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

## FLORA OF NORTH AMERICA NEWS

**Regional review** is in full swing for the monocots except Poaceae. The first batch (of seven sections of *Carex*) was mailed to appropriate regional reviewers, according to distribution of taxa, on 23 September 1996. In September, October, and November, another five batches of manuscripts were mailed: Group 2 -- three genera of Orchidaceae, Group 3 -- eight sections of *Carex*, Group 4 -- seven small monocot families, Group 5 -- eleven genera of Orchidaceae, and Group 6 -- 13 sections of *Carex*. Our regional reviewers are asked to complete their reviews and send comments to FNA's regional coordinators within one month of the date manuscripts left the FNA office. Regional coordinators collate comments and send them to the correct taxon editor for final collation and evaluation. Because treatments sent thus far mostly have had very limited distributions, only subsets of the 57 regional reviewers have received the various treatments mentioned above. The benefit of involving all these folks is to have the most accurate distributional information possible for all of the U.S. and Canada.

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**The new division of the volumes** to be published is included in the middle of this newsletter. Please remove the page from the newsletter and keep it with other reference materials for FNA. One side contains the alphabetical listing of the families showing the new volume number. The other side contains the taxonomic listing of the families.

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**Dr. Nancy R. Morin, FNA Convening Editor, can now be reached at the American Association of Botanical Gardens and Arboreta**, 786 Church Road, Wayne, Pennsylvania 19087. Her email

address is: morin@fna.org; the previous email address morin@mobot.mobot.org still works. FNA-related materials should continue to be sent to the office: FNA Managing Editor, Missouri Botanical Garden, P.O. Box 299, St. Louis, Missouri 63166.

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**The Flora of North America project is now incorporated and is officially called the Flora of North America Association.** By-laws and articles of incorporation were approved by the Editorial Committee, now officially called the Board of Directors. Officers are: Nancy Morin, Convening Editor, Alan Smith, chair of the management committee, Ted Barkley, secretary, and John Schnase, treasurer. Incorporation will allow us to fundraise as a separate entity when this seems advantageous. It will also facilitate agreements with publishers, agencies, and other organizations.

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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.

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**The 1996 revision of the Guide for Contributors** has been sent to all accepted authors for all taxa yet to be published. Asteraceae authors were sent a special edition that contained an Asteraceae sample treatment in addition to the entire contents of the regular Guide, as well as the regular sample treatment. If you have not received your new Guide, and need one, let Judy know via email: unger@fna.org, fax: 314/577-9558, or phone: 314/577-9515.

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**FNA is asking for volunteers to author unassigned taxa in future volumes.** If you are interested, please send Jim Zarucchi, the managing editor, a letter indicating your area of expertise, both taxonomic and regional, and interest in writing some

treatments, specifying which groups you would prefer to write. We will contact you later with an invitation to write treatments, as appropriate.

**Manuscripts received from 1 May 1996 through 31 December 1996**

**Volume 22 [old vol. 11]**

Robert Haynes           Limnocharitaceae  
Terry Jacobsen  
and Dale McNeal    *Allium* (Liliaceae)

**Volume 4**

Stan Welsh    *Atriplex* (Chenopodiaceae)  
Michael Vincent           Molluginaceae

**Volume 8 [6]**

John Packer           *Chrysosplenium*  
                              (Saxifragaceae)

**Volume 12 [7]**

John Hayden           *Tetracoccus*  
                              (Euphorbiaceae)

**EDITORIAL COMMITTEE NEWS**

The annual FNA Organization, previously called the Editorial Committee, met on Sunday and Monday, 6-7 October 1996, at the Missouri Botanical Garden. Sunday morning was spent in executive session discussing the status of the project and the details of incorporation into the Flora of North America Association.

After lunch, John Schnase demonstrated the features of the new FNA Web site ([fna.org](http://fna.org)) and answered questions from the group. Then Jim Zarucchi presented information and ideas on how to speed up the review process. He also provided an overview of his time since beginning as Managing Editor in March of this year. Yevonn Wilson-Ramsey, illustrator, and Keats Smith, map editor, reported on their work, including the latest processes for their parts of the project. Various members of the group, especially the regional coordinators, provided examples of areas of concern.

