

Flora of North America



Volume 24, Number 1

Newsletter

January – June 2010

PRESIDENT'S REPORT

Flora of North America Association

Luc Brouillet, FNAA president

Since the publication of the last newsletter, the most significant event to have occurred with the Flora of North America project is the publication of Volume 7, a massive opus of 797 pages that covers, among others, two very significant families in the flora—the Brassicaceae and the Salicaceae. In each case, the treatment represents the synthesis of the life's work of leading experts in the groups, respectively Dr. Ihsan Al-Shehbaz (the majority of Brassicaceae) and Dr. George W. Argus (genus *Salix*). Though new findings may already be adding to our knowledge of these groups, these two treatments admirably exemplify the unique role played by FNA in presenting expert knowledge to the general public in a readily useable form, knowledge that often might not have become available elsewhere or before these talented individuals retire from the profession.

Publication of FNANM Volume 7 required the work of many individuals, including the authors, reviewers, artists Barbara Alongi, Linny Heagy, John Myers, and Yevonn Wilson-Ramsey, technical editor Martha Hill, taxon, lead, and specialist editors, and editorial director and manager. All of them deserve our thanks and applause as well as our funding supporters!

However, today I would like to bring attention to the cohort of hard-working, dedicated people who act behind the scenes to ensure that publication occurs in a timely manner once the writing, illustrating, and editing are done. These people have limited contact with authors and editors and are little known by most in the botanical community. At the artwork level, let us mention John Myers who, in addition to being an illustrator, does illustration panel composition, Fred Keusenkothen, scanning supervisor, and Michael Blomberg, scanning specialist. Mapping is supported by Trisha Distler, our GIS analyst. Manuscripts pass through many hands to ensure that texts are correct, follow FNA guidelines, and are made into pages: Ariel Roads Buback, manuscript specialist, Michele Funston and Ruth King, editorial assistants, and

Volume 7 Published!

Heidi H. Schmidt

March 22, 2010, marked the publication release date for *Volume 7: Magnoliophyta: Salicaceae to Brassicaceae*, the 16th volume in the 30-volume Flora of North America series. The volume includes 11 families, 125 genera, and 923 species with over 365 taxa illustrated.

Four talented artists executed the line drawings: Barbara Alongi, Linny Heagy, John Myers, and Yevonn Wilson-Ramsey. John Myers expertly rendered the color frontispiece of *Salix ovalifolia* and composed the illustration panels.

Heartfelt congratulations and thanks go out to the lead editor of the volume, Jim Zarucchi, to the taxon editors Dave Boufford, Craig Freeman, Jackie Poole, and Leila Shultz, and to technical editor Martha Hill. The continuing painstaking work done on every volume by Kanchi Gandhi, nomenclature editor, Robert Kiger, bibliographic editor, and John Strother, reviewing editor, also deserves appreciation and gratitude.

Pat Harris, Cassandra Howard, Kristin Pierce, and Ruth King performed the vast majority of editorial processing for this volume of the Flora at the Missouri Botanical Garden in St. Louis where prepress production for the volume, including typesetting and layout, plus coordination, for all aspects of planning, executing, and scanning the illustrations, was completed.

Finally, The Flora of North America Association remains deeply grateful to the authors and contributors who continue to help create, encourage, and sustain the Flora.

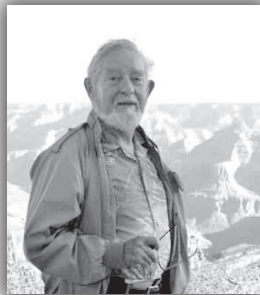
Pat Harris, Cassandra Howard, and Kristin Pierce, editorial assistants and composers. Finally, Hong Song, programmer, brings the finished manuscripts to eFlora and the web. Under the skillful supervision of Jim Zarucchi and Heidi Schmidt, this team brings volumes to completion before they are printed by Oxford University Press. They are the unsung heroes (sometimes literally) of the FNA. I want to express the gratitude of the FNA community to them.

Focus on Southwest Regional Review: The Arizonans

Nancy R. Morin

Regional review of Flora of North America treatments of taxa that occur in the southwestern U.S. faces the challenge common to The West: too few botanists in a vast, phytogeographically diverse area. FNA has been fortunate to have three dedicated reviewers in Arizona who have served from the beginning: H. David Hammond at Northern Arizona University, Charles T. Mason Jr. at the University of Arizona, and Donald Pinkava at Arizona State University. All three worked under Grady Webster while he was Southwest Regional Coordinator, starting from Volume 3, the first angiosperm volume, published in 1997. Dr. Pinkava continues as an active reviewer, but Dr. Mason retired from service last year for reasons of health, and Dr. Hammond is now moving to New York State to be closer to his daughter.

Authors who have written treatments of taxa that occur in the Southwest will have had the benefit of Dave Hammond's thoughtful reviews. He has tested every key, using specimens at the Deaver Herbarium, and his fascination with all aspects of plants and his keen eye for details, have been eloquently (and always constructively) communicated in his review comments. He actually has



David Hammond



Tina Ayers

an East Coast background, having taught at the State University College, Brockport, New York. Later he worked in the department of Scientific Publications at the New York Botanical Garden until he retired and moved to Flagstaff. For many years he was the Editor, and later an Associate Editor, for the *Bulletin of the Torrey Botanical Club*.

I am sorry to be losing David from the team of Southwest Regional Reviewers, but I'm glad to report that he has agreed to help occasionally by doing some general reviews. What will we do to replace him? David's suggestion, which we are adopting, was to ask the group of extremely active floristicians who have the Deaver Herbarium as their base to be a kind of sub-team of reviewers under the leadership of Dr. Tina Ayers. We look forward to comments from Kyle Christie, currently working for the National Park Service on a vegetation map of Grand Canyon National Park; Glenn Rink, who has completed a flora of Canyon de Chelly; and Max Licher, who is working on a flora of Oak Creek Canyon and vicinity; and Tina Ayers, associate professor at Northern Arizona University Biology Department and curator of the Deaver Herbarium.

