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Nancy R. Morin and Judith M. Unger, co-editors

## FLORA OF NORTH AMERICA NEWS

### **Organizational Center News**

**NEW STAFF** - Several botanists have recently joined the FNA staff in the Organizational Center at Missouri Botanical Garden. **Bruce Ford** is the new Assistant Scientific Editor (Databases) and will be working with new computer staff in upgrading both the FNA database and TROPICOS. Bruce is also preparing some treatments of Ranunculaceae genera as well as some sections of *Carex*. He received his Ph.D. in 1990 from University of Toronto under the direction of Dr. Peter Ball and for the past year has worked as an environmental consultant in Guelph, Ontario. His research interests are primarily phenetic and phylogenetic relationships within the *Carex* (Cyperaceae).

**Bruce Parfitt** received his Ph.D. from Arizona State University, where he studied the systematics of prickly-pear cacti (Cactaceae, *Opuntia*) with Dr. Donald J. Pinkava. He is presently working on the systematics of *Echinocereus* in the Southwest, a floristic study of the Coronado National Memorial, Arizona, and treatments of some genera of Ranunculaceae for FNA. As Assistant Scientific Editor (Publications) for FNA, he will help edit manuscripts and serve as a liaison between illustrators and authors or taxon editors. Both Assistant Scientific Editors will write unassigned treatments for various volumes, as needed.

**Alan Whittemore** has been hired at FNA Central to write FNA treatments full time. He received his Ph.D. under Billie Turner and T.J. Mabry at University of Texas at Austin. He worked for FNA in 1987-88, developing the character list for the morphological database. He also studies bryophytes, Asteraceae, and *Quercus*, using terpene and DNA characters as well as standard taxonomic techniques.

With two 'Bruce's in the office and three 'Judy's (with some spelling variation), the FNA Organizational Center gives new meaning to the concept of "conservation of names."

### **Editorial Committee News**

The **fall Editorial Committee meeting** was held on Sunday and Monday, 6-7 October 1991, at the Missouri Botanical Garden. Nineteen of the 24 members of the vascular plant group were present; all eleven members of the bryophyte group were present. During the two-day meeting, the groups met separately on some topics, and together when the topics were of mutual concern.

The editors were introduced to new staff at FNA-Central, and general staff duties were discussed. Current status of the database, character lists, and computer updates were presented by Bruce Ford and Nancy Morin. Don Falk and Peggy Olwell from the Center for Plant Conservation (CPC) discussed CPC's mission and how CPC and FNA might interact. CPC staff will help facilitate interactions with the Endangered Species Office, the Nature Conservancy, Natural Heritage programs, and other conservation agencies to determine which taxa should be marked in the published volumes as being of conservation concern. CPC is working on designing a conservation logo for plants that could be used as the symbol for taxa of conservation concern in the FNA volumes. Marcia Kerz and Claudia Spener from the Garden's Development Office discussed strategies for fund-raising.

The vascular plant group had a lively discussion about terminology to be used. Editors are still struggling to find a reasonable way to make the information accessible without losing concision and precision. In many cases every day English words can directly replace latinized terminology. However, many other direct English equivalents are not "every day" words or do not convey what is meant by the latinized term. In some cases plant taxonomists attribute a specific meaning to a specific term, but that meaning is not given in any current or historical botanical glossary or dictionary. We seem to have developed a kind of folk wisdom about what words mean. Sometimes there is no substitute for the technical term and in those cases we will define and illustrate where necessary. In Flora of North America we will try to choose our words carefully!

All illustrations are complete for Volume 1 and their labels (names, scale bars) are in final stages of revision. All maps have been through the initial stage at the graphics office and are being checked against originals. We are surprised at the number of maps that do not match the treatment distribution statements! Authors will see "final" maps and illustrations before they go to the publisher. We are in good shape for manuscripts received for Volume 2: virtually all will be in hand by the end of January, 1992. Volume 10 progress has been helped by meetings of key Cyperaceae authors, organized by David Murray, and by diligent correspondence between authors and taxon editors of large families--David Murray (Cyperaceae), Bob Kiger (Liliaceae and other related families), George Argus (Orchidaceae), and Jim Phipps (Juncaceae). John Thieret and David Whetstone have responsibility for the remaining Volume 10 families.

The bryophyte group reworked sections of the *Guide for Contributors*, including the sample treatment; discussed the character list for the Bryophyte volume; and identified potential contributors for specific taxa. We have had excellent response from members of the American Bryological and Lichenological Society, who received a letter from the convening editor alerting them to the planned addition of bryophytes to FNA and asking if and how they would be willing to participate.

