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

FLORA OF NORTH AMERICA NEWS

Organizational Center

Volume 3 is nearly ready to be sent to Oxford University Press.

All regional review is completed with the assistance of 50+ regional reviewers. The FNA editors and staff thank these reviewers for the time and effort they have given to ensure that distributions and descriptions are as good as they can possibly be for every region. Maps and illustrations are completed. Treatments that have received their final editing by the Taxon Editor and final revisions by the author, and have been technically edited, are sent to four editors who have agreed to look at every manuscript in its "ready for OUP" state. This helps catch errors that those who have worked closely with the manuscript for many months might otherwise miss. After these corrections have been incorporated, the word-processed file is coded for the typesetter and a series of checks are made by staff at FNA Central to catch final inconsistencies and to double check aspects that we learned, from experience with Volume 2, are likely to be problems. Once corrections that result from *those* checks are made, the treatment really is sent to OUP.

All outstanding Volume 11 manuscripts, with an electronic version, must be sent to the Organizational Center immediately. Editors and staff have already begun work on this volume. Authors who have not yet sent in maps or information for illustrations are asked to do so now.

As a change in overall procedure, and one to which our reviewers have already had to adjust, we are now sending manuscripts in the form provided by the author. The Taxon Editor will have made a preliminary check, or in some cases may have already been through several iterations of the manuscript with the author, but the treatment will not have been extensively technically edited. This allows us to send manuscripts out for review much sooner, and it saves duplication of effort at the Organizational Center. Reviewers will have more time to check their own sources and make suggestions, and editors and authors can work to settle problems and answer queries.

The family editor and taxonomic reviewers will receive spreadsheets from the Organizational Center on which the treatment will have been broken down into its component parts, including separate morphological characteristics. The spreadsheets will be an aid to the editor in collating reviewer comments and in detecting inconsistencies or gaps in information. It should provide a useful format for authors to fill in blanks. Data in the spreadsheet can be moved directly into word-processed format and into the structured database, thus streamlining work at the Organizational Center. Authors who would like to use this technique right from the beginning are encouraged to write to the Organizational Center for more information.

Editorial Committee

David Murray and George Argus have both retired from their respective institutions this year. Could it have been because of Volume 11? . . . We hope not! In any event, they continue on their Volume 11 assignments with

full vigor.

Nancy Morin, convening editor, is taking a 6-month sabbatical to pursue her research on Campanulaceae at the Laboratoire de Phanérogamie, Muséum National d'Histoire Naturelle, Paris, and The Natural History Museum, London. While she is gone, David Murray, Rahmona Thompson, and Ted Barkley will fill in for her in St. Louis (more or less sequentially).

Funding: We do not have definitive word on funding of the proposal submitted to the National Science Foundation for support of Flora of North America. We have been asked to submit an addendum in which a number of specific questions are to be answered.

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.

We are sorry to announce that **David Whetstone** has resigned from the Editorial Committee. Teaching commitments and responsibilities for guiding graduate students do not allow him to continue as regional coordinator for the Southeastern U.S. Reviewers in this area who have questions may direct them to the Organizational Center. We hope to find a replacement for him soon. Authors for whom David was Taxon Editor may also direct their questions to the Organizational Center until those families have been reassigned.

MANUSCRIPTS RECEIVED
1 JULY 1994 through 30 DECEMBER 1994

Volume 11

Bob Haynes - Alismataceae, Zannichelliaceae, Cymodoceaceae,
and Zosteraceae
Mark Nienaber - Scheuchzeriaceae
Robert Kral - Xyridaceae
Harry Sherman - *Schoenolirion*
Fayla Schwartz - *Zigadenus*

Volume 4

Don Pinkava - *Opuntia* sect. *Cylindropuntia* and
Opuntia sect. *Corynopuntia*
Walter Holmes - *Antigonon* and *Brunnichia*

Volume 5

Jim Rodman - *Cakile*

FNA ITEMS FOR SALE - Volume 1 Slide Set, 35 SLIDES IN A SET

are available for US\$50. To order, send your name, address, and payment in cash or check, made out to the Missouri Botanical Garden, to Judy Unger, Flora of North America, P. O. Box 299, St. Louis, Missouri 63166. The names of the slides in the set were listed in the last newsletter. (Numbers used refer to figures in Volume 1. Slides using a map have the same base map that is used for the distribution maps in Volume 2.)

T-shirts are also available for \$10 mostly in sizes L and XL in grey, melon, and purple. Call 314/577-9515 or write to check on availability of earlier

colors and other sizes.

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The New Code and the "New Nomenclature": Implications for the Flora of North America - by John McNeill, FNA Nomenclatural Advisor, Royal Ontario Museum, Toronto, Ontario

The "new nomenclature" -- conservation & rejection of names: *"What is now needed is a general awareness of the fact that it is no longer necessary to change a name, at least in the principal ranks, for reasons other than those mandated by new taxonomic insight"* (Greuter & Nicolson, 1993: 926). This quotation encapsulates the effect of decisions taken by the Nomenclature Section of the XV International Botanical Congress in Yokohama, Japan, in so far as these affect the general users of plant names, most of whom abhor all name changes and certainly those that arise for reasons other than advances in scientific knowledge.

