



Castilleja linariifolia

Castilleja

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Plunging Into Yellowstone Aquatics

There was a splash that rippled across the state with publication of a recent article about the aquatic vascular plants of Yellowstone National Park (YNP) by Hellquist et al. (2014). It makes major strides in understanding the rare and under-collected aquatic vascular plants of YNP, the first work to be printed from among the researchers' breadth of objectives in floristics, genetics and ecology.

The authors, Barre Hellquist, Eric Hellquist and Jennifer Whipple, combined *Flora of North America* expertise with Park flora expertise in daunting fieldwork, herbarium work and lab work. The father-son pair of aquatic experts teamed with Whipple, long-time Park Botanist, to report three species new to the Wyoming flora, including Spiny-spore quillwort (*Isoetes echinospora*), Nodding water nymph (*Najas flexilis*) and Yellowishwhite bladderwort (*Utricularia ochroleuca*; see *Additions to the Flora* – p. 7), plus five species new to Montana or to YNP. Two species new to YNP are rare pondweeds (*Potamogeton* spp.) that hadn't been collected in Wyoming for decades.

In total, 26 species were rare or under-documented by some standard among the 102 aquatic species that comprise the YNP aquatic flora, sampled at over 224 collecting stations. Of the 26 species, two proved to be so frequent that results of this work supported their removal from the Wyoming species of concern list. We can all breathe a sigh of relief that they did NOT find any invasive aquatic plants. (Cont. on p. 9)



Above: Barre Hellquist, North American pondweed expert, examines a rare species imposter in the Firehole River, Upper Geyser Basin with Riverside Geyser in the background. By Eric Hellquist.

Why care about aquatic plants?

Although often overlooked in floristic studies, hydrophytes provide important ecosystem services. The composition and structure of aquatic plant communities has important implications for understanding the ecological interactions of freshwater communities. Aquatic plants are indicators of water chemistry and can influence the temperature, light, flow rates, oxygen, and nutrient availability of water. Aquatic plant communities provide both habitat structure and food resources for invertebrates, fish, waterfowl and moose (C.E. Hellquist pers. commun. – citations available on request).

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WYNPS News

2015 Annual Meeting: Two Sides of the Tetons!

July 10-13, 2015 will be the Joint Annual Meeting of the Wyoming and Idaho Native Plant Societies, hosted by Teton Chapter, WYNPS and Sawabi Chapter, INPS. Fieldtrips will be on both sides of the Tetons. Many will originate from a Driggs, ID meeting place or Teton Canyon, our "basecamp" for the weekend. Lodging: Group campsite in Caribou-Targhee National Forest (Teton Canyon area) is reserved for the weekend (campers and tenters welcome). There are also undeveloped camping sites in Teton Canyon. There are a small number of cabins near Driggs that can be reserved at Teton Valley Cabins (208.354.8153. www.tetonvalleycabins.com) – they fill up quickly! Look for more information in future issues and on-line: www.tetonplants.wordpress.com.



Above: Visiting Desert yellowhead by Tanya Skurski.
...Look for more photographs from the 2014 annual meeting at the WYNPS facebook page and Red Canyon bioblitz post: <http://www.nature.org/ourinitiatives/regions/northamerica/unitedstates/wyoming/wyoming-bioblitz-at-red-canyon-ranch.xml>

New Members: Please welcome the following new members to WYNPS: Amanda Cowan, Evanston; Jackson Crawford, Riverton; Arne Johnason, Jackson; Karin McQuillan, Jackson; Temia and Joe Keel, Yellowstone NP; Dorian Patkus, Green River, and Teresa Tibbitts, Lander.

Wyoming Native Plant Society
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Laramie, WY 82073

Treasurer's Report: Balance as of 18 Sept. 2014: Scholarship = \$1,003; General = \$5,746.65; Total = \$6,749.65.

Contributors to this Issue: Mark Andersen, Ann Boelter, Robert Dorn, Bonnie Heidel, Hollis Marriott, Tanya Skurski and Dorothy Tuthill.

