Spring 2014

2014 Friends of The University of Montana Herbarium Newsletter

Peter Lesica

Marilyn J. Marler

FRIENDS
OF THE UNIVERSITY OF MONTANA
HERBARIUM

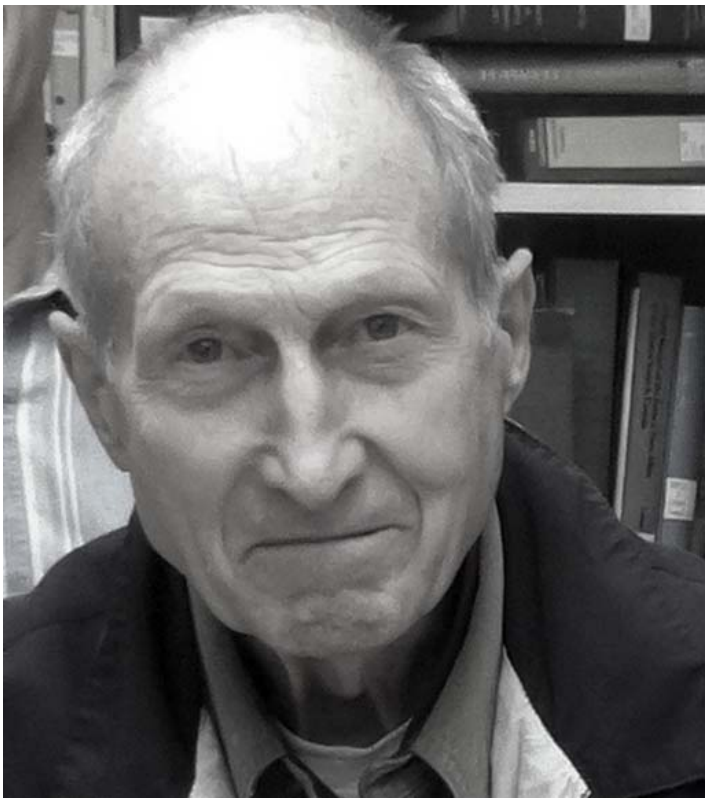
Spring 2014

An Endowment for MONTU's Future

by Marilyn Marler

Peter Stickney, retired botanist and long-time friend of MONTU, has made a serious commitment to the future of the University of Montana Herbarium in the form of an endowment to the UM Foundation. Pete stated, "I wanted to do something to ensure that UM takes the herbarium seriously, and I want to make sure the herbarium has a long term future." In classic Peter Stickney fashion, he would not allow the endowment to be named after him, and made all the arrangements quietly over the past several years. Peter is the sole donor to the foundation's almost $44,000 balance, that he hopes will eventually grow large enough through donations and interest to fund staff or even a faculty taxonomist.

Peter has been professionally botanizing in Missoula since 1957, as a researcher with the Forest Service and continuing well into his retirement. He curated the Forest Service's Missoula Research Center Herbarium (MRC) for decades. Since 2010, the MRC and MONTU collections have been housed together on campus at UM, thanks to Peter's planning. Let's honor Peter's long term commitment to Montana's plants. You can send donations of any amount to the "MONTU/MRC Endowment Fund," UM Foundation, Brantley Hall, UM, Missoula, MT, 59812.



Peter Stickney, founder of the MONTU/MRC Endowment

Visitors to the University of Montana Herbarium in 2013

General Public and Private Consultants
Andrea Pipp (Respec Consulting), Maria Mantas, Ron Page, Rebecca Rawlinson, Tom Watson, Elizabeth Lackschewitz, Paula Tenhoeff, Nathan James, S. Ellen Underwood, Madeline Mazurski, Drake Barton

UM Researchers and Students
Scott Mincemoyer (MT Natural Heritage Program), Klea Clagstad (MT Natural Heritage Program), Tim Peterson, Mandy Slate, Lauren Waller, Katie Baer, Emily Kern, Claire Qubain

Federal, State, Tribal, NGO Biologists
Susan Rinehart (USFS), Sheena Dorak (USFS), David Kemp (USFS), Eva Masin (USFS), Michele Disney (USFS), Chris Carlson (City of Missoula)

