

Volume 6, Number 3
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Nancy R. Morin and Judith M. Unger, co-editors

FLORA OF NORTH AMERICA NEWS

Editorial Committee

The Fall Meeting was held at the Missouri Botanical Garden in St. Louis 4-5 October 1992. In attendance were 21 of the 24-member vascular group, all 11 in the bryology group, two visitors, and six Organizational Center staff.

Dr. Peter Raven welcomed the group. He emphasized his pleasure with the progress that has been made to date, and reaffirmed his personal commitment and the commitment of Missouri Botanical Garden to see the project through to a successful conclusion. Dr. John Edmondson, Keeper of the Liverpool Museum herbarium, gave a report on the project to revise *Flora Europaea*. Volume 1 of this effort will be published within the next several months. Ihsan Al-Shehbaz, from Missouri Botanical Garden, reported on the *Flora of China* project. *Flora of China* is a collaborative project to translate and revise *Florae Republicae Popularis Sinicae*. Volume 17 of *Flora of China*, containing Verbenaceae, Lamiaceae, and Solanaceae, is almost ready to go to the printer. Volume 16, Gentianaceae, Asclepiadaceae, Apocynaceae, Convolvulaceae, Polemoniaceae, Hydrophyllaceae, and Boraginaceae, is undergoing review and revision.

FNA family taxon editors reported on progress on upcoming volumes. For Volume 3, manuscripts have been received covering 100 genera and 440 species in 27 out of 32 families. Manuscripts treating 138 additional species in Volume 3 are nearly completed. *Anemone*, *Thalictrum* and half of *Quercus* need intensive work. A few remaining small genera are either in preparation or are being completed by staff. This volume will be submitted to Oxford University Press in May 1993. For Volume 11, manuscripts have been received for 117 genera and 417 species in 11 families. Those manuscripts are going through preliminary editing and revision. For those manuscripts still outstanding, final manuscript is due by January 1, 1993. Volume 11 will be submitted to Oxford University Press in May 1994.

For subsequent volumes, manuscripts treating 92 genera and 384 species have been received. To date, a total of 376 authors covering 1195 genera in 155 families have been invited to contribute treatments in all angiosperm volumes.

Debbie Kama, database manager, reported that data on names, synonymy, literature citations, bibliography, and distributions from Volume 2 treatments have been entered, and descriptive information is now being entered, into TROPICOS, the database system being used by the project. These data will be available on-line through Internet by the end of 1992. Data from Volume 3 and Volume 11 treatments in hand are being entered and will be made available after the review and revision processes are completed.

Strategies for regional reviewers for the angiosperm families in the next ten volumes was discussed and it was suggested that botanists from U.S. Forest Service regions be invited to review treatments of taxa from their areas.

Bruce Parfitt, assistant scientific editor, and Yevonn Wilson-Ramsey, the new illustrator, (see article under New Staff) presented information on the illustration process. Yevonn requested that live specimens or photographs (slides preferred) be provided along with herbarium specimens. Asteraceae editors Luc Brouillet and Ted Barkley reported on their meeting in July with John Strother at the Organizational Center. The three comp-eds will begin writing draft descriptions of genera immediately and to complete special instructions for Asteraceae authors soon.

The Flora of North America (FNA) project is a cooperative program to produce a Flora of the plants of North America north of Mexico. The FNA Newsletter is published quarterly by the Flora of North America Association to communicate news about the FNA project and other topics of interest to North American floristic researchers. Readers are invited to send appropriate news items to: FNA Newsletter, P.O. Box 299, St. Louis, MO 63166, U.S.A.

Peter Wilson, software engineer in the Garden's Botanical Information Management (BIM) Department, presented information on a data model he is developing with researchers at MO and the New York Botanical Garden. This data model will form the basis for redesigning TROPICOS.

New versions of the Guide for Contributors and the Preferred Terminology list were distributed. The sample treatment is being revised in light of changes in the Guide. The fully revised Contributors Guide will be sent to authors as soon as it is completed. The Organizational Center held two strategic planning sessions in October, and these resulted in suggestions for streamlining activities in the office as well as for improved tracking of progress on manuscripts.

The bryology group suggested changes and additions to the Guide for Contributors to make it relevant to bryological participants. They also identified about seventy assignments for which authors could be invited before the end of the year.