Message from the President:

Another glorious Wyoming summer is drawing to an end—I could almost cry, except that autumn has its own glories to look forward to. In my garden, the last of the hardiest flowers—scarlet gilia, harebells, snakeweed and some unidentified lovely lavender composite— are finishing up their reproductive business with the help of a few remaining bumblebees. Of course those light-weight non-natives, the tomatoes and eggplants, went south, so to speak, with the hummingbirds.

Now that school has started, I've been spending quite a bit of time outside with kids, where I encourage an appreciation for native plants, even the non-edible ones. One of the activities I frequently use is conifer tree identification—how to tell a pine from a spruce from a fir. Along with needles, we use the cones, which leads into a conversation about the best ones for Christmas wreaths, which leads into why we like winter, and how nice it is to not be hot anymore.

Dorothy

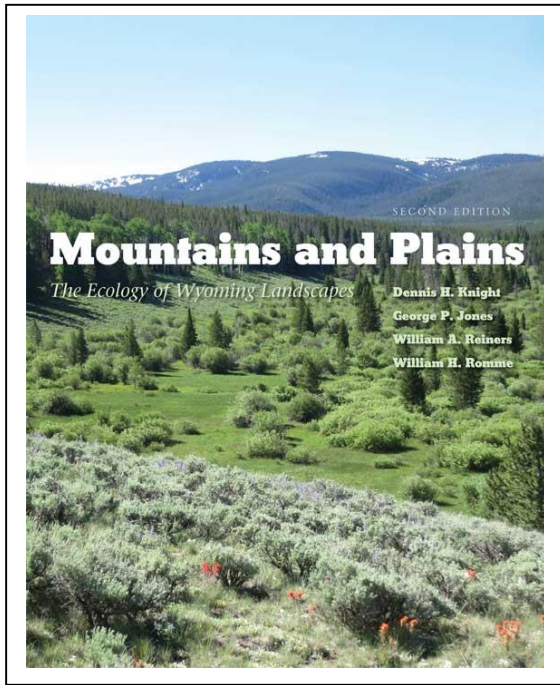
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The Next Deadline: Please send articles and announcements for the December issue by 18 November. Ideas are welcome any time!



The 20 intervening years have also seen the advent of the internet, and the authors have collaborated with the University of Wyoming's Biodiversity Institute to provide an interactive website as a companion to the second edition (<http://www.mountainsandplains.net>). The website allows readers to share information, ask questions, post useful photos or website addresses, and report any omissions or errors.

There will be a book-signing at the Berry Biodiversity Conservation Center at University of Wyoming on November 5th. For details, check the Biodiversity Institute homepage (<http://www.wyomingbiodiversity.org/>).

Books are available at the University of Wyoming Bookstore and other outlets, or directly from Yale University Press: <http://yalepress.yale.edu/yupbooks/book.asp?isbn=9780300185928>.

Botanist's Bookshelf

Knight, Dennis H., George P. Jones, William A. Reiners, and William H. Romme. 2014. ***Mountains and Plains: The Ecology of Wyoming Landscapes***, Second Edition. Yale University Press, New Haven, CT. 404 p; 168 color + 77 b/w illus. ISBN: 9780300185928. PB with Flaps: \$45.00.

The second edition of a Wyoming classic, ***Mountains and Plains*** by Dennis H. Knight (1994), becomes available this month, with expanded treatments, several new chapters, updated information, and a colorful new format. The opening paragraph sets the stage:

"Many changes have occurred in the Rocky Mountain region since 1994, when the first edition of this book was published. Wildlife habitat has been fragmented at alarming rates, the once abundant sage-grouse has been proposed for protection by the Endangered Species Act, invasive plants have become more common, wolves have been reintroduced, climate change is now well documented, epidemics of forest insects are more widespread, forest fires are more frequent, and new approaches for conservation have been adopted. Our goal for the second edition, 20 years later, is to provide a new synthesis of the ecological research that is pertinent to natural resource management, with a focus on the ecology of Wyoming and adjacent parts of Colorado, Utah, Idaho, Montana, South Dakota, and Nebraska. "