The two main decisions that lead to this are the removal of restrictions on conservation of species names and a new provision for the rejection of any name "that would cause disadvantageous nomenclatural change".

Conservation of generic names has been a part of botanical nomenclature since the first international code, the *Vienna Rules* of 1905 (Briquet 1906) - although not, of course admitted in the rival *American Code* (Arthur et al. 1907). Proposals to permit *nomina specifica conservanda* go back to the Stockholm Congress of 1950. Limited provisions for conservation of species name entered the *Code* in Sydney in 1981, and a further but still very restricted category was added in Berlin in 1987. The Tokyo Congress was notable in that the **acceptance of unrestricted conservation of species names was by an overwhelming majority** on a show of hands.

Article 69 of former *Codes* provided, since the Leningrad Congress in 1975, for rejection of any name that "has been widely and persistently used for a taxon or taxa not including its type"; since Sydney in 1981 there has been the requirement to propose such names for inclusion on a list of *Nomina utique rejicienda*. Paralleling the wider scope for conservation of species names, the Tokyo Congress **adopted**, again **overwhelmingly** on a show of hands, **a proposal permitting the rejection of "any name that would cause disadvantageous nomenclatural change"**.

The significance of these decisions was emphasized by the Nomenclature Section in resolutions passed as a typhoon rocked the Tokyo area on the final Friday morning. The first stated that: *"While work continues to find further ways to reduce changes of well-established names, such names should not be displaced for purely nomenclatural reasons, whether by change in their application, or by resurrection of long-forgotten names."* The second emphasized this by encouraging acceptance of proposals to conserve and reject in the following terms: *"The Section urges the General Committee and through it all Permanent Committees to make full use of the options that the Code now provides in order to ensure nomenclatural clarity and stability."* The full Congress, in its final Plenary Session, encompassed these resolutions in one of its own which, in formally accepting the decisions of the Nomenclature Section, resolved as follows:

"Considering the great importance of a stable system of scientific names of plants for use in the pure and applied sciences and in many other domains of public life and economy; noting with satisfaction recent important improvements in the International Code of Botanical Nomenclature and

ongoing efforts to explore new avenues for increased stability and security in the application of plant names; the XV International Botanical Congress urges plant taxonomists, while such work continues, to avoid displacing well established names for purely nomenclatural reasons, whether by change in their application or by resurrection of long-forgotten names; resolves that the decisions of the Nomenclature Section with respect to the International Code of Botanical Nomenclature, as well as the appointment of officers and members of the nomenclature committees, made by that section during its meetings, 22--27 August, be accepted."

The continuing work to which these resolutions refer relates to the Names in Current Use proposals which had been supported by a majority (55%) of the votes cast in the Section, resulting in the establishment of a Standing Committee to pursue the matter further, but short of the 60% majority needed to amend the Code. There was substantial sympathy in the section for lists that represented sound syntheses of current knowledge, but grave concern about the quality of other lists. One list in the former category was singled out in the following resolution of the Section: *"The Nomenclature Section, noting that the List of Names in Current Use for the Trichocomaceae, which has already been approved by the International Commission on Penicillium and Aspergillus and by the International Union of Microbiological Sciences (IUMS), urges taxonomists not to adopt names that would compete with or change the application of any names on that list."*

Although it is now more than a year since the Tokyo Congress, for many the full implications of the decisions taken there are only just being appreciated. Indeed the use of the phrase "new nomenclature" by Greuter & Nicolson (1993) and statements by Hawksworth (1993) such as "the conclusion that priority of publication is no longer automatically paramount in botanical nomenclature is inescapable", have aroused some nomenclaturalists to suggest that these authors are recommending a disregard of the *Code*. This is false; the *Code* remains, and will remain so long as it is applied sensibly, the rules by which plant names are governed. But this means the whole *Code*, including most notably the changes to Art. 14 on conservation of species names and to the former Art. 69 (Arts. 56 and 57 in the *Tokyo Code*) on rejection of names in any rank, and not merely the principle of priority.

The significance for the *Flora of North America* is that, while there is no question of the *Code* having been superseded, there is the reality that the mind-set of all of us who are involved in botanical nomenclature must change. Even those of us who have long championed nomenclatural stability have tended to think when an older name was discovered, or the type was found not to belong to the taxon with which it had always been identified: "Oh dear, we will have to change the name". Now our reaction has to be: "Oh dear, I will have to propose a name for conservation/rejection". It will certainly be more work, but hopefully it will be much more rewarding in terms of nomenclatural stability and of service to users of plant names.

Editors, and staff at FNA Central, when they notice (e.g., from the spreadsheets of names used in other floristic works), that a name being proposed for use in FNA is not what appears to be the most widely used hitherto for the taxon involved, should question the author on the change, and encourage him/her to explore, with the nomenclatural advisor if desired, whether the more familiar name should be retained, and how this can be best accomplished.