Organizational Center

Volume 11, Monocots except Poaceae, manuscripts are due to the family taxon editor by January 1, 1993. Manuscripts must include distribution maps, and suggestions for illustrations, if not already provided.

Volume 3, Magnoliidae and Hamamelidae manuscripts are long past due if not already received by the taxon editor. Those received are being technically edited, checked by the bibliographic and nomenclatural editors, and illustrations and maps are being prepared. Taxonomic and regional review will begin in November.

Status of Volumes 1 and 2 at Oxford University Press - Introductory Chapters and taxonomic treatments have been copy-edited by Oxford University Press and changes have now been entered on the computer files at the Organizational Center. Helen Jeude, FNA's technical editor, has been working closely with the OUP copy editor.

Nancy R. Morin, FNA convening editor, has been named Assistant Director of Missouri Botanical Garden, effective January 1, 1993. In her new position she will be responsible for Garden operations and in particular

will begin working with Garden divisions and departments to refine and implement goals and objectives identified in recent strategic planning sessions held by the Garden. Morin will continue as convening editor of *Flora of North America*. Peter H. Raven, the Garden's Director, reiterated his support for *Flora of North America* and the Garden's commitment to its completion, when he announced the new appointment at the Garden's annual Systematics Symposium.

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A proposal requesting four years of support for *Flora of North America* has been submitted to the **National Science Foundation**. The proposal includes requests for funding to assist editors with particularly heavy assignments during the grant period, for postdoctoral research assistants, and for funds to support some travel to herbaria by authors.

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New Staff--**Yevonn Wilson-Ramsey** is the new FNA illustrator. Yevonn began her career as a freelance botanical illustrator at the Missouri Botanical Garden about 19 years ago. She has since worked in Texas, Hawaii, and New Mexico, illustrating various botany and biology books, including the newly-published *Flora of Hawaii* and portions of the *Flora of Panama*. Yevonn returns to her homeland, St. Louis, with her husband and two children.

Amy Prosser is an intern working part-time in the Organizational Center. She graduated from Drake University in Des Moines, Iowa, majoring in Earth Science. She held two positions with The Nature Conservancy--one in Illinois as a prairie restoration intern at Nachusa Grasslands, another as a member of a prescribed burn crew for prairies in Iowa, North Dakota, and South Dakota. She has also been a Student Conservation Association volunteer--with the U.S. Fish & Wildlife Service at the Alaskan Maritime Wildlife Refuge on the Aleutian Island of Adak, and also as a river ranger with the Park Service at the Ozark National Scenic Riverways at the Current River in Missouri. She is currently enrolled in horticulture classes at St. Louis Community College and is planning to do graduate study at the University of Alaska at Fairbanks in Natural Resource Management in the Fall of 1993. Amy is assisting with various aspects of the Project at the Organizational Center.

COMPUTER NEWS

David Murray (fyherb @acad#.alaska.edu) would like to hear from others who are using **Macintosh computers** and 4th Dimension software for herbarium databases. He would like to compare notes on progress and problems and hopes that fellow users can help one another and even try some electronic data sharing.

OTHER FLORAS

The **Panarctic Flora Project** just completed a very successful expedition in Alaska. A team of phanerogamic and cryptogamic botanists from U.S. and Russia spent a month collecting plants in the Bering Land Bridge National Preserve on the Seward Peninsula of western Alaska. This was followed by a month of work in the herbarium at ALA working up the specimens. Russian participants were from the Komarov Botanical Institute, St. Petersburg: Boris Yurtsev (vascular plants), Olga Afonina

(mosses), Mikhail Andreev (lichens), and Alex Potemkin (hepatics). From the FNA community were David Murray, Barbara Murray, and Tass Kelso. Dale Taylor of the National Park Service was expedition leader and primary sponsor of the expedition, the first of what we hope will be several within the area of his proposed Beringian Heritage International Park, which includes parts of both Alaska and Chukotka.

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Barbara Murray (FNA Bryophytes) is continuing her revision of the Andreaeopsida. She will spend two months in SE Australia and in Tasmania from late 1992 through early 1993 working on a revision of the Andreaeae for the **Flora of Australia**. Her work is funded by a grant from the Australian Biological Resources Study.

