NAME: Pectis imberbis Gray
COMMON NAME: beardless chinch weed, beardless chinchweed, beardless fetid-marigold, Hierba de venado
SYNONYMS: 
FAMILY: Compositae

AUTHOR, PLACE OF PUBLICATION: Asa Gray, Smithsonian Contributions to Knowledge 5(6): 70. 1853 [1852].


TYPE SPECIMEN: HT: GH. Charles Wright 1399, 1851. MOBOT and USNH report date as Sep 1850. IT: F, GH, MO, NY, US.

TAXONOMIC UNIQUENESS: In section Pectidium, genus Pectis has 75 species in warm and tropical America. Pectis imberbis is the only perennial member of the genus in Arizona, and is related to P. linifolia of Latin America and Caribbean (Keil 1978). P. imberbis is the “rarest species of Pectis in the United States” (AZNHP 1982).

DESCRIPTION: Slender perennial herb arising from a woody rootstock, 2-8 mm in diameter, with erect, brittle stems 30-120 cm (12-47 in.) tall. Stems are virgate, green, 6-angled above, becoming terete below, much-branched with ascending branches above, glabrous. Leaves opposite, thick, narrow, one-nerved and gland-dotted, 1.0-5.0 cm (0.4-2.0 in.) long, 1-2 mm wide. Heads are solitary or in open cymose clusters at the tips of the branches. Numerous small flowers, dotted with glands, composed of yellow ray and disc florets, may change to red or purple upon aging. Ray corollas are 6-11 mm long; disc florets 3.7-6.0 mm long (Keil 1978). Achenes are black, 3.5-5.0 mm long, puberulent with ascending blunt-tipped double hairs. Pappus of ray and disc achenes similar, usually “partly of erect or subulate awns and partly of short squamellae. This characteristic endows the species with its specific epithet, imberbis, meaning beardless” (Phillips et al. 1982).

AIDS TO IDENTIFICATION: Very slender, diffuse branching; perennial, woody rootstock; petals and leaves dotted with oil glands. Leaves so narrow and thin, they are
visible only under close examination. *Pectis imberbis* differs from the perennial *P. longipes* by its erect habit, lack of bristles at leaf bases, and pappus of awns and scales rather than bristles (Falk et al., 2001). Easily differentiated from *Stephanomeria tenuifolia* (similar in appearance) by the absence of plumose bristles of pappus. In addition, *P. imberbis* does not have white sap and *S. tenuifolia* does not have glands. Distinguished from *Viguiera multiflora var. nevadensis* by smaller flowers, dark involucre and punctate glands on the leaves (Phillips et al. 1982). *P. imberbis* is very difficult to see in field. The leaves look like green sticks, and the glands appear as small red bumps. Crushed leaves emit an odor (Warren 1994), however, Keil (1978 in Phillips et al., 1982), stated his observations have been that the plants from Arizona populations are non-aromatic and he has not seen any mention of odor on herbarium labels.

**ILLUSTRATIONS:** Line drawing (USFWS).
- Color photo of isotype specimen (Wright 1399, *in* MOBOT [http://digitalis.mobot.org/mrsid/bin/mosid/mosid.pl](http://digitalis.mobot.org/mrsid/bin/mosid/mosid.pl))
- Color photo of isotype specimen (*in* USNH, [http://rathbun.si.edu/botany/types/fullRecords.cfm?myFamily](http://rathbun.si.edu/botany/types/fullRecords.cfm?myFamily=))
- Line drawing (*in* Falk, et al., 2001)
- Color photos of plant and habitat (FWS, *in* Falk et al., 2001)

**TOTAL RANGE:** Southern Arizona, western Chihuahua and eastern Sonora, Mexico.

**RANGE WITHIN ARIZONA:** Cochise, Pima and Santa Cruz counties, including the Atascosa Mountains (along Ruby Rd.), Huachuca and Santa Rita mountains, the Canelo Hills, and the Patagonia Mountains.