Procedures for conservation and rejection of names: The provisions for conservation of names are to be found in Art. 14 and those for permanent rejection in Art. 56 of the *Tokyo Code* (Greuter *et. al.* 1994). The procedures by which a name may be proposed for conservation or rejection have evolved over the past few decades and have become fairly well-established, although until now principally for conservation of generic names. The case for conservation or rejection must be published, nowadays virtually always in the journal *Taxon* (Editors: Brigitte Zimmer and Werner Greuter, Botanischer Garten & Botanisches Museum, Berlin-Dahlem, Königin-Luise Strasse 6-8, D-14191 Berlin, Germany; Nomenclature Editor: D.H. Nicolson, Department of Botany MRC-166, National Museum of Natural History, Smithsonian Institution, Washington, D.C. 20560, U.S.A.). [Prior to publication of the *Tokyo Code*, they (or I) will provide to those considering proposals a copy of the relevant Articles].

The *Code* specifies that conservation is "to avoid disadvantageous changes in the nomenclature of families, genera and species" (Art. 14.1), and that rejection may be proposed for "any name that would cause a disadvantageous nomenclatural change" (Art. 56.1). For conservation, it confirms that "the application of both conserved and rejected names is determined by nomenclatural types" (Art. 14.3), and for rejection requires that "considerations of typification" be included (Art. 56.2). The *Code* also requires "a statement both for and against" conservation or rejection (Arts. 14.12 & 56.2). To be successful, the case in favor must demonstrate the adverse effect of applying the rules to the names as typified under the *Code*, i.e. without the proposed conservation or rejection. The proposals should be as concise as possible (normally less than two printed pages of *Taxon* -- 1200 words), but extent of current and recent past usage must be thoroughly documented, not only with respect to taxonomic works, but, perhaps even more importantly, general scientific and technical literature and major popular accounts. Numbers of relevant usages and examples will achieve this. Details of the format required for future proposals and fuller advice on content and on when to propose conservation and when rejection are given by Greuter & Nicolson (1994).

The proposals are then considered by one of the six Permanent Nomenclatural Committees for special groups, the composition of which are revised at each International Botanical Congress. Most proposals relevant to the *Flora* would be considered by the Committee for Spermatophyta. Bryophyte and any late-breaking fern proposals would involve the Committee for Bryophyta and the Committee for Pteridophyta respectively. The Secretaries of these committees distribute summaries of the published proposals to the members (usually 12 but the Committee for Bryophyta and the Committee for Pteridophyta each has only 8), and, after circulated comments, a vote is taken. A two-thirds majority in the Committee is needed for conservation or rejection proposal to be recommended for acceptance, unless the name falls under the provisions of Art. 57 (names widely and persistently used for a taxon or taxa not including their type, which are "not to be used in a sense that conflicts with current usage unless and until a proposal to deal with it under Art. 14.1 or 56.1 has been submitted and rejected"), in which case the onus is reversed and a two-thirds majority is required for proposal to be recommended for rejection.

The recommendations of these Permanent Committees are then reviewed by the General Committee on Botanical Nomenclature, appointed by each Congress to govern plant nomenclature between Botanical Congresses, and when approved by that committee retention or rejection of the names involved is authorized (Art. 14.14). The *Code* recommends that once a proposal for conservation or rejection has been submitted, authors should

follow existing usage as far as possible, pending decision of General Committee (Rec. 14A).

Other nomenclatural changes at Tokyo: Full texts of and commentaries on all 320 proposals submitted to the Nomenclature Section of the Tokyo Congress are provided by Greuter & McNeill (1993) and the Section's decision on each summarized by McNeill (1993), who also highlights some of the more significant decisions. Hawksworth (1993) gives a fuller account of more significant changes, emphasizing those of interest to mycologists. The Preface (Greuter & McNeill 1994) to the new *Tokyo Code* also highlights the major changes from the *Berlin Code* (Greuter *et al.* 1988). An account of the debates at Yokohama that led to these decisions is presented by Greuter, McNeill & Barrie (1994).

A number of these changes are of considerable significance, e.g. the recognition of "*phylum*" as an alternative to "*divisio*", the introduction of the "*epitype*", a specimen (or occasionally an illustration) "selected to serve as an interpretive type" when the type itself is "demonstrably ambiguous and cannot be critically identified for purposes of the precise application of the name of a taxon", and the designation in an Appendix of suppressed works. The group, however, that is of most immediate relevance in the preparation of the *Flora*, is that encompassing changes to Art. 46 on use of "in" and "ex" in author citations.

The *Code* now makes mandatory what has been FNA's consistent practice, namely to treat "in" and the personal names that follow as strictly bibliographic and not part of the author citation. In addition the concept of "attribution" of authorship is precisely defined, and only when both the name and description of a new taxon are attributed to an author, is he/she to be cited alone; if only one of these is so attributed (usually the name) the citation is that of the publishing author but the attributed author followed by "ex" may be included.

For a new name or a new combination the citation is always that of the publishing author, unless it is ascribed to an author who is explicitly stated to have "contributed in some way to that publication"; co-authorship is automatically treated as such an explicit statement.

