Oxytropis nana Nutt., a Wyoming endemic collected by Thomas Nuttall on his journey across Wyoming in 1834

WYOMING NATIVE PLANT SOCIETY

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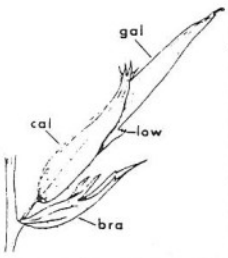
Treasurer's Report - Balance as of May 1, 1988: $385.04; deposits: dues $92.00, scholarship donations $50.50; disbursements: newsletter printing $22.74, stamps $25.33, Secretary of State annual report $3.00; new balance as of October 14, 1988: $476.47. RD

Annual Meeting - The annual meeting for 1988 was held July 16 in the Sierra Madre Mountains in Carbon County. Nine members and two non-members attended. Since the members had only 5 votes, a quorum was not present so the business meeting was dispensed with. No mail votes were received for new officers. According to the bylaws, the old officers then remain in office. The field trip included a visit to the stands of large aspen, Gambel's oak stands, and Bridger Peak, and a search for Trillium ovatum and Cypripedium fasciculatum. The Trillium was located but Cypripedium was not. The annual meeting for 1989 was tentatively scheduled for the Cody area sometime in late June. RD

The State Flower - Our state flower, the Indian Paintbrush, is a member of the genus Castilleja. It was first collected by John C. Fremont near the north end of the Laramie Range in 1842. George Bentham, an English botanist, described it in 1846. Of the 15 species of Castilleja in Wyoming, the state flower (C. linariifolia) is one of the least showy. As a result, many of the photographs and drawings of our state flower are the wrong species. Even the official state highway map displays the wrong species. At left is a single flower of our state flower: bra = flower bract, cal = calyx, low = lower lip of corolla, and gal = galea or upper lip of corolla. Indian Paintbrushes come in a variety of shades of yellow, red, pink, and purple. Generally, there is a red group and a yellow group, but some species can have both colors. Most of the color is on the flower bracts rather than on the flowers themselves. The Indian Paintbrushes are partially parasitic on the roots of other plants, particularly sagebrushes. This is one reason why they may be difficult to grow in cultivation. A study of their parasitism would be a good research project for someone to undertake. Perhaps an easy way to cultivate them can be found so that they can be added to our native horticultural resource. At present, fall planting the seed along with a sagebrush or sunflower seems to be the most promising technique. Transplanting is almost always unsuccessful. RD



Wyoming Endemics

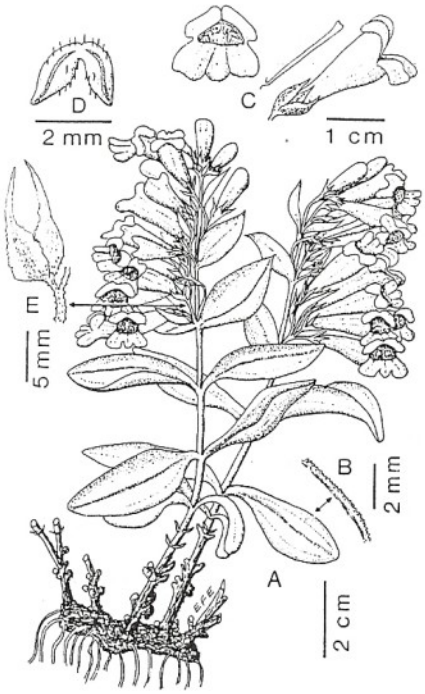
Penstemon absarokensis Evert Absaroka Beardtongue

This member of the figwort family was first collected by Rupert Barneby and Dwight Ripley in 1947 on the Wind River Indian Reservation southeast of Dubois. Erwin Evert found it at a number of locations around Cody beginning in 1974. He described it in 1984. The plants average 4 to 5 inches high with somewhat fleshy, entire leaves. The purplish-blue flowers are quite large, averaging about an inch long, and are somewhat crowded with sometimes as many as 30 flowers in an inflorescence. The flowers appear from mid-June through July. The plants grow on unstable volcanic talus in Fremont and Park counties.

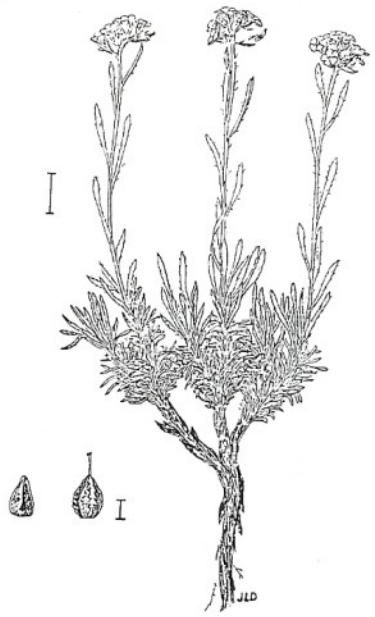
Cryptantha subcapitata Dorn & Lichvar Subcapitate Miner's Candle

This member of the Borage family was first collected by James Carrig near Fort Washakie in 1958. It was next collected by J. R. Wight near Boysen Reservoir in 1964. Robert Dorn and Robert Lichvar then collected it in 1980 near Boysen Dam and described it in 1981. The plants average about 4 inches high with most of the leaves clustered at the base forming mats. The white flowers are borne in head-like clusters. Each flower is only about 1/4 inch long. They appear mostly in June. The plants grow on dry, rocky, usually calcareous slopes and ridges in the vicinity of Boysen Reservoir in Fremont County.

