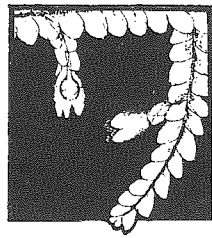


Newsletter of the



FRIENDS OF THE FARLOW

Volume 3 Number 2, April 1985

Geraldine C. Kaye, Editor

RICHARD SPRUCE, HEPATICOLOGIST

One of the pre-eminent figures in the history of hepaticology is Richard Spruce. He is best known for his pioneering work on South American hepatics; his Hepaticae Amazonicae et Andinae (1884-1885) was the first comprehensive work published on the subject, and it remains to date the most thorough treatment of these tiny but exquisitely regular bryophytes.

Richard Spruce was born in 1817 in Yorkshire, England, where he spent his early life, and where he died in 1893. He was educated by his father, and initially followed him into a career of teaching. He obtained his first position as mathematics master at the Collegiate School at York in 1839. His interest in botany began as a hobby in his youth, but in adulthood it began to overshadow all other interests. Eventually he gave up teaching to try to earn a living as a plant collector, and, on the advice of William Jackson Hooker and George Bentham, Spruce made his first botanical expedition to the Pyrenees in 1845. The trip was financed by the sale of specimens, and resulted in his first major publication, The Musci and Hepaticae of the Pyrenees (1849). The venture earned Spruce a reputation as a keen observer and a first-rate collector of all types of plants, and he returned home eager for more field work. In 1849 he left for South America, and during the next 15 years he explored the Amazon, its tributaries, and the Andes of Ecuador and Peru. Once again the trip was financed by the sale of specimens for which Bentham acted as botanical agent. A full account of Spruce's travels appeared in his Notes of a Botanist in the Amazon and the Andes, edited by A. R. Wallace, and published posthumously in 1908. (Wallace also included an excellent



*Yours very faithfully
Richard Spruce.*

biography from which this brief summary is drawn.)

Spruce's trip, so successful from a botanical standpoint, had an unhappy ending. He became very ill while in Ecuador; and while there he was defrauded in the failure of a mercantile house in Guayaquil in which he had invested heavily. Spruce returned to England in 1864, penniless and debilitated by illness. He managed to obtain a small government pension which improved his financial condition; but his health, delicate even in early life, never fully recovered. He settled again in Yorkshire, and devoted the rest of his life to compiling the results of his South American studies.

Hepaticae Amazonicae et Andinae displays a level of sophistication far beyond that of Spruce's predecessors or contemporaries in the field of "exotic" (i.e. non-European) hepaticology. Schuster wrote in 1982 that Spruce had a

"... zeal for precision in his diagnoses; a positive ability to distinguish between the meaningless and the meaningful in the physical makeup of a species; a keen eye for the really salient features that distinguish a group."

Several factors were probably responsible for the superior quality of Spruce's hepatological work. First was his inherent meticulous attention to detail, which predisposed him to the study of these minute, often subtly differentiated plants. Second was the extensive fieldwork through which he acquired intimate knowledge of the plants as they grew in tropical climates. A third factor, perhaps responsible for the unprecedented attention Spruce gave to the ranking of taxa, may have been the theoretical framework of his approach to taxonomy: he was influenced by the theories of another South American explorer, Charles Darwin. Spruce considered the theory of natural selection in reference to his own work, as is evidenced by a passage from a letter to G. Stabler written in 1871 about the study of South American Plagiochila species (quoted here from Wallace, 1908):

"The result has been to make me more Darwinian than ever. I feel certain that if we had all the forms now in existence, and that ever existed, of such genera as Rubus, Asplenium, Bryum, and Plagiochila, we should be unable to define a single species--the attempt to do so would only be trying to separate what Nature never put asunder--but we should see distinctly how certain peculiarities had originated and become (temporarily) fixed by inheritance; and we could trace the unbroken pedigree of every form."