On Monday, the Bylaws and Articles of Incorporation for the new Flora of North America Association were unanimously approved by the group. Also, discussion was held on the present membership of the group, both on the vascular plant side and on the bryological side. Present staffing in

the office was discussed, especially in regard to needing more people to accomplish the projected increase in output.

Jim Zarucchi presented his projection of the number of pages in the books that would be needed for the taxa still to be treated, and the corresponding size of future volumes, using information from Volume 3, now finished. He proposed a new plan for the content, size, and due dates for the 30 volumes now projected for FNA. (*See insert in middle of this newsletter*)

Barbara Thiers provided an update of the bryology volumes. It is anticipated that the bryologists will do much of their work on the Web. Ted Barkley reported on the Asteraceae, saying that their authors will stay with traditional taxonomic views for the most part, unless evidence suggests that a change is needed.

Editors for the major families in monocots except Poaceae provided information on the status of their families. Dave Murray is working hard on Cyperaceae, George Argus is editing Orchidaceae, and Bob Kiger is working on Liliales. Authors of treatments in all of these groups are encouraged to complete their work, and mail them to the appropriate editor.

Nancy Morin reported on grants and fundraising in general. Other possibilities for income were suggested, such as adopt a botanical family or garden club support for the web site. FNA does receive some royalties from the publisher, Oxford University Press, that are used for operating expenses.

**NEWS FROM HERBARIA**

**The University of Manitoba Herbarium has received a National Sciences and Engineering Research Council of Canada (NSERC) equipment grant.** This award enables us to purchase new herbarium cabinets, as well as a plant dryer, dissecting microscope, and computer hardware and software. We have recently expanded the size of our herbarium to accommodate this new equipment as well as to provide more space for herbarium related research. The

Winnipeg Herbarium contains over 60,000 specimens, the vast majority of these being from the province of Manitoba. The herbarium is actively used for taxonomic, floristic, and ecological research. Examples include taxonomic studies on the genus *Carex*, involvement in the Flora of North America project, development of computerized specimen databases and distribution maps, and a variety of environmental and ecological projects in arctic, boreal forest, grassland, and other Manitoba ecosystems. We invite loan requests from recognized botanical institutions. In particular, we encourage FNA authors to make use of our specimens and facilities.

For further information, please contact Bruce Ford, Curator, University of Manitoba Herbarium, Department of Botany, University of Manitoba, Winnipeg, Manitoba R3T 2N2 Canada. Email: bford@cc.umanitoba.ca --Bruce Ford, University of Manitoba (Bruce worked in the FNA office for a short time, and is the author of some treatments of the Ranunculaceae genera in Volume 3 to be published shortly. ---Eds.)

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## PUBLICATIONS

Storage of Natural History Collections: A Preventive Conservation Approach by C. L. Rose, C. A. Hawks, and H. H. Genoways, editors, Volume One, ISBN: 09635476-1-5. Contributions from more than 30 authors who are experts in museum design and collections conservation present a holistic approach to the storage of natural history materials. Chapters and technical appendices address every aspect of maintaining a collection.

Volume Two - Storage of Natural History Collections: Ideas and Practical Solutions by C. L. Rose and A. R. de Torres, editors, 1992, 1995 reprint, ISBN: 0-9635476-0-7. This volume includes 113 articles on practical storage ideas for everything from vertebrate teeth to ethnic costumes to large fossils. Also included is a glossary of terms, lists of materials, and names and addresses of suppliers. Price per book:

US\$36 (includes S & H); both books: US\$70. Priority mail US, and surface mail non-US; US\$10 extra per book for non-US air mail. Make check or money order payable to: Society for the Preservation of Natural History Collections. Send orders to: SPNHC Treasurer, 121 Trowbridge Hall, University of Iowa, Iowa City, Iowa 52242-1379

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**Andrews University Press announces the first ever botany text with CD included free - Contemporary Plant Systematics**, 2<sup>nd</sup> edition, by Dennis Woodland.

