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Herbarium at the University of Montana

Spring 2003

2003 Friends of The University of Montana Herbarium Newsletter

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FRIENDS

*Of The University
Of Montana*

HERBARIUM

Spring 2003

TIES THAT BIND: UM Herbarium and Montana Native Plant Society Support Each Other

by Maria Mantas

Most Friends of the Herbarium (FOH) members are aware of the ties that exist between FOH and the Montana Native Plant Society (MNPS), but few may appreciate the closeness of this relationship. As you might expect, there is substantial overlap in the memberships of MNPS and FOH. In fact, FOH was founded by MNPS members Molly Galusha, Peter Lesica, Jean Parker, Peter Stickney, Steve Shelly, and Virginia Vincent. In addition, nearly all FOH board members have been MNPS members, two of which currently serve on the boards of both organizations! However, the ties of the two organizations run even deeper than overlapping membership. MNPS has been a strong financial supporter of FOH from the very beginning by donating money to the herbarium cabinet drive and contributing annually to the FOH honorarium fund. The honorarium fund was designed to reward volunteer work critical to the functioning of the herbarium. As you may recall from recent newsletters, Virginia Vincent received this award for her outstanding contributions in the herbarium this last year. The local Clark Fork Chapter of the MNPS has contributed muscle power in cleaning and reorganizing the herbarium. Anyone visiting the facility today would be impressed with its neatness and order, due in part to the generous efforts of the MNPS.

Conversely, the UM Herbarium provides opportunities to MNPS members in return for their hard work and support. Several times a year, the Clark Fork Chapter hosts an herbarium night, where local experts use specimens to teach key characteristics of selected taxonomic groups to MNPS members, students, and anyone else interested in learning local flora. Herbarium specimens are also used by MNPS members such as Debbie McNiel, a botanical artist whose recent work includes the illustrations in Peter Lesica's *Flora of Glacier National Park*. MNPS mem-

bers who are professional botanists and ecologists rely on the herbarium as a reference for species' verification and distribution. Local floras used by most MNPS members, such as Lackschewitz's and Lesica's works, were developed using specimens from the herbarium. One only needs to refer to the guest register to see that prominent MNPS members frequently use the herbarium to aid in their work related projects.

It would be fair to say that there is a true mutualistic relationship between FOH and MNPS. We hope it lasts for a long time, and we are grateful to MNPS for their continued support.



Herbarium night with Peter Stickney

2003 Friends of the UM Herbarium Annual Meeting

The Annual Meeting of the Friends of the UM Herbarium will be held Saturday, November 22 from 10 am to 2 pm. The meeting will be held in Rm 202 of the Natural Sciences (Botany) Building on the UM Campus. This is the annual meeting of the Board of Directors and is open to the membership.

Friends

of the University
of Montana



Herbarium

**Biological Sciences
University of
Montana
Missoula, MT 59812**

*The Mission of the
Friends is to secure
support for and to
enrich
the collections and
operations of
The UM Herbarium*

Board of Directors

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Peter Lesica
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The *Friends* Newsletter
is edited by
Peter Lesica and David Dyer

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Drake Barton and Kathy Lloyd

Activities

The Clark Fork Chapter of the Montana Native Plant Society held three meetings in the herbarium in 2002. Peter Stickney gave a presentation on a group of Montana lilies, Scott Mincemoyer taught a class on willows, and Charles Miller helped members identify fossils they collected on an October field trip to the Blackfoot Valley.

Notes from the Board

"Richard A. Prodgers, Existential Plant Ecologist -- As If It Mattered." So reads my business card. Most folks focus on the glib "as if it mattered" part and titter, but the existentialists in the audience know it means that I do all my work as if it mattered, though sadly many conservation requirements are procedural rather than substantive.

Plant taxonomy is scantily taught at our state universities today, a fact painfully obvious when I try to find an assistant. It takes too much time I guess. How can you get around taxonomy? People find a way, believe me. For example, the request for bids goes out for a rare plant inventory. You would think this means identifying all the species and in some cases subspecies or varieties in a specific area, compiling a species list, and flagging any on the restricted occurrence list. But no, the usual approach is to go to the Montana Natural Heritage Program database, identify those likely to occur or already on record for the site, and then somehow look for the oddballs. How one can peruse any number of taxa with which they are unfamiliar and pick out rare plants is beyond me—never mind that a single visit at whatever time of the year can't necessarily find or rule out the presence of something unusual.

