ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM

Plant Abstract **Element Code:** PDPGN08520
Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Eriogonum ripleyi*
COMMON NAME: Ripley wild-buckwheat, Ripley's wild-buckwheat, Frazier Wells wild, buckwheat, Frazier well buckwheat
SYNONYMS:
FAMILY: Polygonaceae

AUTHOR, PLACE OF PUBLICATION: J.T. Howell, Leaflets of Western Botany 4(1): 5-7. 1944.

TYPE LOCALITY: Thirteen miles southwest of Fraziers Well, western Coconino County, Arizona.

TYPE SPECIMEN: HT: CAS 311,671. H.D. Ripley and R.C. Barneby 5226, 13 May 1943.

TAXONOMIC UNIQUENESS: Very large genus, 200-300 species mainly in western North America. Fifty-four species listed by Lehr (1979) as occurring in Arizona. Related to *E. bicolor* and *E. pulchrum* in the *E. microthecum* group.

"The most remarkable characteristic of the Ripley Buckwheat is the bractless flowering stems and the resulting inflorescence which is essentially composed of a single terminal involucre... arrangement of the leaf fascicles with the involucres extending out from these on slender peduncles represents another extreme in the reduction of the inflorescences... trend is not seen in other species in the *E. microthecum* complex although it is hinted at in *E. bicolor*." From J.L. Reveal (1971).

DESCRIPTION: Low herbaceous perennial subshrub with numerous branches, 5-20 cm (2-8 in.) tall, tuft- or mound-forming with trailing stems, rooting at the nodes. Leaves narrowly lance-shaped, 2-6 mm long, densely covered with wooly hair on the underside, with downrolled leaf margins. Single terminal involucre on slender terminal branches. Petals are white with a red-brown center strip, 3.5-4.6 mm long.

AIDS TO IDENTIFICATION: Species differs from other *Eriogonums* in Arizona in that it is a low, heavily branched, mat-forming sub-shrub with short linear leaves. It roots at nodes giving an arching appearance distinguishing it from other *Eriogonums* in its area. *Eriogonum ripleyi* is similar to *E. ericifolium* var. *ericifolium* and *E. caespitosum*, however, the reduction of its inflorescence to a single terminal involucre is distinctive. *E. ripleyi* is very difficult to differentiate from the more thinly stemmed *E. microthecum* which may occur in the same vicinity as *E. ripleyi*. *E. ripleyi* is very similar to *E. ericifolium* var. *thornei* of San Bernadino County, California. When not flowering, it is hard to see because it blends in with soil.

ILLUSTRATIONS: Line drawing (USFWS).
Line drawing (M.S. 90, *in* Falk, Jenkins et al. 2001)
Color photos (Marc Baker, *in* Falk, Jenkins et al. 2001)
Color photo of habitat (USFS, *in* Falk, Jenkins et al. 2001)

TOTAL RANGE: Known from five widely separated localities in central to northwestern Arizona, where it seems to be restricted to white, calcareous substrates.

RANGE WITHIN ARIZONA: Near Horseshoe Lake and Chalk Mountain, Maricopa and Yavapai counties; near Cottonwood, Yavapai County; and southwest Coconino County and adjacent Mohave and Yavapai counties. Frazier Wells on Hualapai Indian Reservation in Coconino County.

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Perennial subshrub/forb.

PHENOLOGY: Dicot flowering plant, that flowers April – June.

BIOLOGY: Where stems contact the soil, they will root at the nodes. Leaves become tightly inrolled and reddish when under drought or dormant conditions; plants will look very different. They are very obvious when they are producing abundant flowers in the spring.

HABITAT: In Tertiary lakebeds on well-drained powdery soils derived from limestone, sandstone, or volcanic tuffs and ashes (Falk, Jenkins et al., 2001). NatureServe (2003) states that *E. ripleyi* is found on calcareous ridge tops or chalky carbonate Verde formations at 1045 m; and among pinyons at 1830 m.

ELEVATION: 2,000 - 6,000 feet (610 - 1830 m). Based on unpublished records from the HDMS (AGFD accessed 2003), elevation ranges from 2,100 – 5,500 ft (641-1678 m).

EXPOSURE:

SUBSTRATE: Heavily calcareous soils (Tertiary limestone/gypsiferous lakebed deposits at Frazier's Well, Hualapai Reservation), sandy clay soil on the edge of sandstone mesas, and volcanic tuffs and ashes and redeposited limestone to chalky clay.

PLANT COMMUNITY: Creosotebush community of the Sonoran Desertscrub, and Pinyon-Juniper Woodland of the Great Basin Conifer Woodland.

POPULATION TRENDS: The Horseshoe Lake and Cottonwood populations each have thousands of plants.

This shrubby buckwheat is remarkable for its distribution in widely disjunct sites on different substrates (Phillips, 1999 draft).

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None (USDI, FWS 1996)
[C2 USDI, FWS 1980]
[PTN-T USDI, FWS 1975]

STATE STATUS: Salvage Restricted (ARS, ANPL 1999)
[Salvage Restricted (ARS, ANPL 1993)]

OTHER STATUS: Forest Service Sensitive (USDA, FS Region 3 1999)

[Forest Service Sensitive (USDA, FS Region 3 1990)]

MANAGEMENT FACTORS: Found in a small range in a specific substrate. Threats include degradation of habitat due to impacts associated with livestock grazing; construction of reservoirs, roads, and recreational development; off-road vehicle traffic; mining. Another threat includes the collection of these plants in the Horseshoe Lake area, for use in gardens.

CONSERVATION MEASURES TAKEN: Most of the Cottonwood population is in Verde Valley Botanical Area.

SUGGESTED PROJECTS: Expand Verde Valley Botanical Area; increase survey efforts for new populations; continue monitoring of known populations.

LAND MANAGEMENT/OWNERSHIP: BIA - Hualapai Reservation; USFS - Coconino, Prescott and Tonto National Forests; Arizona State Land Department; Private.

SOURCES OF FURTHER INFORMATION

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ADDITIONAL INFORMATION:

Phillips and Phillips (1991) indicate that based on the preference of *Eriogonum ripleyi* for specific soil associations there are large areas of potential habitat.

It had been suggested that this species may have some limited value in landscaping.

Revised: 1990-10-16 (SR)
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