

Flora of North America



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Newsletter

January – June 2012

PRESIDENT'S REPORT

Flora of North America Association

Luc Brouillet, FNAA president

Biennially, the executive committee meets to monitor progress and to manage the affairs of the FNA Association. Reports are produced and ideas are exchanged. And every time, I am struck by the high level of dedication of all the people who participate in the production of the Flora of North America and by the huge amount of work that it represents. From the authors to the taxon editors and regional coordinators and reviewers, from the artists, technical editors and volunteers, to the managing editor and the editorial director, and from the lead to the specialist editors, all contribute in their own way to building the splendid edifice that the flora represents: a description of the whole terrestrial-plant flora of

North America north of Mexico. This effort may sometimes appear unrewarding or even frustrating. There is a lot of toil for little thanks. The process may at times appear messy and not very productive. And publication often appears to crawl rather than leap and bound. But this is all part of a complex and difficult task that can only take time and effort to succeed. The sole reward of this splendid group of people is to see volumes published and to realize that each volume is welcomed by an increasing number of people as a major source of knowledge on the biodiversity of our continent. And that is a huge reward and the only one that keeps motivating us all into doing more to see the volumes to their completion.

Report on Fifth Global Plants Initiative (GPI) Meeting

Nancy Morin

More than 220 representatives from herbaria in 41 countries participated in the Fifth Global Plants Initiative (GPI) Annual Meeting at the Real Jardín Botánico in Madrid, Spain, April 9–13, 2012. The purpose of the meeting was to share information and experience regarding high-resolution imaging of type and other significant specimens and to discuss the future management and funding of the collaborative effort. I was invited to give a presentation on the status of Flora of North America work and how its organizational structure might be a model for the GPI in the future.

The Global Plants Initiative grew out of an African Plants Initiative and Latin American Plants Initiative. The Andrew W. Mellon Foundation (an FNA funder) generously funded equipment, staffing, and technical support for digitization, and is now working with JSTOR for online delivery of the images and associated data through the JSTOR Plant Science program. GPI partners include 263 organizations in 71 countries. To date there are more than 1.3 million scans and 2 million related images available; some 7,000 new objects are added each week.

JSTOR is primarily an online resource for journals and currently has 500,000 articles from 200 journals. It now links the type specimen images and associated data (for instance, FNA content) to relevant journal articles and to content in the Biodiversity Heritage Library. JSTOR Plant Science is available to all GPI participants and without additional charge to all JSTOR subscribers; any nonprofit organization can get access to JSTOR Plant Science (contact deirdre.ryan@jstor.org for information).

Meeting in the Botanic Garden in Madrid was especially interesting for me because its former director, Santiago Castroviejo, who died in 2009, was a pioneer in developing tools for taking floristic treatments and converting them to searchable databases through his work with the Flora Iberica project; he was always very supportive of FNA. Founded 257 years ago, the garden has a long history of botanical exploration and publication, especially in Central and South America. Now under the direction of Gonzalo Nieto Feliner, the garden is expanding its digital resources as well as its research programs in plant and fungal biodiversity and evolution.

Particularly remarkable is the digital library they have created, with 2,629 titles, 6,139 volumes, and nearly 1.6 million pages as of this writing. The publications and historical manuscripts have been scanned and indexed, and include works from around the world from the earliest to the present. An example of a work useful to FNA authors is the Flora Iberica keys and checklist of

species, including illustrations and notes on worldwide distribution. For more information go to <http://www.rjb.csic.es>. For a botanical sojourn, look at the incredibly beautiful botanical illustrations scanned from the drawings of the Royal Botanical Expedition to the Kingdom of new Granada (1783-1816), the RJB project MUTIS.

Floristic Record for North America

Alan Smith, University California, Berkeley

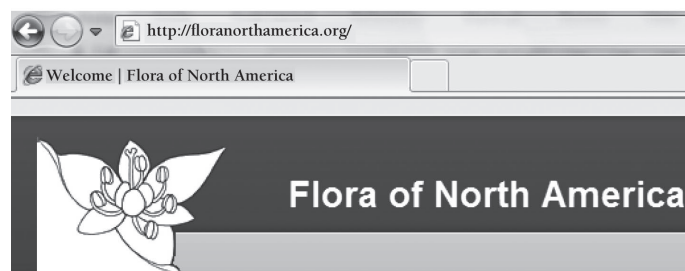
Sphaeropteris cooperi (Hooker ex F. Mueller) R.M. Tryon (Cyatheaceae), native to eastern Australia and naturalized in several tropical areas of the world (e.g., Hawaii) is now known from naturalized populations in both Oregon (Wood 2008, Amer. Fern J. 98: 113–115) and California, Santa Catalina Island (Clark & Summers 2012, ms. submitted). In both localities it occurs in crevices of coastal cliffs, in the fog belt zone, immediately above the Pacific Ocean. These reports are the first known records of establishment of this large (600 spp.), diverse, and predominantly tropical family of tree ferns in Flora of North America North of Mexico. In the California population, some fronds are fully fertile, despite having a trunk less than 1 m tall and fronds to 1.5 m, while the Oregon plants were not yet reproductive in 2008. In native and some cultivated situations, plants attain heights to 12 m, with trunks to 15 cm in diam., and may not form spores until they reach a substantial size. *Sphaeropteris cooperi* [syn. *Cyathea cooperi* (Hooker & F. Mueller) Domin] is commonly sold in nurseries in coastal California and southern Oregon.



Image courtesy the Catalina Island Conservancy.

The Flora of North America (FNA) project is a cooperative program to produce a comprehensive account of the plants of North America north of Mexico. The *FNA Newsletter* is edited by Barney Lipscomb, Newsletter Editor, Botanical Research Institute of Texas, with the assistance of Kristin Pierce, Assistant Editor, Missouri Botanical Garden. The newsletter is published twice a year by the Flora of North America Association to communicate news about the FNA project and other topics of interest to North American floristic researchers. For more information, please see the FNA website, www.fna.org.

Readers are invited to send appropriate news items to:
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Items also can be sent by e-mail to: barney@brit.org or Kristin.Pierce@mobot.org



FNA Website
The Flora of North America website can be found at <http://floranorthamerica.org/>. Recent additions include an expanded Provisional Publications page at: <http://floranorthamerica.org/node/399>. Provisional Publications for FNA are electronically published treatments that have been peer-reviewed and are formatted for eventual publication in print copy by Oxford University Press. Provisional Publications are versions of treatments that minimally meet basic FNA editorial standards and are available as PDF downloads. So, grab a cup of coffee and browse the treatments that are now available.

Botanical Illustrator

Barbara Alongi

Profile
Capturing plants on paper



I have always drawn, since I can recall; I remember my father particularly, drawing animals with me. But my background is rather varied, albeit almost always including drawing and painting. Starting from fashion designing, to move on to fine arts: engraving, fresco, figure drawing, anatomy, all the classical training. After moving to Saint Louis from Italy, the Missouri Botanical Garden was my first introduction to sketching plants for botany students. Then, free-lancing and, through the great botanical artist Yevonn Wilson-Ramsey, I became acquainted with *Flora of North America*. A contract to illustrate *The Identification of Medicinal Plants: a Handbook on the Morphology of Botanicals in Commerce* by Dr. Wendy Applequist, took me to the current position of staff illustrator for the department of Ethnobotany and for *Flora of North America*.

Coming from a more artistic rather than scientific drawing background, at first I thought botanical illustration involved little creativity. It utilizes a different kind of creativity that consists in rendering detail in the clearest way possible and, within that parameter, in the capacity

to envision the dry pressed specimens in their parts into a more living and tridimensional form. Having been on collecting field trips with botanists, I'm aware of how difficult it is to find and press a fresh plant; but when good specimens are available, it is easy to see that from the drawing. The quality and variety of material on which each illustration is based is important in producing a good artwork: they give access to a greater acquaintance with each species and it results in clearer and more fluid renditions. As an artist, I truly enjoy experiencing the feeling of "capturing" a plant on paper, just as I would for a portrait of a person, but with scientific ac-

curacy, instead. A question I am often asked is what is a favorite plant I have drawn, and although of course I have a few favorites, they still are closely tied to my answer, which is invariably, "The ones for which I have the best material." The dry specimen is the basic and most fundamental element for illustration; then the technical description of the species is of great help in determining the range of variations in structure sizes and shapes. Lastly, good photographs of the live plant are important in order to render the correct habit. Speaking of photographs, whenever there is talk of botanical illustration a question always comes up: wouldn't it be better to use photographs instead of drawings? And it brings a smile to my lips, because, even as an illustrator searching for reference pictures of plants, it is hard to find informative, high-quality images and, I often prefer other illustrations, when available. The reason for this is exactly the definition of scientific illustration: a drawn description with all the parts in focus, an accurately depicted explanation of the plant through its stages and forms in all its details.