Although the new wording represents the best possible clarification of dominant practice, in the absence of any means to maintain usage (e.g. through Names in Current Use procedure), there will undoubtedly be many cases where changes in customary citation are necessary. This will generally be where external (and not internal) evidence has been widely accepted as linking an author with a publication, or portion thereof. A well-known example, which failed to receive the necessary majority for it to be accepted as an exception to the new rules, are the new names in Bentham & Hooker's *Genera Plantarum*. Because other publications made explicit the separate authorships of Bentham and of Hooker, such names have generally been attributed to one or the other, e.g. Bentham in Bentham & J.D. Hooker; such a name will now have to be attributed to "Bentham & J.D. Hooker" (or "Bentham & Hooker f.").

The new Tokyo Code: In addition to incorporating the changes referred to above -- and other more specialist ones -- the new *Code* is substantially different from all its predecessors, at least since the *Seattle Code* adopted in 1969, in that the number of Articles is greatly reduced, and the content of some rearranged. The Tokyo Congress agreed to delete the major part of Chapter V dealing with "Retention, choice, and rejection of names and epithets," transferring such material as was not already covered elsewhere in the *Code* to other articles, notably Art. 11. With five other Articles deleted from the latter part of the *Code* at previous Congresses (two in

Leningrad in 1975, one in Sydney in 1981, and two in Berlin in 1987), only 11 Articles remained in the *Code* following Art. 50, yet the numbering extended to 76. For this reason and because a completely new subject index was being prepared for the new edition, the Editorial Committee decided that a renumbering of the Articles in the latter part of the *Tokyo Code* was essential for clarity. This renumbering was executed in the spirit of the Nomenclature Section's usual instruction "to preserve the numbering of Articles and Recommendations in so far as possible", in that only the Articles following Art. 50 have been renumbered, and, by a rearrangement of the ordering of the Articles, the commonly cited Art. 59, on names of fungi with a pleomorphic life cycle, has retained its traditional number. The final Article is now Art. 62, an extra Article having been created by the division of the old Art. 69 (see below).

The Editorial Committee also took the opportunity to clarify the rules on typification and effective publication by creating a more logical arrangement of Arts. 7-10 and 29-31, respectively. Art. 7 now deals with general matters of typification, Art. 8 with typification of names of species and infraspecific taxa, Art. 9 with the various categories of types applicable to such names, and Art. 10 with the typification of supraspecific names. Art. 29 now deals with the general issue of effective publication, Art. 30 with special cases, and Art. 31 with the date of effective publication.

Among the more familiar Articles whose numbering has changed are the former Art. 63 on superfluous names, which is now Art. 52, and the former Art. 69 on *nomina rejicienda*, which now forms Arts. 56 and 57. The new Art. 56 deals with the general case (i.e. any disadvantageous nomenclatural change) and includes the mechanisms by which names can be rejected as in the previous Art. 69.2. The second, the new Art. 57, relates to the more restricted case, to which the former Art. 69 was confined, i.e. names that have been widely and persistently used for a taxon or taxa not including their type. Such names continue not to be available for use in a sense that conflicts with current usage, unless and until a proposal to deal with them under the conservation provisions of Art. 14 or the rejection provisions of the new Art. 56 have been submitted and rejected. The separation of Arts. 56 and 57 makes even clearer the requirement of the *Code* (formerly in Art. 69.4) not to use such a name in a sense that conflicts with current usage unless the appropriate Committee has authorized its use (by rejecting a conservation or rejection by proposal by a two-thirds majority).

A Table is provided comparing the numbering of all Articles and Recommendations between the *Tokyo Code* and the *Berlin Code* and also the paragraphs within Articles and Recommendations where these have changed between the two *Codes*.

References: Arthur J.C. *et al.* (Nomenclature Commission). 1907. American Code of Botanical Nomenclature. *Bull. Torrey Bot. Club* **34**: 167-178. Briquet, J. (ed.) 1906. *Règles internationales de la Nomenclature Botanique adoptées par le Congrès International de Botanique de Vienne 1905*. Gustav Fischer, Jena. 99 pp. Greuter, W., H.M. Burdet, W.G. Chaloner, V. Demoulin, R. Grolle, D. Hawksworth, D.H. Nicolson, P.C. Silva, F.A. Stafleu, E.G. Voss and J. McNeill (eds.). 1988. *International Code of Botanical Nomenclature. Adopted by the Fourteenth International Botanical Congress, Berlin, July-August 1987. (Regnum veg. 118)*. Otto Koeltz, Koenigstein, West Germany. xiv + 328 pp. Greuter, W., F. Barrie, H.M. Burdet, W.G. Chaloner, V. Demoulin, D.L. Hawksworth, P.M. Jørgensen, D.H. Nicolson, P.C. Silva, P. Trehane and J. McNeill (eds.). 1994. *International Code of Botanical Nomenclature (Tokyo Code). Adopted by the Fifteenth International*

Botanical Congress, Yokohama, August--September 1993. (Regnum veg. 131). Koeltz, Königstein, West Germany. xviii + 389 pp.