Personally, I can limp through taxonomy, self-taught though I am. My clients expect me to be able to name what I see. I have a personal herbarium (if I may so grandly describe it—my mounts are shabby things) of a few thousand species that I try to review at the start of field season to jog my memory. But I rarely key plants anymore, just a few a year. Instead, I send my "unknowns" to Bob Dorn in Cheyenne who, if he's not in the field, gets them back to me in about one week. Such is today's world of specialization. I can get stuck on one species for a few hours, time is limited, and no one would pay for it. My way is more efficient, if less satisfactory as a learning experience.

Why, then, do I serve on the board of the Friends of the Herbarium? Because this is one of the things that matter—it serves science and preserves history. Universities are trendy places replete with "invisible colleges," but plant taxonomy isn't irrelevant even if currently largely ignored. I foresee a continued role for detailed floral inventories, dismissed as they may be in some circles as "merely descriptive." The board's goal, I think, is to make sure the herbarium continues to have a home at the U of M, that specimens are properly mounted, cataloged, and preserved, and to provide a focus for day-to-day operations of the herbarium. It's worth a little effort on my part, and a great deal more effort on the part of others, whom I would like to thank.

Yes, and the snacks at the last board meeting were pretty darned good, too.

Rich Prodgers

Thanks to new members!

Your continued interest and support is what makes us effective. Thanks, and welcome to these members, new since the last newsletter.

David and Rebecca Hanna of Choteau
Fort Belknap Indian Community

MONTU People

John Pierce

Chances are good that if you say “botany” in Missoula the person you are talking to will say “John Pierce.” His stewardship work on the Riverfront Prairie, Greenough Park, Mount Jumbo and Mount Sentinel are well known and have often been lauded in the local newspaper. John did graduate work in Botany at the University of Montana under our last two taxonomists, Sherman Preece and Kathleen Peterson. However, his roots in Missoula and his involvement with the UM Herbarium go back further than that.

John was born in Missoula, but lived several of his early years in northern Idaho and elsewhere in Montana. His father worked for the Forest Service and later was professor of forestry at the University of Montana. John developed an early interest in the outdoors with his father, capped by spending several summers at the UM summer forestry camp where his father taught. John graduated from Sentinel High School in Missoula and then enrolled at UM for two semesters where his faculty advisor was Leroy Harvey, the curator of the university herbarium. His next step in botanical education came halfway around the world along the rivers and canals of Vietnam while on a small US Navy watercraft. The service often produces strange bedfellows and surely John was viewed as such by his shipmates as he photographed the flowers and fruits of the vegetation along the waterways they patrolled. A few years later he had a chance to identify those plants while on a summer student program at Longwood Gardens in Delaware.

After the Navy, John earned a BS at Montana State University in horticulture and agricultural production. He took classes there from W. E. Booth and John Rumely, curators of the MSU herbarium. After graduating John worked for a wholesale commercial greenhouse in Billings, and owned and operated a floral shop in Bigfork. He returned to Missoula in 1976 and has lived here since, except for now yearly winter sojourns to Coos Bay, Oregon where his wife Kristina teaches school.

With his return to Missoula John left horticulture and started his botanical career and a long record of community service by volunteering to inventory the flora of the proposed Rattlesnake Wilderness Area. John and his friend Will Kerling traveled by bicycle and foot throughout the Rattlesnake in 1977 and 1978 and collected, photographed and mounted about 650 plant species. This small but well-curated herbarium now resides in the Missoula County Library.

The Rattlesnake work whetted John’s appetite for floristic botany, and in 1979 he enrolled as a graduate student in the UM Botany Department. His mas-

ter’s degree project was a floristic inventory and ecological study of the changes between the time of Chief Joseph and the present at the Big Hole Battlefield National Monument in southwest Montana. Voucher specimens from that project are now housed at MONTU; at least one, *Orobanche corymbosa*, was a state record.

After receiving his degree, John stayed around UM volunteering for various herbarium projects, including curating a large, donated private collection. He then led a minor insurrection of herbarium users. The curator at the time was planning to divide the collection, assuming the number of cases required more room. John and the hired herbarium staff efficiently rearranged the herbarium cases to keep them all together. The physical rearrangement of the cases also proved the opportune time for a switch from an older taxonomic arrangement of the specimens to a newer system developed by Cronquist. John also made that change and methodically froze each group of specimens to rid the collection of a growing dermestid beetle problem.



