

Volume 7, Number 2-3
April-May-June
July-August-September 1993

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

FLORA OF NORTH AMERICA NEWS

ORGANIZATIONAL CENTER NEWS

Page proofs for Volumes 1 and 2 were returned to Oxford University Press in mid-August! **Publication of the long-awaited volumes will be late September.** A celebration is planned for the Systematics Symposium at the Missouri Botanical Garden in early October (see Symposium article in the Meetings section). Full retail price is \$75 per volume from Oxford University Press. Discounts are available. An order form is available on the last page of this newsletter.

EDITORIAL COMMITTEE NEWS

The Flora of North America Editorial Committee, both vascular and bryological groups, met in Laramie, Wyoming, on Saturday and Sunday, 5-6 June 1993 with local host Ron Hartman of the Rocky Mountain Herbarium at the University of Wyoming.

Saturday the group discussed: the latest developments in manuscript, illustration, and map processing; review by family editors, taxonomic reviewers, and regional reviewers; the status of Volumes 3 and 11; and possible authors for unassigned taxa in Volumes 4 and 5, and remaining volumes. Nancy Morin presented information on the financial status of the project. The status of Volumes 1 and 2 at Oxford University Press was updated.

Sunday the group, under the direction of Deborah Kama, learned new ways to access computer information via Internet and similar networks. Rahmona Thompson distributed copies of the Poaceae character list done on DELTA. Using DELTA to generate descriptions and keys for other groups was discussed. Dave Boufford demonstrated the Harvard Gopher, especially how to use the Gray Card Index (See article beginning on page 13).

Special guests on Sunday were Dr. Jim Quinn from UC-Davis and Dr. Tom Stohlgren from Fort Collins, Colorado. They explained how the National Park Service (NPS) is developing a plan to catalog all plants on NPS lands. Quinn is developing programs to allow National Park Service staff to access FNA database information and to link it to NPS herbarium collections. Stohlgren presented an NPS plan to work with botanists to develop better cooperation on a number of issues, including collecting permits.

MANUSCRIPTS RECEIVED between 16 April 1993 and 15 August 1993

Volume 3

Alan Whittemore: *Myosurus*

Susan Meyer: *Arctomecon*

Donald Stone: Juglandaceae

Volume 11

Janice Coffey Swab: *Luzula*
Ruben Sauleda and Ralph Adams: *Platythelys* and *Zeuxine*
Volume 5
Laurence Dorr: *Callirhoe*
Volume 7
George Yatskievych: *Rafflesiaceae*

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.

REMINDER: Volume 11 manuscripts are long past due. Volume 3 is going to the publisher in 1993. Please submit remaining Volume 11 manuscripts ASAP!

A NEW FNA T-SHIRT - The AIBS meeting in Ames, Iowa, saw the first appearance of some new FNA T-shirts. The Volume 1 shirt has a likeness of Asa Gray, holding a plant press in his lap. Gray began his North American Flora about 150 years ago. The Volume 2 shirt has an assortment of pine cones taken from the Pinus illustrations in Volume 2. A different shirt design is planned for each volume. What a collector's item!

The two designs, each printed in black, on three shirt colors are available. Sizes S, M, L, and XL are in stock but only in choices from the convention inventory. Order soon! The Asa shirt comes in natural (wheat), deep pink (fuchsia), and light blue. The pine cone shirt comes in ash, light pink, and deep (not quite royal) blue. Cost is \$10 each with \$2 shipping and handling, prepaid please.

The FNA T-shirt with the logo and name of the project is no longer available.

Other FNA ITEMS for sale include:

green coffee mugs	\$7
cloisonne lapel pins	\$5
wheat or white rectangular buttons	
with habit of <i>Floerkea</i>	\$1

For delivery, add \$2 each (for T-shirts and mugs) for postage and handling, all prepaid please.

COMPUTER NEWS

AUTOMAP software - a useful tool for determining site coordinates.
In the FNA Newsletter Vol 6(4):26, I reviewed the basics of the mini GIS we are using for research and plants-at-risk mapping at CAN. Since then I have acquired some additional software that has proven to be an extremely valuable adjunct to our Canadian and USA gazetteer database files already in use for determining site coordinates.

The software is called AUTOMAP: The Intelligent Road Atlas by AUTOMAP, Inc., Phoenix, AZ. I purchased the Windows version, but it also comes as a DOS application. It should be available at most larger

computer outlets and retails for about \$60. This computerized road atlas covers all of North America and northern Mexico. Over 410,000 miles of freeways and state, province, and county roads are included in several layers of detail, as well as a database of over 120,000 cities and towns. Some of the other overlays include counties, mountains, forests, lakes, rivers, parks, state capitals, and a lat/long grid. Other kinds of data such as state and city populations, land areas, laws of the road, hotels, and car rentals are also provided. The most detailed database and information is available for the contiguous states south of the Canada-US border.

