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Feature Article

Of Shoes and Ships and Sealingwax

This is a tale about an expedition to the highlands of New Guinea in search of rare and wonderful lichens and bryophytes. Many of you who read this will eventually receive duplicates from this collection and you may value them more for knowing what has happened to them over a period of several months.

In July, 1968, Donald McVean, ecologist at the Australian National University which sponsored the expedition, B. O. van Zanten, bryologist at the University at Groningen, Holland, and myself, spent about a month collecting in various parts of the highlands of New Guinea. We visited Mount Kaindi near Wau and the Daulo Pass near Goroka, among other places, but we especially concentrated on the subalpine and alpine reaches of 14,700 ft. Mount Wilhelm, where the A.N.U. has a permanent field station, and which is an important area because it was visited by the Archbold Expeditions and is the type locality for many species of bryophytes described by Bartram.

As our collections accumulated in these various places, we

shipped them down to the herbarium at Lae, where Dr. John Womersley watched over them and saw that they were properly dried and cared for. We shipped boxes by air freight from Mount Hagen and Goroka and also deposited some in Lae on our return from Wau. All in all, there must have been about 25 boxes belonging to my portion of the collection.

We left New Guinea in mid-August, van Zanten to pursue his collecting program in North Queensland, Australia, and Donald McVean and I to return to Canberra, from which point I departed in late August for America. The collections were eventually to be sent to Leiden (van Zanten) and to Colorado (Weber). However, because there were some McVean collections packed in one of my boxes, my shipment went first to Canberra, whence it was crated and shipped by boat to America.

I was informed by McVean that my shipment would arrive in San Francisco on November 23 or 24 aboard the freighter SS "Cap Colorado." You can imagine the sinking feeling I had when I opened our local newspaper on Tuesday, November 21, to see a photograph and the caption: "Freighter Afire—Lifeboats carrying crewmen of the West German freighter Colorado wait beside the smoking vessel for rescue after fire erupted in the Pacific about 1,000 miles northeast of Honolulu. Two men were lost overboard as the ship was being abandoned and one man was crushed between a lifeboat and the side of the ship." In an instant I mentally envisioned all of that precious New Guinea cargo being lost in the bottom of the sea. Then I read the final sentence, "Eight other men stayed aboard and later brought the fire under control." This might have given cause for hope, but until one knew the extent of the fire and the location of the cargo holds only a supreme optimist could have been sanguine about the outcome. The photograph was dramatic, showing the entire stern of the vessel billowing smoke and the superstructure blackened, and two lifeboats in the water in a choppy sea.

A few days later I was informed by San Francisco that a fire

had occurred on board a ship carrying my cargo and that I would be informed as soon as the facts were available. Some days later an AP dispatch from Honolulu stated: "Thirty crewmen rescued from the stricken West German freighter Cap Colorado were scheduled to arrive in Honolulu Monday aboard the Indian merchant vessel Sumadragupta Jayanti. Two crewmen were lost while abandoning the burning ship Wednesday, and eight others remained aboard the disabled vessel. The tugboat Sudbury II of Victoria, B.C., is en route to the Cap Colorado, 1,000 miles east of Honolulu, to take it in under tow to Honolulu. Arrival time in Honolulu is unknown."

In this cargo were, of course, many exciting collections of lichens for distribution later in the *Lichenes Exsiccati* COLO, but one which was of special interest was a fine collection of an undescribed genus which was to be described later, and concerning which I had been corresponding with Mackenzie Lamb. I now had to inform him about this tragedy, and I also wrote to Aino Henssen, who, through her student Martin Jahns, was also interested. So all of us have been following the story of this cargo with prayerful attention. As Dr. Donald Walker of the Dept. of Biogeography and Geomorphology at Canberra wrote: "Although I can well understand your upset at the news of disaster, I think that there is little that we can usefully do or even think about until we know whether the material has indeed been lost or not. In the meantime I guess that we can pour libations, burn candles or get miserably drunk, depending on our individual tastes."