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John Thieret remained in St. Louis for the week after the Editorial Committee meeting compiling comments from outside reviewers for the gymnosperm manuscripts. Luc Brouillet and Ted Barkley were in St. Louis at the Organizational Center during the first week of November bringing the Introductory Chapters into near-final form.

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**Leila M. Shultz**, Utah State University, is currently serving as Interim Curator of the Bebb Herbarium, Department of Botany and Microbiology, University of Oklahoma.

Dr. Shultz says, "The University of Oklahoma position has provided me with an exceptional opportunity to learn molecular techniques, work with the Great Plains collections of *Artemisia*, and interact with the excellent group of systematists and graduate students at the University of Oklahoma. I will also be teaching an undergraduate course in Introductory Botany." Until May of 1992 her address is: Interim Curator, Bebb Herbarium, 770 Van Vleet Oval, Department of Botany and Microbiology, University of Oklahoma, Norman, Oklahoma 73019-0245.

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**David Whetstone**, Frank Romano, and Bill Bowen received an NSF ULI grant to Jacksonville State University to support undergraduate student research in several areas, including systematics. These same researchers received an appropriation from the State Legislature (Alabama) to support environmental education (field-oriented) at Little River Canyon, the newly-proposed National Park Service Wild and Scenic River.

# **FNA Items for Sale**

**COFFEE MUGS, T-SHIRTS, HATS, AND BUTTONS** with the FNA logo and words on them are now available for purchase from Judy Unger at the Organizational Center. These items are a great way to let more people know about the FLORA OF NORTH AMERICA. The latest item available is a very nice cloisonne pin in five colors, about  $1/2" \lor 3/8"$ , of the FNA logo and name, which could be used as a lapel pin or tie tack. It makes an elegant Christmas present.

The beige coffee mugs have green-imprinted FNA logo and name on one side and map of North America on the other side. A white painter's cap with the FNA name and logo is also available. White all-cotton T-shirts with green logo and name are available in only two adult sizes (S and M), but we will get L and XL in soon. We also have available a 11/2" x 3" inch rectangular button with the habit drawing of *Floerkea proserpinacoides* (our logo plant) and the Flora of North America name.

Prices are as follows: T-shirts are \$7; mugs, \$6; caps, \$5; small pins, \$5; and buttons, \$1. If you would like us to mail them, add \$2 each (except for pins and buttons) for postage and handling, all prepaid please.

# **ONGOING PROJECTS**

**Vascular Plants of Arizona** has some Arizona taxa needing authors for treatments. Please contact Rebecca K. Van Devender, Herbarium, 113 Shantz Building, University of Arizona, Tucson, Arizona 85721, if you are interested in:

Aizoaceae, Cannabaceae, Celastraceae, Clusiaceae, Cyperaceae (excl. *Carex, Cyperus, Kyllinga, Hemicarpha*), Dipsacaceae, Fabaceae (excl. *Clitoria, Astragalus*, and Phaseolinae), Fumariaceae, Geraniaceae, Juncaginaceae, Lamiaceae (excl. *Monardella*), Molluginaceae, Papaveraceae (excl. *Argemone* and *Eschscholzia*), Phytolaccaceae, Polygonaceae (excl. Eriogonoideae), Santalaceae, Sapindaceae, Tiliaceae, Vitaceae.

### NEWS FROM HERBARIA

Emily W. Wood was recently appointed Manager of the Systematic Collections in the Harvard University Herbaria following the retirement of Michael Canoso. All correspondence relating to the vascular plant collections in the Harvard Herbaria (A, AMES, ECON, and GH) should now be sent to her attention. As in the past, it is unnecessary to send a separate request for loans to each institution; a single request will automatically result in a loan of all available material, including specimens from the New England Botanical Club (NEBC), which also is housed in the HUH building. Requests concerning Farlow Herbarium (FH) specimens should continue to be sent to Gennaro Cacavio. On 31 July 1991, Michael Canoso retired after 40 years of service in the Harvard University Herbaria. Mike arrived at Harvard to work in the Gray Herbarium, just before the various Harvard collections were combined. Within a few years of his arrival, he was instrumental in the integration of the herbaria of the Arnold Arboretum (A), Gray Herbarium (GH), and Oakes Ames Orchid Herbarium (AMES) in the then newly-constructed Harvard University Herbaria building at 22 Divinity Avenue. In effect, he doubled his work load within a period of a few months. During Mike's tenure, the collection again doubled in size through staff collections, exchanges, and gifts. With the addition of the Farlow Herbarium (FH) of cryptogams and the integration of the Economic Herbarium of Oakes Ames (ECON) in recent years, the collections of the Harvard University Herbaria are now approaching 5 million specimens.