The main purpose for this software is to allow the user to plan trips, determining the best route between the starting point and the end of the journey. A printout can be produced that lists the sequence of highways and turnoff points for the shortest route, the quickest route, or for a route following stated preferences for certain kinds of roads. One can even cut out and paste the route map into other applications. However, the main usefulness of the software, for species mapping, is for determining site coordinates for populated places as well as localities at specified distances from populated places and highway junctions. Let me describe, briefly, how we use this software as an adjunct to our gazetteer files.

When a specimen record gives the locality as a populated place, we generally just use the coordinates given in our gazetteer database files if the site is in town or within a distance of a few miles. For general mapping this is sufficiently precise. However, if the site is given as, for example, 25 mi east, it would be preferable to have more precise coordinates for computer mapping. With AUTOMAP, precise coordinates can be determined for such localities. The lat/long coordinate feature must be turned on first by selecting the track feature under the utility menu. The coordinates of the cursor position on the map are visible at the bottom right of the screen in the status line. The "go to place" tool is then selected from the tool bar and the name of the city or town and abbreviated state name is typed into the dialog box. Duplicate names from different states are then displayed, or if the name is misspelled, place names with similar spelling are exhibited. The correct name is selected and the program displays in the map window the geographical area where the place occurs and its name label. Using the mouse, a rectangular zoom box is created around the region including the place label and this area is magnified to fill the map window. The "measuring tape tool" is then selected from the tool bar. By clicking the left mouse button with the cursor at the middle of the bottom edge of the place label and dragging the tape 25 mi eastward the coordinates can be read off the screen directly in degrees and decimal minutes. The mileage is displayed next to the coordinates in the status line when the measuring tape feature is active.

The coordinates for a collection locality given as a mileage from the junction of two highways can also be determined easily. Simply zoom in to the approximate area where the highway junction occurs, point with the cursor to a highway and click the left mouse button. The route number appears on the map. Repeat this with several of the highways until the correct, intersecting highways are located, and then measure the distance and determine the coordinates as before. Sometimes it is a help, or a necessity, to overlay the county boundaries for a state to help position itself on the map. The names of the counties can also be displayed on the map together with any reference towns or square dot on the map representing a populated place and the name of the town or city appears on the map. Click again and the name disappears. An important point to remember is that the greater the magnification (the closer one is zoomed in to the place for which coordinates are desired) the more precise are the coordinates obtained. Coordinates obtained by this method for populated places have

been found to be very accurate, deviating only a few seconds from the values given in our USA gazetteer database files.

The centroid coordinates of other features such as national parks, monuments, mountains and counties can also be determined using AUTOMAP. Even the summit elevation of many peaks can be directly accessed by pointing and clicking the mouse. An interesting use of this software would also be the creation of a small map that could be affixed to an herbarium sheet showing the collection locality. Maps can be printed directly through AUTOMAP or can be exported, via the Windows clipboard, to a word-processing software. To maintain optimum sharpness, it is preferable to print a magnified portion of the area around the collection site showing the main highways, mountain peaks, reference towns, rivers and possibly lat/long grid directly in AUTOMAP and use the reduction feature of a photocopier to reduce the size. A locality symbol can then be entered by hand and the coordinates of the site included as part of the label data.

AUTOMAP could also be used to create a customized working map for a state or area in which floristic work is being done. The map could include all the county boundaries, together with their names, as well as any major highways and reference points as indicated above. Species localities or collection sites can be entered manually on the reference map and the maps stored in a binder.

Map coordinates for populated places or county centroids are still accessed faster and are more accurate when determined by the use of gazetteer database files. However, AUTOMAP is very useful for determining coordinates for sites not included in standard gazetteers and for preparing working reference maps tailored to personal needs. --by Erich Haber, Research Division, Canadian Museum of Nature, P.O. Box 3443, Station D, Ottawa, Canada, K1P 6P4.

HARVARD UNIVERSITY GRAY HERBARIUM INDEX DATABASE

The Gray Herbarium Index Database currently includes 287,225 records of New World vascular plant taxa at the level of species and below. The information is now accessible over the Internet via keyword searches from the E-mail Data Server and through the Biodiversity and Biological Collections Gopher (see below).