Other Academic Researchers
Joseph Charboneau (University of Wyoming), Larry Hufford (Washington State University)

Notes from the Board

The U of M and MSU herbaria have been an all-too-infrequent, but important resource throughout my career. I started with a somewhat unconventional use of MONTU in 1973 while working under a temporary appointment for Dr. L. Jack Lyon at the Forest Sciences Laboratory on campus. My job was to investigate the feasibility of determining elk food habits by examining plant epidermal cells in elk pellets under a dissecting microscope. This turned out to be a frustrating exercise. Several times, I took some elk poop fragments (after being washed over a screen) to the herbarium for comparison with known plant specimens. I was never able to reliably determine elk food habits in this manner but the herbarium was a valuable part of the investigation.

Later, between 1975 and 1977, I once again became the default scatologist while working for the U of M Border Grizzly Project. This was a much easier task than my previous elk food habits study because grizzly poop has much larger plant fragments compared to elk pellets. Once again I headed to the herbarium, washed poop samples in hand. I was sure my samples were in the Apiaceae but was unsure of the species. I showed the grizzly poop samples to Klaus Lackschewitz who, after a casual look, said "Oh yes, that's *Ligusticum canbyi*." Was I impressed! Wow, I thought, now there's a man who really knows his plants – whether they are growing in the ground, mounted on an herbarium sheet, or coming out the back end of a grizzly bear!

During my time as NRCS State Biologist for Montana, I have somehow become the default plant identification guy for many of our people. Rarely do I get a close to decent plant specimen. Some are sent to me brittle and partially crushed in plastic bags and manila envelopes. Others are sent as email .jpg attachments. Rarely do any specimens have much of a root system attached. The MSU herbarium has been very useful while trying to make sense out of this very limited information.

My most extensive use of MONTU/MONT – and the most enjoyable – occurred while working with Peter Lesica to complete the "Field Guide to Montana's Wetland Vascular Plants." This effort involved many hours looking over countless sedges, bulrushes, rushes, etc. What a lucky break – getting paid to step off of life's hectic, speeding train to pursue my passion in a peaceful, organized haven of natural history!

The current trend in the biological sciences – spending more and more time with computer modeling, geospatial analysis, and genetics – makes it crucial that we maintain our natural history skills and resources, like our herbaria. Sooner or later the pendulum will swing back toward field-based science. Let's hope we are ready with skilled naturalists when that happens! And let's hope we still have our herbaria to support this important field of knowledge.

Pete Husby

FRIENDS
of the University of Montana
HERBARIUM

DIVISION OF 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

The *Friends* Newsletter
Edited by
Peter Lesica and Marilyn Marler

Layout & Copy Editing by
Drake Barton and Kathy Lloyd

2014 FRIENDS OF THE HERBARIUM ANNUAL MEETING

The Annual Meeting of the Friends of the UM Herbarium will be held Saturday, November 8 from 10 AM to 2 PM. The meeting will be held in Rm. 202 of the Natural Sciences Building on the UM Campus. This is the annual meeting of the Board of Directors and is open to the membership.

Herbarium Students and Volunteers

This winter we've had a bloom of fresh faces in the herbarium, which has helped with new and ongoing projects. It also makes for a fun environment as we get to know each other! Longtime volunteer Virginia Vincent and our rock-solid work study student Grace Johnson (now a 2 year veteran of the herbarium) are here to provide stability and continuity as we train new plant enthusiasts.

So far, volunteers have been engaged in two main projects. The first is our effort to photograph all the herbarium specimens and link the photos with the Consortium of Pacific Northwest Herbaria database (http://www.pnwherbaria.org). The second is mounting plants and accessioning them into the museum. Both of these are overwhelming tasks so we are thrilled to have help!

Three undergraduates and two community volunteers began working regularly in late 2013.

Lolo Mason, originally from Georgia and now a senior in wildlife biology, comes a few times a week to take photos for the online database project. I met Lolo last summer when she worked on the Mt. Sentinel restoration crew. This semester she is taking Rocky Mountain Flora as part of a full course load and working multiple jobs off campus! We're lucky to have her positive attitude and hard work applied to this huge project. Lolo says there's "something fun and personal about being around plants." Regrettably, Lolo missed having her picture taken for this newsletter.