Meanwhile the ship was towed to Honolulu and the wheels of legal processes began slowly to turn. We found out very soon that there are some interesting old laws of the sea which few people learn about until they have been involved in this kind of event. For one thing, we found that when one sends a parcel across the sea aboard ship it is very wise to have it completely insured, for the owner of cargo aboard the ship finds that if anything happens to the ship he, in effect, owns a portion of that ship and is responsible, along with the other

consignees of goods, for paying the costs of salvage of the vessel at a rate determined by the relative value of the cargo. In fact, until the consignee has signed what is called the "General Average" agreement, he cannot even learn whether his cargo has been destroyed or damaged. Ordinarily the insurance will cover this amount, since there is a declared value of the cargo of which a percentage will be paid by the insurer.

As you might guess, in this case our cargo was not insured. This was not the fault of McVean but the result of time-honored policies which we need not go into. So we were obliged to sign the average and hope to persuade the insurance adjusters that the cargo was of absolutely no commercial value, in fact was only some dried leaves and twigs which had value only to an eccentric such as myself.

The suspense continued. On 2 January I was informed by the Bakke Steamship Corporation that a cargo with my bill of lading number was discharged at Honolulu and would be forwarded to me when U.S. shipping became available. Note that still there is no statement of the condition of the crate. Not being able to stand any more frustration, I wrote to my brother, who, fortunately for the story, lives in Honolulu, and he personally investigated and found that the cargo indeed was undamaged and that we will be required to pay only five or ten dollars salvage, and so this story comes to a pleasant conclusion. At least there is only one more ocean to cross.

Ah, but the story is not told. On 12 January 1969, I received a letter from van Zanten, who has just returned to Groningen. "Dear Bill: Very probably I have good news for you. Dr. Jahns told me that he had heard from Aino Henssen that part of your bryophyte collection from New Guinea had been lost. Dr. Touw rang me a few days ago and told me there were delivered at the Rijksherbarium (Leiden) a number of boxes from Lae. Nobody knew for whom they were. On the boxes was written in blue pencil the name Weber. Touw did not know what to do with the boxes, so he asked me. I think that they are your lost boxes. Sometime in January I am going to

Leiden and if they are your boxes I will surely recognize them. In that case Leiden will send them to you." Correction, only two oceans to cross.

I may have forgotten to mention that when he was informed of the ship disaster, Donald McVean commented that he did not feel that the crate which he dispatched to the Cap Colorado could possibly have contained all of our collections, but had no real figures and no reason to back up these suspicions.

In any event those of you who will receive the exsiccata from this expedition will know that the collections have been around the world, girdling the globe in opposite directions, a total of over six months in transit, and I hope you will treat them with the respect they deserve. As for me, I am still waiting and hoping that lightning will not strike twice.

William A. Weber

News

Ahmadjian, V. (U.S.A.)—Effective 1 September 1969 will return to Clark University as Associate Dean of the Graduate School and Professor of Botany. Please address all correspondence after September to Clark University, Worcester, Massachusetts.

Asahina, Y. (Japan)—An important problem of lichenology is the question of morphologically but chemically different individuals. Some time ago (*J. Japan. Bot.* **42**: 7, 1967), I hypothesized that this phenomenon resulted from a lichen fungus combining with different algae. To explain this hypothesis one must first establish a convenient method for cultivating lichen fungi and algae separately and reuniting them to the original lichens or to new lichens by interchanging algal symbionts. In Prof. Shibata's laboratory the separate cultures of fungus and algal components of a lichen are now being carried out successfully on a large scale.

Almborn, O. (Sweden)—Working on a proposed "Lichen Flora of Southern Africa", currently *Caloplaca*, *Teloschistes*, and *Physcia*. Would appreciate specimens of lichens (all groups) for determination from all parts of this area. To visit various herbaria in the U.S.A. in August and September 1969 and to take part in the Seattle Congress.

Bird, C. (Canada)—On sabbatical leave from 1 July 1969 to 30 June 1970. Hope to visit many herbaria in North America and Scandinavia to gather data for a projected lichen flora of Alberta and a paper on lichens endemic to western North America.