All of the current records are marked "Provisional" reflecting the fact that they have not been verified or edited following keystroke data entry. We are aware of minor fielding problems particularly with the names of authors (e.g. with the destination of "in" authors) and with complex title entries. Absent from this provisional release are about 10,000 records which represent cards from the master set that were excluded from the keystroke data-entry project for some of the following reasons: 1) they are quadranomials or higher and should be cleaned up; 2) they appear to be "sensu" names and so should be checked before entry into the database; 3) they appear as nomina nova - many of these should be checked before database-entry; 4) they appear as nomina nuda - again these should be checked. Also excluded from keystroke entry were names of genera and of taxa of hybrid origin.

We are making the Gray Herbarium Index Database available to the community as text records, formatted to resemble the original printed card layout, during the period that we are editing and verifying the "raw data" to

eliminate mistakes in fielding and to reconcile inconsistencies that have arisen as the result of almost 100 years of compilation. The verification phase of the project will probably continue into late 1993. When that verification and update has been completed, the Gray Index records will be released in a data format for local institutional and project use.

In the meantime, we encourage comments and suggestions. Queries about editorial content and coverage of the Index should be sent to Dr. Elizabeth Shaw (eshaw@huh.harvard.edu). Queries about network access should be sent to Dr. Jim Beach (beach@huh.harvard.edu).

Internet Gopher Access

The Internet Gopher is a network protocol and a set of network programs which provide access to numerous Internet information resources. The Gopher system includes two types of applications: - Gopher "servers" which index and manage the information and Gopher "clients" which provide a means of interface for the network of servers.

Client programs are available for several types of computers including Desktop PCs, Macintoshes, Unix, OS/2, and VMS. To use Gopher you need a desktop computer, or an account on a computer, which is connected directly (i.e. over network cabling) to the Internet. Gopher has many useful features locating and downloading information for local use.

We have put a copy of the Gray Index Database into the "Biodiversity and Biological Collections" Gopher server. It is accessible through the master Gopher list at the University of Minnesota, or through a direct Gopher connection to the computer: huh.harvard.edu 70.

The Gopher copy of the Gray Index Database is keyword indexed and supports the Boolean search operators: "and", "or" and "not". The Gopher software also permits string searches in addition to Boolean operations by accepting quoted text in the search specification.

E-mail Data Server Access

The E-mail Data Server delivers Gray Index data over the Internet and over networks with a mail gateway to it. The system accepts keyword queries within mail messages. Any meaningful word found in the Gray Index may be used in a query including: generic names, specific epithets, locality information, collectors' names, etc.

In addition the Gray Herbarium Index, three botanical specimen databases are accessible via the E-mail Data Server:

- 1) Type specimens of the mint family from the Harvard Herbaria, comprising 1100 records
- 2) The complete herbarium catalog of the Michigan State University, W. K. Kellogg Biological Station records
- 3) The Flora of Mt. Kinabalu (Sabah, Borneo) specimen collections from the mountain.

E-mail addresses for sending queries are:

Gray herbarium Index: graycard@huh.harvard.edu

Harvard Mint Types: herbdata@huh.harvard.edu

Kellogg Herb.: Herbdata@kbs.decnet@clvax1.cl.msu.edu

Flora of Mt. Kinabalu: herbdata@herbarium.bpp.msu.edu

Usage

To use the E-mail data server, send an e-mail message to the server containing two commands. The first should specify which taxa to retrieve based on keywords within the text of the records. The second command informs the mail server of the address to send replies. Additional formatting and help commands are available but are optional. The commands the server understands are: "help" "format=" "replyaddress=" and "keyword=". It does not matter whether the commands are in uppercase or lowercase characters, and they may be abbreviated. Each e-mail query should not contain more than one of each of the commands. A semicolon at the end of the line is required.

For more information contact Dave Boufford at HUH, e-mail address: boufford@huh.harvard.edu

NEWS FROM HERBARIA

The **University of Arizona Herbarium** in Tucson, Arizona, has appointed Lucinda McDade as its new Curator. She comes from Duke University, where she worked for the Organization for Tropical Studies (OTS) for seven years. McDade studies Neotropical Acanthaceae, with emphasis on *Aphelandra*. Charles Mason remains at the herbarium as emeritus curator while coordinating the Vascular Plants of Arizona project. Assistant curators are Philip Jenkins and Kristen Johnson. In addition to the Arizona flora project, a revision is underway of Howard Scott Gentry's *Río Mayo Plants*, Carnegie Institute publication 527, 1942. The work encompasses the flora and vegetation of portions of southern Sonora and southwestern Chihuahua, Mexico. Project leader is Paul Martin, and funding has come partly from the Southwest Center on the University of Arizona campus. The known flora of the area has approximately doubled (2400 + species) because of the project. Gifts for determination and exchange material from the area are welcome.