Sophomore Aimee Kelley Dickinsen has a knack for mounting plants and a passion for teaching fellow students about the value and hidden secrets of the herbarium. More than once I have come across her giving an impromptu tour of the space to classmates!

Our newest student volunteer is Jeremy Carr, who just moved to Missoula from Colorado to start college. He has more plant knowledge and enthusiasm than your typical 18-year-old college freshman! Part of his home school curriculum had him writing a newspaper column on productive uses of wild plants, a column that he continues to publish from Montana. On volunteering in the herbarium, he says it's been a good way to get settled on campus and learn a little about Montana plants and all the functions of an herbarium!

Jordan Meyer-Morey is also new to Missoula. She's from Helena and graduated from Montana State a few years ago. After a few years' field experience working in Nevada's Great Basin plant communities, Jordan decided to settle in Missoula. She sought out a volunteer position at the herbarium as way to get to know local botanists and local plants. Jordan says that she's been surprised at the age and quantity of museum specimens here at MONTU. While she'll be leaving us soon to spend the field season working in the Bitterroot Valley, we're glad to know that she plans to come back next winter.

And last but not least, our friend Charles Hackett has been making a habit of coming in to mount plants on Friday afternoons. He often brings his 3 year old son Teagan with him, which brings some fresh energy to the plant stacks! Charles works as a hay inspector in the summer, and I think he really needed to get a winter fix of botany. And who can blame him?

We're so grateful to all our volunteers for helping us get through the work load while contributing to a fun and social atmosphere!

Marilyn Marler

Jordan Meyer-Morey, Herbarium volunteer

Charles Hackett, upper left photo, is volunteering to mount specimens at the Herbarium.

Jeremy Carr, upper right photo, is a student volunteer at the Herbarium. He writes a newspaper column about the uses of wild plants and is learning about Montana's flora while helping out at MONTU.

Work study student Grace Johnson (right) works with new students on the fine points of mounting specimens. Aimee Kelley Dickinsen (left) often shows off the Herbarium to fellow students.

MONTU People
….Wilhelm N. Suksdorf

Botanists are often stereotyped as shy, introverted, single-minded people, and in the case of Wilhelm Suksdorf, the stereotype fits pretty well. In spite of his shyness and his almost complete lack of formal training, Suksdorf is often considered one of the premier Pacific Northwest botanists from the latter half of the 19th century. Most of Suksdorf's most valuable collections were made in Washington between 1876 and 1890; he did not come to Montana until the second decade of the following century.

Wilhelm Suksdorf was born in Germany in 1850, and was one of nine children. His family immigrated to the United States in 1858 and settled in eastern Iowa, near relatives. The family, including the children, worked at farming. Wilhelm was somewhat sickly and apparently had time to indulge his innate interest in flowers. By the time he was twenty years old, he had purchased a copy of Gray's Manual of Botany and began to master the flora of the tallgrass prairie. This was the same year that he attended Grinnell College in central Iowa where he studied English.

It wasn't long afterward that two of his older brothers moved to western Washington and convinced the whole family to sell the farm and follow them. They settled along the Columbia River in the shadow of Mount Adams in 1874. Meanwhile, Wilhelm went to Berkeley and attended the University of California for three or four semesters. He was able to take only one plant science course which was heavy on agriculture and horticulture and light on botany. Suksdorf returned to his family in Washington in 1876, and with only a couple of short sojourns, lived there the rest of his life.

Gifford, The Dalles, Ore.
W. N. Suksdorf, about 1900.

Suksdorf began to make plant collections near his home as soon as he returned, and in 1877 sent some of his collections to Asa Gray at Harvard, North America's premier botanist of the time. Gray was very supportive of the young, aspiring botanist, and two years later he described the genus *Suksdorfia* in the Proceedings of the American Academy of Arts and Sciences based on a collection of *S. violacea* that Suksdorf had collected along the Columbia River near his home. Suksdorf made many trips to the nearby slopes of the 12,000-foot Mount Adams, and in 1880 he went there with Charles Parry who had served as botanist on the Mexican Boundary and Pacific Railroad surveys in addition to making many discoveries in the Colorado Rockies. Parry got Wilhelm Suksdorf started on collecting and labeling plant specimens in duplicate so that he could sell the duplicates to herbaria throughout the world. Though he continued to work the farm with his family, Willhelm now began to make some money as a botanist. His collections contained several species previously unknown to science such as *Crataegus suksdorfii* and *Mimulus suksdorfii*. He also collected seeds and live bulbs to sell to botanic gardens and horticultural collectors.