Illustrations of the above two species are on the following page. The Penstemon, drawn by E. F. Evert, is taken from Madrono 31:141, 1984. The Cryptantha was drawn by Jane Dorn. RD



Penstemon absarokensis



Cryptantha subcapitata

Wyoming Botany in the 30's (continued) - After completing his Master's degree at the University of Wyoming with a revision of the Rocky Mountain orchids, Louis Williams left in early May of 1933 "to do some field work over toward the Uinta Mountains in Utah. In that long ago day those mountains had been inadequately explored botanically and it was hoped that I might find the area to be interesting. Plant specimens from the Rocky Mountains were still in demand by many herbaria around the world. Dr. Nelson had suggested that I write to a number of people to see if I might "sell" sets of specimens to their institutions. Response was favorable and ten sets were spoken for, including one for George Osterhout [a private Colorado collector - ed.]. When I went in the field I had hoped to make twelve sets with as many as one thousand specimens in each one. The asking price for the specimens was ten cents each delivered to the subscriber. I made twelve sets but did not reach the goal of a thousand specimens in each one."

"Dr. Aven Nelson, the Grand Old Man in the botany department at the University of Wyoming, and Dr. Jesse More Greenman at the Missouri Botanical Garden in St. Louis who was professor in Washington University, had been close friends for many years. Several of Dr. Nelson's students had been accepted by Dr. Greenman to come to the Missouri Botanical Garden and Washington University to do graduate work in systematic botany under his tutelage. Dr. Nelson inquired whether or not there might be a place for me."

"While I was in the field confirmation of the fellowship at the Missouri Botanical Garden was received. Since Dr. Nelson did not know where I might be reached he accepted in may name and sent a letter to the ranch in Jackson Hole, where eventually I would return, to advise me. With the fellowship and the stipend it provided along with the wealth to come from the sale of specimens I would be in graduate school again."

"The fellowship provided a stipend of $450 plus tuition at Washington University. The recipient was also to be an assistant to Dr. Greenman for a specified number of hours each month, to do whatever might be required."

"In the fall of 1933 I arrived at the Missouri Botanical Garden bag and baggage and the baggage included the specimens that I had collected during the summer. Those specimens would have to be determined, made into sets and mailed off before the wealth they represented would be available. Notoriously graduate students do not confine themselves to eight hour days, nor to five days a week. To keep up with course work, spend the hours stipulated as an assistant in the herbarium, and get those specimens determined, made into sets and put into the mail required one hundred hour weeks. Yes, and to do some research toward a thesis!" - To Be Continued-

Wyoming Native Plant Society T-Shirts are still available. The 100% cotton shirts feature Penstemon caryi, Cary's Beardtongue, a plant endemic to the Big Horn and Pryor mountains. See the design below which is reduced to 75%. Actual size is about 8 1/2 x 11 inches. Actual colors are green and blue on biege. Price is $9.00 per shirt. Include an additional $2.00 per shirt to cover the cost of shipping. You can save the shipping cost by picking up your shirt(s) from Michele Potkin-Stahl in Laramie.