John preparing for fieldwork on one of his many projects

That was John’s last major involvement with the herbarium. In 1983 he began his current career as a contract botanist—primarily with the US Forest Service. He has since worked on Research Natural Area projects and sensitive plant species’ lists. He wrote an early riparian classification, developed a plant species list for much of the Pacific Northwest

New Acquisitions

Loren Bahls (700 microscope slides of diatoms as part of the Montana Diatom Collection)
David Bilderback (976 mosses from Theodore Roosevelt National Park)
Joe Elliott (50 mosses)
Roger Ferriell (46 Montana *Botrychium*)
Janet Hardin and Peter Rice (5 exotics)
Bonnie Heidel (66 Montana collections)
Steve Kohler (17 mainly *Eriogonum*)
Peter Lesica (275 Montana collections)
We also received specimens in exchange for duplicates from the New York Botanical Garden (257) and University of Idaho (322).

Loans for Research

The UM Herbarium sent out three loans in 2002. Toby Spribille from Gottingen, Germany requested a loan of lichens. T. K. Mal from Cleveland State University obtained a loan of 40 sheets of *Butomus*, *Phalaris* and *Polygonum* as references for the Biology of Canadian Weeds published in the Canadian Journal of Plant Sciences. Eighty-eight sheets of *Hymenoxys* were sent to the University of Texas for the Flora of North America Project.

Information Transfer

The UM Herbarium received 25 requests for information in 2002, including:
University of Washington Herbarium—label data for *Juncus effusus* in Montana.

Utah State University Herbarium—sent FOH bylaws and newsletters so Utah State can set up a group similar to FOH.

University of Calgary—sent label data for 89 sheets of *Saxifraga*, *Boykinia* and *Erigeron*.

Information on how to mount plants for a local school making a collection of Lewis and Clark plants.

Queen’s College, Canada—label data for three species of *Geum*, *Sporobolus* and *Carex*.

State Crime Lab—assist in determining vegetable material found in gastric contents during autopsy.

Ecosphere Environmental Services, Colorado and New Mexico—label data for four southwestern species in MONTU collections.

Publications Based on MONTU Specimens

Flora I D Northwest. 2001. Plants of Montana. Interactive keys and color photos. New York Botanical Garden Press. (compact disc)

Morrison, S. 2003. The magic of Montana native plants. A gardener’s guide to growing over 150 species from seed. Montana Native Plant Press, Missoula.

Spribille, T., B. Heidel, W. Albert, F. J. Triepke, J. Vanderhorst and M. Arvidson. 2002. Noteworthy Collections: Montana. Madrono 49: 55-58.

Flora of North America Editorial Committee. 2002. Flora of North America, Vol. 23. Magnoliophyta: Commelinidae: Cyperaceae. Oxford University Press, New York.

Visitors to the University of Montana Herbarium in 2002

General public and private consultants

Loren Bahls, Drake Barton, Joe Elliott, Scott Miles, John Pierce, Andrea Pipp

University of Montana Researchers

Brad Cooke, James Habeck, Marilyn Marler, John Maron

UM Students

Lindsay Amesberry, Maria Newcomb, Beth Newingham, Jennifer Williams, Jeanette Wilson

U.S. Forest Service

Tod Carlson, Laura Courser, Andy Kulla, Darlene Lavelle, Scott Mincemoyer, Susan Rinehart, Peter Stickney

The Nature Conservancy

Maria Mantas

Fort Belknap Indian Reservation

Dennis Longknife

An Upward Bound class from the University of Montana at Dillon stopped by for a visit. Several authors came to do research for their books: Sheila Morrison for her new book on cultivating native plants, Wayne Phillips for his book on plants of the Lewis and Clark expedition, and Steve Kohler was looking at *Phyllodoce* and *Cassiope* for his book on the butterflies of Montana.