Spruce's herbarium is maintained at the Museum of the University of Manchester, England, but duplicates of his collection are

widely distributed. He issued some twenty sets of his collections, each set containing at least 200 specimens, all labelled in his own elegant hand. At least three sets of his collections are now in U. S. herbaria: one in the Farlow Herbarium and two at the New York Botanical Garden.

During his years in South America, Spruce did not limit himself to the Hepaticae. His moss collections formed the basis for William Mitten's monumental Musci Austro-Americani (1869). He also collected lichens and other fungi, as well as vascular plants. In addition to his book on hepatics, Spruce published a treatise on the palms of South America which is considered a classic, as well as articles on ethnobotany, geology, and anthropology.

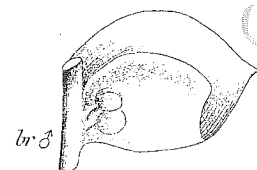
Even if he had made no other contribution, he would deserve the admiration of all cryptogamists for the sentiment so nicely expressed in the following passage, written to his friend Daniel Harbury (also quoted from Wallace, 1908):

"I like to look on plants as sentient beings, which live and enjoy their lives--which beautify the earth during life, and after death may adorn my herbarium. When they are beaten to a pulp or a powder in the apothecary's mortar they lose most of their interest for me. It is true that the Hepaticae have hardly as yet yielded any substance to man capable of stupefying, or of forcing his stomach to empty its contents, nor are they good for food; but if man cannot torture them to his uses and abuses, they are infinitely useful where God has placed them, as I hope to live to show, and they are, at least, useful to, and beautiful in themselves -- surely the primary motive for every individual existence."

References:

- Mitten, W. 1869. Musci Austro-Americani. J. Linn. Soc., Bot. 12:1-659.
 Schuster, R. M. 1982. Richard Spruce (1817-1893): a biographical sketch and appreciation. Nova Hedwigia 36:199-208.
 Spruce, R. 1849. The Musci and Hepaticae of the Pyrenees. Ann Mag. Nat. Hist. 2,3:81-106, 269-292, 358-380, 478-503; 4:104-120.
 Spruce, R. 1884-1885. Hepaticae Amazonicae et Andinae. Trans. & Proc. Bot. Soc. Edinburgh vol. 15. 588 p.
 Wallace, A. R., ed. 1908. Notes of a Botanist in the Amazon and Andes by Richard Spruce. 2 vols. Macmillan & Co., London.

Barbara M. Thiers
 The New York Botanical Garden
 Bronx, NY



BRYOPHYTES OF NORTHEASTERN NORTH AMERICA

Here is the second in our series of booklists for reading about and identifying cryptogams of northeastern North America.

