Oregon Spotted Frog

Scientific Name: Rana pretiosa

Status: Threatened

Critical Habitat: Proposed

Latest Update: On August 28, 2014, the USFWS listed the frog as a threatened species under the Endangered Species Act. A final rule designating critical habitat is expected in the fall of 2014.

- **Historical Status and Current Trends**

  The Oregon spotted frog has been lost from at least 78 percent of its former range. Precise historic data is lacking, but this species has been documented in British Columbia, Washington, Oregon, and California. It is believed to have been extirpated (locally extinct but exists elsewhere) from California. It is currently known to occur from extreme southwestern British Columbia, south through the eastern side of the Puget Trough and in the Cascades Range from south-central Washington at least to Klamath Basin in southern Oregon.

  In Washington, the Oregon spotted frog is known to occur in Whatcom, Skagit, Thurston, Klickitat, and Skamania counties, although historically were also found in Snohomish, King, Pierce, and Clark counties.

  In Oregon, this frog species is only known to occur in Wasco, Deschutes, Klamath, Jackson and Lane counties, although historically they were also found in Multnomah, Clackamas, Marion, Linn, and Benton, counties.

- **Habitat**

  This species is always found in or near a perennial body of water, such as a spring, pond, lake, sluggish stream, irrigation canal, or roadside ditch. While Oregon spotted frogs seem to prefer fairly large, warm marshes (approximate minimum size of 9 acres (4 hectares)) that can support a large enough population to persist despite high predation rates (Hayes 1994) and sporadic reproductive failures, they are known to occur at sites as small as 2.5 acres. Large concentrations of Oregon spotted frogs have been found in areas with the following characteristics: (1) the presence of good breeding and overwintering
sites connected by year-round water; (2) reliable water levels that maintain depth throughout the period between oviposition and metamorphosis; and (3) the absence of introduced predators, especially warm-water game fish and bullfrogs.

In Washington, the Oregon spotted frog primarily occurs on lands managed by the U.S. Fish and Wildlife Service (Nisqually and Conboy Lake National Wildlife Refuges), Washington Department of Fish and Wildlife, and on private lands.

**Description**

The Oregon spotted frog is named for the black spots that cover the head, back, sides, and legs. The dark spots have ragged edges and light centers, which are usually associated with tubercles or raised areas of skin; these spots become larger and darker and the edges become more ragged with age. Body color also varies with age. Juveniles are usually brown or, occasionally, olive green on the back and white or cream with reddish pigments on the underlegs and abdomen. Adults range from brown to reddish brown, but tend to become more red with age; large, presumably older individuals may be brick red over most of the back. Red increases on the abdomen with age, and the underlegs become a vivid orange-red.

The Oregon spotted frog is a medium-sized frog, ranging from 1.74 to 4 inches (44 to 105 millimeters) in body length (McAllister and Leonard 1997). Females are typically larger than males (Leonard et al. 1993; Rombough et al. 2006).

**Life History**

This species typically begins to breed at three years of age. Breeding occurs in February or March at lower elevations and between early April and early June at higher elevations. Females deposit egg masses in shallow, often temporary, bodies of water that are generally no more than 14 inches deep. Many egg-laying locations have been used year after year for over 10 years. Eggs can hatch as quickly as within three weeks after being laid. Tadpoles are grazers, having rough tooth rows for scraping plant surfaces and ingesting plant tissue and bacteria. They also consume algae, detritus, and probably carrion (Licht 1974, McAllister and Leonard 1997). Tadpoles then metamorphose into froglets during their first summer (Leonard et al. 1993). Post-metamorphic Oregon spotted frogs are opportunistic predators that feed on live animals, primarily insects, found in or near the water.
Reasons for Decline

Many factors are believed to have caused Oregon spotted frogs to decline and continue to threaten this species, including loss and degradation of habitat and the introduction of exotic predators such as bullfrogs. Over 33 percent of historic wetlands and consequently Oregon spotted frog habitat, has been lost in Washington. Changes in hydrology (due to construction of ditches and dams) and water quality, development, and removal of beavers continue to result in habitat loss, alteration, and/or fragmentation. Non-native plant invasions by such aggressive species as reed canarygrass (*Phalaris arundinacea*), and succession of plant communities from marsh to meadow also threaten this species' existence. Introductions of bullfrogs and non-native fishes have affected this species both directly, by eating them, and indirectly, by outcompeting or displacing them from their habitat.

The majority of Oregon spotted frog populations are small and isolated. These factors make the Oregon spotted frog more vulnerable than large connected populations to random, naturally occurring events, such as drought, disease, and predation.

Conservation Measures

Active management is required to manage or control non-native plant species like reed canarygrass. Protecting Oregon spotted frog populations through maintaining healthy aquatic habitats will continue to be the key objective of land managers.

References and Links

Washington Herp Atlas


