



Oxytropis nana Nutt., a Wyoming endemic collected by Thomas Nuttall on his journey across Wyoming in 1814

WYOMING NATIVE PLANT SOCIETY

Box 1471
Cheyenne, WY 82003

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Treasurer's Report - Balance as of October 14, 1988: \$476.47; deposits: dues \$34.50, scholarship donations \$10.00; disbursements: newsletter printing \$15.48, stamps \$25.00; new balance as of February 15, 1989: \$480.49. RD

Annual Meeting - The annual meeting for 1989 is tentatively scheduled for June 24 and 25 in the Cody area. Details will appear in the May newsletter.

Wyoming Endemics

Descurainia torulosa Rollins

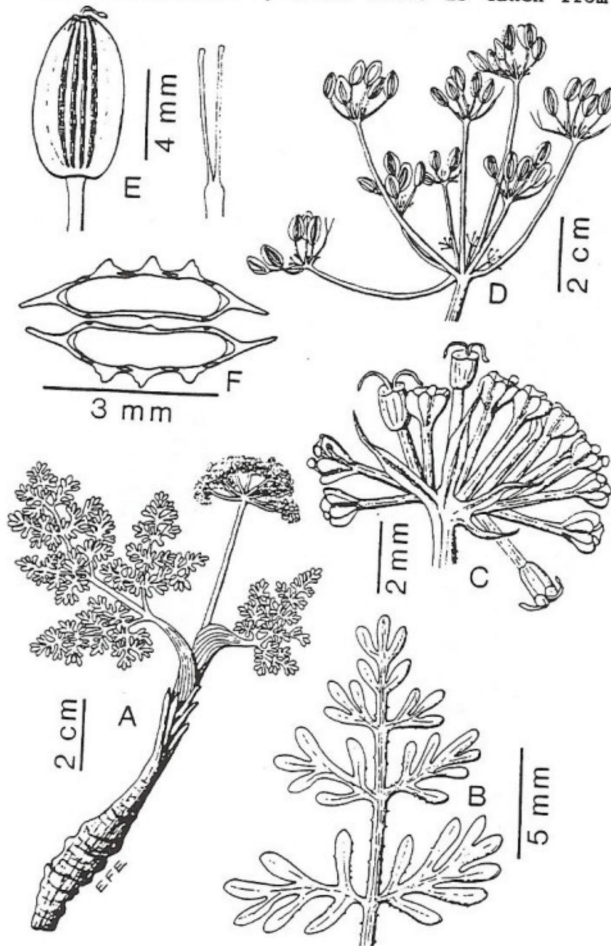
Torulose Tansy Mustard

This member of the mustard family was first collected by Richard Scott on July 8, 1966, near Brooks Lake in northwest Fremont County. Reed Rollins described it in 1983. The stems average about 3-4 inches long, the leaves are divided, and the petals are whitish but only about 1/16 inch long. The plants grow on rocky slopes in the high mountains of Fremont County although it has recently been reported from Sweetwater County.

Lomatium attenuatum Evert

Attenuate Biscuitroot

This member of the carrot family was first collected by Erwin Evert on June 20, 1975, in the Shoshone National Forest west of Cody. Evert described it in 1983. The plants average 6-8 inches high and have much dissected leaves. The flowers are yellow and appear in the latter half of May and first half of June. Each flower is only about 1/16 of an inch long but they are borne in umbellate clusters. The plants grow on open, dry, rocky areas in the Cody area of Park County. The illustration drawn by Erwin Evert is taken from Madrono 30:144, 1983. RD