Student Contributors

Focus Graduate students reflect on orphan genera

Alexander Krings, North Carolina State University (NCSC)

The Flora of North America (FNA) provides the potential for involvement of students at many different levels. Students at institutions around the country have long contributed to FNA by taking on genera as part of their theses or dissertations. Those who have mentored such experiences for students know well how challenging, but also how rewarding, the work can be—for both student and mentor. While none of my master's students have taken on FNA treatments as their sole thesis work, all have elected to develop a treatment of a small orphan genus for FNA to fulfill my requirement that they complete at least one publishable project in addition to their thesis. Several of our undergraduates have also elected to participate in such a project to fulfill our departmental research requirement. Small orphan genera are ideal projects in both regards because they are well-circumscribed, time-limited, and require the application of evolutionary concepts and theory, understanding of morphology, knowledge of nomenclatural rules, and skills in utilizing historical botanical texts as well as modern databases. These are all necessary foundational skills for future success as an engaged, practicing botanist. Thus, for students who are primarily training to ultimately become agency botanists or environmental consultants and are typically working on the scale of a florula, developing a treatment for FNA provides a deeper insight into the taxonomic process and the role of collections than may otherwise have been possible. This insight can profoundly influence the quality of their thesis work, as well as their general understanding and appreciation of the vast biodiversity resources embodied by natural history collections and their tremendous utility for basic and applied research. Over the past three years, students at NCSC have been involved in the development of treatments of nine small orphan genera for FNA (two additional treatments are in preparation). Below, I include some brief reflections by four of my graduate students who have worked on some of these.

Rachel Clark (MSc 2011)

Status: Environmental Educator with the U.S. Environmental Protection Agency. Thesis: Guide to the vascular flora of Kitty Hawk Woods (Dare Co., North Carolina). FNA treatment: *Mucuna* (Fabaceae)

I had never stepped foot into a herbarium prior to beginning my graduate studies and I never heard of “types” or understood the intricacies of nomenclature. But, there was no better way to learn than by preparing a treatment for FNA. I chose *Mucuna* because I liked the aesthetics of the seeds and I could pronounce the genus. While it initially appeared to be a straight-forward project with only two species native to North America, it developed into a very specific scavenger hunt as I searched for taxonomic clarity. And, I am grateful that it was more complicated than I anticipated! I really enjoyed being able to look at scanned documents from hundreds of years ago or seeing herbarium sheets with specimens pressed by long-ago collectors. It made me feel part of a great tradition. Measuring specimens of *Mucuna* made me appreciate how important a good pressing is to the study of a species. I appreciated it so much I took extreme care when pressing the specimens for my thesis work. I know I spent more time pressing my field samples than I did collecting them, but I wanted to make them worthy of the herbarium sheets that might one day get sent to some future student doing their first taxonomic treatment.

Kelly Hines (MSc 2011)

Status: Environmental Consultant at a private consulting firm. Thesis: Guide to the vascular flora of Howell Woods (Johnston Co., North Carolina). FNA treatment: *Cephalanthus* (Rubiaceae)

Working with *Cephalanthus* was an eye-opener for me into the world of finding, explaining, and sometimes solving those intriguing plant mysteries. It was not just about using a microscope to measure traits, but also

using those data to look at the much larger picture. The experience gave me the tools and proper resources to hunt down answers and shed light on some of the evolutionary forces at work. It gave me an appreciation for the small things in life, because you never know what or which thing makes one raise an eyebrow and think about what really makes this species this species. Learning about typification and nomenclature helped me in my graduate work as I strived to be meticulous in properly identifying a specimen. I knew that my collections were going to contribute to the greater knowledge of North Carolina flora and doing so with an understanding of concepts behind why proper identification and herbaria collections are important, connects me to the vast network of knowledge sharing. It makes me feel connected to our botanical and ecological future.

Amanda Saville (MSc 2010)

Status: Research Assistant at North Carolina State University. Thesis: Delimiting species boundaries in the *Dichantheium dichotomum* complex. FNA treatment: *Cullen* (Fabaceae)

Despite the fact that the North American representation of *Cullen* is small, studying the genus for the *Flora of North America North of Mexico* was a fascinating and rewarding experience for me. Not only was it an insightful look into the work involved when writing and publishing a flora, but it was rewarding to contribute to such a large and seminal publication. I also enjoyed the chance to stretch my legs and study within a family I hadn't worked with before. In addition, figuring out the nomenclature of *Cullen* was a beneficial experience for when it came time to work on my own thesis involving the study of species concepts in *Dichantheium*, a genus in which names can be a circuitous challenge. An added bonus of working on this project was the chance to experience the history of the genus through its specimens, something that always appeals to me when working in a herbarium. I still have a certain degree of awe when I hold an older specimen and realize that it has passed through the hands of several botanists before me, some of whom have left their mark upon it in the form of annotations, extra notes, or dissections packed away in fragment packets. It gives me a much greater appreciation of the work botanists collectively do in our quest to understand the natural world.

Robert Thornhill

Status: Current graduate student.
Thesis: Guide to the vascular flora of the savannas at Shaken Creek (Pender Co., North Carolina). FNA treatment: *Bowlesia* (Apiaceae)



Like most good things in my life (including my wife), my interest in plants began with an introduction from my older brother, who took me to a park near our home in Montgomery, Alabama, one Sunday afternoon and formally introduced me to trees. (The friendship was immediate.) Though only a few semesters away from graduating from college with a biology degree, I quickly realized how little I actually knew about the world around me. (“Those are oak trees’ flowers? Really?”) I soon decided that natural history and, in particular, botany, were my passions and began attempting to teach myself the local flora. I enrolled in the plant biology department at NC State as a master’s student in the fall of 2010 and began a floristic study of pine savannas in the outer coastal plain of North Carolina. Surrounded by Venus fly-traps and more *Rhynchospora* (Cyperaceae) species than should be allowed in one ecosystem, I now consider myself the luckiest man in the world. My involvement with the *Flora of North America North of Mexico* project began with assistance on a treatment of *Cephalanthus* (Rubiaceae), during which I realized what the term “morphometric” really means. Currently, I’m working on the treatment of *Bowlesia* (Apiaceae), an endearing, primarily South American genus represented in North America only by *Bowlesia incana* Ruiz & Pavón. Adventive in the southeastern United States but native (or at least traditionally considered so) in the southwestern U.S., *B. incana* is a decumbent annual sporting palmately-lobed leaves and tiny stellate trichomes that, under 10×, look like little white spiders (a useful vegetative identification feature). The tiny mericarps, which become indented dorsally with age, are just plain cute. How *B. incana* spreads is still a mystery; the mericarps lack bristles or any obvious feature that would seem to facilitate transport. Birds, perhaps? Whatever the case, if you live in the southeastern U.S., look for *B. incana* in a moist lawn (or disturbed bottomland) near you! And if you live in the southwestern U.S., check rock outcrops, desert edges, washes, shaded slopes ... but also check your lawn. It could be waiting for you just outside your front door.