* * * * *

Dr. **Brent Mishler** will leave Duke University in summer of 1993 and will become Associate Professor in the Department of Integrative Biology and Director of the Jepson Herbarium and the University Herbarium, all at the University of California, Berkeley, California 94721.

RECENT PUBLICATIONS

Guidelines and Standards for Fossil Vertebrate Databases, 1991, Stanley D. Blum, ed. Society of Vertebrate Paleontology, U.S.A., 129 pp. This book contains information that will be **useful for anyone interested in setting up a computerized system for natural history collections**. It summarizes the results of the Society of Vertebrate Paleontology Workshop on Computerization held November 1--4, 1989, in Austin Texas. In particular, the chapter on "Logistics and Planning for Computerization", by Samuel A. McLeod and Melissa C. Winans, gives simple, straightforward, realistic advice on what must be considered at each phase of developing a computerized database system. The chapter on "Computerization Fields for Vertebrate Paleontology", by Samuel A. McLeod, uncovers a number of issues related to how biologists capture and think about their data. Several other chapters are rather technical but would

be extremely useful for curators who are *not* particularly computer literate who need to communicate their needs to computer support staff. An appendix, "Using Bitnet", by Stanley D. Blum, gives step-by-step instructions on using this network. The report can be obtained at no cost from Dr. Michael Novacek, Department of Vertebrate Paleontology, American Museum of Natural History, Central Park West at 79th Street, New York, New York 10024-5192.-- N. R. Morin

* * * * *

The Moss Flora of Mexico, edited by Aaron J. Sharp, Howard Crum, and Patricia Eckel - The collections from Sharp's early years were determined by Howard Crum as part of his doctoral studies at the University of Michigan. His unpublished dissertation on the *Appalachian-Ozarkian Element in the Mexican Moss Flora* included a checklist of all the species known to that time. The flora presented here was prepared by 32 people active in floristic and monographic revisions of families and genera represented in Mexico. The manuscripts were initially solicited by A.J. Sharp and more recently edited by Howard Crum. Effort has been made to keep to a standard format and uniform terminology.

Illustrations were prepared by Patricia Eckel and, to a lesser extent by Howard Crum and a number of artists: Karen Teramura, Linda Ley, Marie Cole, and Shenlei Winkler. Studies by the international collaborating authors have expanded the known range of the Mexican species, netted many species new to science, and placed many others in synonymy, thereby demonstrating phytogeographic ties to many parts of the world other than the Southern Appalachians.

ISBN 0-89327-379-1, 809 plates, two-part hardcover set, Order No. MEM 69. \$195.00. Autumn 1993. Send order requests to: The Moss Flora of Mexico, Scientific Publications Department, The New York Botanical Garden, Bronx, NY 10458-5126 USA, or phone (718) 817-8721, FAX: (718) 817-6504. Postage and handling fee: US orders: \$3.00 plus 4% of subtotal; Non-US orders: \$4.00 plus 5% of subtotal.

* * * * *

Preserving Natural Science Collections: Chronicle of Our Environmental Heritage, by W. Donald Duckworth, Hugh H. Genoways, and Carolyn L. Rose, is now available from the National Institute for the Conservation of Cultural Property (NIC). 140 pp, paper, U.S. orders \$8, Canada and Mexico \$9, all other countries \$16.50. This report culminates more than two year's work by NIC's Conservation and Preservation of Natural Science Collections project, which was sponsored in part by the National Science Foundation and undertaken in cooperation with the Association for Systematics Collections and the Society for the Preservation of Natural History Collections. The report calls upon institutions holding collections to educate the public about the myriad uses of natural science collections and the importance of preserving them for future research. The report recommends the creation of a natural science conservation training program, suggests curricula, and also lists numerous topics for conservation research and technology transfer. The project also generated 20 reports that summarize meetings with disciplinary societies in the natural sciences and panel discussions on materials sciences. These are also available from NIC for a nominal charge. To order the publication or to receive a list of the 20 summary reports, please contact National Institute for the Conservation of Cultural Property, 3299 K Street NW, Suite 403,

Washington, D.C. 20007. Telephone 202/635-1495; Fax 202/625-1485.

* * * * *

Storage of Natural History Collections: Ideas and Practical Solutions, edited by Carolyn Rose and Amparo R. de Torres, contains over 100 articles on the practical applications of storage systems for a variety of natural history materials, from vertebrate teeth to ethnographic objects to large fossils. Each article details step-by-step instructions for the construction of support and storage systems for specimens and objects. The book also includes a glossary of terms, lists of materials, and names and addresses of manufacturers and suppliers. Published by the Society for the Preservation of Natural History Collections with funding from an Institute of Museum Services grant. \$30, but call or write to get information on shipping rates. Order from SPNHC, c/o Sue McLaren, 5800 Baum Blvd., Pittsburgh, PA 15206-3706.