*"Technically accurate and gracefully written. The authors have spent much of their careers studying the plant and animal life that make Wyoming one of the most engaging landscapes in North America. From the flower-strewn tundra of the Beartooth Plateau to the alkali pans of the Red Desert, **Mountains and Plains** explains in straightforward terms why the region is the way it is. A great reference; a great read."*

—Chris Madson, editor emeritus, Wyoming Wildlife, and author of *When Nature Heals*



Living Flora: New NPS Resources for Devils Tower National Monument

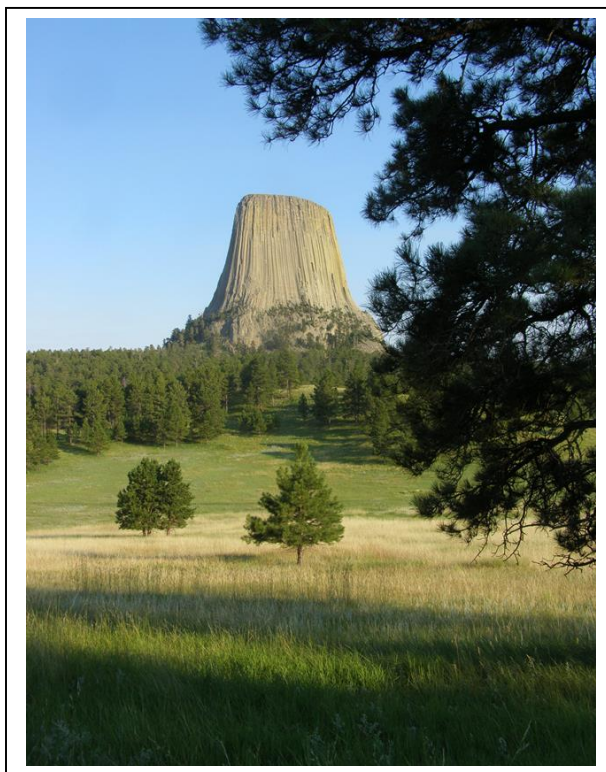
By Bonnie Heidel and Hollis Marriott

The flora of Devils Tower National Monument is now online -- web users can access the Devils Tower digital herbarium, search a database for its species, and generate checklists before visiting. Welcome to the 21st Century!

Devils Tower is the first national monument in the country, established in 1906 to protect a cultural landmark and all associated natural resources. In the early 1980s, an extensive floristic inventory, funded by the Devils Tower Natural History Association, was done in collaboration with the Rocky Mountain Herbarium (RM; Marriott 1982). Additional taxa were added with subsequent herbarium searches (Fertig 2000) and rare plant surveys (Heidel 2008).

In 2012-2014, we carried out a multi-phase project to update the flora and related resources, as part of the effort to prepare information on plants for visitors at all interest levels (Heidel and Marriott 2014). We first field-checked the flora, and searched the National Park Service (NPS) herbarium and RM for possible disparities. Additions included spotted knapweed (*Centaurea stoebe* var. *micranthos*), a noxious weed that has since been eradicated from the park and dwarf horseweed (*Conyza ramosissima*), a Great Plains annual growing in the prairie dog town. Omissions were flagged in special cases such as sandbar willow (*Salix exigua* var. *exigua*), collected in 1962 and since disappeared. These changes point to a dynamic flora and the value of maintaining data online, underscored by the subsequent discovery of Garlic mustard, a new noxious weed in Devils Tower that represents a state record (see: *Additions to the Flora*; p. 7, this issue).

In the next part of the project, we updated nomenclature. Plant taxonomy is as dynamic as the flora if not more so! Two databases were reviewed and edited: the digital herbarium database of monument specimens, and NPSpecies, the National Park Service's web-based tool for documenting species in parks (<https://irma.nps.gov/NPSpecies/>). We corrected misidentifications, made new determinations based on new taxonomic treatments, and deleted false reports and redundant records. At present, the Devils Tower flora has 471 confirmed species, a high diversity of vascular plant species for an area of 2.1 mi² (1347 ac; 545 ha).