Volume Updates

Volume 6 Update: *Robert W. Kiger*

Apodanthaceae (TE: David Boufford) ready for pages. **Thymelaceae** (TE: Jackie Poole) final taxonomic editing. **Begoniaceae** (TE: Jackie Poole) ready for pages. **Bixaceae** (TE: Jackie Poole) in nomenclatural review. **Datisceae** (TE: Jackie Poole) in nomenclatural review. **Frankeniaceae** (TE: Jackie Poole) late editorial review. **Turneraceae** (TE: Jackie Poole) returned to author. **Calophyllaceae** (TE: Jackie Poole) in nomenclatural review. **Clusiaceae** (TE: Jackie Poole) returned to author for revisions. **Cucurbitaceae** (TE: Jackie Poole) returned to author for revisions. **Elatinaceae** (TE: Jackie Poole) in bibliographic review. **Hypericaceae** (TE: Fred Utech) nearly ready for indexing. **Cistaceae** (TE: Fred Utech) *Crocantemum* is in review. **Malvaceae** (TE: Fred Utech) *Melochia* in review; remaining genera either in late editing or revision except former *Tiliaceae* and *Ayenia*. **Muntingiaceae** (TE: Fred Utech) ready for galley and provisional publication. **Passifloraceae** (TE: Fred Utech) ready for pages. **Tamaricaceae** (TE: Bob Kiger) ready for pages. **Droseraceae** (TE: Nancy Morin) ready for pages. **Podostemaceae** (TE: Leila Shultz) final taxonomic editing. **Violaceae** (TE: Ron Hartman & Rich Rabeler) returned to taxon editor.

Volume 9 Update: *Luc Brouillet*

In production at the Missouri Botanical Garden.

Volumes 10 and 11 Update: *James L. Zarucchi and Martha Hill*

Volume Summary: Total of 13 families, 217 genera, 1754 species; treatments of 1144 species (65.22%) received. These exclude drafts of treatments at MOBOT that have not been released from authors. *Astragalus* (Fabaceae) alone has 354 species with 283 varieties.

The 13 families in the two volumes are: Proteaceae (1 genus/1 species), Buxaceae (2/3), Gunneraceae (1/1), Haloragaceae (3/17), Combretaceae (5/8), Lythraceae (10/31), Onagraceae (16/271), Myrtaceae (13/38), Melastomataceae (3/15), Fabaceae (153/1374), Surianaceae (1/1), Polygalaceae (6/54), and Elaeagnaceae (3/9).

The two volumes have a total of 86 authors.

Proteaceae (TE: Leila Shultz): treatment by Peter Weston is in review. **Buxaceae** (TE: Geoff Levin): treatment by Dave Boufford is in post-review stage. **Gunneraceae** (TE: Leila Shultz): treatment by Gordon Tucker is in post-review stage. **Haloragaceae** (TE: Leila Shultz): treatment by M.S. Alix and R.W. Scribailo is technically edited and in pre-review stage. **Combretaceae** (TE: Dave Boufford): treatment by Walter Judd is in post-review stage. **Lythraceae** (TE: Dave Boufford): treatment

prepared by Shirley Graham (& co-author for *Trapa* is C. Barre Hellquist) is in post-review stage. **Onagraceae** (TE: Dave Boufford): Received partial family/subfamily treatment and 7 genera from Warren Wagner. Earlier, 3 genera were sent out for review and need to be revisited. **Myrtaceae** (TE: Dave Boufford): treatment by Leslie Landrum is in post-review stage. **Melastomataceae** (TE: Dave Boufford): treatment by Guy Nesom is in post-review stage. **Fabaceae** (TEs: Jay Raveill and Mike Vincent): 884 of the 1374 species have been delivered to date, and treatments with a total of 593 species have been sent for review. Some of the larger genera that remain to be delivered are: *Acmispon* (29 spp.), *Desmodium* (46 spp.), *Lespedeza* (26 spp.), *Pediomelum* (22 spp.), *Senna* (28 spp.), and *Trifolium* (96 spp.). **Surianaceae** (TE: Luc Brouillet): treatment by James L. Pringle is in post-review stage. **Polygalaceae** (TE: Jackie Poole): treatment by J. Richard Abbott is in pre-review stage. **Elaeagnaceae** (TE: Gordon Tucker): treatment prepared by L. Shultz and W.A. Varga is in post-review stage.

Volume 12 Update: *Geoffrey A. Levin and Lynn Gillespie*

Celastraceae (TE: Dave Boufford and Elizabeth Wells): treatments by Ma Jin-shuang (10 of 12 genera) are back from review and being prepared to send to the author. **Cornaceae** (TE: Geoff Levin): treatment by Zack Murrell and Derick Poindexter was submitted and is in preparation for review. **Eucommiaceae** (TE: Geoff Levin): treatment by Mike Vincent is back from review and being prepared to send to the author. **Euphorbiaceae** (TE: Lynn Gillespie, Geoff Levin): treatments of *Euphorbia* (by Paul Berry et al.; 137 species), *Mercurialis*, and *Vernicia* (both by Lynn Gillespie) were submitted in January and are out for review. The treatment of *Euphorbia* reflects the latest systematic work on the genus by the NSF-PBI team headed by Paul Berry, including treating *Chamaesyce* and *Pedilanthus* within *Euphorbia* and recognizing the weedy invasive leafy spurge as *E. virgata* rather than *E. esula*. **Nyssaceae** (TE: Geoff Levin): treatment by Gordon Tucker and Tracey Park was submitted and is in preparation for review. **Rhamnaceae** (TE: Deb Trock): treatments are with the four authors post-review.

Volume 13 Update: *Luc Brouillet*

Volume Summary: A total of 14 families and 155 genera. 85% of genera and species assigned.

The 13 families are Actinidiaceae,*Anacardiaceae, Apiaceae, Araliaceae, Balsaminaceae, Burseraceae, Escalloniaceae, Geraniaceae, Meliaceae, Nitrariaceae, Pittosporaceae, Rutaceae, Sapindaceae, and Simaroubaceae.

Genera without assigned authors: Rutaceae: 3; Apiaceae: 29 (mostly small native genera).

Provisional publication (04): Escalloniaceae, Pittosporaceae 100% in regional review (started or being compiled); (02): Nitrariaceae, Burseraceae, Balsaminaceae, Meliaceae. Individual treatments are in regional review in nearly all other families. Most Apiaceae treatments reviews have been compiled.

*Actinidiaceae has recently been added to volume 13 as an introduced family. Originally, this family was not listed among those to be done for the *Flora of North America North of Mexico* project but Dr. Brett Serviss (HEND) has recently discovered *Actinidia* growing spontaneously in the USA (Serviss 2012, ms. submitted). Dr. Serviss accepted an invitation to contribute the family to FNA and is thrilled to author the Actinidiaceae treatment for FNA. “It would be a tremendous honor and privilege.”

Volume 14 Update: Robert W. Kiger

Apocynaceae, Convolvulaceae, Gelsemiaceae, Gentianaceae, Hydroleaceae, Loganiaceae, Solanaceae, and Sphenocleaceae. Virtually all of Gentianaceae (17 genera and 113 species, TE: David Giblin), by Jim Pringle, has been submitted and is in preparation for review. Most of **Convolvulaceae** (TE: Kerry Barringer) is in preparation for review. Tim Lowrey, TE: for **Apocynaceae**, is continuing to enlist authors.

Volume 15 Update: Nancy R. Morin

Fouquieriaceae (TE: Jackie Poole) *Fouquieria*, by Jim Henrickson, was completed long ago. **Polemoniaceae** (TE: Nancy Morin; 18 genera, 312 species) Treatments of *Leptosiphon* by Bob Patterson and *Polemonium* by Rebecca Stubbs will go out for review soon.

Hydrophyllaceae (TE: Nancy Morin and Ron Hartman; 15 genera, 240 species). Family description (Bob Patterson), key to genera (Patterson and Genevieve Walden), treatments of *Draperia*, *Ellisia*, *Emmenanthe*, *Eucrypta*, *Hesperochiron*, *Hydrophyllum*, *Nemophila*, *Pholistoma*, *Tricardia*, (all Patterson), and *Romanzoffia* (Patterson and Walden), will go out for review soon. Most of the illustrations of *Phacelia* are complete and the manuscript is still in pre-review stage. **Boraginaceae** (provisional TE: Nancy Morin in consultation with Ron Kelley and Jim Miller; 43 genera, 357 species). Progress has been made on assigning authors. Ron Kelley, Mike Simpson, and Matt Williams have agreed on generic reorganizations and potential authors (new-to-FNA genera are in bold face). New assignments: Kelley and Simpson are confirmed to do *Cryptantha*, ***Eremocarya***, ***Greeneocharis***, and ***Johnstonella***. Mare Nazare agreed to do *Mertensia*, Jim Cohen agreed to do *Lithospermum* (including *Macromeria* and *Onosmodium*), *Antiphytum*, and *Omphalodes*, Matt Williams agreed to do *Harpagonella*, ***Gruvelia***, ***Sonnea***, and *Pectocarya*, Susan

Rolfsmeier agreed to do *Lappula*. Richard Halse agreed to do *Anchusa*, *Argusia*, *Asperugo*, and *Buglossoides*. Ron Kelley has committed to a number of genera including ***Oreocarya***, as well as being willing to fill in on what is left. *Heliotropium* is the only large genus (22 species) still without an author. *Borago* has been submitted by Graye-Raitz and Krings.

