



*Megalagrion leptodemas*. Photo: Dan Polhemus, USFWS.

## Terrestrial Invertebrates

### Crimson Hawaiian damselfly

*Megalagrion leptodemas*

#### SPECIES STATUS:

Federally Listed as Endangered

State Listed as Endangered

State Recognized as Endemic

**GENERAL INFORMATION:** *Megalagrion leptodemas* (Perkins, 1899) is a small, relatively slender damselfly. Males are predominantly bright red except on the posterior half of the abdomen, and females are greenish. Despite the coloration of the males, the small size and shy habits make them inconspicuous when flying about. Adults are found along stream corridors in the vicinity of standing pools or slow-moving stream sections that serve as breeding sites, usually not straying far from the stream. It is considered the rarest O'ahu species known to be extant.

**DISTRIBUTION:** Endemic to O'ahu, it formerly occurred on both sides of the island but is now apparently extirpated from the Wai'anae range. In the Ko'olau range, it occurs in only three isolated locations in the upper reaches of streams: Moanalua, North Halawa, and Maakua.

**ABUNDANCE:** Unknown. The total population is extremely small due to the highly constrained habitat available and few remaining populations.

**LOCATION AND CONDITION OF KEY HABITAT:** The naiads inhabit still pools and slow-flowing sections of streams. Like most native damselflies, this species cannot survive where introduced fish and frogs are present. As a result, it is now restricted to upper elevations in streams where barriers such as waterfalls prevent upstream movement of aquatic predators.

#### THREATS:

- Habitat loss and degradation. Habitat is lost or degraded by erosion, the presence of feral ungulates, stream diversion and alteration, and alien aquatic plants.
- Predation. Non-native predators, including invasive fish, frogs, ants, birds, and reptiles, consume this species.

**CONSERVATION ACTIONS:** The goals of conservation actions are not only to protect current populations and key breeding habitats, but also to establish additional populations, thereby reducing the risk of extinction. For *Megalagrion leptodemas* specifically, management needs include the following:

- Conduct surveys around known populations to determine threat levels and control needs.
- Conduct studies on life history and essential habitats to better direct conservation measures.
- Use these results to create a management plan for species recovery.

**MONITORING:** Periodically census populations in order to assess their stability and trends.

**RESEARCH PRIORITIES:**

- Survey for additional populations, in both historical and novel sites.
- Conduct studies to determine if reintroduction to additional sites is feasible.

**References:**

Polhemus DA, and Asquith AA. 1996. Hawaiian Damselflies: A Field Identification Guide. Bishop Museum Press, Honolulu, Hawai'i.

U.S. Fish and Wildlife Service. 2012. Endangered and threatened wildlife and plants; endangered status for 23 species on Oahu and designation of critical habitat for 124 species; final rule. Federal Register 77:57648–57862.