

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

Plant Abstract

Element Code: PDAST530F0

Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Hymenoxys quinquesquamata*
COMMON NAME: Five Scale Bitterweed, Rincon rubberweed, Rincon Bitterweed
SYNONYMS: *Actinea quinquesquamata*
FAMILY: Asteraceae

AUTHOR, PLACE OF PUBLICATION: Rydberg, Per Axel. North American Flora
34(2): 114–115. 1915.

TYPE LOCALITY: Arizona: Carr Peak, Huachuca Mountains

TYPE SPECIMEN: NYBG 180215 (HT). L.N. Goodding, #874. August 27, 1910.

TAXONOMIC UNIQUENESS: There are 17 species in the genus *Hymenoxys* in the U.S. and Canada. There are an additional eight varieties. Eleven of these species are found in Arizona.

DESCRIPTION: Perennials, 30–100 cm (poly-caespitose; sometimes with sparingly branched, woody caudices). Stems 1(–3), green throughout or purple-red-tinted proximally, branched distally, ± hairy. Leaves: blades simple or lobed (lobes 3–17), glabrous or sparsely hairy, gland-dotted; mid leaves lobed (lobes 5–11, terminal lobes 0.8–2 mm wide). Heads 5–50+ per plant, in paniculiform to corymbiform arrays. Peduncles 2.5–7 cm, ± hairy. Involucres campanulate, 8–10 × 9–12 mm. Phyllaries in 2 series, unequal; outer 5(–8), basally connate 1/3–1/2 their lengths, obovate to ovate, 6–7 mm, apices acuminate; inner 6–8, obovate, 6.5–8 mm, apices mucronate. Ray florets 5–8; corollas yellow, 14–18 × 7–12 mm. Disc florets 30–100+; corollas 3.5–4.3 mm. Cypselae obpyramidal, 2.5–3.9 mm; pappi of 5–6 obovate, sometimes aristate, scales 1.2–2.5 mm. 2n = 30 (FNA).

AIDS TO IDENTIFICATION: The following diagnostic key is adopted from FNA:

Biennials or perennials

Disc florets 25–400+ (bisexual; receptacles hemispheric to globose, ovoid or conic)

Phyllaries (11–)16–30(–40) in 2 series, unequal

Outer phyllaries basally connate 1/4–2/3 their lengths; inner phyllaries obovate to oblanceolate, 2.8–8 mm, apices usually mucronate, sometimes acuminate

Stems 1–10(–20); plants often with sparingly or moderately branched, woody caudices; basal leaf bases sparsely, if at all, long-villous-woolly)

Involucres (8–)10–18 mm diam

Stems (and leaves) sometimes densely hairy (only *H. cooperi* and *H. richardsonii* var. *floribunda* on Kaibab Plateau in Arizona, Utah).

Outer phyllaries 5(–8); s Arizona (mostly Huachuca Mountains) .. *Hymenoxys quinquesquamata*

To differentiate this species from the similar *H. cooperi*, *H. quinquesquamata* has 5-8 strongly keeled outer phyllaries, while *H. cooperi* has 10-14 outer phyllaries, these not strongly keeled. *H. cooperi* also has a conspicuous basal rosette, while *H. quinquesquamata* does not.

ILLUSTRATIONS:

Herbarium Mounts: <http://swbiodiversity.org/seinet/taxa/index.php?tid=3860>.

TOTAL RANGE: Arizona and New Mexico. In New Mexico, the four known collections range from the southwest portion of the state (Grant County), to the center (Torrance County), to the northeast (Colfax County).

RANGE WITHIN ARIZONA: Mostly occurs in south-central Arizona, from the Santa Catalina, Rincon and Santa Rita mountains (Pima County) to the Huachuca Mountains (Cochise County). There is a single collection to the north, about 12 miles northeast of Cottonwood (Yavapai County), that is not mappable. Another collection southwest of Winslow was determined to be *H. cooperi*.

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Perennial herb.

PHENOLOGY: Flowering (Jun–)Jul–Sep(–Oct), FNA.

BIOLOGY:

HABITAT: Open areas, edges of pine, pine-oak forests to chaparral; disturbed meadow, open flats and ridges, burned areas, steep slopes, and roadsides.

ELEVATION: 5,000 – 7,440 feet (1525-2270 m) in south-central Arizona.

EXPOSURE: Open. Some records note north and northwest exposures.

SUBSTRATE: Sandy or rocky loam soil, gravel

PLANT COMMUNITY: Pine, pine-oak, chaparral and meadows. Some of the associated species mentioned in collection records include: *Quercus*, *Fraxinus*, *Arctostaphylos*,

Juniperus, *Pseudotsuga menziesii*, *Robinia neomexicana*, *Houstonia wrightii*, *Hymenopappus mexicanus*, *Penstemon barbatus* spp. *Barbatus*, and *Muhlenbergia*.

POPULATION HISTORY AND TRENDS: Unknown. There are about 10 occurrences in Arizona.

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None.
STATE STATUS: None.
OTHER STATUS: None.

MANAGEMENT FACTORS: Fire is mentioned as a potential threat (NatureServe 2019), but no further information is provided. It is notable that at least two of the known collections were in disturbed and burned areas.

PROTECTIVE MEASURES TAKEN: None specified. One of the known occurrences is within Saguaro National Park.

SUGGESTED PROJECTS: None specified.

LAND MANAGEMENT/OWNERSHIP: USDA Forest Service, Coronado NF (Santa Catalina, Santa Rita and Huachuca Mountains); USDI National Park Service, Saguaro NP; Department of Defense, Fort Huachuca Military Reservation.

SOURCES OF FURTHER INFORMATION

REFERENCES:

Flora of North America, http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=250066994, accessed October 3, 2019.

JStor: Global Plants, accessed October 3, 2019,

<https://plants.jstor.org/search?plantName=%22Hymenoxys+quinquesquamata%22&syn=1>

Kearney, T.H., R.H. Peebles, and collaborators. 1951. Arizona flora. 2nd edition with Supplement (1960) by J.T. Howell, E. McClintock, and collaborators. Univ. California Press, Berkeley. 1085 pp.

NatureServe. 2019. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available <http://explorer.natureserve.org>. (Accessed: October 3, 2019).

Tropicos, <http://www.tropicos.org/Name/2710557>, accessed October 3, 2019.

MAJOR KNOWLEDGEABLE INDIVIDUALS:

ADDITIONAL INFORMATION: Etymology: *Hymenoxys* comes from Greek hymen, meaning membrane, and oxys, meaning sharp or sharp pointed, while *quinquesquamata* refers to five.

Revised: 2019-10-09 (BDT)

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