Volume 16 Update: Nancy R. Morin and Alan Weakley **Oleaceae** (TE: Leila Shultz; 12 genera, 63 species). All treatments of Oleaceae are now in post-regional review: *Fontanesia* (Yatskievych), *Syringa* (Pringle), and *Forsythia*, *Menodora*, *Jasminum*, *Ligustrum*, *Fraxinus*, *Forestiera*, *Chionanthus*, *Olea*, *Phillyrea*, and *Callicarpa* (all by Nesom). **Verbenaceae** (TE: Alan Weakley; 12 genera, 80 species) have been submitted and are ready for review: Roger Sanders contributed *Lantana*, and Guy Nesom is author for the rest. **Lamiaceae** (TE: Nancy Morin; 67 genera, 430 species). New assignments in Lamiaceae are *Nepeta*, *Dracocephalum*, and *Lallemantia* (submitted recently by Stephen Meyers), *Pogogyne* (Elizabeth Straley and Alan Prather), and *Teucrium* (Gordon Tucker). 47% of Lamiaceae genera and 31% of species have been submitted.

Volume 17 Update: Craig C. Freeman and Richard K. Rabeler

Volume summary: 9 families, 91 genera, 948 species, 51 authors; Linderniaceae (3 genera, 11 species), Mazaceae (1/2), Orobanchaceae (28/285), Paulowniaceae (1/1), Pedaliaceae (2/2), Phrymaceae (7/127), Plantaginaceae (41/472), Polyremaceae (1/1), Scrophulariaceae (9/47). Illustrations: 224 species (projected).

As of 1 June 2012, 64 of 101 treatments (63%) covering 643 species (68%) have been submitted. Since December 2011, only seven new submissions have been received. With almost all author submission deadlines now passed, we expect many more manuscripts imminently and are awaiting corrections for 18 manuscripts returned to authors over six months ago.

Recent notable accomplishments include:

- 25 new manuscripts have been posted as provisional treatments on the FNA web site, bringing the total of Volume 17 provisional publications to 26. Two additional treatments should join them soon.
- All treatments for Phrymaceae (6 genera, 127 species) now are in review with the recent submission of *Diplacus* (41), *Erythranthe* (81), *Mimetanthe* (1), and *Mimulus* (2).
- For artwork, 71% of the required specimens have been pulled, representing 74% of the genera in the volume, with 34% of the pencil sketches and 32% of the inked illustrations completed.

Volume 18 Update: *Debra K. Trock*

Menyanthaceae is in review (TE: David Giblin, author Nicholas Tippery); *Knautia* (**Dipsacaceae**, Sara Carlson), **Acanthaceae** (TE: Leila Shultz, author Tom Daniel), **Diervelliaceae** (TE: Raveill, author Tucker) were submitted and are in pre-review preparation.

Volume 28 and 29 Update

Bryophyte Editorial Center

Volume 28 is nearly completely submitted, reviewed and much of the technical editing is finished. Only two families are outstanding, and these are small, of one genus each, and will be submitted shortly. Two large families are being dealt with by T. McIntosh, one the Mniaceae (which he is doing with S. Newmaster) will be submitted in very good shape shortly, and the Brachytheciaceae (by M. Ignatov) has been gone over several times and is ready for the tech editor. Only 6 of the plates remain to be illustrated. Introductory Chapters for Vol. 28 will be Preface (R. Zander, in prep.); Classification and Phylogeny of the Mosses (J. Shaw, reviewed and in final

edit); and, Keys to the Genera of Mosses (D. Vitt and W. Buck, in prep.).

Volume 29, hepatics and hornworts: Twenty-nine percent of the genera and 34 percent of the species are submitted, with 21 and 20 percent reviewed and done, respectively. Fourteen percent of the plates are finished.

Herbarium and Botanical Garden News

Minot State University (MISU) announces the first electronic checklist of North Dakota plants: <http://ashipunov.info/shipunov/fnddb/index.htm>. Please read the last Flora of North Dakota blog entry for the description at <http://floraofnd.wordpress.com/2012/01/26/first-electronic-checklist-of-north-dakota-plant-species-is-now-online/>

This is significant but only a first step towards the completion of the project. Much more to follow! For more information contact Alexey Shipunov at alexey.shipunov@minotstateu.edu

Electronic Resources

Volume 19 of FNA now available on JSTOR Plant Science

Volume 19, the first of the Asteraceae volumes, is now available on JSTOR Plant Science. FNA Information Technology Committee co-chairs James Macklin and Rich Rabeler have been working with Dr. Hong Cui and her students at University of Arizona and staff at JSTOR on all the other published volumes to refine the parsing of treatments, most recently with special attention to the many details of nomenclature and bibliographic citation at infrafamilial and infrageneric ranks. JSTOR is an outstanding way for FNA to reach broader audiences, covering 52 disciplines and one of the most heavily used scholarly resources worldwide. The JSTOR site provides

this information about FNA: FNA builds upon the cumulative wealth of information acquired since botanical studies began in the United States and Canada more than two centuries ago. Recent research has been integrated with historical studies so that the *Flora of North America North of Mexico* is a single-source synthesis of North American floristics. The Flora of North America provides information on the names, taxonomic relationships, continent-wide distributions, and morphological characteristics of all plants native and naturalized found in North America north of Mexico. Visit <http://plants.jstor.org> for more information.

Online Resources for Non-Native Taxa

Nancy Morin

One of the less recognized contributions that Flora of North America makes to the availability of information about plants is its treatment of non-native plants and native plants with distribution outside of the flora area. In the volumes published to date, 5,900 species also occur outside of North America, 1500 of which are introduced in the flora area. Information especially about the introduced species is quite difficult to find—often there is no monograph of the genus or recent flora of its

native area to consult. Or, even if such publications exist they may not be easy to attain. FNA authors make every effort to provide nomenclatural, descriptive, and distribution data for these species that are as well-authenticated as for native species. Fortunately, there are now huge efforts to digitize literature and herbarium material, and to make these available online. Here are some links to resources that may be helpful in running down information on non-native or widely distributed taxa:

Historical literature

Biodiversity Heritage Library

<http://www.BiodiversityLibrary.org>

This digital library just keeps getting bigger and better. They now have 55700 titles, 107,762 volumes, and 38.8+ million pages scanned.

Botanicus <http://www.botanicus.org>

Some overlap with the Biodiversity Heritage Library but this collection contains scans of literature in the Peter H. Raven Library at Missouri Botanical Garden, which has global coverage. As an added benefit it has links to 234,554 protologues.

Real Botanico Jardin de Madrid Digital Library

<http://bibdigital.rjb.csic.es>

See article on the Global Plants Initiative meeting in this issue.

Herbaria

Most of the major herbaria are digitizing their type specimens and making them available as part of the Global Plants Initiative through JSTOR, but many also have their images available directly from their own websites. Index Herbariorum includes links to the website of each herbarium if available: <http://sweetgum.nybg.org>

Botanical Garden of the City of Geneva

<http://www.ville-ge.ch/musinfo/bd/cjb/>

Particularly rich in European, African, and South American taxa. A search on Campanulaceae resulted in 637 specimens that had been imaged.

National Museum of Natural History, Paris

<http://colddb.mnhn.fr>

Paris has had a massive project to capture images of all of its specimens. To do this they mounted all their unmounted material—much of which has not been seen since the original collection was made. This is a vast resource.

