating the name as such inasmuch as I ignored it- but that does not necessarily mean that I do consider it so as Smith indicates. As you will recall, when I first published on the plant in question I had never seen the thing discussed or illustrated in the literature- although I was well aware of *Tetraedron cuspidatum* in the Pascher handbook, and *Ophiocytium cuspidatum* Rab. I assumed, and justly, that this was an entirely different organism and most certainly could not be confused with so definitely a desmid plant as I had. I overlooked the reference to *Closterium cuspidatum* in Engler & Prantl because I never (at least at the time) thought of looking under *Closterium* for such a freakish looking plant; and I assumed that such a unique thing, if previously found, would have been illustrated someplace.

After coming across Bernard's paper and after reading his notes, I published my correction and identified my plant with his, but as a variety because of the (feeble, to be sure) morphological differences. It was then that I became convinced that the plant known as *Reinschiella* and *Closterium cuspidatum* were names for another plant, especially since Ralfs figure and notes gave so little for confirmation. Hence I was, and am not certain but that I do now, feel that Bernard's name should hold. I wish that we could see the type specimen which Bailey sent Ralfs. It may be that it was the same thing. If so, why could there not have been measurements included in the description so that we could get a more definite idea. I am reserving judgement until we can learn more about Ralfs' plant. We must note that Kreiger does not say that *Spinoclosterium curvatum* is a dinoflagellate cyst ~~#####~~ but only that *Closterium cuspidatum* he regards as a cyst (which it might be).

MICHIGAN STATE COLLEGE  
EAST LANSING

DEPARTMENT OF BOTANY AND  
PLANT PATHOLOGY

Actually, I have a strong feeling that the plant sent to Ralfs is probably the same thing as Bernard found, only we have no proof of it. There are too many dinoflagellate cysts which look exactly like Bernard's plant in general outline. The fact that several famous phycologists regarded it as not a desmid cannot help but make one cast a little doubt on its being a Closterium. Anything that is so small as to give one the idea that it was an Ophiocytium or a Tetraedron or a cyst could not have been confused with Bernard's plant, it seems to me. We do not know but that DeToni saw the type material which Ralfs used for inclusion in his British Desmidiaceae. Certainly he is definite enough in his Sylloge Algarum when he reduces the Closterium to synonymy. Well, it is all a very interesting little question, taxonomically. In any case, as indicated by me on your manuscript, if phycologists are satisfied that Ralfs' plant and Bernard's plants are the same, Hirano has already made what most people should regard as a satisfactory disposition (at least those who are willing to regard the plant as in a different genus than Closterium). Of course we must operate by rules for the sake of consistency, but Bernard's plant is so definite and the description so well-written (or at least satisfactory) that I wish we could use his name as a point of departure for naming this curious plant. Your arguments, like those of others, are valid for keeping this plant in Closterium, because according to one point of view, just having spines should not place a plant in a separate genus. But in this case, where the genus is notably one without spines, the possession of these characters clearly sets the plant apart from all others of similar shape. It lies in about the same position as H. alibetical with spines, or Arthrodesmus without them (which would then become a Cosmarium).

Your ideas are pretty much in agreement with E. O. Hughes who is about to publish on Closterium in Canada. If I am not mistaken he is using Ralfs' name and accepting his figure as sufficient to give an authentic name.

I shall try to get around to answer other parts of your interesting letter in the near future after you have returned from your trip..

Yours very truly,

G. W. Prescott

G. W. Prescott

found in western mts.

Re my reference to alpine stations for Closterium cuspidatum was intended to mean that in this country the typical plant (the one that looks like Bernard's figure) has been found in alpine stations. All other records seem to be for the so-called variety (var. spinosum with the slightly woolly spines). Perhaps your record is of the typical rather than the variety.



Jan 19 1952

Dear Dr. Prescott,

Just before we left for Florida for Christmas and New Year, I wrote you on Dec 21st, in care of the AAAS convention at Philadelphia, in the hope that the letter might catch you there. But it has just been returned to me, and I am enclosing it herewith. Even though you did not get it, perhaps you may have remembered to ask Dr. Patrick and Dr. Eggleton about the matters that I referred to.

Glad to report that two of my Panams collections are turning out to be better than I thought from the first "once over". One of them is from one of the lily ponds in the Summit Experiment Garden, and the other is from a shallow back-water of the Chagres River (or of Madden Lake), at the south end of Madden Dam; perhaps you may recall the spot. Both of these samples contain a fairly good assortment of desmids, but they are so few in number that hunting for them takes a long time. But I shall be able to add a number of desmids to the long list that you published, and I think I have a couple of novelties. Last night I found a tiny little *Cosmosium* of a very curious shape, only 11  $\mu$  long by 15  $\mu$  wide, somewhat on the order of *C. Kanitzii* var. *brasiliense* in Cronblad's Brazilian paper.

Here's an account of the trip that may give you some information. From New Orleans we flew direct to Merida, Yucatan, where the plane stopped for half-an-hour, but we did not stay there, though I would have liked to see the Mayan ruins at Chichen Itza and Uxmal. This is a 2-day side trip, and involves considerable walking and climbing, which is out of the question for my wife. Flying over Yucatan I saw an unbroken, level expanse of forest, extending for hundreds of miles, without any surface water visible; no streams, lakes, marshes, not even a pond. Nearing the Guatemalan border the terrain becomes hilly and then mountainous, with a few rapid mountain streams. We passed over Lake Peten Itza, whose algae are described in one of Taylor's papers. This lake is accessible only by plane or on muleback.

In Guatemala City we stayed four days, first seeing the city and environs, and then making some special trips in search of desmids. We visited Lake Amatitlan, near the city, where I made three collections, practically destitute of desmids and all other algae except diatoms, which were numerous. I did not visit Lake Atitlan, a 2-day trip, because I judged it useless after seeing the first lake. To get away from the arid mountainous region, I made a special trip to the little town of San Jose on the Pacific coast (not the same as the San Jose that is the capital of Costa Rica). After leaving the mountains, the road ran for 25 miles or so across the coastal plain, which was what I wanted to see. The rainy season had ended a couple of weeks previously, but there was still some water in the roadside ditches and a few small ponds. But I could see at first glance that the water was unsuitable for desmids, and this was confirmed on examination of the half-a-dozen samples that I collected, which contain almost nothing but diatoms.

Tegucigalpa, in Honduras, was merely a plane stop. The country there is very mountainous and seemed to be quite dry. The next place we stayed was San Salvador, in El Salvador. We only stayed there one day, because we did not like the place, and I was so disgusted with the poor but high-priced hotel accommodations, and the attempted highway robbery of the taxi drivers that I asked the Pan-American Airlines to get us out on the next morning plane. But the plane was filled up, so perforce we had to remain one day. However, I visited Lake Ilopango, about 5 miles from the city, and found that it is a volcanic lake, with a bare stony bottom, and no visible aquatic vegetation of any kind, at any rate in the one spot that was accessible by road. So I make no collection there.

I had hoped to visit Managua, the capital of Nicaragua, but this country was the only one that would not issue tourist cards to us, because I am a naturalized U.S. citizen instead of a native-born one. So to my regret we could not stay there. On the way to Managua, our plane flew along the shores of Lake Managua, and later of Lake Nicaragua, both very large lakes which are said to have been connected with the Pacific Ocean ages ago. The water near the shore seems to be shallow, and I could see a belt of aquatic plants a few feet off shore, and I think I recognized lily pads in a few places. Also near the town of Managua there are a number of small lagoons, which might be favorable collecting places. Some of them can be reached by automobile, but the shores of the lake would require a boat in most places.

We stayed three days in San Jose, Costa Rica, but our visit was spoiled by rain, and I could not find any habitats to collect from, though we drove a hundred miles or so into the country on the second day. One taxi-driver said he knew of a cienaga near the city, so I drove out there, and after walking a couple of hundred yards from the car, he led me to a rapidly flowing river, between clay banks, the water brown from a heavy load of silt and clay, and no aquatic vegetation of any kind. This was the "cienaga".

I had high hopes of getting desmids in Panama, from the excellent account in your last year's paper. But I was disappointed to find that Gatun Lake is accessible by road at only three points, and that to explore the shores would require a boat. I was offered the use of a boat by Dr. Lindsey, Director of the Summit Experiment Garden, but I did not have time for it. So I was reduced to getting samples from the very few roadside ditches that I could find. Dr. Lindsey very kindly took me to the five lily ponds in the Experiment Garden, and I got samples from all of them; one of them is fairly good, and the other four less so. Strangely the desmid-flora of the five ponds differs widely. I also got gatherings from a backwater of Rio Caimitillo (probably the same as your Rio Caimito), at the junction of the Gamboa Road and the Chiva-Chiva trail, near Miraflores, and from a pond back of the Police Station at Pedro Miguel. Both of these were squeezings from Chare (Ch. Kenoyeri?) and contain very few desmids. One day we drove across the Isthmus to Colon, without finding any habitats except the one at Madden Dam mentioned above, which is rather good. Along the road from Colon to Gatun there is a wide ditch which I believe connects at its northern end with a brackish swamp, evidenced by mangroves. In this ditch there were isolated clumps of white water-lilies (*Nymphaea*), so I stopped to investigate several of them. In my hunting grounds in southern U.S.A. *Nymphaea* is always accompanied by many other aquatics such as *Utricularia*, *Myriophyllum*, etc., but to my astonishment there were literally no other associated aquatics in this ditch. I scraped the stems and undersides of some lily leaves, and there are a very few desmids in the resulting muddy sediment.

One day we drove east from Panama City, along the Inter-American highway, to a little village named Chepo, at the end of the highway, about 36 miles from Panama. I made one collection along this road; plenty of diatoms, but no desmids.

From Panama we flew to Medellin in Colombia. This town is at an elevation of 5000 Ft., in a valley between two of the lower ranges of the Andes. We stayed there three days, and liked the town very much. We took three drives out into the surrounding country, but I found no desmid habitats, because of the mountainous terrain, and I made no collections there.

Flying from Medellin to Cartagena, on the northern coast of Colombia, we passed over vast expanses of swamps, thousands of square miles in area, with many large and small lagoons, on the west side of the Magdalena river. This ought to be a good hunting ground, but extremely difficult of access except by amphibian plane, or perhaps by boat from some of the small towns along the river. It would require plenty of time and a lot of money to explore there.

Cartagena was only a plane stop, and we continued on to Barranquilla, also

on the northern coast, near the mouth of the Magdalena River. The map shows two large lagoons between Cartagena and Barranquilla, that look as if they might be accessible from the road between the two towns, so I had expected to stay in Barranquilla to investigate the lagoons. But the principal hotel (a high-feluting place) charged \$23.00, US money, for a double room with meals. The room was poor and the meals unpalatable, so we got out early the next morning, returning to Miami by way of Kingston, Jamaica, and Camaguey, Cuba, which were only plane stops. Flying over Jamaica I saw no likely-looking collecting places. In Cuba, between Camaguey and the northern coast of the island, there are some swamps and lagoons, but Cuba is unfavorable for desmids, generally speaking, because of the high calcium content of the soil.

We had a few hours in Miami between planes, so I rented a car and drove down into the Everglades, penetrating several miles further than I was able to on the last occasion I was there, when the Glades were flooded from a recent tropical hurricane. I got some nice collections there, but nothing new.

Flying from Palm Beach to Tampa, I was greatly astonished at the appearance of the ground, which is literally pock-marked with thousands upon thousands of small lakes or large ponds, that I judged to be a few hundred yards in diameter, many of them with a small wooded island in the middle. The road map shows nothing like this in that part of Florida, and though I have driven through some of this territory in my car, I was quite unaware of the existence of so many ponds. Unfortunately it was after sunset and rapidly getting dark when we flew over them, so I could not see any details, merely the reflection of the western sky on the waters. I should like to make this flight by daytime at some future date.

So that's a sketchy outline of our trip. It was wonderful experience for both of us, in many ways, and I am glad to have spent the money on it, even though my desmid collections are rather disappointing.

Tomorrow (Sunday) I will write you a reply to your letter of Nov. 26th on the subject of *Spinecosmasium curvatum* vs. *Closterium cuspidatum*.

Sincerely yours,

P.S. If you have a reprint of Clark's 1908 paper "holophytic Plankton of Lakes Atitlan and Amatitlan", would you be kind enough to lend it to me for a few days. I would like to see what he found there.

Jan 20 1952

Dear Dr. Prescott,

Here is the belated reply to your letter of Nov. 26th, in which you commented upon my "paper" on the nomenclature of the desmid known as *Closterium cuspidatum* or *Spinoclosterium curvatum*. First let me say that I had no intention of publishing it, and wrote it merely in order to assemble all my arguments in favor of Bailey's name, in the hope of convincing you that this is the correct one. Ordinarily I would leave such a question to experts, and my only reason for wanting to get it decided is that you have described the desmid, in our North Australian paper, as *Spinoclosterium curvatum*, while Cronblad in writing up my American desmids wants to list it as *Closterium cuspidatum*. My name will appear as junior author in both of these papers; hence my interest.

In my letter to Dr. Gilbert M. Smith I said that you apparently considered Bailey's name, as published by Ralfs, to be a "nomen nudum", since you reject it because of an insufficient description. So I am to blame for Smith's reference to this Latin term, which apparently I used slightly incorrectly. True you have not mentioned Bailey's name in print, but in our correspondence I get the impression that this is your attitude.

I sent copies of my paper to Dr. Roy M. Whelden and Dr. Minoru Hirano, the only other workers, to my knowledge, who have seen the actual plant. Enclosed are photostats of their replies to my letters, from which you will see that I seem to have convinced Whelden of the correctness of Bailey's name, while Hirano feels that the possession of the spine is of sufficient importance to warrant placing the plant in a separate genus. So my list of authors and their opinions should now be revised as follows:

Those recognizing  
*Cl. cuspidatum*.

Bailey  
Ralfs  
Nordstedt  
Telling (in litt.)  
Cronblad (in litt.)  
Irenee-Marie  
Scott  
Whelden  
Hughes (?)

Those favoring  
*Sp. curvatum*.

Bernard  
Prescott  
C. M. Smith  
Hirano

Note that in Hirano's letter he refers to *Cl. Pegleri Fritsch*, cited by Irenee-Marie. I do not know this desmid, and cannot find it in my books. Does it possess spines? If so, it would be a valuable addition to my line of argument. Also Hirano refers to a figure of the same (?) plant in Wolle's *Freshwater Algae of the U.S.* I do not have this work, in fact the only one of Wolle's that I have been able to get is the 1884 edition of his *Desmids of the U.S.* I was unaware that Wolle had found the plant, but am not surprised, because you can find almost anything in the line of desmids in his works.

You refer to Krieger's statement that *Cl. cuspidatum* is "wohl Peridean-cyste", and indicate that you are inclined to agree with him. I hope you will pardon my saying that I think this is merely ridiculous, and an unwarranted reflection on the memories of Bailey and Ralfs, both of whom certainly knew a desmid when they saw one. It is on a par with several other rejections and transfers by Krieger that are certainly mistakes, as I can certify from my own knowledge; for instance

*Microsterias ceratophora* Josh., rejected by Krieger as "wohl teratologisch", when it is a perfectly normal and beautiful desmid; *Decidium australe* Borge, transferred by Krieger to *Triploceras* although it lacks the principal and essential feature of *Triploceras*, the divided apex; *Decidium spinosum* Wolle, regarded by Krieger as a synonym of *Pl. trabecula* var. *hirsutum*; *Eustrum denticulatum* var. *strictum* Boerges., transferred to *E. Turneri* by Krieger, though it shows several differences that even an amateur like me can recognize after seeing the plant, and even though Borge lists the two plants separately in his Australian paper.

I have never seen a dinoflagellate cyst to my knowledge, and the only thing I know about them is from the figures in your new book. But I don't think I would mistake one for a desmid. They don't have green chloroplasts divided in the center, do they?, nor terminal vacuoles with moving crystals? A few nights ago, looking at my Panama material, I saw an object that vaguely suggested a desmid similar to *Cl. cuspidatum*. It was green, with granular cell contents, curved like a *Closterium*, more slender than *Cl. cuspidatum*, with a stout spine on one end only, and spirally striate wall. It required a second close look to show me that it was one of the long Euglenas, with a short stubby tail, the flagellum having disappeared.

Of course it is very regrettable that Ralfs did not give a more complete description and measurements of Bailey's plants. From my point of view, (though not from yours), Ralfs' illustration and brief description and his classification as a *Closterium*, coupled with the fact that an exactly similar plant has been found in many places close to Bailey's original habitats, is sufficient to establish the identity of Bailey's century-old discovery with the modern collections. Further, in examining plants from southern USA, northern Australia, Indonesia, and Japan, I cannot see any difference worthy of note except the occasional absence of the "hump" on the dorsal margin near the apex. But note that Sheldon, *Rhodora* May 1942, p. 184, says that this bulge may appear on both ends of the cell, or only one end, and is frequently entirely lacking. So even this slight difference cannot be the base for a varietal or even a form name.

There is one aspect of the matter that might be pursued further, perhaps with profit. Ralfs records that Bailey found his plants in two habitats, "a pond near Princeton, N.J.", which is unidentifiable, and "Worden's Pond, R.I.". If this latter pond is still in existence it might be possible to get somebody to make collections there, with a possibility of refinding Bailey's plant. If this could be done, and the plant recovered, I take it that even you would be satisfied. A couple of years ago I asked Hannah Crossdale to make some collections for me from "Pudding Pond, N.H.", if she got an opportunity. You had told me that Cushman's *Staurastrum pulcherrimum* was originally found there, and I wanted to recover it to see if it is identical with Wolle's *St. Novae-Caesariae*, as I suspect. She was kind enough to send me a dozen collections from Pudding Pond, but I regret to say that the plant is not present in them.

Following up this line of thought, I am attempting (with not much hope of success) to get a collection from the pond in the Botanical Garden at Singapore, where Bernard found his *Spinoclosterium curvatum*. If by some miracle I should get it, I shall of course send you drawings and specimens.

Concluding this discussion, it seems to me that there are two opposing views, probably irreconcilable. One group of workers holds that the addition of spines to a *Closterium* is sufficient to justify placing the new plant in a separate genus. The other, and larger, group thinks that the possession of spines is not sufficient for creating a new genus, and that it is undesirable to set up a new genus to receive only one species with a comparatively minor difference.

You mention that you had thought of publishing some further notes on this subject, which of course you can do very much better than I could. If you do, in fairness you ought to present some of my arguments, and those of others, along with your own views. Perhaps the matter may be settled in another fifty years.

Sincerely yours,

MICHIGAN STATE COLLEGE  
EAST LANSING

January 23, 1952

DEPARTMENT OF BOTANY AND  
PLANT PATHOLOGY

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

Dear Mr. Scott:

It is far past time that I should be answering your good letters, including the additionally interesting one received this morning. Your description of your trip, although all too brief but very welcome, gave me a severe case of the wanderlust. How I do envy you your stops at those places, interesting in other ways if not very prolific in desmids. I could see practically every move you made at the Summit Gardens in C. Z. Did they happen to have any mangosteens rip for you to try? There were a few on hand the last time I was there and the director passed them out. What an unusual and delicious flavor! I am glad that you did get to Rio Chagres. Up the river from the Canal, in some of the quiet 'back bays' I found veritable gardens of desmids- sometimes scummy growths over all the submerged vegetation. Another favorite place for desmids was on the 'back' side of Barro Colorado Island in what they call Gigante Bay. Here there are a lot of 'floating islands' and attached to the overhanging vegetation and in the miscellaneous mixture of vegetation in shallow water near shore the desmid population was the dominating type. You did have a fine trip and I hope both you and Mrs. Scott had a refreshing and restful time in spite of the rapid travel. Your notes on the Canal have served as a needle to stimulate me to action to publish the paper that I have on Canal algae that has been lying about here for over a year now. I wish the Lord would give us a little more time, or less restrict the amount of curiosity with which we are endowed.

Naturally I am much interested in your recent letter and its inclosures. I agree with Whelden whole-heartedly, that you should publish your remarks. They constitute a good summary of the situation and you present in a very lucid way one of the main lines of argument that is used for retaining the 'culprit' in the genus *Closterium*. No, I have no plans for writing a paper on the subject. The publication that I suggested that I might write was merely to clarify the situation for which my earlier publication (erroneous) was (and is) responsible. In other words- all I did was add to a confusion that already existed. In any case my paper did bring Bernard's description out into the light from a place where it was being completely overlooked by modern students.

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Perhaps the best way to answer some of the very pertinent questions which you raised in your letter would be to take up points as you mentioned them in your letter of Jan. 20.

Inasmuch as the majority of students and specialists are in favor of retaining this Closterium-like plant in Closterium, it would be only sensible for the minority to fall in line, unless one were thoroughly convinced that the plant does stand for an evolved form of sufficient divergens to make a separating name justified. For the sake of naming, one is as good as another as long as we all know what is meant, of course. But one is entitled to their own philosophy and if that varies from another view, then one should be true to his convictions, and in this case express his philosophy as to the relationship of the desmid to others by using an appropriate name. I am inclined to agree with Hirano, that the presence of a spine in this plant means something more than does the presence of absence of a spine among Staurostrum species.

I inclose a tracing of Fritsch's *Cl. Pegleri* which shows a small lip-like protrusion. This conceivably could be an intergrading form between Closterium and the plant in question. If this were true, then we would be confronted with the naming of a genus on the length of the spine only, which of course would be inappropriate. *Cl. Pegleri* is a very conventional appearing Closterium, however, except for the minute protrusion and does not have the unique 'personality' that *Cl. cuspidatum* possesses.

Another reason why I fell into the trap of naming this creature as new when I first found it was, as I mentioned before, the reference of it to other genera by specialists. Hence, I never thought of checking my plant with *Ophiocytium*, for example, because it had no *Ophiocytium* characters. Yet Wolle, the one-time authority, lists it and figures it (Pl. 158, f. 1-2) as *Ophiocytium cuspidatum* (Bail.) Rab. His figures do not prove that it is an *Ophiocytium* except that it has spines like that genus and is similar in curvature. The cell contents are very un-desmid like. That is the reason why it was also referred to *Tetraëdron*.

Please do not misunderstand me. I did not mean that Krieger was correct in referring the plant we now have in mind to a Dinoflagellate cyst, but that he may have seen the type specimen on which Ralfs based his all too brief notes and found from examining it that the specimen was a cyst and not a Closterium. I just do not know what the situation is or was. I agree with you that Kriger did make some unacceptable (to most of us) transfers, and we can be critical because we have specimens with which to make comparisons. But I never saw Bailey's plant and I don't think Wolle did either. Wolle

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says, however, that Bailey found the plant in Gilder Pond, Mass., and received specimens from Minnesota, and from California. Ralfs states that Bailey found it in Worden's Pond, R. I. So, I do not know where the type locality is. It would indeed be interesting, and somewhat convincing, if the same plant that we have in mind should be found in one or the other of those ponds- and of course there is no reason why it should not be there. If it is, and if this plant is the same as the specimen that Ralfs saw, then I think it is a great commentary on Ralfs that he should not give it a correct illustration, nor give it any description. Ralfs figure, as I mentioned before, easily could represent any one of several Dinoflagellate cysts. The chances are, and I agree that the chances are very good indeed, that what Ralfs saw was the plant in question. If it is, then there is no alternative but to accept his name- at least as long as according to the 'rules' we are to use Ralfs as the starting point in desmid nomenclature. Of course we all see places where that is a bad rule- but a rule is a rule. Yes, Ralfs should have known a desmid when he saw one. If he did, then why did he not give a desmid description to an obviously new species.

You are right, that you probably would not mistake a desmid for a dino- cyst. Yet, when dinoflagellate cysts are dividing interbally, as they customarily do, the protoplast is segmented by a median fissure which gives the contents the appearance of that of a Closterium cell- and in preserved material one might have to look hard and fast and two or three times to be certain that it was not a desmid-like organism. To be sure, there are wall characters and lack of terminal vacuoles that we use to make a quick separation in case of doubt. But many workers have overlooked these latter characters and hence the naming of several Tetradron spp. from dino- cysts. (Welden, for example, did this, and Reif and Rabenhorst, and several other have described Tetradrons and other algal species from cysts.

I am not sure what the 'hump' means or what it is worth. I have found it so consistently on specimens in some samples, and completely lacking in others, that I have come to think of it as a genetic variation and worthy of a form or varietal name. To be sure it is not always present on both semicells because when one half the cell is younger all wall features are not formed. As I mentioned before, all the high, alpine collections show smooth walls; so far I have found only 'humped' specimens in low altitude collections, but of course that is probably only because of limited samplings.

I certainly hope you are successful in getting specimens from the type habitat for the plant. It seems to me that I recollect hearing that the Massachusetts pond had been drained. While I think of it, I have quite a few collections from Pudding Pond and as soon as I get a chance I shall look up the stuff and send you some samples. Perhaps you would like some others from New England.

Must get to work. Shall write more later. Meanwhile, my kind regards to you and Mrs. Scott.

Cordially-

John Prescott



Feb 27 1952

Dear Dr. Prescott,

I have quite a lot of strong opinions of my own, which run counter to the trend of general thought, and which I am determined to stick to; so I am thoroughly in accord with you, that persons are entitled to their own philosophy even though they are in the minority. Consequently, having failed to convert you to my views, and those of the majority of desmidologists who have studied the plant, in the matter of Closterium cuspidatum Beil., I am dropping the matter, which will have to await a decision by the slow process of evolution in the writings of desmid specialists.

Here's an interesting sidelight. A few days ago I received a copy of Bernard's 1909 paper "Algues unicellulaires", from a second-hand bookseller in Switzerland, containing his publication of the desmid in question. I had eagerly awaited this book, because I thought it would be valuable in the study of Indonesian desmids. Bernard published a number of new species and varieties in this paper, but on checking them with Krieger's monograph, I find that in the genera Penium, Closterium, Fleurotaenium, Docidium, Buestrum and Microsterias, Krieger has reduced to synonymy all except three of Bernard's novelties. Of the three Krieger regards one as doubtful, and the other two he ignores. So Bernard's determinations apparently are not very reliable. I haven't been able to get his 1908 paper.

