



Pika Research at Yellowstone National Park



A fresh pika "haypile" (i.e., food cache)
found at Yellowstone NP. NPS photo

A 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 by studying pika populations within western U.S. parks. Yellowstone National Park provides classic talus pika habitat and is one of eight National Park Service units included in a 3-year research project, titled "Pikas in Peril."

Project Objectives

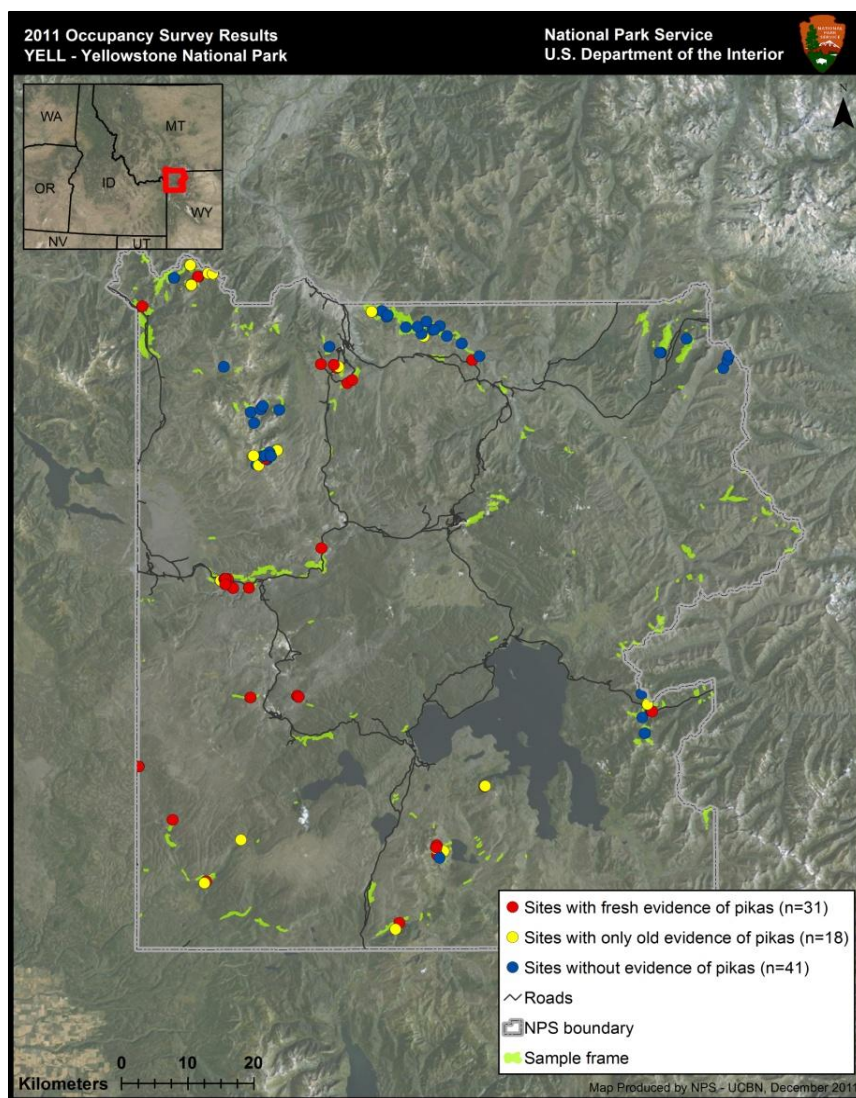
1. Document pika occurrence patterns and predict pika distribution across the eight park units.
2. Measure gene flow and model connectivity of pika populations within five park units (Yellowstone NP not included).
3. Project climate change effects on the future distribution, connectivity and vulnerability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

Methods and Preliminary Results

From June to November 2011, 90 randomly-selected sites, each a 12-m radius plot, 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. Of these sites, 31 (34%) were considered occupied. Of 38 sites surveyed in both years (2010 and 2011), 13 (34%) changed occupancy status (i.e., turned over) with five previously unoccupied sites being colonized and eight previously occupied sites being lost in 2011. When looking at the 185 sites surveyed over the two years, occupied sites covered the range of elevations sampled.

Timeline and Future Plans

Summer 2011 was the 2nd and final year of field data collection for the research project. Data analysis will continue in 2012 and a final research project report is due in 2012. Further details and results for Yellowstone NP and the other parks will be provided on the website listed below as they become available.



Map of 2011 survey results for Yellowstone NP

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