Brown, D. (England)—Current research interests physiology and ecology of marine lichens, especially *Lichina* species, with particular reference to the effect of marine pollutants (oil and emulsifiers). Long-term observations on "natural" and "experimental" pollution in the field are involved as well as more precise laboratory studies; also in conjunction with D. R. Slingsby, a study of the mineral nutrition of lichens with particular reference to nickel. This work concerns the relationship between the nickel content of the lichen and its substratum, its location within the thallus and the effect of added nickel on general physiological processes. This study is part of a wider project dealing with the ecology of serpentine and nonserpentine areas, which also includes work on a flora of the Lizard peninsula, Cornwall.

Chernohorsky, Z. (Czechoslovakia)—This spring I spent three weeks in SE-France where I undertook many lichenological excursions with French lichenologists: Mlle. J. Asta-Giacometti, G. Clauzade, Mme. L. Kofler, P. Ozenda, and Y. Ron-don. In August I collected lichens in the Lower Tatra Mountains (Slovakia).

Dibben, M. (England)—At present studying chemical taxonomy of lichens under the Culbertsons. Will be working on chemical and morphological correlation within the Pertusariaceae and would welcome literature relevant to this topic, as well as on lichenology in general. Would appreciate any news,

notes, or publications on the lichen flora of Southern Africa with an eye to future studies.

Guzman, G. (Mexico)—The Laboratory of Mycology of the Department of Botany (in the Escuela Nacional de Ciencias Biologicas, del Instituto Politécnico Nacional) has a collection of 500 lichens from Mexico. We are studying these in order to make keys to genera and species of some important genera. Our herbarium is increasing through several collecting trips to various parts of Mexico. We have some duplicates and would like to start exchanges. Sra. Laura Davalos de Guzman, my wife, is the principal in the Lichen Research Program in this laboratory.

Hale, M. E. (U.S.A.)—Spent January in Dominica, B.W.I., collecting lichens. I will teach a lichen course at Itasca, Minnesota, this summer.

Hawksworth, D. (England)—I have been using a recently developed method of cluster analysis on *Cornicularia* and *Alectoria*. The results indicate that the differences between the subgenera and sections of *Alectoria* are greater than those between *Cornicularia* and some sections of *Alectoria*. Fifty-one apparently unrelated characters were used in this study, and it is interesting to note that the clusters revealed by the computer could be keyed out in most instances on a combination of apothecial and chemical characters. Numerical taxonomy therefore seems to be a potentially very valuable tool for the lichen taxonomist.

Kershaw, K., J. Millbank, and G. Harris (England)—The nitrogen fixed in cephalodia of *Peltigera aphthosa* is almost all secreted to the lichen thallus (*New Phytol.*, in press). Within the thallus, examination of the *Coccomyxa* fraction shows extremely small amounts of N₂ accumulation. Thus, the mycobiont gets virtually all the nitrogen fixed by the blue-green component; controlled parasitism? (paper in preparation). The ecology of *Parmelia caperata* is being examined in detail and appears to be controlled by water and light. There is evidence for the existence of a number of physiological

strains of the mycobiont, and also that the relationship between respiration and water content of the thallus is not linear. Similar considerations apply to *P. physodes* and *P. sulcata*.

Krog, H. (Norway)—During the summer of 1969 I expect to spend 3 months of field studies in Alaska, mainly in the Fairbanks and Nome areas on the Arctic Coast.

Lamb, I. M. (U.S.A.)—Travelled to Europe in the summer of 1968 and made collections and field studies of *Stereocaulon* species in Scotland and Switzerland, as well as conducting herbarium studies at the Edinburgh Botanic Garden and the Paris Museum d'Histoire Naturelle.

Martin, E. (U.S.A.)—Working on a Ph.D. thesis under Dr. A.S. Sussman dealing with lichen enzymology. I am interested in intermediate metabolism and physiology from an enzymatic viewpoint and in the biosynthesis and metabolism of lichen acids. I would very much like to establish correspondence with any other lichenologists who are interested in any of these areas.

