Protocol for detecting Collared Pika, *Ochotona collaris*

Collared Pika (photo credit: Government of Yukon / J. Meikle)

Other common names: Rock rabbit, cony or rock cony, whistling, piping or mouse hare.

Data forms for surveys are available on the Government of Yukon website: Yukon.ca/report-rare-yukon-species-sighting. Comments and suggestions can be forwarded to:

Government of Yukon
Yukon Conservation Data Centre (V-5N)
Box 2703
Whitehorse, Yukon Y1A 2C6
Phone: 867-667-5331
Toll free in Yukon:
1-800-661-0408, ext. 5331
Email: yukoncdc@gov.yk.ca

Why survey for pika?

Collared Pika are restricted to talus slopes in alpine areas in Alaska, Yukon, western Northwest Territories, and northwestern British Columbia. This region is witnessing climate-driven shifts in habitat and temperature at faster rates than elsewhere in Canada. Pika are sensitive to climate variability and their need to have food nearby their very specific boulder fields, increases their vulnerability to climate change and makes them 'early-warning' indicator species. Collared Pika was assessed as Special Concern by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), because of the great threat to their existence over the long term. This protocol is designed to collection baseline information about the distribution and occupancy of pikas in Yukon. It is hoped that over time this information can be used to help determine the status and trends of pika populations.

Instructions for pika surveys

Pika scat with lighter (photo credit: B. Bennett)

Survey methods: Search for pika and pika sign in **preferred habitat**: which is talus fields (boulder slopes of diverse types) with open rock piles; optimal rock sizes ranging from 30-100 cm; with little sand or soil within the talus; they are rarely >10 m from talus; at an elevation between 700 – 1800 m, though most are found within 1200-1600 m. They have no obvious preference for aspect or rock type; however they occur at higher densities on south-facing slopes. They preferred rock piles adjacent to patches of herbaceous vegetation (the presence of Mountain Avens Dryas spp. or sedge Carex spp.); sometimes conifer foliage may be used at high elevations. Expansive talus fields without surrounding or interspersed vegetation may also be used. A pair of binoculars or a spotting scope are helpful to see animals from a distance.

Most often you will hear a pika, before you see it. The most distinctive pika calls are weak, raspy, distinctive chirps "meep". Refer to the Government of Yukon's mammal series for the Collared Pika for a sound recording: Yukon.ca/collared-pika. Some researchers increase the probability of detection by playing a recorded whistle call. It is important that surveyors recognize the difference between a Hoary Marmot, Arctic Ground Squirrel, and Collared Pika alarm calls. All three species often occupy similar or the same habitats. Pikas are small, about the size of a baseball.

Search in talus first near (within 20 m) borders with vegetation for indirect pika sign. Pika usually use rock piles with large openings, usually 30 x 30 x 30 cm which have protective overhangs and escape routes into deeper rock piles (i.e., not soil or compacted walls – they don't dig holes like ground squirrels). "Sentry" or "perch" rocks are often conical, and are often in the center floor of the opening allowing a view for perched pika out toward the talus field. Pikas sit on these perches and both pellets and urine stains accumulate on and below the perch

rock and are usually covered with orange lichen. Pika pellets are typically rabbit-like, totally round (like BB gunshot) 2-3 mm, dark when fresh, becoming white as they age, although with more aging they decompose and become dark and "soil-like".

Pikas live in rock piles (centre)

(photo credit: Government of Yukon / Ryan Agar)

Search also for "hay piles", or accumulations of leafy vegetation piled within the rocks. They can be of diverse species (not just grasses or "hay"). Because pikas prefer green vegetation, their hay piles comprise leafy branches, not piles of woody stems. Hay piles are solitary and usually separated by > 50 m. Note that pikas use the same hay pile areas each year. Search also for feeding dens, which are characterized by tightly stuffed vegetation around the margin of large boulders (1.5 m – 3 m diameters) perched amidst finer talus. Abundant pellet piles are usually intermixed with the stuffed vegetation. Hay piles created by pikas are most effectively sampled during late summer or early fall, as this is the time of year when hay piles are biggest and more easily seen.

Hay piles amongst the rocks (photo credit: B. Bennett).

Daily activity and movement patterns

The Collared Pika is diurnal, with most of its activity occurring in the morning and late afternoon. Temperatures above 25°C can be lethal to pika. Movement patterns are generally restricted to the safety of the talus slopes and nearby meadow. The movements and activities of pikas are often concerned with surveillance, feeding and/or haying, vocalizing, and territory maintenance or establishment.

Seasonal activities and movement patterns

The Collared Pika does not hibernate, rather it is active year-round. As with daily activities and movements, seasonal activity and movements are restricted to the talus slope and nearby vegetation. The peak breeding season for the Collared Pika is between May and early June. Pika are most apt to be seen July – September.

Orange lichen often grows where pikas and marmots urinate (photo credit: B. Bennett)

Location Information. Use a GPS unit (preferred) to record latitude, longitude, and elevation. Identify the sites by a name related to the general region (Angelcomb Peak site 1), and number sites accordingly. Do not record sites less than 75m distant from each other (these are likely the same animal). Note the geomorphic landform; if possible, substrate type, slope aspect, and any additional notes or comments. If possible, photograph: 1) pika perch/den microsite, 2) talus site, and 3) environmental context.

More resources:

Field personnel must be able to identify species by sight and/or by their sign. Identification of pikas can be aided by instruction from an experienced worker or by pictorial field guides. Species descriptions (including drawings and/or pictures) from books such as The Mammals of British Columbia (Cowan and Guiguet 1973) and The Mammals of Canada (Banfield 1974) would be valuable.

Collared Pika detection

Observation checklist

You will need to provide:

- Date
- Observer name
- Location (General description)
    - Coordinates
    - Source of coordinates (GPS; estimated from map; estimated from Google Earth; other)
    - How far away from the coordinates was the pika.

Send observations to:

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Your trusted source for conservation data.