I wonder if your name was on the "chain letter" list. Apparently the Alpha-Omega chain was started in Portugal; Irene-Marie passed it on to me, and more or less as a joke I copied it and circulated it to some of my correspondents. It is now beginning to pay off, and I have received papers from Brazil, Germany, Austria and Italy. Most of these are of no interest to me, since they mention desmids only incidentally if at all, so I have sent a package of them to you by parcel post. If you don't want them, you can pass them on to someone who is more interested in hydrography or the zoological aspect of limnology. It seems strange to me that the majority of limnological papers are written by zoologists, with long lists of the microfauna identified to species and varieties, but with the algae identified only to genera. Yet according to some European writers, Nygaard for example, the microflora, and particularly desmids, afford a much more reliable index to the classification of surface waters.

In your recent letters you forgot to answer my enquiry whether you saw Ruth Patrick in Philadelphia, and found out what progress, if any, she had made on the diatoms in the Arnhem Land material. I also asked you to ascertain from Dr. Eggleton when publication of our Microsterias paper could be expected. I now note from "Science" that Dr. C.J.D. Brown has been elected Secretary-Editor of the Am. Microsc. Soc. (poor fellow!), so I have written asking if he has our MS and drawings, and when he expects to print the paper.

I have sent your descriptions of the first lot of Arnhem Land desmids to Hannah Crossdale for the Latin translation of the diagnoses. When you work on the remaining, please try to remember to insert a reference to the literature for each item, as Womersley requests.

With my best regards,

Sincerely yours,

Mch 15 1952

Dear Dr. Prescott,

I wrote to Dr. C.J.D. Brown, Montana State College, asking if Dr. Eggleton had turned over to him the MS and drawings for our paper on *Microsterias*, and when he thought it could be published.

He has just written me that he has the MS and drawings; that our paper is now #22 in chronological order of those awaiting publication, and that if the present rate of publication is adhered to, it will probably be included in the October 1952 issue.

That is much more information than I ever succeeded in getting from Dr. Eggleton, and while it is disappointing, it is at least something definite. I suppose that it will be next Christmas before we see it.

I am hoping that our *Ruostrum* paper will appear in the first 1952 issue of *Hydrobiologia*, but my friend Dr. Gowanlock, who is a subscriber, has not yet received it.

Sechlen writes from Java that he has sent me nine more bottles of plankton catches, 5 from Sumatra and 4 from west Java, in regions from which desmids have never before been collected. He sent me 8 photomicrographs of desmids, among which I can recognize *M. Torreyi* var. *Doveri*, *M. ceylanica* var. *Mullichiana*, *M. Moebii* var., *M. longicollis* var. *capitatum*, *St. Rosei* Playf., two dichotypical specimens of *St. subtrifurcatus* plus *St. Wildemanni*, and a probably new species of *Arthrodesmus* that seems to be identical with the one shown on Pl. 20, fig. 10, of the North Australian material. Sechlen says that he has not received the book on Cultivation of Algae that you promised last October to send him. I hope you can arrange to send him a copy if you have not already done so. He also says that he sent you a photo of a new variety of *M. Torreyi*, but no longer has the collection in which he found it. I should like to see this photo if you can find it; perhaps I can make an enlarged drawing from it.

Dr. Krieger writes that he hopes to finish the MS of his *Cosmarium* paper this summer, and adds "Es gab immer wieder etwas nachzutragen; aber einmal muss man doch den Schlussstrich ziehen". (Something more could always be added, but one must draw the closing line somewhere).

In one of your recent letters you said you had a paper on Panama Canal algae that had been lying around for nearly a year. How about finishing it and incorporating my desmids from Panama, and also the very few that I found in Guatemala. Most of them would require listing only, since they are well-known species, but there is one new species of *Ruostrum*, and a few *Cosmaria* that are unusual and might be new. I could make one plate, perhaps two.

Sincerely yours,

MICHIGAN STATE COLLEGE  
EAST LANSING

March 27, 1952

DEPARTMENT OF BOTANY AND  
PLANT PATHOLOGY

Dear Friend Scott:

I have many things to thank you for, and many items to acknowledge. I am very penitent and ask your pardon for being so slow in making reply to your several interesting letters. This is our 'vacation' between terms and I am at last getting around to correspondence. Of late I have been more than confused by having to attend to matters relative to my subsequent plans, which I shall outline to you below, getting the next number of the bulletin out-getting a paper ready for the Mich. Academy- getting a paper ready for publication with a chap in the U.S. Dept. of Health- and getting my graduate students taken care of- besides trying to teach school once in a while.

First- after writing to Dr. Patrick twice I finally received a very hopeful reply- assuring me that she would for sure get the plates of the diatoms ready to submit by next June. I was waiting to hear from her before writing you again, because I did want to give you a definite answer.

Second- I wish to thank you most heartily for the excellent collection of reprints which arrived. I am trying to think of what I might send you. No, I was not included on the chain letter- sounds like an interesting experiment- or gamble- or something. Are you quite certain you do not want any of these papers? You must have had to invest some of your own papers to get these- so actually I am still further in debt to you. Perhaps I can locate some duplicate desmid literature which you can use.

Third: I wish you would not feel convinced that my mind is so made up over the disposition of *Closterium cuspidatum* that it cannot be changed. My opinion is only one of two or three opinions and anything you might add to arguments in favor of the idea which you and many others hold should be set forth and made available for consideration. I do wish that you would crystalize your ideas on this curious plant and if there are some points which have not already been covered by Hirano and Irene-Marie and Hughes, get them published.

I have every hope and expectation of getting at your desmid drawings and plates and completing my review of them in the near future. So please do not give up hope. I have received your new plates with changes of numbering duly noted. As soon as the Mich. Acad. paper has been delivered I can see a chance to do a little more work.

Of late I have been entangled in the necessary extended and almost endless correspondence related to getting plans for next year cleared. Everything now seems to be set (except for some minor financial matters which I hope can be taken care of). After summer school at the Montana station, I am going to return to Alaska (as I believe I told you) to continue the survey of the algae in the Barrow region. The contract this time calls for me to remain there into the winter months so as to obtain winter readings and collections. I shall return for Christmas and then (much to my surprise) go to Ecuador to make a study of alpine lakes and bogs in connection with the long range study that I began some time ago to work out a distribution of arctic species in alpine

MICHIGAN STATE COLLEGE  
EAST LANSING

DEPARTMENT OF BOTANY AND  
PLANT PATHOLOGY

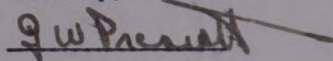
regions. I made a few collections when I was in Ecuador before- just enough to stimulate my interest greatly- and I am anxious to round out my survey of alpine areas in the U. S. with this check on the alpine areas in S. A. I am looking forward with a great deal of interest of course to this expedition and am hoping that nothing will happen to cause a change in plans. The expense of getting over the paramos to the right places is what frightens me a little. I have the where-with-all to get to Ecuador but after one gets there- the business of travelling in that country poses some serious problems. Fortunately the Ecuadorian sucre is quite cheap so that an American dollar will buy quite a lot. However, every trip into the mountains will call for three or four mules, at least two peones- food for the mules and the peones- camping equipment, etc. etc. etc. I am going to try and have an assistant go with me from here because I have learned by experience that it would not be exactly healthy for a white man to be more or less alone in some of those rugged places in the mountains- three days by mule from the nearest road.

If I have the luck I hope to have, I may have too many samples to handle and in that event I am daring to wonder and hope that you might be willing and interest in working over some of them with me. Probably you will be swamped with samples from Australia and the East Indies- but I would like to pose the question anyway.

Thank you for letting me see that interesting little volume on the Oze district. How many of those plants appear closely related to species in our latitude here! Am glad to see this. One of the boys in Japan sent me a very similar little book showing other species. They must have a whole series of these booklets. I am returning this via another cover.

My kind regards until later. Please forgive my tardiness and let me hear from you again soon.

Cordially,



G. W. Prescott



You are certainly going to do a lot of travelling this year and next. I wouldn't mind going to Alaska during the summer, but I would think, not twice but a couple of hundred times, before volunteering to stay there during even one-half of the winter season. And what the devil can you collect there in the winter? No aquatic plants surely! All surface water must be frozen solid.

I hope you will have better luck in Ecuador than I had in Central America. But having been there before, and no doubt speaking Spanish, you will be able to get along much better than I did as a tourist. If you can get down into the tropical valleys on the eastern slope of the Andes you would probably have much better luck.

Please be assured that I should be very proud to be of some assistance in handling your desmid material, provided I have the time. I have put the Australian material aside, pending receipt of further collections that Womersley and Specht have promised me. But the Indonesian material (about 30 vials) is so tremendously rich that so far I have merely scratched the surface, picking out the most striking and unusual forms. And at that I have at least 150 drawings, including a number of duplicated.

Also Grönblad is working full speed on my USA collections, and there is no telling when he will call on me to start work on the plates. But I shall be tickled pink to have a chance of helping with your stuff, and shall do all in my power to make it possible.

With my best regards and wishes,

Sincerely yours,

June 8 1952

Dear friend Prescott,

Several months ago I asked Sachlan to try to get for me some collections of algal material from a pond, or ponds, in the Botanical Garden at Singapore, where Bernard obtained the desmid that he erroneously named Spinoclosterium curvatum. Mr. Sinclair, Curator of the Herbarium at Singapore was kind enough to take some samples and sent them to Sachlan, who forwarded them to me. But I am sorry to say that neither Sachlan nor I have been able to find any specimens of Spinoclosterium in the material, and it is probably not present. This of course was to be expected, because there may have been a number of changes in the habitat during the 48 years since Bernard collected there.

The two samples probably were taken in different spots in one pond, because the algal flora is identical in both of them, save that one contains a few more species than the other. I should judge that the water was hard, with a pH of perhaps 7.5, since the typically acidophilic genera of desmids are completely lacking, such as Arthrodesmus, Xanthidium, Microsterias, Desmidioidium. There is a fairly good number of desmids in the collections, with possibly 25 to 30 species of Cosmarium, Fleurotaenium and Staurastrum, 1 of Eusstrum (E. snatum var.) and Sphaerosomus granulatum. The only unusual desmid I have seen so far is Staurastrum apenthocephalum Skuja. So the material is rather disappointing, because I had a preconceived idea that Singapore ought to be just as rich in desmids as Java. Sachlan's note says that the material was squeezed from Hydrilla, as were several of his collections from Indonesia; I cannot find Hydrilla listed in my book at my disposal; perhaps it is not an American genus. Can you tell me anything about it and which American genus it most nearly resembles? In one of the tubes I saw some fragments of an aquatic plant with brownish spikes on the edge of the leaf, similar to Ceratophyllum.

I am enclosing Sachlan's note, and want to call your particular attention to his postscript. Won't you please, please, PLEASE tell me that you have sent him the book on Culture of Algae. If you haven't any more copies available, tell me the name of the publisher and I will order it direct. The two copies that I bought proved to be valueless to me, so I sent one to Telling and the other to Hirano in Japan.

In our North Australian paper I am going to change E. octogibbosum Krieg. fa. reductum, fa. nov. Pl. 6, Fig. 12, to E. coralloides var. subintegrum W & W fa. reductum fa. nov. Krieger excludes E. coralloides as "unsicher", and created the new species octogibbosum to receive Wests' var. subintegrum. But I have found several examples of E. coralloides var. trigibberum Lagerh. in material from Borneo, Java, and Sumatra, which agree perfectly with the illustration in Borge, Ueber tropische und subtropische süßwasserchlorophyceen, 1899, Pl. 2, Fig. 31. Also they differ from Joshua's original illustration of E. coralloides only in having five facial swellings instead of four. So E. coralloides is a good species and Wests' name for the var. subintegrum must be reinstated. I shall add an explanatory note similar to this.

Sincerely yours,

MICHIGAN STATE COLLEGE  
EAST LANSING

June 10, 1952

DEPARTMENT OF BOTANY AND  
PLANT PATHOLOGY

Dear Mr. Scott:

Just a note to acknowledge receipt of your letter and that of Sachlan today. The sketch you sent is most certainly an 'image' of Ceratophyllum. I am not familiar with the leaf structure of Hydrilla. It is a member of the Vallisneria (water celery) and Elodea family. The cells of Elodea are nothing like those shown in your illustration and it has not familiarity. I think your drawing is that of a bit of Ceratophyllum. Hydrilla is a genus with one species located only in the south Pacific and SE Asia so it is not included in any work that I have at hand. Otherwise I would try to check on its anatomy. That was a right interesting attempt to locate *Closterium cuspidatum*- but understandable how it was possible to have failed because of the changing conditions in the habitat. Possibly it will turn up even yet.

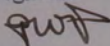
Quite some time ago I sent Sachlan a second copy of *The Culturing of Algae*. He surely must have received it by this time. If he does not I shall feel sure that something is wrong with the mail service. I did not bill him for the book but sent it just as a complimentary copy because I feel that we should help him all that we can. I am certainly sorry that he did not receive the first copy- for he must have thought that I was very neglectful. I have forgotten when I sent it- away long last winter or late fall some time. 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.

I sent off the manuscript yesterday and hope you have received it by this time.

The change you suggest for *Eubstrum* sp. sounds reasonable and would seem to be a satisfactory disposition.

Let me hear from you soon. Sorry that I am so rushed that I have to cut this letter short. There are so many things I would like to talk over with you. I keep telling myself that when I once get to Montana I can settle down and get caught up on correspondence.

Best regards-



G. W. Prescott



June 10 1952

Dear friend Prescott,

This is in reply to Dr. Ruth Patrick's query regarding illustrations for the diatoms for our North Australian paper.

Let me recall that the results of the Arnhem Land Expedition are being published by the Australian Government in a series of volumes, of which one entire volume will be devoted to botany. Therefore there is not the usual pressure for economy of space in text and illustrations; in fact it is almost an invitation to spread ones-self.

You will remember that for our paper on South Australian desmids I drew eight plates showing all the desmids, but you thought there would be difficulty in getting this number of plates accepted for publication in an American journal. Therefore I redrew the plates and reduced the number to five, by omitting the common species. Then Womersley told us he had succeeded in having it accepted for publication by the Royal Society of South Australia, and it is now in press (I hope). But Womersley was badly disappointed that not all the desmids were illustrated, because he expected that the paper would be largely used in Australian colleges, because of the scarcity and incompleteness of other literature on Australian algae. I had destroyed the first drawings comprising the eight plates, and had to decline to draw them a third time.

Womersley has only an indirect connection with the Arnhem Land Expedition, in that it was one of his graduates, Ray Specht, who was Botanist of the Expedition and made the algal collections. But Womersley and Specht are working closely with Chas. P. Mountford, Editor of the Official Reports, and have given me some pointers on the preparation of the MS. I am quite sure that Womersley's desire would be to have every one of the diatoms illustrated.

Certainly any new diatoms must be illustrated, as well as rare or unusual ones, such as the Stauroneis Fulmen Brightw. that I found in South Australian material and which interested Paul Conger very much. I think we must leave it up to Dr. Patrick as to how many others she will illustrate, and to help her decide let me mention that I have twenty plates of desmids, plus whatever other plates you have prepared on the other Chlorophyta and Cyanophyta.

It was originally planned that the botanical volume should go to the printers sometime in the Spring or Summer of 1952, and it is fortunate for us that there has been a delay of some nine months; now it is set for the Spring of 1953. But the poor Editor must have some time to work on it, and with this in mind I wrote Specht three weeks ago that I would get all the MS and drawings to him by the end of this year, or if this was not soon enough for him to set a deadline and I would do my best to meet it. But remember that it takes eight weeks for ordinary mail from here to Australia; airmail requires eight to nine days and costs 25¢ per half-ounce. Also I shall undoubtedly have to retype Ruth Patrick's MS, to make it conform to the style of the rest of the paper. I don't know yet just what that style will be, and have asked Specht to send me a sample page of his own MS to copy from. I am not an expert typist as you may judge from this letter, so I am going to have the final copy typed by a commercial firm.

I would like Dr. Patrick to tell me how she would prefer to have her section on diatoms handled. I propose that if she had a comparatively small number of diatoms, compared with my 240 desmids and your 71 other algae, the diatoms should

be included as an integral part of the whole paper, under the authorship of Prescott Scott & Patrick, or Prescott Patrick & Scott (the order is immaterial to me). But if she has a considerable number of diatoms I should think it would be preferable to make a separate section: DIATOMACEAE, by Ruth Patrick.

I believe that this paper will be one of the most important ever published on Australian algae, and certainly by far the longest on North Australia. All of us ought to work together to try and make it as complete as possible.

In conclusion let me say that if Dr. Patrick can get her MS and drawings to me by Sept. 1st, that will give me time to rewrite it and have it copied commercially, and keep my promise to have it in Australia by the end of 1952.

Sincerely,

MICHIGAN STATE COLLEGE  
EAST LANSING

June 13

DEPARTMENT OF BOTANY AND  
PLANT PATHOLOGY

Dear Scott:

Did I ever reply to your card of May 24 relative to reprints on *Micrasterias* paper? I hope so, but I do not find a copy of it. Probably too late now anyway, but I would like 200 reprints (with or without covers). They should be sent to my East Lansing Address, Dept. of Botany, Mich. State College.

Sent off the drawings yesterday and I hope they have arrived by now.

Will send my plates next ( 5 x 8 scale, right ? )/

Best regards-

*Q W Prescott*

June 22 1952

Dr. Gerald W. Prescott,  
University of Montana Biological Station,  
Flathead Lake, Bigfork, Mont.

Dear friend Prescott,

Your various letters and packages have all arrived safely, including your own drawings, which I am glad to see for the first time. Surprised to see that you are still using tracing cloth; I think paper is much easier to work with, and also cheaper. Nearly all engineering and architectural drawings are now made on paper. You did not put your initials on your plates, as you usually do. I could add them, if you wish, but I could not imitate your monogram, and they would have to be in the same style as the initials AMS on my plates.

The difference in the style and method of numbering the illustrations on your plates and mine is unfortunate, and I wish I had thought of it before. I have considered trying to cover my numbers with your small printed labels; on some of my plates this could be done, but on others it would be very difficult because my numbers are very close to the drawings, too close in some instances. Erasing the numbers would be a terrible job and would probably result in a mess. What do you think? I could try to remove your labels and number your drawings with my Leroy lettering guide, but the removal might spoil the surface of the cloth so that the ink would run.

In the MS your text on Cyanophyta and Chlorophyta will precede that on the desmids, so your plates ought to precede mine. But would there be much objection if the desmid plates come first, numbered 1 - 22, and your plates numbered 23-28? In that way I would have to renumber only your 70-odd text descriptions, while the other way I would have to renumber my 252 desmids, which is my latest count; there will be a few more.

In your bibliography you have not included works referred to in your text on Cyanophyta and Chlorophyta, but they should be included. I have located all except five or six, and have asked Hannah Crossdale to look these up for me while she is doing the Latin. Also in the first half of the text on desmids you gave ~~no~~ no references to the original description. I have not yet tried, but probably can dig up most of them from Nordstedt's Index, and Krieger's and W&W's monographs, but no doubt there will be some that I cannot find. Did you take your iconograph to Montana, or do you have enough other literature to look them up?

I am satisfied that I am correct about there being only one paper on FW algae from North Australia, but as you suggest, I shall add a qualifying clause. Also I am going to add some remarks that some of the collections studied by Bailey, Borge, Schmidle and Moebius may have been made in or near Arnhem Land, because there are frequent references in those papers to collections from "the Gulf of Carpentaria" and "waters of the Gulf region", without any more precise indication of the locality.

For our paper on South Australia, Ophel prepared a long list of algalogical papers, to which I made some additions, but I told him I thought the bibliography was too long for a comparatively short paper. The editor thought so also, and I believe Ophel had to reduce it considerably. For our new paper, do you think it would be desirable to prepare two separate lists of literature, one giving the complete list of works on Australian algae, and the other listing the other works mentioned in the text? There doesn't seem to be any objection to the length of our paper, or the number of plates.

Speckthes sent me some dope on the typographical style that he is using, and I can prepare our MS in the same style. They using bold-face for the accepted name of each plant, italics for synonyms and species mentioned in the text, and roman for references.

Here are some questions that I would like you to answer as soon as you can conveniently:

Which name do you wish to use: *Closterium cuspidatum* Bail.  
*Spinoclosterium curvatum* Bern.  
*Spinoclosterium cuspidatum* (Bail.) Hirano  
 I think that in Hirano's combination Bernard's name should appear, thus  
*Spinoclosterium cuspidatum* (Bail., Bern.) Hirano  
 though I have never seen a name written this way.

How about *Gymnozyga*? Do you wish to retain this, in spite of the International Rules which substitute *Bambusina* for *Gymnozyga*? If you want to change to *Bambusina* will it be *B. Borreri* as Taylor has it, or *B. modiliformis* as Irene-Marie writes it?

In most of the older papers, and some modern ones, names of forma are given a feminine ending, e.g., *Desm. Baileyi* f. *tetragona* Nordst. The present International Rules require them to agree in gender with the genus. Should I correct them in this paper? Taylor published *M. radiata* var. *gracillimum* through error, but everybody uses *gracillima* now.

A similar question for geographical names of species, e.g., *St. Nigrae-Silvae* Schm. Should I write this with lower case letters?

Digitized by Hunt Institute for Botanical Documentation

As you expected, there are some differences of opinion between you and me regarding some of the *Desmids*; also in a few cases changes will be necessary because of additional information that I have acquired through the finding of new specimens, both in the Australian material and Sachlan's Indonesian collections. For instance, the plant that you described as *Arthrodesmus steurodesmiforme* sp. nov. turns out to be a form or variety of *A. arcuatus* Josh. with 2 additional spines. I have found a complete cell in the Australian material, with the extra spines on both semicells, and from Borneo I have a single specimen with the extra spines on only one semicell. I am preparing a list of these differences, and will send it shortly, together with additional sketches where necessary.

In the meantime, please answer all my questions, including those on the first page, so that I can make a start on the MS.

Sincerely,

June 26, 1952

Dear Mr. Scott:

Your good letter arrived this morning and I shall try to reply to your questions from this rather remote spot. I always feel a little at sea when I get away from my reprints and iconograph and card files- that is, when it comes to checking references, etc. I did bring a rather expensively expressed lot of books and papers- so I may be able to take care of a few items. I shall take up your questions in the order of their 'appearance.'

1) Your numbers could be covered with my printed ones for the plate figures if you wish. The numbers come printed on gummed sheets and can be cut out with enough margin to cover over another figure, no doubt. On the side which lies next to the illustration the figure number could be trimmed very close so as not to cover the lines of the drawing. I shall inclose a few sheets of numbers and you can use your judgement. On the other hand my gummed numbers can often be lifted off with a needle or scalpel, and if the paper still sticks, it can be removed with a damp cloth and I think would dry firm and hard enough so that inking could be carried on over the same spot- or the figure could be entered at another point away from the place where the gummed number was removed. I would do what ever saves the most time and still gives satisfactory results. Sorry that I am not able to help you out with this piece of work. I like cloth because ink runs so little if ever; whereas on paper, after scraping corrections, the paper is often roughened enough that new ink lines seem to run (at least they always seem to for me.)

2) Forgot to mention the initialing of the plates. If you will please, and if you wish, enter my monogram as you have for your plates. I usually forget to do this.

3) Seems to me that there could be no objection at all to having the desmid plates precede the other algae. I believe I did not enter plate and figure references in my text (or did I?). At least my carbon copy does not carry them. In which case you would need to enter only the plate and figures for the green and blue-green algae and I would recommend this. It would be a time-consuming task and would lead to some chances of confusion to renumber all the desmid references.

4) Did not mean to make you more work by omitting the bibliographic references to my part of the manuscript. I remember giving that point some thought and decided at the time that they had appeared in the literature so often that possibly they were not necessary. But I do agree that we should be consistent in the matter of giving references. So, if you have them all checked out already they might well be included. I might be able to find the nine out here which you state you have not found as yet. If you wish, and if I can be of any help on this- send out the names of the plants for which you have not found the lit. cit. and I shall do whatever I can.

5) What do you refer to as the first half of the text on desmids- the section on Micras-terias? My boy, W. E. Wade, a desmid student, is still at East Lansing and I can get him to check out any that you cannot find- that is if the papers are at E. L. Let me know which ones these are and I shall check out what I can here and forward the remain-der to Bill. He is good at the job of digging up references.

6) My opinion is that it would be better form (although a rather long list) to have but one bibliography- unless the writing on the algae should be broken up into 3 chapters or sections, or papers. Then there might be a bibliography for the green and blue-green, as prepared by myself, one section for the desmids, and one for the diatoms. But as I understand it the blue-green, greens, and desmids are going to be incorporated in one report, with plates serially numbered so that there should be one bibliography for this unit. Many of the papers on Australian algae are also the papers to which reference is made in the text- and would need to be entered but once- not in two sep-arate lists.

7) Personally, I prefer the name *Spinoclosterium cuspidatum* (Bail.) Hirano. This would mean that we are referring to a species which was originally named *cuspidatum* by Bailey but later transferred to the genus *Spinoclosterium* by Hirano. We would not need to include a reference to Bernard. I do not wish to appear stubborn on the use of *Spinoclosterium* as opposed to *Closterium*- but it so happens that I am at least temporarily convinced that the plant in question has been derived from *Closterium* and has developed a character unlike all other species in the genus- may even have a different cytological life history. And until the latter is known I prefer to draw a line about it and separate it from *Closterium*.

8) For the sake of conformity with widespread usage, I prefer to use *Gymnozyga* in place of *Bambusina* (rules notwithstanding). In a monographic treatment, one would be forced to follow rules of nomenclature, but in a paper such as ours, and because *Gymnozyga* is so much better known and more generally used, I would say retain it. The name endings should be changed from 'um' to 'a'.

9) *Nigrae-Silvae* should be written lc. It is customary, and the rule, now to use cap. for genus names employed as species names, and for species names taken from proper names of persons. Geographical names are all lc.

10) Hope you do not have too much trouble in making changes in the descriptions to conform to new information. Sorry I do not have my iconograph here to help me check any of the possible questions. Good luck to you. I really feel much like a heel not being able to help you any more than I can at this time.

With kind regards,

G. W. Prescott

P.S. If you decide not to use the gummed figures, please return them to me here. I can use them on some other plate this summer. Thank you.

