ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM

Plant Abstract **Element Code:** PDCON0A1H0
Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Ipomoea tenuiloba* Torr.
COMMON NAME: Trumpet morning glory, Spiderleaf, Lemon's morning-glory
SYNONYMS: *Ipomoea leptosiphon* (for *I. t.* var. *tenuiloba*); *Ipomoea lemmonii* (for *I. t.* var. *lemmonii*)
FAMILY: Convolvulaceae

AUTHOR, PLACE OF PUBLICATION: Torrey, John. 1859. Rep. U. S. Mex. Bound., Bot. 2(1):148.

TYPE LOCALITY: (Var. *tenuiloba:* Valley of the Rio Grande, below Donana (=Dona Ana, New Mexico)).

(Var. *lemmonii*: Arizona: Cochise County: Huachuca Mountains: Tanner's Canyon (Garden Canyon), cienega)).

TYPE SPECIMEN: (Var. *tenuiloba:* NY!. Bigelow et al SN. September).
(Var. *lemmonii*: GH!. Lemmon 2840. August 1882).

TAXONOMIC UNIQUENESS: The genus *Ipomoea* contains approximately 500 species worldwide, located in tropic and warm temperate areas (Hickman 1993). Fourteen species of *Ipomoea* are recognized by Austin (1998) as occurring in Arizona.

DESCRIPTION: An Herbaceous perennial with a tuberous root. The tubers may be ovoid or narrowly fusiform, and are commonly several-parted. The stems are very slender, commonly 1-3 mm thick, and are usually prostrate on the ground or climbing in low shrubs, but twining near the tips, glabrous. The stems are commonly less than 1 m long, and are sparingly branched above, although several stems may rise from the same tuber. The leaves are orbicular in outline, palmately or deeply pinnatefid with 5-9 linear to lanceolate lobes, 1-7 cm long, and 0.5-6.5 mm wide, entire, glabrous; the base cordate, the petioles 2-38 mm long. Inflorescence mostly 1-flowered; peduncles (1-)5-39 mm long; bracts linear to deltoid-attenuate, 1-3 mm long. Flowers have calyces 9-11 mm long, **sometimes** with wart-like bumps; pedicels (0-)2.5-8 mm long, recurved in fruit; sepals unequal with scarious margins, the outer oblong-lanceolate, 5-11.5 mm long, 2-3 mm wide, muricate along the midrib or almost smooth, mucronate, the inner 8-9 mm long, 3-4 mm wide, obovate-acuminate, smooth; the corolla is funnelform or salverform, glabrous, 3.5-10 cm long, completely white or white with pale rose to purple, or bluish-purple limb, the limb 3-3.6 cm; stamens exserted, the filaments 8-19 mm long, the anthers 2-2.5 mm long; ovary ovoid, 1.5-2 mm long and wide, 2-

locular, glabrous; styles 30-36 mm long; stigmas 2, globose. The fruit is a globose to broadly ovoid, 2-loculed capsule 4-8 mm in diameter, the apiculum 4-5 mm long. The seeds number 1-4 and are 3.5-5 mm long, ovoid, black to dark brown, finely appressed tomentose.

Var. *lemmonii:* Leaves with 7-9 linear to linear-lanceolate divisions to 6.5 mm wide, 71 mm long; the petioles 8-38 mm long at maturity. The corollas funnelform, 3.5-6.5 cm long, up to 25 mm in diameter, the upper portion purple or bluish-purple, the tube white, the free portion of filaments 14-19 mm long, anthers situated near upper end of the throat; sepals **smooth**, to 11 mm long. Tuber ovoid to narrowly fusiform, to 60 mm long, entire or often several parted below.

Var. *tenuiloba:* Leaves with 5-7 filiform divisions to 1.2 mm wide, 65 mm long; petioles 2-16 mm long at maturity. The corollas 6.5-10 cm long, up to 50 mm long in diameter, salverform, white or slightly tinged with pink to purple or bluish-purple, the free portions of filaments 8-11 mm long, anthers situated near the middle of the throat; sepals **warty**, to 14 mm long. Tuber is globose to ovoid, to 32 mm long, entire.

AIDS TO IDENTIFICATION: This species differs from similar morning-glories in the area by its longer corollas. *I. tenuiloba* can be distinguished from *I. madrensis*, in that *I. madrensis* is easily recognized by its non-pedatisect leaves (Yatskievych et al 1984). *Ipomoea tenuiloba*, differs from *I. heterophylla* in its leaf-blades, which are divided into narrow even threadlike segments; the sepals have translucent edges (Rickett 1970).

