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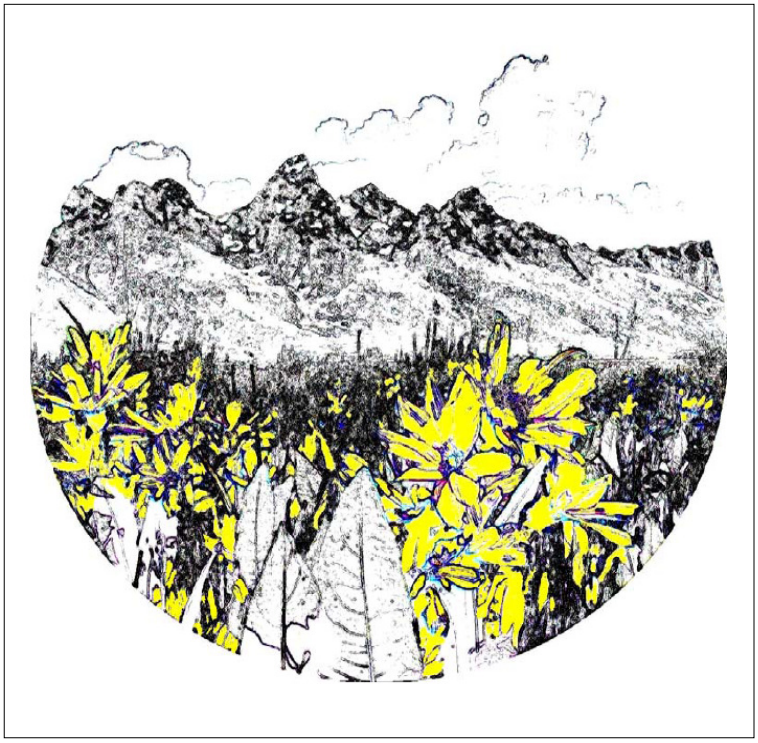
Building a National Community of Natural History Collections

By Grace Kostel
Black Hills State University Herbarium

Thousands of institutions with natural history collections exist in the United States. The number of specimens is estimated to be 820,000,000. These specimens document the diversity of life and provide a continuous record of biotic changes over the last few hundred years. A Research Collections Network (RCN) was recently funded by the National Science Foundation to build a community that will overcome fragmentation of natural history collections caused in part by geographic, taxonomic, historical, and institutional diversity. A stronger community will facilitate research by providing better lines of communications between collections managers and researchers, and improve access to specimens and specimen data. (*Cont., p. 11*)

In this issue:



Above: The Teton Chapter of the Wyoming Native Plant Society and Wyoming's *Wyethia* welcome you to the 2008 annual meeting, July 11-13.

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The design above will be featured in the first ever Wyoming Native Plant Society tshirt and tote bag, printed on organic and recycled cotton, respectively, by a Jackson, Wyoming printer. It is abstracted from a photograph taken by Susan Marsh, member of the Teton Chapter of Wyoming Native Plant Society.

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Happy Spring!

WNPS News

2008 Scholarship Winners: The 2008 Markow WNPS Scholarship winners are Brittany Rene Jenkins (University of Wyoming), undergraduate senior who is researching genetic consequences of rarity in the *Penstemon* genus; and James Zier (University of Wyoming), doctoral candidate who is researching peatland reponse to Holocene climate change and current conditions. Both scholars were presented with a $500 award. The merit (soundness and significance) of all proposals was outstanding. Thanks go to everyone who applied… and to all in WNPS who support scholarships.

Wyoming Native Plant Society
P.O. Box 2500
Laramie, WY 82073

WNPS Board – 2007

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Teton Chapter: PO Box 82, Wilson, WY 83014 (Joan Lucas, Treasurer)
Bighorn Native Plant Society: PO Box 21, Big Horn, WY 82833 (Jean Daly, Treasurer)

New Members: Please welcome the following new members to WNPS: Peter Gallins, Laramie; and Teresa Tibbets, Lander.

Teton Chapter event: Spring Planting!

When: Sat., May 10, 2008 - 10:00 a.m. ~noon
Where: Visitor Center, Grand Teton Natl. Park
It's spring and time to plant a wildflower bed. Teton Chapter made a small wildflower garden at the visitor center on North Cache several years ago. It has fallen into some disrepair, and Marilyn Quinn, who cares for the town flower plantings, has agreed to assist us in redoing it. We will dig out the remaining plants, weed the bed, improve the soil and add new plantings and labels for them. Bring a shovel and your enthusiasm! Meet north of the visitor center at 9 AM. Information: call Joan Lucas at 733-2523.

Contributors to this issue: Ann Boelter (AB), Bonnie Heidel (BH), Grace Kostel (GK), Dave Scott (DS), and Amy Taylor (AT). All contributions and announcements are welcome; the next deadline is September 18.

Treasurer's Report: Balance as of 26 April 2008 - General Fund: $1,583.75; Markow Scholarship Fund: $696.00. Total Funds: $2,279.75. AB

New Publication:
A Field Guide to Biological Soil Crusts of Western U.S. Drylands. 2008. Rosentreter, R., M. Bowker and J. Belnap. U.S. Government Printing Office, Denver, CO.