Dennis Longknife examines plants from the Fort Belknap Reservation

Marie Mooar

It is impossible to open a folder of wetland or aquatic plants at the University of Montana Herbarium and not come across at least one specimen collected by Marie Mooar. And they're not just from a few select places but rather from hundreds of locations in every Montana county west of the Continental Divide. This would be nothing exceptional if she were an academic or a professional collector, but she wasn't. Marie Mooar was a high school biology teacher from Michigan who had the adventure of her life botanizing the wilds of western Montana.

Marie's youth gave her a taste for wild places. She was born Marie Brunson in Peoria, Illinois but grew up in Michigan. Her stepfather was the first ranger for a wilderness park in the northern part of the state. This may be where Marie first developed an interest in natural history. The family later moved to East Lansing where Marie graduated high school in 1925. She attended Michigan State University and majored in science and mathematics, an unusual undertaking for a woman in those days. She graduated *cum laude* in 1929 and, at the age of 20, began her life-long career teaching high school. She returned to Michigan State and obtained a masters degree in botany in 1933. While working on her degree she met Willard Mooar, a plant pathologist at the university, and they were married. Marie went back to teaching high school science and math and coaching girls basketball. In 1948 she returned once again to the university to work as an assistant plant pathologist. Marie had four children during this time, but in 1953 she and Willard divorced, and she moved to Ypsilanti just outside Detroit where she again taught high school until her retirement in 1971.

As if teaching high school and raising four children weren't enough, Marie, at the age of 50, applied for and received a National Science Foundation fellowship for summer study. She chose to attend the University of Montana Biological Station where her brother, Royal Brunson, was a professor of invertebrate biology. From 1959 until 1963 she was funded by NSF each summer to take classes and collect clams and sponges for the University of Montana and the Field Museum in Chicago. She assisted Gerald Prescott and William Vinyard teaching phycology, mycology and aquatic botany at the Biological Station in 1964. But her real tenure in aquatic botany began the following summer.

Western Montana, especially the Flathead River drainage, has a wealth of wetland diversity. The value of this resource was acknowledged in 1965 when Sherman Preece, a professor of botany at the University of Montana, received a grant from the state to compile a wetland plant flora for western Montana. That summer and every summer through 1970 Preece hired Marie Mooar to collect plants for herbarium specimens. She travelled the valleys and

ventured into the mountains, first in a car and later a van-camper, staying out for many nights at a time, collecting during the day and pressing specimens at night. Some of her favorite areas appeared to be Glacier National Park, Seeley Lake, Flathead Lake, Thompson Lakes and the Bull River. Marie wrote a memoir of her Montana years in which she tells of encountering all manner of wildlife from bears to fool hens. More importantly she collected plants from all manner of wetlands, and Marie's definition of wetland was pretty inclusive; MONTU has Mooar collections of many species generally considered upland plants. In 1967 Ypsilanti High School gave Marie a sabbatical year, and she came to Missoula to work on mounting and identifying her collections. She also took this opportunity to get into the field in fall and spring, times of year she had previously been teaching school.



Marie Mooar enjoying the Montana uplands

The money for collecting western Montana wetland plants ran out in 1970. Instead of being deterred from her project Marie redoubled her efforts. She retired from teaching in 1971, bought a small house outside Polson, and moved to Montana! For the next five years she collected, identified and mounted specimens at the Biological Station. Her memoir suggests that she prepared a manuscript complete with dot maps, but in 1976 she was told that there was no money to publish the project. The following year she moved back to Michigan to be closer to family. She indulged her love of botany by gardening. She died in the winter of 1997 at the age of 88.

In her memoir Marie Mooar reports *collecting*

Herbarium Workhorses

Ever wonder who those hard-working students are that you see in the herbarium busily mounting plants, putting together loans, and gathering data for researchers? They are our two dedicated work-study students Kasey Stewart and Timothy Lawes. The bulk of the day-to-day work of the herbarium is carried out by our work-study students. In addition to the above responsibilities, the students do a myriad of other tasks including inspecting cabinets and new collections for insect pests, cataloging and filling specimens, monitoring the temperature and humidity in the facility, organizing and rearranging the collection, and assisting visiting researchers. We select students who have some botanical background and, just as important, they must be highly organized, detail-oriented, and have the sensitivity to handle important and fragile herbarium specimens. We are lucky this year to have two students who fit these criteria!