*** INTRODUCTORY AND GENERAL BOOKS ARE:

- Bland, John H. 1971. Forests of Lilliput: the realm of mosses and lichens. Line drawings by Stanley Wyatt. Prentice Hall, Englewood Cliffs, N.J. 210 p.
Delightful, anecdotal, non-technical introduction to the two plant groups, presenting everything from ancient Greeks to John Ruskin to how to grow a moss garden. Also, identification keys, reading list, glossary. Illustrated with photographs and ethereal line drawings.
- Richardson, D.H.S. 1981. The biology of mosses. Wiley, New York. 220 p.
A more scientific reference, with chapters on physiology, genetics and reproduction, ecology, air pollution, classification, and mosses and man. Interesting tales of archaeology of peat bogs, etc.
- Watson, E.V. 1971. The structure and life of bryophytes. 3rd ed. Hutchinson, London.
A good introduction to the general literature; more oriented to the morphology of bryophytes.
- *** MATERIALS FOR IDENTIFYING NORTHEASTERN BRYOPHYTES ARE:
- Andrus, R.E. 1980. Sphagnaceae (peat moss family) of New York State. New York State Museum, Albany. Bull. no. 422. 89 p.
- Conard, H.S. & P.L. Redfearn. 1979. How to know the mosses and liverworts. 2nd ed. Brown, Dubuque, Iowa.
Recently revised and enlarged, can be found in many bookstores; keys and illustrations, glossary.
- Crum, H. & L. Anderson. 1981. Mosses of Eastern North America. Columbia, New York. 2 vol.
The standard reference flora for the mosses; does not have keys to families.
- Crum, H. 1983. Mosses of the Great Lakes Forest. 3rd. ed. University Herbarium, University of Michigan, Ann Arbor.
Lacks some species found in the northeast, but still quite useful. Contains much interesting general information about mosses; illustrations and keys.
- Crum, H., W. Steere, & L. Anderson. 1973. A new list of mosses of North America north of Mexico. Bryologist 76:85-130.
The standard checklist of names, with synonyms. Available from the American Bryological and Lichenological Society.
- Dunham, E.M. 1951. How to know the mosses. Mosher, Boston. 289 p.
Still A useful manual for identifying northeastern mosses. An update of the 1916 book with revised nomenclature.
- Evans, A.W. 1923. Second revised list of New England Hepaticae. Rhodora 25:192-199.
The most up-to-date list of the liverworts, by state.
- Grout, A.J. 1903. Mosses with hand-lens and microscope. Published by author, New York.
Good illustrations; names out of date.
- Grout, A.J. 1938-1941. Moss flora of North America north of Mexico. 3 vol. Published by author, Newfane, Vt.
The "old standby", replaced to some extent by Crum & Anderson; does include keys to families.
- Hilferty, F.J. 1960. The mosses of Massachusetts. A county catalogue with annotations. Rhodora 62:145-173.
No keys, just a list of mosses by county.
- Howard, L.D. 1975. Moss flora of New England, New York, and southeastern Canada. University of Vermont, Burlington. Agr. Exper. Station Bull. no. 680. 74 p.
Keys from the big Grout flora, with up-to-date nomenclature.
- Ireland, R.R. 1982. Moss flora of the Maritime Provinces. National Museums of Canada, Ottawa; distributed by University of Chicago Press. 738 p.
An excellent and relatively inexpensive new treatment.
- Ketchledge, Edwin H. 1980. Revised checklist of the mosses of New York State. New York State Museum, Albany. Bull. no. 440. 19 p.
- Schuster, R.M. 1949. The ecology and distribution of Hepaticae in Central and Western New York. American Midland Naturalist 42:513-712.

Schuster, R.M. 1966-1980. The Hepaticae and Anthocerotae of North America. Columbia, New York. 4 vol., incomplete; fifth and last volume should appear soon.
The standard technical flora for the liverworts and hornworts.

Stotler, R. & B. Crandall-Stotler. 1977. A checklist of the liverworts and hornworts of North America. Bryologist 80:405-428. The standard checklist of names, with synonyms. Available from the American Bryological and Lichenological Society.

Schuster, R.M. 1977. Boreal Hepaticae. J.Cramer, Vaduz.
A reprint of articles from the American Midland Naturalist, 1953, 1957, 1958; lacks some northeastern species, but good illustrations and keys.

Brent D. Mishler
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NEWS NEWS NEWS

ANNUAL MEETING

Our Third Annual Meeting took place in Cambridge on November 10, 1984, with members of the Boston Mycological Club in attendance. President Moselio Schaechter opened the business meeting. The year's activities were summarized by treasurer Harvey Pofcher, secretary Bob Edgar, and Farlow director Don Pfister.

The mycologically oriented program featured speakers Margaret Lewis, on "The intricacies of Tricholoma," and Ron Petersen, on "The coralloid fungi of New Zealand." Dr. Pfister presented Mrs. Lewis with a certificate recognizing her many years of devoted attention to the New England fungi. She replied, "All those happy years of research in the Farlow Library brought so many hours of contentment it comes as a surprise to be rewarded for my zeal in applying that knowledge to my teaching, identifying, and yes, even cooking!"