The U.S. Geological Survey recently published a field guide to the common lichens and bryophytes (mosses and liverworts) found as part of biological soil crusts in Wyoming and other western states. This guide contains sharp pictures, keys and distribution maps for 65+ species commonly encountered. It is intended for field use and thus the keys emphasize characteristics distinguishable in the field, rather than those needing a microscope. A limited number of printed copies can be obtained at no cost by sending a request to: cparry@usgs.gov. It is also posted at: http://sbsc.wr.usgs.gov/products/pdfs/Field_Guide_Book_25.pdf

Reminder:
Growing Native Plants of the Rocky Mountain Region, 2007, by Robert and Jane Dorn, featuring 518 species, can still be ordered in book format, at the $50.00 discount rate, including shipping. Contact the Dorns for details prior to the annual meeting, at linglebird@yahoo.com . The CD-rom version is also available at www.lulu.com/content/787924 for $7.50 plus shipping.

2008 Wyoming Native Plant Society Annual Meeting

GRAND Botanizing: Jackson Hole and Grand Teton National Park

July 11, 12, 13

Where in Wyoming can you spend a weekend exploring wetland potholes, investigating whitebark pine ecosystems above 9000 ft, walking on a landslide from 1925, sketching wildflowers in a National Park, and having a terrific time with other plant enthusiasts? The Teton Chapter invites **you** to a weekend of grand botanizing at the 2008 annual meeting. Saturday is the main day of events, with field trips followed by an evening social hour, catered dinner, dedication of the Markow-Murie Herbarium, and a talk by Robert and Jane Dorn, "Landscaping with Native Plants". Sunday offers two more tantalizing fieldtrips. All weekend events are free and open to the public. Pre-registration is only required for Saturday's optional catered dinner and for the Gros Ventre Campground. Read on for details. Plan NOW to join us in northwest Wyoming this summer.

Schedule of Events

Friday, July 11

All day	Arrival at Gros Ventre Campground
6:30-8:00 p.m.	Gros Ventre Slide field trip

Saturday, July 12

Grand Teton National Park, parking lot of former visitor center in Moose (see map):

8:00-9:00	WNPS business meeting
8:30-9:00	Field trip sign-up; Coffee and muffins provided by Teton Conservation District; bring a mug.
9:00-9:30	Announcements; Carpool to start of hikes
9:00-2:00+	Three field trip options; bring lunch

Teton Science Schools (TSS), Kelly Campus:
(Park at big lower parking lot)

3:00-5:00	Plant Walk
5:00-6:00	Social Hour; tour TSS and Herbarium sales of books and t-shirts
6:00-6:45	Catered Dinner *(registration required)*
6:45-7:00	Dedication of Markow-Murie Herbarium
7:15	Speakers: Robert and Jane Dorn – "Landscaping with Native Plants"

(Open to all; no registration required)

Sunday, July 13

9:00	Two field trip options

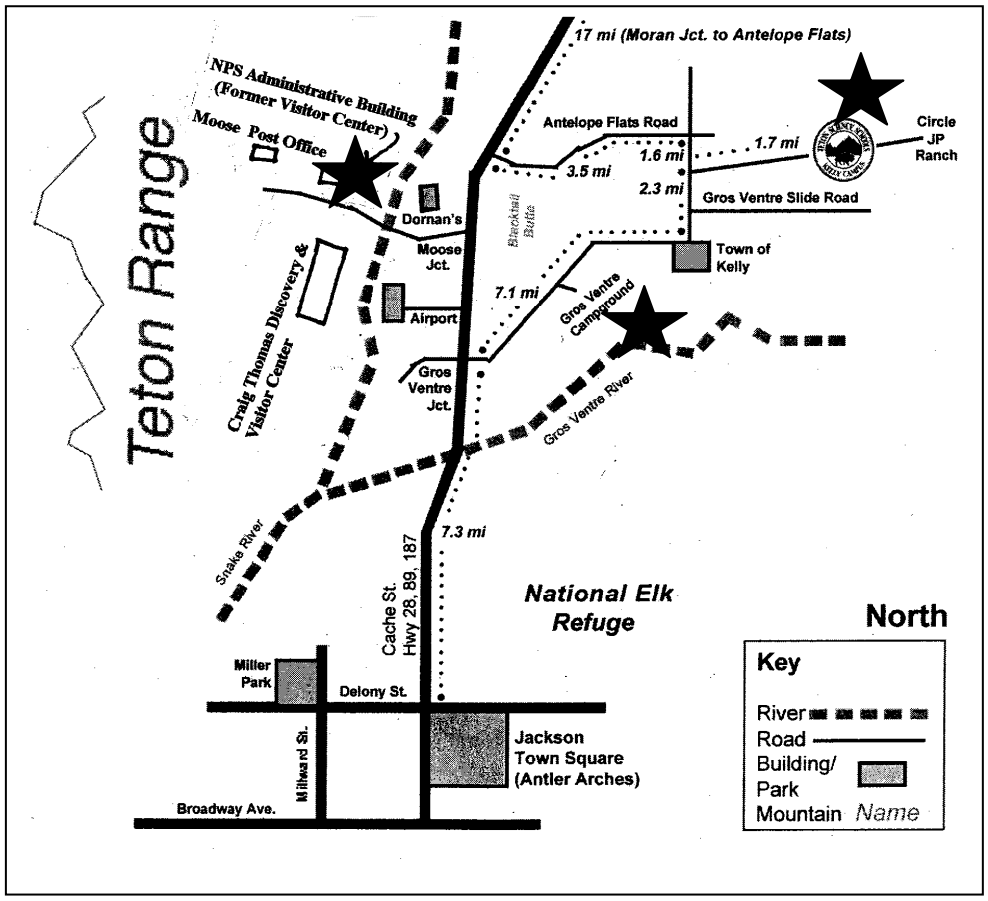
Also: Thursday, July 10: UW/NPS Research Station (AMK) near Leeks Marina within GTNP. "A floristic Inventory of Grand Teton National Park and the Pinyon Peak Highlands, WY" by Dave Scott. 5:30 BBQ $5; 6:00 Seminar