Contemporary Plant Systematics offers a well-illustrated, broad-view, beginning text that gives students—wherever they may live in the world—sufficient botanical understanding of vascular plants. It has been written to 1) teach basic botanical facts as applied to vascular plants, 2) to relate these facts to systematic principles, 3) to show how systematic principles are important to contemporary botanical and environmental issues from a global perspective, and 4) so the student can interact with computer botanical images.

Robert R. Kowal, Kenneth J. Sytsma, and Mike Clayton from the Department of Botany, University of Wisconsin at Madison, and Marilyn J. Ward of the Royal Botanic Gardens, Kew have collaborated with Dennis Woodland to produce a color 3,500-image CD of the 235 plant families discussed. ISBN 1-883925-14-2, 680 pages, \$59.95. To order call 616/471-6134 or FAX: 616/471-6224. For information, email: aupress@andrews.edu Andrews University Press, 213 Information Services Building, Berrien Springs, Michigan 49104-1700.

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**Earn Money and Experience at Public Gardens – 1997 AABGA Internship Directory is now available** Over 100 public gardens across the United States are currently advertising openings for 1997 with more than 500 positions available for aspiring horticulturists, educators, curators, and horticultural therapists. The 1997 Internship Directory list is available from the

American Association of Botanical Gardens and Arboreta. The Directory lists each garden's address, contact person, deadline for applications, job descriptions, hours, salary, and educational benefits. Application deadlines begin as early as November 1997, with most from January to March 1997. To order, send \$10.00 to AABGA Internship Directory, 786 Church Road, Wayne, Pennsylvania 19087.

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**A Revision of *Heterotheca* sect. *Phyllothea* (Compositae: Astereae): the Prairie and Montane Goldenasters of North America** by John C. Semple from the *U.W. Biology Series*, Department of Biology, University of Waterloo, Waterloo, Ontario, Canada N2L 3G1 - A monograph presenting the morphology, classification, and distribution of the largest group of goldenasters: *Heterotheca* sect.

*Phyllothea*. Included are a comparison of the traits of all the goldenaster genera and a key to all species in the three sections of the genus *Heterotheca* native to Canada, the United States, and Mexico. Full synonymy and detailed illustrations of 20 species and 24 varieties are provided. Distribution dot maps based on over 10,000 specimens are included and 25 years of field observations back up this work. This work includes the first detailed discussion and revision of *Heterotheca fulcrata*, *H. sessiliflora*, *H. villosa*, and 17 other species. 164 pp.; 52 figures including scanning electron micrographs and line drawings. Price: \$15.00 plus \$5 S & H. Canadian buyers add GST.

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**A Phytogeographical Study of the Vascular Plants of West Greenland** (62° 20' -- 74° 00' N) -- by Bent Fredskild in *Meddelelser om Greenland*. Bioscience, vol. 15. Phytogeographically and climatically West Greenland includes parts of the low arctic and high arctic areas. The present vegetation and a summary of its history since the last glaciation based on pollen- and macrofossil analyses are briefly described. The determination of more than

55,000 herbarium sheets of native Phanerogams has been checked. Dot maps have been prepared for 379 taxa. This work is part number three of a four-part work that will serve as a basis for a synoptic phytogeographical study of the Greenland vascular plants and a new revised "Flora of Greenland." Parts one (Feilberg, 1984) and two (Bay, 1992) have been completed, and part four is in preparation (by Geoffrey Halliday and Christian Bay). (Bent Fredskild and Geoffrey Halliday are the Flora of North America regional reviewers for taxa with distribution in Greenland. ---Eds.)