Greuter, W. & J. McNeill. 1993. Synopsis of proposals on botanical nomenclature -- Tokyo 1993. A review of the proposals concerning the International Code of Botanical Nomenclature submitted to the XV International Botanical Congress. *Taxon* **42**: 191-271.

Greuter, W. and J. McNeill. 1994. Preface. Pages vii--xv. In: Greuter, W., F. Barrie, H.M. Burdet, W.G. Chaloner, V. Demoulin, D.L. Hawksworth, P.M. Jørgensen, D.H. Nicolson, P.C. Silva, P. Trehane and J. McNeill (eds.). 1994. *International Code of Botanical Nomenclature (Tokyo Code). Adopted by the Fifteenth International Botanical Congress, Yokohama, August--September 1993. (Regnum veg. 131).* Koeltz, Königstein, Germany. Greuter, W., J. McNeill, & F. Barrie. 1994. Report on botanical nomenclature -- Yokohama 1993. XV International Botanical Congress, Tokyo: Nomenclature Section, 23 to 27 August 1993. *Englera* **14**: 1-265.

Greuter, W. & D.H. Nicolson. 1993. On the threshold to a new nomenclature? *Taxon* **42**: 925-927.

Greuter, W. & D.H. Nicolson. 1994. Guidelines for proposals to conserve or reject names. *Taxon* **43**: 109-112.

Hawksworth, D.L. 1993. Name changes for purely nomenclatural reasons are now avoidable. *Systema Ascomycetum* **12**: 1-6.

McNeill J. 1993. XV International Botanical Congress: preliminary mail vote and report of Congress action on nomenclatural proposals. *Taxon* **42**: 907-922.

NEWS FROM HERBARIA

URGENT CALL FOR CORRECTIONS TO THE JEPSON MANUAL

- Have you found any typographical errors or minor substantive errors in The Jepson Manual: Higher Plants of California (J. Hickman, ed.)? If so, the Jepson editors would be grateful to receive your input before April 1, 1995 to aid in production of the next printing of The Jepson Manual (1st edition). Corrections that change pagination cannot be considered for incorporation in the next printing (but see below). Any substantive corrections that require editorial judgment should be accompanied with documentation (e.g., literature or voucher citation). Please send your corrections to Bruce Baldwin, curator of the Jepson Herbarium, 1001 Valley Life Sciences Bldg. #2465, University of California, Berkeley, California 94720-2465. e-mail communication of corrections can be sent to jepson@ucjeps.berkeley.edu. Thank you!!

In preparation for production of a more extensively revised 2nd edition of The Jepson Manual, the Jepson editors would also greatly appreciate any documented corrections of more substantial errors or problems in the Manual. All corrections that would change pagination of the Manual fall under this category. To aid editorial procedures, please segregate any corrections of this type under separate heading from typographical and other minor corrections discussed in the previous paragraph. These corrections can be sent to the same address given above. --from Margriet Wetherwax, Jepson Herbarium

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The **University and Jepson Herbaria** of the University of California at Berkeley are again accessible in the renovated Valley Life Sciences Building on Campus. Eastern hemisphere material previously in a separate annex has also been reintegrated. New case labels are still being prepared, and work areas are still being rearranged, but visitors can otherwise be fully accommodated. However, there will continue to be delays in incoming and

outgoing shipments and correspondence until we catch up on backlogged routine curation.

Use the following address for mail delivery: University Herbarium OR Jepson Herbarium OR University and Jepson Herbaria, 1001 Valley Life Sciences Building #2465, University of California, Berkeley, California 94720-2465. Two curatorial/research staff have new direct telephone lines: Barbara Ertter at 510/643-0600 and Alan Smith at 510/643-1000. Messages can still be left at 510/642-2465. All staff whose email addresses were formerly @quercus or @ribes are now @ucjeps.herb.berkeley.edu. For more information, contact Barbara Ertter (ertter@ucjeps.herb.berkeley.edu).

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Tatiana Shulkina, formerly on the staff at the Komarov Botanical Institute, has made the following list available to Flora of North America. Listed are names of some taxa that occur both in North America and in the Former Soviet Union, with their distribution in FSU, the types of which are held in the Komarov Botanical Institute: *Dryopteris fragrans* (L.) Scholt, Siberia, Far East; *Cryptogramma stelleri* (S. G. Gmel.) Prantl, West Siberia; *Potamogeton rutilus* Wulfg., North Siberia; *Potamogeton friesii* Rupr., North Siberia; *Arctagrostis arundinacea* (Trin.) Beal., North Siberia; *Agrostis exarata* Trin., Far East; *Calamagrostis landsdorffii* (Linn.) Trin., Eurasia, Far East; *Trisetum sibiricum* Rupr., European part of North Caucasus, Central Asia, Siberia; *Avena meridionalis* (Malz.) Roshev., European Siberia; *Avena cultiformis* (Malz.) Malz., European part of FSU; *Pleuropogon sabinii* R. Br., Arctic Siberia, Altai; *Poa arctica* R.Br. /Cotype Leningrad/; *Arctophila fulva* (Trin.) Anderss., Arctic Siberia, Far East; *Eriophorum callitrix* Cham. ex C. A. Mey., Arctic Siberia, Far East; *Carex kreczetoviczii* (C. laeviculmus auct), Far East; *Carex macrochaeta* C. A. Mey., Far East; *Carex micropoda* C. A. Mey., Far East; *Carex nigricans* C. A. Mey., Far East; *Carex melanocarpa* Cham. ex Trautv., Siberia; *Salix rotundifolia* Trautv., Far East; *Salix ovalifolia* Trautv., Arctic Far East; *Rumex arcticus* Trautv., Arctic Far East; *Rumex sibiricus* Hult., East Siberia, Far East.