Gros Ventre Campground, Grand Teton National Park: Grand Teton National Park and Bridger-Teton National Forest offer many campsites, but few can be reserved in advance. Therefore, the Teton Chapter offers to make same-day reservations on behalf of attendees who pre-register at Gros Ventre Campground beginning on Friday, July 11. It is located near the Gros Ventre River and Teton Science Schools, with great views of the Tetons and incredible birding and other wildlife watching opportunities. Campsites are $17/night (half price for seniors with Golden Age Pass). A maximum of 2 vehicles, 6 people, and 2 tents and are allowed per site (split the cost with a friend!). There are both RV sites (no hook-ups) and tent sites. The campground has bathrooms, but no showering facilities. We will be reserving sites only for those who wish to begin camping on Friday, July 11. Upon arrival on Friday, your site will be marked with your name. We also plan to have someone available from the Teton Chapter during the day to help you locate your spot. If you plan on staying only Saturday night, you will need to reserve your own site. Please indicate on the registration form the names of people sharing your site (if applicable), RV or tent site, and number of nights. Make checks payable to Amy Taylor.

Many other options exist for camping and lodging in the area. Plan to reserve early for lodges and hotels. They often fill up during the busy summer season.
Grand Teton National Park: 307-739-3300, www.nps.gov/grte
Bridger-Teton National Forest: 307-739-5400, www.fs.fed.us/r4/btnf
The Hostel, Teton Village (private rooms with bathrooms) 307-733-3415
Jackson Hole Chamber of Commerce: 307-733-3316, www.jacksonholechamber.com

FIELD TRIPS:
Please be prepared for all types of weather. Wear good walking shoes/boots. Bring raingear, extra layers, hat, sunscreen, lots of water, food, and extras such as camera, binocular, hand-lens. Bring a lunch for day hikes. Sign-ups for fieldtrips will take place Friday at campground and Saturday morning at parking lot of former visitor center.

*** Admission to Grand Teton National Park is $25 per vehicle for one to seven days (also good for Yellowstone National Park). Many locals have annual park passes and may have room in vehicles when carpooling to GTNP field trip locations.



Friday July 11:
6:30-8:00 p.m. Vegetation Responses to the Gros Ventre slide of 1925

Meet at Gros Ventre Campground entrance; Carpool from there.

Join Susan Marsh, Recreation Staff Officer for Bridger-Teton National Forest, to learn about the impressive Gros Ventre Slide. In nearly 90 years, the raw scar of the landslide has transformed, with trees, shrubs and wildflowers replacing bare rubble. Much of the landslide debris is still visible. Various states of regrowth can be seen along the half-mile interpretive trail. Stop along the way to view mountain meadows and Teton vistas. Moderately easy hike, but sturdy boots are needed for segments of steep terrain along the trail.

Saturday July 12:
Three different full-day field trips in **Grand Teton National Park** are planned for Saturday morning. All groups will meet by 9:00 am for announcements in the parking lot at the former Visitor Center (now the NPS Administrative Building) near the Moose Post Office (see map). Show up between 8:30-9:00 to sign-up for hikes. Coffee and muffins provided by the Teton Chapter. Everyone is also welcome to attend the WNPS business meeting at the same location at 8:00 am.

9:00 a.m. Announcements; Carpool to one of three field trip destinations; bring lunch:

Burnt Ridge Pothole Wetlands Klara Varga, botanist for Grand Teton N. P., will lead a stroll (**not** a vigorous hike) in the Burnt Ridge area of the park. Burnt Ridge is on the south side of the Inside Road, across from Jackson Lake's Spaulding Bay. This will be a cross-country amble across the sagebrush and lodgepole of the valley floor, and we will come upon some very intriguing little pothole wetlands of interesting native plants. It should not be a strenuous hike, but since it will be off-trail, appropriate footwear will be especially important. Total distance: approximately 3 miles. Drive time and hike: approx. 4+ hours.