I am so grateful to Don Pinkava, Chuck Mason, and David Hammond for their many years of southwest reviewing. Thank you, Don, for sticking with us, and thanks in advance to the new team of Northern Arizona reviewers

GLOBAL PLANTS INITIATIVE

A Remarkable Botanical Resource

Nancy R. Morin

With funding and leadership from the Andrew W. Mellon Foundation, herbaria around the world have joined in a partnership called The Global Plants Initiative (GPI) to digitize and make available images of plant type specimens and other holdings used by botanists and others working in plant science. Partners include more than 150 institutions in 52 countries. GPI has grown out of two earlier efforts: the African Plants Initiative, which focuses on plants from Africa, and the Latin American Plants Initiative, which contributes plants from Latin America. GPI is also expanding to Asia, with a first partner working from Nepal, and is beginning to

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 Web site, www.fna.org.

Readers are invited to send appropriate news items to:
Barney Lipscomb, Newsletter Editor
Leonhardt Chair of Texas Botany
Botanical Research Institute of Texas
500 4th Street
Fort Worth, TX 76102-4025, USA
Items also can be sent by e-mail to: barney@brit.org or
Kristin.Pierce@mobot.org

include North America north of Mexico. Many of the taxa for which type specimens have been imaged also occur outside of Africa and Latin America.

The resulting images and data are provided through JSTOR Plant Science, an online environment that brings together content, tools, and users. In addition to images of type specimens, JSTOR Plant Science provides access to scientific literature, botanical illustrations and photographs (20,000 of them), some images of ethnobotanical objects, and related materials. Links are provided to literature held in JSTOR and to Biodiversity Heritage Library materials. As a result, it is possible to view an image of a type specimen and an image of the original document in which the taxon was named. Descriptive information and taxonomic placement are given for African plants based on references such as the Flora of Somalia, Flowering Plants of South Africa, Flora Capensis, Flora Zambesiaca, and Useful Plants of West Tropical Africa. Flora of North America treatments will be integrated in the same way.

Currently, for Flora of North America authors, this resource would be most useful in treatments of taxa native outside of North America north of Mexico. Authors, especially at smaller institutions, know how difficult it is to find good information on these taxa, especially for the ones not native in North America. The GPI collection included 919,707 objects on 1 June 2010. Of these, 66,411 images are from herbaria in Africa; 619,698 are from herbaria in Europe; 202,277 are from herbaria in North America; and 31,321 are from herbaria in South America. So far, the greatest number of type specimens were collected in South America (317,207) and Africa (312,112), but a surprising number are from other regions: 68,472 from Northern America (including Mexico); 44,459 from tropical Asia; 55,008 from the Pacific; and 29,671 from temperate Asia. Many participating herbaria have full time staff imaging specimens, so these numbers are increasing rapidly.

Progress on Volumes

Authors, editors, reviewers, and artists have been making good progress on all remaining volumes. Since the last AFNA Newsletter, treatments of 107 genera and 329 species have been received from authors, and 700 species in 290 genera have been sent out for review.

Volume 6 Update: *Robert Kiger*

- Lead Editorial Center: The Hunt Institute for Botanical Documentation, Robert Kiger Lead Editor; Mary Ann Schmidt, Technical Editor
- Taxon Editors: David E. Boufford (Harvard University), Ronald L. Hartman (University of

The Andrew W. Mellon Foundation has brought together the technical staff and the curators at partner institutions for yearly meetings to discuss and develop procedures and protocols used for imaging the specimens and recording label, literature, and metadata. The images are of extremely high resolution. Zooming in is like using a good dissecting microscope. A color card is used on every image. Special cameras are now being used to image thicker specimens. Regional networks of herbaria have developed so that type specimens in smaller herbaria can be included in the GPI.

To use these specimens to greatest advantage, JSTOR has developed an easy to use interface that supports research and teaching, including the ability to measure and record plant specimens, share observations and objects with colleagues and classmates, and investigate global plant biodiversity.

The basic Global Plants Initiative files are available at <http://plants.jstor.org>, including thumbnail images of the specimens and label data. Ability to view or download larger images is restricted to JSTOR subscribers; however, for taxa for which a “taxon page” has been created, the entire description and distribution can be viewed without any subscription. Accessing the Plant Science files through the Northern Arizona University’s Cline Library required choosing JSTOR, clicking on the “About” tab at the top of the home page, selecting “The Archives” > New Features and Content > JSTOR Plant Science > <http://plants.jstor.org> [which kept me within the NAU subscription]. At that point I could search on a name. To view the high-resolution images, click on the thumbnail, then choose “viewer,” and use the “+” button at the bottom of the screen to increase the magnification. Different libraries may have different options.

Subscription to JSTOR is required to view full documents in the JSTOR archive, but full access to Biodiversity Heritage Library holdings is fast and free.

Wyoming), Robert W. Kiger, Nancy R. Morin, Jackie M. Poole (Texas Parks and Wildlife), Richard K. Rabeler (University of Michigan); Leila M. Shultz (Utah State University); and Frederick H. Utech (Hunt Institute for Botanical Documentation)

- Families: 19 families, 105 genera, 533 species; Cucurbitaceae to Droseraceae
- Illustrations: 144 species as full habit

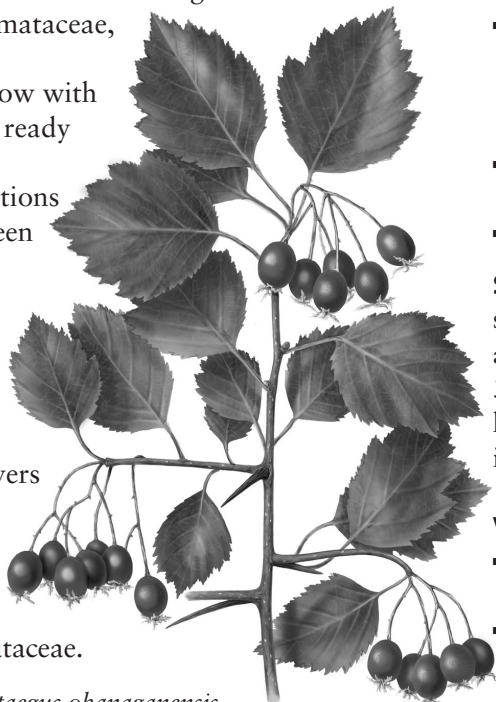
Status: The biggest advance for Volume 6 has been getting almost 300 species in 19 genera out for review. Volume 6 now has 64% of the genera and 80% of the species submitted and in review or later technical editing.