Most of Suksdorf's early collecting was near home, between Portland, Oregon and central Washington, but in 1884 he made his first excursion to eastern Washington, collecting specimens from Yakima to south of Spokane where his brother lived. After this first trip to the Columbia Plateau, Suksdorf returned in 1889, 1916 and 1921. He visited Montana during trips taken in the last two of these years.

His friendship with Asa Gray and his custom of sending his best collections to Harvard resulted in Suksdorf accepting a position to work as Gray's assistant in 1886. He worked there for over a year but left just before Asa Gray died in early 1888.

Wilhelm lived in what was his parents' house in Bingen, Washington until 1910, when his brother built him a small house nearby. In the back yard of this house, Suksdorf created a small botanic garden where he performed common garden studies. He was, by all accounts, a taxonomic splitter. He found that many populations maintained small differences in the common garden, and he used these to justify his taxonomic splitting. The fiddleneck genus *Amsinckia* is currently thought to encompass about 15 species. Suksdorf published a monograph of the genus in 1931 in which he recognized over 100 species.

Suksdorf went to visit his brother south of Spokane in May of 1916, and spent most of the next three months botanizing in the area around the town of Spangle. In mid-August he went east to south-central Montana to visit his nephew Adolph Suksdorf who farmed northwest of Wilsall in the valley of Cottonwood Creek on the eastern slopes of the Bridger Range in northern Park County. He spent almost every day of the next two weeks collecting plant specimens in the vicinity of his nephew's farm or along the Shields River as far south as Wilsall. On the 26th of August he made a trip to what he called Bridger Pass (now called Battle Ridge Pass) in the Bridger Range. His last Montana collections were made on September 2 on his nephew's farm. That was the final day of his Montana collecting in 1916. He collected approximately 200 specimens with

(Continued on page 6)

...Suksdorf *(Continued from page 5)*
numerous duplicates of each. All were fairly common late-season species of grasslands, such as gentians and goldenrods as well as seven species of milkvetch (*Astragalus*). By September 7, he was back in eastern Washington with his brother.

Five years later, at the age of 71, Suksdorf returned to Montana and his nephew's farm, but this time he stayed for three months. He arrived in late June and botanized in the immediate area of the farm for the rest of the month and many days through mid-September. On the Fourth of July he collected plants along Flathead Creek near the community of Sedan, southwest of Wilsall. Then, in mid-July, Suksdorf travelled south of the Yellowstone River to Chico Hot Springs where he collected his only specimen of James' saxifrage (*Telesonix jamesii*). Later in the month he travelled to Bridger Pass. He botanized near his nephew's home most of August. On the 21st Suksdorf went to Horse Creek, his first and only trip to the Crazy Mountains east of his nephew's farm. There he collected twinflower (*Linnaea borealis*), the only real boreal species he collected in Montana. This raises the question of why Suksdorf, who was surrounded by mountains, never collected plants in the subalpine or alpine zones. It may be, that at the age of 71, he was unable to make the climb. Toward the end of the month Suksdorf travelled to Livingston and collected wild cucumber (*Echinocystis lobata*) and cocklebur (*Xanthium strumarium*) along the Yellowstone River. After his trip to Livingston, Suksdorf continued collecting around his nephew's farm until the equinox.

Among his collections from 1921 were 13 species of New World asters (*Symphyotrichum*), 11 species of milkvetch (*Astragalus*) and seven species of sedge (*Carex*). He made six different collections of prairie gentian, *Gentiana affinis*, and five different collections of northern gentian (*Gentianella amarella*). He collected over 300 species of vascular plants in all and even a couple bryophyte specimens. He collected narrow-leaved bricklebush (*Brickellia oblongifolia*) which has only been collected five times in Montana, and made the fourth collection of the noxious weed common toadflax (*Linaria vulgaris*) from the state.

