

**A NEW VARIETY OF *ERIOGONUM LACHNOGYNUM*
(POLYGONACEAE: ERIOGONOIDEAE)**

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ABSTRACT

Eriogonum lachnogynum var. *colobum* is proposed for a series of populations confined to mesa tops formed by outcrops of the upper Jurassic Todilto limestone near Thoreau, McKinley Co., New Mexico. The variety differs from var. *lachnogynum* and the recently established var. *sarahiae* by its low, flattened mats of numerous caudex branches with short leaf-blades (up to 12 mm long and 3.5 mm wide), and capitate inflorescences that are about as long as to slightly surpassing the height of the leaves. Members of this species have long been used medicinally by the indigenous Navajo (Diné) people.

KEYWORDS: Polygonaceae, Eriogonoideae, *Eriogonum lachnogynum*, Navajo medicinal plants. *New Mexico*

***Eriogonum lachnogynum* Torr. ex Benth. var. *colobum* Reveal & A. Clifford, var. nov.**

TYPE: UNITED STATES. New Mexico, McKinley Co.: On a low ridge overlooking the San Antonio Mission site, 0.5 mile southeast of the Elkins Lime Pit, 6.1 airmiles northeast of Thoreau and 1 airmile east of New Mexico Highway 57 at San Antonio Spring, on limestone caprock

associated with *Juniperus*, 7460 ft elev., T14N, R12W, sec. 21 NW¼, 27 May 2003, *A. Clifford* 03-390. Holotype: NY; isotypes: BRY, GH, MO, RSA, SJNM, UNM, US.

A var. *lachnogyno plantis* (0.05–0.2 vs 1–3.5 dm altis) et foliis (0.4–8 (1.2) vs 1–3 cm longis) brevioribus differt.

Plants low, cespitose, matted, herbaceous perennials, 0.5–2 cm tall, 5–35 cm across, with a pluricipital caudex of 30 or more branches arising from a stout, woody taproot; *leaves* basal, in fascicles, the leaf blades narrowly elliptic to oblanceolate, 4–8 (12) mm long, 1–3 (3.5) mm wide, silky tomentose on both surfaces but more densely so adaxially, the margins slightly revolute, the petioles 1–3 mm long, pilose, tapering to elongated, sparsely pilose or more commonly glabrous bases, 3–6 mm long; *flowering stems* numerous, erect, scapose, (1) 2–5 (13) mm long, silky tomentose, about as long as to slightly surpassing the height of the leaves; *inflorescences* capitate, 3–8.5 mm across; *peduncles* lacking; *involucres* 1 per flowering stem, broadly campanulate, 2–3.5 mm long, 4–6 (8) mm wide, silky tomentose adaxially, the teeth 5, slightly spreading, 1–1.5 mm long; *flowers* yellow, 3–4.5 mm long, densely white pilose adaxially, the tepals monomorphic, broadly lanceolate, united only near the base; *stamens* slightly exserted, 2.5–4 mm long, the filaments glabrous; *achenes* dark brown, trigonous, 3–4 mm long, tomentose.

Other specimens seen.

UNITED STATES. New Mexico, McKinley Co.: On a low ridge overlooking the San Antonio Mission site near the Elkins Lime Pit, 6.1 airmiles NE of Thoreau and 1 airmile E of New Mexico Highway 57 at San Antonio Spring, 7460 ft elev., T14N, R12W, sec. 21 NW¼, 18 May 2000, *A. Clifford et al.* 00-268 (BRY, SJNM); 7 mi N of Thoreau along New Mexico Highway 371, N of road above mine, 29 May 1997, *K. Heil* 10961 (SJNM); N of Thoreau on point of mesa, 21 May 1998, *S. L. O’Kane* 4227 (BRY, SJNM); on a low ridge overlooking the San Antonio Mission site near the Elkins Lime Pit, 6.1 airmiles NE of Thoreau and 1 airmile E of New Mexico Highway 57 at San Antonio Spring, on limestone caprock associated with *Juniperus*, 7450 ft elev., 35°26’11”N,