Volume 9 Update: Luc Brouillet

- Lead Editorial Center: Canada Center; Lead Editor Luc Brouillet; Technical Editor Helen Jeude
- Taxon Editors: Luc Brouillet (University of Montreal) and Jim Phipps (University of Western Ontario)
- Families: 4 families, 75 genera, 688 species: Rosaceae, Crossosomataceae, Staphyleaceae, and Picramniaceae
- Illustrations: 149 species as full habit; 63 additional insets

Status: Volume 9 has made significant progress since October. All manuscripts (100% of species) have gone through regional review, but five have yet to be returned by the authors with their corrections (all being actively worked on by authors); 89% of manuscripts (53% spp.) have gone through specialist review (bibliographic, nomenclature, etc.), and all but two of these are styled and indexed; the low percentage of species is due to the fact that a large share of species are in *Rosa* and *Crataegus*, which are currently being prepared for specialist review. Most of the Rosaceae subfamilial and tribal descriptions, with keys to genera, have been corrected and are in special editing or beyond. A large number of manuscripts have also been released to FNA Central for final editing and galley preparation. The remaining families in Volume 9—Crossosomataceae, Picramniaceae, and Staphyleaceae—are now with FNA Central and are ready to go to galleys.

Nearly all illustrations in the volume have been done by artist Marj Leggitt, including the frontis-piece, which illustrates *Crataegus okanaganensis*, a red-fruited plant; additionally, John Myers illustrated species of *Rosa* and Barbara Alongi prepared those for the three genera of Crossosomataceae.



Crataegus okanaganensis
Frontispiece for Vol. 9. Marjorie C. Leggitt, FNA artist.

Work on Volume 9 has been supported by the Chanticleer Foundation, the Andrew W. Mellon Foundation, and an anonymous foundation. So far, art has been sponsored by the Haverford College Arboretum (*Exochorda racemosa*) and Marshall R. Crosby and Shelley R. Pryor (*Malus ioensis*); the American Rose Society has sponsored 10 illustrations of *Rosa*. Anyone interested in sponsoring art in Volume 9 or any other volume can contact Nancy Morin, nancy.morin@nau.edu; 707-882-2528; P.O. Box 333, Point Arena, California 95468.

Volumes 10 and 11 Update: Heidi H. Schmidt

- Lead Editor: James L. Zarucchi; Technical Editor Martha Hill
- Taxon Editors: Dave Boufford, Luc Brouillet, Geoff Levin, Jackie Poole, Jay Raveill, Leila Shultz, Gordon Tucker, and Michael Vincent
- Families: 13 families, 212 genera, 1869 species (see below for discussion)
- Illustrations: ca. 416 species as full habit; 53 additional insets

Status: Editors have been busy getting treatments of 41 genera and 77 species out for review. The largest families in these 2-volumes are Fabaceae and Onagraceae. Of the other families, all of the Buxaceae, Gunneraceae, Lythraceae, Melastomataceae, and Myrtaceae are submitted and in various stages of editing. Illustrations of 128 taxa with 15 insets are in the ink stage.

Volume 12 Update: Geoffrey A. Levin and Lynn Gillespie

- Lead Editors: Geoffrey A. Levin and Lynn Gillespie
The Technical Editor is unassigned
- Taxon Editors: Dave Boufford, Luc Brouillet, Lynn Gillespie, Geoff Levin, Nancy Morin, Jackie Poole, Rich Rabeler, Deb Trock, Gordon Tucker, and Elizabeth Wells
- Families: 29 families, 118 genera, 725 species (see below for discussion)
- Illustrations: ca. 189

Status: 13 genera and 29 species were received and 216 species in 18 genera have been sent out for review in about the past six months. Now 62% of the genera and 39% of the species treatments are in hand. Rhamnaceae have been submitted and sent for review. Eighty of the illustrations for the volume have been inked.

Volume 13 Update: Luc Brouillet

- Lead Editorial Center: Canada Center; Lead Editor Luc Brouillet. The Technical Editor is unassigned.
- Taxon Editors: Luc Brouillet (University of Montreal),

Bruce Ford (University of Manitoba), Geoff Levin (Illinois Natural History Survey), Nancy Morin (FNA), Rich Rabeler (University of Michigan), Gordon Tucker (Eastern Illinois University), and Alan Weakley (University of North Carolina)

- Families: 13 Families, 152 genera, ca. 631 species: Geraniaceae, Nitrariaceae, Burseraceae, Anacardiaceae, Sapindaceae, Simaroubaceae, Meliaceae, Rutaceae, Balsaminaceae, Escalloniaceae, Araliaceae, Pittosporaceae, and Apiaceae

Status: The focus of activity continues to be completing author assignments, especially for Apiaceae. Treatments of Meliaceae, Sapindaceae, and Anacardiaceae have been submitted. Illustration of Volume 13 was assigned to Marj Leggitt, who has already started working on genera for which material had been prepared by authors.

Volume 14 Update: *Robert Kiger*

- Lead Editorial Center: The Hunt Institute for Botanical Documentation, Robert Kiger Lead Editor; Mary Ann Schmidt, Technical Editor.
- Taxon Editors: Richard K. Brummitt (Royal Botanic Gardens, Kew), Robert W. Kiger, Jay A. Raveill (University of Central Missouri), and Janet R. Sullivan (University of New Hampshire).
- Families: 8 families, ca. 99 genera, 614 species. Families Gentianaceae to Hydroleaceae.
- Illustrations: 190 species as full habit

Status: Authors hard at work.