Royal Botanic Gardens, Kew

<http://www.apps.kew.org/herbeat>

Natural History Museum, London

<http://www.nhm.ac.uk>

Chinese National Herbaria

<http://pe.ibcas.ac.cn/sptest/syninvok.aspx>

At the moment, they have digitized 1.8 million specimens including 17,000 types as well as the reference materials, 1.6 million images, and the rate of digitization has reached about 70%.

Missouri Botanical Garden

<http://www.mobot.org/imagesearch/>

The New York Botanical Garden

<http://sciweb.nybg.org/science2/VirtualHerbarium.asp>

Especially good for plants from Brazil.

JSTOR Plant Science

<http://plants.jstor.org>.

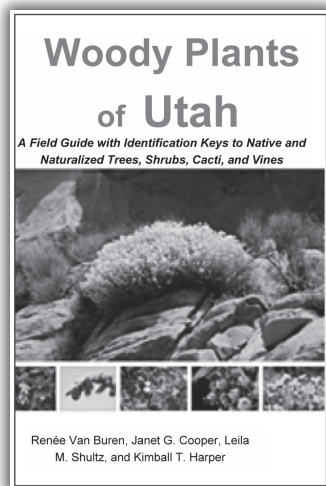
Probably the most efficient way to find images of specimens from Latin America and Africa.

Publications

Woody Plants of Utah: A Field Guide with Identification Keys to Native and Naturalized Trees, Shrubs, Cacti, and Vines

by Renée Van Buren, Janet G. Cooper, Leila M. Shultz, and Kimball T. Harper. 2011. (ISBN 978-0-87421-824-4, pbk.). Utah State University Press, Chicago Distribution Center, 11030 South Langley, Chicago, IL 60628, U.S.A. (Orders: toll free: 800-621-2736, fax: 800-621-8476, custserv@press.uchicago.edu). \$39.95, 6" × 9", 528 pp., color.

A comprehensive guide that includes a vast range of species and plant communities and employs thorough,



original keys. Based primarily on vegetative characteristics, the keys don't require that flowers or other reproductive features be present, like many plant guides. That especially suits an arid region such as Utah with less diverse native trees.

Detailed, illustrated plant descriptions complement the keys and provide additional botanical and environmental information in relation to a useful introductory categorization of Utah plant communities. Supplementary tools include photos, distribution maps, and an illustrated glossary.

John Howard Redfield: In Search of Shortia, With Asa Gray in North Carolina 1879, Transcribed and Edited by John Marsh. 2011. (ISBN: 978-0-9852199-0-1). John Marsh, 197 Ore Bank Rd., Dillsburg, PA 17019, U.S.A. (Orders: jmarsh9@verizon.net). \$19.95 (PA residents includes s&h plus tax); \$18.75 (outside PA, includes s&h).

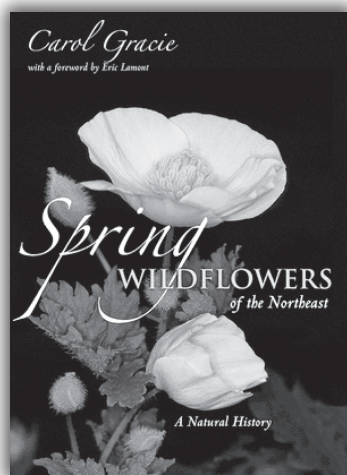
John Howard Redfield (1815–1895), In Search of Shortia, is the journal of John Howard Redfield's travels with Asa Gray, William Canby, Charles Sargent, and M.E. Hyams in search of an elusive plant in North Carolina in 1879. On a visit to Paris, France in 1839, Asa Gray saw one leaf of a plant first discovered by André Michaux in 1788. Gray named it in honor of Dr. Charles Short, *Shortia galacifolia*. Gray traveled to North Carolina four times over the next 40 years searching for this plant, finally having success on this trip. *William C. Redfield (1789–1857), A Pedestrian Tour* is about the twenty-one year old William C. Redfield, father of John, who traveled in 1810, most the way by foot, from Connecticut to Ohio. This is his journal of that trip. William Redfield would go on to be recognized for many contributions to transportation and science. In later years he organized and served as the first president of the American Association for the Advancement of Science.

More Turfgrass and Related Weeds: Beyond the Color Atlas. A Guide to Weed Identification for Turfgrasses, Ornamentals, Plant Nurseries, Roadsides, Pastures, Specialty Areas by L.B. (Bert) McCarty and David W. Hall. 2011. (ISBN 978-0-0798777-5-9, pbk.). Clemson University Public Service Publishing, Room 96, Poole Agricultural Center, Clemson University, Clemson, SC 29634-0129, U.S.A. (Orders: <http://www.clemson.edu/psapublishing>, toll-free 1-888-772-2665, check or money order payable to Clemson University to address above). \$25.

From the publisher: A weed can be defined as any plant growing where it is not wanted. The first step to successful weed management is proper identification, which is the primary focus of this book, a supplement to the highly successful *Color Atlas of Turfgrass Weeds* (2nd edition).

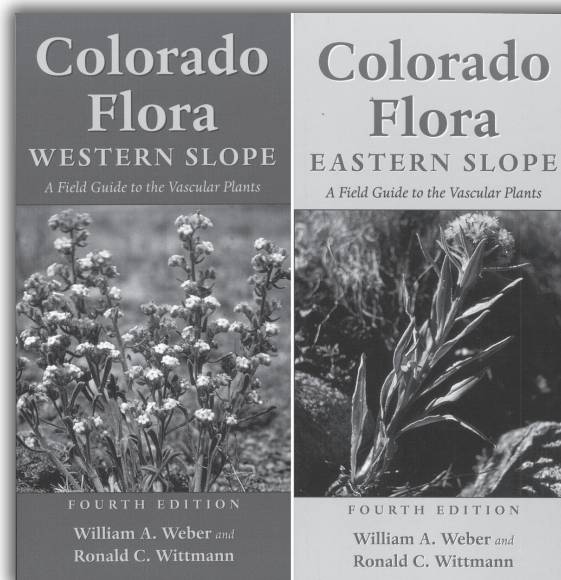
This guide, which includes 1,118 color photographs, covers species which may be locally common but are not as widespread as those in the Color Atlas. Both this text and the *Color Atlas* cover most major weeds in fine and rough turfgrasses, plant nurseries, ornamentals, landscapes, pastures, roadsides, gardens, crops, and waste areas.

Spring Wildflowers of the Northeast: A Natural History by Carol Gracie with a foreword by Eric Lamont. 2012. (ISBN: 978-0-691-14466-5, hbk.). Princeton University Press, 41 William Street,



Princeton, NJ 08540, U.S.A. (Orders: <http://press.princeton.edu/titles/9668.html>, 609-258-4884, 609-258-6305 fax). \$29.95, 290 pp., 512 color illus., 7½" × 10".

From the publisher: This exquisitely illustrated volume provides an in-depth look at spring-blooming wildflowers of the Northeast, from old favorites to lesser-known species. Featuring more than 500 full-color photos in a stunning large-sized format, the book delves deep into the life histories, lore, and cultural uses of more than 35 plant species. The rich narrative covers topics such as the naming of wildflowers; the reasons for taxonomic changes; pollination of flowers and dispersal of seeds; uses by Native Americans; related species in other parts of the world; herbivores, plant pathogens, and pests; medicinal uses; and wildflower references in history, literature, and art. The photos capture the beauty of these plants and also illustrate the concepts discussed in the text.



Colorado Flora: Western Slope. A Field Guide to the Vascular Plants, Fourth Edition by William A. Weber and Ronald C. Wittmann. 2012. (ISBN:978-1-60732-142-2, pbk.). University Press of Colorado, 5589 Arapahoe Ave., Suite 206C, Boulder, CO 80303, U.S.A. (Orders: http://www.upcolorado.com/content/_welcome, 800-627-7377). \$27.95, 608 pp., 108 line drawings, 1 map, 4 tables.

