ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM

Plant Abstract **Element Code:** PDASTE60N0
Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Packera hartiana*
COMMON NAME: Hart's Groundsel, Gila Groundsel
SYNONYMS: *Packera quaerens, Senecio quaerens, Senecio prionophyllus* Greene
FAMILY: Asteraceae (Compositae)

AUTHOR, PLACE OF PUBLICATION: Greene, E.L. 1906. Leaflets of Botanical Observations. 1:214.

TYPE LOCALITY: Willow Creek, Mogollon Mountains, Caltron County, New Mexico. Wooton. 1900.

TYPE SPECIMEN: Type: U.S. National Herbarium. Wooton, E.O. August 8, 1900.
Holotype: U.S. National Herbarium. Metcalfe, O.B. August 7, 1903.

TAXONOMIC UNIQUENESS: Flora of North America (2006) consider *Packera hartiana* and *P. quaerens* to be conspecific.

DESCRIPTION: Herbaceous perennial; **nearly glabrous** (devoid of hairs); with erect stems 30-60 cm tall. Stems arising singly or sometimes two or three from a short fibrous rooted, erect caudex. Leaves are mostly basal, those oval, broadly rounded at the apex; 3.5-8 cm long and 1.5-4 cm wide, usually about twice as long as wide; the petiole about twice as long as the blade; leaf margins with shallow, rounded teeth; the few stem leaves deeply and regularly toothed with the terminal lobe larger than the others. Inflorescence is a **corymbiform cyme** of 3-9 heads (flat topped cluster of flowers). Flower heads 8-10 mm thick, with 8-12 yellow ray flowers. Achenes glabrous.

AIDS TO IDENTIFICATION: Very similar to *Senecio hartianus*. The leaves of *S. quaerens* are somewhat more serrulate (toothed); *S. quaerens* has only a few short hairs at the base of the stem and inflorescence; hairs of *S. hartianus* are restricted but conspicuous at the base and lower surfaces of leaves and on the outer surface of the bracts; the root system of *S. quaerens* is fibrous rather than rhizomatous as in *S. hartianus*. *S. hartianus* grows on more rocky stream banks and in more open situations than *S. quaerens*. Intermediate forms may be hybrids with problematic identities.

ILLUSTRATIONS: Line Drawing (A handbook of rare and endemic plants of New Mexico, 1984: p. 61).
Color photo (R. Fletcher *in* http://nmrareplants.unm.edu/reports/senqua.htm accessed 2002).

TOTAL RANGE: Mogollon and San Francisco Mountains of western New Mexico (Catron County), and east-central Arizona (Apache and Greenlee counties).

RANGE WITHIN ARIZONA: White Mountains, Apache and Greenlee Counties, Arizona.

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Herbaceous Perennial

PHENOLOGY: Flowering June - August; presumably seeds mature and are dispersed in early fall (Martin 1981). Flowers early spring, perhaps into the summer (Galeano-Popp, Apache-Sitgreaves National Forest plant workshop, April 1991).

BIOLOGY: Presumably stable rather than disturbed conditions are important to seedling establishment and survival (Knight and Cully, 1987).

HABITAT: In New Mexico, muddy, damp riparian margins of cold mountain streams and wet meadows in upper montane coniferous forest. In Arizona, occurs in somewhat drier sites (but still damp) often associated with ponderosa pine. Usually among shrubby or grassy hummocks in partial shade of forest overstory (half to full shade).

ELEVATION: Arizona: 7,520 - 9,100 feet (2294 - 2776 m). Elsewhere: 8,000 - 9,000 ft. (2450 - 2750 m).

EXPOSURE:

SUBSTRATE: Moist, organic soil.

PLANT COMMUNITY: High elevation riparian community and mixed conifer forest. With *Pica pungens* and *Pinus ponderosa*.

POPULATION TRENDS: Several populations in New Mexico have been extirpated or cannot be re-located, others declining; one vigorous population. Status of Arizona populations is unknown.