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Recent Floristic Studies in the Rocky Mountains were conducted during the past three summers in Colorado, Idaho, and Wyoming by the students, staff, and associates of the Rocky Mountain Herbarium. This is part of an ongoing study of the region that has netted more than 192,000 numbers during the past 15 years. The goal is to conduct rather intensive inventories to acquire additional material for the preparation of FNA, for a flora of the Rocky Mountains, and for monographic research. The accompanying information is being placed in a database for use by systematists, phytogeographers, ecologists, etc., and for use as a layer in geographical information systems.

Owl Creek/Bridger Mountains---In 1991, an inventory was initiated by Robin Jones, Walter Fertig (WF), B. Ernie Nelson (BEN), and Ronald L. Hartman (RLH) on these east-west trending ranges (1,800 square miles). The relief varies from 5,000 to 9,684 feet in the Owl Creeks and to 8,272 feet in the Bridgers. The two are bisected by the Wind River Canyon with a depth of up to 2,240 feet. Being relatively dry and composed largely of limestone and other sedimentary strata, this area is of special interest as a potential refugia for novelties. Furthermore, these ranges may have served as a migratory route between the Absarokas and the Big Horns. About 2,000 specimens were obtained (1.1 per square mile) but much work remains. Thus far only a portion of the material has been identified. Species of note include *Cryptantha subcapitata*, *Shoshonea pulvinata*, and *Townsendia nuttallii*.

West Slope of the Wind River Range---During 1990 and 1991, through a cost-share agreement with the Bridger-Teton National Forest, this area was inventoried by WF, Jonathan Hughes, BEN, and RLH. It extends from Togwotee Pass southeast along the Continental Divide to South Pass (1,700 square miles) and ranges in elevation from 7,500 to 13,700 feet. The northern portion is sedimentary with some volcanics, whereas the southern part is primarily Precambrian in origin. More than 13,800 collections were obtained (8.1 per square mile) and the total flora now stands at 1,033 taxa (58 percent increase). Thirty-seven sensitive species of vascular plants (Wyoming Natural Diversity Database [WYNDD] and Forest Service lists) were documented. Many of these are restricted to limestone on the mountains adjacent to the Green River Lakes. Also, four species new to the flora of Wyoming were discovered.

Targhee National Forest (Wyoming and Idaho)---Fieldwork was conducted in 1991 and 1992 by Stuart Markow, BEN, and RLH with

funding provided by the Forest. The first season focused on the Snake River Range, the Big Hole Mountains, and the west slope of the Teton Range (1,260 square miles). The second covered the remainder of the Forest and adjacent areas including: Beaverhead Range, Centennial Range, Henry Lake Mountains, and Island Park area (1,620 square miles). In 1991, 8,701 specimens (6.9 per square mile) representing 765 taxa were obtained including seven species of special concern to the Forest. This past summer, a drought year, 5,063 specimens (3.1 per square mile) were collected and currently are being identified.

Wyoming/Salt River Ranges---The Willow Creek drainage (150 square miles) in the northern Wyoming Range, was inventoried in 1990 through a cost-share agreement with Bridger-Teton National Forest. Collectors included WF, BEN, and RLH. A total of 1,821 numbers were obtained (12 per square mile). The number of taxa documented was 532 including four of special concern (WYNDD). Under a similar agreement, the remainder of the northern portions of the ranges was inventoried in 1992 (1,440 square miles). A total of 7,776 collections were acquired by Bruce Embury, WF, BEN, and RLH (5.4 per square mile). The southern portions will be inventoried in 1993. The ranges are part of the overthrust belt which extends along the western edge of Wyoming and are composed of sedimentary materials, particularly limestone. In recent years, several taxa new to science have been described from these ranges including: *Astragalus shultziorum* Barneby, *Physaria dornii* Lichvar, *P. integrifolia* (Rollins) Lichvar var. *monticola* Lichvar. Species of special concern which were found to be relatively abundant, but often in scattered areas, include: *Astragalus paysonii*, *A. shultziorum*, *Lesquerella paysonii*, and *Lomatium bicolor* var. *bicolor*.

