

Striped Whipsnake

(*Masticophis taeniatus taeniatus*)

State Status: Candidate, 1991

Federal Status: None

Recovery Plans: None

The striped whipsnake is a long, slender, striped snake (Figure 1). Adults range in size from 30-72 inches total length (Stebbins 2003). Lizards are the predominant prey, but small mammals, snakes, young birds and insects are also eaten (Brown and Parker 1982, Nussbaum et al. 1983). Individuals may live as long as 20 years (Brown and Parker 1982).



Figure 1. Striped whipsnake in the Columbia Basin (photo by Lori Salzer).

Striped whipsnakes reach the northern limit of their geographic range in Washington. Evidence indicates the species was never common in Washington and appears limited to the driest areas of the central Columbia Basin (Hallock 2006). All Washington occurrences are below 1,500 ft. elevation (Figure 2).

The vast majority of lands below 1,500 ft in the Columbia Basin have been converted to agriculture or inundated by reservoirs for the Columbia Basin Irrigation Project (Hallock 2006). In addition, cheatgrass and other invasive weeds have altered the understory of shrub-steppe habitat. This is particularly problematic for this active, visual predator as well as the ground-dwelling lizards on which it preys. Additional potential threats to striped whipsnakes include road mortalities, quarrying of basalt, construction of new transmission lines, and collecting.

Striped whipsnakes use communal dens (i.e. hibernacula) in rock for winter dormancy. Clustering at hibernacula is important for surviving freezing winter temperatures and for locating mates in the spring. This species has high fidelity to hibernacula, returning to it each year to winter (Woodbury et al. 1951). Destruction of a hibernaculum led to the extirpation of a local population in Utah (Brown and Parker 1982). Identification and protection of hibernacula sites is essential for conservation of this species.

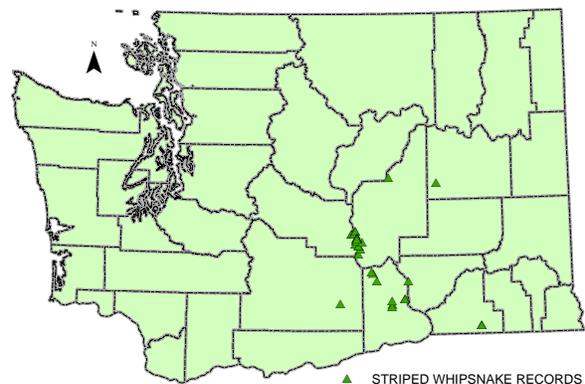


Figure 2. Locations of historical records of striped whipsnakes in Washington through 2011.

Concern about the species' status in Washington was triggered by lack of observations during large scale herpetological inventories in the 1990s (e.g., Hallock 1998a, 1998b, 1999) and surveys at historical striped whipsnake sites by the Washington Department of Natural Resources (WDNR) Natural Heritage Program from 1998-2004. Moreover, WDFW received only three observation reports from 1990-2003. A confirmed report of a striped whipsnake in western Grant County in 2004 triggered surveys at the observation site by WDNR's Natural Heritage Program, the Bureau of Land Management (BLM), and WDFW. In 2005, a cooperative project was initiated between the BLM and WDNR's Natural Heritage Program to describe habitat use and life history of striped whipsnakes at this same site and to evaluate the status of the species in Washington (Hallock 2006).

Whipsnakes are elusive and have proven difficult to find even where they are known to occur. Searching for shed skins eliminates many of the difficulties associated with finding the species and is currently the only method that seems time and cost effective. Shed skin surveys and additional work have produced only two verified striped whipsnake occurrences in Washington (about 7-8 km apart). A corridor of native habitat supporting healthy lizard populations still remains between the two sites (Hallock 2006). WDFW has continued to conduct these surveys annually at the occupied sites to monitor the populations. Numbers of shed skins found has remained small but relatively consistent from year to year including the most recent surveys in 2012 (L. Hallock, unpubl. data). Due to a lack of funding, inventory at other sites has not been conducted in recent years with the exception of the Yakima Training Center (YTC). The YTC has provided shed skins to WDFW for identification. In 2012, WDFW surveyed an area on the YTC that was known to have whipsnakes in the 1970s for the third time since 2006. Although the habitat appears suitable, none of the survey efforts have resulted in evidence that whipsnakes still occur on the YTC.

Shed skins from striped whipsnakes have been collected and stored since 2005 as vouchers for future genetic research. In 2010, researchers at the U.S. Geological Survey were able to isolate genetic material from a small sample of these shed skins. If funding is secured, future efforts will look at the genetic relationship between the Washington population and those in other states to determine if the Washington population is genetically isolated. Also, the genetic health of the Washington population will be examined.

The area currently occupied by striped whipsnakes has been proposed as a Natural Area Preserve. The Natural Heritage Advisory Council reviewed and approved the proposal in 2007. The WDNR's Natural Heritage and Natural Areas Program secured funding for land acquisition in 2012.

Partners and cooperators: Bureau of Land Management Wenatchee Office, Washington Department of Natural Resources, U.S. Army-Yakima Training Center, U.S. Geological Survey.

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