ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM

Plant Abstract **Element Code:** PDFAB40420
Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Trifolium sonorense* T.K. Alhquist & Vincent
COMMON NAME: None
SYNONYMS: *Trifolium amabile*
FAMILY: Fabaceae

AUTHOR, PLACE OF PUBLICATION: Alhquist, T.K. & M.A. Vincent. 2018. Phytoneuron 2018-1:1-5.

TYPE LOCALITY: Arizona: Cochise Co.: Garden Canyon, Huachuca Mountains.

TYPE SPECIMEN: Holotype: ARIZ. G.J. Harrison 5768 with T.H. Kearney. Isotype at US.

TAXONOMIC UNIQUENESS: Differs from *T. amabile* primarily in larger flower components (keel petal claw, sepal lobes, wing petal claws, and connate filaments). However, *T. amabile* is not known to occur in Arizona. *T. sonorense* is most similar to *T. laciae* but geographically separated, with *T. sonorense* occurring within and on the west side of the Sierra Madre Mountains (Alhquist 2012).

DESCRIPTION: Perennial herb from a woody taproot, taproot 3.5-8 mm in diameter. Stem prostate, 25-38 cm in length, internodes sparsely-moderately pubescent, nodes more so. Leaves trifoliate, petioles 2.5-50 mm x <1 mm, moderately-densely pubescent; leaflets obovate-obcordate, glabrous above, glabrous-sparsely pubescent below on outer half of lateral leaflets, bases acute, margins weakly serrate to serrate, 9.5-16.5 mm x 6.8-11.5 mm; peduncles 28-50 mm in length, moderately to densely pubescent. Inflorescences axillary, racemose-umbellate, 8.5–15.5 mm × 9–15.5 mm. Flowers 10-20, subtended by linear to triangular bracts, in 1-2 whorls, petals white-pink. Sepal lobes >3 mm. Petioles 1.2–2.7 mm × <0.5 mm, sparsely to densely pubescent. Seed pods (legumes) compressed laterally, 4.4 x 2-2.7 mm. Seeds 2, brownish-orange to olive-brown, occasionally speckled, globular–mitten shaped, similar in length and width (1.2–1.5 mm).

AIDS TO IDENTIFICATION:

ILLUSTRATIONS: Black and white drawing (Fig. 1 in Alhquist & Vincent 2018).

TOTAL RANGE: Southwestern United States (Arizona) and Mexico (Sonora, Chihuahua, Jalisco, Sinaloa).

RANGE WITHIN ARIZONA: Cochise County: Foothills and canyons of Huachuca Mountains.

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Prostrate perennial herbs from a deep taproot.

PHENOLOGY: Flowers August - October

BIOLOGY: *Trifolium* species tend to be insect (bee) pollinated, and seeds require scarification in order to germinate (Les, D. H. 2017).

HABITAT: Openings in pine forests along streams or moist soils

ELEVATION: 1500 - 1780 m (up to 2600 m in Mexico)

EXPOSURE: Unknown

SUBSTRATE: Wet places along stream banks, springs, moist depressions

PLANT COMMUNITY: Madrean oak woodland, pine forests. Known associated species include *Platanus wrightii*, *Juniperus deppeana*, *Pinus leiophylla*, *Quercus* sp.. In Mexico, associated plants include *Quercus* and *Arbutus*.

POPULATION HISTORY AND TRENDS: Unknown. In Arizona, known from only a few collections, last collected in 1995 (as *T. amabile*) (*Reeder and Reeder 9324*) (SEINet 2020).

SPECIES PROTECTION AND CONSERVATION

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

MANAGEMENT FACTORS: Grazing and recreational activities may affect known habitat.

PROTECTIVE MEASURES TAKEN: None

SUGGESTED PROJECTS: Survey similar habitats in nearby mountain ranges. Monitor known populations.

LAND MANAGEMENT/OWNERSHIP: USFS - Coronado National Forest (Sierra Vista District).

SOURCES OF FURTHER INFORMATION

REFERENCES:

Alhquist, T.K. 2012. A Morphological Analysis of the Trifolium amabile Kunth Species Complex in North America. M.S. Thesis. Miami University.

Alhquist, T.K. & M.A. Vincent. 2018. Phytoneuron 2018-1:1-5.

Les, D.H. 2017. Aquatic Dicotyledons of North America: Ecology, Life History, and Systematics. CRC Press. Boca Raton, Florida.

Southwest Environmental Information Network (SEINet). 2020. Website http://http://swbiodiversity.org/seinet/index.php (accessed March 5, 2020).

MAJOR KNOWLEDGEABLE INDIVIDUALS:

Tia K. Ahlquist, Tempe, Arizona

ADDITIONAL INFORMATION:

Revised: 2020-04-02 (TME)

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