**SPECIES BIOLOGY AND POPULATION TRENDS**

**GROWTH FORM:** Herbaceous perennial.

**PHENOLOGY:** Blooms after summer rains from August to October.

**BIOLOGY:** Unknown

**HABITAT:** In open grassland and oak/grassland, 4,000-5,500 ft (1220-1680 m) elevation. Adapted to disturbance; grows along road cuts. This species has an extremely broad range.

**ELEVATION:** 3,600 to 6,475 feet (1100-1975 m). Falk et al. (2001) reports elevation range in Arizona of 4,000-5,500 ft (1220-1680 m). In Mexico (Martin et al., 1998), found from 2,951-4,492 ft (900-1370 m).
EXPOSURE: South, slope of 95-100% (refers to road cuts).

SUBSTRATE: Eroded granite. Sonoran Desert Section and Mexican Highland Section of the Basin and Range Province.

PLANT COMMUNITY: Surrounding vegetation intergrades from grassland to oak woodland, extremely broad range. Dominant associated species include: *Andropogon barbinodis* (cane bluestem), *Arctostaphylos pungens* (point-leaf manzanita), *Bothriochloa tenuifolia*, *Eragrostis* sp. (lovegrass), *Erythrina flabelliformis* (coral bean), *Fouquieria splendens* (ocotillo), *Prosopis velutina* (velvet mesquite), *Quercus* sp. (oak), and *Viguiera multiflora* var. *nevadensis* (Nevada viquiera).

POPULATION TRENDS: Not much known about this plant, when it comes to trends. Monitoring on the Forest began at four sites in 1995. NatureServe (2003) reports at least 9 occurrences of this species in Cochise and Santa Cruz counties, Arizona, and eastern Sonora and western Chihuahua, Mexico. According to Falk et al. (2001), *Pectis imberbis* is “considered to be the rarest of all U.S. *Pectis*.” Several locations on Coronado NF have not been seen since late 1970s. Small population range from 20-30 individuals to maximum of 100.” According to Martin et al. (1998), “This species has not been collected in the region since the 1930s and is a candidate for endangered species in the U.S.”

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None (USDI, FWS 1996)
[Category 2 USDI, FWS 1983]
[Category 1 USDI, FWS 1980]

STATE STATUS: None

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

MANAGEMENT FACTORS: Populations may be susceptible to impacts from grazing and road maintenance activities. Keil (1982 pers. comm. in Phillips et al., 1982), stated that plants do not flower until they are over 0.5 m tall, and under heavy grazing pressure, they probably do not reach that size.

CONSERVATION MEASURES TAKEN:

SUGGESTED PROJECTS: Additional surveys and determination of population status. Any studies concerning the biology, and phenology of this plant are needed. Monitoring began at four sites in 1995.
AGFD Plant Abstract

Pectis imberbis


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.
USDA, Forest Service Region 3. 1990. Regional Forester's Sensitive Species List.
AGFD Plant Abstract

Pectis imberbis

USDA, Forest Service Region 3. 1999. Regional Forester's Sensitive Species List.
Plant Data Center, Baton Rouge, LA 70874-4490 USA.
Review of Plant Taxa for Listing as Endangered or Threatened Species. Federal Register
45(242): 82526.
Supplement to Review of Plant Taxa for Listing; Proposed Rule. Federal Register
48(229): 53655.
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

MAJOR KNOWLEDGEABLE INDIVIDUALS:
Tom Deecken - Coronado National Forest, Sierra Vista, Arizona.
Jack Kaiser - Retired (USDA), Nogales, Arizona.
David Keil - California Polytechnic, San Luis Obispo, California.
Elinor Lehto - Retired (Arizona State University), Tempe, Arizona.
Art Phillips - Private consultant, Flagstaff, Arizona.
Don Pinkava - Arizona State University, Tempe.

ADDITIONAL INFORMATION:

Revised: 1991-11-05 (PLW)
1994-12-12 (DBI)
1994-12-29 (MF)
1998-01-09 (SSS)
2003-12-11 (SMS)

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