Volume 15 Update: *Heidi H. Schmidt*

- Lead Editorial Center: Missouri Botanical Garden
- Taxon editors: Ron Hartman (University of Wyoming), Ron Kelley (Eastern Oregon University), Jim Miller (New York Botanical Garden), Nancy Morin (FNA), Jackie Poole (Texas Parks and Wildlife Department)
- Families: Fouquieriaceae (1 genus, 1 species), Polemoniaceae, 18 genera, 268 species, Hydrophyllaceae 16 genera, 235 species); Boraginaceae (38 genera, 365 species)

Status: Authors hard at work.

Volume 16 Update: *Heidi H. Schmidt*

- Lead Editor and Lead Editorial Center are unassigned
- Taxon editors: Nancy Morin (FNA), Leila Shultz (Utah State University); Alan Weakley (University of North Carolina)
- Families: Oleaceae (11 genera, 58 species), Lamiaceae (75 genera, 450 species) and Verbenaceae (12 genera, 79 species). All Verbenaceae assigned, all but 13

genera in Lamiaceae assigned. Fifty treatments have been submitted for this volume

Status: 51% of the genera and 47% of the species have been submitted, including all of Verbenaceae and most of Oleaceae, and activity has centered on preparing manuscripts for review or processing reviews.

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

- Lead Editorial Center: The University of Kansas; Lead Editors Craig C. Freeman and Richard K. Rabeler. The Technical Editor is unassigned.
- Taxon Editors: Wayne Elisens (University of Oklahoma), Craig Freeman (The University of Kansas), Deb Lewis (Iowa State University), Rich Rabeler (University of Michigan), and Leila Shultz (Utah State University)
- Families: 8 families, 89 genera, 931 species; Linderniaceae (3 genera, 13 species), Orobanchaceae (26 /281), Paulowniaceae (1/1), Pedaliaceae (2/2), Phrymaceae (4/112), Plantaginaceae (44/468), Scrophulariaceae (8/53), and Tetrachondraceae (1/1)
- Illustrations: 217 species as full habit

Status: As of May 2010, 37% of the genera and 19% of the species have been submitted, with most in review. Unfortunately, manuscript delivery is lagging significantly behind proposed delivery dates. The projected number of illustrations for the volume is 217. Additional funds have been acquired to allow 1 in 3 of the 113 species of *Castilleja* to be illustrated.

Volume 18 Update: *Debra K. Trock*

- Lead Editorial Center: California Academy of Science, Lead Editor Deb Trock, Technical Editor Rebecca Peters
- Taxon Editors: David Boufford (Harvard University), Craig Freeman (University of Kansas), Lynn Gillespie (Canadian Museums of Nature), Jay Raveill (University of Central Missouri), Leila Shultz (Utah State University), Gordon Tucker (Eastern Illinois University), and Frederick Utech (Hunt Institute for Botanical Documentation)
- Families: 16 families, 138 genera, 581 species; Families Rubiaceae to Valerianaceae
- Illustrations: 210 species as full habit

Status: The treatment of the Lentibulariaceae was submitted and sent out for review and that for Goodeniaceae is being prepared for regional review.

Bryophyte Editorial Center Update: *Richard H. Zander*

Status of Volume 28: Eighty-nine percent of the genera and 90 percent of the species have been submitted. Only 48 of the expected 284 plates remain to be completed. Introductory chapters for Volume 28 will be Preface (R. Zander); Classification and Phylogeny of the Mosses (J. Shaw); and, Keys to the Genera of Mosses (D. Vitt and W. Buck). Considerable nomenclatural changes have been made with new phylogenetic work and associated new combinations, which holds up the operation. Treatments that have been reviewed, revised, and edited are made available on the FNA Bryophyte website.

Status of Volume 29: 48 families, 121 genera, and 520 species, approximately. Twenty-four percent of the genera and 20 percent of the species are submitted, and five percent of the plates are finished. Authors have been apprised that their volume is scheduled for the not too distant future. Vadim Bakalin (Institute of Biology and Soil Science, Vladivostok) will be at MBG either at the end of 2010 or at the beginning of 2011 to work on orphaned hepatic groups he has recently agreed to do for FNA.

Notice About Provisional Publication

The Flora of North America electronically publishes treatments that have been peer-reviewed and are formatted for eventual publication in hardcopy by Oxford University Press. This is called “Provisional Publication” but is equivalent to publication in a regular scientific journal printed on paper. Minor corrections, additions and other modifications are allowed to the electronic manuscripts, and significant changes are published as new versions become available.

The number of Provisional Treatments that have been posted and are available for public review has grown from 1 to 4! We encourage both the use of these treatments and posting additional treatments from future volumes. For provisional treatments available go the FNA website <http://www.fna.org/review> and look for provisional publications.

Herbarium and Botanical Garden News

Missouri Botanical Garden Board Appoints Dr. Wyse Jackson Successor to Dr. Raven

The Missouri Botanical Garden’s Board of Trustees has appointed Dr. Wyse Jackson, director of the National Botanic Gardens of Ireland in Dublin, as successor to internationally-renowned Garden President Dr. Peter H. Raven.

With the Garden’s Board of Trustees, Dr. Raven played an integral part in the selection process and will play a key role in the future, especially during the 2010–2011 transition period.

Recognized as one of the world’s leading botanists and advocates of conservation and biodiversity, Dr. Raven transformed the Garden into a world-class center for botanical research, education, and horticultural display. He is known globally as an advocate for preserving plant diversity in the face of deforestation, degradation, and global warming. In addition, Dr. Raven is credited for putting a spotlight on the growing problem of nature-deficit disorder, speaking about the need to instill in children a love of nature that will translate into concerned adults. The recipient of hundreds of awards and accolades over his 40-year tenure, Dr. Raven holds the country’s highest award for scientific accomplishment, the U.S. Medal of Science.

