

Pika Research and Monitoring at Lava Beds NM



An American pika at Lava Beds NM
NPS photo

Importance: Species Vulnerable to Climate Change

The American pika (*Ochotona princeps*) is considered an indicator species for detecting ecological effects of climate change. Results from recent studies suggest that in some areas pikas are being lost from lower elevations in response to increased warming, and thus, their suitable habitat is being reduced. The National Park Service has a unique opportunity to assess the vulnerability of pikas to climate change and monitor pika population trends over time. Lava Beds National Monument (LBE) provides unique, low-elevation pika habitat and is one of eight National Park Service units included in a 3-year research project titled "Pikas in Peril." Additionally, the Upper Columbia Basin Network (UCBN) has developed a long-term pika monitoring protocol, which is being implemented in LBE and 3 other Pacific West Region parks.

Objectives

"Pikas in Peril" research

1. Document pika occurrence patterns and predict pika distribution across the eight park units.
2. Measure gene flow and model connectivity of pika populations within five park units (LBE not included).
3. Project climate change effects on the future distribution, connectivity and vulnerability of pika populations in each park unit.

Pika monitoring

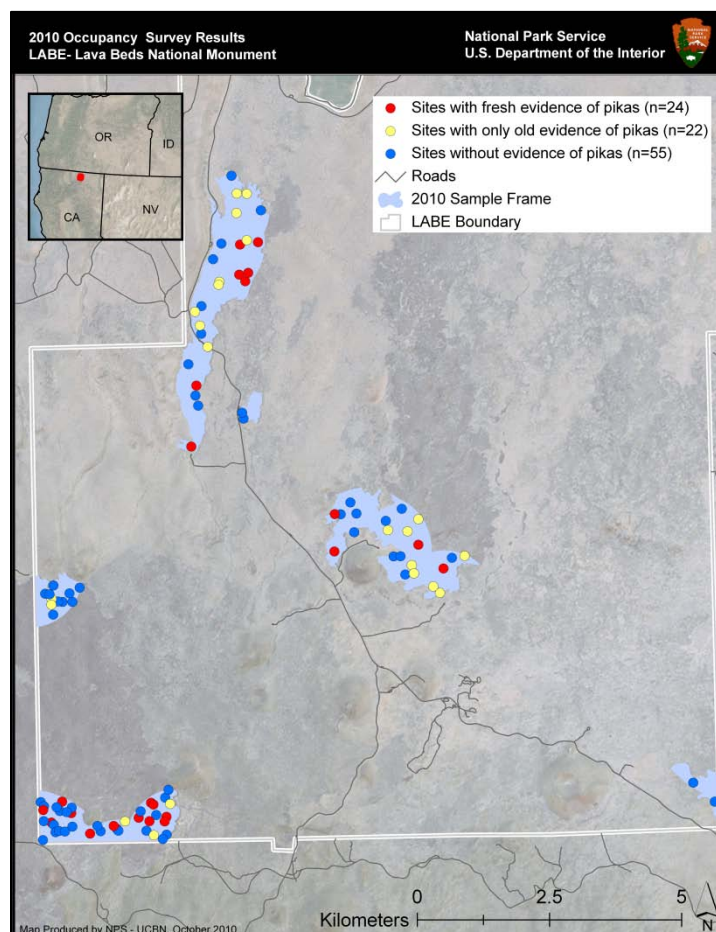
1. Determine current patterns of pika site occupancy in the four parks.
2. Determine trends in pika site occupancy patterns in the four parks.

Methods and Preliminary Results

In 2010, research and monitoring methods were merged into a single survey effort. In June and September, 101 randomly-selected sites (12-m radius circular plots) were searched for evidence of pika occupancy in the form of visual encounters, calls, fresh fecal pellets, and fresh food caches found within the site. Pikas occupied 24 (24%) sites surveyed and were found on the Callahan, Devil's Homestead, and Schonchin flows. Detectability of pika increased substantially in the September surveys.

Timeline and Future Plans

Data analysis will continue fall and winter 2010. Surveys of new sites and resurveys of current sites are scheduled for 2011 with a final research project report due in 2012. Furthermore, these sites will be monitored over time to detect trends in pika site occupancy using the revised UCBN pika monitoring protocol, which was submitted for approval in November 2010. Further details and results from these efforts will be available on the websites listed below.



Map of 2010 occupancy survey results for Lava Beds National Monument

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