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James L. Reveal

*University of Maryland, College Park, and Smithsonian Institution, Washington, D.C.*

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A NEW SUBFRUTICOSE ERIOGONUM (POLYGONACEAE)
FROM WESTERN COLORADO

James L. Reveal

ABSTRACT.—A new subfruticose Eriogonum (Polygonaceae) is described as E. pelinophilum, from specimens obtained near Hotchkiss, Delta Co., Colorado. A member of the subgenus Eucycla, the new species is most closely related to E. contortum Small ex Rydb., but differs in having cream-colored flowers instead of bright yellow flowers. The two species also differ in that E. pelinophilum has narrowly turbinate involucres which are longer than those of E. contortum and larger flowers and achenes. The new species is apparently restricted to gumbo clay hills west of Hotchkiss.

In my series of Notes on Eriogonum, part VI dealt with the Eriogonum microtheicum Nutt. portion of the Section Corymbosa Benth. in DC. (Reveal, 1971). In that treatment, I discussed an undescribed species known only from a single collection which occurred on clay hills near Hotchkiss, Delta Co., Colorado. In spite of two attempts to find additional material, the plant could not be located in the field, and the decision was made not to provide formal recognition of this entity until it could be rediscovered and an exact location established.

In July 1972, fieldwork in the Hotchkiss area led to the relocation of this long-sought buckwheat which may now be called:

Eriogonum pelinophilum Reveal, spec. nov. A Eriogonum contorta Small ex Rydb. floribus albidis et longioribus (2.5) 3-3.5 mm longis, involucris anguste turbinatis (2.5) 3-3.5 mm longis differt. Plantae subfruticosae 5-10 cm altae et 8-20 (30) cm lateae; folia oblanceolata, laminis 5-12 (15) mm longis et 1-2 (3) mm latiss, subtus albotomentosis, supra subglabras vel glabras raro floccosis, marginibus revolutis, petiolis brevissimis, 1 mm longis, floccosis vel glabras; caules gracies, (3) 5-10 mm longi, floccosi vel glabri; inflorescentiae cymosae, 1-2 cm longae et 1-3 cm lateae, ramis floccosis vel glabras, radiis 2-7 (10) mm longis; bracteae ternatae, 0.5-1 mm longae et lateae; pedunculi erecti, 1-5 mm longi, floccosi vel glabri; involucra solitaria, anguste turbinata, (2.5) 3-3.5 mm longa et 1-1.5 mm lata, floccosa vel glabra, 5-lobatis 0.3-0.4 mm longis, bracteolis oblanceolatis, 1.8-2.5 mm longis, pedicellis 2.5-4.5 mm longis et glabras; flores albidi cum costa et funda rufi, (2.5) 3-3.5 mm longi, glabri, tepalis similaribus, oblongis, 0.8-1.2 mm latiss, stamina exserta, 2.5-4 mm longa, filamentis sparse pilosis basi, antheris albidis, 0.6-0.7 mm longis, oblongis; achaenias infuscata, 3-3.5 mm longa.