Wildflower Field Sketching for Beginners – Taggart & Bradley Lakes
Taking visual notes of wildflowers helps you remember what you have seen, the names of the plants you learn and gives you the information you need to identify the flowers later when you have access to your field guides. Come join Meredith E. Campbell, artist and naturalist, for a walk through beautiful wildflower terrain and learn some simple, yet effective techniques for sketching wildflowers. Moderate hiking with stops for sketching. Bring sketchbook, pencil with eraser, colored pencils or watercolor (optional), field guide (optional), sit pad, and backpack to carry supplies. The day will end around 2 p.m. Limited to 15 people. (sign-up Friday evening or Saturday morning)

Phelps Lake Wildflowers
Teton Chapter founder, Katy Duffy, is returning to the Tetons! Katy (now working in Yellowstone National Park as the west district interpretive ranger), will lead a hike to Phelps Lake Overlook and then down to Phelps Lake to enjoy the variety of wildflowers blooming in the conifer forest and in the meadows on the south-facing slopes above Phelps Lake. We will walk a short distance along the lake before turning around and hiking back to the Death Canyon trailhead. The return trip is mostly uphill and moderately strenuous, so we will pause frequently to admire the wildflowers. Roundtrip distance: 5-6 miles. Estimated time: 5+ hours.

3-5 p.m. Many Uses of Plants – Teton Science Schools, Kelly Campus Meet at Spur Ridge Classroom. Participants will wander through several plant habitats looking at plants from unusual perspectives: What is the mythology behind some of their names? Which are valuable as first aid or "woods medicine" in emergency situations? What uses were made of plants by native peoples and early settlers? Which have been traditionally used in the dying of wool? Which plants could you use for survival if necessary? This is a "stroll" or "amble" rather than a hike. Your guide: Jean Jorgensen, an amateur naturalist, has been closely affiliated with Teton Science Schools since the late '60s. A former owner of The Herb Store in Jackson, she has offered this unique type of plant walk to the community over the years.

Sunday July 13:

9 a.m.-2 p.m. Flowers and Trees of the Alpine
Meet in front of ticket counter at Teton Village.
Join Kim Springer and Nancy Bockino for a ride to 9100 feet at the top of the gondola at Teton Village. Take a hike up Rendezvous Peak to explore the miniature plants, hardy trees, and their adaptations for surviving the harsh conditions above treeline. Accompany us as we explore high elevation whitebark ecosystems, including the impacts of bark beetles and blister rust and the resilience of these amazing trees. If time permits we'll observe marine fossils from the Mississippian period 350 million years ago, when this area of Wyoming was covered by a shallow marine sea. Expect a hike of two to three miles over the course of the day. Be prepared to hike on rugged terrain at high elevation where weather can change quickly. Bring raingear, lunch, water, camera, hand lens, and money for the gondola ride (approx. $10 with educational discount).

9 a.m.-noon Laurance S. Rockefeller Preserve Trails
Meet outside the visitor center at the Laurance S. Rockefeller Preserve.
Be among the first visitors to the newly opened trails of this preserve. Gifted to Grand Teton National Park by Laurance S. Rockefeller, the 1,106 acre preserve is made up of sagebrush meadows, mixed conifer forests, wetlands, creeks and the shores of Phelps Lake. Researcher Dave Scott will be your interpreter on the trails through these different natural communities; a moderate hike of 2-3 hours. Rockefeller envisioned a place where one could re-connect with the natural world . . . come be inspired . . .and leave the weekend feeling more connected to the land.

Catered Dinner at Teton Science Schools, Kelly Campus: Saturday, July 12, 6:00 p.m.:
Wyoming Native Plant Society – Teton Chapter invites you to a catered dinner that is being offered through TSS on Saturday Night. The **optional** dinner is a full meal including a meat and vegetarian option, salad, non-alcoholic drinks, and dessert. Price is $15 per person. Free for children under age six. **Dinner seats are limited and will be reserved**

on a first come, first serve basis. Reservations are due by June 16. Fill out reservation form soon with checks made out to Teton Chapter Wyoming Native Plant Society (TCWNPS).

Other Meals: Please plan on bringing your own food for other meals throughout the rest of the weekend. Grocery stores and restaurants are located in Jackson. Lodges are available in GTNP. Dornan's in Moose also offers meals and a convenience store.

Have more questions about the annual meeting?

Contact Teton Chapter coordinator Amy Taylor 307-733-3776; ajrtaylor@hotmail.com

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2008 Annual Meeting Reservation Form

Only required for people making reservations for the catered dinner and/or Gros Ventre Campground. Reservations are **due by June 16**. All other events are free and open to the public. If you plan to attend the annual meeting, but don't need dinner or campground reservations, we'd still like to know you are coming!

Name(s)_____

Address_____City_____State_____Zip_____

Phone_____ E-Mail_____

Catered Dinner at Teton Science Schools, Kelly Campus
Saturday, July 12, 6:00 p.m.:

Number of people_____ x $15 per person = _____

****Make a separate check for dinner reservations payable to:*
Teton Chapter Wyoming Native Plant Society (TCWNPS).

Gros Ventre Campground Reservations: A Friday night stay is required in order for the Teton Chapter to make reservations for the weekend.