Flat Tops/White River Plateau (Colorado)---This inventory, conducted by Jim Vanderhorst, WF, BEN, and RLH during 1990 and 1991, was funded in part by White River National Forest, The Nature Conservancy, and the Colorado Native Plant Society. The study area included all of the Flat Tops (Little, Dunkley, and Beaver; volcanic plateaus), the White River Plateau, parts of the Yampa, Williams Fork, White, and Colorado river valleys, and most of the Grand Hogback (2,500 square miles). It ranges in elevation from 5,300 to 12,245 feet. Approximately 6,500 collections (2.6 per square mile) representing 852 taxa of vascular plant (unable to determine percent increase) were obtained. A total of 27 populations of 11 species of special concern were located. Twenty of these were newly discovered while seven of the species previously were unreported for the study area. All but one of the latter occurred in the portion of the range (southern 40 percent) composed largely of limestone.

Through our work and that of many other systematists, more than 425 taxa new to the flora of Wyoming have been discovered during the past 15 years. Included are 2 genera, 38 species, 3 subspecies, and 7 varieties. During the same period, more than 144 novelties (2 genera, 87 spp., 13 subsp., 44 vars.) have been described from the Rocky Mountain Region. The Rockies ranks a close third behind the Intermountain Region and California for areas in North America, north of Mexico, from which new taxa are being discovered. --Ronald L. Hartman (FNA Editorial Committee member)

PUBLICATIONS

Plants and Agriculture, by James C. Forbes and Drennan Watson, provides an integrated explanation of all aspects of plant structure and functions for students of agriculture, horticulture and applied biology, with the aim of highlighting the practical relevance of botany to agriculture. Each chapter

is self-contained and self-explanatory, with specific chapters covering water, minerals, structure, growth, and development from sowing to harvest, environmental effects and controls, breeding, vegetative propagation, field productions and yield, and the nutritional content of produce.

1992, 352 pp., 52 halftones, 156 line diagrams, 11 tables, Hc \$79.95, Pb \$29.95. A 20% discount (good until November 30) form can be faxed to you if you call the FNA office at 314/577-9515, making the cost of this book \$63.96 or \$23.96. Available from Cambridge University Press, 40 West 20 St., New York, NY 10011-4211.

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Paleobotany and the Evolution of Plants by Wilson N. Stuart and Gar W. Rothwell---This new edition of a successful textbook describes and explains in a refreshingly clear way the origin and evolution of plants revealed by the fossil record, and summarizes paleobotanical information relevant to our present understanding of the relationships between the major plant groups, extant and extinct. New ideas and theories pertaining to such topics as the origin and evolution of eucaryotes, the early evolution of ferns, the origin of seeds, and the origin and early evolution of gymnosperms and angiosperms are included, as is the cladistic method and its results. Paleoecology is a theme discussed in the new edition, ranging from the Precambrian to the Tertiary, with a new chapter wholly devoted to the paleoecology of Pennsylvanian coal swamps. One of the major additions is a new chapter discussing the paleobotany of the flowering plants, a topic that was given only a brief treatment in the first edition.

1992, 500 pp., 115 halftones, 235 line diagrams, 10 tables, Hc \$49.95. A 20% discount (good until November 30) form can be faxed if you call the FNA office at 314/577-9515, making the cost of this book \$39.96. Available from Cambridge University Press, 40 West 20 St., New York, NY 10011-4211.

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Indices to the Species of Mosses and Lichens Described by William Mitten (1992), by Barbara M. Thiers---William Mitten (1819-1906) was the premier bryologist of the second half of the nineteenth century. He described mosses, and to a lesser extent hepatics, from every corner of the globe. This kindly, perceptive gentleman, who looked at bryophytes in his spare time, changed the face of bryology. Few bryologists today, with access to exotic travel and great libraries and herbaria, can match the breadth of Mitten's work. Data such as literature citation of original publication, label data, and literature citation for typification are provided for all species of mosses and lichens described by William Mitten in the Indices. Most entries are arranged by geography---Africa, Asia, Australia, New Zealand, Oceania, Central America, South America, the West Indies, Europe, and North America. A comprehensive index to all binomials concludes the work. U.S. orders: \$20.25; Non-U.S. orders: \$21.35 (All orders are prepaid in U.S. currency and include postage and handling.) Mail to: Scientific Publications Department, The New York Botanical Garden, Bronx, New York 10458-5126, USA.