GWP

New Orleans, La. July 28 1952

Dear friend Prescott,

Please let me know by return mail when you will leave Big Fork, and when you will arrive in Point Barrow; also your exact address in Alaska.

I have just about finished typing the rough copy of the final draft of our N. Australian paper, and am going to submit it to you for criticism, corrections, additions, deletions, emendations, etc. etc. After you return it to me I shall have it copied by a professional typist. After looking over my MS you would hardly believe that I used to be an expert typist 45 years ago, in the foreign correspondence department of a large import house in London, Eng. But that's a fact. I learned my two-finger system on an old Oliver typewriter. Can you remember that far back?

Ruth Patrick's section on distoms will have to be cast as a separate chapter in the book. Probably that will be her advantage, because the reprints are going to be expensive, and no doubt she will be able to get reprints only of her own work. We are supposed to get 50 (or it may be 100) reprints free. So far I have 93 typewritten pages of text, plus 28 for the plate descriptions, plus another 7 or 8 for the bibliography, or a total of about 128 sheets. And by the way, is it necessary to list every reference in the bibliography? I hardly think so.

I note that in a dozen places you have given 1893 as the date of Turner's F.W. Algae W. India. The correct date, given in the book itself, is 1892, and that is how it is listed in Nordstadt's Index, and in Krieger's bibliography. If your records show 1893, you had better correct them.

Sincerely,





AIR MAIL-POSTAL CARD

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



AIR MAIL-POSTAL CARD

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

Dear Friend, Mr. Scott: Have just had a word from Bill Wade. Apparently *Anabaena oscillarioides* *fa. globosa* Playfair as given in Geitler, is a mistake for *fa. torulosa* Playfair. Geitler gives only vegetative cells measurements, but Playfair's original description mentions a character which would keep this from being *fa. torulosa* (by this form, I mean our Australian plant). Ours agrees with Geitler, but not with Playfair. So will you please delete the part of the name (*fa. globosa*) in the text and in the plate description, and name our plant simply *Anabaena oscillarioides* Bory 1822, p. 308. In *Dictionnaire d'histoire naturelle, Paris. 1822-1831.*

Prescott

Dear Mr. Scott: If it is not too late, and if it is not too much trouble I would appreciate it if you could return my plate No. 24 (your number) for some additional corrections. I note some figures which deserve to be repaired. I hesitate to bother you- but I would like to have these plates in good shape and I am not proud at all of this plate. If they have already been processed, it is OK and I would not want to have it cut over again. Your figures come out very well and the size of line you used is very good. Much obliged if you can send this plate back

Univ. Montana Biol. Sta  
Big Fork, Montana

Cordially,

G W Prescott

MONTANA STATE UNIVERSITY

MISSOULA

Dear Friend Scott:

A, still waiting for references and iconography to recheck desmid species. Mr. Wade has written that he is sending material which may help to answer some of the questions you raised. At present I offer:

*Spinoclosterium* (Ball.) Hirano. **Some new or noteworthy desmids from Japan.**  
#p.1, f. 5. In Acta Phytotax. et Geobot., 14(1): 1-4. Figs. 1-11. 1949.

I am having to write to a library to check *Anabaena oscillarioides* *fa. globosa* Playfair. Wade cannot find a paper in my reprint collection which contains this form. The name I used was obtained from Geitker's *Cyanophyceae* in the Pascher Handbook series.

One time we had a desmid which reminds me of the inclosed figure. I do not have the plates in which you illustrated this. I believe we called it a *Euastrum*. I am sending it along for your checking to see whether my memory is faulty. Just now I cannot remember the details-only that it was an elongate *Euastrum* with wavy folds in the wall.

More later. Hurriedly and with kind regards-

GWPrescott

7-29-52

MONTANA STATE UNIVERSITY  
MISSOULA

Aug. 1, 1952

Dear Friend Scott:

Just returned from a 2-day field trip over into the Whitefish Mountains and found your good letter and the reproductions of those most handsome *Micras-terias* species. Those are certainly splendid plants. May I keep the illustrations? What a gold-mine of interesting items that part of the world must be. And what a great deal of interesting scientific fun it would be to collect there. Too bad it is so far away- but may be Sachlan will get the material rounded up in fair shape.

You must be a busy man indeed getting so much of that retyping done. What are you doing about the descriptions of the forms in question- which I have still to write you about. Can you set up the manuscript without them? I hope to be able to write you soon. There is a notice that there is a registered package at the P.O. for me- so that may be the iconography which I wrote to have Bill Wade send so that I might discuss some of your questions with a little intelligence.

The date for Turner (I believe I am right) is 1893 for publication. The journal number is for the year 1892, but the journal was published in 1893. It is customary to give the date of publication of all papers and journals. *Pap. of Mich. Acad.* for example are always published a year later than the year for which they are published. If all authors would be consistent in giving the date of publication (which is the important date) there would not be irregularities. I shall check the Turner date again- but reference I have in my files is : 25(1892): 1-187. 23 pls. 1893.

Inasmuch as the work on the Australian desmids is not to be a monographic treatment in any sense, nor an intended report on all the algae of the region, but a report on those collections which happened to have been made on a particular expedition, I would agree with you that it is not necessary to give all the literature references for the species listed. It is certainly a helpful feature, however. I know that I always appreciate having a paper cited for a listed species if it is one in which I am especially interested and one on which I wish to obtain additional information. How near to being complete is the bibliography for the species references? Bill Wade cannot find *Anabaena oscillarioides* fa. *globosa* Playfair in any of the Playfair papers that I have either. I shall write to a library and try to check this further. Otherwise, reference to this form can be given as: Geitler, L. 1925. *Cyanophyceae*. Pascher's *Die Süßwasserflora Deutschlands, Österreichs und der Schweiz*. Heft 12. The page citation for this species is: p. 326. (It was reported from Australia according to Geitler). Geitler in his *Rabenhorst* volume gives rather full literature citations, but I do not have this. Will try to get it for the manuscript.

What a variety of interesting occupations and travels you have had. I do wish that I could visit with you more and to learn of your experiences. I would think that the position in a foreign correspondence department would be highly interesting and educational. I always envied the life of shipping

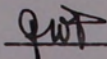
MONTANA STATE UNIVERSITY

MISSOULA

agents and foreign buyers as described in books I have read- Anthony Adverse for example.

You asked about my address in the near future. I shall be here until Aug. 14- and mail addressed to me here will be received up to and including that date as my plane does not leave until noon. After Aug. 14, all mail should be sent via air:  $\frac{1}{2}$  Arctic Research Laboratory, Point Barrow, Box 1310, Fairbanks, Alaska. I arrive there (strange to say, because I hardly expected such connections) at noon on Aug. 15. Somehow I cannot get accustomed to having Point Barrow just a suburb of Big Fork and only 24 hrs. away.

Best of luck to you- and my regrets at not being able to help you more.  
Yours truly,

  
\_\_\_\_\_

G. W. Prescott

Digitized by Hunt Institute for Botanical Documentation

Dec 12 1952

Dear Friend Prescott,

I am addressing this to Lansing, in the expectation that if you are not home already you soon will be, - that is if you didn't get frozen-in up in Alaska.

A couple of days ago I sent you by parcel post two packages containing 200 reprints of our Euastrum paper in *Hydrobiologia*. There were 50 free copies and 250 for which they charged \$63.68 as per the enclosed invoice, which I have paid. So you owe me \$43.46, which you may pay at your convenience.

I am glad to say that the Euastrum paper is much better composed than our *Micrasterias* paper in *Trans. Am. Microsc. Soc.*, which was pretty well messed up by the printers, Spahr & Glenn. I wrote to Dr. Brown complaining about it, but of course there's nothing that can be done now. The *Micrasterias* and Euastrum papers were typed in exactly the same style, so I don't think I am to blame.

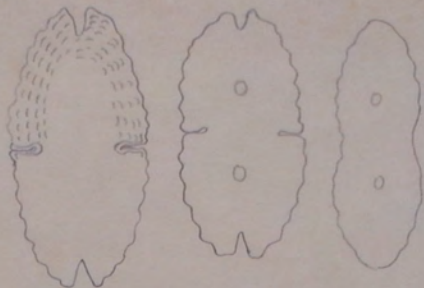
The North Australian paper was sent off about five weeks ago, so it ought to be just about arriving in Adelaide now. The editor, Mr. C. P. Mountford, hopes to send the botanical volume to press next spring, but I believe there has been considerable delay in printing the first one or two volumes of the official report of the Expedition, so our paper may not appear until 1954.

I have heard nothing from Ruth Patrick about the diatoms, so I suppose she has sent, or will send, her material directly to Mr. Mountford, and I mentioned this in my letter to him.

When you get time to write I should like to hear something about your travels and what you found up there near the North Pole. I am sure it must have been very interesting, but that climate wouldn't suit me. The wife and I are leaving Dec 20th for a two weeks trip to Florida, returning about Jan 3rd. I shall make some collections, but hardly expect to find any novelties; it seems that I have pretty well skimmed the cream off the Florida desmids.

Best regards from Mrs. Scott and myself for Christmas and the New Year.

Sincerely,



*Cosmarium spetsbergense* Nordst., ex Kossinskaja, E. K.  
Acta Inst. Bot. Acad. Sci. URSS. II, 1: 35-63.  
Pls. 1-6. 1933.

Aug 2 1952

Dear friend Prescott,

As requested, I am sending you herewith your Plate #24, and am also enclosing Plate #26. I hope you will not mind the small criticism, but on #26 the lines are not all of the same weight, and I am afraid that some of them are too thin and/or faint that they will not reproduce well. For instance, the right-hand margin of Fig. 13, the paramylon (?) granules on Fig. 11, and some of the marginal lines in Figs. 3, 4 and 14.

The bamboo tube is one of a bunch that Minoru Hirano sent me, with half-a-dozen small vials in each tube. A very neat and convenient way of packing them, don't you think? The bamboo is much stronger than cardboard tubes, which frequently are crushed in the mail.

Have noted the citation for Hirano's paper, but you didn't say whether you wish to make any changes or additions to your remarks on *Spiniclosterium cuspidatum*. I have left a blank page in the paper for this species, so you can make any changes that you want.

The typing of the paper itself is finished, except for the unsettled questions that I referred to you, and except for the Latin diagnoses for the second half, not yet received from Crossdale. I have left spaces for them, to be inserted later. Now I am going through the paper, and checking all plate and figure numbers, also habitats, with my original drawings, to make sure there is no error. When this is done I will send you a copy of the paper for criticism.

Here's another question that is bothering me. I have grouped all the desmids under the heading *DESMIDIACEAE*. But there are two genera, *Metrium* and *Gonatoxygon*, which belong to other families, though they are commonly called desmids. Is it necessary to use separate headings for these two genera, *MYCOTAEIACEAE* and *GONATOXYGACEAE*? Or would it be better to use the one heading *DESMIDIALES*?

The *Musstrum* that you had in mind, which is somewhat though distantly similar to *Comastrium spetsbergense*, is *Musstrum invaginatum* Presc. & Scott sp. nov. It is included in our *Musstrum* paper to be published in *Hydrobiologia*. I returned the corrected galley proof of this last Fall, and hoped it would have been printed in an early 1952 issue. But Prof. van Oye devoted the first 2 issues of the 1952 volume to Ireneé-Marie's paper on Lake St. John. I am writing van Oye today to find out if he can tell me when it will appear, and to get the complete citation for the bibliography of our Australian paper, because there is one desmid, *M. Turneri* var. *strictum* P & S comb. nov., that appears in the Australian collections.

Ireneé-Marie wrote me that it was at first proposed to publish his paper in about 10 installments, but Prof. van Oye decided that it would be better to publish it all in one. I am glad that he did so, even though it postpones our paper, because having all Ireneé-Marie's plants in one lot makes it much more valuable for reference. He has a lot of desmids that I have found in my territory, and has anticipated me in publishing a few new species and varieties. But that is to be expected, of course.

Sincerely,



To American Embassy  
Quito, Ecuador  
Jan 3, 1953

Dear H. Scott:

I have just received your good letter of Dec 12 - forwarded to me here (with inclosed statement from junk). I shall have this paid (43.46) through my research fund (if there is any left) and have forwarded a requisition. So you should receive check soon - if not I shall certainly be glad to meet the bill pronto. Thanks very much. Was glad to hear about the paper & am looking forward to seeing it. According to your letter you are this day just getting back from what I hope was a pleasant vacation. I imagine you have pretty well sampled Florida - but it is a rich state and has many possibilities. I have a request from Guggenheim to recommend a man (Gustafson) to do collecting & research in Florida. I think I shall mention that the *Psoralea* have been pretty well taken care of. We should capitalize on anything new that shows up.

I do hope that Patricia comes through with her manuscript. Have you written her lately? She probably needs to be jiggled - as spread out as she is in her work.

I wrote you a short letter telling a little about the Point Sanson work - a letter which probably arrived during your absence. Our collecting during the last 2 months was mostly for limnological samples - the algae having all but disappeared - and well they

showed under 3 feet of ice. It was all very interesting but I am thankful it is over and that I am back in the land where the sun shines. There were a number of types of habitats acid enough to favor desmids and I collected them for all they were worth. The number of genera is small - no Microtrichia at all on the Arctic slope - few Eucasta - mostly Closterium, Coscinonema, Pleurotaenium and a few Staurosetia (very few). I am going to work them up as soon as possible.

Here we are vegetating, getting acclimated and overhauling our gear for the first trip into the Mts. Quims itself is 9500+ ft high so we have to learn to breathe all over again. I am going first to the Oriente to the slopes of Vol. Saracco and then to Vol. Cayambe. This will be a rugged going but will take the slow. My assistant was pretty much knocked out by the change in alt., food, water, etc. - although he is quite a husky - and will have to give him time to get squared around before striking out. This is turning out to be quite an expensive venture and I only hope we will have some interesting results to show for it all.

I would be very glad to hear from you and of your vacation results when you get time. Address: 703 American Embassy, Quito

My kind regards to you and Mrs. Scott and best wishes (though late) for the New Year.

Cordially  
G. W. Prescott

Jan 17 1953

Dear friend Prescott,

Of course Mrs. Scott and I were very much disappointed that you could not stop off in New Orleans on your way South, but since you are apparently on a Government mission you naturally have to travel by whatever means and route they prescribe. Perhaps you will have an opportunity to visit us on your way back, and I surely hope so.

Our trip to Florida was very enjoyable and we got as far as Key West which we had not seen before. The drive along the Florida Keys of about 100 miles was interesting, but there is not a drop of fresh water on them, except maybe some temporary rain pools during the wet season. Desmid collecting on the mainland was not very good because of a prolonged drought, and also a freeze about a week before our trip. Nevertheless I brought back 16 jars of material from localities in which I had not previously collected. Several of them were quite rich in desmids, but I have found nothing that is not contained in my former collections. So I am keeping only one of them, which has a few isolated cells and semicells of the extremely rare Desmidium curvatum Nordst., (Mateola acutiloba Salisb.), of which I have previously seen only two isolated semicells in something like 500 gatherings from Florida. The results, therefore, were disappointing again, but I shall continue collecting in Florida each time that we go there. There must be literally millions of suitable desmid habitats and in any one of them there is always the chance of finding something new. So it would be well to tell Gustafson, as you suggest, that the desmids have been taken care of. Grönblad is working actively on my stuff, and has returned my drawings of the genus Arthrodesmus with many notes and queries and requests for further information, particularly regarding the chloroplasts. Previously I had not thought that the chloroplasts were of much taxonomic importance, except in a few species of Cosmarium like C. bonnatum and C. pseudobonnatum, but he seems to attach much more importance to them, so now I have to try to find more specimens to get the information that he wants. And of course, when you want to find a certain desmid in a vial where you know it to be present, it sometimes takes many hours to turn up an example.

As you suggested, I have written Ruth Patrick asking if she has finished her paper on the North Australian diatoms, and if so whether she has sent it to the editor in Australia. I don't know whether she will reply. Many years ago I scratched her name from my correspondence list because she did not answer letters and neglected to acknowledge samples and sketches of diatoms that I sent her.

I hear occasionally from Sachlan, and a couple of months ago he sent me two tubes of material from Borneo, containing the very pretty M. Torreyi var. Doveri, exactly like the Indian specimens as copied by Krieger from Biswas. At Christmas he sent me a card with a snapshot of his family, wife and two small children, very nice-looking people. It rather surprised me to see that he is older than I thought; somehow I had formed the idea that he was in his early twenties, but the picture shows greying hair, and I judge that he must be 35 to 40 years old. Formerly I had been uncertain whether the name Sachlan was Dutch or Indonesian; it turns out that he is Indonesian, no doubt Javanese. Off and on I have been working on his material, and have more than 300 drawings of desmids, but so far I have been picking out the more unusual ones, and have neglected the "common or garden varieties". With the return of warmer weather next month I hope to get down to business and start working systematically on his collections.

Lately I have exchanged a few letters with Mr. F. C. Müller-Melchers of Estacion Atlantida, a few miles from Montevideo, Uruguay, and he has kindly sent me a few samples from that neighborhood. So far they are not very rich in desmids, being more on the diatomaceous side. But I felt obliged to promise that I would not publish

any of the Uruguayan desmids, because Müller-Melchers is a close friend of Ricardo Thomsen, who has a large series of unpublished drawings of desmids. Thomsen is 75 years old, and rather "difficult" to use Müller-Melcher's expression. So I have asked him to try to get Thomsen to send these drawings to some specialist for working up, and in his last letter he said that Thomsen has been thinking of sending them to Krieger.

I have also made contact with a limnologist in Belém, Brazil, near the mouth of the Amazon, who wrote in his last letter that he would send me some samples of plankton collections. Such material ought to be highly interesting, but I'll believe it when I see them, for such promises do not always materialize. I had some promises of more collections from North Australia, and also from West Australia, but none of them have shown up yet.

According to your letter, your explorations in Ecuador will be principally confined to the mountainous regions. While you are there it might be possible for you to arrange with some local collector to get material from the low-lying regions of Eastern Ecuador, down towards the Amazon basin. According to the map this region is uninhabited, at least no towns are shown there, but presumably collectors go there once in a while. If you could find someone, I would be willing to contribute say \$50.00 for a series of 2 dozen gatherings. Naturally you would have to give him some pointers on the best methods of collecting, and how to recognize suitable desmid habitats.

That's all for the present. I hope that you have lots of luck in your explorations, and that you can persuade MATS to let you off in New Orleans on your return trip.

Sincerely,

2824 Dante St.  
New Orleans La.  
Feb 2 1953

Dear friend Prescott,

Just had a reply from Ruth Patrick, as follows:

"I have about completed the determination of the diatoms. My difficulty is in producing plates, and I fear that if you want the paper sent in shortly it will not be possible to have illustrations of any but the new species. Please tell me your feelings in the matter".

I have answered that I cannot make the decision myself, and that I have written by airmail to Ray Specht asking for his opinion and that of the editor, and telling him that I get the impression that Mrs. Patrick is unwilling to illustrate the "common or garden" species, which of course is unusual in a small paper.

Also I have an acknowledgement of the Arnhem Land Ms. and plates from the editor, Mr. C. P. Mountford, thanking and congratulating us "On such an outstanding piece of research and the excellence of the illustrations". I think this is a feather in both our caps, eh what? Specht has taken the duplicate copy of the Ms. to look it over, and I have asked him, if he finds any erroneous statements or ones that could be improved, to make any changes or emendations that he may think necessary, in view of his special knowledge of the region.

I took advantage of your kind offer and showed the authorship of the paper as Scott and Prescott.

Sincerely,

To American Embassy

Quito, Ecuador

Feb. 13 1953

Dear Friend Scott:

Congratulations! At least you were able to get a letter from Ruth Patrick. It is quite a while past June, 1952 when she was going to have the manuscript turned in (with plates). But she is a bung woman and like the rest of us sometimes she promises more than she can deliver. I shall be interested in knowing what Dr. Spracht decides.

Naturally I am glad to learn that the Arnhem-land Mts. was acceptable. When will it be published?

I found your letter of Feb. 2 upon returning from a very arduous (to put it lightly) trip into the mountains - going this time to the opposite side of the eastern cordillera. Of the two lakes I had in view we reached only 1 - the higher and therefore more interesting one for me. I was weaving about under a severe case of dysentery on the trip and could not put as much into it as I should have - but I did get some good collections - and I think, some diamonds from some kanying bags.

I know of no one that could be expected to collect on the Amazon lowland side of the mts. That country really should be looked into, too. I may try to get over there myself. Transportation is my biggest problem. There is a road now

over to the land of the febrons and if I have any luck I shall get some kind of a vehicle and get down into the basin? As I visualize it - and judging from pictures - any water is likely to be deeply shaded and hence not very favorable for algae. But it would be highly worth while to investigate.

Have you received payment for reports yet? Let me know if it does not come through soon. A check should be on the way if not already there.

This is magnificent country and I am doing my best to incorporate a little of it on film and in bottles. Very difficult for moving about - scarcely any roads and expensive to make when one has no car. The whole nation is one great national Park as far as scenery is concerned.

Hope you and Mr. Scott are well. Let me hear from you again.

With kind regards

G. W. Prescott

Feb 27 1953

Dear friend Prescott,

I have just received a reply from Ray Specht in Australia, reading in part as follows:

#There have been some further delays in the publishing of the Arnhem Land Expedition reports. It looks as if the volume on botany will be delayed until the end of the year. This may give Dr. Patrick the opportunity to complete the illustrations of all species of diatoms, - a highly desirable thing in view of the dearth of literature on algae in Australia, especially when Dr. Patrick is such an expert in this field. However, if she feels loath to illustrate the 'common or garden' species, which are copiously illustrated in other journals, I sympathize with her position. Valuable though complete illustrations may be to Australian botany, she may feel that it is a waste of time".

I have sent Ruth Patrick a copy as above, and told her that it is now up to her to decide what she wants to do. Also I sent her carbon copies of the first few pages of our Ms, giving the introduction and a few pages of the descriptions, to show her the style of typography that is to be used.

In the current issue of "Science" there is a note that the National Science Foundation has approved a grant to the Nat. Acad. of Sci., Philadelphia, of THIRTYONE THOUSAND FIVE HUNDRED DOLLARS !!!!!!!!!!!!! for the study of freshwater diatoms of the U.S., over a period of 3 years, under the direction of Ruth Patrick. So it looks as if she will be busier than ever, and probably won't even consider drawing illustrations of the common diatoms.

She ought to be able to find a hell of a lot of diatoms for that money, which must be by far the largest amount ever appropriated for that purpose. When you get back to civilization you had better start pulling strings in Washington to get an equal amount for the study of desmids of the U.S.

With best regards,



2824 Dante St  
New Orleans 18, La.  
Feb 28 1953

Dear friend Prescott,

The check for \$43.46 from Mich. State College arrived this morning, just 24 hours after I mailed my letter yesterday. Many thanks.

I forgot to say that in Specht's letter he mentions that our first paper, on South Australian desmids, was published by the Royal Society of S. Australia about the end of January, and that the reprints ought to be on the way soon. He adds a note that is rather disturbing, that the plates were reproduced on scale considerably smaller than they had expected, but that they are quite clear. I wonder what that means?

My wife and I had mild cases of dysentery in Mexico a number of years ago, so I know what it means, and I can hardly imagine you climbing around the Andes while suffering from a severe case of this annoying and debilitating complaint. We were told that it was caused by a combination of the high altitude and the different food, to which we were unaccustomed.

The new issue of the Phycological Society's Bulletin arrived today, and I see that there is under consideration a proposal to publish a journal jointly with the protozoologists. I think I should be in favor of such a move, though there would be little room in such a journal for my pets, the desmids. But at any rate it would be a start, and at some future date it may be possible to publish a journal of our own.

Also in the Taxonomic Index it is noted that a committee has been appointed to consider the feasibility of publishing a series of botanical monographs, in which the various groups would be treated, down to genera. I don't think much of this proposal; in the F.W. Algae there are several good works going that far. What is needed is more books like your magnificent book on the Western Great Lakes Area. When you get that \$30,000 grant from the National Science Foundation you can go to work on a monograph on the Desmids of the U.S.

That's all for now. I would send you a bottle of paregoric, but I'm sure that you will have recovered by the time this reaches you.

Sincerely,

of American Embassy  
Quito, Ecuador

3-3-53

Dear H. Scott:

Just got in from the woods (and the most beautiful orchid country I have ever seen) and found your 2 good letters. What a Banerjee for Ruth Patrick!! I suppose that \$30,000 includes publication costs too. Yes, I think I shall have to go after an "aid" for the desmids. We certainly need a monographic treatment of this group. My Ph.D. student, W. E. Wade and I have talked seriously of starting a monograph - in fact we have already started. Between the material that he and I have together - and the material you have from SE United States plus the Wisconsin records, a sizeable number of the desmids in this country are already under "control". Would you be interested in a cooperative enterprise?

On the contrary, I think there would be "room" for desmids in a journal published jointly with the protozoologists. They have much in common with micro-algologists - much more so than marine phycologists. Marine algae really do not pair off with protozoa at all & that group of phycologists who study marine algae constitute the greatest argument against having a joint publication. We are trying to work out a divisional plan of publication whereby proto-

P.S. Many thanks for the interesting new stamps you put on the last envelope.

zoologists and/or phycologists would not need to subscribe to the entire journal.

Yes, I agree with you that a monographic treatment of algal genera would not be very helpful - except possibly for Boulet's work on the families of blue-green algae. What we need is a series of monographs, genus by genus, of algal species.

I hope to see some reprints of our Australian paper by the time I get back - which certainly will not be long now. Have just had a good collecting trip in high country along the Colombian border. Some spots felt and looked like good desmid material - especially a hanging bog with *Sphognum* high on the paramo of Boladero (13,500 - 13,700 feet). A short time ago I made a quick trip (4 days) to the Oriente and got down to the Amazon basin country - where both the algae & the terrestrial flora were distinctly different. A few places had a pH of 5.5-6.5 and seemed rich in desmids. It is disconcerting to keep collecting without knowing what I am getting.

I hope Ruth Patrick takes the hint from the letter you sent & takes advantage of the delay so as to get all the desmids illustrated. She can do it if she just wanted to.