Tent campsite___ or RV campsite (no hook-ups) _____

Names of other parties sharing your site (if applicable)_____

Campsite Friday evening, July 11 $17
_____Yes, also reserve Saturday evening July 12: $17

Total_____

**** Make a separate check for campsite reservations payable to: Amy Taylor*

Please make sure checks for dinner and camping are made out separately.
Mail this registration form and check(s) to:

Amy Taylor
WNPS Annual Meeting
P.O. Box 6654
Jackson, WY 83002

2007 Scholarship Research

A Floristic Inventory of Grand Teton National Park and the Pinyon Peak Highlands, WY

By Dave Scott (Kesonie)
Principal Investigator: R. Hartman, Co-Principal Investigator: B.E. Nelson

Results of a floristic inventory in the Teton Mountains and adjacent Pinyon Peak Highlands document a rich flora and fill in crucial gaps. Field work associated with my master's research and partially funded by the Wyoming Native Plant Society 2007 Markow Botany Research Scholarship has amounted to many additions to the local flora. Two species previously unknown to Wyoming are now acknowledged and 85 species have been added to the Grand Teton National Park vascular plant list.

We initiated this study in response to a known data gap on federal lands of northwest Wyoming where the unique habitats of the Teton area were not well represented by specimens in regional herbaria. We first examined a list of vascular plant collections held by the Rocky Mountain Herbarium (RM) for areas managed by Grand Teton National Park. Vouchers were available for the easily-accessible valley bottom within the Park but outlying backcountry areas were not well-represented. Several townships within the project area (each 36 square miles) had less than 15 specimens/township at the RM. Further, a broad scale plant collection effort for purposes of cataloging the extant floristic diversity had never been undertaken within the project area. We included in our study area a remote portion of the Bridger-Teton National Forest known as the Pinyon Peak Highlands which lies within the Teton Wilderness, and lands on the Targhee National Forest, and lastly the National Park Service managed John D. Rockefeller Jr. Memorial Parkway (JDR).

Two summers were spent collecting vascular plants across the project area including remote backcountry localities and frontcountry areas. Habitats encountered include montane ponds and bogs, the sagebrush valley bottom of Jackson Hole, montane and subalpine slopes, and alpine areas up to 11,300 feet. Plants were pressed and dried then identified at the Rocky Mountain Herbarium with some specimens being verified by specialists. These scientific vouchers representing 8012 collections now serve as the basis of this project's results.

Two species were collected for the first time in Wyoming. A native sedge *Carex atrosquama* was collected by R. Hartman in the south end of Grand Teton National Park in montane habitat. Likewise, I collected *Achillea ptarmica* in Grand Teton National Park but near historic buildings whereby it is now escaped from cultivation and naturalized. The latter collection represents a cultivar that was bred from the mentioned European species for its showy white ray florets.

INVITATION

Thursday, July 10: UW/NPS Research Station (AMK) near Leeks Marina within GTNP. "*A floristic Inventory of Grand Teton National Park and the Pinyon Peak Highlands, WY*" by Dave Scott. 5:30 pm BBQ for $5; 6:00 pm Seminar

We identified 85 species that had not yet been collected on Grand Teton National Park or the JDR. Some of these were from alpine areas: *Draba cana*, *Elymus alaskanus* ssp. *latiglumis*, and *Townsendia parryi*. Other notable collections were from aquatic habitats: *Lemna gibba*, *Myriophyllum verticillatum*, *Stuckenia pectinata*. Historical species (Keinath et al. 2003), those that had not been collected or relocated in more than 30 years and tracked as rare by Wyoming Natural Diversity Database (WYNDD) were also collected: *Carex proposita* and *Huperzia haleakalae.* The latter, a fern ally had in fact been collected only once in Wyoming in the early 1930's but was misidentified for many decades due to the poor condition of the original specimen. Overall, 13 WYNDD species of conservation concern were documented that were otherwise previously unknown to the Park.

Outstanding contributions to our species list from the Pinyon Peak Highlands, Bridger-Teton National Forest are: *Carex cusickii*, *Eriogonum flavum* var. *piperi*, *Sanicula graveolens*, *Spirodela polyrhiza*. A remarkable pattern was uncovered in examination of the habitat characteristics of the

rare sedge *Carex cusickii* documented in this project. The Pinyon Peak Highlands population occurred adjacent to a cold upwelling spring, a rare habitat in that part of the project area. Two populations from the JDR were adjacent to upwelling thermal springs and only one other

All species mentioned thus far were located in intact habitats free from direct human disturbance. Some introduced plants now shown to occur in the project area include: *Lappula squarrosa*, *Logfia arvensis*, *Salix fragilis*. Many more populations of locally notorious weeds were also documented

In total 987 taxa were found within the project area. The discovery of new populations of WYNDD tracked species is among the greatest contributions of this study. All taxa are now represented by the best evidence of their presence, which are research-quality specimens deposited at a nationally recognized institution, the RM. Future work on rare or invasive plants in the project area and beyond can now be directed by the findings of this baseline study.

Literature Cited:
Keinath, D., B. Heidel, and G. Beauvais. 2003. Wyoming plant and animal species of conservation concern. Unpublished document. Wyoming Natural Diversity Database, Laramie, WY.

Contact Information:
Dave Scott (Kesonie)
dscott1@uwyo.edu

Markow – Murie Herbarium

By Amy Taylor

"*Hierochloe alpina* (Sw. ex Willd.) Roem. & Schult. Determined by Stuart Markow 1999. "

The words are neatly written in pencil, in the lower right-hand corner of a herbarium sheet containing alpine sweetgrass collected in 1940 by Adolph Murie in Mount McKinley National Park.