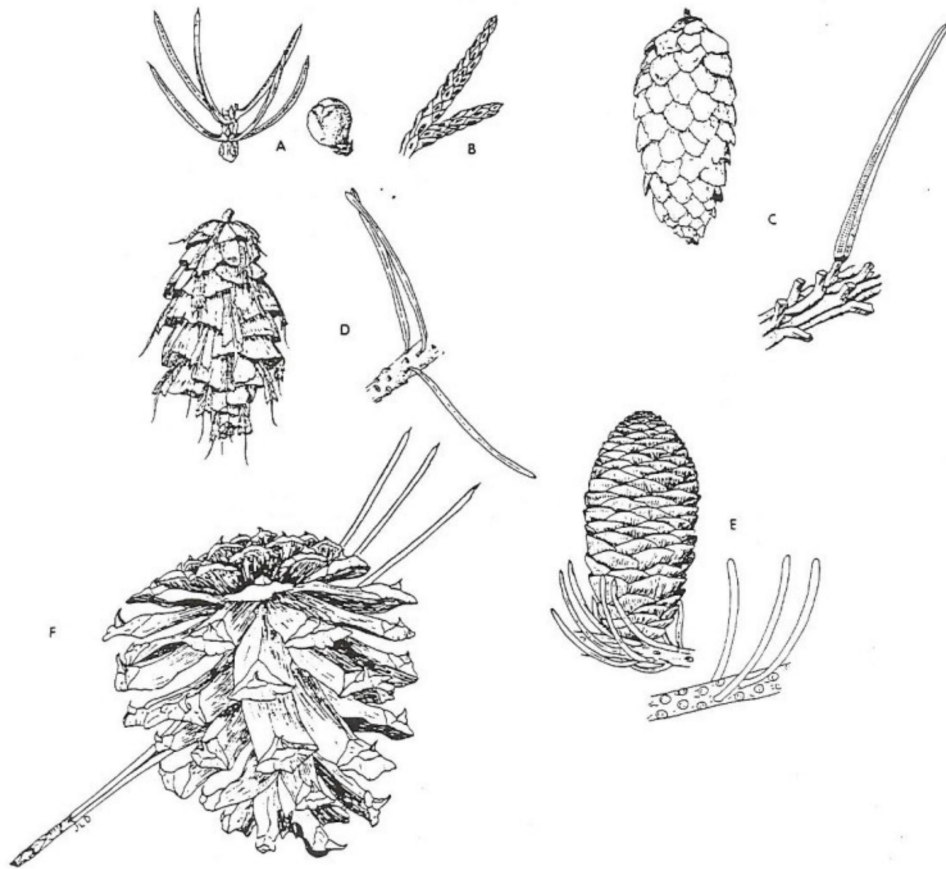


Conifers - The conifers, more familiarly known as our evergreen trees, are members of the gymnosperms (naked seeds). There are two major groups of seed plants, the angiosperms or flowering plants which have their seeds generally enclosed in an ovary which becomes the fruit, and the gymnosperms which have no covering over the seeds. Most conifers have their seeds on scales of cones. The pine cone is a familiar example. Conifer cones are unisexual but most species have both male and female cones on the same tree. Most junipers are an exception with only one sex per tree.

Conifers are the dominant plants in our mountains. All of our conifers except the junipers belong to the pine family. We have four native genera in the pine family: *Abies*, the true firs; *Picea*, the spruces; *Pinus*, the pines; and *Pseudotsuga*, the Douglas-fir. The pines have their leaves (or needles) borne in clusters of 2-5. There are five species native to the state: limber pine, whitebark pine, ponderosa pine, lodgepole pine, and pinyon pine. Ponderosa and lodgepole are economically important for lumber products. The spruces have sharp-pointed, four-sided leaves. There are three native species: white spruce, blue spruce, and Engelmann spruce. The firs bear their cones erect rather than hanging down. We have two species, subalpine fir and white fir, although all material of the latter appears to be intermediate to subalpine fir. Douglas-fir is best recognized by the three-lobed bracts protruding from between the cone scales.

There are four species of juniper native to the state including Utah juniper, a desert species. Their leaves are scale-like except for common juniper which has needle-like leaves in whorls of three. The remaining two junipers are creeping juniper and Rocky Mountain juniper.

All of our conifers are good candidates for landscaping, but some are better than others. For moist, sheltered areas blue spruce is the best tree and common juniper the best shrub. Creeping juniper is good for stabilizing steep slopes. Drought tolerant trees are ponderosa pine and Utah juniper. Ponderosa is the fastest growing of our pines. It can be transplanted easily upto a height of about two feet but must be obtained from a heavy soil that holds together well so that the roots are minimally disturbed. RD



Representative conifers - A. Common Juniper, B. Rocky Mountain Juniper, C. Engelmann Spruce, D. Douglas-fir, E. Subalpine Fir, F. Ponderosa Pine.

Wyoming Botany in the 30's (continued) - After arriving at the Missouri Botanical Garden in 1933, Louis Williams consulted with Dr. Jesse Greenman about a thesis project. "The genus *Mertensia* was decided upon as one small enough yet providing sufficient problems for a thesis. The principal range of the genus was in the Rocky Mountains, a region I was familiar with and where I might carry on the field work that would be useful in a monographic study."

"Come spring of 1934 I got a job in Grand Teton National Park as Ranger-Naturalist. The location was good for I could stay at the family ranch and in spare time do some collecting in those high mountains. The "employment" brought in \$150 a month toward next school year, and a dollar was worth quite a lot of goods and services. The most important day of that year was September 16th when Terua Pierson and I were married. We left that same day for St. Louis in our old car loaded with our baggage which, again, included the summer's collections."

"Work on the accumulated western collections went more rapidly. Rua took them over, wrote labels endlessly and made the specimens into sets ready to send off to subscribers. Grad work went well for now there were cases full of borrowed specimens of *Mertensia*. Little by little they seemed to make sense until, one day, they began to fall into place, an experience I suppose most monographers have at some time, and I did many times in later years."

"We waited with anticipation for the spring day to come when we might get in our old car and start toward the mountains. We planned to search the mountains and valleys for *Mertensias* in May. Rua got to the point where she could spot a *Mertensia* hidden among the sagebrush when we were going as fast as our old car would go, but that was not very fast!"