“I am extremely pleased with the selection of Dr. Wyse Jackson as the next president of the Missouri Botanical Garden,” said Dr. Raven. “He brings not only a wealth of horticulture and botanical experience, but also a deep understanding of the importance of sustainability and conservation. I look forward to working closely with him over the years to come to help ensure a smooth transition.”

Born in Kilkenny, Ireland, and educated at the University of Dublin, Trinity College, Dr. Wyse Jackson has served as the director of the National Botanic Gardens of Ireland since March 2005. During his tenure, Dr. Jackson placed a new emphasis on organic horticulture and home gardening. He made environmental sustainability a priority of the institution, reducing waste and energy consumption, promoting new programs and research on biodiversity, conservation, and sustainable development. In addition, Dr. Wyse Jackson introduced a wide range of new cultural programs to the Garden and secured for Ireland the fourth Global Botanic Gardens Congress, hosted by the National Botanic Gardens in June 2010. In Ireland, he has also been a leader at national levels in environmental policy development,

providing advice to government in fields including biodiversity, conservation, and climate change.

Prior to his position with the National Botanic Gardens, Dr. Wyse Jackson served as secretary general for the Botanic Gardens Conservation International (BGCI), a chief executive position charged with leadership of the organization. BGCI is a worldwide organization promoting plant conservation, environmental education, and sustainable development through botanic gardens.

University of Alaska Museum of the North Herbarium (ALA)

ALA is pleased to announce the completion of the initial phase of our specimen imaging and databasing project (funded in part by NSF BRC-0646482). ALA now has high-resolution images available online for over 136,000 specimens (http://arctos.database.museum/SpecimenResults.cfm?collection_id=6&mime_type=image/jpeg). Over 185,000 specimens have high-resolution images and/or label data available online (<http://arctos.database.museum>), representing nearly 100% of our vascular plant collection. We have also completed the installation of new compactors (also funded in part by NSF) that has tripled our storage capacity and

“The Garden has been fortunate to benefit from the long and rich tenure of Peter Raven. He has put Missouri on the global map,” noted Arnold Donald, Chair of the Garden’s Board of Trustees. “Going forward, we are in excellent hands with Peter Wyse Jackson, who will continue Dr. Raven’s outstanding legacy in both horticultural displays and science and conservation.”

Dr. Wyse Jackson and his wife, Diane, have three children. He will begin the position of Garden President on Sept. 1.

allowed ALA to safely house many overflow specimens that were previously held in boxes. While filling the new compactors, we up-dated familial assignments to follow the recommendations of APG III for flowering plants and Smith et al. (2006) for ferns. A new project beginning in 2010 will image and database our lichen and bryophyte holdings, making this valuable Arctic collection available online. For more information visit our website (<http://www.uaf.edu/museum/collections/herb/>), or contact the curator, Dr. Steffi Ickert-Bond (smickertbond@alaska.edu), or the collection manager, Jordan Metzgar (jmetzgar@alaska.edu).

Electronic Resources

TexasNonNatives.org

Over 800 species of vascular plants are known to be naturalized in Texas. Information on these species, comparable to data from other states of the southeastern USA, is provided at www.TexasNonNatives.org. A ranking system includes each of the 800+ species, and a Watch List, Expected List, and detailed documentation for species reported in Texas since 1970 also are provided. Data and literature updates are added when available and a blog site provides opportunity for commentary. Several other major features will be added in 2010. The information at TexasNonNatives.org is developed and maintained as a public service by a group

of Texas botanists, the Texas Non-Native Plants Group (TNNPG). With support from The Nature Conservancy, the ranking system and initial data were published in 2009 (*J. Bot. Res. Inst. Texas* 3: 971–991).

Hopefully, others in the southeastern USA interested in invasive species will find useful information at TexasNonNatives.org. Although the organizational structure of TNNPG is less formal than other EPPC’s (Exotic Pest Plant Council), our goals are similar and the data provided for Texas are reliably developed. We also hope that the Texas information can be integrated into larger programs and data sets.

Southwest Environmental Information Network Expands

The Southwest Environmental Information Network (<http://swbiodiversity.org/SEINet>), part of the Southwest Biodiversity Consortium, has now expanded beyond the Arizona holdings in Arizona herbaria to include all of the southwest, including northern Mexico, especially Sonora and Baja California. In addition to all of the university-held herbaria in Arizona, data from

collections held by National Park Service, U.S. Forest Service, and the Cochise County Herbarium are included. New Mexico herbaria include University of New Mexico, New Mexico State University (herbarium and Range Science), Eastern New Mexico University, and Western New Mexico University. Colorado State University Herbarium has been added, as have

southwestern collections held at the New York Botanical Garden and University of California, Riverside. The Navajo Nation Herbarium is available in SEINet. For Mexico the Herbario de la Universidad de Sonora

provides specimen data and the Sky Islands Alliance of the Madrean Archipelago Biodiversity Assessment provides observations. SEINet also provides access to regional checklists, descriptions, and images.

Flora Of Baja California Website Adds Specimens and Images

The Flora of Baja California website (<http://bajaflora.org>) hosted by the San Diego Natural History Museum continues to grow and now provides access to more than 60,000 specimens. Collection data and photo vouchers from the herbarium of the Centro de Investigaciones Biológicas de Noroeste (HCIB), La Paz, Baja

California Sur and Universidad Autonoma de Baja California (BCMEX), Ensenada, Baja California, have been added. The site includes a map of Baja California, historic place names in Baja California, and a georeference help facility as well as Reid Moran's field notes, photos of plants and landscapes, and floras of the islands.

Online Digital Atlas of Utah Plants

The online digital atlas of Utah plants has been updated with new voucher records and current nomenclature--and it has a new address. Added features include species lists by ecoregion, a search engine for common names, and an online drawing tool that allows users to

limit an area and extract a list of species. Citation for this electronic version is Shultz, L.M., R. D. Ramsey, W. Lindquist, and C. Garrard. 2010. *Revised Atlas of Utah Plants*. Utah State University, Logan, UT: <http://earth.gis.usu.edu/plants>.