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Foliar Morphology of the Common Trees of North Carolina and Adjacent States by James W. Hardin - The leaf morphology of 155 types (species and varieties) of trees has been fully described from fresh collections and herbarium specimens. These 155 represent about 62% of the native and naturalized trees in the southeastern United States and were selected because of their frequency in the mid-Atlantic States (Virginia, North Carolina, Tennessee, South Carolina), dominance in various communities, or conspicuousness in particular habitats. Many of these trees are also important for wildlife food and shelter, as a source of various forest products, or ornamentals. The macro-morphology has been fully described and illustrated with 152 line drawings. Stipules, rarely mentioned in the literature beyond mere presence or absence, are described. The newer terminology of secondary vein architecture and terminology for shape, vestiture, etc. are used consistently throughout. The micro-morphology is described and illustrated using 224 scanning electron micrographs. Surface features such as papillae, cuticular patterns, epicuticular wax, and trichomes are described using consistent terminology. Trichome morphology is very stable within a family, genus, or species, and it is the relative abundance (vestiture) and persistence that are often ecologically and seasonally available. These surface features can be used as analytic and synthetic taxonomic characters, for recognizing hybrids and introgressants, and as indicators of ecophenic or ecotypic variation. They can also be important in the recognition of fossil material or in other diverse studies such as biotechnology, air pollution, airborne allergens, insect predation, pathology, and poisoning or forensic cases.

To order this book, North Carolina Agricultural Research Service Technical Bulletin 298, 133 pp., send US\$10 to the Department of Agricultural Communications, Box 7603, North Carolina State University, Raleigh, North Carolina 27695-7603.

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Wildflowers of the Western Plains by Zoe Merriman Kirkpatrick---The author covers the High Plains up into the Dakotas with gorgeous pictures supplemented by descriptions. A 1992 publication by the University of Texas Press, Austin 78712. Hardback \$29.95, soft \$14.95, shipping and handling extra. --Marshall C. Johnston (FNA Editorial Committee member)

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A Taxonomic Revision of the Acaulescent Blue Violets (*Viola*) of North America, by Landon E. McKinney, has been published as *Sida, Bot. Misc.* 7. It is available from the Botanical Research Institute of Texas, 509 Pecan Street, Forth Worth, Texas 76102 for \$10. Phone: 817/332-4441; fax: 817/332-4112.

FUNDING

The **Barbara J. Harvill Botanical Research Fund** was endowed by friends and family of the late Barbara J. Harvill to encourage floristic work in Virginia. It provides small grants to botanists without an institutional base of support for such work. Most of the awards requested to date have been for mileage costs related to field work, by other expenses, such as mileage costs for visits to herbaria, lodging, and certain kinds of field equipment (plant presses, for instance) can also be covered. Please send

your letter of application to Donna M. E. Ware, Curator, Herbarium,
Department of Biology, College of William and Mary, Williamsburg, VA
23187.

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The **Asa Gray Award** is given by the American Society of Plant Taxonomists to an individual for outstanding accomplishments pertinent to the goals of the Society. The award is intended to be international in scope. All persons, from any country, who have made significant contributions to plant systematics may be considered. Previous recipients of the award have been: Rogers McVaugh (1984), Arthur Cronquist (1985), Lincoln Constance (1986), Reed C. Rollins (1987), Charles B. Heiser (1988), Rupert C. Barneby (1989), Warren H. Wagner, Jr. (1990), Billie Lee Turner (1991), and Albert C. Smith (1992). ASPT members are encouraged to submit nominations for the 1993 Asa Gray Award. The award will be presented at the Annual Meeting in Ames, Iowa. The nomination materials should include a letter of nomination, a fairly complete curriculum vitae for the nominee, and three or more supporting letters from others familiar with the nominee and his or her career. All nomination materials should be sent to: Thomas F. Daniel, ASPT Honors Committee, Department of Botany, California Academy of Sciences, Golden Gate Park, San Francisco, California 94118-4599. Deadline for receipt of all materials is 1 February 1993.

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The ASPT is pleased to announce continuation of its program of **support for graduate student investigators** (both master's and Ph.D. level) conducting field work, herbarium travel, or laboratory research. No award will exceed \$1,000. Awards will be made on the basis of merit alone, regardless of the research area. Thus, for example, if all the best proposals are for field work, grants will be given only in that category, and no grants awarded for the other two areas. Awards will be made on the basis of proposals submitted to the Society's Honors Committee. Applicants must be members of the ASPT, and each proposal must include: (1) a curriculum vitae; (2) a proposal (the text of which should not exceed two single-spaced typed pages) describing the research to be conducted and emphasizing the role the grant funds would play; (3) an itemized budget; (4) two letters of recommendation, one of them from the major professor. Submit three copies of all items in the proposal including the letters of recommendation to: Thomas F. Daniel, ASPT Honors Committee, Department of Botany, California Academy of Sciences, Golden Gate Park, San Francisco, California 94118-4599. The deadline for receipt of all materials is 1 February 1993.