The sweetgrass specimen is one of more than 4000 that are housed in the Markow-Murie Herbarium at Teton Science Schools, Kelly Campus, Wyoming. Formerly called the Murie Herbarium, it was renamed in 2004 in memory of Stuart Markow, a well-known botanist in Wyoming. Stuart meticulously reviewed the entire plant collection between 1994-1999. Annotating an entire herbarium is a daunting task. Annotations are notes added to a herbarium sheet indicating that the examiner has confirmed, corrected or determined the species' identification. Because of Stuart's diligence and expertise, each specimen in the Murie plant collection contains the correct identification with the current nomenclature.

Naturalists Olaus and Adolph Murie's plant specimens occupy most of the cabinet space in the Markow-Murie Herbarium. The plants were part of a greater collection that the Murie families donated to Teton Science Schools in 1974. The unique collection was previously stored in the family's barn in Moose, Wyoming. It contains some 600 bird skins, 500 skulls, 800 scats, 300 animal track casts, research notes, and upwards of 2500 dried plant collections. The brothers made collections beginning in 1910 until their deaths (Olaus in 1963, and Adolph in 1974).

Although best known for their North American studies of elk, caribou, coyotes, wolves, and grizzlies, Olaus and Adolph gathered many plants throughout their careers with the federal government. Most notably are Adolph's more than 700 plant specimens collected from Mount McKinley National Park from the late 1940s through early 1960s. Stuart Markow identified most all these specimens, which had not yet been determined.

The herbarium also contains specimens from Olaus' wife, Mardy Murie. Mardy is best known for her life's dedication to wilderness conservation. She died in 2003, at age 101, at her home on the Murie Ranch in Grand Teton National Park. Adolph's wife, Louise 'Weezy' MacLeod Murie, lives in Jackson and was probably the most ardent wildflower enthusiast among the Muries. Each spring she continues to eagerly anticipate the arrival of buttercups, steer's head, and spring beauties.

Teton Science Schools (TSS), founded in 1967 and located in Grand Teton National Park, is dedicated to educating, training and inspiring students of all ages about the natural world. The Muries, Adolph in particular, knew founder Ted

Major and believed that TSS would make the best home for the Murie collection because of its location, mission and future utility by students.

Stuart Markow educated and inspired many students during his seasonal work at TSS. His summer courses, offered between 1998-2004, had clever titles, including "Grappling with Gramineae: Grass Identification", "Wildflower High", and "Getting the Edges on Sedges: Wetland graminoids identification." Students praised his knowledge, patience, enthusiasm, communication, humor, and outstanding class handouts.

During the summers of 1998 and 1999, Stuart helped graduate student Heather Marks confirm identifications from plants collected at the Murie Ranch (former home of Adolph and Weezy, and Olaus and Mardy). They spent sleepless nights identifying plants at the Murie Herbarium. "Stuart was tireless, inspiring and a great teacher who made my skills in ID increase off the charts" said Marks. "Without a doubt, his expertise, guidance, and mentorship was key to the success of my project and to the integrity of the data."

In addition to being a remarkable teacher, Stuart made many scientific contributions to the area. For his Master's thesis at University of Wyoming, he completed a floristic inventory from 1991-1993 for Targhee National Forest in NW Wyoming and E Idaho (13,741 specimens of 1006 taxa). He worked seasonally as a botanist in other states, but always found ways to return to Jackson. His local accomplishments include general and rare plant surveys for Bridger-Teton National Forest. He also reviewed and made correct identifications for Grand Teton National Park herbarium.

During his summer visits he would always squeeze in time to botanize on his own or with an eager apprentice. Armed with bear spray, his hand-lens, and a bag of pumpkin muffins, he would begin the day excited for a new botanical adventure. Grassy Lake Road, off the John D. Rockefeller, Jr. Memorial Parkway, was among his favorite spots to look at plants. He treated all plants with dignity, but delighted in finding interesting grasses, grape ferns (*Botrychium* spp.), Teton wirelettuce (*Stephanomeria fluminea*), and northern twinflower (*Linnaea borealis*).

The Markow-Murie Herbarium is located in a basement classroom at Teton Science Schools, Kelly campus. A small plaque inside the door reads "Markow-Murie Herbarium – In Memory of Stuart Markow, a fine botanist and good friend". Four metal herbarium cabinets contain specimens separated into three different collections.

The first two cabinets contain the 'Adolph and Olaus Murie Vascular plant collection'. Plant specimens, numbering 2465, date from early 1900 to 1940s from the Muries and other notable collectors that include Aven Nelson, C.L. Porter, C.S. Crandall, Charles C. Parry, Reed Rollins, Wilhelm Solheim, and Louis Williams. This historic collection includes rare plants, a few algae and lichens, and 16 very important specimens called isotypes. Isotypes are duplicates of the original specimen used to represent and define the species (holotypes). They are found at the same time and location by the same collector as the holotype.

Adolph Murie's plants of Mount McKinley National Park are housed in a separate cabinet. And finally, a third collection within the herbarium is one that is accessible to students. The Teaching Collection contains plants from Grand Teton National Park and the surrounding area. They include Stuart's 1996 plant collections from Rendezvous Mountain, Teton Range-East Slope. Other contributions come from TSS founder Ted Major and students.