Best regards to you & Mrs. Scott - until later -

G. W. Prescott

Mch 20 1953

Dear friend Prescott,

Many thanks for the handsome One Sucre stamps on your last letter. There must be something special about the stamp, for I see that it was issued in 1939 in commemoration of the US Declaration of Independence, and then reissued in 1945 with an overprint "Llor a Chile". Anyway it is a curiosity that Sachlan will be glad to get. Can you pick up a few more pretty stamps while you are there?

What I meant by there not being "room" for desmids in a joint journal is that the Desmidiaceae are only one family out of maybe 100 in the FW algae, and the protozoologists probably have as many, so the space available for desmids would be very small. I agree that marine algae should not be included in such a journal. Of course I should be glad to subscribe to the publication, including the protozoological section, since I have a desultory interest in FW microfauna.

Your enquiry whether I would be interested in a cooperative enterprise in the publication of a treatise on the Desmids of the U.S. is highly flattering, and I think you know the answer in advance. It goes without saying that I should be literally dee-lighted, and ready to do anything in my power to assist. My principal contribution, I suppose, would be my collections, and drawings (more than 3000) of desmids from southeastern USA. But it would be useless to turn these over to you until Grönblad has worked them up and published them, because there are numerous differences of opinion between him, and you, and me, as to the determination of many of my specimens. Frequently he refers to European species or varieties that are unknown to me and that are not illustrated in my small supply of literature. On the other hand I can sometimes advance arguments to show that your and my identifications are correct; I have just sent him a full-page dissertation on the desmid that we know as *Cosm. quinarium*, which he wanted to identify as *C. polymorphum* var. *Paulense* or *C. Paulense* which two he says are identical. I hope I shall convince him that he is wrong on both counts. Just now I am trying to assemble arguments in the case of *St. grillatorium* var. *forcipigerum*, which he considers to belong to *St. saltans*.

Glad to know that you were able to get down into the Amazon basin and obtained some promising collections. If you could spare a small quantity of the material I should be tickled to death for the chance of examining it. Why don't you take a small microscope along on such trips? Edmund Scientific Corpn. is advertising an imported one, with triple nose-piece, 3 objectives and 1 eyepiece, magnifying up to 300x. Of course it is only a somewhat elaborated toy, but it would at least enable you to see what you are getting, and it costs only \$14.95, in a wooden case.

Please let me know your approximate date of leaving Ecuador. If you visit Costa Rica the natural way of returning would be through Guatemala and New Orleans. I strongly hope that you will be able to do so.

Sincerely,

May 27, 1953

Dear Friend Scott:

So very glad to get your letter today- the one which had travelled to Ecuador and back. I am feeling very 'low' for not having written you before this- especially since I have thought about it from day to day. The business of carrying on a full teaching schedule since returning and the job of unpacking, sorting and cataloging the pressed specimens and the algal vials have really keep me out of jail. On top of the ordinary duties I am finding that getting a daughter ready for a wedding requires a bit of time- more than I ever thought necessary- but since we have only one daughter she has, as usualy, occupied much of our thought. Please pardon me for being so quiet so long.

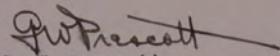
Naturally I am pleased that you are willing to join in on a project to 'do' the desmids. For this I anticipate needing some financial help and of having some sort of a tentative promise or arrangement for publication. I have been waiting for word from NSF on a proposal of extension of my present grant before sending them another proposal. It may be that my present proposal will be rejected- but that will not prevent us from submitting one for a study of desmids. However, I did not think it wise to have two proposals in at one time. As soon as I hear- which should certainly be soon, I shall forward a draft of a suggested proposal to you for your consideration. I am pleased that my man, W. E. Wade who did his Ph. D. work on desmids, has found a permanent position here on the college staff so that he will be able to work along with me and to make contributions from his many collections, drawings and records. When I make my proposal I am going to include as one of the objectives a study of desmid ecology as well as taxonomy. I do feel that with the combination of all y our material and ours here, plus the material which I can borrow from Taft, Croasdale, etc. that we could, in not too long a time, have the great majority of all N. A. desmidiaceae under control. By the time we get some definite plan made, either with NSF or some other, the identifications from Gronblad will have been received. We shall have to stand on our own judgement, I feel- using the identifications of others freely and charitably as long as we can, but at the same time feeling free to modify according to our own concepts. That is a prerogative that belongs to each individual of course.

When I get the Ecuador stuff onto the table for work I shall be very glad to send you chunks of the desmid-containing material. So far I have seen a few samples and have found a number that are right stimulating- although none that would come under the classification of 'rich.'

As I may have written you, my time ran out there in Ecuador and I had to hurry back in order to get here in good time- so I gave up the Costa Rica trip. I had heard that the regions I could reach were not satisfactory for my purposes anyway- being not alpine at all.

I am inclosing a few stamps which may be of interest to you. My kind regards to you and Mrs. Scott.

Cordially,

  
G. W. Prescott

June 20 1953

Dear friend Prescott,

My week-ends, Saturday and Sunday, are when I do most of my letter-writing, and lately it seems that each week there is something else that must be done. Recently we had the brick front of our house removed, because it was settling and pulling away from the rest of the frame building. That meant a lot of confusion and moving stuff around; in fact I have not yet straightened out all of my tools, machinery and other paraphernalia. Then there is a small job of painting to be done, or the plumbing to be fixed, or the attic fan to be attended to. That's what you get for being a 'handy-man', and in the 90 to 100° temperatures that we have had for the last month even the slightest exertion leaves me feeling like a limp rag and unfit for doing anything else.

I wonder how it feels to settle down to college life again, after roaming around for six months in some of the world's wildest regions. Quite difficult, I should imagine. And what an immense amount of work you must have ahead, reporting on all your gatherings from Alaska and Ecuador. And there's still more in prospect for you! My preliminary work on Sachlan's Indonesian collections is approaching the finish line, though there are still a lot of loose ends to be gathered up. For instance, I have spent 2 or 3 hours each night for a week, searching for a certain elusive Xanthidium, similar to *X. spinosum* (M&W) Josh., but twice as large, in order to get top and side views to go with the front view that is all I have been able to get so far. It is probably a new species.

By the way, Sachlan has enquired about you several times. If you get a chance drop him a line. Until the end of July he will be in Japan, where his Government sent him to study fish-culture. His address is % Consulate-General of Indonesia, Tokyo.

For the last couple of months I have had a suspicion that something had gone wrong with our first Australian paper, the one on South Australian desmids. In the early part of May I wrote the Secretary of the Royal Society of S.A., enquiring about it, and received a rather vague reply, saying that "to the best of his knowledge the reprints were on the way". Evidently he passed my letter on to the Society's editor, because a week later I received the enclosed letter from Mr. I. C. Symons, and just two days ago I received the single copy of the reprint that he sent by airmail, and which I am enclosing herewith. When you examine it I think you will be just as disgusted as I am about the way he has treated the plates of illustrations. The other 49 copies of the reprint that he has sent by parcel post will not arrive for another 5 or 6 weeks. It takes 7 or 8 weeks for ordinary mail from Australia.

So today I have written the editor as per the enclosed copy. If you think that my rather mild "cussing-out" is too strong, I can assure you that I had to exercise considerable self-restraint to refrain from using much stronger language. What I really think about the business is unprintable. By a fortunate chance, his error in ordering only 50 reprints instead of 275, and his offer of reprinting the paper, opens a way for inserting full-page plates in the new edition, and I hope that he can see his way to accept one of my two proposals. If he does not, it is my intention to have the entire paper reprinted in New Orleans.

Please return Mr. Symons' letter and also the reprint, which I must proof-read to see if there are any more typographical errors beyond the couple that I have already noticed.

Sincerely,

Univ. Montana Biol. Station,  
Big Fork, Montana

June 26, 1953

Dear Friend Scott:

When I opened your envelope this morning I had the same shock that you experienced and when I read your letter I felt a little better, for I found that you were giving me company and that you had forthrightly taken the editor to task. Your letter to be sure is quite a scolding but conservatively so under the circumstances. You are offering too generously, I think, in the matter of repairing the damage and I hope that you will permit me to share with the additional expense (although actually the authors should not be called upon to invest further in this publication). The casualties are to be placed at the door of the publishers. It certainly is a disappointment and a shame to see your fine plates reduced to (not even good) text figures, and I do hope that the editor will feel that it is possible to reprint with full sized page plates.

I have read through the reprint, making a few entries (attached) and a few corrections in the text. I am afraid you will have to be burdened with checking the manuscript (the reprint, I mean) inasmuch as you have the original manuscript (and the Latin). I appreciate the fact that the editor has offered to furnish us reprints for I would certainly like to have a fair number for distribution. Let me know if I can be of any help in this matter.

I feel for you and the distracting high temperature and I appreciate your taking time to write when you have been so busy. From all sections of the mid-west, east and south we hear the same report (hot weather) which makes me feel a little guilty as we bask in the delightful sunshine and cool clear skies (clear most of the time) in Montana. It is grand to be back here- but my nerves are a little frazzled trying to enjoy the country and my teaching work at the same time that I am trying to make myself do microscope work on the 1600 vials of algae which confront me. (I did not bring them all with me to be sure.)

Thank you for the address of Sachlan. I wrote him not long ago to his Indonesian address. I wonder how long he has been in Japan and whether he receive my letter. I shall write him again soon. How is the colossal Xanthidium coming? I hope you get it cornered and on record- but too bad to have to spend so much time. Those critters certainly tax ones patience.

In due time I would like to discuss the possibility of initiating a resume of the desmids of North America. My 'man', W. E. Wade is staying on at Michigan State College (in the Biology Department) so he will be close at hand for cooperation. He is quite eager to undertake a 'monograph' of North American Desmidiaceae and we would like to have your cooperation which you so kindly agreed to give when I wrote you about this before. Even before we have financial assistance promised, I am willing to begin the initial task (one which should be done anyway and one which is right in line with Brunel's and my interest in Index Desmidiacearum) of getting the literature all checked out and the species tabulated which would be included in such a monograph.

Best regards till later-

G. W. Purcell

July 8 1953

Dear friend Prescott,

Well, it looks like I've stirred up something done yonder in Australia, as you will see from the enclosed letters from Mr. Womersley, which you will please return to me. In some respects his letter to the Secretary of the Royal Society of S.A. is even stronger than mine to the Editor, and it certainly ought to get some action. Probably it may be some weeks before I hear any more about it, because the Council no doubt meets only once-in-a-while.

I have noted the typographical errors that you have marked in the paper, and several others. I shall give it a thorough proof-reading, against the time when the editor tells me what they propose to do. As regards the spelling of the names cynthia, dianae, venus, and cornu, I followed Krieger who does not capitalize them. I don't know his reason for discontinuing the capitalization, but in my own mind I reason that the first three of these names are derived from the names of mythological goddesses, not "persons" as in Recommendation XLIII of the 1935 International Botanical Congress. The derivation of cornu is unknown to me.

The name mahabuleshwarensis comes from a place-name, (a village in India, I believe), as is shown by the ending -ensis, which is never affixed to a personal name. Examples: michiganense, panamense, brasilienis, etc. But I have to admit, regretfully, that for years I have been spelling it wrongly mahabulash-- instead of mahabulesh--. And I find this strange, because I have had numerous occasions to refer to the text-books for this species and its many varieties. It will never happen again, I can promise you.

Minimissimus is correct, as far as I can ascertain, and Croasdale passed it without any objection.

While on this subject of orthography, Grönblad informed me recently that at the last Botanical Congress, a couple of years ago, a new recommendation was adopted, reading thus: "All specific and infraspecific epithets should be written with small initial letter, though authors desiring to use capital initial letters may do so when the epithets are directly derived from the names of persons (whether actual or mythical), or are vernacular (or barbaric) names, or are former generic names". This exact wording is not guaranteed, because it is probably a translation from French into Swedish into English. Grönblad got it from Prof. Nils Nylander, who he says is a Swedish nomenclature specialist. Accordingly Grönblad proposes to use small initial letters for specific and infraspecific names in his future publications, including those which he and I will publish jointly, and I have agreed to this proposal. Of course, I knew nothing about all this when I wrote the South Australian paper some two years or more ago.

1600 vials of algal material, WOW! I should think that would keep you busy for five years, working full time. Don't forget, when you run across some vials that are rich in desmids, or contain unusual forms, to put a little aside for me, particularly those from Ecuador. Just a week ago I received from Dr. Krieger two small samples from Lake Victoria in East Africa, not for publication of course, just for my pleasure and information. They are plankton samples, apparently, and contain only a limited quantity and selection of desmids, most of which are unknown to me. There are a dozen species of Staurastrum, two of Cosmarium, one of Closterium, and I have seen a single specimen of Arthrodesmus; quite a strange assortment of genera. The most striking feature of the material is the extraordinary abundance of Pediastrum, principally P. clathratum in three differing forms, and three or four other species. I have never seen Pediastrum so plentiful.

With best regards; Sincerely,



Univ. Montana Biol. Station  
Big Fork, Montana

July 13, 1953

Dear Friend Scott:

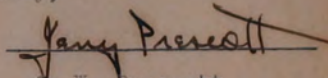
The editor is certainly being taken to task- and it will be interesting now to see what rearrangements and corrections may be forthcoming. I am inclosing the letters relating to the matter. I do hope that there can be some readjustment which will be more satisfactory to all concerned.

In respect to the changing of small to caps for the species names, I believe I made the suggestion because some of the species names were capitalized. If some are, then all that are derived from personal (proper) names and genera should be capitalized for uniformity and consistency. Was that not the case? I cannot remember which ones were capitalized now, but as I recall, some were. Hence, Diana, Venus, Cynthia would be capitalized (if the authors so wished). I have a recollection of reading some place that Mahabuleshwarsensis comes from "Son of the Mahab" or son of the city mayor (or what ever the head mogul of an Indian village is called). In any case, I am in favor of consistency- whatever plan is used.

Have just come upon an almost 'pure' collection of Closterium turgidum from a small wayside swamp in Ecuador. The smallest cells are 1100  $\mu$  long and I find some which are 1250  $\mu$  long- very noble plants. I shall set some aside for you if you would like to see them. Am slowly working through the collections. Some require only 15 minutes; some require several evenings of microscope work- and even then are not assuredly completely gone over.

I dare say you are still mighty uncomfortable with the heat there in the south. It was 104 deg. at Missoula yesterday and of course we felt it a little here near the mountains. But having the lake at our doorstep makes all the difference in the world. It makes me a little impatient with some individuals who keep growling about the 'heat' here when they are really in an ideal spot and a place where millions of people would give almost anything to be these days.

Best regards to you and Mrs. Scott. Cordially,

  
G. W. Prescott

July 28 1953

Dear friend Prescott,

Thanks for your letter of the 13th, and your offer to send me some of the material containing the very large specimens of Cl. turgidum. From the size I should judge that they are either var. Borgei or var. giganteum, the former having been reported from Brazil, and the latter from Ecuador, Colombia, Brazil and Paraguay, also from Louisiana. I have not seen var. giganteum from Louisiana, but I do have a gathering from southwest La. containing what I take to be var. Borgei, running from 930 to 1210 long. It would be interesting to compare your plants to mine and see how they correspond.

Dr. Krieger kindly sent me two samples from Lake Victoria in Uganda, which are the first I have seen from the African continent, and I should be glad to send you a small quantity if you would like to see them. They are evidently plankton gatherings, with diatoms as the principal item, Melosira, Surirella and Cymatopleura; next comes an unusual abundance of Pediastra, 3 different forms of P. clathratum of very large size, which you might like to compare with American forms of P. simplex var. duodenarium. The desmids are not very numerous, but a curious assortment of genera; about a dozen species of Staurastrum few of which I can identify, 2 species of Cosmarium, 1 of Closterium, and I have seen a single specimen of Arthrodesmus. One interesting item is St. leptocladum without the two apical spines, which I have never seen before. West & West, also G.M. Smith, did not believe in the existence of a spineless form of St. leptocladum, and accordingly refused to recognize Wille's var. cornutum.

I have heard nothing from the Australian editor, nor have the 50 reprints arrived, so we just have to wait. However, I have a letter from Ray Specht who has sent me 7 tubes of new collections. One of them, from another lagoon near Oenpelli, he says is "teeming" with desmids, and another from Groote Eylandt, in the Gulf of Carpentaria, is somewhat less rich. The other 5 were gathered in the neighborhood of Alice Springs, almost in the center of the Australian continent, surrounded by hundreds of miles of arid country. From his description I don't expect too much from these 5, but it is almost certain that no algal collections have ever been made there before, and it will be interesting to see what turns up. Specht also says that publication of the results of the 1948 Expedition is proceeding slowly but surely, but that he expects that the botanical volume No. 3, will not appear until 1954. He asks again what Ruth Patrick is doing with the diatoms, so apparently she has not written to anyone in Australia, nor sent anything. Do you think you can stir her up? I don't want to write her any more, and I shall certainly never again send her any diatom material.

Specht says that if we find any additional desmids (or other algae) he would like to see them in a supplemental report to be published simultaneously and in the same volume as our long paper, or perhaps ( $\frac{1}{2}$ ) incorporated in it. The latter would not be possible without rewriting the whole paper to arrange the additional items in ~~their~~ their proper generic and alphabetical order, and I sure would not feel like doing that.

Did you know that Hannah Crossdale is going to Finland next month, to visit Rolf Grönblad? I knew that he has been working up some of her desmid material from New Hampshire, but the trip seems rather surprising, for it is an expensive one.

I am sorry that in my last letter I failed to respond to your remarks on the proposed monograph on Desmids of North America. I feel greatly honored that you should invite me to collaborate in this work, but must confess that I am quite in the dark as to what part I can play. Please let me know your ideas about this, and tell me if there

at the present time. Confidentially, I may tell you that I expect to retire from business at the end of this year, which will give me plenty of time for my hobby, but will also mean that I shall not be able to spend money on it as freely as I have done for the last 15 years, because my income will be greatly reduced. Teiling retired from his professorship last month, and Krieger also is living on a pension. I don't know whether Grönblad is retired or not; he never tells me anything about his personal affairs.

With my best regards,

Sincerely yours,

Sept 20 1953

Dear friend Prescott,

Enclosed is a drawing of the strange desmid that I mentioned on the phone yesterday, and in a box that is going under separate cover there is a vial with a very small quantity of the material containing it. The desmid (if it is a desmid) is rather rare, but you should be able to find a few examples. I have now seen 25 or more specimens, all of which are built according to the same plan, with only the usual minor variation in size and the spination of the processes. There is no evidence of any abnormality in any of the plants.

The two different semicells are a feature quite unique in the Desmidiaceae, and for this reason, as well as its unusually elaborate structure, I think it is worthy of a new genus, though obviously it could be fitted into *Staurostrum*. Other closely allied genera are differentiated on purely morphological grounds, I believe, for instance *Penium* and *Cosmarium*, *Tetmemorus* and *Euastrum*, *Arthrodesmus* and *Xanthidium*. But in the present case far more than morphology is involved; there are problems in genetics, physiology, and perhaps cytology which will be quite troublesome to solve, I think. Since I know nothing of these branches of botanical science I cannot attempt to discuss them. It would be quite interesting to see some specimens in the process of division, but so far none have shown up.

Some years ago I saw in one of my Florida collections an unidentified object that I now realize must have been quite similar to the present plant, if not identical with it. The only specimen that I saw was so badly entangled in mucus and debris that I was unable to ascertain its structure accurately, and to draw it was out of the question. I came to the conclusion that it could not be a desmid, and reluctantly had to abandon it as another of the mysterious things that I see under the microscope. I did not record it, and don't know what collection it came from, but maybe it will show up again in Florida one of these days.

I am asking three of my friends, you and Grönblad and Krieger, whose opinions I value most highly, to tell me what they think of this curiosity, and whether or not my proposal for a new genus is justified. I think you would agree, but G. & K. are sceptical of new genera. However this plant may make them receptive to the proposal.

The collections that I received from Brazil are from two general regions. One is the upper Rio Negro, not far from the extreme southern boundary of Venezuela. I had high hopes of this material, because it is from a little known region, where almost certainly no algal gatherings have been made before. Regrettably all of these collections are either completely devoid of desmids, or contain only a very few specimens of small featureless *Cosmaria*, a couple of small *Closteria*, and a small *Staurostrum*. It is hard to imagine the reason for this; perhaps an unsuitable collecting method, and/or highly acid water, pH 4.5, 4.4, 4.1 and perhaps even lower, since 4.1 seems to have been the lower limit of the testing apparatus.

The other lot comes from the lower Rio Tapajoz, the same area that provided the collections that Grönblad described in his Brazilian paper. In fact some of the place-names are also mentioned in G.'s paper, such as Rio Tapajoz, Rio Arapiuns, Igarapé Assu. So it is obviously the right thing for me to do, to work with him on this material. These gatherings are of uneven quality, a few are barren of desmids or nearly so; some have few desmids but quite interesting ones; and there is one extremely rich, of which I am sending you a sample. I will not attempt to enumerate the curiosities, most of

which you will find in Grönblad's paper, but you should be on the lookout for some rareties like *Cyanozyga armata*, *Spondylosium desmidiiforme*, and *Doecidium hexagonum*.

The box also contains the two North Australian collections from Arnhem Land, which Ray Specht wants us either to incorporate in our completed paper, or else to add as a supplement to it. I wrote him that incorporation would mean entirely rewriting the paper, an undertaking that I should not care for at all. It would, however, be perfectly feasible to sub-title the existing paper Part I, and the supplement Part II, and publish them consecutively in the Botanical Volume of the Official Report. The man who made the new collection from Oepelli, Jim Blyth, has promised to get more stuff for us, and since the Oepelli region is proving so extremely rich in desmids, perhaps it might be desirable to hold up publication of these two collections until we get some more. But then it would probably not be possible to get them into the Official Report, as Specht naturally desires. I wrote him about this also, and asked him to let me know what we should do. However, I am starting on the desmids, and would like you to work on the other algae as soon as you get a chance. If you find anything not listed in the existing paper, it will be necessary to make drawings of them. If you have space left on a plate of illustrations, I can fill it up with desmids, of which I guess there may be 30 or more forms that did not appear in the previous material. Please tell me what you think of the very large triangular *Euastrum* in the Oepelli tube. It is possibly the second largest *Euastrum* known, only exceeded by *E. giganteum*, I believe. In front view it looks like *E. latipes*, but the side view is quite different; I have not yet been able to get the top view.

The two green bottles contain the larger filamentous algae, fragments of macrophytes, etc., which I strained out so that I could work more conveniently ~~from~~ on the desmids. The fine material is in two small vials.

A couple of months ago I heard from the Editor of the Trans. Roy. Soc. of A. Austr., to the effect that the Council of the Society had agreed to a reprinting of our paper, with full-page plates. My original drawings had either been destroyed, or were not usable, but I had sent a set of blueprints to Womersley when the paper was submitted, and the printer was able to use a reversal process to make cuts, and the proof of one plate that the Editor sent me looked very nice. So I sent them a check for \$73.00 to cover the cost of reprinting 275 copies, 75 for me and 200 for you. This was much higher than I expected, especially as the Editor said he was not charging for the cost of typesetting, but it was the only I could see of getting out of the mess. The reprints of the original paper were never mailed, since the Editor thought they would be of no value to us, but I told him we should at least have a few copies as records, and asked him to send 10 to me and 20 to you. I also asked him to send me a proof of the new paper for checking, because there were at least 100 typographical errors in the original; a horrible mess.

With best regards,

Yours sincerely,

P.S. You will need a deep cell for examining and manipulating the new Brazilian desmid. It is nearly 200  $\mu$  long.

P.S. #2. I am sending you some tracing cloth, which belonged to an engineer friend of mine, who died recently.

Sept 22 1953

Dear friend Prescott,

When I came home tonight there was another letter from Ray Specht, saying that 14 more collections from North Australia are on the way to me. Two of them are from Groote Eylandt in the Gulf of Carpentaria, the others seem to be from the region of Darwin, though most of the place-names are not shown on my map.

Specht agrees that with these new collections, there would be no chance of writing a supplementary paper in time to be included in the Botanical Volume of the Report; so for the present my examination, and yours, of the two gatherings that I sent you two days ago, are OFF. If any of this new material is as rich as that from Oenpelli it will mean another large paper.

Now I can go back to Sachlan's Indonesian material, and try to complete my study of the stuff that I now have on hand. But he also intimates, in a recent letter, that there may be some more collections coming from Borneo!

For several years I have conducted a "mail campaign" to get desmids from far-off tropical lands. Not all of my efforts have been successful, by a long shot. But three of them have paid off in a big way: Indonesia, Australia, and Brazil, three of the richest regions in the world, and with some of the strangest desmids.

Sincerely yours,

MICHIGAN STATE COLLEGE  
EAST LANSING

October 2, 1953

DEPARTMENT OF BOTANY AND  
PLANT PATHOLOGY

Dear Friend Scott:

You certainly hit 'the jack-pot' with that Brazilian desmid. Such 'critters' just do not exist- and yet there it is. Have just found a couple of specimens in the process of cell division, with the two semicells showing the differentiation as you have noted. This precludes any idea that the differentiation is related to age of the two semicells. After seeing your drawing and before receiving the specimens I naturally considered the obvious possibility that the difference might be in some way related to age. This seems to me to be a clear case of 'polarity', unique in the desmids as far as morphology is concerned. Yet, physiological polarity might well exist without our having an opportunity to see its outward expression. This has an interesting evolutionary significance- at least it incites speculation- that here is an example of a 'move' toward the so-called higher Zygnematales in which polarity is highly conceivable inasmuch as one end of a filament is the one which emerges from the spore first and which would represent the apex or the anterior 'pole' of the plant. It certainly is a beautiful thing and you have an excellent record of it. I was able to find but few plants- but certainly enough to give a very good idea. What we need now (ideally) is some living material so that the process of cell division and growth might be observed. In cell division, the semicell without the crown must continue to exist without this character, whereas the new semicell becomes the portion with the polar process. At the same time, the other new semicell formed by the portion that possesses the polar process (and a mate to the other new semicell) develops (theoretically) without the process. Hence the 'region of dominance' is always kept in the same direction or plane. I shall have to sleep over this plant and speculate on it a bit. I shall certainly be interested in learning what Grönblad thinks of it. I sincerely wish we might have zygospores and/or living material to study. I am very grateful to you for sending me the material and I hope you can get the 'thing' worked up soon for publication. Also I am grateful for the package of tracing cloth which I can use to very good advantage. It is very fine material and the grade that I like for making plates.