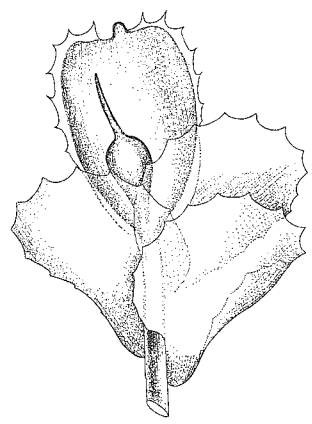
Thereupon we adjourned to the Library, where our now traditional reception awaited us. Carolyn and Harold more than upheld the exacting culinary standards of the Farlow!

The display in the hall cabinet, on special loan for the event, consisted of selections from The Tina and Gordon Wasson Ethnomycological Collection of fine objects with mycological motifs. Our theme was Ganoderma lucidum or "ling chih," a polypore which figures prominently in Chinese and Japanese medicine and folklore. We appreciate the privilege of enjoying these works of art at first hand. (The Wasson Collection is located at Harvard's Botanical Museum and may be viewed by appointment.)

FROM THE LIBRARY

Most difficult reference question of the year: A truffle is a Tuber--but is it a tuber?

Line drawings from
R. Spruce, Hepaticae
Amazonicae et Andinae.



FARLOWPEOPLE

Our president, Elio Schaechter, recently undertook also the presidency of a somewhat larger organization--at the annual meeting of the American Society for Microbiology in Las Vegas. (It'll be a while before FoF reaches the 34,000 member mark of ASM--but we had Elio first!)

Two hard-working Friends who have done their thesis research at the Farlow will be receiving degrees of Master of Liberal Arts in Extension Studies from Harvard this June. They are Elizabeth Kneiper (historical and chemotaxonomic studies of lichens of the Boston area) and Anna M. Reid (development of Edward Tuckerman as a lichenologist). Congratulations, Nancy and Elizabeth!

Marcy Abbott, Curatorial Assistant and ace book repairer for the last 5 years, has left the Farlow. We miss you, Marcy, but wish you the best in your new career.

Barbara Harris, volunteer in the Library, is doing bibliographic detective work on early New England plant collectors.

NORTHEASTERN MYCOLOGISTS' CONFERENCE

A symposium on the history of North American mycology will be held at the New York State Museum in Albany, N.Y. on April 20. Speakers from the Farlow include: Anna Reid, on Edward Tuckerman; Geraldine Kaye, on J.B. Ellis; and Donald Pfister, on W.G. Farlow. In addition, a Farlow alumnus, Roy Halling, will speak on C.C. Frost; and Jim Ginns, Advisory Board member, will present the Canadian connection. (I think we've got them surrounded!)

MYCOLOGICAL LITERATURE GRANT

Donald Pfister has just begun work on a grant from the National Science Foundation to conduct an inventory of the mycological taxonomic literature between 1753 and 1821. This is the period which has become important with the recent change to the earlier starting point for naming fungi; names will now be based on Linnaeus' Species Plantarum of 1753 (or the first valid description published thereafter; Fries and Persoon names are protected). We will catalog and index the literature of this period and publish the resulting inventory. Since much of the literature is both scarce and unfamiliar to most workers, this project will provide valuable reference materials for taxonomists. The Farlow Library with its fine holdings of early publications is a natural base for the 3-year project.

SEAWEED COLLAGES--FARLOW'S NEW EXHIBIT

We're privileged to present Rose Treat's "Seaweed Collages," an exhibit of unusual and striking compositions created using real seaweed as the medium.

Mrs. Treat, an artist who lives on Martha's Vineyard, knows the local seaweeds well. Martha's Vineyard waters, in fact, provide one of the most varied algal populations in the world, situated as they are near the edges of the ranges of both northern and southern Atlantic species. In addition, the Gulf Stream glances off the island, occasionally depositing more exotic specimens on Vineyard beaches.

The artist began work in this medium over 25 years ago, gradually developing her techniques for handling large as well as small plants, and for ensuring the permanence of the finished compositions.