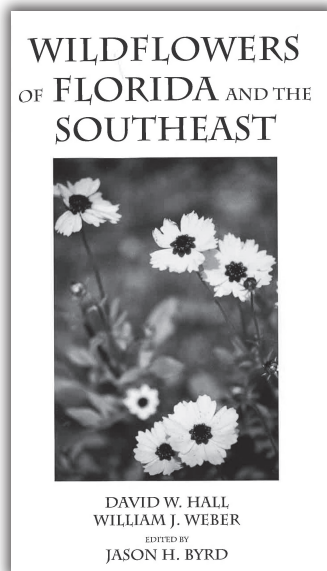
Colorado Flora: Eastern Slope. A Field Guide to the Vascular Plants, Fourth Edition by William A. Weber and Ronald C. Wittmann. 2012. (ISBN: 978-1-60732-140-8, pbk.). University Press of Colorado, 5589 Arapahoe Ave., Suite 206C, Boulder, CO 80303, U.S.A. (Orders: http://www.upcolorado.com/content/_welcome, 800-627-7377). \$27.95, 608 pp., 104 line drawings, 1 map, 4 tables.

From the Publisher: *Colorado Flora: Western Slope* describes the remarkable flora of the state, distinctive

in its altitudinal range, numerous microhabitats, and ancient and rare plants. Together with *Colorado Flora: Eastern Slope*, Fourth Edition, these volumes are designed to educate local amateurs and professionals in the recognition of vascular plant species and encourage informed stewardship of our biological heritage.

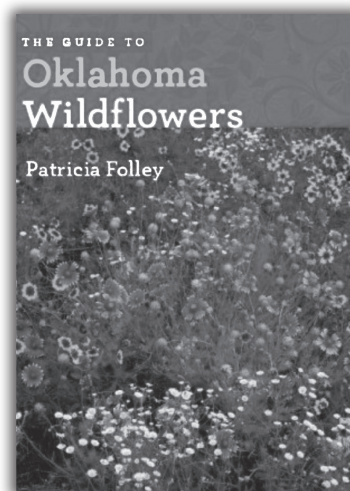
These thoroughly revised and updated editions reflect current taxonomic knowledge. The authors describe botanical features of this unparalleled biohistorical region and its mountain ranges, basins, and plains and discuss plant geography, giving detailed notes on habitat, ecology, and range. The keys contain interesting anecdotes and introductions for each plant family. The book is rounded out with historical background of botanical work in the state, suggested readings, glossary, index to scientific and common names, references, and hundreds of illustrations. The books also contain a new contribution from Donald R. Farrar and Steve J. Popovich on moonworts. The fourth editions of *Colorado Flora: Eastern Slope* and *Colorado Flora: Western Slope* are ideal for both student and scientist and essential for readers interested in Colorado's plant life.

Wildflowers of Florida and the Southeast by David W. Hall and William J. Weber, edited by Jason H. Byrd. 2011. (ISBN: 978-0-615-39502-9, hbk.). D.W. Hall, Wildflower Book 8135 Meadowlark Court Melrose, FL 32666, U.S.A. (Orders: D.W. Hall, Wildflower Book 8135 Meadowlark Court Melrose, FL 32666; Amazon at <http://www.amazon.com/Wildflowers-Florida-Southeast-David-Hall/dp/0615395023>). \$40 (plus s&h: \$8 USPS Media Mail, \$18.95 USPS Priority Mail), 819 pp.



From the Publisher: This regional wildflower book is 819 pages, and features full color photographs throughout. The plants are arranged by color, and each plant species featured contains at least one photograph of the plant and a concise description of the season of flower, geographic range, leaf shape and type. Scientific names are listed along with the most frequently used common names known to the authors. The text was written by Dr. David W. Hall, an internationally known botanist, and is

the culmination of a life effort by Dr. William Weber, a well known wildlife photographer, to show his collection of wildflower photos. This book is an invaluable resource to gain knowledge of many species of plants found throughout the southeastern United States.



The Guide to Oklahoma Wildflowers by Patricia Folley. 2011. (ISBN: 978-1-60938-046-5, pbk.). University of Iowa Press, 119 W. Park Road, 100 Kuhl House, Iowa City, IA 52242-1000, U.S.A. (Orders: <http://www.uiowapress.org/books/2011-fall/guide-oklahoma-wildflowers.htm>, Phone: 319-335-2000, Fax: 319-335-2055, Phone orders: 800-621-2736, Fax orders:

800-621-8476, E-mail: uipress@uiowa.edu). \$39.95, 312 pp., 415 color photos, 1 color map, 6" × 9".

From the Publisher: With its Rocky Mountain foothills, hardwood forests, many rivers and streams, low mountains, sand dunes, cypress swamps, and wide swaths of rangeland and pastureland, the Great Plains state of Oklahoma is one of only four with more than ten ecoregions. Tallgrass, mixed-grass, and shortgrass prairies are native to large areas; rainfall and temperature are quite variable; and elevations drop from 5,000 to 300 feet. This diversity ensures that Oklahoma is host to hundreds of species of wildflowers, yet no guidebook to these botanical riches has been available in recent years. Patricia Folley's beautifully photographed and carefully compiled *Guide to Oklahoma Wildflowers* fills this gap.

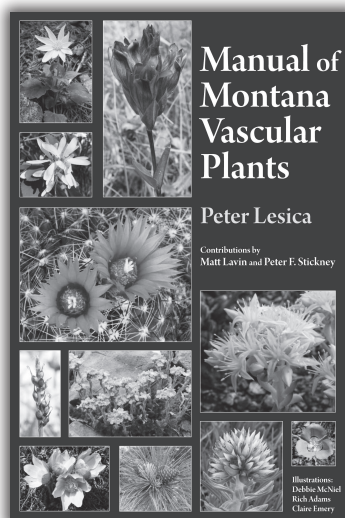
Trees, Shrubs, and Woody Vines of East Texas, Third Edition by Elray Nixon, Illustrated by Bruce Lyndon Cunningham. 2012. (ISBN: 978-0-934115-10-0, pbk.). Bruce Lyndon Cunningham. (Orders: bruce1c@suddenlink.net or call 936.569.6965). \$59.95, 256 pp., 345+ b/w illustrations, 8" × 10".

From the Publisher: Contains keys & illustrations for over 300 woody plant species in East Texas; contains an illustrated glossary of plant structures with over 200 terms; contains keys that rely mostly on leaf, twig, & stem characteristics; can be used by botanists, foresters, naturalists in nearby states to the north and east.

Louisiana Wildflower Guide by Charles Allen, Ken Wilson, and Harry Winters. 2011. (ISBN: 0-9718625-2-4). Allen's Native Ventures, 5070 Hwy. 399; Pitkin, LA 70656, U.S.A. (Orders: www.nativeventures.net, 337-328-2252). \$30 (+ \$3 s&h), 251 pp., 500 + color photos.

Manual of Montana Vascular Plants by Peter Lesica, Contributions by Matt Lavin and Peter F. Stickney, Drawings by Debbie McNeil, Rich Adams, and Claire Emery. 2012. (ISBN-13: 978-1-889878-39-3, pbk.). Botanical Research Institute of Texas, 1700 University Dr., Fort Worth, TX 76107-3400, U.S.A. (Orders: <http://www.brit.org/brit-press/books/montana>; orders@brit.org; 817-332-4441 x 33). \$50, 779 pp., 2000 + maps, 128 b/w plates b/w, 6 1/2" x 9.5".

From the Publisher: Montana is the fourth largest state in the United States. It includes portions of the Northern Great Plains and the Rocky Mountains. The vegetation of Montana is diverse, due primarily to the size of the

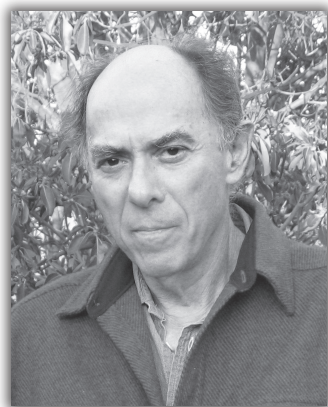


state and its great topographic relief, which provide strong variation in environmental factors. Montana has a relatively large flora for a northern continental region due to being at the intersection of the Cordilleran, Great Plains and Boreal floristic provinces. This book is a comprehensive field guide to the more than 2,500 species of Montana's vascular plants. It contains descriptions as well as habitat and distribution information based on specimens housed at the state's two major herbaria. Portraits or illustrations of diagnostic structures are provided for nearly one-third of the species.