Above: Devils Tower by Bonnie Heidel

Once the digital herbarium and NPSpecies database were up-to-date and consistent, the National Park Service data management team stepped in. They linked digital herbarium images to NPSpecies records so that they can be viewed with a simple click. In cooperation with park staff, they are developing customized checklists to add to the standard lists now available on the NPSpecies website. Because NPSpecies databases are continually updated, we now have access to current information rather than the static checklists of the past.

There are two main ways to use these new botanical resources. NPSpecies records for Devils Tower can be accessed via the homepage (<https://irma.nps.gov/NPSpecies/>). Choose a park -- Devils Tower National Monument, choose a Category -- Vascular Plants, and select "Full list with details". A spreadsheet of results appears. Herbarium images can be viewed via the "External Links" field (move right through spreadsheet). Click on the number and one or more active links will appear. To generate checklists, use the Reports tab near the top of the page. The Help option (upper right) is indeed helpful.

The park's digital herbarium can be accessed directly by way of the Rocky Mountain Region Digital Herbarium home page (<https://www-lib.uwyo.edu/digitalherbaria/index.php>). Choose "DETO" to view the NPS specimens from Devils Tower, or narrow a search using selected fields. The result is a list of specimen records; open a record for collection information and a link to an image.

These digital herbarium resources are available for other areas as well. Specimens have been scanned and posted for Fort Laramie National Historic Site, Grand Teton National Park, Bridger-Teton National Forest and Targhee National Forest among Wyoming public lands. These herbaria are accessed at the Rocky Mountain Region Digital Herbarium home page (<https://www-lib.uwyo.edu/digitalherbaria/index.php>).

References

- Fertig, W. 2000. Rare plants of Devils Tower National Monument. Report prepared for the National Park Service by the Wyoming Natural Diversity Database, Laramie, WY.
- Heidel, B. 2008. Survey for special plant species of concern in Devils Tower National Monument. Report prepared for the National Park Service by the Wyoming Natural Diversity Database, Laramie, WY.
- Heidel, B. and H. Marriott. 2014. Devils Tower National Monument Flora - Field Analysis, Updating Online Resources and Applications. Report prepared for the National Park Service by the Wyoming Natural Diversity Database - University of Wyoming, Laramie, Wyoming. Posted electronically at: <http://www.uwyo.edu/wyndd/files/docs/reports/wynddreports/u14hei01wyus.pdf>.
- Marriott, H. 1982. Devils Tower National Monument plant checklist. List prepared for the Devils Tower Natural History Association, 1980-1982.

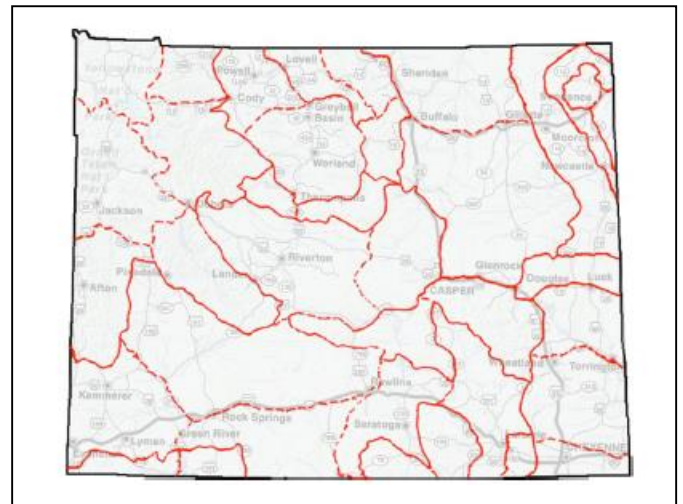
Announcing:

New WY Bulletin on Restoration Using Native Plants

Hufford, K.M. and R.D. Meador. 2014. Successful restoration of severely disturbed lands: native plants and adapted seeds for reclamation. B-1256. Produced by the Wyoming Extension Reclamation Issue Team and the Wyoming Reclamation and Restoration Center. Available on-line from: http://www.wyoextension.org/publications/Search_Details.php?pubid=1859, or through your local extension service office.

