

Muliwai

Estuary

A *muliwai* is an area of the stream where ocean and stream water mix.

The prawn or *'ōpae 'oeha'a* is native to Hawai'i and is often found in the brackish waters of the *muliwai*. It has one large and one small claw that make its gait look uneven. Early Hawaiians named the prawn *'oeha'a*, which means "to walk crookedly." The prawn uses the larger of the two pinchers to defend the area where it feeds and to fight other males for females, especially during the breeding season. The *'ōpae 'oeha'a* is usually found in the lower reaches of the stream where salt and fresh water mix. In ancient times, streams served as a natural refrigerator for Hawaiians, storing such delicacies as the *'ōpae 'oeha'a*.

The *hīhīwai* is one of three endemic freshwater neretid snails found in Hawai'i. They are found in the lower as well as upper reaches of the stream and scrape algae from rocks. The *hīhīwai* prefer clean streams that are well oxygenated. They hide under boulders during the day and become more active at night. *Hīhīwai* form a single line instead of clumping together. The *hīhīwai*'s shape and the texture of its shell vary depending on its habitat. The black rough-shelled snails, also known as *wi*, are found in the lower parts of the stream nearer the ocean, while the smooth-shelled black snails are found in the middle reaches. The related *hapawai* has a smooth brown shell with a flattened edge. It lives in brackish water near the mouth of the stream.

(Why are the shells different? Do the *hīhīwai* adapt depending on their location? Does this occur so as they can protect themselves from predators?)

The *'auku'u* is a native bird that feeds on the native *hīhīwai*. It has a long bill for piercing the shell of the snail and hunts for food in the early morning hours and at dusk. It also eats frogs, fish, chicks of other birds, amphibians, crustaceans, insects and small animals. The male night herons use their nests to attract a mate. The same nest may be used for many years.