Over the years, Stuart assisted in re-organizing the herbarium, generating plant species lists, utilizing the collection with students, and examining all specimens for correct identifications. I smile to think of how many times Stuart had to sharpen his #2 pencil in annotating over 3000 specimens in the collection.

The Teton Science Schools strive to connect people to nature through education. It is befitting that the schools' herbarium is named after individuals that did so much to inspire others about the natural world. The Markow-Murie Herbarium is open to the public by appointment. Contact April Landale, TSS Kelly Campus Director: 307-734-5659.

There will be an open house and dedication of the Markow-Murie Herbarium at Teton Science Schools, Kelly Campus on July 12 during the Wyoming Native Plant Society Annual Meeting. Please see the Annual Meeting announcement for details. All are invited.

Costmary: Heirloom Homestead Herb

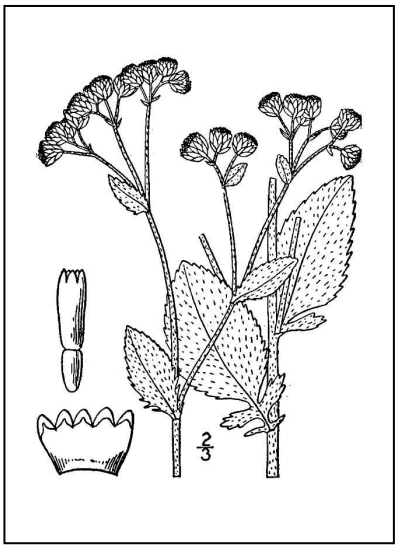
By Mike Evans

Out in the front of one of the older houses on our creek there grows a patch of some unnamed herb… it ***thrives,*** in fact. The homestead house was built out of recycled materials from Fort Fred Steele when it went out of business. The descendants of the original Swedish residents refer to the patch as "something Grandma grew." However no one seemed to know it and its culinary or medicinal values. The cows, when they got in the yard, pretty much leave it alone. The horses will not bother it and deer favor other herbage.

Blue-collar taxonomists' attempts to identify it yielded only "cultivated Asteraceae" and a shrug of the shoulders. "Wonder if you can eat it?" was usually answered by: "Wouldn't want to eat very much...spit-spit." The unidentified plant has maintained itself in its little patch with minimal care for at least the last 112 years.

In July, 2007 we had the privilege of visiting the Linnaeus Garden in Uppsala, Sweden. It was on a rainy afternoon. While wandering the garden, which appears much as it did when the leading architect of modern taxonomy tended it, lo and behold, there was "Grandma's herb": *Tanacetum balsamita L.*, Costmary, Bible leaf, Alecost, Mint Geranium or Balsam herb (synonym *Chrysanthemum balsamita* (L) Baill., non L.).

Dorn (2001) describes it as "Perennial herbs, leaves alternate, toothed; heads in a corymbiform inflorescence; rays lacking, pappus a short crown; leaves merely crenate-serrate or lobed at very base; disturbed areas; Park, Teton and Albany counties." Welsh et al. (2003 adds that it is found in "fields, roadsides, irrigation canals and cemeteries at 1370-2715 m , ... escaped from cultivation, now widely established ..."



Above: *Tanacetum balsamita*,. From: Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. Vol. 3: 519. Courtesy of Kentucky Native Plant Society. Scanned by Omnitek Inc.

Among Costmary's many varied medicinal values, "It is profitable for those that are fallen into a continual evil disposition of the body" according to Culpepper's British Herbal (1653). Bitter, aromatic, astringent, laxative, diaphoretic, carminative, tonic… used to treat much of what ails you.

Edible uses include condiment, leaves, and tea. Leaves are eaten raw or used as a flavoring in soups, beer. They can be chopped and added sparingly to salads. They have a very pleasant aroma, but can be overpowering in the food if you are not careful. The leaves were at one time were widely used in brewing beer, hence Alecost, before being superseded by hops *Humulus lupulus*. The whole leaves can be laid in cake trays to flavor the cake baking. A delicious tea is made from the dried leaves. An infusion can be added to the wash to freshen linens and dried leaves combined with lavender add fragrance to the closet. On the Web, a good site to learn more uses is: http://www.botanical.com/botanical/mgmh/c/costm107.html

Costmary is a native of the Orient and Iran. The plant is known from ancient times and was included in European gardens throughout medieval times. Culpeper begins his discussion of Costmary by saying "This is so frequently known to be an inhabitant in almost every garden, that I suppose it needless to write a description thereof." It was brought to this country by colonists and immigrants as we can attest to. Costmary is best propagated by root division.

Many of today's ranches are made up of smaller homesteads. Some of these old homesteads are now only decaying cabins and barns. There were gardens at most homesteads, and some of the perennials persist. Rhubarb, horseradish, asparagus, fruit trees and herbs like costmary are now part of Wyoming's flora.

References:

Dorn, R. D. 2001. Vascular Plants of Wyoming, 3rd Ed. Mountain West Publishing, Cheyenne, Wyoming.