NATIONAL SCIENCE FOUNDATION NEWS

The next deadline for proposals submitted to the Biotic Surveys and Inventories program is May 8, 1995. For more information ask for NSF Brochure 94-66 or contact Dr. Michael Allen, Division of Environmental Biology 703/306-1483.

PLANTS ONLINE

The PLANTS database held by the Natural Resource Conservation Service (formerly Soil Conservation Service), U.S. Department of Agriculture, is now available in a variety of ways. Telnet: Telnet>plants.usda.gov login: plants. On the World Wide Web: URL><http://peabody.ftc.nrcs.ag.gov/IRMD/welcome.html>. For direct dial-in assistance, contact Tony Hernandez at 303/498-1588 or 76thernande@attmail.com. This database contains much information of use to Flora of North America participants.

PUBLICATIONS

Rare Vascular Plants in the Northwest Territories by Cheryl L. McJannet, George W. Argus, and William J. Cody, Canadian Museum of Nature, Ottawa, 1995, 104 pages. This publication is the latest to emerge from the **Canadian Rare Plants Project**, which is supported by the Research Division of the Canadian Museum of Nature. It was compiled to identify the rare vascular plants in the Northwest Territories.

This annotated list treats 206 rare vascular plant taxa in the Northwest Territories. It is divided into three sections, the first includes: an introduction, a definition of terms, methods, criteria for assessing rare status, and interpretation of distributional patterns, a summary of the protection of plants in the Northwest Territories, and a listing of future research requirements. The second section is a list of the rare plants and for each taxon is included: documentation supporting its rarity, phytogeography, rare status in other provinces and regions of Canada, The Nature Conservancy Global and Canada Ranks, habitat, relevant comments, and a map illustrating its distribution in the Northwest Territories. The third and final section includes three appendices: a listing by family (Appendix I), a phytogeographical list (Appendix II), and a list of excluded taxa with reasons for their exclusion (Appendix III).

The rare taxa included in this publication represent a unique part of Canadian biodiversity and their recognition is an important step toward characterization and representation of northern ecosystems. This publication is available in English prepaid with check or credit card from: Direct Mail, Canadian Museum of Nature, P.O. Box 3443, Station "D", Ottawa, Ontario K1P 6P4 CANADA. Or call toll free at 1-800-263-4433. ISBN: 0-660-13072-6; price in Canada \$16, in US and overseas \$18.95.

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The Vascular Plants of Iowa, an Annotated Checklist and Natural History, by Lawrence Eilers and Dean M. Roosa. 1994. University of Iowa Press, Iowa City. - This welcome checklist of the vascular flora of Iowa contains the first comprehensive listing of the state's flora in modern times. According to a summary table in the volume, Iowa harbors 1958 species and interspecific hybrids, classified into 673 genera in 141 families, with about 22.5 percent of the taxa non-native.

The main body of the text consists of two annotated lists of species. First is a list of accepted taxa, organized alphabetically by family (within major plant groups). The other is a listing of all binomials included, arranged alphabetically by genus and species, with accepted names indicated for those included as synonyms in the previous list. Each of the entries for an accepted taxon includes annotations for infraspecific taxa, common names, synonymy, general distribution within Iowa, brief statement of habitat, abundance and conservation status, and geographic origin. The entries for species of conservation concern are frequently more detailed than the rest. The data presented are printouts from the BIOBANK database, which is discussed briefly in the text.

Of equal interest, particularly for readers from other states, is the lengthy introduction, which includes a treatment of the natural history and vegetation of Iowa, along with lists of representative or restricted species for each of the major habitat types. The ample bibliography makes this portion of the book even more useful. Botanists who perceive Iowa to be a flat expanse of cultivated fields will be surprised by the diversity of habitats in the state. For example, I was unaware that northwestern Iowa contained areas where Precambrian quartzite exposures occurred, certainly an unusual habitat for the central United States.

If one need criticize an undertaking of this sort, it is probably easiest to focus on the length of time necessary to get it published. Portions of the text apparently were completed some time ago. Sadly, citation of literature after about 1990 is uneven, and two of the principal references for the flora of Iowa apparently were not consulted: Volume 2 of the *Flora of North America* (1993) and the second edition (1991) of Gleason and Cronquist's *Manual of Vascular Plants of Northeastern United States and Adjacent Canada*. The omission of the latter reference, which includes Iowa in its range of coverage, is particularly noteworthy, as there are many taxonomic and nomenclatural differences between it and the first edition of Gleason and Cronquist (1963), which the authors did use.

