

County. This grass could prove invasive and contribute to the decline of native grassland systems within the MSCP preserve system.

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MONTANA

*RANUNCULUS JOVIS* A. Nels. [*R. digitatus* Hook.] (RANUCULACEAE), Carbon County, Montana; East Pryor Mountain along USFS Road 2849 as on Big Ice Cave, Mt. USGS Quad. 45°10'N, 108°25'W. In places abundant.

Collections made by the authors on 19 May 2005 with the plant in flower and on 03 June 2005 with the plant in fruit. Voucher specimens held at MONT, Montana State University, Bozeman, MT and at Rocky Mountain College, Billings, MT.

Prior to our discovery, *Ranunculus jovis* was not known to be in the Pryor Mountains. The Montana Natural Heritage program lists *R. jovis* as S1/G4.

Exploring East Pryor Mountain in 2006 we found eleven sites separated into two populations 2.5 km apart. The total estimated for the two populations is 221,700 plants.

*Previous knowledge.* *Ranunculus jovis* is found in mountains of Idaho, Utah and Wyoming. Heretofore collections had been made in Montana locations immediately north and west of Yellowstone National Park. There are no known reports of *R. jovis* along the rims of the Bighorn Basin of which the Pryor Mountains are the northern terminus.

*Significance and comment.* This finding of *R. jovis* in the Pryor Mountains is a significant 130 km extension northeast of the plant's known range, over the Beartooth – Absaroka mountain ranges from the nearest previously known population in the northeast corner of Yellowstone National Park.

Within the Pryors, *R. jovis* is an ephemeral plant that emerges with *Claytonia lanceolata* from melting snowbank communities in early spring. The snowbanks are sufficiently deep to support subnivean activity of pocket gophers (*Thomomys talpoides*). This association was consistent at every site we found. This association has not been noted in collections done elsewhere; however, whenever the site has been described it is often noted as being at the foot of a melting snowbank.

As with other spring ephemeral/deep snowbank plants, *R. jovis* has evolved storage roots. *Ranunculus* species have relatively long-tapered roots occasionally described as somewhat fleshy. In *R. jovis* those roots are decidedly fleshy, and are best described as clavate, resembling a club or better, a baseball bat.

*R. jovis* occurs in various soil types and plant communities. Within the Pryors the collection sites varied from *Artemisia tridentata*/grasslands with loamy clay soil among limestone cobbles at 2134 m elevation to openings within the *Pseudotsuga menziesii* forest at 2438 m with soil richly organic and overlain by mucky duff.

Our two populations of *R. jovis* in the Pryors had not before been noticed by botanists because, in the past, weather and road conditions prohibited explora-

tion of these mountains in early spring. Warm climate/drought conditions have occurred during the last seven years and with the diminished snow pack we can reach the populations as the plants emerge from the snowbanks.

We are now conducting studies in the field on pollination, root development, and the relationship of *R. jovis* to *Ranunculus glaberrimus*, an often sympatric species that has similar above-ground morphology but very different roots.

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PERU

*GENTIANELLA CALANCHOIDES* (Gilg) Fabris (Gentianaceae).—Huancavelica: Tayacaja Province, 40 km from Colcabamba, 4070 m, 31 Jul 1978, Aronson & Berry 567 (HAM, MO).

*Previous knowledge.* Known from Deptos. Huánuco and Junín. Previous knowledge of the distribution of the species reported here is based on my studies for L. Brako and J.L. Zarucchi, Catalogue of the Flowering Plants and Gymnosperms of Peru, Monographs in Systematic Botany, Missouri Botanical Garden 45, 1993, and P.M. Jørgensen and S. León-Yáñez, Catalogue of the Vascular Plants of Ecuador, Monographs in Systematic Botany, Missouri Botanical Garden 75, 1999.

*Significance.* Extends the known range to Depto. Huancavelica.

*GENTIANELLA ERICOTHAMNA* (Gilg) Zarucchi (Gentianaceae).—Pasco: Prov. Oxapampa, Distr. Huancabamba, P.N., Yanachaga-Chemillen, Sector Santa Barbara, bosque montano con abundante chusquea, 10°20'06"S, 75°38'42"W, 3340 m, 11 Mar 2004, Vásquez & Monteagudo 29981 and 29983 (both HAM, MO).

*Previous knowledge.* Known only from the type from Depto. Huánuco, Prov. Huamalies, Berge südwestlich von Monzón, 3300–3500 m, collected prior to 1906.

*Significance.* Indicates that the species is extant and is distinct from *G. radicata* (Griseb.) J.S.Pringle, which also occurs in Depto. Pasco. Extends the known range to Depto. Pasco.

*GENTIANELLA GILIOIDES* (Gilg) Fabris (Gentianaceae).—Cajamarca: Prov. San Ignacio, San José de Lourdes, cerro Picorana, bosque enano, 4°58'17"S, 78°53'00"W, 2830 m, 17 Aug 1998, Campos et al. 5547 (HAM, MO).

*Previous knowledge.* Known only from Provs. Loja and Zamora-Chinchipe, Ecuador.

*Significance.* This specimen, from near the Ecuadorian border, is the first record of the species from Peru.

*GENTIANELLA HERRERA* (Gilg) Zarucchi (Gentianaceae).—Ayacucho: Prov. Huanta: road from Quinua to Tambo, S12°59'W074°05', 4300 m, 19 Feb 2000, Weigend & Weigend 2000/373 (NY).

*Previous knowledge.* Known only from the type from Depto. Cusco, Andes del Paucartambo, 3900 m, collected in 1924.

*Significance.* Confirms that *G. herrerae* is a distinctive species, encourages the hope that it remains extant, and extends its known range to Depto. Ayacucho.



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