OBITUARIES

Leslie David Gottlieb 1936–2012

Dr. Leslie Gottlieb was born in New York City in 1936. Following a Bachelor of Arts degree from Cornell University in 1957, he earned a Master's degree from Oregon State University in 1965, where he studied hybridization between species of manzanita in southwestern Oregon. His Ph.D. at the University of Michigan in 1969 examined patterns of diversity and mechanisms of speciation in *Stephanomeria*. He then joined the faculty of the Department of Genetics at the University of California, Davis where he taught classes in genetics and evolutionary biology, and served as department chair for three years during the mid-1980s. Gottlieb researched a broad array of subjects including plant speciation, polyploidy, biochemical evolution of isozymes



and molecular genetics. He will be long remembered as a pioneer and strong advocate for the application of biochemical and molecular data to plant systematics. Many of his studies dealt with rare and endangered species, particularly in the genera *Clarkia* and *Stephanomeria*. He also wrote the *Flora of North America North of Mexico* treatment of *Stephanomeria*.

Gottlieb published more than 120 research papers and received a number of awards including a John Simon Guggenheim Fellowship (1975), Fellow of the American Association for the Advancement of Science (1985), Alumni Association Fellow of Oregon State University (1993), and the Botanical Society of America Merit Award (2000) and Centennial Fellow Award (2006).

In 2004, Leslie and his wife Vera Ford Gottlieb retired from UC Davis to Ashland, Oregon. He was active in the Native Plant Society of Oregon, and served as Chair of the Rare and Endangered Plants Committee. He passed away on January 31, 2012, from the complications of pancreatic cancer. He was 75.

—Aaron Liston

Charles T. Mason Jr. 1918–2012

Well-known North American botanist and FNA contributor Chuck Mason passed away on March 7, 2012. He was 94 and had been retired for several years. Charles Thomas Mason Jr. was born on 26 March, 1918, in Joliet, Illinois. After undergraduate work at the University of Chicago, he completed a Master's degree in 1942 and a Ph.D. in 1949, both at the University of California.

His dissertation was on the developmental biology and systematics of the Limnathaceae, a family that is endemic to the United States and Canada and emblematic of the FNA Project. His major professor was Lincoln Constance, but he was also influenced heavily by G. Ledyard Stebbins, Herbert L. Mason (his uncle), and Annetta Carter. In 1943, while at Berkeley, he met and married his wonderful wife, Patricia.

After completing his doctorate, Chuck accepted an instructorship in botany at the University of Wisconsin–Madison. During his four years there, he began his taxonomic studies of perennial North American gentians, which became a lasting research focus. In 1953, he accepted a professorship in the Plant Sciences Department at the University of Arizona and became curator of the university's herbarium. At that time, the herbarium was somewhat in disarray and relatively inactive. Mason is perhaps best known for his dedication to development of the ARIZ herbarium as a museum of regional and international importance for both its historical and newer accessions, as well as its extensive outreach activities. The herbarium also became an outstanding gathering place for a large and diverse group of loosely affiliated amateurs and professionals with broad interests in ethnobotany, horticulture, agriculture, ecology, climatology, conservation, taxonomy, and various other disciplines.

Chuck Mason botanized extensively in the U.S. and Mexico. Under his leadership, the herbarium also acquired several important collections, including the personal herbaria of Thomas Kearney, Robert Peebles, and Howard Scott Gentry, and set up an active international exchange program. As a result of the increased pace of acquisitions, during his nearly half-century association with the University of Arizona Herbarium, vascular



Chuck Mason and one of his students, Carole Jenkins, on a field trip to the Cabeza Prieta in southwestern Arizona, March 1979.

plant accessions tripled to about 300,000 specimens.

By 1960, the year that the Kearney and Peebles *Arizona Flora* was published, Chuck began compiling an extensive series of additions to the Arizona flora. He was instrumental in the inception of the *Vascular Plants of Arizona* Project, which began publishing fascicles in 1992, and he continued to be active in the editing of this work well into his retire-

ment. In recognition of these efforts, the Arizona Botanists Group honored him with a special award in 2007. Mason also authored a number of papers on taxonomy and cytology of various angiosperm groups. His field work in Mexico resulted in *Mexican Roadside Flora*, a popular field guide co-authored with Pat Mason.

Chuck was an outstanding teacher and mentor. His encyclopedic knowledge of plants was coupled with a dry sense of humor and an engaging teaching style. He was a well-known figure on campus with his trademark bow tie (later, a bolo tie). Several of his students went onto careers in botany. In addition, Chuck was active in several honor societies, including Sigma Xi, Phi Kappa Phi, and Gamma Sigma Delta, and contributed to the development of numerous young scholars through these groups. He kept in touch with many of his former undergraduate and graduate students, and he and Pat delighted in visiting some of his foreign students during their many travels.

When the Flora of North America Project began compiling manuscripts in the late 1980s, Dr. Mason became a charter member of the regional reviewers group and continued to contribute to this effort well into his retirement. He also agreed to write a treatment of the Crossosomataceae, a family that he had begun to study during his discovery and publication of the uncommon novelty, *Apacheria chiricahuensis*, in 1975. His treatment, co-authored with George Yatskievych, is scheduled to appear in the forthcoming Volume 9.

Chuck Mason will be remembered among botanists for his encyclopedic knowledge of the Southwestern and Mexican floras and his dedication to the University of Arizona and its herbarium. His generous spirit will be missed by those who knew him.

—George Yatskievych

Ronald Leighton McGregor 1919–2012

Ronald Leighton McGregor, Curator Emeritus of the Ronald L. McGregor Herbarium at the University of Kansas, died April 21, 2012, at the age of 93. Born in Green, Kansas, on April 4, 1919, he graduated from high school in Oregon, Missouri, in 1937. He received his B.S. degree in botany from the University of Kansas in 1941 and started graduate studies at KU that same year. He served in the U.S. Army from 1942 to 1946, stationed most of that time in the Pacific Theater.

Ron resumed his graduate studies at KU in 1946, completing his M.S. in 1948 and Ph.D. in 1954. He was promoted to Assistant Professor at KU in 1954, when he also took over directorship of the herbarium, then with about 70,000 specimens. He was promoted to Associate Professor and Chair of the Department of Botany in 1957 and to Professor in 1961. He administered the construction of a new botany greenhouse and a new herbarium building on KU's West Campus in the early 1960s. Around that same time, he initiated systematic efforts to document the plants of the Great Plains with financial support from the Bridwell Foundation. The Foundation helped underwrite field expeditions to every county in the Great Plains, garden plot studies of range grasses, and specimen preparation into the 1980s.

Ron continued to serve as Chair of Botany until 1969, when he became the first Chair of the Department of Biological Sciences. He continued in that capacity until 1973. From 1955 to 1973, he advised 21 M.A. and 19 Ph.D. students, many of whom went on to careers in academia and science. In 1971, he helped convene a meeting of Great Plains botanists. That group formally organized as the Great Plains Flora Association in 1973, with Ron serving as the coordinator. The Association published the *Atlas of the Flora of the Great Plains* in 1977 and the *Flora of the Great Plains* in 1986.

From 1973–1983, Ron served as Director of the Kansas Biological Survey. In 1984, with funding from the Bridwell Foundation, he oversaw construction of an annex to the herbarium building; the entire building was named the Joseph S. Bridwell Botany Research Laboratory in 1985. Ron continued to serve as Professor and Curator until 1989. At his retirement in 1989, the herbarium had grown to nearly 300,000 specimens. In 1990, the collection formally was named the Ronald L. McGregor Herbarium and “dedicated to the study of the Great Plains flora.”

Ron authored nearly 200 papers and books during his career and collected nearly 42,000 specimen numbers in the U.S. and Mexico. His duplicate specimens are

widely distributed among North American herbaria and frequently cited in the literature. He served as a regional reviewer for the Flora of North America project, putting his prodigious knowledge of Great Plains plants to good use. He also authored treatments for five genera in Hydrangeaceae; those will be published posthumously in Volume 12. He was active at various times in more than a dozen professional organizations.

