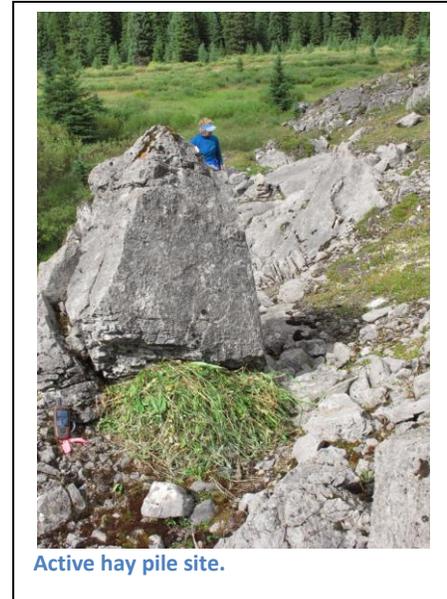


PIKA POPULATIONS

RATIONALE

Pikas are an IUCN Red-Listed species with some subspecies in the United States listed as *Vulnerable* or *Near Threatened*, but little is known about their status in Canada. Most of the declines in the US have been caused by hotter and drier summers, lower precipitation, warming temperatures, loss of vegetation, and timing of spring snow melt. Given the projected trend for a warmer climate, pikas face high risk of extirpation in many areas.

Pikas do not hibernate. Instead, they collect and dry their winter food supply mid August through the fall, building large and often easily observable hay piles beneath boulders. Research elsewhere in North America has suggested that late-summer surveys of such hay piles could provide a low-cost and repeatable index of local population trends and growth rates.



OBJECTIVES

To monitor population trends over time by determining occupancy of sites based on active or inactive hay piles.

METHODS

In 2014, staff re-visited 10 monitoring locations in Banff and Kootenay National Parks (Figure 1). A total of 447 sites were re-surveyed. Surveyors (2-4 people) would return to previously marked hay pile sites, note whether the sites were active or inactive, re-mark and build cairns to facilitate future pinpointing of the site. Temperature loggers placed at each site in 2013 for the purpose of tracking temperatures over time were collected and sent in for analysis.

RESULTS

With four years of data (study commenced in 2011), results indicate a slight increase in the overall proportion of active sites. Data will be re-analyzed in 2 more years to determine further changes occurring in population trend and growth rate over time.

In 2014, nine citizen scientists contributed 150 hours of volunteer time to this project and are integral to the collection of field data (both detecting hay piles and collecting DNA hair samples). This demonstrates the potential of this project for engagement of volunteers. In addition, the Bow Valley Naturalists also collected Pika observations from the public through their High

Elevation Localized Species (HELs) monitoring initiative and website.

<http://bowvalleynaturalists.org/page21/page21.html>

Several challenges remain with this monitoring project: difficulty in defining the boundary between individual pika territories as active hay piles within a territory sometimes 'drift' towards another territory (or site), and thoroughness of detection of hay piles (especially in large, blocky talus). The magnitude of these challenges will directly affect the precision of population estimates and the

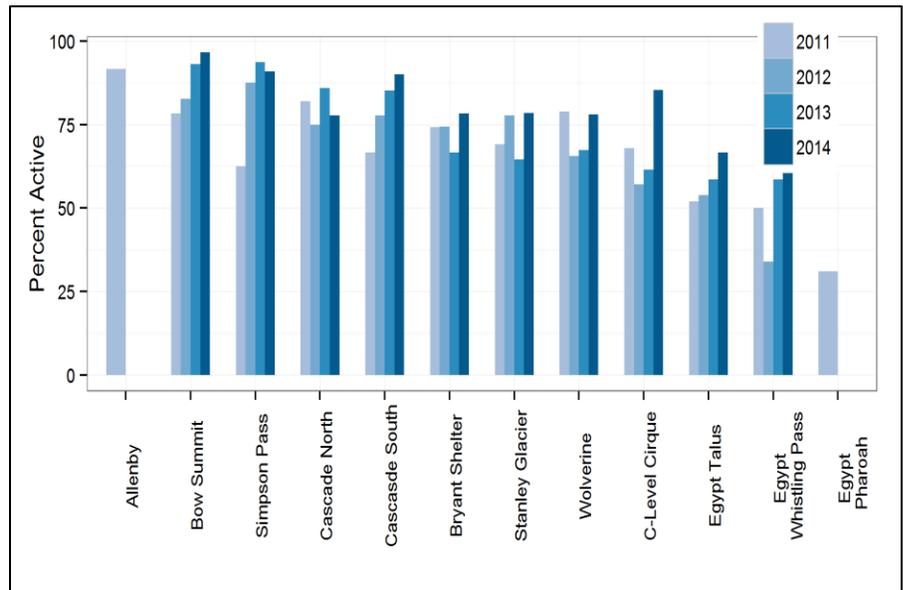


Figure 1 Percent of active sites per site across all locations.

power to detect trends over time. Work is ongoing to

calibrate hay piles and numbers of pikas, to determine hay pile detection rates and to better assess the potential of the project to determine population trends and growth rates.

YEARS OF DATA

2011 – 2014

FUNDING

Parks Canada

PARTNERS

Dr. David Hik, Univ. of Alberta, Bow Valley Naturalists, Dr. Philippe Henry of Univ. of Northern BC, Mount Revelstoke and Glacier National Park.

CONTACT

Derek Petersen, EI Monitoring Coordinator – Lake Louise, Yoho & Kootenay and Banff Field Units. P: 250-347-6171 E: derek.petersen@pc.gc.ca