I have started on the filamentous and miscellaneous forms in the Australian collections. The samples are generous, but I find not too many filamentous species so it should not take too long to get them on record. The Oedogonium species are fruiting nicely, but are rare and they require repeated sampling to get the story. I note at least two fruiting Spirogyra also. At least one sample has an interesting mixture of desmids with (at first glance) some new species in the Triploceras or Pleurotaenium group. I don't know where they belong- more like Pleurotaenium (at least two of them are) and yet have a Triploceras feature or two. I am making records of some of them just in case they happen to be uncommon enough that you might by chance miss them in your examination.

The new Brazilian desmid will have to be a new genus (almost a new family<sup>o</sup> or will call for an emending of the family description). Certainly glad you found this plant- it makes collecting and the examination of collections really 'pay off' or certainly compensates for the long tedious hours of working over garden varieties.

Ruth Patrick (now having become elected Pres. of the Phyc. Soc.) probably will never have time to finish her study of diatoms- let alone to answer my letter. I wrote her some time ago but as yet have received no reply. Shall try again soon if I get no word.

MICHIGAN STATE COLLEGE  
EAST LANSING

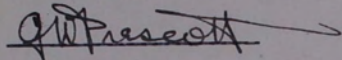
DEPARTMENT OF BOTANY AND  
PLANT PATHOLOGY

If she does not come across soon I think the report on algae should go to press with her name listed above a blank page.

Naturally, I am very glad to learn of the adjustments being made in the publication of the Australian paper (and the plates). You should not have had to pay for the reprinting- but inasmuch as you have I wish you would let me assist in this. Let me know when the ms. or proof is returned. Also I will want to pay for the reprints which you have ordered.

Thanks for your good letter and the supplies. I hope the weather has let up on you a bit. We are still having high summer temperatures here which make it difficult to stay indoors- especially when there is so much work I should be doing about the place at home. Please give my regards to Mrs. Scott.

Yours truly,



G. W. Prescott



MICHIGAN STATE COLLEGE  
EAST LANSING

Oct. 13, 1953

DEPARTMENT OF BOTANY AND  
PLANT PATHOLOGY

Dear Friend Scott:

I can scarcely get through the Australian samples for a study of the miscellaneous algae because of the fascinating desmids which I have to stop and examine (drawing some of them). They certainly are beautiful and odd. I know you must be enjoying going over them.

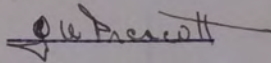
At present I cannot find a copy of the manuscript of the forms we previously reported (probably I do not have it). Do you know whether I should have a copy? I wish to have a list of the forms I included in the previous examination of samples so as to know which ones to include on plates illustrating the additional forms. If you have a list of species (or a copy of the manuscript) which you can lend me I would appreciate it very much. I think with a few more mounts I will have completed the examination of the samples you sent.

Have had a good letter from Hannah Croasdale. She has been having some very pleasant and profitable visits in Scandinavia and writes enthusiastically about Grönblad. He has been very helpful as well as very courteous apparently.

Have just received a great shipment of prepared mounts of desmids from Prof. Kincaid (ex Univ. Washington). These were put up very carefully by him because he was interested in desmids, but nothing was ever done about their identification. Some of them have become dried and distorted but most of them are still in excellent condition and will be very useful for distribution studies (and our hoped-for treatment of N. A. Desmidiaceae). Unfortunately, in such mounts the specimen cannot be rolled and identification must be made from one view (if at all). He sent, in all, about 1300 slides. I do not suppose that they represent 1300 species but cannot tell until they have been examined.

Hope you are getting along fine now. The weather should be more pleasant down there. Wonderful here- and difficult to stay indoors. I find a good excuse to get out by having undertaken the job of filling in my lawn and back yard with new dirt and that calls for a lot of exercise and some subsequent troubles no doubt.

My kind regards to Mrs. Scott. Cordially,

  
G. W. Prescott

Oct 17 1953

Dear friend Prescott,

I am pretty sure that you ought to have a copy of our North Australian Ms, but I am sending you a copy of the 2nd version, which contained so many corrections that I rewrote it as the 3rd and final version. You may keep this.

Apparently you must have overlooked my air-mail letter of Sept. 22nd, in which I wrote that the idea of writing a supplemental paper to be published with our longer one, was OFF for the time being, because Specht was sending me another batch of collections, and it would be obviously impossible to work up all of them in time. Therefore there is no great rush about your examination of the two samples that I sent you.

Part of the new lot of stuff from North Australia arrived two days ago, consisting of 12 vials, of which one was broken and contents lost though I shall attempt to salvage some of it from the cotton on which the liquid was absorbed. They were collected mostly in a region about 75 miles SW of Darwin, with one from Melville Island, and there are two more still to come from Groote Eylandt. Of the lot, there are three that have a nice selection of desmids, three that are less rich, and the other five contain either very few desmids or perhaps none at all. All of them, however, contain other green algae and cyans that you will have to work up.

There are also a good number of diatoms, and I wonder who we can get to work on them. Ruth Patrick is definitely out of the picture, as far as I am concerned. Enclosed is a copy of a letter that I wrote her on Oct 10th, asking her to send what she had to the Editor without waiting for additional illustrations.

In the new Australian material I have so far seen nothing that is obviously a new species, but there are several interesting new varieties; for instance a new form or variety of *Ichthyocercus longispinus*, and a giant *Pleurotaenium* in which the apical granules are elongated into blunt teeth or short spines, extending vertically from the apex.

In the Unawalerke gathering on which you are now working, I have seen two of the *Pleurotaenium-Triploceras* desmids that you mentioned; perhaps there may be others. One of them is *Tr. gracile* var. *elegans* (Borge) Krieg., and the other is *Pl. australianum* (Borge) Sc. & Presc., described in our former paper (*Syn. Docidium australianum* Borge, *Tr. australianum* (Borge) Krieg.). When you have finished with these two collections, I should like you to send me your drawings of the desmids, so that I may be on the watch for them and make drawings to my larger scale. So far I have made sketches of only the more striking ones. How do you like the pretty little new variety of *M. mahabuleshwar-ensis* with the two large teeth above and below the isthmus? I propose to call this "var. *tetrodonta*".

The 1300 slides from Prof. Kincaid is certainly a very valuable lot of material, even if some of them are unidentifiable. If they happen to be mounted in glycerine jelly it might be possible to melt the jelly by gentle heat, in order to roll the specimens. A few years ago Gr nblad loaned me some very old and valuable slides made by G.S.West, Nordstedt, L tkendler, and others. These desmids had been mounted in either Venetian turpentine or balsam, and many of them had deteriorated badly, though some were almost as good as when they were prepared nearly 75 years ago.

I have waited replying to your letter concerning the new Brazilian desmid until I could get replies from Grönblad and Krieger, to whom I sent both drawings and samples. Copies of their letters are enclosed, and you will note that both of them agree with you (though somewhat more reservedly) that the creation of a new genus to receive this strange plant can be justified. I have sent copies of your letter to them, so that they may be acquainted with your views, because, rather strangely, both of them base their opinion on purely morphological grounds, and say nothing about the physiological questions that suggest themselves. But considering the morphology alone, it seems to me that there would hardly be sufficient justification for a new genus; in fact I fully expect that after it is published as a new genus, there will be some who will object that it should have been placed in *Staurastrum*.

Grönblad mentions, as you do, the desirability of getting living material, but this, I think, would be just about impossible. It would be like trying to get somebody in Ecuador to send you living specimens from one of your Andean habitats; maybe he could catch'em alive, but they would be good and dead long before they reached you. And I could do nothing with living material, even if it reached me safely. The only person I know who might be able to cultivate it would be Bourrelly at the Laboratoire Cryptogamique in Paris.

However, there is a possibility that the plant may turn up again in Florida one of these days, as I mentioned in my letter of Sept. 20th. Unfortunately I made no record of it because I supposed that it could not be a desmid, and I have not the faintest idea of what part of Florida it came from.

Grönblad wrote me about Hannah Croasdale's visit, which he enjoyed very much. He mentioned that she was up and around at 6 am, while he stayed in bed until 9:30. That's just about what I should have expected from such a very energetic person as friend Hannah.

Mrs. Scott joins me in sending our best regards.

Sincerely yours,

MICHIGAN STATE COLLEGE  
EAST LANSING

Dec. 12, 1953

DEPARTMENT OF BOTANY AND  
PLANT PATHOLOGY

Dear Friend Scott:

Life has been so complicated lately that I have not written many letters. Recently I spent a week at the Woods Hole Library and that threw me far behind in work here- then Tess and I flew down to Quantico to spend Thanksgiving with our youngster and her 'boy friend' in their trim little trailer home. Don is a Marine Lt. and is finishing his training there before taking off- to where he does not know of course. We hope Gerry Rae will be coming back here to finish her last term of school which was interrupted by the wedding. Hannah Croasdale was at Woods Hole- and characteristically she put aside all her work and pitched in to help me with my checking and abstracting. She bought a few reprints for me when she was in Europe. A couple or three are duplicates and I wonder if you could use them. I think you must have them, but if not let me know and I shall be glad to send them down.

Borge- Die Algen der ersten Regnessschen Expedition. II. Desmidiaceen  
Arkiv f. Bot. I. 1903 . Same. III. Zygnemaceen u. Mesocarpaceen.

Borge-Chlorophyllophyceer från Norska Finmarken. Bih. t. K. Svenska  
Vet.-Akad. Handl. 17, Afd. III(4). 1892.

Lagerheim-Beiträge zur Flora der Bären-Insel. Bihang t. K. Svenska  
Vet.-Akad. Handl. 26, Afd. III(11). 1900.

I hope you and Mrs. Scott are well and that you are going to have a pleasant Christmas holiday. Where will you go this year? I expect to stay here and work over the collections- a never ending job.

Have you heard anything more from Australia and the reprints? I do hope the business down there works out satisfactorily. I shall try to finish plates on the new miscellaneous forms from the Australian collections this vacation also. There are not many things to add- but enough to make two or three plates. I just cannot get over marvelling at the desmids in those collections. Thinking of Australia- I came across a volume the other day that has nothing to do with algae but I was interested in reading some of it not only because of the curious subject matter but because it was written about the natives in the area from which we have been studying algae. The book is *Sexual Behavior in Western Arnhem Land* and shows several pictures of the terrain- one or two of which show what certainly must be excellent desmid pools and lakes. I think Arnhem Land would be a good place for Dr. Kinsey to go if he wants to write another book. He would find that his American statistics were not worth very much.

Have you used Clearcol for mounting desmids on microscope slides? Hannah is trying it. So far she is not pleased but thinks it may be made to behave properly. I think I shall send for some and try it too. It is too simple to be really good, I am afraid.

With kind regards-

*J. W. Francis*

Dec 15 1953

Dear friend Prescott,

Thanks for your nice letter of the 12th, with the offer of some reprints. I already have the desmid part of Borge's Regnell'schen paper, and the third part dealing with Zygnemaceae and Mesocappaceae would be of no value to me. However I should be glad to have the other two that you mention, Borge's Norska Finmarken, and Lagerheim's Bären-Insel. I shall gladly send you a check if you will let me know the cost.

A month or so ago I received the printer's proof of the Australian paper as reset. The plates have been reproduced full-page size and look very nice; also the text had been set more carefully; there were very few typographical errors as compared with the hundred or more in the first edition. So if we live long enough we may see the reprints. Even now I have not received reprints of the paper as originally issued last January.

I have no more news regarding the Arnhem Land paper, except that it is supposed to appear next year. The Australians seemingly work very slowly, and every time Ray Specht writes me he says that there has been "another delay" in the editing of the report of the Expedition.

Please do not draw any plates of the miscellaneous algae in the two Australian collections that I sent you a few months ago. These will have to be included with a number of other samples from various parts of Australia that Specht and others have sent me, and in which you will probably find other algae that should go on your plates. I shall send these to you after Jan. 1st, when I shall have plenty of time for many things that I have to neglect this year. I think I told you that I am retiring from business at the end of this year.

I have never heard of Clearcol and don't know what it is, but if you and Hannah Croasdale think it is of value, I should like to try it. Some time ago Mr. F. C. Miller-Melchers, of Atlantida, Uruguay, asked me to get for him some polyvinyl alcohol, which he wished to use in a German recipe for mounting fragile plankton diatoms. I had to buy a pound of it, and have a lot left on hand, so if you would like to try it I can send you some, together with the recipe. It is a white powder, like sodium carboxymethyl cellulose, and apparently with similar physical properties, i.e., it forms a viscous solution with a low percentage of solute. By the way, Harry K. Phinney says that some of his colleagues at Corvallis, Ore., have found Sodium CMC useful, but I think it was in phytopathology, and I don't know if they used it for algae.

A few weeks ago I read in "Science" that you had received a grant of \$2200 from the National Science Foundation for the study of Arctic algae, and I hope this is the forerunner of others for the publication of your proposed work on N. American desmids. Also there was an announcement that the NSF would award grants to partially defray travel expenses to the 8th International Botanical Congress in Paris next July, and it occurred to me that there might be a very remote chance that they would award such a grant to me. This would be an excellent opportunity for me to meet in person several European phycologists with whom I have been corresponding for several years, - Bourrelly, van Oye, Heimanns, Krieger, Grönblad, Teiling, Nygaard, and Ruzicka (if he can get permission to go there). There are others with whom I have exchanged occasional letters, Skuja, Printz, Margalef, Sampaio, and others.

So I obtained the application blanks, and find that I have to submit letters of recommendation from two scientists who can testify to the worthiness of my application. Accordingly I am going to ask you and Dr. Wm. R. Taylor if you will be kind enough to write such letters, provided, of course, that you actually do consider

my application to be worthy of your recommendation. The letter should be addressed to the National Science Foundation, but sent to me, and I can have the necessary 8 copies reproduced by photostat. I should appreciate a prompt response, because the application must be in Washington by Jan 1st, and there is much delay in the mails at this season.

We are not going away this Christmas, because there is much to be done during the remainder of this month, in preparation for my separation from the business with which I have been connected for the last 44 years. But we may take a short trip after January 1st.

With best wishes for you and yours for the Holiday Season,

Sincerely,

Jan 1 1954

Dear friend Prescott,

Many thanks for your very prompt response to my request, and for the nice letter of recommendation that you wrote. My application is not in Washington, and I shall have difficulty in containing my impatience while waiting for their decision. I wish you the best of luck with your own application, and hope that we shall be able to meet in Paris. It will hardly be possible for us to travel together, for if I go I shall take Mrs. Scott along, and we shall have to travel by the cheapest route, which is by steamer directly from New Orleans to France.

At Dr. Taylor's suggestion I am going to write a short paper for presentation at the Congress, illustrating some of the new and rare desmids that I have found from Indonesia and North Australia. Those from N. Australia would be those described and shown in our unpublished paper, and the ones from Indonesia are to be described in a future paper by us. Because this presentation at the Congress would not constitute formal publication I propose not to mention the names of new species or varieties, but simply say that they are "new". Please tell me if this is correct procedure. The illustrations would be drawings photographed on 35 mm film, and mounted in 2" x 2" Kodasides, for projection. Perhaps I may be able to make some photomicrographs, mounted in the same way.

I should be grateful if you would give me your opinion on this project, on the subject matter as well as the method of illustration. This would be my first venture in presenting a paper at a scientific meeting, and to tell the truth I should be quite bashful about confronting a crowd of professional phycologists. However, it is a safe bet that none of them have ever before seen these desmids, except as illustrations in Krieger's monograph, or in the original papers by Playfair, Nordstedt, Borge, Joshua, Turner, Gutwinski, etc., and I think the desmidiologists, at any rate, would be glad to see them presented in better and more complete form. I understand that a summary of the paper is to be sent to Bourrelly by Jan 15th.

I think that you have been notified by the editor of the Trans. Roy.Soc. S. Austr. of the despatch to you of 200 reprints of the revised edition of our South Australian paper, together with some copies of the reprints of the paper as it was originally printed. He has also sent 75 copies to me, with some extra prints of the plates, and I shall send some of the latter to you when they arrive, which ought to be about the end of this month. The editor's letter says "this will conclude an unsatisfactory episode", with which I fully agree. Wouldn't you hate to have this editor's job, and have to write all your correspondence in longhand? I paid \$74.00 for these reprints, so if there is any money left in your research fund you can send me a check at your convenience for your share.

Recently I wrote to Sachlan that I was getting near the end of my examination of his Indonesian samples, and asking for his ideas as to the medium of publication. I suggested "Hydrobiologia", but also asked him to investigate and see if any of the Departments of the Indonesian Government would undertake the publication. His reply is enclosed herewith (Please return it), and you will note that he asks that we do not publish in Hydrobiologia, but in "Reinwardtia" (formerly Bull. Jard. Bot. Buitenzorg). I think this is a good suggestion, and

if you agree, I shall write the Editor, Dr. M. A. Donk, and give him as good an idea as I can of the probably size and scope of the paper. I think it will be comparable to Krieger's "Sunda" paper, with about the same number of plates, though there will be less text because we do not have the hydrobiological data that Krieger had. On the other hand there will be Latin diagnoses of the new forms, which K. conveniently omits.

Enclosed also is a short note that I received from Krieger at Christmas. Note the clever sketch of the Christmas tree made from my new Brazilian desmid. He has taken a little artistic license in showing three whorls of processes instead of two, but this was necessary to turn it into a Christmas tree, and I think the idea is very cute and amusing.

My wife joins me in sending our best wishes for the New Year to you and your family.

Sincerely,



MICHIGAN STATE COLLEGE  
EAST LANSING

Feb. 8, 1954

DEPARTMENT OF BOTANY AND  
PLANT PATHOLOGY

Dear Friend Scott:

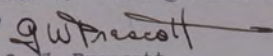
Today I received a shipment of reprints of the So. Australia paper (parts) and a box of algae from Sachlan. Naturally I had to peek at them right away and my first examination gave me quite a thrill. It is grand to see the species of which up to now I had seen only illustrations. The two or three vials that I looked into are amazingly rich and I am waiting now to learn what you are going to do or have done with these. There certainly is a wealth of material. No doubt I shall have a letter from you soon. What is the story on the reprints? A few days ago came a shipment of reprints from South Australia. Is your lot of 75 included (I did not count them)? If so, I shall get them off to you right away. What a pleasure to see the plates printed in correct size. They look very fine and they did a reasonably fine job of printing. That whole business was certainly a complication. I shall look into the correspondence to see what I owe you. Some time ago I think you mentioned what you had paid out. If you have a figure for me to meet, let me know what it is. I know you must feel very much gratified to see the paper issued as it now is.

I am holding up further work on the Australian miscellaneous algae until we have the additional material from Specht. I believe you said we should wait for additional material and so combine the collections.

I am going over a batch of 'stuff' from a Royal Air Force officer based in Fiji. I am disappointed in it so far- run of the mill material and mostly scraps from rocks in streams and margins of ponds. No desmids have appeared thus far although he said there were desmids there. I had hopes of finding some new and interesting things from that little-known part of the world. I still have a few more vials to look over yet so somethings may appear even yet.

How are the plans for going to Paris? I have given up the idea. The NSF has not come through with any indication that my application will be acted on and the dead line has been passed for submitting the paper which I was supposed to give. So I have decided to return to Montana for the early part of the summer and then make my long-hoped for trip to Mexico late in the summer- into the Sierra Madre and the Copper Canyon country. There is not likely to be many aquatic habitats there- but one must look anyway. I surely hope you can continue to make plans for the Paris meetings. When you get ready to go there are several message which I would be pleased to have you deliver for me.

Best regards to you and thank you very much for sending the interesting material for me to examine. Cordially,

  
G. W. Prescott

Feb 10 1954

Dear friend Prescott,

The unbound reprints of our South Australian paper are extra copies for cutting out the illustrations for iconographic purposes. I ordered 20 extra copies of the plates only, but the printer found it cheaper merely to run off the plates together with part of the text, rather than set up the plates separately. I have sent these unbound copies to Teiling, Grünblad, Krieger, Nygaard, Ruzicka, Messikommer and Fritsch, whose names were given me by Teiling as the European phycologists who are compiling iconographs. You may know others in this country.

I received my copies of the paper directly from Australia, so all that you received are for you, totaling 200 copies. I wrote you on Jan 1st about this, but you have not answered, and probably have mislaid the letter. The cost of the reprints was \$74.00, and the editor said he did not charge for resetting the paper in type, nor for the cost of the larger plates, but it looks pretty high to me. So you owe me 200/275 x \$74.00, which my slide-rule says is about \$53.80, and you can pay me whenever you have money in your research fund.

The box I sent contains about 2/3 of Sachlan's material. I am now making up another box that will contain the remainder, and also some or all of the miscellaneous collections that I have received from three people in Australia. I would like you to work on Sachlan's Indonesian stuff first, leaving the Australians until later. The reason is that I have almost completed my examination for desmids in the Indonesian material, though I have to go once more through each of the vials, to pick up any strays that I may have missed, or species on which I could not make out the markings the first time. So in a short time I should be able to send you my drawings for checking and determinations, and I think you will be surprised at some of the extraordinary 'critters' that I have found.

I wish you would try to find my letter of Jan 1st, because there were two enclosures, one from Sachlan and one from Krieger, that I asked you to return, also a question about publishing in "Reinwardtia" (formerly Bull. Jard. Bot. Buitenzorg) as Sachlan requests. He sent me a copy of this journal which I can lend you if you have not seen it; it is devoted to taxonomy, and I should judge that the editor is somewhat of a stickler, like Theodor Just.

Sorry that you had to give up the idea of going to Paris, but I too am beginning to get dubious as to whether I shall go or not, because the proposition does not look as attractive as it did at first. Just three weeks ago I was notified that the amount of the grants by the NSF (Not Sufficient Funds?) would be \$400 plus round trip coach fare from the applicant's home to New York. This is considerably less than half of my estimated cost, even going by freighter direct from New Orleans. Dr. Taylor suggested that I might prepare a paper for presentation at the Congress, so I included a statement to that effect in my application, and sent to Bourrelly before the deadline an abstract of the paper, to be entitled "New and little-known Desmids from Indonesia and North Australia", which I proposed to illustrate with 2" x 2" slides of my drawings and perhaps some photomicrographs. Bourrelly replied that the programme was pretty well filled up with more than 100 papers that they had already received, and suggested that my paper be presented to an informal gathering after 5 pm (when everyone would be tired from listening all day to other papers). This is not much to my liking. Also in the last issue of the AIBS Bulletin it was stated that the number of grants to be made would be "between 10 and 15" at \$400 each, and as I expect that hundreds of applications will have been received, there seems

to be only a very slim chance of my getting one. Further, my friends Grönblad, Telling, and Krieger have written that they will not be able to attend, and since you also are not going, I think I shall abandon the trip. However, I shall take my wife to England this summer, and then go on alone to Sweden and Finland to see Telling and Grönblad. If conditions seem favorable, I may stop in Berlin to see Krieger, provided he can meet me in West Berlin.

Your visit to the Sierra Madre and Barranca de Cobre region ought to be highly interesting; I should hardly expect to find many desmids there, though you may get other stuff from running water. What makes you pick out such a spot for phycological investigation? I should think there are places, even in Mexico, that would be much more profitable. What about the west coast of Mexico, southwest from Guaymas, where my map shows a long stretch of coastal swamps or marshes? Some of them ought to be freshwater.

I would like to call your special attention to a very large Pleurotaenium in the collection Borneo 270, which I take to be Pl. Traubii Bernard (1908, p. 81, figs. 98-101). Krieger lists this as a synonym of Pl. trabecula var. maximum, but has written me that this is probably a mistake, especially if Bernard's plant has apical granules, as his figures seem to indicate, and as the Borneo specimens have. The special feature of this plant is the pores, which, on the uppermost part of the cylindrical cell, appear as a dark annulus with a light center and change to a light annulus with a dark center when the focus is changed. On the sloping side of the cylinder they appear as distinct, almost hemispherical granules, corresponding very well with Bernard's drawing. But they cannot be granules, because they do not project from the margin in an optical section through the wall. I sent samples from this collection to Grönblad and Krieger and asked their opinion. Both of them are convinced (and have convinced me) that the appearance of projecting granules is illusory, and is caused by a "plug" of mucus in the very large pores, which by refraction causes the false appearance. After receiving their letters I crushed some of the specimens, and where the wall was bent flat on itself, there can be seen, projecting slightly from the margin, a somewhat rectangular plug of darker material, that apparently has been partly extruded from the pore by the severe deformation of the wall at this point.

A month or more ago I wrote to Ray Specht in Adelaide, and incidentally asked him if there was any news about the publication of our North Australian paper, but he has not replied. It was supposed to come out this year sometime.

I have two copies of a long and excellent paper by Dr. Paavo Kallio, Univ. of Turku, Finland, on "The significance of nuclear quantity in the genus *Micrasterias*". This describes a long series of experiments in the culture of M. Thomsiana var. notata and also the specific form, in which the plants were subjected to many varying conditions of light, heat, cold, centrifugation, and chemicals such as colchicine, and the results are described in detail, with beautiful photographs. He even succeeded in establishing a permanent clone of tri-radiate forms of M. Thomsiana and also a 4-radiate clone, which however, eventually died out. If you do not have this paper I shall gladly send you my extra copy. There are also two shorter papers by Kallio, very interesting, but I do not have extra copies.

With my best regards,

Sincerely,

MICHIGAN STATE COLLEGE  
EAST LANSING

Feb. 12, 1954

DEPARTMENT OF BOTANY AND  
PLANT PATHOLOGY

Dear Friend Scott:

I hasten to apologize for being responsible for putting your letter of Jan. 1 into the file of letters answered instead of into the one for "letters awaiting reply." Hence I have neglected to respond, but would have found it as soon as the 'pile' was filed into the correspondence cases. I am inclosing herewith the notes which you kindly sent me. Krieger did a very neat little trick in setting up the new desmid as a Christmas tree. He has a sense of humor that I did not suspect. Thanks also for the recently sent photographs of the new critter. What are you going to do with it? It certainly should be placed on 'exhibit' soon.