Tim Lawes is a senior from Nibley, Utah and is a



Tim Lawes, one of MONTU's workhorses

wildlife biology major. Though a wildlife major, Tim has a strong background and personal interest in plants. Before coming to the herbarium, Tim worked as a Biological Aide for the Lincoln Ranger District where he did a wide variety of work including identification of riparian vegetation. He has also held related positions at Dead Horse Point State Park in Moab, Utah and at Utah State University. Tim's personal interests include traveling, hiking, identifying plants and animals he en-

counters, and computer technology. Did he say computers!? We will no doubt twist his arm to use his great computer background as we begin to computerize the herbarium's collections.

We rarely hire university freshmen in work-study positions simply because of their relative lack of experience. However, last year we made an exception in the case of Kasey Stewart! Kasey came to UM with a great high school science background, top references, and experience gained from spending summers working with Montana Fish, Wildlife, and Parks. The big advantage to us is that, hopefully, Kasey will be with the herbarium for at least four years, and help bring continuity and accumulated knowledge to the position. Kasey is in Mexico this semester on an exchange program and we look forward to getting her back. Kasey is currently an anthropology and Spanish major, however given the amount of time she has left here we're convinced that we can sway her academic interests towards the biological sciences!

Next time you're in the herbarium, please introduce yourself to our great work-study students!

David Dyer

New UM Biological Collections Advisory Committee

Associate Dean of Biological Sciences, Don Christian, recently convened the Biological Collections Advisory Committee (BCAC) to help guide management of the UM Herbarium and Wright Zoological Museum. The board, consisting of zoologists Kerry Foresman, Dick Hutto and Don Christian, plant scientists Ray Callaway, Mark Behan and Peter Lesica, and natural sciences librarian Barry Brown, met for the first time in late February. The Friends of the UM Herbarium developed recommendations at our last board meeting and presented them to the BCAC. We proposed that the herbarium focus on temperate families and genera, and specimens of tropical affinities be sent to herbaria actively working with these groups. We also proposed that work-study students begin to use a computerized database to enter data from new accessions. Don Christian reported that he and geology professor George Stanley were collaborating on a National Science Foundation proposal to link the two biology museums and the paleontology museum through computerization. Dave Dyer, the collections manager, proposed creating museum display cabinets in the Health Sciences Building. All of these proposals will be moved forward as funds become available. The next meeting will be held fall semester.



A Valuable Resource

Above is an image of one of MONTU's herbarium sheets, representing *Lomatium nuttallii*. This plant has been very rarely collected in Montana; in fact this sheet represents the only documented population in the state. When another population of this species was found this summer, having access to this herbarium sheet, annotated by Lincoln Constance, was extremely useful in making an accurate determination of the collected material.

...**Marie** (Continued from page 5)

15,000 specimens for her wetland botany project. Many of these were already mounted and stored in boxes in UM's Botany Building. Beginning in 1985 the collections manager, Kathy Ahlenslager, began the process of sorting. More than 4,100 specimens were accessioned into the herbarium. Many more were traded to other herbaria. Although a book was never published, Marie's work made a large and permanent contribution to the knowledge of Montana's flora. And she had a lot of fun doing it.

Peter Lesica

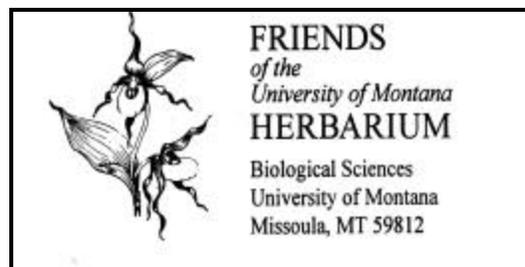
...**John** (Continued from page 3)

and parts of the Great Basin, and recently developed a classification of aquatic plant communities. His work with the Montana Riparian Association provided MONTU with some of its few collections from Yellowstone National Park. John continues with botanical employment, but he now also volunteers significant parts of his time doing natural areas stewardship in the Missoula area. Nonetheless, you can find his name in the MONTU guest book at least once each year and probably for many years to come.

Scott Miles

Yes! *I want to help protect the irreplaceable collections and enhance the facilities of the University of Montana Herbarium*

- | | | |
|--------------------------|---------------------|-------|
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Dues are for a period of **two** years. All contributions to the Friends are tax deductible to the full extent provided by law. All checks should be made payable to UM Foundation/Friends of the UM Herbarium.

Send checks to:
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