Mrs. Treat, a Friend of the Farlow, is a versatile naturalist, photographer, and craftsperson. She is well versed in the fungi of the island and leads identification walks for local groups. Her work has been shown in galleries and museums, has won many art show ribbons, and is in the permanent collections of State University College, N.Y., and Dukes County Historical Society, Edgartown, Mass. Her husband, Lawrence Treat, is a well-known mystery writer. Mrs. Treat is currently completing work on The Seaweed Book, which will introduce this intriguing feature of our New England landscape to a non-technical audience.

The exhibit, in the entry hall and library of the Farlow building, will run through May 29. The building is open 9-5 Monday through Friday, and during First Saturday open hours, 10-2 (April 13 and May 4). The major works may be purchased; also available are smaller matted and framed designs, notecards, and bookmarks.

AFFILIATED SOCIETIES

Friends of the Farlow has friendly associations with a number of (mostly) natural-history-related organizations. They include:

- Boston Mycological Club, Cambridge, MA.
- Colorado Mycological Association, Denver, CO.
- The Connecticut Mycological Society, Pound Ridge, NY.
- Council on Botanical & Horticultural Libraries, Pittsburgh, PA.
- Friends of Arnold Arboretum, Boston, MA.
- Friends of Harvard College Libraries, Cambridge, MA.
- Illinois Mycological Association, Chicago, IL.
- Mycological Association of Washington, DC.
- New England Wildflower Society, Framingham, MA.
- Oregon Mycological Society, Portland, OR.
- Triangle Area Mushroom Club, Raleigh-Durham, NC.

The newsletters we receive on exchange are available for perusal on the Members' Shelf in the Library. All editors have been generous with favorable publicity for FoF--THANK YOU!



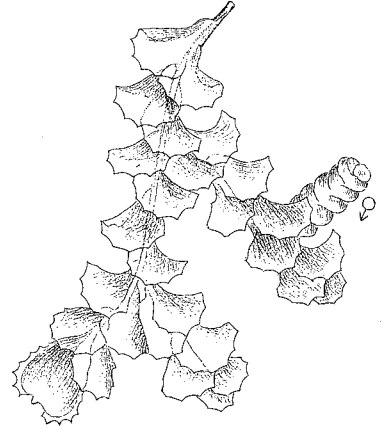
Rose Treat at work.

RUTH LEVER MEMORIAL

A memorial gathering for the late Ruth M. Lever was held at the Farlow on October 25, 1984. Mrs. Lever, FoF member and veteran amateur mycologist, had an encyclopedic knowledge of New England fungi which she shared generously with all who sought her help. Her quiet humor and good humor brightened many walks and gatherings. Ruth's many friends met on this occasion to remember her and to meet members of her family. We shall not see her kind again.

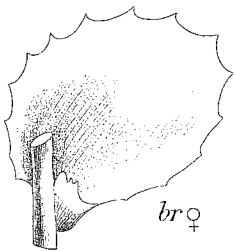
FRIENDS of the FARLOW

FIRST CLASS



BOOK SALE 3

Our natural history Book Sale by Mail is one of our most popular events. We've started receiving donations of books for this year's sale. Please send us any surplus books you have on natural history subjects (remember, donations are tax-deductible). We'll make up a list of books available, with prices, and circulate it to members during May. Your requests will be due back about June 1; we'll ship your orders as soon as possible thereafter.



WHO ARE WE ANYWAY?

Friends of the Farlow is an international group of amateur and professional botanists concerned with supporting the programs and resources of the Farlow Reference Library and Herbarium of Cryptogamic Botany of Harvard University. Membership categories are: Associate member, \$5-15; Full member, \$25; Sponsor, \$50-\$1000; Benefactor, over \$1000. Membership year runs from 1 July to 30 June. (To join, please make check payable to Friends of the Farlow and send to address below.) Members receive a discount on Farlow publications, and get to participate in book sales and other events. This Newsletter is published twice a year. For more information please contact the Editor at the Farlow Reference Library, 20 Divinity Avenue, Cambridge MA 02138, U.S.A. (tel. 617-495-2369).