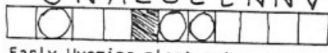
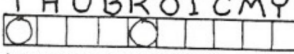
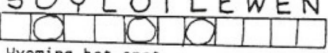
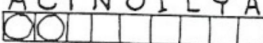
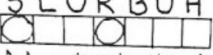
"I had a summer job with Soil Conservation Service to search through Nebraska, Colorado and Wyoming and to collect seeds from any likely looking species of grasses. Marion Ownbey working toward a masters at University of Wyoming was to be my assistant. The "Gods" had been kind to us! We were assigned a new pickup, provided with expenses, paid a much better salary than either of us had really expected, and to top it all off each of us were given a per diem of three dollars! We did not spend all of those three dollars either!" - To Be Continued-

Penstemon caryi - The plant on the society T-shirt, *Penstemon caryi*, is endemic to the Big Horn and Pryor mountains of Wyoming and Montana. It was described by Francis Pennell, a specialist of the figwort family, in 1920, commemorating Merritt Cary who discovered the species in the Big Horn Mountains in 1910. Cary was a member of the U. S. Biological Survey which worked in Wyoming from 1909 to 1915. Results of their work can be found in North American Fauna No. 42, 1917. RD

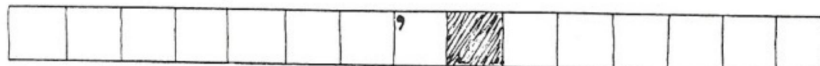
Annual Scholarship - Two applications were received for the scholarship(s). The Board will likely be acting on this in the next month. RD

Election - Nominations or volunteers are needed by the next newsletter for President, Vice-President, Secretary-Treasurer, and Board Member.

NAME THAT PLANT -- Unscramble the letters and fill in the blanks:

- | | |
|--|--|
| <p>1. ONALSEENN
 
 Early Wyoming plant nut.</p> | <p>2. KRABOU
 
 Eastern representative in Wyoming's flora.</p> |
| <p>3. THUBROICMY
 
 Lunar representative in Wyoming's flora.</p> | <p>4. SOYLOTLEWEN
 
 Wyoming hot spot.</p> |
| <p>5. ACTNOILYA
 
 Lovely harbinger of the season ahead.</p> | |
| <p>6. SLURBUH
 
 ...down by the riverside...down by the riverside...</p> | |

Now rearrange the circled letters and NAME THAT PLANT (one of Wyoming's classic edaphic endemics):



FOR ANSWER, SEE PAGE 4.

Contributors This Issue - RD = Robert Dorn, HJM = Hollis J. Marriot.

Wyoming Native Plant Society T-Shirts are still available for \$9.00 per shirt plus \$2.00 for shipping. Sizes are S, M, L, and XL. Make checks payable to Michele Potkin-Stahl and mail or deliver order to her at 1008 Park Ave., Laramie, WY 82070. Ideas and artwork are being solicited for alternate designs for the shirts. Send any ideas to Michele.

NAME THAT PLANT: Barneby's Clover, Trifolium barnebyi, is endemic to the Nugget sandstone on the Red Canyon Rim south of Lander. (1. Aven Nelson 2. Bur Oak 3. Botrychium 4. Yellowstone 5. Claytonia 6. Bulrush). HJM

US AIR FORCE MOVES IN DEFENSE OF COLORADO BUTTERFLY PLANT In spite of its name, the "Colorado" butterflyplant, Gaura neomexicana ssp. coloradensis, is nearly endemic (restricted) to Wyoming. From 1984 through 1986, 20 populations in Laramie Co. were documented. One extends into Nebraska, and two small populations were found in northern Colorado in 1984, but were not relocated in 1988. Historically, the butterflyplant extended at least as far south as Ft. Collins.

The butterflyplant prefers broad drainage bottoms. It generally occurs close but not immediately adjacent to streams--an intermediate position in the moisture gradient from emergent streamside vegetation to upland prairie. Unfortunately, this habitat is well-suited to other uses, such as grazing and haying, and is often sprayed with herbicide as it is also home to leafy spurge and Canada thistle.

Due to rarity and endangerment, the Colorado butterflyplant is a candidate for Federal listing. In an effort to avoid the lengthy and expensive listing process, the US Air Force, The Nature Conservancy and the US fish and Wildlife Service are working cooperatively towards protection of two butterflyplant populations on Warren Air Force Base west of Cheyenne. Conservancy staff have worked on contract with the Air Force to map and monitor populations on the Base. Censuses showed a decline of almost 50% in the larger of the two populations from 1986 to 1988. The cause? Noxious weed invasion is probably a major factor, but lack of natural disturbance probably is involved also. The plant grows in somewhat open habitat; it appears to be part of a seral stage in riparian succession.

Designation of a Colorado Butterflyplant Research Natural Area on the Base has been recommended. Such a designation would make protection a long-term policy, and perhaps open funding channels for monitoring and habitat improvement (the Dept. of Defense devotes a tiny portion of their budget to environmental management, but a tiny portion of the DOD budget translates into significant funding). Base environmental staff are actively pursuing designation, and their case is strong. However, they must negotiate channels up through SAC headquarters and further (the Pentagon?), a formidable-sounding task. We wish them luck! HJM

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