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NEWS FROM HERBARIA

The **Herbarium of the U.S. National Arboretum**, Washington, D. C., announces the installation of a new Spacesaver compactor filing system. The project, to be installed in three modules, was started in January 1992 and should have been finished in July 1992. The transfer of the herbarium

specimens will take place at the completion of each of the three modules, with the transfer into the final module to be completed in late 1992. When the shift of the specimens is completed, scientists and students will be welcome to visit and use the new system.

The National Arboretum herbarium collection of over 600,000 specimens concentrates on extant and potential economic plants from indigenous and cultivated sources on a worldwide basis. The collection is especially rich in woody landscape plants species, cultivars and clones cultivated in the United States. The National Arboretum Herbarium welcomes exchange of herbarium specimens of economic plants and their wild-occurring relatives, landscape, food, forage, commercial, industrial, weed, etc., both indigenous and cultivated. The herbarium is also pleased to send material worldwide on loan for study by specialists in various groups.

Dr. T. R. Dudley became Lead Scientist in charge of the Herbarium and the taxonomic and nomenclatural research unit at the National Arboretum, effective 1 October 1991. Mr. P. M. Mazzeo, Botanist, is responsible for herbarium curatorial activities. Dr. Frederick G. Meyer, formerly Botanist in charge of Herbarium, retired effective 30 September 1991. Contact either Dr. T. R. Dudley or Mr. P. M. Mazzeo for exchanges and loans. --P. M. Mazzeo and T. R. Dudley. U.S. National Arboretum Herbarium, 3501 New York Avenue, NE, Washington, D.C. 20002-1958, USA. Mr. Mazzeo's phone: 202/475-4841, Dr. Dudley's phone: 202/4754842; fax: 202/475-5694.

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The **Fish and Wildlife Service** in Anchorage, Alaska, plans to establish a herbarium and is interested in learning of the availability of metal cabinets from institutions that are switching to other methods of storage (e.g., compactors). If you have information on cases, please contact Stephen S. Talbot, Curator, Alaska Fish & Wildlife Service Herbarium, 1011 E. Tudor Road, Anchorage, Alaska 99503; phone: 907/786-3381; fax: 907/786-3635.

NEWS AND NOTES

Announcements and awards were made at the annual **Botanical Society of America (BSA) banquet**, held at the 41st Annual American Institute of Biological Sciences (AIBS) meeting of 9-13 August 1991, Honolulu, Hawaii.

Botanical Society of America Merit Awards, for outstanding contributions to botanical science, were made to: **Hardy Eshbaugh**, **Ron Jackson**, and **Beryl Simpson**. The Charles Bessey Award for excellence in botanical teaching was given to **Marshall D. Sundberg**, Louisiana State University, Baton Rouge. The Edgar T. Wherry Award of the Pteridological Section of the Botanical Society of America was awarded to **Tom A. Ranker** for his paper titled "Genetic evidence for multiple colonizations of *Asplenium adiantum-nigrum* onto the Hawaiian Archipelago," co-authored with **Sandra K. Floyd** and **P. Genie Trapp**, all of University of Colorado.

The **Henry Allan Gleason Award** was presented to **Warren L. Wagner**, Smithsonian Institution, for *Manual of the Flowering Plants of Hawai'i*, co-authored with Derral R. Herbst and S. H. Sohmer and organized by the Bishop Museum. The New York Botanical Garden makes this award annually for an outstanding recent publication in the field of plant

taxonomy, plant ecology, or plant geography.

The **1992 Jesse M. Greenman Award** has been won by Sharon Elaine Bartholomew-Began for her publication "A morphogenetic re-evaluation of *Haplomitrium* Nees (Hepatophyta)", published as Volume 41 of *Bryophytarum Bibliotheca*. This study is based on a Ph.D., dissertation from Southern Illinois University at Carbondale, under the direction of Dr. Barbara Crandall-Stotler. The Greenman Award is presented each year by the Missouri Botanical Garden. It recognizes the paper judged best in vascular plant or bryophyte systematics based on a doctoral dissertation published during the previous year.