These criticisms and the nomenclatural nitpicking ubiquitous to taxonomists aside, the present volume provides a solid foundation for future research on the flora of Iowa. The forthcoming atlas and floristic manual implied to be in preparation by the authors also will be most welcome.

xi, 304 pp. Paperbound, U.S.\$14.95 + postage ISBN 0-87745-464-7 (also available in hardcover for \$29.95 + postage, ISBN 0-87745-463-9). Available from the University of Iowa Press, Iowa City, Iowa 52242. -- reviewed by George Yatskievych, MO

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One Hundred and One Botanists by Duane Isely. Iowa State University Press, Ames, Iowa 50014. 1994. pp. 351. ISBN 0-8138-2498-2 - Professor Duane Isely of Iowa State University has served up a delightful book, wherein the lives and accomplishments of one hundred and one botanists are each given a few pages of genial discussion. Most of those honored by inclusion are also treated to a portrait.

The book had its genesis in a series of essays that Professor Isely circulated among the botany group at Iowa State University, and indeed, the dedication is to the botany graduate students who asked, "Why don't you put these together as a book?" Smart graduate students.

Most of the essays are 2-3 pages long, and they tell a bit about each of their subject's background and life and the things that made each one notable to posterity. The essays rest not on any lengthy re-evaluation of the original sources, but chiefly from standard secondary sources (which are cited with each essay). Their special value lies in their way of giving easy access to their subjects in a congenial, chatty way. The essays are a pleasure to read; Professor Isely is an author who knows the delights of a well-crafted sentence.

The essays are arranged chronologically by birth years, beginning with Aristotle (b. 384 BC) and ending with Winona Welch (b. 1896). Along the way we read of Theophrastus, Linnaeus, Darwin, and 96 others, chosen because they have materially advanced botanical science and/or because they were interesting participants in botany. Doubtless most readers would choose about the same roster for inclusion in the book, give or take a few who might be my favorites or yours.

Professor Isely makes the German botanical establishment of the 1800's come almost alive, and as one reads about Sachs and van Tieghem and Engler and Strasburger and their contemporaries, one can grasp these proud

and pompous fellows who did so much to expand the plant sciences. C. E. Bessey is treated to a particularly pleasant essay; he is described as a "short, stocky man who was an incessant bubbling conversationalist." I would like to have known him. Sir Joseph Banks, the great patron of natural history, is described as a "one-man National Science Foundation" and as an "operator cum laude." Many in botany would be pleased to have the likes of Sir Joseph currently among us.

One Hundred and One Botanists is a great book for dipping. It is easy to open it at random and read an essay about a botanist whose name rests in the corner of the mind, and then be informed about why that name is still with us. But like the ad for potato chips, I bet you can't read just one. -- book notice by Theodore M. Barkley, Kansas State University

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The Association of Systematics Collections (ASC) is embarking on a second round of **obtaining biosystematic literature** for the Biodiversity Information Exchange with Cuba Project. This time, literature acquired will be distributed to institutions outside of Havana. In trying to build biodiversity information resources, Cuban research institutions have a great need for current and back issues of botanical journals and other ecological and biosystematic literature. To donate and for more information, please contact Elizabeth Hathway, ASC, 730 11th Street NW, Second Floor, Washington, DC 20001-4521, 202/347-2850, fax: 202/347-0072

NEWS

Secretary of the Interior Bruce Babbitt renamed the Department's newest bureau as the **National Biological Service (NBS)**. When established in 1993, the bureau had been named the National Biological Survey. In addition, Babbitt also issued a Secretarial Order placing significant restrictions on the agency's activities, particularly those on private property. The Service's use of volunteers will have strict parameters. The Order also reiterated a requirement for independent scientific peer review of NBS study projects.

The National Biological Service devotes only a small component of its budget and functions to actual survey activities," said Pulliam. "Its broad scientific responsibility was not clear in its original name, but this change should clarify public understanding of its mission. And it better reflects the partnership orientation of NBS. The NBS goal is to provide a service -- access to the most current and complete biological science information available for all those who make or care about decisions that affect America's natural resources," Pulliam said.

Pulliam also noted that NBS is a small organization, fewer than 2000 employees nationwide, with large responsibilities. "We need the help and support of organizations--national, regional, state and local, public and private--and individuals--scientists, students, experts, and interested amateurs. Respect for lives and property of American citizens will always outweigh any interest in accumulating scientific knowledge."

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Dr. Ron Pulliam announced formation of an **NBS partnership** with the State of **North Carolina**. Through the new alliance, NBS will fund a \$150,000 project, coordinated by the N.C. State Museum of Natural

Sciences, to improve access to a range of state-developed data relating to natural communities in nine counties in the southeastern portion of the state.