Motyka, J. (Poland)—I have worked for 6 years on the taxonomy of *Lecanora* and related genera. The descriptions and diagnoses are entirely useless in the identification of almost all species. Thus, the types must be exactly studied and in most cases typified as lectotypes. Many specimens of the types often contain very different species. I have studied and defined most of Acharius' taxa, almost all those of Nylander, Schaerer, Müller Arg., Körber, B. de Lesdain, Arnold, Mereschowsky, Zahlbruckner, and some also of Magnusson and others. Photographs were made of all types in natural size or magnified 2:1. The descriptions of many species, the European ones first, will soon be published. On the basis of types, often lectotypes, the concept and delimitations of many taxa must be altered. Since many old types are inaccessible to me, I beg institutions and persons possessing them to send loans or give me information as to where they are located. Many of B. de Lesdain's were lost during the

last war. Only the taxa of known types or isotypes will be treated in my study.

Nadvornik, J. (Czechoslovakia)—Ich bearbeite diesmal die Gattung *Lecidea* in CSR.

Pisut, I. (Czechoslovakia)—During 1968 I collected in CSR, Bulgaria, and Yugoslavia. Presently working on a revision of Czechoslovak and Middle-European *Haematomma* species. Paper in press: Die Flechte *Haematomma nemetzii* und ihre Verbreitung. Together with Dr. Soviar, chemotaxonomical investigations of some lichens, especially *Haematomma*. A world revision of this genus is a long-range plan.

Pyatt, F. (England)—Recently accepted the position of Lecturer in Applied Biology at the Bromley College of Technology, Rookery Lane, Bromley, Kent, U.K. Would greatly appreciate reprints on any aspect of lichenology, especially in the area of air pollution.

Rogers, R. (Australia)—My main interest is ecological, the distribution and survival mechanism of soil crust lichens in South-eastern Australian rangelands, and hence, the taxonomy of these organisms.

Rondon, Y. (France)—Etant dépositaire depuis peu de temps de l'herbier des Champignons parasites de lichens, de l'Abbé J. Vouaux, en publiera incessamment l'inventaire (une centaine d'espèces), probablement dans la *Revue Bryol. et Lichénol.*

Schofield, E. (U.S.A.)—In March 1969 a third summer field season in the Victoria Land and Ross Island regions of Antarctica was completed. This last season was by far the most successful. Considerable progress was made in determining what environmental factors are primarily responsible for the observed distributions of (1) *Caloplaca elegans* var. *pulvinata* (Dodge & Baker) Murray at Cape Royds, Ross Island, (2) *Buellia frigida* Darb. in the ice-free valleys of southern Victoria Land, and (3) *Neuropogon antarcticus* (DR.) Lamb on Ross Island and Kar Plateau in Victoria Land. Climatic, geographic, and edaphic factors were found to interact

quite clearly to promote or inhibit lichen growth. The role played by any one factor varied considerably, depending upon species and geographic location. The final result—lichen distribution—was found to be due to a cause-and-effect chain of environmental factors. This "chain" could be traced from one or two "primary factors" to the ultimate effect of lichen growth or lack of growth. The results that have been obtained so far show the value of studying lichen distribution where conditions for growth are marginal and where the presence of lichens is not obscured by other plant growth. The field results will be augmented by laboratory experiments, and physiological studies based on the field results will be initiated.

Sheard, J. (Canada)—Now on the staff of the Biology Department, University of Saskatchewan, Saskatoon. Continuing studies on the genus *Rinodina* in North America. A preliminary key to the species of Eastern, Central, and Northern regions is available on request. I hope to include the Western species sometime in 1969. A lichen herbarium will be established in the coming year. It will emphasize the flora of the Prairie Provinces and the Boreal Forest but hopefully it will prove possible to gather representative collections from other regions by exchange. Exchange material from herbaria and personal collections would therefore be greatly appreciated.

Cover: *Lobaria pulmonaria*