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The **herbarium of Louisiana State University (LSU)** is the oldest in the Gulf South and is especially strong in the vascular flora of Louisiana (including historically important collections), lichens, and (in LSUM) neotropical fungi. The herbaria, under the direction of **Dr. Lowell Urbatsch**, recently have been substantially reinforced: 1) **Dr. Tom Wendt** has joined the staff in a full-time, non-teaching position as Associate Director of the herbaria as of 1 September 1991; 2) the Louisiana Education Quality Support Fund has awarded Dr. Urbatsch a grant for \$58,200 for computerization of the herbarium; 3) the Department of Botany has approved a half-time graduate assistant curatorship for the herbaria, starting January, 1992. Dr. Wendt is now the correspondent for the vascular plant herbarium (Ph.: 504/388-8564).

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The **herbarium of the San Diego Natural History Museum** has received a grant from the National Science Foundation to upgrade its herbarium cases, install compactors, and reduce its backlog. Construction and installation is expected to take place from December 1991 to February 1992, during which time the collections will be inaccessible. Anyone expecting to visit the herbarium or request loans should plan to do so before or after these dates. Institutions with outstanding loans are requested to return them no sooner than February 1992, if possible. As a consequence of the renovations, a number of herbarium cases will be available to other institutions for the cost of shipping. Questions should be directed to **Dr. Geoffrey Levin**, Curator, Botany Department, San Diego Natural History Museum, P.O. Box 1390, San Diego, California 92112-

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## **RONALD L. STUCKEY HERBARIUM FUND - Ronald L. Stuckey**, Professor of Botany at the Ohio State University, presented a gift of \$30,000 to the University's Foundation to initiate an endowment for the support of the University Herbarium. The presentation was made as a final surprise announcement at Professor Stuckey's retirement party celebrating 26 years of teaching at the University. The event was attended by 130 colleagues, former students, relatives, and close friends. They came from the central Ohio area, elsewhere in the state, and eight other states.

The establishment of the endowment fund for the University Herbarium also commemorates the 100th anniversary of the Herbarium. The fund creates a foundation for its future as a part of the Biological Sciences' new Museum of Biological Diversity. Celebrating 100 years of continued operation, the Ohio State University Herbarium was founded in 1891 by the University's first Professor of Botany, William A. Kellerman. Initially the Herbarium was housed in Botanical Hall (site of the present-day Faculty Club Building) and moved in 1914 to the Botany and Zoology (B&Z) Building, 1735 Neil Avenue. With the beginning of its second century of operation, the Herbarium will be relocated in the former food facility building, now being renovated to house all the biological collections in the University. Stuckey served as curator from 1967 through 1976.

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The Rupert Barneby Award - The New York Botanical Garden announces the first Rupert Barneby Award. This \$500 award is to assist researchers planning to come to The New York Botanical Garden to study the rich collection of Leguminosae. Researchers interested in applying should submit a curriculum vitae and a letter describing the project for which the award is sought and stating how the collections at NY will benefit their research. Travel to NY should be planned between 1 January 1992 and 30 January 1993. Letters should be addressed to Dr. Brian Boom, Vice President for Botanical Science, The New York Botanical Garden, Bronx, New York 10458, and should be received no later than 6 December 1991. Announcement of the recipient will be made by 20 December. Anyone interested in making a contribution to the Rupert Barneby Fund in Legume Systematics may send a check, payable to The New York Botanical Garden, to Dr. Boom.

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**NEBC Award for the Support of Botanical Research** - The New England Botanical Club will again offer a \$1000 award in support of botanical research to be conducted on the New England Flora during 1992. This award is made to stimulate and encourage botanical research in plant species or communities that occur in New England, and to make possible visits to the New England region by those who would not otherwise be able to do so. The award will be given to the **graduate student** submitting the best research proposal. It is not limited to graduate students at New England institutions nor to members of the New England Botanical Club. Preference will be given to research dealing with field studies in systematic botany, biosystematics, plant ecology, or plant conservation biology. Applicants should submit a proposal of no more than three double-spaced pages, a budget (the budget will not affect the amount of the award), and a curriculum vitae. Two letters, one from the student's major professor, in support of the proposed research are also required. Proposals and supporting letters should be sent before 28 February 1992 to: Awards Committee, The New England Botanical Club, 22 Divinity Avenue, Cambridge, Massachusetts 02138.