This book can be ordered from the Danish Polar Center, Strandgade 100 H, DK-1401 Copenhagen, Denmark. Export price is DKK220,-, excluding postage. ISBN 87-90369-03-3, ISSN 0106-1054. 157 pp. For more information call (+45) 32 88 0100, or fax (+45) 32 88 0101

*Please remove middle page for reference. The newsletter continues on page 25.*

## NEWS AND NOTES

**NATIVE PLANT CONSERVATION INITIATIVE (NPCI)** - Flora of North America has been a collaborator of The Federal Native Plant Conservation since the first meeting was held three years ago. This collaborative effort among nine federal agencies and 58 collaborating organizations has been working to increase appreciation for the value of native plants nationwide and to facilitate conservation of native plants and habitats. A committee of representatives has been meeting monthly, and a report was given at the January 8 meeting, held in Washington D.C., on progress to date. The Initiative has now underwritten 37 on-the-ground plant conservation projects totaling nearly \$800,000 in federal funds and matching non-federal contributions through a grant program administered by the National Fish and Wildlife Foundation; created a partnership with the Friends of the National Arboretum to develop a newsletter, annual report and other public outreach programs; established a World Wide Web site featuring the NPCI's members and cooperators, accomplishments, national

strategy and educational resources (<http://www.aqd.nps.gov/natnet/npci>); expanded the public awareness campaign, "Celebrating Wildflowers," nationally from a one week event to a year full of activities; developed the *Wild Wealth* brochure detailing the importance of native plants in our everyday lives; developed a traveling exhibit on native plants; produced five television public service announcements in cooperation with the Garden Club of America; and participated in the phone card program offered by American Express and the National Park Foundation.

The web site is a great source of information for educators and conservationists. If you would like to know more about the phonecard, if you would like to participate in "celebrating wildflowers" alone or in collaboration with a local federal site (national park, U.S. Forest Service, Bureau of Land Management, etc.), if you want quantities of the *Wild Wealth* brochure (there will be a small charge per brochure), or if you are interested in using the exhibit (the cost of shipping is about \$300), call Margaret Sotham, public outreach coordinator, at 202/208-5895 or email [margaret\\_sotham@nps.gov](mailto:margaret_sotham@nps.gov).

## MEETINGS

**Thirteenth Annual Southwestern Botanical Systematic Symposium** will be held on 23-24 May 1997 at Rancho Santa Ana Botanic Garden in Claremont, California. The topic, "Evolution and Taxonomy of Southwestern Plants," will address advances in our understanding of plant groups occurring in the southwestern United States and adjacent areas. The keynote speaker is Billie L. Turner, University of Texas, Austin. Other presenters are J. Curtis Clark, California State Polytechnic University (on *Encelia* and relatives, Asteraceae), J. Travis Columbus, Rancho Santa Ana Botanic Garden (*Bouteloua*, Gramineae), Gerald J. Gastony, Indiana University (cheilanthoid ferns), Jennifer A. Matos, California State University, Northridge (*Pinus*, Pinaceae), Mark Porter, Rancho Santa Ana Botanic Garden (Polemoniaceae), and Robert S. Wallace, Iowa State University (Cactaceae).

Early registration (prior to 30 April) is \$45 (\$25 for students). After 30 April registration is \$65 (\$40 for students). This fee includes the Friday evening mixer and Saturday lunch. The Saturday evening banquet, featuring Dr. Turner's keynote address, is \$35 (16 May receipt deadline). Registration brochures, containing information on housing, may be obtained from <http://www.cgs.edu/inst/rsa/1997symp.htm> or Ann Joslin, Rancho Santa Ana Botanic Garden, 1500 N. College Ave., Claremont, California 91711-3157, ph: 909/625-8767 ext. 251, fax: 909/626-3489, email: [JoslinA@cgs.edu](mailto:JoslinA@cgs.edu)

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**The University of Oklahoma is hosting a public forum on Biodiversity and Native North America** at the George Lynn Cross Hall 123 (main campus) on 21-22 February 1997. Gary Nabham will speak on "Rare Plants and Vanishing Indigenous Knowledge" and a public forum will be held with nine well known experts. For details, contact Wayne Elisens at 405/325-5923 or [elisens@ou.edu](mailto:elisens@ou.edu).