I am sorry to learn that you are thinking of not going to Paris. That would be a fine opportunity for you to meet quite a few workers- even though some whom you wish to see would not be there. Better not decide too definitely to not go. Perhaps NSF will come through yet. I did not dare wait any longer with Beurrely because the dead line for sending in titles was reached and I did not think it fair to keep my title on the program and so crowd it for someone else without knowing for sure that I were going. So I cancelled it. Your procedure would be quite correct if you showed illustrations and gave notes on 'new species' without referring to them by a scientific name. That is usually done- so that when abstracts of the paper are printed the name of the new species does not appear. The first place of publication of a name determines its 'locus primus' and messes up the literature for a specific name if that place is not where the scientific description and full diagnosis is also given.

I envy you the trip to England and the north countries- if you do not go to the Congress. That would be a pleasant as well as a professionally profitable journey. I surely hope you do have a chance to see Krieger and to learn something of his plans and successes with the remaining genera of desmids.

Reinwardtia would be a suitable place for publication of papers dealing with the Flora of Indonesia and Burma certainly. Naturally in Indonesia they do not feel friendly toward the governing agencies of Hydrobiologia. I shall be glad to work into Sachlan's collections and to see what there is in the way of 'miscellaneous' algae. There appears to be some- but mostly desmids. I am anxious to see the spread of them- for judging from the glimpses I had they are very curious and variable. I just received another big batch of stuff from Fiji and shall get that looked over and out of the way (I hope) before the remainder of Sachlan's collections arrive.

I am grateful for the extra copies of the places. They were generous in sending those- or did you have to pay for them? If so, please let me know. I can use a few copies to good advantage and others here will be glad to have them also. Must hurry to town- so will close this note for now and write again later. Cordially,

J. W. Prescott

Feb 18 1954

Dear friend Prescott,

Enclosed are lists of the Indonesian and Australian collections in the three boxes that I have sent you recently. They represent all the information that I have.

To fill up the last box I included 6 vials from Uruguay, but these are merely for your pleasure and information. We cannot work on them, because I had to promise Mr. F. C. Müller-Melchers, who sent them, that I would not publish anything from Uruguay until (and unless) Mr. Ricardo Thomsen publishes a lot of desmid drawings that he has made over a period of many years. Whether he will ever do so is uncertain. There has been some talk of sending the drawings to Krieger, but I do not know if that has been done. Thomsen is 75 years old, in poor health, and "rather difficult at times", to quote Müller-Melchers.

I plan to finish up the Indonesian desmids first, and send my drawings to you for checking. The Australian stuff will have to wait for some time, probably late this year, so you do not need to work on it now.

It is disappointing that your Fijian material contains so few desmids; perhaps there will be more of them in the new lot. I have often wondered what was to be found in those isolated Pacific islands, and if you run across any of the samples that contain any quantity of desmids I should greatly appreciate the opportunity of looking at them. Samoa is not too far from Fiji, and if you should happen to find Micrasterias anomala var. samoensis Hub.-Pest. I should like to compare it with the two varieties that occur in Sachlan's collections. Also you promised to send me some of your Ecuadorean stuff.

The new desmid from Brazil has been written up by Grönblad, and will be published in Botaniska Notiser, this year (I hope). I have just sent him the finished drawings and photographs. It is to be named "Scottia mira" Grönbl. Dr. Kallio, of the Univ. of Turku, is going to write some comments on the problem of polarity in this strange desmid, and is extremely anxious to get living specimens in order to cultivate them and observe the reproductive process. But I see no chance of obtaining living material in view of the difficulties of collecting and shipping, especially since my Brazilian correspondent has left the Amazon region, and has taken a new position in Belo Horizonte, which is about 75 miles north of Rio de Janeiro, and says that he never expects to visit the Amazon region again.

The cost of the extra plates of our 3, Australian paper was included in the price, so there is nothing extra to pay for them.

I have not entirely given up the idea of going to Paris, but it is looking more doubtful. Now I find that it is not easy to book passage on a freight steamer, even four months in advance. The American Express has been working on it for three weeks, with no progress so far, but something will work out, I am sure.

Sincerely,

Mch 21 1954

Dear friend Prescott,

Mannah Croaddale was kind enough to lend me a set of colored photos that she took in Europe last year, and asked me to send them on to you, so that they would be on hand when she visits you early next month. So I have forwarded them in a box under separate cover.

Among these photos I was particularly pleased to see pictures of Grönblad, Teiling, Skuja, and Kallio, all of whom I hope to see this summer. I already possessed photos of the first two, but the latter two were new to me. A surprising picture was one of Nellie Carter, taken in Guildford, England. I have not seen her name mentioned in algological literature recently, and her last paper that I know of is Alpine Desmids from British Columbia 1935. Somehow I had formed the impression that she must have died.

Yesterday I had a letter from the NSF in Washington saying that they were unable to grant my application for travel funds to Paris, and I suppose you have heard from them too by this time. I am not too badly disappointed, for I had figured that my chance was extremely small. My wife and I are going to England in June, so perhaps I may get a chance to run over to Paris for a few days, though I have abandoned the idea of presenting a paper at the Congress. Then I shall go by myself to Finland and Sweden, and possibly to Berlin to see Krieger.

I have a letter from friend Specht in Australia telling that three more samples from Cenpelli in Arnhem Land are on the way to me. This is the very rich region that provided the strange new desmids that astonished you so much a few months ago; I wonder what curiosities the new samples will contain. I shall send you some of the material when it arrives.

In the current issue of Trans. Am. Microsc. Soc. I notice that your name has disappeared not only from the list of officers, but from the membership list also. What happened? Did you get disgusted and resign? I have had thoughts of doing so myself, for the journal is of no use to me; the current issue contains not a single word about plants. Its a damn shame that the principal American Microscopical Society should have been allowed to become so overwhelmingly zoological in character, but it will continue that way so long as they select zoologists as editors. Probably it would not be difficult to find a botanist who would take the job.

Just received a new book from Europe, by Kossinskaja, entitled: Flora Plantarum Cryptogamarum URSS, Vol. II, Conjugatae (1), published by Biblioteka Nauk SSSR, Birgevaia Linia 1, Leningrad 164, USSR. Apparently this is the first of a series that will deal with the whole of the Conjugatae; this part covers the Meschaeniales and Gonatozygales. It is entirely in Russian, except the scientific names, and the citations to non-Russian literature. This is a pity, for it would have been much more useful to many more people if it has been written in one of the better-known languages, English, French, or German, but undoubtedly the Soviet policy would never permit this. The illustrations are good, and there are a few species and varieties that I have not seen elsewhere.

With my best regards,

Sincerely

May 31 1954

Dear friend Prescott,

When I found that new desmid genus from Brazil last fall it was the highlight of my desmidological experience. I could not possibly have imagined that I should ever again find another new genus, but here it is, - this time from Sumatra in a new batch of samples from Sachlan. He wrote that he has just returned from a 3500 km trip through the island, visiting many lakes for his fisheries work, and making algal collections wherever possible. He will send these to me later on, after he has finished his own examination, but in the meantime he sent me by airmail five samples, in miniature test-tubes, only 1 1/2" long and 5/16" diam., each with just about one drop of sediment. Four of the samples are very rich in desmids, with some new species; the fifth is of not much interest.

The new desmid is just as startling in appearance as the Brazilian one, though in quite a different manner, and by an incredible coincidence it also possesses the feature of differing semicells, based on observation of two entire cells and one semicell, which are all that I have seen so far, for it is extremely rare. Here are my thoughts about it:

If we neglect the structure of the poles temporarily, and consider only the body of the semicell with its circular cross-section, its intermeshing basal teeth, the line of 3 mucus pores, and the Bostrychia-like structure, which is probably parietal and similar to that of a Pleurotaenium, I think that the plant could be assigned to Docidium, in spite of the very obvious differences from any other member of that genus. But all the other features of the plant are definitely Euastrum-like, even the basal teeth are quite similar to those of E. asperum. Both of the two different polar structures are paralleled in other Euastrum species, and the two large mucus pores just below the apices are found in no other genus, I think. An unusual feature is the very delicate spine arising from, or continuing, the stout conical spine at each corner of the poles. This hair-like spine is so tenuous that it is barely visible, yet I think it is not a mucus thread because it tapers to an extremely fine point, while mucus-threads are cylindrical or even knobbed.

Following these thoughts, I suggest the name Docideuastrum Sachlanii Scott & Presc. for the plant. Perhaps you can think of something better and more appropriate; I have no fixed ideas.

I am sending two slides, containing one entire cell and one semicell, the first and second specimens seen. They are simply my temporary water mounts sealed with vaseline, but they ought to last long enough for you to find the specimens. If you will center the pencil dot and then traverse the slide in an east-west direction, the specimen should appear in approximately the position indicated by the dot, provided it does not move. In a few days I shall have some photos, but they will do no more than confirm my drawings.

You will see many other interesting desmids on these slides, including the strange-looking St. manggalense sp. nov., shown on one of the sketches herewith. There is also the very rare Tetmemorus Brebissonii var. tenuissimus, differing somewhat from Moebius' illustration and from the single example that I found in our Arnhem Land material. Also Glosterium infractum Messik., which Krieger also found in Sumatran material; it occurs in one of my Louisiana collections. The pretty little biradiate Staurastrum with the long curved serrate arms, is related either to

St. columbetoides var. intermedium Krieg., or to St. Ginzbergi Grönblad from Brazil. It is more like the Brazilian plant because of the intermeshing spined protuberances above and below the isthmus. You may keep all of these drawings; they are copies of my original sketches.

No doubt you will soon be leaving on your annual trip to Montana, but I hope that before you leave you will be able to give me a preliminary opinion on the new genus. In the meantime I shall be searching for additional examples, to confirm the peculiarities already seen.

Of course it would be desirable to get this new discovery into print at the earliest possible date, without waiting for our longer paper. I shall not be able to do much more with it until next Fall, because on July 5th my wife and I are going to Europe, and we shall not return until about Oct 1st. Edith will stay in Devonshire with my sisters, and after a couple of weeks with them I am going to see Teiling in Sweden for a few days, and then to Grönblad in Finland for about ten days. I had hoped to visit Krieger, but getting behind the Iron Curtain is too difficult and hazardous. So Krieger suggested that he will try to get permission from the Soviet authorities to go to Finland and stay with Grönblad at the same time I am there. If he can do that perhaps I can persuade Teiling to be there also, and then we could have a small Phycological Congress all by ourselves.

I am not going to the Congress at Paris, but I have prepared a batch of 2" x 2" (35 mm) slides showing some of my desmid treasures from Indonesia and Australia, some as photos and others as reduction of my pencil drawings. Bourrelly will have to find somebody to show them. Do you happen to know anybody from the USA who is going there; preferable a phycologist? If so I wish you would give me the names and addresses. My wife and I will be in Paris during the second week in September, and I shall call on Bourrelly then and pick up my slides.

If there is anything that I can do for you in the countries mentioned, let me know what it is, and I shall try my best to attend to it.

I hate to mention this, but you have not answered my last two letters, and the thought has occurred to me that it might be because of the money for the South Australian reprints. If that is the cause of your silence please store the matter away in a cubbyhole at the back of your mind indefinitely. One of these days you will have money in your research fund; or if you do not, it won't hurt me.

Please tell me when you will leave for Montana, and if your address will be the same as formerly, for I may have occasion to send you more dope on the new desmid before I go to Europe.

With best wishes for a very pleasant summer,  
Sincerely yours,



MICHIGAN STATE COLLEGE  
EAST LANSING

June 5, 1954

DEPARTMENT OF BOTANY AND  
PLANT PATHOLOGY

Dear Friend Scott:

It is now clear that you are in the same category as and born under the same star as Rufus Thompson. He is another chap who can reach down into a swamp any old place and come up with a new genus and half a dozen new species. The new anomaly is certainly proof of that. I have located the specimen (or a specimen) on the slide after only a little searching. It came through the mails very well with only a minor shifting. I have not been able to make it roll over - but your excellent drawing gives a perfect picture. What an 'odd ball' this one is. It has such a curious combination of features - perhaps enough to erect a new genus. Yet I have a feeling that it should be as well 'at home' as a new (and quite strikingly different) ~~###~~ species of *Ichthyocercus*. This genus contains only two or three species and undoubtedly there are more - showing greater ~~range~~ than indicated by the few that are known. Had you discounted this genus? To be sure the basal teeth are major argument, one might say, against including it in *Ichthyocercus* - yet perhaps that character alone should not keep it out. The shape of the semicells and the proportions are so very suggestive. I wonder what Grönblad would say. With what we can see of the plant thus far I would feel better about making a new species of this genus - until perhaps other similar species are found (possibly) which show that the basal folds and teeth are a character that is maintained regardless of variations in other features. I have no description of *Ichthyocercus* which gives the character of the chloroplast. It is certainly parietal. The slight apical notch is about the only good *Euastrum* character present (except for the mucilage pores, which are not peculiar to *Euastrum* of course). If the differences in the poles is a constant character *Dipolaris* might be a descriptive name (just a suggestion). Well - this certainly is a most interesting find and gives further support to the evolutionary status presented by your Brazilian plant. It opens up a whole new field of speculation and is a great stimulus for further search now for other 'missing links' in what might well be a new (at least unrecognized) trend in desmid phylogeny. You have certainly been rewarded in your persistent work. I am so very pleased that you have found these plants and to have an opportunity to work them over with you. (I am grinding along on run-of-the-mine stuff all the while it seems.) What a rich mixture there must be in that sample. I have enjoyed looking through the slide. Every field has a different combination of species. Certainly good of Sachlan to send you so much stuff. What a lot of fun it would be to go into that country to collect. Lately I have been spending many barren hours going over samples of stuff for a chap down in Fiji and the S. Pacific islands. At first I was hopeful that his collections would contain material worthy of note and publication from that part of the world so I agreed to some stuff up for him. But either he did not know how to collect - or else there is just nothing down in that part of the world - mostly sterile conjugates and a few *Chlorococcales*. Thank you very much for sending me the slide and the drawings. I appreciate your letting me retain the drawings - which I shall keep safely on record.

Was very glad to learn of your trip and how I envy you. It should be very profitable indeed - meeting Grönblad, Teiling and possibly Krieger. I mentioned your hope to see Krieger to Desikachary who happened to be coming through today on his way to Paris and back to India. He said very earnestly and surprisingly

MICHIGAN STATE COLLEGE  
EAST LANSING

DEPARTMENT OF BOTANY AND  
PLANT PATHOLOGY

that I should urge you to say nothing to any European, especially, or to ~~now~~ one that Krieger was planning on getting out of Germany to make a trip to Finland. I did not know that there was quite so much tension and suspicion- but he said especially that you should not mention his proposed trip to anyone who might be going to Paris. I asked him why and he said something about there being possible action taken against him by 'agents.' I do wish you could get to Paris and present your paper- you are going to be so near.

To tell the truth I have been feeling a little guilty about not sending you the cost of reprints. I well-remember that I owe this to you and shall balance the account. I appreciate your allowing me to 'budget' it. I shall try to take care of this bill very soon. In the meantime, would you be so good as to send me a formalized statement of the amount due for reprints- then as soon as my research fund is refreshed I shall draw a requisition on it to cover the bill?

I have just finished going over the galley of the new little book and have put it in the mails with much misgiving. Of course there is still page proof where I can catch other possible 'bugs.'

I am leaving for Montana about June 17. Address after that date will be as before: Montana University Biol. Station, Bigfork, Montana. Shall be there until Aug. 1 and hope to arrive in Chihuahua about Aug. 4 to join Dr. Knobloch with whom I am making the Mexican trip.

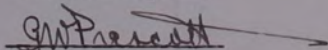
The *Staurostrum menggalense* sp. nov. I have not been able to locate on the slide as yet. Shall keep trying. I have not had a chance to check the iconograph as yet, but have a feeling that it is in there. I shall write you when and if I locate it. It looks very very familiar, but I cannot think of what it has been called so shall have to go down through the sheets.

I agree with you that the new genus or whatever it is settled to be, should be written up and described as a separate note. My name should not be attached to the new plant unless you permit me to help with the description of it- which I shall be most happy to do, if you wish.

Your kind offer to do something for me in Europe may get you into trouble, for I may write some requests to you before you leave. But I do not like to burden you with requests for I am sure that you will have your time more than filled as it is.

I shall be glad to hear from you again soon about the desmid and other things if you can find time to write before I leave, or before you leave.

With kind regards,



G. W. Prescott

June 12 1954

Dr. Gerald W. Prescott,  
Dept. of Botany,  
Michigan State College,  
East Lansing, Mich.

Your share (200/275) of the cost (\$74.00) of reprints of the paper by Prescott  
and Scott, "Some South Australian Desmids", in Trans. Roy. Soc. S. Aust.,  
75: 55-69, September 1952.

\$53.80

June 13 1954

Dear friend Prescott,

Many thanks for your prompt reply regarding the new desmid from Sumatra. Since writing you I have found a few more specimens, making a total of five whole cells, and one 'upper' and one 'lower' empty semicells. They are all identical save for the usual very small variations in size and curvature, so the plant is not a sport or monstrosity.

When I saw the first specimen, the thought of Ichthyocercus came to my mind, as it did to yours. I know Ich. longispinus from Indonesia, and I have a new form or variety from N. Australia that is even closer to the new Sumatran plant, but after consideration of the several conflicting characteristics I came to the conclusion that it could not be assigned to Ichthyocercus. Furthermore, I think that the unlike semicells, alone, require its separation from all existing genera. That was the case with the Brazilian desmid, Scottia mira, for if in that case the two semicells had been identical, whether with or without the apical corona of teeth, there would ~~have~~ have been no justification for placing it anywhere but in Staurastrum.

I have now been able to obtain a view of the basal aspect of the new plant, of which I am enclosing a copy. The sketch is not very good, because the only way I could get it was to cause the broken fragment of a semicell to adhere to a mass of mucous debris, and then manipulate it until it stood on end. This was quite difficult and in the process of manipulation it became so entangled that visibility was poor. Nevertheless the sketch shows the essential features, and shows that the semicell is not quite circular in cross-section, this specimen measuring 23 x 21 u.

Your suggestion for a new generic name (if it is decided upon) seems better than mine, but I believe it should be Bipolaris instead of Dipolaris, because 'polaris' is Latin though derived from the Greek 'polos'.

I have sent a slide with a single specimen, also drawings of several specimens, to Grönblad, and have quoted your views. Now I am trying to find another one to send to Krieger, and after I have heard from them I shall let you know their opinions. Also I have asked Sachlan to send me more of the material, if it is available, after he has finished his sown examination in connection with his ~~fisheries~~ fisheries work, which he says will be some time this Fall.

Enclosed is a sketch of the new form of Ichthyocercus from N. Australia, and one of Glosterium cuspidatum (or Spinoclosterium cuspidatum if you insist) from Sumatra. The latter seems to me practically identical with my specimens from Mississippi, Florida, and N. Australia, also with your drawings and those of Whelden, Irene-Marie and Hirano. It is surprising that the plants from such widely separated regions should be so constant in form and size. I think there is no doubt that Bailey's original sketch (in Ralfs) and Bernard's from Singapore are of the same plant.

If you look again at the slides I sent you, please notice the way all the chloroplasts are deteriorated to a greenish-gray amorphous mass. This is the case with many of the collections that I receive from abroad, and the only theory I can advance for it is that too much formalin may have been used, as evidenced by the smell. Have you encountered this condition, and do you know what causes it? I have warned all my correspondents not to use more than 4 or 5% formalin, but they keep on doing it.

As requested, I am enclosing a bill for your share of the cost of reprints of our South Australian paper, but please remember that there is no hurry about it.

Ray Specht says that the proof of the North Australian paper may be ready about the end of this year, and will be sent to me by airmail, but I read an item somewhere that the editor, Mr. C. P. Mountford, is now on an anthropological expedition to Melville Island, so I imagine that this means further delay. It is now more than 18 months since I sent him the Ms.

In the Taxonomic Index there is a notice of a paper by you on Ecology of FW Algae in Alaska. I hope you will send me a reprint when they are available. Also in your letter you mention a little book of which you have just checked the galley proof. What is this?

I also have a suspicion that I have seen 'Staurastrum menggalense' illustrated somewhere, or something much like it, but I cannot find it in any of the works that I possess on the Indo-Malayan-Indonesian-Australian region, and I am pretty sure that it is not a form from the Western Hemisphere. However, the checking can wait until later.

Hope you have a good trip to Chihuahua, but I'm afraid you won't find many desmids there, unless that part of Mexico is different from what I have seen. A friend of mine, who is with an oil exploration outfit, wrote me that the company geologists said that all of Mexico is limestone. But that is a pretty sweeping statement about such a large country, and surely there must be some spots that are favorable for desmids, if they can only be located.

With best regards,

Sincerely

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MICHIGAN STATE COLLEGE  
EAST LANSING

June 13, 1954

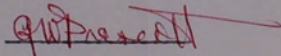
DEPARTMENT OF BOTANY AND  
PLANT PATHOLOGY

Dear Friend Scott:

I hesitate to bother you, but I need a little information and advice as I pack up for Montana. I wish to recall just what the situation is in respect to our report on the algae for the Australian Expedition. Am I correct that I sent you some plates illustratin 'general algae' from the expedition, or are those still to be prepared. I have a batch of drawings (South Bay, Mission Station, etc.- Sprecht Collections) with no note as to whether they had been placed on plates. Then I have a small batch of drawings I made up last winter from 3 vials (Jim Blythe Coll.) which I know have not been put into plates. As I recall, you said there would be no hurry about these, especially inasmuch as other samples might be coming which should be worked over. Please put me straight on this if I am wrong. I thought I would do these up this summer, if there should be a need for them before fall. But since you are to be away I was wondering whether I should need to prepare these- or just wait. I have tried desperately to keep my records straight, with cars filed on each collection- but somehow I slipped on the last collection from Australia you sent and the vials and cards have become separated. There have been so many collections coming and going this past winter that my 'good intentions' have broken down.

I dare say you are having even warmer weather than we have. Actually it is not hot yet, but it is very humid and we have had such a long cold spring that no one is prepared for summer. We are just in the throes of examinations and the usual finish 'rush' and at the same time am packing for Montana and Mexico. I shall be here until toward the end of the week so you might reach me here with a note or card via air mail.

Hope all is well with you. How many new genera have you found this past week?  
Best regards to you and Mrs. Scott.



G. W. Prescott

June 15 1954

Dear friend Prescott,

This is in reply to your enquiry concerning your drawings. In 1952 you prepared 6 plates of algae other than desmids collected by Ray Specht during the Arnhem Land Expedition, and these plates together with mine and the complete manuscript have been in the hands of the editor for more than 18 months, as I wrote you yesterday.

The drawings that you have, marked "South Bay", "Mission Station", Specht collections, must be included in the above 6 plates, for the South Bay of Bickerton Island is one of the Expedition stations, though there is nothing called specifically "Mission Station". Two or three of the samples were, however, collected near the Mission Station at Oenpelli.

You should do nothing more at present with the drawings from the Jim Blyth collections, nor should you do any examination of the batch of about 30 samples from various parts of Australia that I sent you on Feb 17 1954. All this is for some future time, for I am still receiving material and have promise of a good deal more. Just a few weeks ago I received a beautiful collection from a new man named Gregson, who has taken Jim Blyth's place at Oenpelli. It came by airmail, in the form of a half-pint jar scantily wrapped in cardboard, and miraculously it survived the hazards of transit. But the screw cap had loosened and all the water escaped. Fortunately the sediment was still in the jar and still damp, so that all I had to do was add some water to restore it to practically its original condition. Of course I wrote him immediately and sent him some of the small vials that I use, and gave him explicit directions for collecting. He wrote that he is a stockman covering a wide expanse of territory, and that he will be able to make gatherings from many different bodies of water.

Our next project will be Sachlan's stuff from Indonesia, and if you are looking for work this summer I can send you a couple of hundred drawings for checking and identification. But you will need your iconograph and many reference works for this, and I suppose you will not take them to Montana. However, if you think you can work on them, let me know at once and I will forward them to Montana. I have identified many of them with a pretty fair degree of certainty, but there are others that I believe to be new species, and some that are quite obscure and will require a good deal of research and comparison.

We leave N.O. on July 5th, so I should know if you want the drawings at least week before that date, for our last few days will be quite busy.

I have sent specimens and drawings of the new Sumatran desmid to Grönblad and Krieger, and if I hear from them in time I shall write you about it. Have heard nothing more from K. about his proposed trip, and of course I am not mentioning it to anyone except Grönblad.

With best regards,

Sincerely,

July 8 1954

Dear friend Prescott,

Well, the European trip is off for this year. Two weeks ago I stumbled on an uneven sidewalk and fell, breaking one of the bones in my ankle. It is now in a plaster cast which must remain in place for two or three weeks, and then I must walk on crutches for another couple of weeks. After that it will take some time before I shall be able to walk for any considerable distances, and it would be foolish to think of going sightseeing in London, Paris, Stockholm and Helsinki until I am able to walk for hours, to say nothing of desmid collecting with Grönblad. So we shall have to wait until next year, and hope that nothing will occur to interfere.

I now have replies from Grönblad and Krieger on the new desmid from Sumatra, and an enclosing copies of their comments. Krieger, as you will note, remarks on the resemblance to Ichthyocercus, but says nothing about placing it in that genus; he seems to take it for granted that a new genus will be created, and suggests another name instead of my Docideuastrum.

Grönblad thinks it could be placed in Ichthyocercus, but also says that the plant's remarkable features are sufficient justification for a new genus, and he also suggests alternate names instead of my suggestion.

My own opinion is that the unlike semicells, alone, justify a new genus as in the case of Scottia, to say nothing of the other conflicting characteristics which by themselves also are another reason for a new genus. If we make a new genus now, the plant can always be transferred to Ich. if a good reason should develop from future evidence in the form of other desmids with similar features. On the other hand, if we now assign it to Ich. there is little probability of anyone transferring it to a new genus in the future. So we might as well get the kudos, nicht wahr?

Since nobody likes my name Docideuastrum, I suggest either Bipolaris Sachlanii, or Sachlania bipolaris (or bipolare?, I don't know which is correct). I think it would be a nice gesture to name the genus after Sachlan, who has gone to a lot of trouble to send us such an amazingly rich lot of stuff, and with still more to come later this year. I also suggested the name Skeumatos, meaning 'a subject for speculation', but Sachlania would be more gracious.

