

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

**Invertebrate Abstract**

**Element Code:** IMGASC9500

**Data Sensitivity:** No

**CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE**

**NAME:** *Sonorella rinconensis* Pilsbry and Ferriss, 1910

**COMMON NAME:** Posta Quemada talussnail

**SYNONYMS:**

**FAMILY:** Helminthoglyptidae

**AUTHOR, PLACE OF PUBLICATION:** H.A. Pilsbry and J. H. Ferriss, 1910, Proc. Acad. Nat. Sci. Philadelphia 61(for 1909): 517-518; Pl. 22.

**TYPE LOCALITY:** Per Bequaert & Miller (1973), "Rincon Mts, originally given as "Rincon Peak," without precise Station or elevation; placed at first by error in Cochise Co., corrected to Pima Co. by Pilsbry (1939); in 1910 dead shells from Mt Mica and Wrong Mtn in the same Range were also referred to it; but only syntypes from Rincon Peak (lot 94313 Acad. N. S. Phila.) were dissected by Pilsbry."

**TYPE SPECIMEN:**

**TAXONOMIC UNIQUENESS:** Based on an unpublished revision by W.B. Miller (1968a, in Bequaert and Miller 1973), he recognized 68 valid species of *Sonorella* (with 19 subspecies), 57 of them in Arizona (three common with Sonora), 3 in New Mexico, 1 in trans-Pecos Texas (in common with New Mexico), 8 in Sonora (3 in common with Arizona), and 3 in Chihuahua. *Sonorella rinconensis* is 1 of 26 species in the *S. hachitana* Complex.

**DESCRIPTION:** Snails in the genus *Sonorella* have a "depressed globose, helicoids shell, 12 to 30 mm in diameter, umbilicate or perforate, with a wide, unobstructed mouth and a thin, barely expanded peristome, smoothish or slightly sculptured with growth-lines, occasionally with fine oblique or spiral granulation and short hairs (mainly on the early whorls), lightly colored, and normally with a dark peripheral band. Its most characteristic features are, however, in the genitalia, which lack a dart sac and mucus glands." (Bequaert and Miller, 1973). For species in the *S. hachitana* Complex: the penis is a usually long, slender, narrowly pointed verge; and in extreme forms, the verge is thick and club-shaped. Shells are relatively large and capacious, with a smooth, silky-lustrous periostracum; usually with apical spirally descending threads. (Bequaert and Miller, 1973).

**AIDS TO IDENTIFICATION:** The most characteristic features of the genus *Sonorella* are, in the genitalia, which lack a dart sac and mucus glands (Bequaert and Miller 1972).

**ILLUSTRATIONS:**

**TOTAL RANGE:** Endemic to Arizona in the Rincon and Little Rincon mountains, Pima County.

**RANGE WITHIN ARIZONA:** See “Total Range.”

**SPECIES BIOLOGY AND POPULATION TRENDS**

**BIOLOGY:** Terrestrial gastropods do not move much, usually only to find food or reproduce. Olfaction is the primary sensory behavior utilized to find and move toward a food item (on the scale of centimeters to meters). A moving terrestrial gastropod lays down water-laden mucus on which it moves, exposing its integument to a potentially drying atmosphere, and increasing its water losses through the pallial cavity because of the necessity for gas exchange. A roosting terrestrial gastropod deploys a variety of passive mechanisms for water conservation, including the direct protection of its wet surfaces from drying conditions, avoidance of temperature extremes, the creation of more favorable microclimates and decreases in gas exchange. (A. Cook, *in* Barker 2001).

**REPRODUCTION:**

**FOOD HABITS:** Probably omnivorous, feeding on plant material (including algae, mosses, lichens, and possibly roots, shoots, leaves, flowers, anthers, pollen, fruit, seeds and rotting wood), and microorganisms associated with live and decaying vegetation; followed to a lesser extent by fungi and soil. (Speiser, *in* Barker, 2001).

**HABITAT:** Collected in varied habitats such as: rockslide on bank of creek; in rock outcropping; in granite rocks along cliffs in canyon; in slide under and at base of railroad; and in limestone rock piles at foot of cliffs at confluence of two creeks (SBMNH, accessed 2008). The talussnail is a rock snail usually found in taluses or “slides” of coarse broken rock, generally found in crevices one to several feet below the surface, sealed to stones by their mucus. (SDCP, 2005).

**ELEVATION:** Found at elevations from ca. 3,200 – 3,700 ft (976-1129 m). (Bequaert & Miller, 1973).

**PLANT COMMUNITY:**

**POPULATION TRENDS:** Unknown.

**SPECIES PROTECTION AND CONSERVATION**

**ENDANGERED SPECIES ACT STATUS:** None

**STATE STATUS:** None

**OTHER STATUS:** None

**MANAGEMENT FACTORS:** Threats include destruction or disturbance of talus slopes.

**PROTECTIVE MEASURES TAKEN:**

**SUGGESTED PROJECTS:** Validity of the informal *Sonorella* “species-groups” (or “complexes”) has been brought into question by Naranjo-García (1988) and Roth (1996). Further research, including the use of molecular techniques, is needed to help clarify the relationships of these informal taxa. (Gilbertson and Radke 2005).

**LAND MANAGEMENT/OWNERSHIP:** NPS – Saguaro National Park; USFS – Coronado National Forest; Private.

**SOURCES OF FURTHER INFORMATION**

**REFERENCES:**

- Bequaert, J.C., and W.B. Miller. 1973. The Mollusks of the Arid Southwest. The University of Arizona Press. Tucson, Arizona. Pp. 111, 117-118.  
<http://www.co.pima.az.us/cmo/sdcp/sdcp2/fsheets/vuln/ts.html>. Fact-sheet: Talusnail, *Sonorella*. Accessed: 11/23/2005.
- Integrated Taxonomic Information System (ITIS). Retrieved 4/9/2008 from ITIS, <http://www.itis.usda.gov>.
- MCZ Malacology Collection. Accessed: 4/9/2008.  
<http://collections.oeb.harvard.edu/Mollusks/MolluskDetail.cfm>.
- NatureServe. 2008. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.0. NatureServe, Arlington, Virginia. Available <http://www.natureserve.org/explorer>. (Accessed: April 9, 2008).
- The Academy of Natural Sciences. ANSP Malacology Search Details. Accessed: 9 April 2008. <http://clade.ansp.org/malacology/collections/index.php>.
- Santa Barbara Museum of Natural History. 2008. SBMNH: Invertebrate Zoology Online Database Collection. <http://www.sbcollections.org/iz/recordview.php>. Accessed: 4/9/2008.

**MAJOR KNOWLEDGEABLE INDIVIDUALS:**

**ADDITIONAL INFORMATION:**

The genus *Sonorella* occurs over most of Arizona (except a strip north of the Grand Canyon, an extensive northeast corner, and the small southwest *Eremarionta* area), the southwest corner of New Mexico, trans-Pecos Texas, northeast Sonora, and the northwest corner of Chihuahua, Mexico. (Bequaert and Miller, 1973).

**Revised:** 2008-04-24 (SMS)

To the user of this abstract: you may use the entire abstract or any part of it. We do request, however, that if you make use of this abstract in plans, reports, publications, etc. that you credit the Arizona Game and Fish Department. Please use the following citation:

Arizona Game and Fish Department. 20XX (= **year of last revision as indicated at end of abstract**). X...X (= **taxon of animal or plant**). Unpublished abstract compiled and edited by the Heritage Data Management System, Arizona Game and Fish Department, Phoenix, AZ. X pp.