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None (USDI, FWS 1996)
[C2 Arizona, New Mexico, USDI, FWS 1990]
[C2 New Mexico, USDI, FWS 1985]

STATE LIST STATUS: Salvage Restricted (ARS, ANPL 1993)

OTHER STATUS: Forest Service Sensitive (USDA, FS Region

3, 1999)

MANAGEMENT FACTORS: Limited distribution. Degradation of stream-side habitat due to livestock grazing and recreation, and direct and indirect effects of logging; stream siltation, erosion and flooding; loss of habitat due to reservoir construction. Scientific collecting has been a problem at accessible sites in New Mexico.

Probably not palatable to livestock.

Per Sivinski (1999 accessed 2002), "*Senecio quaerens* and *Trifolium longipes* var. *neurophyllum* often occur in the same habitat. Both are rare riparian species in the Mogollon Mountains. This habitat type has historically been heavily utilized in a number of ways needs more intensive protective management."

CONSERVATION MEASURES TAKEN: Status survey of New Mexico populations completed in 1986 (Knight and Cully 1987).

SUGGESTED PROJECTS: Comprehensive status survey (Arizona survey scheduled for 1991 under USFS cost-share with TNC). Monitor the trend of known populations and habitat. Establish seed banking by Center of Plant Conservation. Re-locate type locality.

Riparian habitat where this species is known to occur should be given protection from direct and indirect disturbances. Restoration of riparian habitat and erosion control.

LAND MANAGEMENT/OWNERSHIP: Arizona: USFS - Apache-Sitgreaves National Forest; Private. New Mexico: Gila National Forest; Private.

SOURCES OF FURTHER INFORMATION

LITERATURE CITATIONS:

Barkley, T.M. 1978. *Senecio*. North American flora. Series 2, part 10, 49-139.

Fletcher, R. 1980. Provisional status report for *Senecio quaerens*. Unpublished report for USFS, Albuquerque, New Mexico.

Greene, E.L. 1906. Leaflets of Botanical Observations. 1:214.

Greenman, J.M. 1916. Monograph on the north and central American species of the genus *Senecio*, II. Annals of the Missouri Botanical Garden 3:85-94.

Knight, P.J. and A. Cully. 1987. Status report on *Senecio quaerens*. Unpublished report for USFWS, Albuquerque, New Mexico.

Martin, W.C. and C.R. Hutchins. 1981. A flora of New Mexico. *Senecio quaerens*. In der A.R. Gantner Verlag Kommandlitgesellschaft. 2:2215.

New Mexico Native Plants Protection Advisory Committee. 1984. A handbook of rare and endemic plants of New Mexico. University of New Mexico Press. Albuquerque, New Mexico. pp. 60-61.

Sivinski, R. 1999. *Senecio quaerens* (Gila groundsel). http://nmrareplants.unm.edu/reports/senqua.htm, accessed 1/7/2002.

USDA, Forest Service Region 3. 1999. Regional Forester's Sensitive Species List.

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):50.

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):6224.

USDI, Fish and Wildlife Service. 1992. Letter and New List of Plant Candidates from Sam Spiller, Regional Director, Albuquerque.

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.

Wagner, W.L. and D.G. Sabo. Undated. Status report for *Senecio quaerens* for U.S. Fish and Wildlife Service, Albuquerque, New Mexico.

MAJOR KNOWLEDGEABLE INDIVIDUALS:

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Ann Cully - USFWS Botanist, Albuquerque, New Mexico.
Reggie Fletcher - USFS Regional Ecologist, Albuquerque, New Mexico.
Paul Knight - Albuquerque, New Mexico.
Richard Spellenberg - New Mexico State University, Las Cruces.

ADDITIONAL INFORMATION:

The earliest collection of this species is from the "Santa Magdalena Mountains," New Mexico, by Vasey in 1881. The actual collection site uncertain; no mountains in New Mexico of that name.

The New Mexico status survey (Knight and Cully 1987) identified two "viable populations" of the five recorded sites in New Mexico. These two New Mexico populations are in the Mogollon Mountains; one large (Indian Creek with hundreds of individuals) and the other small and declining (Gilita Creek with perhaps 100 individuals). No evidence of recolonization into eroded or disturbed areas.

Surveys should be conducted in early- to mid-summer.

Scattered individuals of *S. quaerens* found in the Wildcat Creek restoration project on the Apache-Sitgreaves National Forest (pers comm., Galeano-Pop 1989).

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