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**The 1997 Annual Conference of the American Association of Botanical Gardens and Arboreta** will be held in New York City 28-31 May. In addition to sessions of interest to a wide range of professionals in botanical gardens, including education, display, horticulture, and management, several sessions of special interest to gardens with academic affiliations will be held. Topics such as international collaboration, seed banks, native plant gardens, databases, and gardens as they relate to academic programs will also be offered. The conference also features preconference workshops and behind-the-scene tours at gardens and other local institutions. To receive the registration brochure, write AABGA, 786 Church Road, Wayne, Pennsylvania 19087.

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**AIBS Montreal 1997** - The 1997 AIBS Meeting will be held jointly with the Canadian Botanical Association in Montréal,

hosted by the Université de Montréal's Institut de recherche en biologie végétale. The meeting will occur 3-7 August 1997, with a series of pre-and post-conference field-trips (see AIBS Web site, [www.aibs.org](http://www.aibs.org), for descriptions). FNA will host a reception on Monday evening (Aug. 4), and we are planning a special meeting of the Canadian regional reviewers. We are looking forward to seeing all FNA contributors in Montreal.

The Herbar Marie-Victorin (MT), and possibly other facilities in Montréal (MTMG), Ottawa (CAN if open, DAO), Sherbrooke (SFS), and Quebec City (QFA, QUE), will be open for visits by researchers. Please let us (MT) know your needs (email: S. Hay, [hays@ere.umontreal](mailto:hays@ere.umontreal), or L. Brouillet, [brouille@ere.umontreal.ca](mailto:brouille@ere.umontreal.ca)). This would be an excellent occasion for authors to examine specimens of species at their northern range limit. I would particularly encourage authors treating Arctic taxa to visit CAN, MTMG and QFA. Both Ottawa and Quebec City are within 250 km of Montreal. MT, QUE and QFA also house significant bryophyte collections that have not been examined for taxonomic or biogeographic review purposes. —Luc Brouillet, University of Montréal

#### **POSITIONS AVAILABLE**

**PLANT SYSTEMATIST** - The **University of Wisconsin, Department of Botany** seeks a distinguished Plant Systematist to assume a tenured professorial position preferably at the Associate Professor level. Duties include teaching, research, and directorship of the Wisconsin State Herbarium. The Department and Herbarium seek candidates whose training and/or abilities will expand the University's and Department's breadth in biosystematics. The successful candidate will be expected to contribute to the development of systematic biology on the campus, provide leadership in the Herbarium, and develop an active program of research and instruction.

Applicants should send a curriculum vitae, a statement of research and teaching interests, current and long-term goals, and three letters of recommendation. The

deadline for receiving applications is 15 January 1997, and the earliest start date is 20 August 1997. Send applications to: Professor Kenneth J. Sytsma, Chair of Search Committee, Botany Department, University of Wisconsin, Madison, Wisconsin 53706.

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#### **POSTDOCTORAL RESEARCH POSITION IN SYSTEMATICS CALIFORNIA**

**ACADEMY OF SCIENCES** -- Appropriate fields: Aquatic Biology, Botany, among many other sciences. Must have received Ph.D. within last 5 years. Stipend: \$27,000, plus \$1000 expenses. Starting date flexible; normally a 1-year appointment. Provide résumé, plan for collections-based research, and names, addresses, and phone numbers of three references by 1 February to: Tilton Fellowship Committee, Research Administration, California Academy of Sciences, Golden Gate Park, San Francisco, California 94118 For additional information, look at <http://www.calacademy.org/research>.

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#### **NEW ENGLAND BOTANICAL CLUB. GRADUATE STUDENT RESEARCH AWARD ANNOUNCEMENT**

- The New England Botanical Club will offer an award of \$1000 in support of botanical research to be conducted by a graduate student in 1997. The award will be given to the graduate student submitting the best research proposal dealing with systematic botany, biosystematics, plant ecology, or plant conservation biology, although research in other areas will be considered.

Applicants must submit a proposal of no more than three double-spaced pages, a budget (the budget will not affect the amount of the award), a curriculum vitae, and two letters in support of the proposed research, one from the student's thesis advisor. Three copies of the proposal must be submitted. Proposals and supporting letters must be received no later than 1 March 1997. The recipient will be notified by 30 April 1997. Send proposals to: Awards Committee, The

New England Botanical Club, 22 Divinity Avenue, Cambridge, Massachusetts 02138.