So when you get time I would like you to write up the new plant, though perhaps it would be as well to wait until you see Grönblad's paper on Scottia mira, which should be printed in Botaniska Notiser either this month or August. Grönblad got Paavo Kallio to write a supplement discussing the problem of polarity, but somewhat to my disappointment Kallio has devoted some pages to his experiments in culturing M. Thonasiana and var. notata, and only a couple of paragraphs to Scottia.

Are you going to the AIBS convention at Gainesville, Fla., next September? Since you will probably be elected President of the Phycological Soc. I should imagine you will have to go, and if you will be present I will go also. Perhaps you could come to New Orleans and let my wife and me drive you to Gainesville, which is a 2-day trip, and I can show you many rich desmid habitats on the way.

Sincerely yours,



Univ. Mont. Biol. Station  
Big Fork, Montana

MONTANA STATE UNIVERSITY  
MISSOULA

July 10, 1954

Dear Friend Scott:

What confounded bad luck! I have just heard that you have been laid up with a broken bone. I feel so very blue for you having to give up your interesting trip- but not for long, I hope. Surely you can make the trip a little later. Meanwhile probably you can get well caught up on drawing while you are immobile. You probably are not in a mood for doing long stretches of microscope work during the hot weather, however- except that your basement should be cool. I had no details- but am hoping that it was not a bad break and no complications. It was a foot bone, right? Hope you are able to get about on crutches. Whwn and if you feel like writing please let me know how you are making out. The men in Finland are very disappointed at your not being able to make it.

I hope it it not too miserably hot there. You should be out here- temperature just right and very conducive to work- although I would much rather be outside these days. Have just completed the index for the How to Know volume which is to be published in September I understand. Best of luck to you- until later,

*W. W. Prescott*

Univ. Montana Biol. Station  
Big Fork, Montana

July 13, 1954

Dear Friend Scott:

Received your good letter yesterday- just after I had dropped you a line. Glad to hear that the break was no worse- bad though it is. The time will pass quickly and you will soon be getting about- but too bad that it will put off your trip for a whole year.

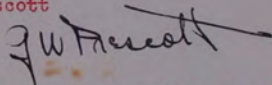
Thank you for the interesting comments from Krieger and Grünblad. We all seem to be pretty much agreed on the status of the new plant- and as for the name, I would not be dissuayed by suggestions from others. It is your find and your contribution and you have the right and duty to select the name which appeals to you. *Docideuastrum* certainly is suggestive of its 'hybrid' character- and would be much more acceptable to some botanists- especially those who frown upon the giving of proper names to plants or 'honorary' names, appropriate though they may be at times. A name which tells something about the plant is always better 'form.'

I shall be glad to write a tentative description of the new genus and wait for the appearance of '*Scottia*' in order to make reference to and comment on the appearance of another plant with similar characteristics and with the same implications in desmid evolution.

The question of getting to the meetings in Florida is in the back of my mind. I do not know how long the Mexico field work will last- but if there should be time, I would be glad to drive home via Florida- or at least via New Orleans since we shall be quite far south in any case. Thank you for the suggestion. It really would be a treat to get out with you and look in on some of the famous desmid holes.

With kind regards, until later-

G. W. Prescott



P.S. I almost forgot to thank you for the excellent prints of the desmids. May I keep them, or should they be returned? The figure about which you inquired is a very fine portrait of an epidermal plant hair, one of the more elaborate types with radiating lobes. It comes under the heading of a 'peltate scale.' Very nice looking one.

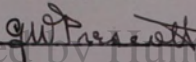
July 15, 1954

Dear Friend Scott:

How is the heavy-footed man this morning. I know from experience that you are mighty weary of transporting that cast about.

Had a note from Hannah. She would like to write the Latin right away for the new genus and asked to have a description. Hence I drew up the inclosed delineation. I am sending a copy to Hannah with a note that I am sending one to you for your comment and criticism and that she should wait to hear from you before writing the Latin so as to incorporate any changes which you might feel necessary. If you send this copy directly to Hannah without returning it to me it will save a little time- but I would like to have a copy of such changes as you may include. I have tried to omit from the description of the genus such features as one might anticipate would vary when and if another species is found- and to include in the specues description those features which one has a right to guess are peculiar to the type. At best, of course, this is only guess work and can be nothing else. Who knows but that you will come across another species in the Sumatra collections before you get through with them.

Best regards till later-

  
G. W. Prescott

July 19 1954

Dear friend Prescott,

From the medical viewpoint it appears that I am an old man (!), though I don't like to admit it. At any rate the doctor will remove the cast tomorrow, after only four weeks instead of the customary six weeks, in order to avoid the possibility of a stiffened ankle joint, which he says sometimes occurs in the case of old persons if the cast remains on too long. It will be a great relief to get rid of the dead weight, which seems like 50 lbs., though it actually weighs something like 15 lbs. I suppose he will have to strap the ankle, and I must go on crutches for another two weeks, to keep from placing my full weight on the injured part. But one of these days I shall be able to get around again.

I surely hope that you will be able to return from Mexico via New Orleans, and perhaps go to Gainesville for the convention; it would be a great pleasure to see you again and to show you some of my favorite hunting grounds.

It is with considerable surprise that I learn that some persons, among whom you are doubtless included, frown upon the use of 'personal' generic names. After consideration, I must say that I can see no more reason for objecting to such generic names than the 'personal' specific names, and you do not seem to look on the latter with disfavor. The International Rules provide regulations or recommendations for the formation of such generic names, and since these recommendations are formulated by some of the best taxonomists of our day and are then admitted to publication, it would seem that the objectors must form a small minority. Some of the most eminent authorities have created such names, and there must be hundreds of them in botany and zoology, and also in mineralogy and metallurgy, though the two latter sciences do not use the binomial system. So there is ample precedent, and I feel greatly honored by Grönblad's suggestion of the name Scottia. Perhaps I will embarrass you by naming my next new genus Prescottia!

The name Docidenastrum was merely one of the first that occurred to me and I am by no means wedded to it. On further consideration I think your suggestion is better, and I have decided to name the new plant Bipolaris Sachlanii, which ought to satisfy everyone. Your diagnoses are quite adequate, and I have only a couple of small changes to suggest, and the addition of a few lines describing the basal view of the semicell, which turns out to be broadly elliptical instead of circular as I had at first thought. The structure of the chloroplast is still uncertain, but from my visual observations and from one of the photos it seems probable that it is a plate or ribbon, as you mention. However, if it is a ribbon it cannot be parietal, but must be axile as in Gonatozygon and Mougeotia.

I have rewritten the diagnoses incorporating the changes (underlined), and am sending two copies to you and one to Miss Croasdale. If you concur in the changes please drop her a line by airmail and ask her to go ahead with the Latin. In the next day or two I will write some notes telling what I know about the habitat, and commenting on some of the morphological features in more detail than can be included in the diagnosis.

Thanks for the identification of the unknown object that I photographed. I should never have suspected that it was a plant hair, and I am astonished that someone has not invented a six-syllable name for such a complicated structure. In a book on general botany I find that such hairs or scales occur in Elaeagnus and a couple of other families. There is a rather poor sketch of a somewhat similar scale, but

not a word about their function, though the preceding four pages give a detailed discussion about the structure and function of stomata, with some nice drawings.

I can't type with my foot up in the air, and now it is getting painful, so now I must stop and rest it.

With best regards,

Sincerely,

P.S. You may keep the photos; I have other prints of them.

Univ. Montana Biol. Station  
Big Fork, Montana

July 22, 1954

Dear Friend Scott:

It seems that you are making fine progress with your job of bone-healing and I am glad to learn that you can soon be shed of the cast. You will have to be very patient and gentle with that foot- but even if you cannot get about rapidly for a while it will be a grand relief to be free of that weight.

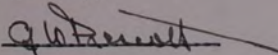
I must have given you an incorrect idea when I wrote last. I, for one, do not frown upon the use of proper names for generic or species names. I was simply pointing out that some (perhaps many) do, and for the reason (which I agree is a good one) that generic and specific names are more valuable if they give some description of the organism in question. At the same time, what's in a name? An organism can be called anything and if its morphology and physiology are known, it can be called by name no matter whether it is a latinized proper name or an adjective. To be sure, there are hundreds of proper names in binomial nomenclature of both plants and animals- and they do not bother me- in fact I find many of them very interesting because most of such names carry a bit of history of the naming of the organism. I hope that your thought that I objected to proper names has dissuaded you from using the name *Sachlanii* or *Sachlanus*. I am quite agreeable to *Docideuastrum* also- so please use the nomenclature which you prefer.

My notion about the chloroplasts is, as you yourself suggested once, that they are parietal and band-like, similar to some species of *Pleurotaenium*. It would be very helpful of course to see living material. This point can be left for emending when such time arrives that living specimens are collected and studied. Let's go to the South Pacific! I used the word ribbon, meaning 'band'. Having seen the plant you can come close to determining whether it is parietal or axial. (I am betting that it is parietal.)

Am glad you could add the description of basal view. Judging from the lateral view I would have thought it practically circular, hence the description I gave it. I shall drop a line to Hannah Croasdale right away. Do you plan to send the note in soon for publication? I hope so. It does not need to wait for an extended analysis of Sachlan's samples.

Am in the throes of packing and sorting again. Shall drop you a line from Mexico if I can. Meanwhile, good luck in your recovery.

Cordially,

  
G. W. Prescott

P. S. A desmid student from Argentina wishes to come to East Lansing to study with me. I have suggested that she do so, looking forward to the job about which we have been thinking, preparing a general work on North American Desmidiaceae.

July 24 1954

Dear friend Prescott,

I have just received the sad news of the sudden death of Dr. Willi Krieger, on July 15th, at the age of 67 years. The printed announcement gives no details, except that it was after a brief, very severe illness. He was buried in the churchyard at Hohen Neuendorf on Thursday, July 22nd. He is survived by his widow, Frau Gertrud Krieger, a son Dr. Kurt Krieger, a daughter-in-law Dr. Eva Krieger and two grandchildren, a sister Frau Lucie Reinicke, and a brother-in-law Otto Himburg. Some years ago I learned that another son, presumably the husband of Dr. Eva Krieger, was killed during the war.

His illness must indeed have been a short one, for it is only two or three weeks ago that I received a letter from him saying that his passport for the contemplated trip to Finland to meet me and Grönblad could not be issued before September, and that in view of the postponement of my trip he would start his application early next year.

I have been corresponding with him, occasionally, for the last four or five years, and though his letters have always been short and not too communicative, I had looked forward eagerly to meeting him in person. Of course I wanted to see him in East Berlin, to look at his laboratory and library, to know his method of working, and especially to find out by what method he went about the extremely difficult task of wading through the literature and picking out from among dozens or even hundreds of illustrations, what he conceived to be the most representative form of a given species. But he would not recommend me to take the risk of crossing the border into the Eastern Zone, and he himself proposed the plan of meeting with me and Grönblad in Finland.

About three years ago he asked if I would send him some samples containing typical American species of *Cosmarium*, so that he could make his own drawings of them instead of relying on the drawings of other authors, and accordingly I made up a batch of samples with a considerable number of *Cosmarium* species.

A year or more ago, he wrote that the next installment of his monograph, dealing with *Cosmarium*, was nearly completed, and that he had hopes of being able to publish it, which had hitherto seemed impossible because of the poor economic conditions under the Soviet rule. It is greatly to be hoped that someone will be able to publish this installment, which would be of enormous help in studying this very difficult genus. Further I hope that somebody may be found who will undertake the work of completing the monograph and the other genera, though who it could be I do not know. I believe that his son was killed during the war was his assistant in the first installments of the monograph; whether the other son, Dr. Kurt Krieger, could do it is also beyond my knowledge.

I suggest that you write Rufus Thompson, giving him the data in the first paragraph above, and ask him to publish an announcement in the next issue of the News Bulletin of the Phycological Society.

Sincerely,

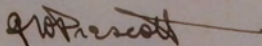
July 29, 1954

Dear Friend Scott:

Certainly am shocked to learn of Krieger's death/. I have just received the announcement from the family. This is a great loss- to his family and to phycology. I do hope that his next work is far enough along so that it can be put into print. I suppose we shall learn soon just what the status is of his Cosmarium section. If they do not print it there- we should try to have it done here. We should have an announcement in the Phyc. Bull. and if Rufus does not have the information I shall see that he gets it. He is in Paris now and probably will learn of Krieger's death there.

Am just off for the 'sunny' South and am dreading the heat of the southwest. Since I am travelling by plane it will be quite a shock to get off, I am sure, into the high temperatures of Mexico after the coolness and the freshness of this lake country.

Will drop you a line from Mexico if I find it possible to return via New Orleans. With kind regards.



G. W. Prescott



Sept 2 1954

Dear friend Prescott,

Sorry that you were unable to include New Orleans on your route home from Mexico, but I can appreciate how you felt after spending a month in the wilds, even though I have never done such a thing myself.

I had promised the wife that as soon as my foot was well enough, I would take her for a trip somewhere, to make up for our missed voyage to Europe, and the thought has occurred to me that we might drive up to Michigan and pay you a visit. I have never been in your State, and in fact I know little about any of the northern States, but the principal reason for going there would be to take along my drawings of Sachlan's Indonesian desmids and check them with your iconograph, and also with your help, provided you could spare the time. With the identifications made, I could start work on the preparation of our paper, and perhaps finish it before we go to Europe next year. However, there are quite a number of new species and even more new varieties of desmids for which you would have to write the descriptions, and there are also the miscellaneous algae on which I suppose you have not yet been able to do anything.

How would such a scheme fit in with your plans? I have in mind spending about a week in Lansing, say the last week in September or the first in October, or somewhat longer if necessary. I would not like to do much collecting in Michigan because of the colder weather which will be setting in. My wife and I would stay at a motel, of which I presume there are plenty within easy reach of the College.

Please let me know as soon as you can what you think of the proposal, and if the visit would not fit in well with your schedule or your convenience, do not hesitate to say so. We could just as easily go to Florida or Mexico or anywhere else. And by the way, are things any cheaper in Mexico since the devaluation of the peso?

Last week I received from Sachlan four more tiny tubes of stuff from Sumatra, with more strange desmids, including a new spinous variety of Micrasterias lux, and a curious plant that I first thought to be new, but which I now think must be Euastridium staurastroides N. Barber. I have no complete illustration of Barber's plant, but there is a diagrammatic top view in Telling's "Radiation of Desmids", which agrees with my specimens.

Grönblad's paper on Scottia mira has not yet reached me in print, though judging from the Editor's urgent request for speed in returning the proof I thought it would have been published in July. Undoubtedly he will send you a reprint, so when it arrives we can work up a paper on the new genus from Sumatra.

With best regards, and hoping to hear from you soon,

Sincerely,

MICHIGAN STATE COLLEGE  
EAST LANSING

Sept. 7, 1954

DEPARTMENT OF BOTANY AND  
PLANT PATHOLOGY

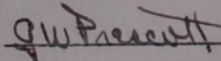
Dear Friend Scott:

I am pleased to learn of the prospect of a visit from you and Mrs. Scott, although I am afraid Michigan is a poor substitute for more glamorous places such as Florida, Mexico, etc. It would be fine to be able to talk over a number of matters with you and I hope you can plan on coming this way. We have a modest home, but we would like to make you comfortable if you will give us the opportunity. On the other hand, if you feel that you would be more comfortable in a motel I would be glad to look up a place for you. There are some very close to East Lansing, but none that are very 'special', judging from external appearances. We have a space for you at 352 Marshall so if you come please feel free to make that your headquarters. There is no such thing as predicting Michigan weather but the chances are that at this time of year the elements should be very kind. It is not too favorable a time for collecting, but if you would like we could run out to a typical Michigan bog and see what the desmids are like. As for the choice of time, either week would be equally favorable. The last week of September will be the time that we are registering and getting under way so that I might have more interruptions in a visit at that time- but then the first week in October would be almost equally erratic so it really does not matter. The last week in September is more likely to give us favorable weather. You can have full use of the office, iconography and the card index and you could have lunch even though I was occupied at times with classes, etc. You can let me know what you decide and we shall plan accordingly. I do hope that your hind foot will permit you to get about comfortably by the time you plan your trip.

Someone wrote the other day calling my attention to the incorrect use of Cosmarium rotundum in our Australian desmid paper. This is clearly my fault for Turner's name has been on record for a long time. Do not know how I came to overlook it. We shall have to change the name in our next paper.

I am in the throes of reorganization- recent collections, records, etc. and in getting Montana material unpacked and resorted. I hope to be all settled by the end of the month so that you will find working space. Let me hear from you soon.

Cordially,



G. W. Prescott

Sept 14, 1954

Dear friend Prescott,

We are planning to leave here on Sept 29 and arriving in Lansing about Oct 4. This seems slow, but I must take it in easy stages, for the enforced idleness this summer because of my broken ankle has left me in a somewhat weakened condition. Also I am not as young as I used to be, and can no longer drive 400 or 500 miles a day. A complication has arisen that may possibly delay our start. I have a cyst in a most inconvenient place, right where I sit down, and it is cutting up and getting sore. All I can do is hope that it will either subside, or else come to a head so that it can be lanced.

Please don't go to any trouble on our behalf. We should prefer to stay at a motel, and if you will give us the name of a street where there are several of them we can pick one that suits us. I will get in touch with you at the College when we arrive, and it would be helpful if you would tell me the street on which the Botany Dept. is situated.

Among the many interesting things that I want to discuss with you is the following puzzling situation, which you might turn over in your mind. In the first very small sample of material from Menggala, Sumatra, that Sachlan sent me, I found 7 whole cells of the new *Ichthyosarcus*-like dendrid, also 2 detached semicells, one of each kind. I asked him to send me more material after he had finished his own examination, and I have just received the total quantity that he had retained, so no more is available. In this new lot I have found a few more specimens, all identical with the first 7, a total of 14 whole cells and the 2 semicells. BVF, I have also found one specimen in which both poles are alike, as shown on the enclosed sketch. Further diligent search, which of course I am continuing, has so far failed to turn up any more than this one equipolar <sup>specimen</sup> ~~specimen~~, though others of the dichotypical type turn up occasionally; it is still extremely rare.

Telling wrote six weeks ago, "It is a pity that the dendrid is so scarce in your sample, seven specimens are a very small material for stating the definite constancy; it may be a local mutation of a species with symmetrical vertices". This is easily understandable, and that is why I asked Sachlan for more material. If Telling was right (and it seems that he was), there ought to be another form, so far unfound, with both poles of the fishtail type. And why the big difference in frequency, 14:1. Dichotypical specimens are usually much rarer than either of the two species or varieties of which they are combinations.

Anyway, the plant remains a new genus, even without the dipolar feature, though what we shall use as the type species of the genus is more than I can say. We can continue the discussion when I see you in a few weeks.

Sincerely,

MICHIGAN STATE COLLEGE  
EAST LANSING

Sept. 16, 1954

DEPARTMENT OF BOTANY AND  
PLANT PATHOLOGY

Dear Friend Scott:

Was glad to receive your letter of Sept. 14 and interesting drawing this morning. The specimen of course bears out what one might anticipate in respect to the polar differentiation, but still, as you say, the bipolarity is the rule (as far as evidence is concerned) and the plant certainly illustrates a trend toward cellular differentiation which in no way detracts from its uniqueness. With as many specimens as you have seen there is every justification for describing a new genus. Who knows, maybe similar or other curious entities may show up in the Sachlan collections. I hope I can get back to microscope work soon- am getting eager- but the time since returning has been given over entirely to reorganizing and putting away my summer collections, etc. I think I shall have a good assistant this year.

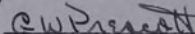
Am glad to know that you are making plans to come this way. I shall be glad to look up some motels for you and shall drop you a line. There are some on U. S. highway 16 just east of East Lansing. Others are on the highways going north and west of Lansing but would be too far away to be convenient. As indicated on the enclosed map we have Kellogg Hotel on the campus, which is an ultra 'smooth' hotel\*with dining room and many facilities, but which is not operated at rates comparable to Motel rates. I think you would find the hotel very comfortable, however, and I have made a tentative reservation pending word from you.

\*\$8.50 double

If you come in on U. S. 16 from Detroit you will drive through East Lansing and right along side of the campus (as shown on map). If you come in from Jackson to the south, or from Marshall on U. S. 127 or U. S. 27 you will come to Lansing first. Where 27 or 127 intersect with U. S. 16 coming in this way, turn to your right on U. S. 16 and that will take you east on this highway. This runs right down the 'main street' of East Lansing and separates the village from the campus. You can turn right off from this highway at the points indicated as campus entrances. I have marked Natural Sci. Bldg. The campus phone is Edgewood (ED) 21511 and my extension number is 381. The house phone is ED22852.

I do hope that the weather will act hospitably. We are just as apt to have a fine Indian Summer week the first of October- but one never knows. If you would like we could make a one-day excursion to some ponds which I think would be near enough to the road so that you would have very little if any walking to speak of.

Hoping to hear from you soon, Cordially

  
G. W. Prescott

I was surprised to learn of Fritsch's death while I was away. I would like to see his last presidential address on desmid phylogeny.



centennial  
1855-1955

"IT IS FOR US THE LIVING . . . TO BE DEDICATED HERE TO THE UNFINISHED WORK . . ."

LINCOLN

MICHIGAN STATE COLLEGE  
EAST LANSING

September 26, 1954

DEPARTMENT OF BOTANY AND  
PLANT PATHOLOGY

Dear Friend Scott:

We have Mrs. Scott's letter indicating that you would prefer staying at the campus hotel (Kellogg Center) and I have, therefore, confirmed the reservation that I made earlier for a double room, October 4. I do hope you have an easy drive and can make it about that time. If it is necessary to change your plan let me know so that I can keep the reservation open for you. I am sending up a little prayer for good weather next week. Just now it is grand, warm (up to 82 deg.) and not a cloud in the sky. If you can, let me know about when to expect you- and give me a ring when you get in telling me where I can meet you so that I can show you over to the hotel- or drive in here to the building first if the time of day is right. I am usually here until nearly 6:00 P. M. and am back at about 7:30. Best regards until later-

*C. W. Prescott*

C. W. Prescott

Digitized by Hunt Institute for Botanical Documentation



"IT IS FOR US THE LIVING . . . TO BE DEDICATED HERE TO THE UNFINISHED WORK . . ."

LINCOLN

Sept 29 1954

Dear friend Prescott,

It must be that I have not been living right, or perhaps that my past sins are catching up with me.

Just an hour ago the doctor had to cut open the 'bobo' on my posterior and cauterize it with silver nitrate. YOWWW!!! So now I cannot even sit on it, let alone drive a car for 1100 miles. To write this letter I am balancing on one corner of the chair.

Possibly a week may show sufficient improvement and healing to let me undertake the trip, and if so I will write you again. But in the meantime please cancel the reservation at the Kellogg Hotel.

complementary

A week ago I found the ~~unpublished~~ species of the new genus from Sumatra, a fish with two tails, one at each end, like the enclosed sketch. The first specimens that I found are dichotypical combinations of the two species with equal poles, but it is very strange that 13 specimens seen by me and 10 seen by Sachlan were dichotypes, against only one specimen each of the 'basic' species. I have asked him to try to get more material, and we shall have to postpone publication until we can get further information.

Painfully yours,

MICHIGAN STATE COLLEGE  
EAST LANSING

October 3, 1954

DEPARTMENT OF BOTANY AND  
PLANT PATHOLOGY

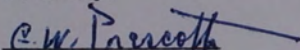
Dear Friend Scott:

My disappointment is exceeded only by my sympathy for your bad luck. I can imagine the irritation and painfulness of such treatment. Here is hoping that it is only a short time before you are sitting and walking in comfort again. I cancelled the reservation and the desk said to let them know and they would try to find room for you whenever you arrived. If your plans develop so that you can still make the trip we shall continue to hope for good weather. It is rather rainy just now but quite warm and not unpleasant at all. We are supposed to have some good Indian Summer weather yet this month.

That is a fine symmetrical specimen drawing of the new genus. It appears to be quite capable of constructing identical semicells, but shows a tendency toward bipolarity- trying something new in desmid evolution- that is, new to us. Such a trend or tendency has been going on for a very long time of course and may be further along than we know- as evidenced by your find from South America. We need now to find other forms for confirmation and to fill in the 'steps.'

My best wishes to you and Mrs. Scott. Let me know soon if you can plan on coming this way this fall.

Cordially,



G. W. Prescott



centennial

1855-1955

"IT IS FOR US THE LIVING . . . TO BE DEDICATED HERE TO THE UNFINISHED WORK . . ."

LINCOLN

Oct 6 1954

Dear friend Prescott,

Just received yours of the 3rd, and am glad to say that the 'bobo' has healed, at any rate on the surface, and is apparently progressing favorably.

My wife and I have made a special foam rubber cushion for the car, with a hole cut in it to relieve pressure on the sore spot. I tried it out yesterday on a 50-mile drive and it seemed to work very well. So I am going to take a chance and leave here Friday, the 8th, and expect to arrive in East Lansing on the afternoon of the 12th, though it might be the 13th, depending on how things go.

I should appreciate it therefore if you would make another reservation for us at the Campus Hotel. If the notice is too short for them, we can always go

to a motel or to one of the hotels in downtown Lansing.

With best regards, and hoping to see you next week,

Sincerely



MICHIGAN STATE COLLEGE  
EAST LANSING

Nov. 5, 1954

DEPARTMENT OF BOTANY AND  
PLANT PATHOLOGY

Dear Friend Scott:

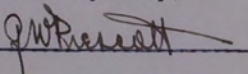
I hope by now you are safely home and that the last part of your trip has been pleasant- although I suspect that Edith has been rather miserable. We were certainly sorry to learn that she had broken her rib- and because of such an unfortunate accident. I still think that theater should be sued. We do hope that Edith is over the painful part of the injury now. I am afraid you will remember East Lansing with some ill-feelings- what with being dunked in a swamp and falling down steps. We shall try to do better by you next time. I am glad that you had a visit with Brunel and with Hannah. I know she was pleased to have you stop, especially since she has no phycologists in the college there with whom to talk shop.

