

**ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM**

Plant Abstract

Element Code: PDAST8U054

Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Stephanomeria exigua* ssp. *exigua*

COMMON NAME: Schott wire lettuce, Schott's wire-lettuce, Scott's wirelettuce

SYNONYMS: *Stephanomeria schottii* (A. Gray) A. Gray, *Hemiptilium schottii* A. Gray

FAMILY: Asteraceae

AUTHOR, PLACE OF PUBLICATION: *Stephanomeria schottii* (A. Gray) A. Gray, Geological Survey of California, Botany 1: 427. 1876. *Hemiptilium schottii* A. Gray, Report on the United States and Mexican Boundary...Botany 2(1): 105. 1859.

TYPE LOCALITY: Camp Miller, "Valley of the Gila," Arizona, U.S.A.

TYPE SPECIMEN: Lectotype: NY-114881. A.C.V. Schott 58, May 1855.

TAXONOMIC UNIQUENESS: Species *exigua* is 1 of 18 species in the genus *Stephanomeria* in North America, and 1 of 7 in Arizona. Subspecies *exigua* is 1 of 5 subspecies in *S. exigua*.

DESCRIPTION: Herbaceous annual with a milky sap and a stout taproot. Plants are glabrous, (20-)30-60 cm ([8-]12-24 in) tall, with a single or sometimes several major erect stems, branched above, the branches usually straight and ending in flower heads. Stems are shiny silvery white except when very young. Early leaves are thin, in a quickly withering basal rosette, 2.8-12 cm, linear with few widely spaced alternate teeth or pinnate segments 1-3 cm; stem leaves reduced upwards, the plants generally nearly leafless at flowering time. Flowers cream-colored and nocturnal; 3-9 flowers per head. Involucre 6-7.5 mm, cylindrical in bud, narrowly funnelform at flowering time to often campanulate as achenes mature; phyllaries 5 (or 6), subequal, plus a few short basal bracts, often green in bud, becoming purplish with white, membranous margins. Ligules 6-7 mm, 5-toothed at apex, white, flushed with violet, fading to cream with violet at the tip. The anthers are white with dark violet-purple toward apex. Style pale violet with dark purple papillae on the exerted portion, the stigma intense pale purple or violet, papillose outside but not inside (above). Achenes 3.2-4 mm, columnar, light tan, tuberculate, sharply 5-angled, each face with a slitlike longitudinal groove. Pappus bristles 5, rigid, persistent, somewhat unequal in length, the larger bristles 2.2-3 mm, with a shiny copper-colored midstripe. (Falk et al., 2001; Felger 2000).

AIDS TO IDENTIFICATION: *Stephanomeria exigua* (small skeletonplant), which occurs at higher elevations than *S. schottii*, has a pappus of 5-18 bristles that are plumose above the middle and longer than the achenes. (Falk et al., 2001). In contrast, *S. exigua* ssp. *exigua* (small

wirelettuce) may have many capillary pappus bristles. (Felger 2000). *S. schottii* has cream-colored, nocturnal flowers whereas all others in Arizona have pink or pinkish-tan, diurnal flowers (Lehto 1979).

ILLUSTRATIONS:

B&W drawing of plant and flower (Falk, Jenkins et al., 2001).

Color photos of plant, flower, and habitat (Falk, Jenkins et al., 2001).

Color photo of Lectotype specimen (NY-114881, in NYBG Virtual Herbarium)

Color photo of specimen (ASU-238146 and ASU238170, in

<http://swbiodiversity.org/seinet/collections/index.php>).

TOTAL RANGE: The principal part of its distribution is the flora area in Sonora, Mexico. Also found in Arizona, from Yuma County, and reported from Maricopa County.

RANGE WITHIN ARIZONA: *S. schottii* was assumed extinct until its rediscovery in 1978 by Elinor Lehto, on the Cabeza Prieta Game Range, Yuma County (some distance from original collection). Today it is found in southern Yuma County: Pinta Sands, Mohawk Dunes, Yuma Desert, San Cristobal Valley east of the Mohawk Mountains. Also reported from southern Maricopa County.

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Annual/perennial forb/herb.

PHENOLOGY: Flowering and fruiting period occurs from mid-March to mid-May. Per Felger (2000), "Lehto (1979) says then flowers are nocturnal; however, I have seen them closed at dusk and open from dawn through midmorning on warm days, and suspect that they remain open longer on cooler days."

BIOLOGY: The species seems to exhibit cyclic patterns of seed germination, perhaps in response to wet winters. Populations appear to be local and periodic and the plants have a short life span. Mature plants tend to become foul smelling. At dawn, the flowers can produce an almost sickeningly sweet fragrance.

HABITAT: A sand dune endemic of the Gran Desierto Region. Habitat includes semi-stabilized sand dunes with creosote, white bursage, big galleta grass, and many other wildflowers. (Falk et al., 2001).

ELEVATION: 350 – 800 ft (107 – 245 m).