The focal area of the effort is dominated by components of the longleaf pine ecosystem, pocosins (upland swamps on the coastal plain), and remaining parts of the vast Green Swamp. It is a region noted for ecological diversity, with 80 plants or animals either considered candidates for recognition as threatened or endangered species, or are already classified as such.

The State of **Arizona** and the NBS announced the establishment of a research partnership which includes a variety of other public, private, and Native American organizations, according to Dr. Pulliam. To launch the new alliance, NBS will provide \$150,000 to the Arizona Fish and Game Department (AFGD), the State's Biodiversity Team Assessment (BIOTA) Project. AFGD coordinated the BIOTA project.

The project will employ new technology to permit combined mapping of biological information from a variety of sources as a service to State, Federal, local, and private decision-makers, scientists and the public. The University of Arizona will provide information on the abundance and distribution of common species and vegetation cover. AFGD has similar records relating to rare species.

The BIOTA Project will combine these data to identify key areas of biological richness or uniqueness in the state. It will also simplify use of biological information drawn from a variety of sources. Pulliam said, "We look forward to this project's completion, when the public will have far better access to the full range of Arizona's biological information.

The State of **Illinois** and the NBS announced a partnership in increased public access to information about the plants and animals of Illinois, according to Dr. Pulliam. To launch the new alliance, NBS will provide \$150,000 to the Illinois Natural History Survey, a 135-year-old State science organization, to develop Internet access to INHS databases and assist in compiling and computerizing specimens, publication, and directories. The goal is "to integrate data and provide broad access by public and private decision-makers, scientists, and the public to existing knowledge so as to contribute to future planning, development, and conservation decisions throughout Illinois," Pulliam said. The INHS has one of America's most impressive continuous records of historical and modern biological knowledge, the NBS Director noted.

The new project includes the development of the Illinois Partnership, a proposed statewide program to be coordinated by INHS. The partnership is a network of institutions that exchange and transfer information on Illinois' biological resources. The collected data, analyses, and reports will be accessible both directly through Internet and the NBS' National Biological Information Infrastructure (NBII). NBII is a computerized network that uses common formats to make biological information resources available to the public. Large portions of the information are already automated. Some have been analyzed in terms of changes in species distribution over time in different areas across the State. The current project will continue the automation and provide additional analysis. The project is scheduled for completion in late 1995.

MEETINGS

Eleventh Annual Southwestern Botanical Systematics Symposium entitled *The New Morphology: Integrative Approaches* will be held at the Rancho Santa Ana Botanic Garden at Claremont on May 26-27, 1995. Elizabeth Zimmer and J. Mark Porter are organizing the event. In the past two decades, the fields of both chemistry and anatomy have been enlivened by conceptual and technical advances in molecular genetics and computerization. Recently, more sophisticated molecular and imaging techniques have been applied to long-standing questions in cell and developmental biology in model systems. Complex morphologies and developmental programs and the genotype-phenotype interactions that provide the starting materials for adaptation over evolutionary time can be better understood in molecular terms. Registration fee of \$60. includes Friday evening social, box lunch, and Saturday banquet. Contact Rancho Santa Ana Botanic Garden, Systematics Symposium, 1500 N. College Avenue, Claremont, California 91711 Phone: 909/625-8767, ext. 251 or Fax: 909/626-7670.

The Annual Meeting of the **Society for Ecological Restoration** will be held in Seattle, Washington, September 14-16, 1995. The Conference theme, *Taking a Broader View*, touches on issues central to the Pacific Northwest environment and beyond. It will explore the importance of scale in effecting meaningful restoration and the scientific and social basis for decision-making.

The three day technical program will feature sessions ranging from restoration theory and education to the nuts and bolts of project implementation. Restoration of ecosystem function and landscape patterns and processes as well as the politics of restoration will be addressed. The conference will interest natural resource professionals: designers, landscape contractors, native plants providers, researchers, consultants, and educators as well as members of the general public with an interest in ecological restoration.

Abstracts for presentation of papers are due by April 3; advance general registration deadline is August 1. For registration and information, write SER Conference, 1207 Seminole Highway, Madison, Wisconsin, 53711; Phone: 608/262-9547

POSITION AVAILABLE

Botanical Society of America, Plant Science Bulletin Editor - The nomination committee is searching for a botanist with an active research program, Internet access, knowledge of BSA and its members, editorial skills, computer skills in word-processing, database management, and desktop publishing. Enthusiasm and willingness to learn about unfamiliar botanical disciplines and to acquire new skills important. Interested persons should send queries about responsibilities, time commitment required, etc., to the current Editor, Meredith Lane, at MLANE@KUHUB.CC.UKANS.EDU (913/864-4493 or fax -5298). Applicants should send letter of interest with a statement of skills, resources, and goal for the *Plant Science Bulletin*, and a curriculum vitae to Judith E. Skog, Chair, PSB Editor Search Committee, Dept of Biology, George Mason University, Fairfax, Virginia 22030-4444 (e-mail JSKOG@GMU.EDU). Submission of the information on disk or via e-mail would be VERY helpful. Deadline for applications: 1 March 1995.