Culpepper, Nicholas. Culpepper's Complete Herbal. London. 1653. Online Version: www.bibliomania.com/2/1/66/113/frameset.html

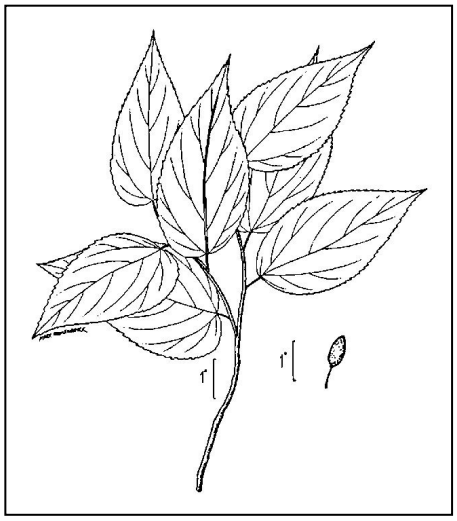
Welsh, S. L., N. D. Atwood, S. Goodrich and L. Higgins. 2003. A Utah Flora, 3rd ed., Brigham Young University Press, Provo, UT.

(*National Natural History Collections, cont. from p. 1*)

The Research Collections Network (RCN) objectives are to 1) identify the institutions and people that define the natural history collections community and facilitate dialogue among them about how to better serve the needs of researchers, 2) identify major opportunities and challenges in the current environment and foreseeable future and develop a strategic plan for the future of collections research, 3) determine how to strengthen and modernize the role of collections in education and outreach, and 4) identify the primary needs of collections regarding care, curation, storage, and accessibility.

Recently, the RCN held the first in a planned series of workshops, symposia, and internships at Michigan State University in East Lansing, MI. The goal was to identify the opportunities and challenges of small collections. I was chosen to attend, from several hundred applicants, as Herbarium Manager of Black Hills State University Herbarium (BHSC). This workshop brought together 26 individuals from all over the U.S. representing collections in entomology, botany, mammology, and more; to increase exposure to collections and opportunities for research at smaller institutions, develop strategies for integrating such collections into the education of future biologists, and enhance access to collections for collections data users in government and non-government positions who work with resource management and other applied areas.

Many opportunities were identified for small collections during the workshop despite the many challenges, usually in the form of funding and staffing issues that are unlike those of larger institutions. But the stakes are high. Small collections often have significant holdings of regionally important holdings, are rich with information about local history, and represent a specific biological identity. BHSC is such an example. The herbarium is home to one of the largest collections of Miocene age plant fossils from the Great Plains of North America. In addition, the holdings of the herbarium include over one-thousand specimens of macrofungi, lichens, and slime molds. Most of these specimens are state records and are frequently the only records of fungi from the region. The RCN will foster student internships and research with novel approaches to specimen-based research utilizing the holdings of small collections.



Celtis (hackberry) is a common tree genus among Miocene fossil accessions at BHSC, and *C. occidentalis* is an species of eastern deciduous forest still present in South Dakota and Wyoming. From: Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. Vol. 3: 519. Courtesy of Kentucky Native Plant Society. Scanned by Omnitek Inc.

BHSC's mantra of preservation, improvement, development, and use made it an ideal choice for inclusion into the RCN's first workshop for small collections. The BHSC houses ca. 40, 000 specimens representing plants, fungi, and Miocene flora and houses the world's largest collection of Black Hills flora. The mission statement of the BHSC is to support botanical research of the Black Hills and surrounding region for the purpose of the compilation and dissemination of botanical information in one of the least botanically known areas of the continental United States. The region is a biological crossroad with large numbers of disjunct species and probably a large number of hybrids. The personnel at BHSC strive to increase the availability of data for government; non-government; and educational uses, to help ascertain the status of plant species of conservation concern, allow improved hypotheses about current and future plant distributions, provide baseline data for studies, and increase collaboration and research productivity in related disciplines.

For further information about the RCN see:
http://www.collectionsweb.org/index.html
and about BHSC see:
http://www.bhsu.edu/artssciences/asfaculty/mgabel/

Announcing:

Bridger Plant Materials Center Field Day

The USDA NRCS Plant Materials Center in Bridger, Montana, is hosting a field day on Wednesday, June 18. The event is in cooperation with the Montana and Wyoming Associations of Conservation Districts and is scheduled from 10:00-1:00 pm. The activities include tours of studies and evaluation areas, seed processing and plant propagation facilities, seed production fields, plant demonstration areas, and equipment displays. A barbeque lunch is provided immediately after the tour. RSVP is no later than June 11. Contact: Roger Hybner at roger.hybner@mt.usda.gov or call: 406-662-3579.

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Wyoming Native Plant Society
P.O. Box 2500
Laramie, WY 82073

The Wyoming Native Plant Society is a non-profit organization established in 1981, dedicated to encouraging the appreciation and conservation of the native flora and plant communities of Wyoming. The Society promotes education and research on native plants of the state through its newsletter, field trips, and annual student scholarship award. Membership is open to individuals, families, or organizations. To join or renew, return this form to:

Wyoming Native Plant Society
P.O. Box 2500, Laramie, WY 82073

Name: _____

Address: _____

_____

Email: _____

___ $7.50 Regular Membership
___ $15.00 Scholarship Supporting Member
($7.50 goes to the Markow Scholarship Fund)

Check one:

_____New member
_____Renewing member

__Renewing members, check here if this is an address change.