EXPOSURE: All.

SUBSTRATE: Sand dunes and sandy flats.

PLANT COMMUNITY: Sonoran Desert. Associated species include: *Abronia villosa* (Sand-verbena), *Ambrosia acanthocarpa* (flat-spine bursage), *A. dumosa* (white bursage), *Chaenactis stevioides* (pincushion), *Ephedra trifurca* (long-leaf Mormon-tea), *Hesperocallis undulata* (desert lily), *Hilaria rigida* (big galleta grass), *Larrea tridentata* (creosotebush), *Oenothera deltooides* (dune primrose), *Opuntia kunzei* (Devil's prickly-pear), *Palafoxia arida* (Desert Palafoxia), *Prosopis velutina* (velvet mesquite), and *Vulpia* (six-weeks grass). (Falk et al., 2001; SEINet accessed 2005).

POPULATION HISTORY AND TRENDS: Not well known. Numbers vary from locally common in good years to occasional, to totally absent in poor years.

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None (USDI, FWS 1990)
[3C USDI, FWS 1985]
[C USDI, FWS 1980]

STATE STATUS: None

OTHER STATUS: Bureau of Land Management Sensitive
(USDI, BLM AZ 2000, 2005, 2008, 2010)

MANAGEMENT FACTORS:

PROTECTIVE MEASURES TAKEN:

SUGGESTED PROJECTS:

LAND MANAGEMENT/OWNERSHIP: BLM – Mohawk Dunes ACEC; DOD – Barry M. Goldwater Air Force Range; FWS – Cabeza Prieta National Wildlife Refuge; Private.

SOURCES OF FURTHER INFORMATION

REFERENCES:

- Falk, M., P. Jenkins, et al; Arizona Rare Plant Committee. 2001. Arizona Rare Plant Guide. Published by a collaboration of agencies and organizations. Pages unnumbered.
- Felger, R.S. 2000. Flora of the Gran Desierto and Río Colorado of Northwestern Mexico. The University of Arizona Press. Tucson, Arizona. Pp. 157-158.
- Integrated Taxonomic Information System (ITIS). Retrieved 8/3/2005 from ITIS, <http://www.itis.usda.gov>.

- Lehto, E. 1979. "Extinct" Wire-Lettuce, *Stephanomeria schottii* (Compositae), rediscovered in Arizona after more than one hundred years. Desert Plants Volume I Number 1. University of Arizona Press. Tucson, Arizona. P. 22.
- Missouri Botanical Garden Nomenclatural Data Base. *Stephanomeria schottii* (A. Gray) A. Gray. http://mobot.mobot.org/cgi-bin/search_vast. (Accessed: 15 May 2002).
- Missouri Botanical Garden – TROPICOS, Nomenclatural Data Base. *Stephanomeria schottii* (A. Gray) A. Gray. http://mobot.mobot.org/cgi-bin/search_vast. Accessed: 3 Aug 2005.
- NatureServe. 2005. NatureServe Explorer: An online encyclopedia of life [web application]. Version 4.5. NatureServe, Arlington, Virginia. Available: <http://www.natureserve.org/explorer>. (Accessed: August 3, 2005).
- Phillips, B.G., N. Brian, and A.M. Phillips. 1982. Status Report: *Stephanomeria schottii* (Gray in Torrey) Gray. Museum of Northern Arizona, Flagstaff, Arizona. Submitted to: Office of Endangered Species, Fish and Wildlife Service, U.S. Department of the Interior, Albuquerque, New Mexico. 11pp.
- SEINet. Collections Search Result. Accessed 8/3/2005 and 8/8/2005 at <http://seinet.asu.edu/collections/list.jsp>.
- The New York Botanical Garden. NYBG Specimens Search Results. http://207.156.243.8/emu/vh/specimen_list.php. (Accessed: 8/3/2005).
- USDI, Bureau of Land Management. 2000. Arizona BLM Sensitive Species List. Information Memorandum No. AZ-2000-018.
- USDI, Bureau of Land Management. 2005. Arizona BLM Sensitive Species List.
- USDI, Bureau of Land Management Region 2. 2008. Arizona BLM Sensitive Species List.
- USDI, Bureau of Land Management Region 2. 2010. Arizona BLM Sensitive Species List.
- USDI, Fish and Wildlife Service. 1980. Endangered and Threatened Wildlife and Plants; Review of Plant Taxa for Listing as Endangered or Threatened Species; Notice of Review. Federal Register 45(242): 82539.
- USDI, Fish and Wildlife Service. 1985. Endangered and Threatened Wildlife and Plants; Review of Plant Taxa for Listing as Endangered or Threatened Species; Notice of Review. Federal Register 50(188): 52.
- USDI, Fish and Wildlife Service. 1990. Endangered and Threatened Wildlife and Plants; Review of Plant Taxa for Listing as Endangered or Threatened Species; Notice of Review. Federal Register 55(35): 6184-6229.

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ADDITIONAL INFORMATION:

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