Wilhelm Suksdorf published 23 papers in all, most of them in German. In 1892, he privately published a checklist of vascular plants of Washington based on his collections, and four years later published a checklist of the flora of Mount Adams. Shortly after returning from Montana, Suksdorf began working on his own botanical journal called *Werdenda*. He never felt completely comfortable with English, so he published his journal in German. He used this venue to publish his monograph of *Amsinckia* as well as describe new plants he had found and records of species previously not known to occur in Washington. He also published articles in English on *Arenaria* and *Cardamine* in Rhodora, the journal of the New England Botanical Club, and a description of *Saxifraga gormanii* in Torreya, the journal of the Torrey Botanical Club.

Washington State University in Pullman hired Charles Piper as its first plant taxonomist in 1893, six years after Suksdorf returned from his year at Harvard. Without Asa Gray, Suksdorf was in need of a taxonomic advisor, so he turned to Piper. The two became friends and helped each other over the ten years that Piper remained at WSU. Piper was preparing his *Flora of the State of Washington*, and Suskdorf's knowledge was invaluable. Harold St. John became the taxonomist in 1920, and he and Suksdorf struck up a friendship. St. John was instrumental in obtaining a research fellowship for Suksdorf in 1925-1927, which allowed him to use the WSU library and laboratory facilities to help him identify his difficult specimens. St. John also nominated Suksdorf for an honorary Master of Science degree from WSU which he received in 1928. In return, Suksdorf donated his private herbarium and library to WSU upon his death in 1932. Many of Suksdorf's duplicates are housed at MONTU.

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Peter Lesica

Activities

The Clark Fork Chapter of the Montana Native Plant Society held three meetings in the herbarium during the winter of 2013. In January, Peter Lesica and Mike Young presented on Montana's species of *Penstemon*. Joe Elliott gave an introduction to common mosses in February. In March, John Pierce provided an introduction to Montana sedges.

Thanks to new members of the Friends!

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

Dr. Tom Watson

Don't Forget to Pay Your Dues!

If you haven't already done so, send in your membership renewal. You won't want to miss a single issue of the newsletter or miss out on what is happening at the herbarium. Use the membership renewal insert included in this newsletter, or the membership form on page 8. Gift memberships are also available and are a great idea for friends.

MONTU NEWS BRIEFS

Publications

Bahls, L. 2012a. *Staurophora brantii*, a new diatom (Bacillariophyta, Anomoeoneidaceae) from the northwestern Great Plains. Phytotaxa 39:31-37.

Bahls, L. 2012b. Seven new species in *Navicula* sensu stricto from the Northern Great Plains and Northern Rocky Mountains. Nova Hedwigia, Beiheft 141:19-38.

Bahls, L. 2012c. Five new species of *Stauroneis* (Bacillariophyta, Stauroneidaceae) from the northern Rocky Mountains, USA. Phytotaxa 67:1-8.

Bahls, L. 2012d. *Navicula whitefishensis*, a new diatom (Bacillariophyta) from the Northern Rockies. Intermountain Journal of Sciences 18(1-4):1-5.

Bahls, L. 2013a. New diatoms (Bacillariophyta) from western North America. Phytotaxa 82(1): 7-28.

Bahls, L. 2013b. Northwest Diatoms, Volume 5: *Encyonopsis* from western North America: 31 species from Alberta, Idaho, Montana, Oregon, South Dakota, and Washington, including 17 species described as new. Montana Diatom Collection, Helena, Montana, 46pp.

Bahls, L., J. Pierce, R. Apfelbeck, and L. Olsen. 2013. New and rare diatoms from undisturbed floating-mat fens in the northern Rocky Mountains. *In* M. Edlund and M. Julius (eds.), Proceedings of the 21st International Diatom Symposium, Saint Paul, Minnesota, U.S.A. Phytotaxa (*in press*).

Bahls, L., M. Potapova, M.-A. Fallu, and R. Pienitz. 2009. *Aulacoseira canadensis* and *Aulacoseira crassipunctata* (Bacillariophyta) in North America. Nova Hedwigia, Beiheft 135:167-184.