* * * * *

Canadian Poisonous Plants Information System/ Système d'information sur les plantes toxiques au Canada, by Derek B. Munro, 1993, contains computerized information from literature references to 259 plants that can poison livestock, pets, and humans in Canada; provides information on names, distribution, toxic plant parts, toxic chemicals, and symptoms of poisoning; allows users to add their own notes for each plant species on case histories, symptoms, new references, and toxicity; enables users to view all information either on the computer screen or in a printout; produces, from the user's printer a 1000-page manual of documentation on those poisonous plants; includes an electronic card catalog to over 500 references. To receive this three-diskette set and documentation write The Director, Centre for Land and Biological Resources Research, Room B147, K.W. Neatby Bldg., 960 Carling Avenue, Ottawa, Ontario K1A 0C6. ISBN 0-662-59802-4.

* * * * *

Handbook of Rocky Mountain Plants, by Ruth Ashton Nelson, drawings by Dorothy V. Leake, Fourth Edition, Revised by Roger L. Williams. In this latest edition, Roger Williams maintains the simplicity and clarity of Nelson's keys in the earlier edition, but adds numerous additional species likely to be found within the book's range which cannot be treated in the limited space of an introductory text. Moreover, while Williams had honored Ruth Nelson's wish to provide popular names of species, he has implored the reader to accept the precedence of Latin names in the keys.

These revisions--which also reflect the progress in botanical knowledge in the two decades since the first edition of the *Handbook* appeared--will introduce a new generation of readers to Nelson's well-known method of plant identification, and delight those who have long-awaited the reappearance of the *Handbook of Rocky Mountain Plants* in print. Published in Cooperation with the Denver Museum of Natural History. ISBN 0-9911797-96-3 (paper), 460 pages, 350 drawings, 6 x 9, \$19.95.

* * * * *

Meet the Natives, The Amateur Field Guide to Rocky Mountain Wildflowers, Trees, and Shrubs by M. Walter Pesman, Illustrations

adapted from drawings by Emma A. Ervin, Ninth Edition. Designed to aid the amateur plant lover, *Meet the Natives* helps identify over four hundred plant species in the Rocky Mountain region. This easy-to-use field guide is organized by life zones where plants grow, color of flower, and season of bloom. For quick reference, a detailed chart at the beginning of the guide lists the elevations and life zones of towns, peaks, passes and parks in the Rocky Mountain region, from alpine to plains. A Publication of the Denver Botanic Gardens. M. Walter Pesman (1887-1962) was a landscape architect and a lover of native plants. Emma A. Ervic (1874-1957) was a well-known artist in Denver. The drawings in this book are taken from life-sized paintings done from fresh flower specimens. ISBN 1-879373-31-9(paper), 248 pages, 300 drawings, 5-1/2 x 8-1/2, \$12.95.

FUNDING

ANNOUNCEMENT OF 1992 RECIPIENT OF THE DELZIE DEMAREE TRAVEL AWARD AND CALL FOR 1993 APPLICATIONS

Elena Conti, a graduate student of Kenneth J. Sytsma at the University of Wisconsin-Madison, was the recipient of the fourth annual Delzie Demaree Travel Award. Her dissertation research focuses on evolution and relationships within the Onagraceae and the order Myrtales and involves the application of DNA sequencing to the solution of phylogenetic problems within these taxa.

Graduate students in plant systematics are eligible to apply for the Delzie Demaree Travel Award, a \$250.00 stipend to defray expenses related to attendance at the Systematics Symposium. The application should include a letter from the applicant telling how symposium attendance would benefit his/her graduate work and a letter of recommendation sent by the major professor. Please mail letters of application to Donna M. E. Ware, Herbarium, Biology Dept., The College of William and Mary, Williamsburg, VA 23187.

* * * * *

THE RUBERT BARNEBY AWARD - The New York Botanical Garden is pleased to announce that Mr. David Clarke, of the University of Illinois, Urbana is the recipient of the **1992 Rupert Barneby Award**. Mr. Clarke will use the award to complete a taxonomic treatment of Acacia series Gummiferae of the Caribbean, both as part of his graduate thesis and as a contribution to the Flora of the Greater Antilles.