OBITUARIES

William Clarence Martin

1923–2010

William Clarence Martin was born on November 27, 1923, in Dayton, Kentucky, a small town across the Ohio River from Cincinnati, and grew up on a farm in Ripley County, Indiana.

During his last two years of high school, Bill saved enough money to pay part of his way to attend college. In the fall of 1941, he enrolled at Purdue University with the intention to study horticultural science. Pearl Harbor changed everything. By the fall of 1942, Bill realized that military service was inevitable. In the late winter of 1943, he was inducted into the U.S. Army at Ft. Benjamin Harrison near Indianapolis. Two weeks later he was sent to Camp Swift near Austin, Texas, for basic training. Bill's unit saw action in Europe as part of Patton's 3rd Army and took part in the Battle for the Ruhr Pocket, which resulted in the surrender of thousands of German soldiers.



William C. Martin. Courtesy of Eugene Jercinovic, 6285 Algodón Rd., SW Deming, NM.

“During that action, we fired night and day, three howitzer rounds per minute.” As spring advanced, the army swiftly moved across Germany and into Czechoslovakia. By mid-May, the shooting was over in Europe. Bill was discharged from the army on Valentine's Day, 1946. He had lost one uncle in combat, and another uncle and his brother were seriously wounded.

By September, he was back in West Lafayette enrolled in the Division of Forestry of the School of Agriculture of Purdue University. He soon switched to the Department of Horticulture. On June 14, 1947, he and Evelyn Hastings were married. Their first child, William David, was born in 1949. Bill graduated in 1950 with a degree in horticultural science.

At age 30 Bill, with Evelyn and by this time their three children David (William), James, and Barbara, the family moved to Bloomington, Indiana, so Bill could become a graduate student at Indiana University. Because his interest was taxonomic botany, he studied under Dr. Charles Heiser, a renowned sunflower specialist. Bill also served as curatorial assistant at the herbarium. As part of his research, he made numerous field forays all over the south-central and southeastern states collecting sunflowers. He completed his Masters in 1956 and his Ph. D. in 1958, with his dissertation on the biosystematics of *Helianthus angustifolius* and related species.

Bill decided to accept a position at the University of New Mexico. He worked with Dr. Edward Castetter a great deal. The two produced *A Checklist of Angiosperms and Gymnosperms of New Mexico* in 1970. After retiring, Castetter suggested that Bill undertake the project of writing a new flora of New Mexico. Bill involved his graduate students in gathering floristic data and used his summers to explore the state (and the southwest in general) for plants. In 1968, a man by the name of Charles R. “Bob” Hutchins, whom Bill had gotten to know through the American Association for the Advancement of Science (AAAS), moved to Albuquerque to pursue an advanced degree under Bill. Bob rapidly became absorbed in the flora project, and though he did not choose to complete his studies, became Bill’s close friend and dedicated himself to the project for the next twelve years.

Bill served as Assistant Professor of Biology from 1958–1965, Associate Professor of Biology from 1965–1971, and Professor of Biology from 1971–1989, as well as Curator of the Herbarium from 1958–1989. During a leave of absence from UNM, he served as Senior Curator of Botany at the Los Angeles County Museum of Natural History from 1970–1972. At the same time, he was Adjunct Professor of Biology at the University of Southern California. He remained a Research Associate at the Museum of Natural History for the remainder of his career.

After returning to UNM in 1972, Bill worked on a diversity of projects, numerous botanical surveys, the chemotaxonomy of *Ribes*, the chemotaxonomy of *Astragalus* and *Oxytropis*, natural succession on strip-mined land, and germination requirements of plants of arid lands. Of course, considerable energy went into the effort to finish the flora of New Mexico project. By the late 1970s, most of the research was as complete as possible for a continuously evolving topic. Bill began assembling the massive document. *The Flora of New Mexico*, in two volumes, appeared in 1980–81.

Over the years, Bill taught 19 different classes. He came to be known among his students as “P.C.,” plant chief. He advised more than 60 graduate students involved with monographic studies of *Castilleja*, *Senecio*, and *Cirsium*, and floristic studies of the Jemez Mountains, Redondo Peak, Mt. Taylor, the Manzano Mountains,

Wheeler Peak, the San Andres Mountains, the Animas Mountains, the Ladron Peak/Sevillaleta area, the Datil Mountains, and the Grants lava beds. During the 1980s, Bill continued his association with Bob Hutchins, publishing three books in conjunction with Robert DeWitt Ivey: *Spring Wildflowers of New Mexico* (1984), *Summer Wildflowers of New Mexico* (1986), and *Fall Wildflowers of New Mexico* (1988). Also, in this decade, Bill and Loren Potter put together a summer course for graduate students to study and collect plants in the western U.S. The group logged more than 5000 miles in eight states. Bill also continued his connection with the Los Angeles County Museum, making several visits to the Hawaiian Islands to study rare and endangered plants. These forays were to backcountry areas to the islands of Hawaii, Oahu, Maui, Kauai, and Molokai. Bill noted, “We were able to locate some plants that had not been seen for 50 years or more.” While there, he was able to reconnect with an ex-student who earned a Masters at UNM, Warren L. Wagner, then Associate Botanist at the Bishop Museum in Honolulu.

Bill’s retirement was probably longer than many—more than 20 years. He retained an essential joy in what he had contributed, particularly to those he had sought to educate and motivate in his many years of teaching. Indeed, his graduate students have contributed much. Warren L. Wagner became curator of the National Herbarium at the Smithsonian Institution and world expert in the family *Onagraceae* (evening primrose) as well as President of the American Society of Plant Taxonomists. Ray Powell served two terms as Land Commissioner of New Mexico and is now Director of the Jane Goodall Institute’s Root and Shoot Program. Reggie Fletcher spent a distinguished career with the U.S. Forest Service. Paul Knight spent 12 years as botanist for the New Mexico Natural Heritage Program. There are many others. In his last decade he was honored with the naming of *Cirsium ochrocentrum* var. *martinii*. Although he would never have really supported the naming of a plant for himself, there is little doubt that he was touched by the gesture of UNM Ph.D. candidate Patricia Barlow-Irick.