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**CATHERINE BEATTIE FELLOWSHIP, for graduate students in Horticulture.** The Catherine Beattie Fellowship was created to promote the conservation of rare and endangered flora in the United States through the programs of the Center for Plant Conservation, headquartered at the Missouri Botanical Garden. The research grant enables a horticulture student to conduct field research on the biology and management of rare plants in conjunction with the Center's Botanic Garden programs.

Preference is given to students whose projects focus on the endangered flora of the Carolinas and the southeastern United States. For further information contact Scholarship Committee, c/o Mrs. Monica Freeman, The Garden Club of America, 598 Madison Avenue, New York, New York 10022.

# SYSTEMATICS PRIORITIES INITIATIVE

The American Society of Plant Taxonomists, the Society of Systematic Biologists, and the Willi Hennig Society have formed a steering committee to organize an initiative to document research trends and priorities within systematics, to be called SYSTEMATICS AGENDA 2000: INTEGRATING BIOLOGICAL DIVERSITY AND SOCIETAL NEEDS.

SYSTEMATICS AGENDA 2000 will have as its major themes the role of systematics in the analysis of biodiversity, the integrative role of systematics in comparative biology, and the importance of systematics in human affairs. The initiative is charged with (1) identifying important research trends and questions and establishing priorities among them, (2) assessing the status of current infrastructures supporting systematics research and evaluating future needs, (3) documenting the broad role that systematics plays in human affairs and evaluating its future contributions and needs in those endeavors. SYSTEMATICS AGENDA 2000 has established 28 committees to undertake this initiative.

A detailed description of SYSTEMATICS AGENDA 2000 including a list of the members of the Steering Committee and the co-chairs of all Standing Committees, is in the October 1991 issue of the ASC Newsletter. All systematists, and any nonsystematists interested in the role that systematics plays in their discipline, are invited to contact the appropriate committee co-chairs to discuss their potential contributions to this effort.

### NEWS AND NOTES

The latest issue of the *Cyperaceae Newsletter 9* (8-1991), edited by P. Goetghebeur (State University of Gent) and D. Simpson (Royal Botanic Gardens, Kew), includes a list of new names and combinations published during 1990 together with names from previous years not included in the two previous lists. Slightly over 100 new names are presented. A regular feature of this publication is a listing of *Recent publications in cyperology* 

divided by topics and quite extensive. If interested in receiving this publication, contact Paul Goetghebeur, Laboratory of Plant Systematics, State University of Gent, K.L. Ledeganckstraat 35, B-9000 Gent, Belgium. They request a voluntary contribution of the equivalent of U.S.\$8 (£5) but they cannot cash checks made out in U.S. dollars.

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**THE NATIONAL AUDUBON SOCIETY** has a brochure titled "Ancient Forests: Falling Fast" explaining the need to preserve the ancient forests of the Pacific Northwest. Brochures are available at \$50 per 100 to interested persons or groups. Send name and address with a check or money order to Information Services, National Audubon Society, 950 Third Avenue, New York, New York 10022. Also, an ancient forest activist kit is scheduled to be available. For information call 212/832-3200.

# **RECENT PUBLICATIONS**

The Unity of Evolutionary Biology, The Proceedings of the Fourth International Congress of Systematic and Evolutionary Biology (ICSEB IV), edited by Elizabeth C. Dudley, is to be published in December 1991. The papers represent the diversity and breadth of ICSEB IV, a 1990 congress hosted by the Smithsonian Institution and the University of Maryland that attracted more than 1600 participants from 38 countries. These papers represent a timely synthesis of current ideas and research in a wide range of disciplines. Evolutionary biologists and other scientists, policy-makers, and the general reader should find the topics interesting and challenging. Beyond the Hardcopy: Databasing Flora of North America Information, by Nancy R. Morin, Convening Editor of FNA, is included. This two volume set, 1160 total pages, 14 b/w photos, numerous line drawings, 7  $3/4 \lor 10 3/8$ ", hardbound, is available for \$125 from Dioscorides Press, Timber Press, Inc., 9999 S.W. Wilshire, Suite 124, Portland, Oregon 97225-9962. Credit card orders may be telephoned to 800/327-5680. For U.S. & Canada orders, please add \$6.00 postage and handling for the 2-volume set.