The New York Botanical Garden also invites applications for the 1993 **Rupert Barneby Award**. The award of \$1,000.00 is to assist researchers planning to come to the New York Botanical Garden to study the rich collection of Leguminosae. Anyone interested in applying for the award should submit their curriculum vitae, a letter describing the project for which the award is sought, and how the collection at NYBG will benefit their research. Travel to NYBG should be planned between January 1, 1994 and January 31, 1995. The letter should be addressed to Dr. Enrique Forero, Director, Institute of Systematic Botany, The New York Botanical Garden, Bronx, NY 10458-5126 USA, and received no later than 3 December 1993. Announcement of the recipient will be made by 17 December. Anyone interested in making a contribution to **THE RUBERT BARNEBY FUND IN LEGUME SYSTEMATICS**, which supports this award, may send their check, payable to The New York Botanical Garden, to Dr. Forero.

* * * * *

National Science Foundation Directorate for Biological Sciences
Doctoral Dissertation Research deadline dates for FY 1994 are: 1 September 1993 and 1 February 1994. For further information contact the Systematic Biology program, 202/357-9588. The deadline date for the **Research Experiences for Undergraduates Program** will be 15 September in 1993 and later years. For more information contact the REU Coordinator at 202/357-9549. The deadline for **Conservation and Restoration Biology** (Brochure NSF 90-66) is 29 September 1993. The deadline for NSF Visiting Professorships for Women is 15 October 1993. A new brochure, NSF 93-88, is now available.

AIBS NEWS AND NOTES

A symposium, cosponsored by ASPT and the Systematics Section of BSA and organized by Flora of North America, on **The Grasslands of North America** was presented at the American Institute of Biological Sciences (AIBS) meeting in Ames, Iowa. **Nancy Morin** moderated the afternoon symposium and speakers were **Ted Barkley**, Introduction to the grasslands of central North America; **Dean Roosa**, Plant Communities of Iowa's tallgrass prairie; **Jim Hoy**, Settling the tallgrass prairie; early ventures in the Flint Hills of Kansas; **Tom Bragg**, Fire and the biotic heterogeneity of the Great Plains grasslands; **Dale Vitt**, Grassland bryophytes: Adaptations for survival in an arid environment; and **Hugh Iltis**, North American grasslands: Do they have a future?

* * *

An FNA early evening mixer was held at the AIBS meeting for everyone interested in or involved with the project. Over 100 people attended the mixer, which was supported by Oxford University Press, publisher of the FNA Volumes.

* * *

AWARDS WERE PRESENTED at the Annual Botanical Society of America (BSA) banquet, held at the 42nd Annual American Institute of Biological Sciences (AIBS) meeting from 1-5 August 1993, Iowa State University, Ames, Iowa. Some awards presented were: **Botanical Society of America Merit Awards**, for outstanding contributions to botanical science, were made to: **Daniel Axelrod** and **Robert Ornduff** (an FNA author). The **Edgar T. Wherry Award** of the Pteridological Section of the Botanical Society of America was awarded to **Karen S. Renzaglia** (an invited FNA moss author) of East Tennessee State University for her paper titled "Spermatozoids of *Phylloglossum drummondii* are multiflagellated," co-authored with **Dean P. Whittier** of Vanderbilt University. The **Henry Allan Gleason Award** was presented to **Matt Lavin** (an FNA author), Montana State University for "Biogeography and Systematics of *Poitea* (Leguminosae)," Volume 37 of *Systematic Botany Monographs*. 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.

At the annual banquet of the **American Society of Plant Taxonomists** at the AIBS convention, the **Asa Gray Award** was presented to **Sherwin Carlquist**, for his outstanding work on the island biogeography and plant anatomy. The Asa Gray Award is given by the American Society of Plant Taxonomists to honor an individual "for outstanding accomplishments

pertinent to the goals of the Society."

NEWS AND NOTES

DIVERSITY FOR DEVELOPMENT - The International Board of Plant Genetic Resources (IBPGR) has recently carried out a major review of its strategy and program as part of its transaction to an independent CGIAR institute, the International Plant Genetic Resources Institute (IPGRI).

The strategy "Diversity for Development" makes clear that IBPGR/IPGRI will carry out a significant program to take account of the human socio-economic and cultural aspects (SECA) of conserving and using plant genetic resources. The basis for the program outlined in our new strategy states that: The conservation and use of plant genetic resources has a human dimension that IBPGR will make part of its agenda in the future. As we increase research and other activities in-situ and farm- or community-level conservation, so, increasingly, social factors such as decision making processes, social organization and other cultural perspectives must be taken into account. Clearly an understanding of gender variables will be critical in such studies.

