

PIKA PROJECT – 2016 REPORT

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In 2015, the Northwest Ecological Research Institute (NERI) initiated a new project concerning the American Pika (*Ochotona princeps*). Specifically, NERI volunteers participate in Cascades Pika Watch (CPW), a monitoring project based at the Oregon Zoo. They also assist with pika studies conducted by the U. S. Geological Survey (USGS). The NERI Board contributed \$1000 to CPW in 2015.

The American Pika was considered for listing by the U. S. Fish and Wildlife Service (USFWS) due to its apparent vulnerability to reduced mountain snow packs and greater extremes of both heat and cold occurring and anticipated because of climate change. Although a paper just published by Erik Beever, principal investigator for the USGS study, showed population declines and extirpations, the paper was not available for the USFWS to consider. While the petition to list pikas was rejected in September of this year, the species remains the subject of concern, and is in need of continued study and monitoring. Pikas in the Columbia River Gorge are unique in their low elevations and population density.

STUDY AREA AND METHODS

The focus of both CPW and the local part of the USGS study is long-range monitoring of pika populations in the Gorge, on both the Oregon and Washington sides. During the USGS study of pikas in the western United States, Beever conducted pika surveys in the Gorge from 2012 to 2014, training me and several other local biologists and naturalists, so that we could continue his work. Under his guidance, CPW has designed a long-term monitoring project that is intended to provide an early warning system, should pikas begin to decline in the region. Although the USGS study had included the Bull Run Watershed, CPW decided to limit its long-term study to sites that are on public land that is accessible to the public.

A two-tiered system of monitoring is being used. From approximately 285 sites throughout the Gorge that were included in Beever's study, 80 of the lower elevation sites have been randomly selected. Each of these sites will receive one or more presence / absence surveys every other year, to be conducted by CPW volunteers. In addition, the study emphasizes the edges of the pika's range in the Gorge, focusing on the East and West ends of known pika occupancy on both the Oregon and Washington sides. These four edges would be most likely to experience the earliest declines in pika abundance because these outlier areas are most vulnerable to microclimatic and habitat changes. Five sites in each of the four edges will receive a more intensive survey every other year to estimate pika numbers.

Both temperature and relative humidity within the pikas' talus habitat are likely to be important parameters associated with population persistence. During the USGS study, Beever placed sensors below the talus surface at about 80 of the sites he studied. CPW's core volunteers are maintaining about 50 of these sensors, including at all 20 of the edge sites.

RESULTS AND DISCUSSION

During 2016, NERI volunteers helped with all phases of the CPW project. I participated in numerous planning meetings to design the study, and worked for too many days on the databases and Google Earth to eliminate certain sites before the final selection was made.

In February Oregon Field Guide aired a program about CPW, which resulted in a surge of new volunteers through the Oregon Zoo. I led one hike to train some of them, although only four of the 12 sign-ups showed up on a very rainy day. These volunteers learned identification and data recording skills for conducting CPW's presence / absence surveys in the Gorge.

We retrieved as many of Beaver's iButton data-loggers as possible, especially the ones recording relative humidity, replacing them with Hobo temperature sensors which are easier for volunteers to manage. This field work was at times quite challenging, but I was very ably assisted by NERI associates Cathy Flick, Ashley Smithers, and Mary LaGow, as well as by NERI's founder Philip Gaddis, and eastern Oregon friend Marilyn Cripe. We retrieved and replaced 23 sensors in the Gorge (and visited 2 other sites where the sensor was no longer there), as well as retrieving and closing down the 7 sensor sites in the Bull Run Watershed. No one got injured or contracted poison oak, in fact Ashley got rewarded by finding a \$100 bill along I-84. A big "Thank you!" to all of these helpers!

For 2017, volunteers from NERI will continue to work with CPW to monitor pika populations in the Gorge and to maintain the sensors. We will also continue to do presence / absence monitoring at some of the pika sites in the Bull Run Watershed and elsewhere on the Mt. Hood National Forest as part of Wetland Wildlife Watch.