



**Natural Heritage
& Endangered Species
Program**

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Massachusetts Division of Fisheries & Wildlife

**Slender Walker
*Pomatiopsis lapidaria***

State Status: **Endangered**

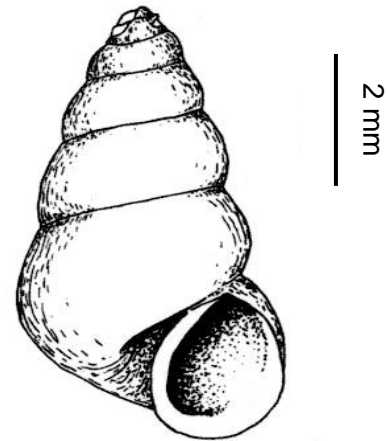
Federal Status: **None**

DESCRIPTION: The Slender Walker is an amphibious snail found on land and in freshwater. It has an elongated conical shell reaching nearly 8 mm in length. As with all snails in the subclass Prosobranchia, the shell has an operculum, a hardened circular structure that seals the shell opening. The Slender Walker's operculum has a single obvious spiral, which fans out to the perimeter. The spiral shells of males usually have a higher number of whorls and tend to be more slender than females. Identification of this species is difficult because it requires knowledge of the anatomical features of snails.

SIMILAR SPECIES: The Slender Walker is quite similar to all snails in the family Hydrobiidae but attains a greater size and length. Identification guides sufficiently illustrate the differences among these species (Smith 2000).

HABITAT: In Massachusetts, the Slender Walker has been found in the low, moist bordering floodplain of Schenob Brook, a slow-flowing, calcareous brook. Sensitive Fern (*Onoclea sensibilis*) dominates the area where snail colonies are found. The Slender Walker is found along riverbanks or in moist areas near streams in vegetation that is well protected from direct sunlight. While the Slender Walker requires very moist conditions, it is not found submerged in water for long periods of time except during wet conditions, such as rain events. During these events, this species can be submerged for several days. On sunny days, the snail can be found under leaves in the shade or on cloudy days it may be easily visible. It is usually found on substrates that have a high proportion of sand and dead plant material.

RANGE: In Massachusetts, the Slender Walker is found in the upper Housatonic River drainage in Sheffield (Smith 1986). Elsewhere, this species has a spotty distribution of locally abundant individuals from



Smith, D.G. The rediscovery of *Pomatiopsis lapidaria* (Say) in New England. Malacological Review 19: 115-116. 1986.

Northern Florida north to southern Canada, and west through the Great Lakes into Minnesota and south into Arkansas.

LIFE HISTORY/BEHAVIOR: The life span for the Slender Walker is approximately 2 and a half years (Dundee 1957). There are two reproductive periods between mid-March and October. The eggs are typically laid individually on moist soil at the water's edge and are surrounded by a sandy husk made up of soil and fecal pellets. Young snails emerge after a few weeks by creating a hole in the egg capsule and husk and then crawling through it. The young are seen throughout the summer in colonies ranging from a few dozen to many thousands of individuals.

If there is insufficient moisture, the snail will enter a dormant period when it becomes inactive and its operculum is tightly closed. There are two major dormancy periods in the yearly cycle, but neither period

A Species of Greatest Conservation Need in the Massachusetts State Wildlife Action Plan

Massachusetts Division of Fisheries & Wildlife

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is continuous. A few days of rain may provide enough moisture so that the snail becomes temporarily active again. This species may be found lying in vegetation and under objects during dormancy in the cold, winter months. In the hot, dry months of summer it can be found on the surface of the substrate. Given that the Slender Walker prefers shade and is found under cover on sunny days suggests that dormancy ensues somewhat immediately when there is lack of sufficient moisture (Dundee 1957).

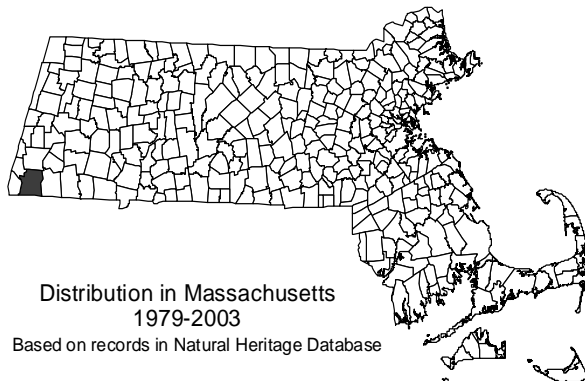
POPULATION STATUS IN MASSACHUSETTS:

Little is known regarding the population status of the Slender Walker in Massachusetts. In a recent field survey, the Slender Walker was common in one very distinct habitat along the brook where it is known to occur, but was not found in any other area in that brook or in the adjacent wetland habitat of nearby brooks (McLain 2003). The Slender Walker is rarely encountered and is listed under the Massachusetts Endangered Species Act as Endangered. All listed species are protected from killing, collecting, possessing, or sale and from activities that would destroy habitat and thus directly or indirectly cause mortality or disrupt critical behaviors. In addition, listed animals are specifically protected from activities that disrupt nesting, breeding, feeding, or migration.

THREATS: It is unclear what factors may influence the distribution of the Slender Walker. The greatest threat is likely habitat destruction or alteration.

REFERENCES:

- Dundee, D.S. 1957. Aspects of the biology of *Pomatiopsis lapidaria* (Say) (Mollusca: Gastropoda: Prosobranchia). Misc. Publ. Mus. Zool. Univ. Michigan. No. 100:1-37, 16 pls.
- McLain, D. 2003. Status of 4 state-listed snails in western Massachusetts in 2002. A report to the Massachusetts Natural Heritage and Endangered Species Program.
- Smith, D.G. 2000. Keys to the freshwater macroinvertebrates of southern New England. Published by author. Sunderland, MA. 243pp.
- Smith, D.G. 1986. The rediscovery of *Pomatiopsis lapidaria* (Say) in New England. Malacological Review 19: 115-116.



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