Low-rounded, heavily branched, pulvinate subshrub 5-10 cm high, 8-20 (30) cm across, the lower woody stems light brown, the bark exfoliating in long loose strips or in wide plates, leafless, arising from a stout, woody taproot, the upper branches herbaceous, slender, floccose to glabrous; leaves solitary, scattered along the entire
length of the herbaceous stems except for the last (3) 5-10 mm, somewhat closely arranged and congested to widely spaced, the leaf-blade oblanceolate, 5-12 (15) mm long, 1-2 (3) mm wide, densely white-tomentose below, the midvein totally obscured by the tomentum, subglabrous to glabrous and green above, the margin entire, revolute and complete enclosing the lower surface, the apex and base acute, the blades persistent throughout the growing season, the petiole short, 1 mm long, light yellowish-brown to tan and thinly pubescent when young, becoming glabrous and brownish at maturity, the petiole-base elongate-triangular, 1-2 mm long, 0.7-1.2 mm wide, slightly pubescent to glabrous and light brown without, densely tomentose within; flowering stems erect, slender, 5-10 mm long, floccose to glabrous; inflorescences cymose, ± compact and congested, 1-2 cm long and 1-3 cm wide, trichotomous, the rays 2-7 (10) mm long, once or twice divided, floccose to glabrous; bracts scalelike, ternate, 0.5-1 mm long and wide, triangular, floccose to glabrous without, thinly tomentose within, connate at the base; peduncles, when present, 1-5 mm long, erect, floccose to glabrous, those of the central involucre longest, 3-5 mm long, those of the lateral involucres shorter, up to 2 mm long; involucre solitary, narrowly turbinate, (2.5) 3-3.5 mm long, 1-1.5 mm wide, floccose to glabrous without, glabrous within, the 5 acute teeth 0.3-0.4 mm long, the bractlet oblanceolate, 1.8-2.5 mm long, minutely fringed with capitate, gland-tipped, cells, the pedicel 2.5-4.5 mm long, glabrous; flowers white to cream with reddish-brown midribs and large, conspicuous brownish-red to greenish-red bases, (2.5) 3-3.5 mm long, glabrous within and without except for microscopic glands along the midribs within, the tepals essentially similar, oblong, the outer whorl of tepals 1-1.2 mm wide, the inner whorl 0.8-1 mm wide, the apex of both whorls rounded, united at least \( \frac{1}{2} \) the length of the flower; stamens slightly exserted, 2.5-4 mm long, the filament sparsely pubescent basally, the anther white to cream, 0.6-0.7 mm long, oblong; achenes light brown, 3-3.5 mm long, the globose base tapering abruptly to a long, three-angled beak.

**Type.—** Colorado: Delta Co.: Along Colorado Highway 92, 8.6 miles west of the western edge of Hotchkiss, 0.9 miles east of the Red Mesa turnoff and 3.1 miles west of Lazear, 11.5 miles east of U.S. Highway 50 at Delta, on rolling clay hills associated with scattered species of *Atriplex* and *Eriogonum lonchophyllum*, at 6400 feet elevation, 16 July 1972, *Reveal and Reveal* 2780. Holotype, US! Isotypes, 30 duplicates to be distributed from US.


The Clay-loving Buckwheat, *Eriogonum pelinophilum*, was first thought to be a member of the Section Corymbosa and to be related to *E. bicolor* M. E. Jones (Reveal, 1971). Since seeing the plant in the field, it appears to be more closely related to *E. contortum* Small ex Rydb., a species which is currently placed in an unnamed section typified by *E. brevicaule* Nutt. (Reveal, 1969). The discovery of
this new species now raises serious questions as to the placement of these two species within the genus. Stokes (1936) associated E. contortum with those elements around E. corymbosum, but the reduced nature of E. contortum, its yellow flowers, and smooth greenish stems seem to exclude it from this group of species. However, the flower color of E. pelinophilum removes the significance of the flower color, and one is faced with the problem of whether or not one should place both E. contortum and E. pelinophilum with E. brevicaule or with E. clavellatum Small and E. bicolor. Compounding the problem is the highly reduced, diminutive E. acaule Nutt. of Wyoming. Further work is needed before the exact placement of these species can be made, but it is possible that E. pelinophilum, E. contortum, and E. acaule should be placed in a distinct section occupying an intermediate position between those species of the genus typified by E. microthecum—E. corymbosum and those related to E. brevicaule.

The new species may be distinguished from Eriogonum contortum by its white or cream-colored flowers and its longer involucres, flowers, and achenes. Eriogonum pelinophilum occurs to the south of all known locations of E. contortum, which occupies the Grand Valley of Utah and Colorado. So far as known, E. pelinophilum is relatively rare in the field, being restricted to gumbo clay hills and slopes in the desert west of Hotchkiss; no specimens were found to the east and south of this townsite.

Acknowledgment

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Literature Cited


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