This bulletin addresses the use of native plants and adapted seed sources in reclamation of severely disturbed lands. Native plants represent key resources for restoration of ecosystem functions and wildland health. Selection of adapted seed sources may improve the short-term establishment of plants as well as the long-term sustainability of plant and animal communities at reclamation sites. Background information and practical guidelines are outlined to assist restoration practitioners and land managers when selecting plant materials for site revegetation.

This 12-page publication is a springboard for dialogue within and between public and private reclamation specialists. It provides a framework for restoration



Above: U.S. Forest Service seed zones for the state of Wyoming. Seed zones are based on climate data (dotted lines) and land resource regions (solid lines) within which seed collections are most likely to be suited. (From Hufford and Meador 2014; derived from Cunningham 1975)

planning, a highlight of new developments in the field, and a synthesis where theory hits the road in ecology, genetics and horticulture. It is the newest part of a series by the Wyoming Extension Reclamation Issue Team and the Wyoming Reclamation and Restoration Center.

Home-Grown Plant Data Portals

By Bonnie Heidel¹, Dorothy Tuthill² and Mark Andersen³

Two new University of Wyoming data portals serve up plant data, joining the Rocky Mountain Herbarium on-line specimen database

(<http://www.rmg.uwyo.edu>; see *Castilleja* 28(3):3-4 in 2009) as home-grown database delivery systems. The newcomers on the scene include WYOBIO and WISDOM, each with their complementary strengths and purposes. The Rocky Mountain Herbarium database is still the most comprehensive in representing the entire state flora and in providing the most detailed information of complete specimen data. The newcomers are highlighted below.

WYOBIO (<http://www.wyobiolog/>)

WYOBIO is the Wyoming Biodiversity Citizen Science Initiative, a free, user-friendly tool for the public including students, teachers, parents, researchers and the generally curious to contribute observations to the growing database, and to view professional- and citizen-collected data on a map. The purpose of WYOBIO is to present and build spatial information on animal and plant species of Wyoming, and to engage citizens and students in the study of biodiversity. WyoBio was designed with educators, so the website includes lesson plans, protocols and identification aides for use by all. Unlike other citizen science applications, WyoBio was front-end loaded with data managed by Wyoming Natural Diversity Database (WYNDD).

The Biodiversity Institute (University of Wyoming) and the Wyoming Geographic Information Science Center (WyGISC) developed the information storage and search tools, in collaboration with WYNDD, making plant species of concern datasets available with spatial representation. It is part of a much larger compilation of natural resources information and spatial tools for educators and the general public.

WYOBIO covers Wyoming plant species of concern and many animal datasets, as well as options to build-your-own database or see the maps of information collected by other WYOBIO users. In order to view the distribution of any Wyoming plant species of concern, select "Map" and the magnifying glass icon, and enter the common name or scientific name of the species whose distribution you want. Then select

"Observation" for an integrated dataset of plant specimen vouchers and professional botanical surveys. The other two options for using the Map tool include "Range Map" as watershed units where the species has been documented, and "Modeled Distribution" (under development).

WISDOM (<http://www.wisdom.wygisc.org/>)

WISDOM is the Wyoming Interagency Spatial Database & Online Management System, a free, user-friendly interface for exploring site-specific information related to plant species of concern (includes all Threatened, Endangered and sensitive plants, and all other Wyoming species of concern) and animals, and other natural resources. The purpose of WISDOM is to provide non-regulatory, preliminary analyses for the early stages of project planning so that users are alerted to potential natural resource considerations in their area of interest.

