

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

Plant Abstract

Element Code: PDAST4V0J0

Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Heterotheca rutteri* (Rothr.) Shinners
COMMON NAME: Huachuca Golden Aster, Rutter's Golden-aster, Rutter's False Goldenaster
SYNONYMS: *Chrysopsis rutterii*; *Chrysopsis villosa* var. *rutteri*
FAMILY: Asteraceae

AUTHOR, PLACE OF PUBLICATION: Shinners, Lloyd H. 1951. Field & Lab. 19(2): 71.

TYPE LOCALITY: Arizona: Sonoita Valley.

TYPE SPECIMEN: Rothrock 662.

TAXONOMIC UNIQUENESS: Seven species in the genus are known from Arizona. A recent revision of the genus did not consider this species, leaving its generic identity in question.

DESCRIPTION: Large (up to 1.0 m, 3.3 ft.) robust perennial (no woodiness) herb with alternate leaves (Warren (1999) reports up to 35 cm in height); herbage silvery-silky throughout; heads relatively few, large and leafy-bracted with disk 1.0-1.5 cm (0.4-0.6 in.) tall; ray flowers yellow, often surpassed by leafy bracts; pappus double in rays and disks with outer series of short squamellae and inner series of longer capillary bristles.

AIDS TO IDENTIFICATION: Erect growth form with few stems approximately 30.0 cm (1.0 ft.) tall; silky canescent hairs throughout (if these not present, not *H. rutteri*); yellow flower heads 2.0 cm (0.8 in.) in diameter. Bracts longer in *H. rutteri*, extend above top of head; very distinct, separates it from other *Heterothecas*. *H. rutteri* can be distinguished from *Senecio* by size and leaf shape, *Senecio* is much taller with linear leaves.

ILLUSTRATIONS: Line drawing (USFWS, Phoenix).
Color photo (http://www.science.uwaterloo.ca/biology/jcsemp/het_rutt.jpg).

TOTAL RANGE: Known only from eleven locations in the United States (Reichenbacher 1994), including Cochise, Pima and Santa Cruz counties, Arizona; one record from Santa Barbara, southern Sonora, Mexico.

RANGE WITHIN ARIZONA: The Altar Valley, Sonoita, San Rafael Valley, Kino Springs, Canelo Hills, Garden Canyon, Huachuca and Patagonia mountains, and the Buenos Aires National Wildlife Refuge.

Warren (1999) reports range as "San Rafael, Empire, San Pedro and Altar valleys."

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Herbaceous perennial.

PHENOLOGY: Flowers summer from July - October after summer rains; fruits in August to November.

BIOLOGY: Unknown. Rarity of this plant puzzling because it has many close relatives that are very weedy. Very robust with enough rain, much smaller with less rain. Robustness could also depend on soil conditions. Fuzzy, dirty white when it goes to seed. Before this time, appears as other daisies do.

HABITAT: Level, open grassland. Grows on roadcuts, and disturbed sites. May be mistaken for "yellow daisy."

ELEVATION: 4,500 - 6,500 feet (1373 - 1983 m). Based on records in the Heritage Data Management System (AGFD), elevation ranges from 3,560 - 5,275 ft (1086 - 1609 m) (AGFD, unpublished data accessed 2001).

EXPOSURE: Various

SUBSTRATE: Various

PLANT COMMUNITY: Grassland and oak savanna.

POPULATION TRENDS: Populations are small and patchy within what appears to be relatively extensive, uniform heads (Warren 1999).

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None (USDI, FWS 1996)
[Category 2 USDI, FWS 1993]

STATE STATUS: None

OTHER STATUS: Forest Service Sensitive (USDA, FS Region 3 1999)
Bureau of Land Management Sensitive (USDI, BLM AZ 2000)

MANAGEMENT FACTORS: If this species is dependent upon healthy grassland habitat, it may be vulnerable to loss of grassland, and may have experienced historic declines for that reason.

Fire may be an important management factor for this species because it is found in habitats that historically burned with high frequency.

PROTECTIVE MEASURES:

SUGGESTED PROJECTS: Population monitoring is needed to determine status and trends. Relationship to habitat conditions should be studied to determine need for grassland habitat.

The fire ecology of this species should be studied to determine dependency on fire. Most forbs tend to benefit from cooler fires. As *H. rutteri* is a stout forb, it should survive (Reichenbacher 1994).

LAND MANAGEMENT/OWNERSHIP: BLM - Tucson Field Office; DOD - Fort Huachuca Military Reservation; FWS - Buenos Aires National Wildlife Refuge; USFS - Coronado National Forest; TNC - Cottonwood Spring Preserve; Private.

SOURCES OF FURTHER INFORMATION

LITERATURE CITATIONS:

Harms, V.L. 1965. Cytogenetic evidence supporting the merger of *Heterotheca* and *Chrysopsis*. *Brittonia* 17:11-16.

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- Kearney, T.H. and R.H. Peebles. 1960. Arizona flora (with supplement). University of California Press. Berkeley. p. 855.
- Lehr, J.H. 1978. A catalogue of the flora of Arizona. Desert Botanical Garden, Phoenix, Arizona.
- Malusa, J., P. Warren and D. Gori (TNC). 1993. Population studies of sensitive plants of the Coronado National Forest, Arizona.
- Reichenbacher, F. 1994. Bureau of Land Management, Safford District, Rare Plant Workshop. November 14-16. Tucson, Arizona.
- USDA, Forest Service Region 3. 1999. Regional Forester's Sensitive Species List.
- USDI, Bureau of Land Management. 2000. Arizona BLM Sensitive Species List. Instruction Memorandum No. AZ-2000-018.
- USDI, Fish and Wildlife Service. 1993. Plant Taxa for Listing as Endangered or Threatened Species; Notice of Review. Federal Register 58(188):51163.
- USDI, Fish and Wildlife Service. 1996. Endangered and Threatened Wildlife and Plants: Review of Plant and Animal Taxa that are Candidates for Listing as Endangered or Threatened Species; Notice of Review. Proposed Rule. Federal Register 61(40):7595-7613.
- Warren, P. 1999. *Heterotheca rutteri* (Rothr.) Shinners (Rutter's Golden Aster), Asteraceae. Draft abstract from Arizona Rare Plant Book, in prep.

MAJOR KNOWLEDGEABLE INDIVIDUALS:

- Mark Fishbein - Department of Ecology, University of Arizona, Tucson, Arizona.
 Steve McLaughlin - University of Arizona, Office of Arid Lands Studies, Tucson.
 Peter Warren - Tucson, Arizona.

ADDITIONAL INFORMATION:

F. Reichenbacher currently preparing status report (which will be completed by end of December, 1994) for USFWS. He is contracted to survey throughout state and determine federal listing.

Dr. Semple: University of Maryland expert who has looked at all collected specimens. Stated that none occur in the Santa Ritas, specimen actually *H. fulcrata* which is greener. *H. rutteri* tends to be silvery white all over plant. Semple's report in press (University of Waterloo, Ontario, (#37)).

Revised: 1991-10-30 (PLW)
 1991-11-13 (SR)
 1994-10-17 (PLW)
 1994-12-07 (DBI)
 1998-01-08 (SSS)
 2001-12-21 (SMS)

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