

# A NEW SUBFRUTICOSE ERIOGONUM (POLYGONACEAE) FROM NORTHERN MEXICO

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Recent floristic studies by B.L. Turner of the University of Texas on vegetation restricted to gypsophilous soils in southwestern United States and adjacent northern Mexico have resulted in the discovery of several interesting plants (Turner, 1972a, 1972b; Turner & Powell, 1972). Among the collections obtained by Turner from near San Roberto Junction in Nuevo León is a new *Eriogonum* (Polygonaceae) here described as:

**ERIOGONUM turneri** Reveal, sp. nov. A *E. jamesii* Benth. in DC. var. *undulata* (Benth. in DC.) Stokes ex Jones foliis lanceolatis 6–11(15) mm longis et 4–5(6) mm latis, inflorescentiis compactis capitatis vel biumbellatis, plantis subfruticosis et compactis differt. *Plantae* caespitosae et subfruticulosae 2–10 cm altae et 5–15(20) cm latae, apicibus lignosis et ramosissimis; *folia* lanceolata, laminis 6–11(15) mm longis et 4–5(6) mm latis, subtus albo-tomentosis, supra glabris vel subglabris, marginibus crispatis, petiolis brevibus et 3–6 mm longis, floccosis; *caules* graciles, (1.5)2–5 cm longi, tomentosi; *inflorescentiae* capitatae vel biumbellatae, ad 4 cm longae et latae, ramis tomentosis; *bracteae* 3–5, 0.7–4 mm longae; *pedunculi* nulli; *involucra* solitaria, campanulata, 3–3.5 mm longa et 3.5–4 mm lata, sparse tomentosa, 5–6-lobatis, bracteolis brevibus, 0.8–1 mm longis et hirsutulosis, pedicellis 3–4 mm longis et glabris; *flores* stipitati, albi vel subrosei, 4.5–6 mm longi, puberuli, tepalis dissimilaribus, extimis tepalis oblongis, 3–3.5 mm longis et 0.9–1.2 mm latis, intimis tepalis spatulatis, 4–5 mm longis et 1.8–2.5 mm latis; *stamina* exserta, 3–4 mm longa, filamentis pilosis basi, antheris roseis vel purpureis, 0.5–0.8 mm longis, oblongis; *achania* infuscata, 4–4.5 mm longa.

Low caespitose subfruticose perennials 2–10 cm high with compact, woody caudex branches forming a mat 5–15(20) cm across, this arising from a stout woody taproot, the bark of the caudex branches and the taproot reddish brown, exfoliating in loose shaggy plates; *leaves* basal, in indistinct basal rosettes restricted to the base of the herbaceous flowering stems or at the tips of exposed caudex branches, the leaf blade lanceolate, 6–11(15) mm long, 4–5(6) mm wide, densely white-tomentose below, green and subglabrous to glabrous above, the midvein remaining pubescent above in most, the margin enrolled and crispate, the apex acute, the base truncate to rounded, the petiole short, 3–6 mm long, floccose to thinly tomentose, reddish



under the tomentum, the petiole base triangular, 0.8–1 mm long, 0.5–0.8 mm wide, persistent and covering the upper part of the caudex branch, glabrous within, thinly pubescent without; *flowering stems* erect, slender, (1.5)2–5 cm long, thinly tomentose, often reddish under the tomentum; *inflorescences* capitate and consisting of a single terminal involucre with the head 1–1.5 cm across to biumbellate and up to 4 cm high and across, the branches thinly tomentose; *bracts* 3–5 at the base of the involucre and at each node, usually with 1–3 semifoliate ones with one distinctly longer than the others, 2–4 mm long and similar to the basal leaves only more reduced, the others reduced and scale-like, 0.7–1.5 mm long, all connate at the base; *peduncles* lacking; *involucres* solitary, campanulate, 3–3.5 mm long, 3.5–4 mm wide, thinly tomentose without, glabrous within, the 5–6 rounded shallow teeth less than 0.5 mm long, the bractlets small and peg-like, 0.8–1 mm long, densely hirsutulous, the pedicels numerous, 3–4 mm long, glabrous; *flowers* stipitate, pinkish-white with greenish to pinkish midribs and bases at anthesis, becoming pinkish in fruit, 4.5–6 mm long including the 1–1.3 mm long stipe, densely pubescent without especially along the midribs and stipe, glabrous within except for a few scattered minute glands, the tepals dissimilar, united about  $\frac{1}{4}$  the length of the flower, the outer whorl oblong, 3–3.5 mm long, 0.9–1.2 mm wide, becoming turned outward in fruit, the inner whorl spatulate, 4–5 mm long, 1.8–2.5 mm wide, remaining erect, the pubescence remaining rather dense from anthesis to fruit; *stamens* slightly exerted, 3–4 mm long, the filament thinly pilose basally, the anther dark red to purple, 0.5–0.8 mm long, oblong; *achenes* light brown, 4–4.5 mm long, the narrow base tapering to a long, sparsely pubescent, 3-angled beak.

MEXICO: Nuevo León: Along Mexico Highway 57, 15.5 mi S of San Roberto Junction, 2.3 mi N of El Refugio, 0.5 mi W of highway on a small raised ridge of gypsum, with *Isocoma gypsophila*, *Strotheria gypsophila*, *Frankenia margaritae*, and *Calylophus*, 5700 ft elevation, 19 Sep 1972, Reveal & Hess 3147 (Holotype, US; 30 isotypes to be distributed from US).

Additional specimens examined: MEXICO: Nuevo León: 16 mi S of San Roberto Junction, 0.5 mi W of highway, 24 Oct 1970, Turner & Crutchfield 6310 (TEX).

The Turner Buckwheat, *Eriogonum turneri*, is a member of the subgenus *Oligogonum* Nutt, a complex of some 30 species typified by *E. umbellatum* Torr. (Reveal, 1969). The new species closely approaches *E. jamesii* Benth. in DC. var. *undulatum* (Benth. in DC) Stokes ex Jones, found in mountains and foothills of northern Mexico northward into western Texas and south-eastern Arizona.

The new species may be distinguished by its short narrow leaves [5–11(15) mm long and 4–5(6) mm wide versus 1–2 cm long and 0.5–1 cm wide for var. *undulatum*]; the short compact inflorescence (up to 4 cm long for *E. turneri* and up to 1.5 dm long for var. *undulatum*); and the generally smaller fruiting flowers (up to 6 mm long in the new species and up to 9 mm long in var. *undulatum*). *Eriogonum jamesii* occurs typically on sandy loam to

clayey soils but, so far as known, not on gypseous soils. Likewise, var. *undulatum* in Mexico is found mainly in high mountains in well drained soils mostly above 7000 ft elevation. In most places, var. *undulatum* forms small to rather large mats (the latter especially in arroyos and on gradual rocky slopes), with its large leaves being a conspicuous part of the plant as is the tall (up to 5 dm) habit of the flowering stems and inflorescence. In *E. turneri*, the plants form very small compact mats, usually less than 2 dm across, on exposed valley bottoms at 5700 ft elevation. The plants, with their small inconspicuous leaves, rarely exceed 1 dm in height. Both entities have crispate leaf-margins, unlike var. *jamesii*.

It is a pleasure to name this species for Billie L. Turner, a Texan whose stature in plant taxonomy far exceeds that of this diminutive taxon. Field work was supported by NSF grant GB-22645.

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