

Photo not available

Freshwater Invertebrates

Aquatic Snail

Erinna aulacospira

Lymnaea (Pseudisidora) producta

Lymnaea rubella

SPECIES STATUS:

IUCN Red List – Not considered
Endemic

SPECIES INFORMATION: Little is known specifically about these lymnaed snails. They likely graze on algae and other items growing on hard substrates. Eggs are probably attached to substrate and there are no widely dispersing larval stages. *L. producta* is unusual in that it is coiled sinistrally.

DISTRIBUTION: Stream environments on Kaua'i, Maui, Moloka'i and Hawai'i are the home of these species.

ABUNDANCE: No formal monitoring program or abundance data appear to exist. These three species are more widespread and abundant than the threatened Newcomb's snail (*E. newcombi*), but they suffer from the same sorts of threats.

LOCATION AND CONDITION OF KEY HABITAT: Unknown.

THREATS:

- Predation by introduced rainbow trout threatens *E. aulacospira*. Other introduced fishes are likely to affect all of these species;
- The large-scale dewatering of streams is likely to be the major threat to these snails, though detailed research is needed;
- Decreased water quality from sedimentation and pollution are likely, but need to be confirmed with detailed research.

CONSERVATION ACTIONS: The goals of conservation actions are to not only protect current populations, but to also establish further populations to reduce the risk of extinction. In addition to common statewide and island conservation actions, specific actions include:

- Work to clean streams with significant pollution;
- Improve altered or diverted streams;
 - Modify or remove gratings or diversions to allow for instream passage;
 - Restore riparian vegetation to help decrease instream heating and reduce sediment loads;
 - Create pools in frequently dewatered stretches to provide safe usable habitat between flows.

- Continue developing GIS database and making it web-accessible;
- Collaborate with the Commission on Water Resources Management and the Land Board to ensure adequate Instream Flow and biological integrity of riparian areas;
- Continue on-going partnerships focused on environmental education and conservation and expand partnerships;
- Restore habitat.

MONITORING:

- Establish survey schedule to determine population size and distribution.

RESEARCH PRIORITIES:

- Research impacts and methodologies to deal with alien species;
- Improve understanding of the life history of these snails and the factors that limit their abundance and distribution.

References:

Kido MH, Heacock DE, Asquith A. 1999. Alien rainbow trout (*Oncorhynchus mykiss*) (Salmoniformes: Salmonidae) diet in Hawaiian streams. *Pacific Science* 53 (3):242-251.

Kinzie R, Ford J. 1977. A limnological survey of Lower Palikea and Piipiwai Streams, Kipahulu, Maui. Technical Report #17. Cooperative National Park Resources Studies Unit. 44 pp.