Ron continued to work in the herbarium nearly every day after retirement until April 2009. On rare occasions when he took time off from the herbarium, he enjoyed fishing and working in his garden. Ron was keenly interested in Kansas history, and he had an encyclopedic memory for dates, places, people, and events. He is survived by his wife of 70 years, Dorothy M. McGregor.

—Craig Freeman

Norton G. Miller 1942–2011

Dr. Norton G. Miller, emeritus curator of bryology and quaternary paleobotany at the New York State Museum, died in Syracuse on December 7, 2011 following a 20-year battle with prostate cancer. Norton was born in Buffalo on February 4, 1942 and completed a bachelor's of arts in biology at the University of Buffalo, now the State University of New York at Buffalo, in 1963, graduating with high distinction in biology. Growing up in rural western New York, Norton was an avid outdoorsman learning as much as he could about the environment around him. As a boy he kept a flock of bantam hens, roamed the woods with the family dog, Nipper, became an avid birder, and studied many natural history subjects with Mabel James, a local naturalist who was his first mentor. He developed an intense interest in botany leading to lifelong knowledge of many types of plants. As a teenager, Norton served as Miss James' assistant on several of the Buffalo Museum of Science Conservation Caravans that she led to locales in the Northeast. During this time he was active in the Boy Scouts of America, achieving the rank of Eagle Scout. He developed an interest in bryophytes and spent several summers apprenticing with Dr. Stanley J. Smith, a bryologist at the New York State Museum, in whose footsteps he would follow several decades later. He graduated from Holland Central School in 1959. Following completion of his undergraduate degree, he enrolled in Michigan State University to pursue a PhD in botany. The topic of his dissertation, completed in 1969, was glacial and post-glacial vegetation change in southwestern New York State, also published as a New York State Museum Bulletin. Dr. Miller's research interests included plant

systematics and floristics, especially of bryophytes and seed plants; quaternary paleobotany and paleoecology and the tertiary and quaternary history of the bryophyta. His field work in these areas led him to explorations throughout the northern latitudes from New York and New England to Michigan, Colorado, the west coast, the southeast, Alaska, Russia, Scandinavia, Scotland, Iceland, Greenland, Canada and Japan. He authored more than 100 scholarly publications, gave many presentations, taught a variety of courses at multiple institutions including Harvard University and the University of North Carolina at Chapel Hill, collaborated with colleagues throughout the world, provided leadership to numerous professional organizations, including the American Bryological and Lichenological Society, and served on the editorial boards of ten journals. He is survived by his wife, Heather Swan Miller; son, Dr. Andrew David Miller and his wife Dr. Allison Miller; and granddaughter, Natalie Rose Miller. He is also survived by his brother Brandt J. Miller and his wife Lucy Leighton Miller whom he was visiting at the time of his death. A celebration of his life may be held in the spring. Contributions in his memory may be made to the New York Botanical Garden.

—Published in *Albany Times Union*, December 30, 2011

The Bryophyte Editorial group regrets the loss of Norton. He was a long-time associate with FNA, as taxon editor for Vol. 27, and contributor to Vol. 28.

Stephen Lee Timme 1950–2012

Stephen Lee Timme, professor emeritus at Pittsburgh State University and Curator Emeritus of the T.M. Sperry Herbarium, died April 10, 2012, at the age of 61. He was born August 27, 1950 in Kansas City, Kansas, the son of William Everett and Esther Mae Timme. He served from 1969 to 1970 in the U.S. Army 101st Airborne Division in Vietnam, receiving two purple hearts. He received his B.S. and M.S. degrees in biology from Missouri State University (1978, 1981) and Ph.D. in botany from Mississippi State University (1985).

Stephen taught biology, botany, ecology, and plant taxonomy at Pittsburg State University for nearly 20 years. His research specialties included bryophyte systematics, floristics and ecology, and tropical botany. He authored the treatment for *Vesicularia* (Hypnaceae), which will appear in FNA Volume 28. Stephen was active in the native plant societies of Kansas and Missouri and was an avid photographer. Many of his photographs appear in the four books that he authored or co-authored: *Wildflowers of Mississippi*, *Wildflowers of the Natchez*

Trace, Medicinal and Useful Plants of the Upper Amazon, and *Wildflowers of Southeast Kansas*.

He is survived by his wife, Susan Lee (Shroyer) Rozgaja; two sons, Caleb Timme and Zach Timme, both of Pittsburg, Kansas; his mother, Esther Timme, Harrisonville, Missouri; two brothers, Wyatt Timme Arvada, Colorado and Matthew Timme, Harrisonville, Missouri; and one sister, Robin Timme, Archie, Missouri.

—Craig C. Freeman (KANU)

Edward G. Voss 1929–2012

Edward Groesbeck Voss, died on February 13, 2012, in Ann Arbor, Michigan, after a brief illness. He was born on February 22, 1929, in Delaware, Ohio, the son of David O. Voss and Katherine (Groesbeck) Voss. After graduating from high school in Toledo, Ohio, in 1946, he subsequently received a bachelor's degree with honors from Denison University (1950), and a master's in Biology (1951) and a doctoral degree in Botany (1954), both from the University of Michigan.

In 1956, he was appointed as a research associate to conduct a five-year project to document the flora of Michigan. He joined the faculty of the Department of Botany in 1960 as assistant professor and was later promoted to associate professor (1963) and professor (1969). The study of the Michigan flora took longer than originally anticipated, in part due to his extremely methodical approach. With volumes appearing in 1972, and 1985, his work culminated 40 years after its start with the appearance of the third volume of the Michigan Flora in 1996; the year of his retirement. He continued to work actively at the herbarium until late in 2011.

His research focused on the vascular plants of the Great Lakes region, with a particular interest in boreal environments and aquatic plants. In addition to the *Michigan Flora*, he published nearly 100 other articles, on subjects including Lepidoptera of the northern Great Lakes area, history of Michigan botanists, and botanical nomenclature. He founded and edited the first 15 volumes of *The Michigan Botanist*, the scientific journal of the Michigan Botanical Club. A series of articles about Ed, including a complete bibliography, will appear in that journal later this year. He served as a regional reviewer for Michigan for *Flora of North America North of Mexico* until this past year; many treatments benefitted from his eye for detail.

He is survived by his sister, Eleanor (Elly) Hendricks (Tom), and nephews; Jim and Andy Hendricks.

—Richard K. Rabeler (MICH)
and Anton A. Reznicek (MICH)

Meetings/Workshops

MONOCOTS V

5th International Conference on Comparative Biology of Monocotyledons July 7–13, 2013, New York

The New York Botanical Garden and Fordham University invite you to MONOCOTS V: 5th International Conference on Comparative Biology of Monocotyledons is to be held July 7–13, 2013. The scientific program will consist of symposia, contributed papers, and poster sessions held at Fordham University's Rose Hill Campus in the Bronx, New York City. Optional activities will include a ticketed banquet, tours of the science campus and grounds of The New York Botanical Garden, and post-conference field trips

to botanically interesting sites in the region. Air-conditioned dormitories will be available at the Rose Hill Campus of Fordham University, across the street from the New York Botanical Garden.

Online registration, abstract submissions, and Fordham University dormitory room reservations will be possible as of 1 December, 2012, through the Conference website. More information is available at <http://www.regonline.com/builder/site/Default.aspx?EventID=1060172>; email: monocotsv@gmail.com.

Botany 2012—The Next Generation July 7–11, 2012, Columbus, Ohio

Greater Columbus Convention Center, Columbus, Ohio
For more information visit <http://www.botanyconference.org/>

59th Annual Systematics Symposium, Missouri Botanical Garden October 12–13, 2012, St. Louis, Missouri

With support from the National Science Foundation
Organizing committee: Nick Turland
For more information visit <http://www.mobot.org/MOBOT/research/symposium/welcome.shtml>

Texas Association of Botanic Gardens Annual Meeting February 21–23, 2013, Weatherford, Texas

Chandor Gardens and Clark Gardens Botanical Park
Organizing committee: Steven Chamblee
For more information call 817-988-7857; schamblee@weatherfordtx.gov