To explore data available through WISDOM, users first define an area of interest by drawing a boundary on a map (no GIS software required), or by uploading a shapefile in a user-friendly GIS mode. Then users select the data layer by category. WISDOM queries hundreds of Geographical Information Systems (GIS) layers to determine what plant or animal species are likely to occur in the area. A GIS platform is required; video tutorials and help documentation are available from the WISDOM website.

The Wyoming Game and Fish Department and WyGISC developed WISDOM as part of an effort by the Western Governors' Association to improve access to information useful in landscape-level planning. Partners including WYNDD, the U.S. Fish and Wildlife Service and The Nature Conservancy helped guide the design of the application and provided the critical data needed to make the tool useful.

WISDOM covers Wyoming species of concern, capacity to query by agency status (e.g., Endangered Species Act, BLM Sensitive, USFS Region 2 or Region 4 Sensitive), and animal datasets including sage grouse use, big game crucial ranges and important wildlife habitat areas. The map products can address multiple species. The tabular products include the most recent year of documentation.

¹ Lead Botanist, Wyoming Natural Diversity Database

² Associate Director, Biodiversity Institute

³ Spatial Ecologist, Wyoming Natural Diversity Database

Additions to Flora

By Bonnie Heidel

Blast from the Past

The first report of water-nymph (*Najas flexilis*) in Wyoming came from peat cores collected in the Big Horn Mountains (see *Castilleja* 29(1):4-6 article by Zier in 2010). Its distinctive spores represented material that died some thousands of years ago. Recently the species was found alive and well at one station in Yellowstone National Park by aquatic plant researchers (*Hellquist and Hellquist* 976-10 YELLO; see “*Plunging into Aquatics*” article, p. 1, 9). *Najas flexilis* is an aquatic annual with widespread distribution in eastern North America and interrupted distribution in the western part of the continent, including adjoining states.

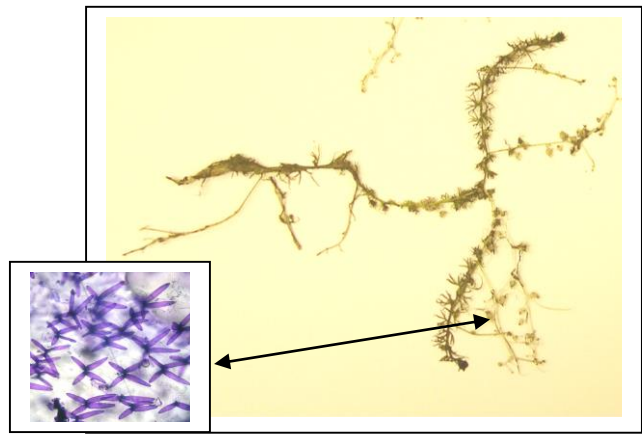
A Full Quiver of Quillworts

Yellowstone National Park harbors a new quillwort addition to the state flora – spiny-spored quillwort (*Isoetes echinospora*). It was documented by Yellowstone aquatic plant researchers at one collection station (*Hellquist and Hellquist* 1154-10 YELLO ; see “*Plunging into Aquatics*” article, p. 1, 9). Much like bladderworts, the Park is now known as the only place where all three species of quillworts that occur in Wyoming can be found in the same area. The other two species are the *Isoetes bolanderi* and *I. occidentalis*; the latter is known only from the Park in Wyoming. *Isoetes echinospora* is a circumboreal species also known from Idaho and Montana.

Bursting with Bladderworts

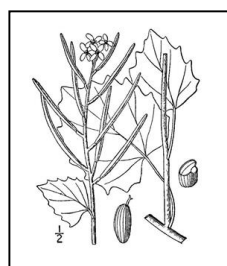
Yellowstone National Park harbors a new bladderwort species addition to the state flora – yellowish-white bladderwort (*Utricularia ochroleuca*), plus the three other species of bladderworts known from Wyoming (*U. intermedia*, *U. minor*, and *U. macrorrhiza* [syn. *U. vulgaris* ssp. *macrorrhiza*]). Yellowstone aquatic plant researchers collected it at 13 stations in the Park (see “*Plunging into Aquatics*” article, p. 1, 9). Bladderworts are carnivorous plants that trap zooplankton in submerged bladders.