The use of gender analysis to incorporate social variables into projects whenever relevant has great potential for improving results and will be introduced on a systematic basis in the project development. It is of growing concern that indigenous knowledge about cultivated and wild species is being rapidly lost. As societies change, in many cases the younger generations do not acquire this knowledge about from their elders. Local knowledge, about plants, and the innovative systems of individual and communities, are an invaluable resource in the search for new ways of conserving and using plants. Such knowledge provides a critically important adjunct to the normal passport, characterization and evaluation of data. IBPGR will initiate research in partnership with national, and other organizations and will in this area, seek to develop appropriate strategies for conserving and making available indigenous knowledge. IBPGR realists that a large share of information is held by women, much of which is not in the public domain. IPGRI will be careful to respect the rights of ownership of this valuable resource.

We want to identify relevant information sources dealing with the socio-economic and cultural aspects of plant genetic resources. Specifically, we are interested in information from journals, books, reports, occasional papers, features and articles or any other information sources on the social and cultural aspects of plant genetic resources. --Monica Opole, Consultant SECA Programme, Genetic Diversity Group, IBPGR, c/o FAO of the United Nations, Via delle Sette Chiese 142, 00145 Rome, ITALY

* * * * *

The **Pennsylvania Native Plant Society** (PNPS) invites those interested to join their group. PNPS is a comprehensive membership organization for the benefit of everyone who cares about the wildflowers and plants of Pennsylvania and the surrounding region; and for the benefit of Pennsylvania Botany and the floral heritage of Pennsylvania and wildflowers, trees, and shrubs everywhere. The PNPS offers members a wide array of benefits: fieldtrips and educational activities; information and response to inquiry; the Bartramia newsletter; other publications; exchanges; linkage with government agencies, conservancies, colleges, universities, and museums; and protection of Pennsylvania's floral heritage.

Individual membership is \$10 payable by check to PNPS and mailed to Robert M. Gruver, Treasurer, Pennsylvania Native Plant Society, PO Box 281, State College, PA 16804-0281.

RECENT DEATHS

Alwyn Gentry, a botanist at the Missouri Botanical Garden since 1971, died 3 August 1993 in a plane crash in Ecuador. Three other people, including American ornithologist Ted Parker, died in the crash in the Pacific lowlands coast of Ecuador. Three biologists survived the crash. The scientific group was doing an aerial survey of the coastal area of Ecuador, 350 miles southwest of Quito, when the crash occurred. They were on a reconnaissance trip for Conservation International's Rapid Assessment Program (RAP). Known for his botanical knowledge of South America and recognized as one of the world's leading field biologists, he made more than 70,000 botanical collections during his lifetime. His understanding of woody tropical plants, a subject about which he had recently published a major volume, was unsurpassed. Despite his incredibly busy schedule and focus on tropical taxa, Al had cheerfully agreed to provide the treatment of Bignoniaceae for FNA.

* * * * *

Lyman Benson died on 12 July 1993 at the age of 84. Former chairman of the botany department at Pomona College from 1944 to 1973, he built up the department from three student majors in 1944 to 120 student majors in 1974. He was author of "The Cacti of the United States and Canada", for which he received the Henry A. Gleason Award in 1983. Benson's grandfathers were California 49ers and he used his \$5 gold piece legacy to invest in his college education. He graduated from Stanford University in 1930, and earned master's and doctoral degrees in botany there in 1931 and 1939, respectively. He taught at Bakersfield Junior College from 1931 to 1938 and at University of Arizona from 1938 to 1944.

UPCOMING MEETINGS

INTERNATIONAL CONFERENCE ON THE SYSTEMATICS OF THE RUBIACEAE - Missouri Botanical Garden

4-6 October 1993 - Rubiaceae is the fifth largest family of angiosperms, with about 10,000 species in more than 1000 genera and 25 tribes. Our current classifications are far from resolved. Recent systematic research in this family considers new evidence from DNA, cytology, and anatomy. Participants will present results from ongoing research. The classification of woody taxa proposed by Elmer Robbrecht (*Tropical Woody Rubiaceae*, Opera Botanica Belgica #1) will be the starting point for discussion of current research and future priorities in this family.

This conference is dedicated to Dr. John Dwyer, a specialist in Rubiaceae at the Missouri Botanical Garden for more than thirty years. This program will include invited presentations during all three days, and a dinner and panel discussion with audience participation on the evening of 5 October. A special dinner session in honor of Dr. John Dwyer will be held in the evening on 6 October.

The registration fee is \$75.00 (\$60.00 for students) and includes attendance in all sessions, box lunches for all three days, and coffee break refreshments. The dinner planned for John Dwyer on 6 October is an

additional \$30.00. Make checks payable to the Missouri Botanical Garden. Mail to Rubiaceae Conference, Missouri Botanical Garden, P. O. Box 299, St. Louis, MO 63166 USA. Please register separately for the Annual Systematics Symposium. Hotel arrangements are the responsibility of the participants; information will be distributed to registrants.