Differentiation of the two varieties may be facilitated by several characteristics, including the shape and length of the flower, the position of the anthers, the number and width of leaf segments, and the presence or absence of warty growths on the calyx. In Finger Rock Canyon, Santa Catalina Mountains, where both varieties are found, the width of leaf segments, particularly on lower leaves, the position of anthers, and the presence of warts on the calyx seem most useful to differentiate between the two varieties (Bertelsen 2000).

ILLUSTRATIONS:

TOTAL RANGE: Southeastern Arizona, New Mexico, and northern Mexico (Chihuahua, Sonora).

RANGE WITHIN ARIZONA: Pima County: Santa Catalina and Rincon Mountains; Santa Cruz County: Santa Rita and Pajarito Mountains; Cochise County: Huachuca, Chiricahua and Mule Mountains.

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Low twinning herbaceous vine/forb/herb perennial.

PHENOLOGY: Plants begin to emerge in July. Flowers appear in late July or in August after heavy summer rains and continue through September, with fruits ripening within two to three weeks.

BIOLOGY: Stem growth begins just prior to the onset of summer rains in May and June, and stems die back with the first frost in the Fall.

HABITAT: Shallow sandy or gravelly soil on bedrock terraces; rocky canyons or shaded mountains.

ELEVATION: 4,020 - 7,025 ft. (1,226 - 2,108 m).

EXPOSURE: Varies. Plants seem to do as well in full sun as in shade.

SUBSTRATE: Shallow sandy or gravelly soil on bedrock terraces; rich herbaceous groundcover.

PLANT COMMUNITY: Desert grassland, oak woodland, or pine-oak woodland. Associated species may include: *Pinus leiophylla, Pinus englemannii, Pinus discolor, Pinus ponderosa, Quercus arizonica, Quercus reticulata, Quercus deppeana, Arctostaphylos pungens, Sageretia wrightii, Yucca schottii, Mimisa dysocarpa, Bouteloua curtipendula, Phaseolus heterophllus, Cuphaea wrightii, Piptochaetium fimbriatum, Cheilanthes* sp., *Ipomoea coccinea, Gnaphalium* sp., *Muhlenbergia.*

POPULATION TRENDS:

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None (USDI, FWS 1996)
[*Ipomoea lemmonii:* C3 USDI, FWS 1990]
[*Ipomoea lemmonii:* C2 USDI, FWS 1980]

STATE STATUS: None

OTHER STATUS: *I. tenuiloba* var. *lemmonii*: Forest Service Sensitive (USDA, FS Region 3 1999).

MANAGEMENT FACTORS: This plant was specifically addressed in the Coronado National Forest Management Plan (Reichenbacher 1986).

PROTECTIVE MEASURES TAKEN:

SUGGESTED PROJECTS:

LAND MANAGEMENT/OWNERSHIP: DOD - Fort Huachuca Military Reservation; NPS - Chiricahua National Monument and Saguaro National Park; USFS - Coronado National Forest; TNC - Ramsey Canyon Preserve; State Land Department; possibly Private.

SOURCES OF FURTHER INFORMATION

LITERATURE CITATIONS:

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Kearney, T.H., R.H. Peebles with collaborators. 1960. Arizona flora. Second Edition. University of California Press. Berkeley. p. 677.

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Yatskievych, G. and C.T. Mason. 1984. A Taxonomic study of *Ipomoea tenuiloba* Torrey, with notes on related species. Madrono. Vol. 31, No. 2.

MAJOR KNOWLEDGEABLE INDIVIDUALS:

Dave Bertelsen - Tucson, AZ

ADDITIONAL INFORMATION:

"There is considerable morphological overlap between *I. tenuiloba* and *I. plummerae*, and that further taxonomic analysis of this 'close-knit species complex' is needed to clarify our understanding of their relationships" (Yatskievych et al 1984).

Per Bertelsen (2000), Austin (1998) did not include the presence or absence of warty structures on the calyx as differential characteristics of the two varieties although this difference is described in Yatskievych and Mason (1984) and (for the species before being combined) in Kearney and Peebles (1960). "I find this to be a very important characteristic and point out that Austin's treatment was based on herbarium specimens, not on field observations."

"Although the species is described as flowers that are white to purple in color, only two specimens in the U of A Herbarium collection, one identified as var. *lemmonii* and the other as var. *tenuiloba*, have white flowers; both are from Chihuahua, Mexico. I have seen only light purple or bluish-purple flowers in Finger Rock Canyon" (Bertelsen 2000).

According to the USDA, NRCS (1999), *Ipomoea tenuiloba* is a prohibited noxious weed.

Revised: 1999-11-09 (RHB)
2000-02-08 (JCP)
2000-03-21 (CDB)