WYOMING NATIVE PLANT SOCIETY T-SHIRT ORDER FORM

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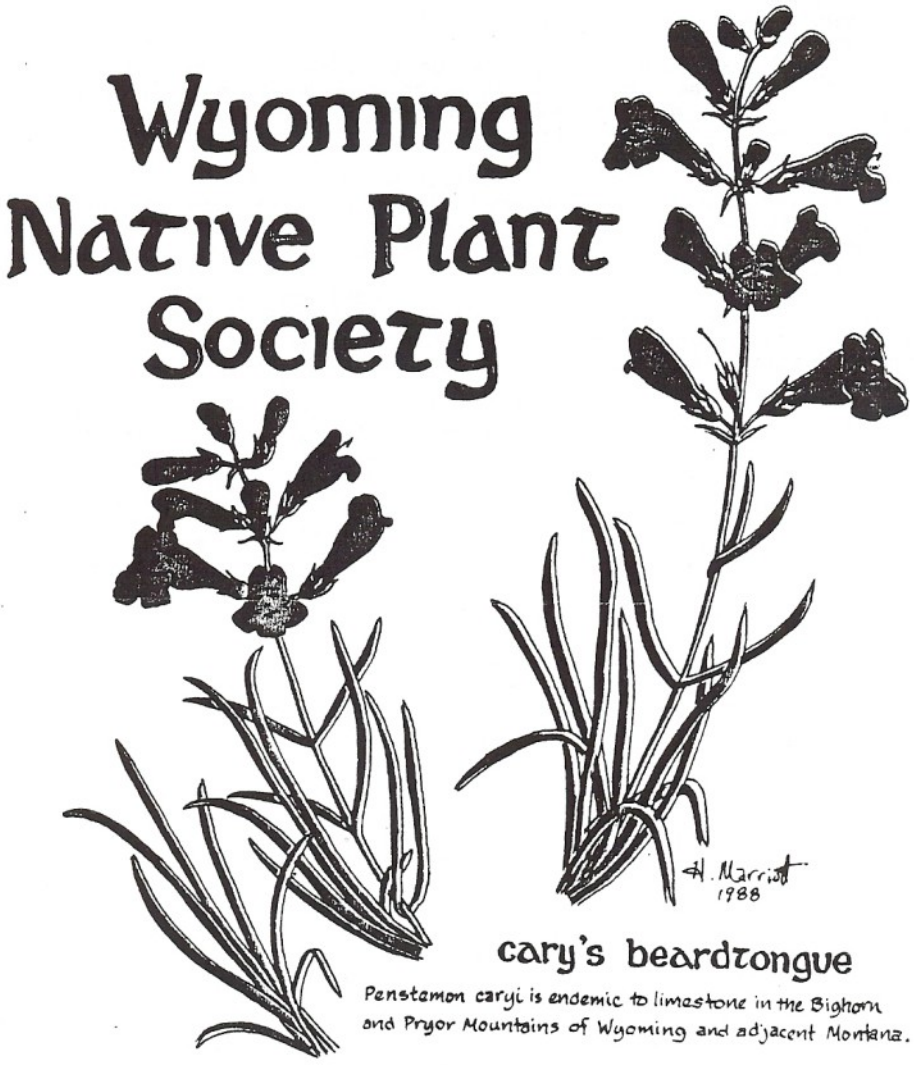

Contributors This Issue - RD = Robert Dorn, HJM = Hollis J. Marriot.

FEDERAL AGENCIES MOVE TO PROTECT RARE PLANT IN SOUTHWEST WYOMING -- Thelesperma pubescens, the "Uinta greenthread," is endemic to the southwesternmost corner of Sweetwater Co. and the southeasternmost corner of Uinta Co. A member of the aster family, this species was described in 1983 by Bob Dorn. It is a Category 2 candidate for Federal listing ("more information needed"). The greenthread is presently known from only four sites in the world, all within less than 100 sq. mi. It occurs on relic surfaces, off the north flank of the Uinta Mountains, that now stand as isolated mesa-like mountains: Cedar Mountain, Sage Creek Mountain and the two summits of Hickey Mountain. These long, broad, flat summits are capped with the Bishop conglomerate, and are vegetated mainly with grassland and sagebrush. However, along the edges and on ridges leading off the summits, soils are very coarse, sometimes with cobbles to a foot or more in diameter, and sparsely vegetated. Such habitat is home to the Uinta greenthread. It is a common, or even a codominant, member of the community of low forbs that can grow under these harsh conditions.

Like many narrowly endemic plant species in Wyoming, Thelesperma pubescens is common to abundant where it grows, but very restricted in overall range. As a result, development in the area could have a significant negative impact on the species as a whole. Survey work in 1987 by Hollis Marriott, The Nature Conservancy's Wyoming Heritage botanist, showed that Thelesperma pubescens habitat overlapped with the Hickey Mountain-Table Mountain oil/gas field, which was reopened to exploration and development in 1987. The Environmental Impact Statement (EIS) prepared for the project by Wasatch National Forest and the Rock Springs District of the BLM (1987), stipulated that negative impacts on populations of Thelesperma pubescens be avoided whenever possible during development, so that the need to list the species as Threatened or Endangered would not arise. However, the species distribution information provided in the EIS was incomplete.

To avoid adverse impacts on populations, the BLM and Forest Service contracted with The Nature Conservancy's Wyoming office on a cost-share basis in 1988 to prepare detailed distribution maps and establish permanent monitoring transects for Thelesperma pubescens within the Table Mountain-Hickey Mountain oil/gas field. The final report was submitted Sept. 30, and the information is being used in reviewing permits for development in the area. For example, Wasatch National Forest is requiring that a proposed pipeline be routed south of populations of the greenthread in the saddle between Hickey and Table Mountains.

The actions taken by Wasatch National Forest and the Rock Springs BLM are exemplary of the type of management needed for many rare plants in Wyoming. We are fortunate that protection of our rare species often requires only preventive measures, rather than expensive and complex processes such as listing and restoration. With avoidance and monitoring, these plants will likely remain rare only...rather than rare and endangered. **HJM**

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