ANNUAL SYSTEMATICS SYMPOSIUM MISSOURI BOTANICAL GARDEN - 8-9 OCTOBER 1993 - Economic Botany - The 5.4 billion people on earth are consuming its resources at an unprecedented rate, even though 1.2 billion live in absolute poverty and half of these people are seriously malnourished. At the same time, deforestation is leading to massive loss of biodiversity. How can botanists work with others to improve the situation? What can we learn from the past? How can we wisely use forest plants? How can we improve current crops? These are but a few of the questions to be pondered by botanists. Friday evening, 8 October, will be devoted to an informal mixer for all Symposium participants and speakers on the Garden grounds. All papers will be presented on Saturday, 9 October. **Gayle Fritz** (Washington University) Paleoethnobotany: Plants and people in the past; **Walter Lewis** (Washington University) Medicinal plants as sources of new therapeutics; **Janis Alcorn** (World Wildlife Fund) Economic botany, development and conservation: What's the connection?; **Gordon Cragg** (National Cancer Institute) Natural product drug discovery and development at NCI; **Robert Fraley** (Monsanto), Genetic engineering in plants; **Charles B. Heiser** (Indiana University), Edgar Anderson - botanist and curator of useful plants, is the EVENING SPEAKER.

Registration must be accompanied by a \$45.00 registration fee (\$35.00 for students), which includes refreshments at the Friday mixer and lunch, dinner, and cocktails on Saturday. No refunds will be granted after 25 September. Please make checks payable to the Missouri Botanical Garden. Mail to: Systematics Symposium, Missouri Botanical Garden, P. O. Box 299, St. Louis, MO 63166. Space limited to 400; please register early. Please register separately for the Rubiaceae Conference.

POSITIONS AVAILABLE

Brooklyn Botanic Garden seeks a professional to work on the New York Metropolitan Flora Project. Duties include working with computer databases of location information, mapping, collecting plants, identification, and assistance with writing floristic treatments. A B.S. or equivalent and computer skills are essential. Knowledge of plants is an asset. Some travel to other herbaria is expected. This is a 30 month position with the expectation that it will be extended. Closing date is 31 October 1993. Send résumé to Director of Personnel, Brooklyn Botanic Garden, 1000 Washington Avenue, Brooklyn, New York 11225. *

* * * * *

The University of California at Berkeley seeks an outstanding plant systematist for appointment as curator of the privately endowed Jepson Herbarium (which is devoted to the vascular plants of California) and as an adjunct faculty member at an appropriate professorial rank (commensurate with experience and standing in the field) in the Department of Integrative Biology. The Herbarium and Department seek candidates who have demonstrated ability in areas of conservation, floristics, and systematics and whose future research will include vascular plants of California. The successful candidate will be expected to develop research programs, to

participate in conservation programs, to provide leadership to those generating financial support for these efforts, and to participate in upper-division and graduate-level instruction in the Department. Applications should include a curriculum vitae, names and addresses of three references, a summary of current research, descriptions of research (including reprints), and evidence of curatorial and teaching experience. The deadline for receiving applications is 15 November 1993 and the anticipated starting date is 1 July 1994. Send applications to Director, Jepson Herbarium, University of California, Berkeley, California 94720.*

***An Equal Opportunity/Affirmative Action Employer
ORDER FORM**

Special Discount Offer - Save 20% through November 30, 1993

To order, please indicate desired quantity, payment method, name and address on the form below. Send to: Oxford University Press, 2001 Evans Road, Cary, NC 27513. All orders must be prepaid by check or credit card. Institutions and libraries may use purchase orders-- attach to this form to qualify for discount. Books may be returned within 30 days for a full refund. To order by phone, call toll free 1-800-451-7556. Prices and publication information subject to change.

Please send:

_____ copy/ies of Flora of North America, Volume 1
ISBN: 0-19-505713-9
\$75.00 list price/\$60.00 discount price

_____ copy/ies of Flora of North America, Volume 2
ISBN: 0-19-508242-7
\$75.00 list price/\$60.00 discount price

Shipping and handling: Please include \$2.50 for the first book
and \$1.00 for each book thereafter.

Subtotal_____

Shipping and handling_____

Sales tax (CA and NC residents only)_____

_____ Check or money order enclosed

Total_____

_____ Charge to: _____ MasterCard _____ VISA _____ American Express

Account number _____ Expiration Date _____

Signature _____

(Required for all credit card orders)

Name _____ Daytime phone number _____

Address _____

City, State, Zip _____

Books used in connection with your work may be tax deductible. Please recommend library acquisition of those books needed for teaching and research.