In consultation with Garret Crow, FNA author of the pending Lentibulariaceae treatment, they cite eight more *Utricularia ochroleuca* specimen



Above: *Utricularia ochroleuca* whole plant (Heidel 3645 RM, MSC), and (left) quadrifid glands inside bladders. Photos by Garrett Crow

annotations by Crow collected earlier in the Park and deposited at Rocky Mountain Herbarium or Yellowstone National Park Herbarium. They cite a later specimen from the Upper Green River Basin also determined by Crow (Heidel 3645, 3783 RM). *Utricularia ochroleuca* has a combination of characteristics that help distinguish it from the other species in the state including sparsely scattered bladders among green leaves, relatively obtuse leaf segment tips, and the long, straight setiform appendages above the trap mouth. Yet the authors warn that vegetative features of the four species are variable, the species have habitat overlaps, and the most convincing characteristics “require microscopic examination of the arrangement, length, and arm angle of the internal quadrifid glands of bladders.” This circumboreal species is known Colorado and recently from Montana.



Above: Garlic mustard (*Alliaria petiolata*)

Trailside Invader

Garlic mustard (*Alliaria petiolata*) is an invasive mustard that is on state noxious weed lists throughout much of the country. This year it was discovered and collected at Devils Tower by NPS staff (*Chapman s.n.* MORU, RM).

Eradication efforts are underway. It is a biennial with basal leaves that have scalloped margins and a garlic-like fragrance when crushed. *Alliaria petiolata* is known from all adjoining states.

Growing Native Plants

Part 13. Ferns and Allies

By Robert Dorn

Ferns and fern allies generally require a moist, shaded location although there are a few more dryland species. Some of the latter take advantage of a large rock face to funnel runoff water into the rock crevices where they grow. The five examples that follow are not strictly rock crevice species but rather larger species that can be grown successfully in an average yard that has shading and available moisture.

Adiantum aleuticum, Maidenhair Fern, grows to 2 feet tall and wide from a short rhizome. The leaf is divided into several finger-like branches, each with 7 to 17 pair of leaflets. It occurs naturally in our northwest mountains in shady, moist places. It prefers moist, cool, loamy soils in shade and may not do well in hot areas of the state. Several cultivars are available in the nursery trade which may be the best way to bring it into cultivation. Rootstock cuttings are often difficult to establish and growing from spores is a tedious process.



Adiantum aleuticum, Clearwater County, Idaho

Athyrium filix-femina, Lady Fern, grows to 4 feet tall and wide. The leaves are typical fern leaves arranged in an arching vase shaped clump. The plants occur naturally in shady moist places in the mountains. They prefer cool, moist, rich loamy soil and shade but tolerate some sun. There are many cultivars available in the nursery trade but most were developed from European stock. It is easy to grow from rootstock divisions. Leave dead leaves over winter to protect

emerging growth in early spring. The dead leaves can then be cut off and removed.



Athyrium filix-femina, Pend Oreille Co., Washington

Dryopteris filix-mas, Male Fern, grows to 3 feet tall. The leaves are typical fern leaves clustered on a short rhizome. They tend to remain green through much of the winter. The plants occur naturally in shady, moist areas in the mountains, sometimes in deep rock crevices. They prefer moist, cool, well drained loamy soil in shade. Several cultivars are available in the nursery trade. It can be grown from rootstock divisions.



Dryopteris filix-mas, Albany County

Equisetum sylvaticum, Sylvan Horsetail, grows to 2 feet tall from a rhizome. It has jointed stems with lacy branches emerging from the joints. The plants occur naturally in wet to moist areas in the Big Horn Mountains and Black Hills, often along streams. They

prefer full sun to light shade and cool, wet to moist, loamy or well drained soils. It can be grown from rootstock cuttings. It is best confined to pots as it can be aggressive. Keep moist if grown in sun.