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Genetics and Conservation of Rare Plants, edited by Donald Falk, Executive Director of the Center for Plant Conservation, and Kent E. Holsinger, summarizes our current knowledge of the genetics and population biology of rare plants, integrating it with practical conservation recommendations. It features discussions on the distribution and significance of genetic variation, management and evaluation of rare plant germplasm, and conservation strategies for generic diversity. This 304 page book is available for \$39.96 (20% discount) in check, money order, or credit card, through 31 December 1991 from Order Dept., Oxford University Press, 2001 Evans Road, Cary, North Carolina 27513. For shipping and handling, please add \$2.50.

Systematic Botany Monographs - Volume 32. Systematics of *Clermontia* (Campanulaceae-Lobelioideae), Thomas G. Lammers, 97 pp., September 1991. ISBN 0-912861-32-0. U.S. orders: \$13.00; non-U.S. orders: \$14.00.

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Volume 33. Taxonomy of *Complaya, Elaphandra, Iogeton, Jefea, Wamalchitamia, Wedelia, Zexmenia*, and Zyzyxia (Composite-Heliantheae-Ecliptinae), John L. Strother (a member of the FNA Editorial Committee), 111 pp., November 1991. ISBN 0-912861-33-9. U.S. orders: \$14.50; non-U.S. orders: \$15.50. <u>Terms</u>: Payment in U.S. currency must precede shipment. Not available as exchange. No discounts allowed on single orders. No refunds. Price is postpaid. Make checks payable to <u>American Society of Plant Taxonomists</u> and send with order to: Systematic Botany Monographs, University of Michigan Herbarium, North University Building, Ann Arbor, Michigan 48109-1057. <u>Standing order</u> customers receive a 10% discount beginning with the current volume and are billed with shipment. Information about previously published volumes and instructions for contributors may be obtained by writing to the editor, Christiane Anderson, at the above address.

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**The Complete Trees of North America**, first edition, by Dr. Thomas S. Elias was published in 1980. A revised edition of this popular account of all native and over 100 introduced species of trees was published in 1989. At that time, for some unexplained reason, the publisher changed the title to **Field Guide to North American Trees**. Soon after the revised edition was published, the rights to this and many other titles were sold by Grolier Book Clubs, Inc. to Meredith Press. Unfortunately, notice of the title change was never publicized, and when orders were placed for the book under the name of the first edition, people were told that it was out of print. This is not true, and there is an ample supply of the revised edition available for sale! The title of the revised edition is **Field Guide to North American Trees**. This 948 page book contains over 2000 labeled illustrations, and it is available at \$32.95 from Stackpole Press, P.O. Box 1831, Harrisburg, Pennsylvania 17105. Ph.: 717/234-5041.

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Liverworts and Hornworts of Southern Michigan, by Howard Crum. 1991. University of Michigan Herbarium. Hardcover; 233 pp. ISBN 0-9620733-1-8. Keys, descriptions, glossary, and extensive notes on morphology, habitats, and distributions; 104 plates comprising hundreds of photographs and line drawings. Because liverworts and hornworts have very wide distributions, this manual will be useful far beyond southern Michigan. \$18.00 U.S., \$20.00 non-U.S., 30% discount for orders for 10 or more copies. Make check or purchase order to University of Michigan Herbarium; mail to University of Michigan Herbarium, North University Building, Ann Arbor, Michigan 48109-1057.

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Vascular Flora of the Southeastern United States Volume 3, Part 2: Leguminosae (Fabaceae) by Duane Isely. 1990. The Vascular Flora of the Southeastern United States project covers the forested region of the southeastern United States west to the prairie and north to the southernmost terminal moraines. This volume is 258 pp., with 13 illustrations, ISBN 0-8078-1900-X, LC79-769. Subscribers to the series receive a 20% discount. Cost: \$35; add \$1.50 for the first book, \$.75 for each additional book; North Carolina residents add 5% sales tax. Send orders to Customer Service, The University of North Carolina Press, P. O. Box 2288, Chapel Hill, North Carolina 27515-2288. For toll-free orders, call 800/848-6224. \* \* \* \* \* \* \*

**INTERNSHIPS AT PUBLIC GARDENS** - The AABGA Internship Directory - 1992 lists over 500 internships and summer jobs for students at 132 public gardens. Now available from the American Association of Botanical Gardens and Arboreta, the directory lists the garden's address and contact person, deadline for application, positions available, and hours and salary plus comments about the positions and the educational benefits offered.