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**A ONE-YEAR INTERNSHIP IS AVAILABLE AT THE MORRIS ARBORETUM OF THE UNIVERSITY OF PENNSYLVANIA AND THE ACADEMY OF NATURAL SCIENCES OF PHILADELPHIA**

to work on the Flora of Pennsylvania Project. The intern will assist the herbarium curator, participate in the preparation of a field manual of the plants of Pennsylvania, attend weekly classes, seminars, and field trips and carry out an independent study project thereby earning graduate credit at the University of Pennsylvania. The internship lasts one year beginning mid-June 1997. Salary is approximately \$5 per hour for a 40 hour week plus full university benefits including medical insurance and tuition. The internship is intended for students of botany who have completed an undergraduate program and are seeking more exposure to the field before entering graduate school.

To apply send a letter of intent, three letters of recommendation and transcript to: Janice McFarlan, Internship Coordinator, Morris Arboretum of the University of Pennsylvania, 9414 Meadowbrook Ave., Philadelphia, Pennsylvania 19118. Application deadline - 30 March 1997. For more information, contact Dr. Ann F. Rhoads at 215/247-5777 x 134 or rhoadsaf@pobox.upenn.edu, or Dr. Alfred E. Schuyler at 215/299-1193 or schuyler@say.acnatsci.org

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**INTERNSHIP IN BIOLOGICAL ILLUSTRATION AT THE CALIFORNIA ACADEMY OF SCIENCES** - The California Academy of Sciences announces an internship in biological illustration. The internship is open to currently enrolled undergraduate or graduate students interested in developing illustration techniques related to biological specimens. The intern will work with one or more Academy scientists to develop illustrations that may be used in scientific publications. Internship Period: Full time 10 weeks during the summer (starting and ending dates

flexible). Stipend: \$1500 for the internship period. To apply, send a letter of interest, résumé, sample of previous work and letter of recommendation from a faculty member to: Biological Illustration Internship, c/o Director of Research, California Academy of Sciences, Golden Gate Park, San Francisco, California 94118

The sample of work may be in any form; all original materials, including slides, will be returned to you after the applications are reviewed. All materials must be received at the Academy by 15 April 1996. Questions can be addressed to the Director of Research at 415/750-7277 or via email [ayingling@cas.calacademy.org](mailto:ayingling@cas.calacademy.org) This internship is made possible in part by a gift from the Fellows of the California Academy of Sciences.

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**SPECIAL LIMITED TIME OFFER! Save 20% until March 31, 1997 (from a flyer distributed by Oxford University Press)** *Flora of North America, Volume 3*, provides information on many of the most familiar vascular plants and trees in North America. Included are treatments of the buttercup family (Ranunculaceae), with such plants as delphiniums and columbines, and the poppy family (Papaveraceae). Most of the important broadleaf tree species are covered, including the oaks (Fagaceae), elms (Ulmaceae), birches (Betulaceae), walnuts (Juglandaceae), plane trees (Platanaceae), and magnolias (Magnoliaceae). Many striking families are covered, such as the dutchman's pipe family (Aristolochiaceae), and the aquatic families Nymphaeaceae (water lilies) and Nelumbonaceae (lotus). As with Volume 2,

keys, summaries of habitats and geographic ranges, distribution maps, pertinent synonymies, descriptions, chromosome numbers, phenological information, and other significant biological observations for each species are included. For anyone interested in the definitive account of North American plants, this newest volume in the long-awaited *Flora* will be valued as an indispensable acquisition. February 1997 560 pp.; 100 illus., 1470 range maps 511246-6 \$85.00/**\$68.00** Also available are: **Volume 2: Pteridophytes and Gymnosperms** 1993 496 pp.; 76 illus., 606 maps 508242-7 \$85.00/**\$68.00** and **Volume 1: Introduction** 1993 400 pp.; 167 illus. 505713-9 \$85.00/**\$68.00**. Call Judy at the FNA office at 314/577-9515 or email unger@fna.org to be mailed or faxed an order form.