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The Association of Systematics Collections has developed a brochure describing the identification and care of archival material. To receive one or several copies, write ASC, 730 11th St., NW, Second Floor, Washington, DC 20001.

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MEETINGS

The **Center for Plant Conservation** will hold a three-day symposium to review existing reintroduction and restoration policies, to develop national guidelines for rare plant reintroductions, and to develop a model policy on them. The goals of the symposium are to review current policies of various federal and state agencies, conservation organizations, and private corporations, publish and publicly distribute the results of the workshops and the symposium. This project is being studied by a Steering Committee, consisting of eleven individuals representing nine different agencies and organizations, at the federal, state and private levels. The Steering Committee is reviewing the available policies, organizing the format and speakers for the symposium, and assisting with editing the proceedings of the symposium. The expected results of the symposium will be a book of contributed papers, including national guidelines that can be used for reintroduction projects by agencies and organizations throughout the country.

If you would like to receive a registration form for the Rare Plant Reintroduction Symposium please contact Mary M. Bruegmann, Center for Plant Conservation, Missouri Botanical Garden, P. O. Box 299, St. Louis, Missouri 63166. Space is limited, so please register early.

POSITIONS AVAILABLE

Graduate Student Needed at the Rocky Mountain Herbarium---A student interested in pursuing an M.S. degree in broad-scale floristics is sought. The successful applicant is expected to be an energetic, highly motivated individual capable of working alone for extended periods of time. A member of the staff will spend 3-4 weeks each summer assisting with collecting. Beginning in spring of 1993, the BLM will fund the fieldwork, provide housing, and provide space for the processing of specimens. The study area is the southern third of the Powder River Basin (parts of Natrona, Converse, and Niobara cos.) and the adjacent plains of

eastern Wyoming (parts of Platte and Goshen cos.). The recipient must compete successfully for a teaching assistantship in the Department of Botany. For more information contact: Ronald L. Hartman, Rocky Mountain Herbarium, University of Wyoming, Laramie, WY, 82071-3165, Phone: 307/766-2236.

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Environmental Internships with the Natural Resources Defense Council, DC available for Fall, Spring, or Summer semesters in the following program areas: agriculture, air quality, endangered species, global warming, international environment, nuclear weapons, public health, toxics, and water quality. Applicant should be a current student or a recent graduate with experience in environmental work, science, laws, policy issues, languages (especially Russian or Spanish), computers, grassroots organizing or communications, solid writing, research and communication skills required. College credit available, no salary. To apply send cover letter indicating programs and starting date preference, resume, writing sample, and transcript to Intern Coordinator, Natural Resources Defense Council, 1350 New York Ave., NW, Ste. 300, Washington, DC 20005; Phone: 202/783-7800. Apply at least three months before preferred starting date.

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The Biology Department at **Oberlin College** invites applications for a full-time continuing faculty position effective 1 July 1993. The position, which has been authorized for an initial term of four years will carry the rank of assistant professor or higher. The incumbent will teach advanced courses and a seminar in the areas of ecological, evolutionary, and conservation biology. The incumbent will be expected to maintain an active research program leading to publication. Preference will be given to candidates with teaching and postdoctoral experience. Among the qualifications required for appointment is the Ph.D. degree in hand or expected by July 1993. Candidates must demonstrate interest and potential for excellence in undergraduate teaching. To be assured of consideration, a letter of application, including curriculum vitae, at least three letters of recommendation, academic transcripts, reprints of recent publications, and brief statements of teaching and research goals should be sent to: Chair, Search Committee, Biology Department, Oberlin College, Oberlin, Ohio 44074 (fax 216/995-8960) by 4 December 1992.*

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The Department of Botany at **Oklahoma State University** seeks candidates for a 9-10 month postdoctoral position for United States Forest Service-funded research on quantitative floristics. Familiarity with conservation biology, botanical nomenclature, library methods, computer spreadsheets, statistical methods, and word processing is essential. For full consideration, applications must be received by 1 November 1992. Anticipated starting date is 1 January 1993. For application and position details, please contact Michael W. Palmer, Department of Botany, Oklahoma State University, Stillwater, Oklahoma 74078 USA, BITNET: BTNYMWP@ OSUCC, Phone: 405/744-7717.*

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