I am sending today the copy of W & W Index. I hope there are not too many typographical errors. I wish that I had typed on both sides of the sheets- but I did not know for certain how you would wish to use it. This would have cut down the total number of pages.

We are having great football weather today and for the first time this year MSC is having an old-time victory- 54-6 over Washington State.

We shall be hoping to hear from you soon on the success of the homeward trek.

Yours very truly,

  
\_\_\_\_\_

Nov 14 1954

Dear Jerry,

Many, many thanks for the copy of the index to Wests' Monograph. This turned out to be a much larger job than I, and I think you, had anticipated, and I am sorry you spent so much of your valuable time on it. Of course it will be highly useful to me, and I am going to cut the sheets down in size and bind them.

Edith and I can never thank you and Tess enough for your gracious and generous hospitality. Our stay in East Lansing was very enjoyable, and we shall always remember it with vivid pleasure. Let us hope that one of these days you and Tess will be able to visit New Orleans, so that we can show you our appreciation.

I am glad (and rather surprised) that no ill effects followed my dunking. Edith also has almost recovered from her fall; the cracked rib is well on the way to mending, though she still has some pain in the shoulder joint from the stretched ligaments.

After leaving you, we drove through Ann Arbor, where I caught Dr. Taylor as he returned from lunch at 1 pm. He had classes running through until 5 pm, so could give me only a short time, but I had a very pleasant chat with him and was glad to renew the acquaintance. Then we went on to Detroit and spent two days there, seeing the sights.

Crossing into Canada we drove through Toronto to Montreal and spent three days there, sightseeing. We called on Dr. Brunel and were very cordially received by him. He has a very nice place to work; a spacious office and a separate secretarial office; a good-looking secretary, Miss Perrier; a large laboratory and a beautiful Zeiss binocular microscope, permanently fitted with a monocular tube carrying a 35 mm camera. All he has to do when he finds a specimen that he wishes to photograph is to turn a knob to divert the light into the camera, and then push the button for the exposure. Also he has a large botanical library and herbarium. Lately he has been working on marine algae, preparing for a general work on Canadian algae that the Institute expects to publish. I talked with Brunel about Irene-Marie, mentioning the numerous errors in spelling of authors' and botanical names in I-M's recent papers. Brunel smiled and said he was well aware of the situation, but that it was hopeless to try to do anything about it. He cited a case that occurred a few years ago, when he was editor for the Canadian AAS, and had to reject a paper by I-M because it was so badly prepared. I-M shrugged his shoulders, figuratively speaking, and did not correct nor resubmit the paper, which consequently was never published. I had hoped that Brunel, knowing I-M personally, should have mentioned the matter to him, for it is a pity that his good work should be marred by such a multitude of careless errors.

I expected to go from Montreal to Quebec, visiting I-M on the way, for he lives in a small town directly on the highway, and about half-way between the two cities. But the day we left Montreal it was raining hard, and the weather prediction was for more rain and possibly snow for several days all down the St. Lawrence valley. I don't like driving under such conditions, so I headed south down through New York, Vermont and New Hampshire to call on Hannah Croasdale. We got to Hanover about 10 am and I expected to spend only a couple of hours there, but she talked so persuasively that we stayed all day and slept at the Hanover Inn on the campus. She gave us lunch at her house, and took dinner with us at the Hotel, after which we returned to her home for a fireside chat. I spent most of the day in her office, talking shop; and I showed some of my slides to a few botanists whom she rounded up, though I think she was the

only one interested. Altogether we had a delightful visit, and both of us were very much impressed with her charming personality and her extraordinary vim and vitality.

Then we went on to Boston, passing through Cambridge on the way, and I stopped at the Farlow Herbarium to make the acquaintance of Dr. Lamb, the new Curator, with whom I had had some correspondence about the condition of some of my early collections which had dried out. He has kindly agreed to restore them by adding preservative solution, and to seal the screw caps by dipping them in melted paraffin. Previously I had experimented at home by drying out some material and then adding water, and found that it works pretty well; some of the more delicate desmids are collapsed, but the majority ~~are~~<sup>are</sup> restored to good condition, thanks to the 5% glycerine which I had used from the beginning. In future I am going to use 10% glycerine.

Then we spent two days in Boston, and nearly wore our legs out climbing up and down Beacon Hill, on top of which our hotel was situated. Next time I go there I shall pick a hotel further uptown, where the ground is more nearly level.

There were no more calls to be made, so we headed homeward, bypassing New York City, and going through Peekskill, N.Y., Harrisburg, Pa., Roanoke, Va., Knoxville, Chattanooga, Birmingham, and so home. Most of the way the weather was bad, cold and rainy; in Virginia we travelled most of one day through a fairly heavy snowfall, the first of the season. Fortunately the snow melted as soon as it hit the road, though there was plenty accumulating in the fields on each side. And in New York State we awoke one morning to find the car covered with a glazing of ice, caused by a heavy dew in the evening, followed by freezing temperature in the early morning. Commonplace to you, I expect, but new experiences for us.

Well, we had a most wonderful trip of 4200 miles, and it was the first vacation I have ever had where I was not compelled to be back by a given date. I think the most memorable experience was the glorious autumn coloring of the foliage in the northern states, particularly in Bear Mountain State Park, just across the Hudson from Peekskill, N.Y. Edith did not remember such coloring from her girlhood days in Grand Rapids, nor did I from my boyhood in England, and since then we have never visited the northern states at the right season, until now. We have seen many color photos of such scenes, but the actual sight exceeded them by far. And to think that you bätanists reduce all this glory to percentages of carotenes and xanthophylls!

Now I am starting to answer the accumulation of correspondence. There is a letter from Sachlan saying that he will get more material from the Sumatran swamp where the new *Ichthyocercus*-like genus occurs, but that it will probably by next spring before he can go there. So we shall have to wait and see what turns up in his new collections.

Dr. Krieger's son, Dr. Kurt Krieger, wrote me a letter which I quote in part as follows:

"Die Veröffentlichung des Teiles Cosmarium der Desmidiaceenmonographie stösst auf sehr grosse Schwierigkeiten. Ein fertiges Manuskript existiert noch nicht, dagegen ein wohl vollendeter Zettelkatalog (card-index?) mit Zeichnungen, der jedoch in der Ostzone im Hause meiner Mutter steht und infolge seines Umfangs nicht ohne weiteres nach West-Berlin gebracht werden kann. Falls ich das schaffen kann, so erhebt sich die Frage, wo es einen Spezialisten gibt, der die Monographie vollenden kann. In Deutschland ist im Augenblick meines Wissens keiner zu finden. Ausserdem liegt der Verlag auch in der Ostzone und ich weiss nicht, ob er noch arbeitet. Die unglücklichen Verhältnisse erschweren hier jede Arbeit. Ich wäre Ihnen für eine Mitteilung sehr dankbar, wer nach Ihrer Meinung die Arbeit meines Vaters vollenden könnte."

From this it appears that the Cosmarium section is very far from being as nearly complete as I had judged from Krieger's letters. I had thought that it was in manuscript form, almost ready for the printer. Even with the help of the card-index

there would remain an immense task awaiting anyone who might be found to undertake the completion. There would be the arrangement into groups of similar characteristics, digging out the citations to previous authors, the long lists of synonyms, the world distribution, and assembling the individual drawings into plates and writing the descriptions of all the forms. Can you make any suggestions of phycologists who might take on the job? If so I should be glad to forward them. I suggested to Grönblad that he might undertake it, but he replied that he dared not do so, for his capacity for work is far too small. In return he suggested you, and Skuja, and Messikommer, as the only ones he considers capable. What would you say to it? There is one objection that I can see, that you could not write the book in German, which would probably be quite necessary if it has to be published by the original firm which is located in the Russian zone of Germany. About Skuja and Messikommer I don't know very much; their work seems to be competent, but I don't like Skuja's drawings, and Messikommer seems to have confined his attention to the algae of Switzerland, so that perhaps he does not have sufficient knowledge of the desmids of other continents.

The name of the glossary that I mentioned to you is "Petit Glossaire Limnologique", by Marcel Huet, published by Imprimerie H. Vaillant-Carmanne S.A., Place Saint-Michel 4, Liege, Belgium. I don't know the price, because Prof. van Oye was kind enough to send me a copy without charge. It is a paper-bound book of 40 pages, 8½" x 12". The first 17 pages give definitions and explanations (in French) of a large number of limnological terms; the remainder of the book gives translations in three languages of the words and phrases, French-german-English, German-French-English, and English-French-German. I think you and your students would find it useful.

Enclosed are the photostats of the plates to Gutwinski's 1902 paper on Algae from Java collected by Raciborski. The particular figure that we were looking for was *St. javanicum*, Pl. XXXIX, Fig. 59, which as you will see is not certainly identifiable because no top view is given, so the number shape and arrangement of the apical processes is unknown. Bernard (1903) changed the name of this plant to *St. Gutwinskii*, which was recognized by Krieger in his Sunda paper. It is similar to, but different from, the Indonesian *Staurastrum* that I was trying to identify, and these will have to be referred to *St. Freemanii* M&W, I believe.

Under separate cover I have sent you a copy of Mikrokosmos, containing an ad. of small plankton nets at very reasonable prices, only \$4.00 for the #20 mesh and \$4.50 for the #25 mesh, also a telescoping handle for them at \$6.50. Please return the copy to me, for I think I shall order one. The catalogs of second-hand books you may keep; I have no further use for them.

Best regards and good wishes to you and Tess, and renewed thanks for your kindness, from Edith and myself.

Your friend

Dec 12 1954

Dear Jerry,

At Grönblad's request I have sent reprints of our papers to:

Mr. (Dr.?) Gerald A. Prowse,  
University College,  
Khartoum, Sudan.

My supply of some of them is exhausted, (Mississippi, 1942; *Micrasterias* I, 1943; *Spinocosmarium* 1949), so if you still have some of them I wish you would send them, also your own papers if you will. I don't know anything about him except that he sent Grönblad a collection from Lake Ambadi in a remote region on the White Nile, that is truly EXTRAORDINARY, also photo copies of some of his desmid drawings, which G. says are not particularly good. In the sample there are THREE NEW SPECIES of *Micrasterias*, totally unlike anything heretofore known, and two of them are dichotypical with differing semicells, all specimens being alike so far. In addition there are two new species of *Euastrum*, one of them looking like something out of a desmidologist's nightmare; a heavily built *Arthrodesmus* like *A. curvatus* but with a beautiful pattern of triangular pits in a hexagonal arrangement on the face; an undescribable *Staurastrum*; and a large number of strange *Cosmaria* only a few of which I can recognize from the African literature. G. sent me a very small quantity of the material, in which I have seen these critters with my own eyes, otherwise I should hardly believe some of them. Enclosed are sketches of two of the *Micrasterias*; of the third one I saw only one specimen and I sent the drawing to G. because I think he had not found it yet.

G. also sent me five samples from Uganda, three of which are fairly good in desmids, and there may be a few novelties in them, but I have been so entranced with the Sudan collection that I have not done more than give them a quick once-over.

Grönblad has written a short account of Dr. Krieger's life and works in two versions, German and English. The German one will be published by the Soc. Sci. Fennica, and he thinks the English one should be published in this country. I think it would be an excellent idea to publish it in the Bulletin, along with a cut of Krieger's photo that I left with you, if Philip Wollé can manage it. There are three typewritten pages, including list of publications, which I suppose would take a page of the Bulletin, or a little more with the cut. Please let me know your opinion.

I remember very well the list of Phillipine habitats, because I used it to pick out some of the vials which from the low pH seemed to offer possibilities of desmids, which however I did not find. It was a rather thin sheet of paper, folded several times to a small size, and I am sure I put it back in the box with the vials after I had finished. There is no chance of it having been mixed with my papers, for all of those were on the opposite side of your desk.

The one rich collection of Australian material that you mention sounds as if it came either from the Northern Territory or from the northern and tropical part of Queensland. I should like to have some of the stuff if you can spare it, or at least a few slides, to compare with the other tropical Australian and Indonesian desmids. And if there are desmids in the other vials that you get from the Army Officer, they would fit in very well with a future paper that we have to do on a lot of miscellaneous collections that I have from various parts of Australia.

About eight months ago I received a jam-jar (!) of very rich desmid material from a new chap at Oenpelli Mission in Arnhem Land. Of course I wrote him an enthusiastic letter, giving full directions how to collect and ship, but I heard no more from him until a couple of days ago, when I received an airmail letter saying that three vials are on the way. Two of them seem to be from the same habitats as the ones that Specht collected from, but taken at different seasons, so they may show a different selection of desmids. The third one seems to be a new habitat. It will be six or seven weeks until they arrive.

I am working on the paper on *St. Wildemani*, and have the rough draft nearly complete; when I make the drawings I will send the whole thing to you for your approval or criticism.

With best regards and holiday greetings to you and Tess, from Edith  
and myself,

Sincerely,

Dear Edith and Arthur:

What good sports you are to write so enthusiastically about your trip - with all the bumps and dunkings and traffic tickets, etc. We were surely glad to know that you were safely home - and now with a new car! What kind? The new models are certainly alluring and inveigling. It gave me the wonder lust to read your interesting log of your trip. I am so very glad that you could make the trip to Montreal and then to Hannak's picturesque little town. Yes, Hannak is a most delightful person to be with. She is like a character a strong character from a book. New England in the autumn is a colorful experience to say the least & I am glad you had a chance to see some memorable landscapes. Of course New England is scenic at any time of the year - I think. One reason why I like it is because so much of the topography and vegetation is remindful of Oregon and the northwest - and such a relief from the prosaic midwest. I suppose I should be more choitable but I have always had a rebellious feeling toward the terrain and the climate here. I think they do "things" to the

people too - even though they don't know it and wouldn't admit it.

Well - it certainly was very grand to have you here and to get better acquainted. You did so many friendly things for us that we feel that we were very fortunate to have you in town - even for so short a time. Let's hope we can get together again soon. When you come again I hope to maybe in the spring (which isn't much in Michigan - but at least we could get out and around under more pleasant conditions.

Thank you very much Arthur, for the photostats. Those are exceptionally clear prints and will be very useful since they fill in a gap in my literature file. Thinking of desmids - I am working over the collections from the Australian army officer (collections from Australia, Fiji, etc.). I have come upon one vial of wonderful stems - many of which are the same as in some of the vials from Secklon. There are so many large forms and some like the Sunda Expedition species. I wish that you could see them. If I don't have to send these collections back I shall send you at least some slide mounts.

Tess is in a great fever of writing and has some very interesting little compositions. One especially I want you to see, Arthur. Although she did not know it she wrote a very nice word picture of desmid haunts (in Michigan). She is going to send copies soon I think.



Arthur, did I show you the check list of habitats for that collection of Philippine algae? If so, do you remember what it looked like? I can't remember. In any case, it has become "filed" and I don't even know what I am looking for. I find that the algae are not very interesting any way - but I should report back to the shop.

Now we are having November for sure - cold rain - bare trees - and all the leaves raked and burned - the squirrels burying acorns - and the coal pile shrinking.

I notice by the weather map that you folks are having a "spell" of cold weather too - but you are comforted by knowing it will not last long. I am

glad I am so busy that I don't have to notice the collapse of life all about. Have John's thesis

to work on - and he has just completed a going over of a chapter for a book the Amer. Geographic Soc. is getting out. That was really a long hard job and although I enjoyed the experience I should have been doing my own work.

Must turn in. Thank you for your good letters. Shall write again before long and talk "shop" a little.

With kind regards

Jerry Prescott

MICHIGAN STATE COLLEGE  
EAST LANSING

DEPARTMENT OF BOTANY AND  
PLANT PATHOLOGY

Dear Friend Scott:

Just a note- and in a hurry to hasten along the letter regarding your application to the NSF. I think that it would be a splendid idea and I hope that aid will be forthcoming. Who knows, we might travel together. I, too, am making an application inasmuch as funds I had counted on here have failed me. It will make a rather full summer, but I would like very much to attend and to give the short paper I was asked to deliver.

Best regards until later-

*GW Prescott*

Dear Mr. Scott:

I had been planning on stopping off to see you on the way to Ecuador. Recently, however, our plans have called for travelling to Balboa via MATS which will not give me a chance to stop over in New Orleans. I did want to visit with you and to talk over a number of problems.

How are you getting along anyway? I hope you and Mrs. Scott can have a vacation over the holidays. I believe you usually do go on a trip. I am going to make a run from Balboa up to San Jose + get into some alpine stations before going on to Quito. I think you stopped in Costa Rica on your trip last year, right?

Not long ago Van Oya sent a card to be filled in for ordering reprints. He wanted it back promptly and since so much time had been lost getting it

to Barrow, I filled in what number seemed  
to be sufficient for both of us and returned  
it. When the reports are off I shall see that  
you receive as many copies as you wish.

Any progress on the Austroheri paper? I see that  
the ~~Enochian~~ *Hicriantensis* paper is out but I have  
not had a chance to read it again. How is it?  
Any more news from Saellan? I have been  
so buried in work and ice and darkness that I  
have lost contact with what has been going on.

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It is quite a joy to get back and to see the  
sun shine again and to tell the truth I am very  
weary of running an ice auger through  $3\frac{1}{2}$  feet of  
ice to get samples. I have had enough and the  
tropics are going to look mighty good to me. I  
am hoping to hear from you when you have time  
to write. I shall be at Hotel New Yorker Dec. 25-26. After  
that address will be 90 American Embassy, Quito.  
Best wishes to you and Mrs. South for a very  
cheery Christmas. Cordially - J. W. Prescott

NOTES ON CLOSTERIUM CUSPIDATUM BAILEY.

A. M. SCOTT.

Synonyms: Ophiocytium cuspidatum Raben. 1868

Reinschiella (?) cuspidata (Bail.) de Toni 1889

Tetraedron cuspidatum (Bail.) Wille

Closterioides spinosus Prescott 1937

Spinoclosterium curvatum Bernard 1909

Spinoclosterium curvatum var. spinosum Prescott 1940

Spinoclosterium cuspidatum (Bail.) Hirano. 1949

This desmid was first found by J. W. Bailey in the 1840's, in Rhode Island, and assigned to the genus Closterium. He sent a drawing and a brief description to John Ralfs in England, who published it (1848) under Bailey's name Closterium cuspidatum, Bail. The illustration in Ralfs is not very good but is clearly recognizable, while the accompanying description lacks any dimensions, and is far from complete by present-day standards. Nevertheless, the International Rules for Botanical Nomenclature establish Ralfs' British Desmidiaceae as the starting point for desmid nomenclature; therefore this name is valid. Irénée-Marie (1948) has also called attention to this fact.

At later dates the plant was transferred to other families by Rabenhorst, de Toni, and Wille, as shown in the list of synonyms above. None of these references are accessible to me, so I cannot comment further on this aspect.

Nordstedt's Index (1896) lists the plant as Closterium cuspidatum Bailey, and gives as synonyms Ophiocytium cuspidatum Raben., and Reinschiella (?) cuspidata (Bail.) de Toni. Therefore, Nordstedt accepted it as a Closterium.

Krieger, in his monograph (1937) excludes the plant from Closterium on the ground "Wahrscheinlich Perideenzyste".

G. M. Smith (1950) lists Spinoclosterium curvatum Bernard, and gives Closterioides spinosus Prescott as synonym. Since he does not mention Bailey or Ralfs, ~~it~~ it is not known whether he was aware of the previous publication in Ralfs.

Apparently the plant was not seen from 1848 until 1909, when Charles Bernard found it in a pond at the Botanical Garden in Singapore. He published it (1909)

under the name Spinoclosterium curvatum Bern., considering that the presence of the <sup>2.</sup> spines was a generic character sufficient to distinguish it from Closterium. However, he appears to have been somewhat confused by de Toni's transfer to Reinschiella, as 1/b is shown by the following quotation:

"Je dois, cependant, me demander encore si Reinschiella (?) cuspidata (Bail.) de Toni, type encore fort mal connu, puisqu'on le ~~set~~ <sup>trouve</sup> parfois parmi les Desmidiées sous le nom Closterium cuspidatum Bail., mais plus souvent parmi les Protococcacées, ne devrait pas être rapproché de notre nouveau type. Je n'ai pas de renseignements assez circonstanciés au sujet de C. cuspidatum pour pouvoir le mettre dans le genre Spinoclosterium, et pour décider, entre les opinions divergentes des auteurs, s'il faut le considérer comme une Desmidiée ou comme une Protococcacée. En tout cas notre type, par bien des détails, se différencie, du moins spécifiquement, du type de Bailey, et ce que nous pouvons affirmer, - l'étude du contenu cellulaire l'a démontre, - c'est qu'il n'est certainement pas une Protococcacée. Je l'ai donc considéré comme un nouveau genre, distinct de Closterium, car ce dernier est caractérisé par sa membrane lisse, dépourvue d'ornements. La présence d'aiguillons m'a paru un caractère générique". 1/a 1/m

Note that Bernard says that his plant "differs in many details, at least specifically", from Bailey's. But since Bailey's description and illustration, as published in Ralfs, give almost no details, it is difficult to imagine what details Bernard had in mind. Comparing the two illustrations and descriptions, there does not seem to me to be any difference worthy of specific differentiation. Bernard's figure shows a smoothly rounded apex (except for the spine), without the "hump" or "shoulder" that characterizes all (?) other specimens that have been found. But that, at most, would warrant merely a different form name. Of course, Bernard was entitled to his opinion as to the generic significance of the spines, but it remains to be seen how many desmidiologists will agree with him.

Prescott (1937) described a closely similar desmid from Isle Royale, Mich. Unaware of Bernard's previous publication, he named his plant Cloterioides spinosus, but later (1940) reduced this to synonymy under the name Spinoclosterium curvatum Bern. var. spinosum Presc. He made no mention of either Ralfs or Bailey. 1/5

The varietal name, spinosum, seems somewhat of a misnomer, since all of the plants from widely separated countries, bear the same number and kind of spines.

Whelden reported the plant from Maine and New Hampshire (1942), and again from Maine (1943), under the name Spinoclosterium curvatum Bern. He calls attention to Prescott's synonymous name Closterioides, but does not mention either Ralfs or Bailey, so it is uncertain if he was aware that the plant had been published in 1848 as Closterium cuspidatum Bail. His figures agree with Prescott's and mine.

In the last few years I have found the plant, as rare individuals, in my own collections from Mississippi and Florida, in North Australian material from the Arnhem Land Expedition (furnished by Ray Specht), in Indonesian material (furnished by M. Sachlen), and in Japanese collections (furnished by Minoru Hirano). All of these specimens are of approximately the same shape, the same range of size, the same morphology of chloroplast and pyrenoids, the same shape and size of spines, except that occasionally the spines are somewhat curved instead of straight. The few living specimens that I have seen possess terminal vacuoles with moving granules, and traces of them can usually be seen in preserved specimens. All specimens have the "hump" on the dorsal margin near the apex, but none of them have the suture shown and described by Prescott.

When I first found the plant in Mississippi in 1946, I identified it as Spinoclosterium curvatum Bern., from Prescott's papers. But Rolf Grönblad, to whom I sent a sketch, called my attention to the previous publication in Ralfs. Later he questioned the absence of any suture, which was ~~not~~ shown on my sketch, and thought <sup>it</sup> ought to be present. Obviously there must be a joint between the old and new semicells, but it need not necessarily be visible; in fact many species of Closterium are depicted without a suture. To satisfy myself I undertook a special search to see if I had overlooked it. In the examination of several specimens from Mississippi, Florida, and Japan, I was able to find a faint indication of a suture in only one example, in which the walls of the old and new semicells differed considerably in thickness. After the most careful scrutiny with a 60x apochromatic objective, I was able to see a very faint indication of a suture, caused, I believe, by the varying refraction of the different wall thicknesses. Further, I asked Minoru Hirano to see

if he could find the suture, and he was kind enough to go out and get some living plants. He wrote me that he was unable to find a suture in any of them. The presence or absence of a suture has no taxonomic significance.

As to the generic value of the spines, some interesting and pertinent precedents may be cited. When Archer found Pleurotaenium <sup>(Docidium)</sup> Keyi he did not think it necessary to create a new genus, though no spiny Pleurotaenium <sup>or Docidium</sup> was previously known.

Borge found a Pleurotaenium (Docidium) in Australia with a different spination, D. australianum, but saw no reason to place it in a new genus. Neither did I when I rediscovered the plant in 1950 and thought it to be new.

Wolle described another spiny Pleurotaenium (Docidium), D. spinulosum. When Jules Brunel and I independently ~~rediscovered~~ rediscovered the plant, neither of us thought of changing it to a new genus.

The long-spined Microsterias ceratophora Josh. differs so radically from any other known species that Krieger (1939) excludes it as "wohl teratologisch". I rediscovered the plant in North Australian material in 1950, and thought I had made a remarkable find. After hesitating between Arthrodesmus and Microsterias, I tentatively ~~named it~~ named it Microsterias Spechtii until Prescott informed me of Joshua's previous publication. Neither Joshua nor I thought of establishing a new genus to receive this extraordinary desmid. wohl

The original generic diagnosis of Cosmarium made no mention of spines, but today there are known many species that have various kinds of spines, ranging from the tiny conical teeth of C. dentatum and ~~C. Askenasyi~~ C. Askenasyi, though C. Eloiseanum with its stout conical spines, to C. denticulatum and especially Grönblad's Brazilian varieties which have true slender, sharply pointed spines. d/

Again, the genus Staurastrum was founded on only one species, St. paradoxum, which has only very short terminal spines on the processes, entirely different from the long-spined species that are now included in the genus, such as St. longispinum, St. Wildemanii, <sup>St.</sup> subtrifurcatum var. major, etc.

The point that I wish to bring out is that generic concepts have been enlarged many times in the past, and must also be changed in the future, I think, to admit new plants with hitherto unknown features. t/



Here is a list of authors showing the weight of opinion behind the two names, Closterium cuspidatum Bail. and Spinoclosterium curvatum Bern.

Those recognizing  
Cl. cuspidatum.

Bailey  
Relfs  
Nordstedt  
Teiling (in litt.)  
Grönblad (in litt.)  
Irénée-Marie  
Scott

Those favoring  
Sp. curvatum

Bernard  
Prescott

Opinion unknown.

G. M. Smith  
Whelden  
Hirano