Above: *Equisetum sylvaticum*, Crook County

Right: *Polystichum lonchitis*, Teton County

Polystichum lonchitis, Northern Hollyfern, grows to 2 feet tall but is often sprawling. The leaves are evergreen, in a vase like cluster, and divided into leathery, mitten shaped, spiny margined leaflets on opposite sides of the central stalk. The plants occur naturally in moist, mostly shaded areas of the mountains. They prefer cool, moist, loamy or well drained soils in shade or partial sun. It can be grown from rootstock division.



Plunging into Yellowstone Aquatics, cont. from p. 1

As a result of their study, new light has also been shed on the bladderworts (*Utricularia* spp.) of the region. The good news is that they determined that Wyoming has a fourth species of bladderwort, *U. ochroleuca*. The not-so-good news for field botanists is that this species and the other two rare bladderwort species, which rarely flower, are best distinguished by microscopic characteristics of internal gland arrangements within the bladders.

Another outcome was to resolve persisting puzzles in the flora. The only report of *P. foliosus* ssp. *fibrillosus* for Wyoming was that from YNP. All putative *P. f.* ssp. *fibrillosus* material collected by the authors was run thru DNA fingerprinting and proved to be other species, supporting the interpretations that it is not a valid taxon and the specimens were of hybrid origin. Likewise, waterweed (*Elodea* spp.) originally identified as *Elodea canadensis* was run through DNA fingerprinting and proved to be *Elodea nuttallii* (previously considered as a Wyoming species of concern). Waterwort (*Elatine* spp.) taxonomy has been a source of confusion and the authors documented that YNP has two species rather than the single species reported in Dorn (2001) and in Evert (2010).

This publication represents a vital resource for re-evaluating rarity among aquatic vascular plants of YNP, the Greater Yellowstone Ecosystem (GYE), and the greater Rocky Mountain region. The authors also provide insights into aquatic plant identification that all Wyoming botanists will find useful. *Bonnie Heidel*

References

- Dorn, R. D. 2001. Vascular Plants of Wyoming, third edition. Mountain West Publishing, Cheyenne, WY.
Evert, E. F. 2010. Vascular Plants of the Greater Yellowstone Area: Annotated Catalog and Atlas. Park Ridge, IL.
Hellquist, C.E., C.B. Hellquist, and J.J. Whipple. 2014. New records for rare and under-collected aquatic vascular plants of Yellowstone National Park. *Madroño* 61(2):159-176.

Hunting the Wild Asparagus Saltwort

The plant hunting season is still open in parts of Wyoming and, sometimes, early and late in the growing season are prime times for tender delicacies. A salad recipe made with saltwort (*Salicornia* spp.) comes with favorable reviews from an avid Wyoming hunter and gatherer, Carlos Martinez del Rio, in keeping with the recipe posted by Hank Shaw, author of “Hunter, Gatherer, Cook” (Shaw 2011). The author advises: “...pick only the top few inches of the little plant, which can get bushy over the years. Try to avoid the reddish stalks, as they are often tough.” More information about serving up saltwort is posted on:

<http://honest-food.net/2011/07/15/sea-beans-salicornia-samphire-saltwort/>.

Saltwort grows in salt flats and playas of Wyoming.

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

Wyoming Native Plant Society
P.O. Box 2449
Laramie, WY 82073

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 Renewing members, check here if this is an address change.
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Membership

WYNPS annual membership: \$10.00
 WYNPS annual membership + scholarship support: \$20.00
(\$10.00 for membership and \$10.00 for Scholarship fund)
 WYNPS Lifetime membership: \$300 (\$150 for membership and \$150 for Scholarship fund)
 Sublette Chapter annual membership: \$5.00
 Teton Chapter annual membership: \$5.00

Total enclosed: _____ THANK YOU!

Wyoming Native Plant Society
P.O. Box 2449
Laramie, WY 82073