

# Phoenix Talussnail

**SCIENTIFIC NAME:** The Phoenix talussnail (formerly known as the Squaw Park talussnail) was named after its discoverer, Allyn G. Smith, a noted mollusk taxonomist. The species was placed in genus *Sonorella*, named after the Sonoran Desert where most talussnail species occur. The Latinized scientific name translates to “Allyn G. Smith’s Sonoran Desert talussnail.”

**DESCRIPTION:** An adult snail’s shell is little more than half an inch long, thin and delicate. When clean and moist, the shell is glossy and bears a faint tan hue with a tan shoulderband. The body is nearly black with a fine bumpy texture and small light tan flecks, especially along the lower edge of the foot. There is a patch of light tan at the tail tip.

**DISTRIBUTION:** The Phoenix talussnail is remarkable for its ability to live in the hot, dry hills of the Sonoran Desert. It occurs in northeastern Maricopa County within the greater Phoenix metropolitan area from Piastewa Peak north to the town of New River, and from the McDowell Mountains west to New River. The species is known from 25 locations.

**HABITAT:** Phoenix talussnails reside in deep talus slopes, boulder outcrops and rocky wash embankments above the flood zone. The snails often use vegetated areas along the edge of talus because the vegetation provides food, reduces soil temperature and helps stabilize the talus slope.

**BIOLOGY:** Talussnails emerge to feed on decaying vegetation, lichen and fungus in cool weather between fall and spring, typically after pro-



ILLUSTRATION BY ZACKERY ZDINAK

Talussnails emerge to feed ... during cool weather between fall and spring.

longed rains. They reach maturity after three to five years. They may lay only one small clutch of 10–30 eggs deep underground before dying. Most of their life span is spent underground in dormancy, called “estivation,” during which their metabolism is a fraction of what it is when they are active. Between June and September, while estivating and unable to move, they endure constant dry heat (93–102 degrees).

**STATUS:** The Phoenix talussnail is identified as a “species of greatest conservation need” (Tier 1B) in Arizona’s State Wildlife Action Plan. This snail currently has no federal status or protections under the Endangered Species Act. However, the U.S. Fish and

Wildlife Service evaluated this species among 475 Southwestern species petitioned for federal listing and issued a partial 90-day finding in 2009 that included the Phoenix talussnail as a species for which listing as threatened or endangered may be warranted.

**MANAGEMENT NEEDS:** Maintaining habitat and conducting population studies are the primary management needs. Talussnail populations face several threats. Road and trail construction damages habitat. Landscaping grasses are now widespread throughout mountain preserves in the Phoenix area. Unlike native plants, these grasses are not drought hardy and likely contribute to loss of soil moisture. These grasses also increase risk of wildfire, which would reduce vegetative cover and food availability, and degrade habitat by baking soil, shattering cover rock and increasing erosion. Rainfall after a wildfire may wash disturbed soil downslope and fill open space within talus, as well as increase the risk of landslides. A potential threat is the introduced decollate snail (*Rumina decollata*), which is found in many neighborhoods in the Phoenix area. This snail preys on other land snails but has not been detected within Phoenix talussnail habitat. 🐌

■ Nick D. Waters is a graduate student at Arizona State University. He conducts research on herpetofauna and terrestrial mollusks for public agencies and private organizations, and as a citizen scientist. Waters authored the department’s “Nongame Technical Report No. 264,” which describes the distribution and ecology of the Phoenix talussnail.

■ Jeff Sorensen manages the Native Fish and Invertebrates Program for Arizona Game and Fish.