Bill died quietly in his sleep on January 18, 2010.

—Eugene Jercinovic

Reid Moran

1916–2010

Dr. Reid Venable Moran, an explorer and scientist, spent many years traveling by mule, truck, and boat to remote locations throughout Baja California in search of plant specimens.

His expeditions yielded hundreds of plants from islands off Baja including Guadalupe Island, a volcanic island 250 miles south of San Diego. His peers considered him a legend in botanical exploration. As the longtime curator of botany at the San Diego Natural History Museum, he played a key role in the museum's growth.

"He was among the very few people who really explored Baja California (in the 1950s and 60s) when you had to travel (solely) by mule," said Tom Oberbauer, a botanist with the San Diego County Department of Planning and Land Use. "He found hundreds of new species and described them. He was very detail-oriented and made meticulous notes. He was passionate about all of Baja California, but Guadalupe Island was his focal point."

Reid Venable Moran was born June 30, 1916, in Los Angeles to Edna Louise Venable and Robert Breck Moran. He grew up in Pasadena, and his interest in botany started in childhood. He earned a degree in biology from Stanford University in 1939, a master's degree in botany from Cornell University in 1942 and a doctorate from the University of California Berkeley in 1951.

He served in the Army Air Forces from 1942 to 1946 as a flight navigator. He was awarded the Distinguished Flying Cross after his aircraft was shot down over Yugoslavia during World War II. He and the rest of the crew completed their bombing mission before being ordered to bail out of their damaged B-24. They parachuted into German-controlled territory but were able to escape unharmed.

Anthropologist and author Jane Goodall wrote about



Reid Moran. Walter Hodge photographer. Courtesy of Hunt Institute for Botanical Documentation, Carnegie Mellon University, Pittsburgh, PA.

Dr. Moran's dedication to preserving the diversity of flora around the world. She called him "a sort of living myth in botanical exploration" and noted that he spent 48 years "studying the sequence of the destruction of (Guadalupe Island's) flora, and the richness that yet remained." He described it as the most beautiful island he had known.

Dr. Moran kept extensive field notebooks documenting his travels and his botanical collections, said Judy Gibson, botany department collections manager for the Natural History Museum. During his 25-year tenure with the museum, Dr. Moran was instrumental in more than doubling the museum's botanical collection from 44,000 specimens to 108,000 specimens. He also gained a devoted following among museum members as a leader of field trips throughout Baja California.

In addition to writing about his findings, Dr. Moran became adept at photographing his collections, and many of his photos have been part of his exhibits. In 1965, the Smithsonian Institution selected an exhibit he designed for a three-year national tour of other museums and universities. The exhibit featured Crassulaceae, a family of succulents known as Stonecrops. He had collected the succulents in California, Mexico, the Mediterranean and eastern Asia.

Colleagues said Dr. Moran's strength and stamina allowed him to work in isolated areas, hiking up mountains and collecting specimens for weeks at a time. "He was hiking through steep canyons and rough terrain when he was in his 70s," Oberbauer said. He didn't mind spending a lot of time alone with his work, but he also seemed to appreciate being around people and could be the life of the party, Oberbauer said. "He had a dry sense of humor, and he liked to play the guitar and sing songs."

He married the former Ellen Boersma in the 1980s. The couple divorced a few years later. Dr. Moran is survived by a daughter, Jenna of Washington, D.C.; a stepson, Matthew Boersma of Santa Rosa; a sister, Katharine "Kaki" Cashman of Reno; and several nieces and nephews. Dr. Moran died of pneumonia January 21, 2010, in Clearlake, where he had lived for several years. He was 93. The recently published Volume 8 of FNA contains his treatment of Crassulaceae.

Charles Bixler Heiser

1920–2010

Charles Bixler Heiser Jr. was born in Cynthiana, Ind., on October 5, 1920, to Charles Bixler Heiser Sr. and Ines Metcalf Heiser. After living several places in Indiana (Princeton, Evansville, New Albany, Vincennes, Indianapolis, Bloomington, Columbus) his parents moved to Belleville, Ill., where he attended high school. In 1939, he enrolled in Washington University (St. Louis) majoring in Botany and English; he lettered in basketball for three years and was elected to Phi Beta Kappa.

In his second year as a graduate student, he coached the University's Basketball Team. At the University, the two professors who had the most influence on him were Dr. Edgar Anderson and Dr. R.E. Woodson Jr.

He married Dorothy Gaebler on August 19, 1944. They have three children, Lynn Marie Monzo, Cynthia Roberts Hall, and Charles Bixler III and wife, Carolyn; and seven grandchildren.

In 1945, he enrolled in the graduate program in Botany at the University of California at Berkeley where Dr. G. Ledyard Stebbins was most influential. In his second year as a student, he taught in Botany at the University of California at Davis and was in charge of the herbarium there.

After receiving his Doctoral Degree from University of California in 1947, he came to Indiana University as Assistant Professor of Botany and Curator of the Herbarium. Except for a Visiting Professorship at the University of Texas in 1979, all of his teaching has been done at Indiana University where he became Distinguished Professor in 1979 and Professor Emeritus in 1986.

His first sabbatical leave was spent in Costa Rica in 1953 to study chili peppers and to learn the flora. His meetings of two students, Jorge Soria and Jaime Diaz from Ecuador at the Inter-American Institute of Agricultural Science at Turrialba, Costa Rica, was particularly important, for he was to spend his next two sabbaticals in Ecuador (1962, 1969) and they were most helpful.