108°07'18"W - T14N, R12W, sec. 16 SW $\frac{1}{4}$ of the SW $\frac{1}{4}$, 31 Oct 2003, *Reveal, Broome & Clifford* 8434 (NY); ca 5 mi NE of Thoreau along New Mexico Highway 57, on the S side of a quarry, T14N, R12W, sec 17, center, 2225 m, 11 Jun 1997, *Sivinski* 3784 (BRY); 5 mi NNW of Prewit on top of first small mesa W of Casamero Mesa, 35°24'50.4"N, 108°03'45.2"W - T14N, R12W, sec. 24 SE $\frac{1}{4}$ of the NE $\frac{1}{4}$, 2190 m, 12 Jun 1994, *Sivinski et al.* 2737 (BRY, MARY, NMC, UNM).

At the type location northeast of Thoreau, New Mexico, *Eriogonum lachnogynum* var. *colobum* (from the Greek *kolobos*, shortened or stunted, alluding to habit) is confined to a windswept ridge formed by a shallow north-facing dip of the Pinedale Monocline that exposes a caprock lens of the upper Jurassic Todilto limestone. The outcrop consists of grayish, thin-bedded, gravelly limestone, gypsiferous lens, and reddish brown shale and siltstone (Cooley et al. 1969). The clipped wild buckwheat occurs there with other low-growing species along with sparsely scattered, stunted pinyon pine (*Pinus edulis* Englem.), Utah juniper [*Juniperus osteosperma* (Torr.) Little], James' galleta (*Pleuraphis jamesii* Torr.) and bluegrama [*Bouteloua gracilis* (Willd. ex Kunth) Lag. ex Griffiths]. The variety has been collected north-northwest of Prewitt about 7 miles to the east, and reported to be west of New Mexico Highway 371 along the western extension of the Pinedale Monoclinical ridge.

The var. *colobum* joins the newly proposed *Eriogonum lachnogynum* var. *sarahiae* (N. D. Atwood & A. Clifford) Reveal (Reveal 2004) as one of two depauperate variants of the species. Compared to the flattened mats of var. *colobum* with its flowers at or just above the height of the leaves, the var. *sarahiae* has long, exserted scapes (3–6.5 cm long) atop a hemispheric mat. Like its counterpart, Sarah's wild buckwheat occurs on windswept ridges on limestone caprock in widely scattered locations in Apache and Navajo counties, Arizona, and along the edge of Red Valley in western McKinley Co., New Mexico.

According to the late Sarah Charley of Beclahbito, New Mexico, for whom the var. *sarahiae* is named, the Navajo (Diné) people believe *Eriogonum lachnogynum* is a lifeway medicinal plant. Shredded roots of

this plant, and other tap-rooted species such as *Eriogonum alatum* Torr., *E. jamesii* Benth., and *E. racemosum* Nutt., are soaked in water and used for any internal and sometimes external injuries, including back pain and diarrhea. When the plants are used medicinally, the user is required to disclose their name, age and type of ailment for the plant to work properly. Sacred Navajo names, prayers, and offerings are given to the plants before they are collected for ceremonial use.

ACKNOWLEDGEMENTS

We wish to thank Drs. Robert W. Kiger and James Zarucchi for reviewing the manuscript.

LITERATURE CITED

- Cooley, M. E., J. W. Harshbarger, J. P. Akers & W. F. Hardt.** 1969. Regional hydrogeology of the Navajo and Hopi Indian reservations, Arizona, New Mexico and Utah. U. S. Geol. Surv. Prof. Pap. 521-A: 1-61.
- Reveal, J. L.** 2004. Nomenclatural summary of *Polygonaceae* subfamily *Eriogonoideae*. Harvard Pap. Bot. 9: 143-230.



Clifford, A and Reveal, James L. 2004. "A new variety of *Eriogonum lachnogynum* (Polygonaceae: Eriogonoideae)." *Phytologia* 86, 169–172.
<https://doi.org/10.5962/bhl.part.28431>.

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