Internships and summer jobs at public gardens are an excellent way to prepare for a career in horticulture. Application deadlines are often early in the year, so students should make their summer plans now. For a copy, send \$4.00/members, \$5.00/non-members to AABGA, 786 Church Road, Wayne, Pennsylvania 19087, 215/688-1120.

## UPCOMING MEETING

The Association of Systematics Collections will hold its 1992 Annual Meeting in conjunction with the American Institute of Biological Sciences 9-11 August 1992 in Honolulu, Hawaii. Featured events will be a workshop on "Data Sharing and Database Ethics," an informational session on "Systematics Agenda 2000" (the effort to determine research needs and priorities in systematics), and a discussion of the role of vice presidents for research at natural history institutions. A business meeting and discussion of NSF programs will be held on 9 August. For program information, contact: ASC, 730 11th St., NW, 2nd Floor, Washington, DC 20001. Ph.: 202/347-2850. Contact AIBS for hotel information, 202/628-1500.

## POSITIONS AVAILABLE

**The Botany Department, University of Georgia**, invites applications for a 9-month, tenure-track position of assistant professor, plant systematics/evolution, beginning 1 September 1992. Candidates should have demonstrated research capabilities in molecular systematics or methods and principles in phylogenetic reconstruction. The successful candidate is expected to maintain an active research program with strong participation in undergraduate and graduate training and teaching in plant systematics and related courses in his or her speciality. Send curriculum vitae, reprints, statements of research and teaching interests, and four letters of reference directly to David E. Giannasi, Department of Botany, University of Georgia, Athens, Georgia 30602 by 15 December 1991. \*

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The Illinois Natural History Survey seeks a plant systematist specializing in cryptogams or flowering plants. Applicants are expected to be wellversed in systematic theory and methodology. In addition, applicants should have expertise in: a) developing and enhancing plant collections, such as through floristic surveys; b) revisionary, monographic, or evolutionary studies; or c) population ecology. Qualifications include a Ph.D.; significant research experience; demonstrated ability to plan, conduct, and evaluate research activities; recognized stature in the scientific community; and a record of frequent publications. To receive full consideration, applications should be received by 13 December 1991. Send letter of application, résumé, statement of research interests, and the names and addresses of three references to Ms. Jacque Sanders, Personnel Officer, Illinois Natural History Survey, 607 E. Peabody Drive, Champaign, Illinois 61820. Refer technical questions about the position to Dr. Kenneth R. Robertson. Ph.: 217/244-2171. \*

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**Oregon State University** seeks a herbarium curator/ instructor for a 12month, recurring position in plant systematics. The successful candidate will be responsible for curation of the University Herbarium, teaching a course in plant taxonomy and contributing to the introductory biology curriculum, and providing identifications of higher plants as

part of the University Extension Service. Ph.D. degree and expertise in herbarium curation are required. A knowledge of, or willingness to learn, the flora of Oregon is essential. Applicants should submit a curriculum vitae, samples of publications, copies of academic transcripts, a statement of interests in teaching and herbarium curation, and three letters of recommendation to: Chairperson, Herbarium Curator Search Committee, Department of Botany and Plant Pathology, Oregon State University, Cordley Hall 2082, Corvallis, Oregon 97331-2902. Ph.: 503/737-3451. Closing date: 31 December 1991. Position available: 1 July 1992. Oregon State University has a policy of being responsive to the needs of dualcareer couples. \*

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Massachusetts Division of Fisheries & Wildlife announces an opening for the title of Environmental Analyst I (State Botanist). The state botanist compiles and analyzes data on the occurrence and distribution of populations and habitats of the state's flora with a special emphasis on endangered, threatened, and special concern plant species. The botanist also plans and implements research and management programs that enhance and conserve the Commonwealth's endangered and threatened plant species. A minimum of an M.A. degree from an accredited university with a major in botany, plant ecology, or related discipline plus two years of full-time experience in botanical or ecological research and management are required. A Ph.D. in botany, plant ecology, or related discipline may be substituted for two years of experience. Salary: \$27,924-\$35,568/yr. Send applications in writing, including an up-to-date résumé, to: Jack Buckley, Deputy Director for Administration, Division of Fisheries & Wildlife, Room 1902, 100 Cambridge St., Boston, Massachusetts 02202. All applications must be postmarked no later than 16 December 1991. \*

## \*An Equal Opportunity/Affirmative Action Employer

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