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Kimball, S. and P. Lesica. 2013. Trees and flowering shrubs of Glacier National Park and surrounding areas. Trillium Press, Kalispell, MT.

Lesica, P., B. Christiaens, D. Hanna, L. Larsen and C. Odegard. 2013. Noteworthy Collections: Montana. Madrono 60: 262–263.

Lesica, P. and P. M. Kittelson. 2013. Morphological and ecological segregation of two sympatric *Lomatium triternatum* (Apiaceae) varieties in Montana. Madrono 60: 211–216.

Morales, E., L. Bahls, and W. Cody. 2005. Morphological studies of *Distrionella incognita* (Reichardt) Williams (Bacillariophyceae) from North America with comments on the taxonomy of *Distrionella* Williams. Diatom Research 20 (1):115-135.

Morales, E., K. Manoylov, and L. Bahls. 2010. Three new araphid diatoms (Bacillariophyta) from rivers in North America. Proceedings of the Academy of Natural Sciences of Philadelphia 160:29-46.

Morales, E., K. Manoylov, and L. Bahls. 2012. *Fragilariforma horstii* sp. nov. (Bacillariophyceae), a new araphid species from the northern United States of America. Nova Hedwigia, Beiheft 141:141-154..

Winter, D. and L. Bahls. 2013. *Encyonema hamsherae* sp. nov., a new species from the Northern Rockies. *In* M. Edlund and M. Julius (eds.), Proceedings of the 21st International Diatom Symposium, Saint Paul, Minnesota, U.S.A. Phytotaxa (*in press*).

Zika, P. F. 2013. A synopsis of the *Juncus hesperius* group (Juncaceae, Juncotypus) and their hybrids in western North America. Brittonia 65: 128-141.

New Acquisitions

Peter Lesica 113 Montana vascular plants
John Semple University of Waterloo (Ontario) 17 Asteraceae
Karen Gray of Moscow, ID, 23 mosses, 1 liverwort, 1 lichen
Jessie Salix, USFS, 1 specimen *Botrychium multifidum*
University Washington Herbarium, 68 Montana vascular plants
Chadron State College, 187 Montana vascular plants, 4 mosses
University of Washington Herbarium, 5 specimens of Montana *Castilleja*
Roger Rosentreter 119 lichens
Kelly Privatsky, U.S. Forest Service, 1 *Cryptantha torreyana*

Loans

Mara Nazaire of Rancho Santa Ana Botanic Gardens, 64 Mertensia specimens for annotation
Andrea Weeks of George Mason University, 25 sheets of *Melampyrum lineare*
Steve O'Kane, University of N. Iowa, 74 sheets of *Physaria* (various species)
Mandy Slate, UM DBS, *Brachythecium albicans* and *Homalothecium aeneum* (mosses)

Our fungi collection had a really exciting year! The entire collection took a vacation to the Denver Botanic Garden where it was photographed, indexed and made available on line as part of a National Science Foundation funded project to liberate museum fungi from around the country. MONTU is one of 35 participating groups from 24 states. Melissa Islam of DBG was the project lead. You can search the fruiting bodies of this labor on line at www.mycoportal.org

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

☐	***REGULAR MEMBER***	**$15**
☐	***SUSTAINING MEMBER***	**$25**
☐	***CONTRIBUTING MEMBER***	**$50**
☐	***ORGANIZATION***	**$50**
☐	***LIFE MEMBERSHIP***	**$300**
☐	***SPECIAL GIFT***	**$____**
☐	***HONORARIUM FUND***	**$____**

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Send checks to:
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59812

Dues are for a period of **two** years. Dues for current members are payable in even-numbered years. New memberships are accepted at any time. All contributions to the Friends are tax deductible to the full extent provided by law. All checks should be made payable to: U.M. Foundation/Friends of the U.M. Herbarium.

Dues may also be paid online at: http://umfoundation.onlinemontana.org
1. Click on "Click here to Submit a Gift"
2. In the list of possible funds to donate to, **uncheck** the first box, scroll down to the last entry "Other" and type in "Friends of UM Herbarium, Fund #29H"
3. Under "Comments" indicate "Membership for Friends of UM Herbarium, Fund #29H"

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