In 1969, on his way to Quito, with wife and two children, he would also visit Cuba, after several armed passengers boarded the plane at Guayaquil and demanded that the pilots take them to Havana. In 1975, on a National Science Senior Post Doctoral Fellowship,



Charles Bixler Heiser. Walter Hodge photographer. Courtesy of Hunt Institute for Botanical Documentation, Carnegie Mellon University, Pittsburgh, PA.

he was to spend his time in Ecuador and Peru. At a meeting to celebrate his Fifty Years at Indiana University in 1996, he received a plaque from INIAP (the National Institute of Ecuador for Agricultural Research) for assisting in their research.

His other most significant honors and awards follow: American Society of Plant Taxonomists, President, 1967; Asa Gray Award, 1988; Raven Outreach Award, 2002 (for his books); Botanical Society of America, Merit Award, 1972, President, 1980; Centennial Award, 2007; Society for the Study of Evolution, President, 1974; Society for Economic Botany, President, 1978; Distinguished Economic Botanist, 1984. He also served on the committee that founded the Society; Gleason Award of the New York Botanical Garden, 1969; Guggenheim Fellowship, 1953; Pustovoit Award of the International Sunflower Association, 1985; elected to the National Academy of Sciences, 1987; Distinguished Scholar Award, Indiana Academy of Science, 1997.

His early research, beginning in the 1940s, was with the sunflower. He showed that hybridization was important in its evolution, and he made artificial hybrids to document those that he claimed occurred naturally.

He also studied the origin and development of the sunflower domesticated for its seed, showing that it was one of the few crops to have been domesticated in the United States. He has since been interested in the origin and domestication of a number of other crops, most recently the naranjilla or lulo, a crop grown for its juice, in southern Central America and the northern Andes. He developed the variety now most widely grown in Ecuador.

In addition to his many scientific papers, he has published six semi-popular books dealing mostly with plants. *Nightshades, the Paradoxical Plants*, 1969 (slightly revised and published as *The Fascinating World of the Nightshades: Tobacco, Mandrake, Potato, Pepper, Eggplant, etc.*, 1987); *Seed to Civilization, the Story of Food*, 1973 (3rd ed. 1990); *The Sunflower*, 1976; *The Gourd Book*, 1979; *Of Plants and People*, 1985; *Weeds in My Garden*, 2003 (received Garden Globe Award "for best talent/writing" in 2004).

He took pride in his introduction of two ornamental plants: the ball loofah or "*Luffa operculata*" and *Peperomia serpens* 'Tena', neither of which has become invasive.

At Indiana University, he has taught courses in Survey of Vascular Plants; Systematics of Flowering Plants; Economic Botany or Ethnobotany and Evolution. Twenty-nine students have received their Ph.D. degrees under his direction.

After 89 vigorous years, he died on June 11, 2010, at Bell Trace Health and Living Center.

—Courtesy Bloomington Herald Times, June 13, 2010.

Meetings/Workshops

SMITHSONIAN BOTANICAL SYMPOSIUM 2010

“Food For Thought: 21st Century Perspectives on Plants and People”

Presented by the Smithsonian’s National Museum of Natural History Department of Botany in collaboration with the United States Botanic Garden with support from the Cuatrecasas Family Foundation.

People are dependent upon plants for food, clothing, medicine, fuel, and other necessities of life. Humans and plants have interacted for as long as humans have existed, but our relationship is not static. Since the advent of agriculture, we have exerted evolutionary pressure on plants that are of importance to us. Indigenous and industrialized societies have interacted with plants in their environments and influenced not only crop plants but also cultural landscapes. The Smithsonian Botanical Symposium, hosted by the Departments of Botany and Anthropology, will examine the 21st century transformation of the study of interactions between plants and



people. The invited speakers will cover a wide range of topics: from the role molecular biology now has in elucidating crop domestication to the ways in which peoples across myriad ecosystems interact with specific plants and landscapes.

The Botanical Symposium is one of many activities planned to celebrate the Centennial of the National Museum of Natural History. Symposium participants are invited to visit the new David H. Koch Hall of Human Origins, which is dedicated to the understanding of human origins.

This major exhibition opening in March 2010 is based on decades of cutting-edge research by Smithsonian scientists, and it tells the epic story of human evolution and how this occurred over the course of six million years in response to a changing world. For information and registration go to <http://botany.si.edu.sbs/>.

OCTOBER 15–16, 2010, SAINT LOUIS, MISSOURI

57th Annual Systematics Symposium, Missouri Botanical Garden

With the support from the National Science Foundation, the 2010 symposium theme is Evo-Devo. Organizing committee chair: Elizabeth “Toby” Kellogg. <http://www.mobot.org/mobot/research/symposium/>

POSITION AVAILABLE

NatureServe, an international nonprofit conservation organization, is seeking a Research Botanist to join its team of scientists. This is a full-time position located in Arlington, Virginia. The Research Botanist assesses and reviews the conservation status of rare North American plants and contributes to a diverse array of projects and analyses that use this information to influence conservation decisions. Frequent clients/partners include U.S. and Canadian Federal land management agencies, as well as more local conservation groups and university-based conservation researchers.

The ideal candidate will have a M.S. in botany or in biology/ecology with a botanical emphasis, at least one year of experience working in a botanical field, a working knowledge of some portion of the North American flora, knowledge of systematic concepts, and excellent research and communication skills.

NatureServe’s mission-focused, collaborative atmosphere motivates staff to contribute their best efforts to make a positive impact on some of the world’s most pressing environmental issues. They offer a competitive nonprofit benefits package that includes a 401(k) savings and retirement plan with matching contributions; health and dental insurance; short- and long-term disability; annual and sick leave; and life insurance.

NatureServe is located in Arlington, Virginia, just outside Washington, D.C., in a location easily accessible by foot, bike, or public transportation. If you would like to pursue a career in plant conservation that makes a tangible difference, please go to <http://www.natureserve.org/aboutUs/jobs/researchBotanist.jsp> for detailed information about this job, the organization, and how to apply.