INSTRUCTIONS FOR PIKA SURVEYS

vs 4/13/09

Contact for questions & address to send Survey Form:
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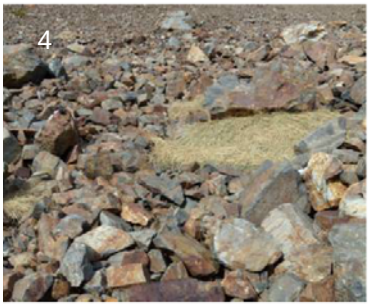
Survey Methods: Time your search for **30 minutes** and indicate either pika seen, pika sign found, or no sign of pika. Search for pika and pika sign in preferred habitat: talus fields (boulder slopes of diverse types) with open rock matrix; optimal clast (rock) sizes ranging from 25-90cm; minimal fine sediments or soil within the talus; sloping terrain from shallow to steep; above 1800m but more common above 3000m (for central southern Sierra Nevada & central Great Basin). No obvious preference for aspect or substrate type. Preferred talus locations are adjacent to patches of herbaceous vegetation (shrub and especially forbs of diverse species); conifer foliage may be used at high elevations. Expansive talus fields without surrounding or interspersed vegetation may also be used.

If you see or hear pika, stop and fill out the form. The most distinctive pika calls are raspy, distinctive chirps (1-3 repetitions per set): "chee chee chee". Guidebooks often indicate a "piercing whistle" but pika in California don't make this sound. Then look for & collect other sign as indicated on the form and below.

Search in talus first near (within ca 20m) borders with vegetation for indirect pika sign. Look deep within rock matrix openings that are ca 30 x 30 x 30cm and have protective overhangs and escape routes into deeper rock matrix (i.e., not soil or compacted walls). A flashlight may help to see down and into the openings. "Sentry" or "perch" rocks are ca 20cm diameter, often conical, and often situated on 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. Urine stains accumulate to about 10cm dia; much larger & "messier" urine stains are made by woodrats and might be confused for pika except for size. Pika pellets are typically rabbit-like, totally round (like BB gunshot) ca 2-3 mm, dark when fresh, becoming white as they age, although with more aging they decompose and become dark and "soil-like". Collect pellets, note condition of urine stains. Fresh urine is silvery white-yellowish and smeary; old urine is chalky white, with flaking edges and looks like old typing "white-out". Pika (as all rabbit relatives) produce a second type of feces known as caecal feces – these are rarely seen but are tar black, smeary & flat, ca 1cm diameter, and occasionally can be found among collected vegetation.

Search also for "haypiles", which are concentrated accumulations of leafy vegetation piled within talus matrices. They can be of diverse species (not just grasses or "hay"). Because pika prefer green vegetation, their haypiles comprise leafy branches, not piles of woody stems, the latter being woodrat sign. Branches can be up to about 30cm long. Haypiles are solitary and usually separated by > 50m. Search also for feeding dens, which are characterized by tightly stuffed vegetation around the basal margin of large boulders (1.5m – 3m diameters) perched amidst finer talus matrix. Abundant pellet piles are usually intermixed with the stuffed vegetation.

Location Information. Use a GPS unit (preferred) to record latitude, longitude, and elevation. Identify the sites by a name related to the general region (canyon, mountain peak), and number sites accordingly. DO NOT RECORD SITES <75m DISTANT FROM ONE ANOTHER (these are likely the same animal). Note the geomorphic landform; if possible, use taxonomy of Millar & Westfall. 2007. Quat Intern 188: 90-104 (*http://www.fs.fed.us/psw/publications/millar/psw_2008_millar003.pdf*), substrate type, slope aspect, and any additional notes or comments. If possible, photograph: 1) pika perch/den microsite, 2) talus site, & 3) environmental context.



Photos: 1) Typical pika pose on perch; 2) fresh urine stain on pika perch with fresh pellets adhering; 3) fresh pellet pile; 4) large haypile (can be many species other than grasses) under typical feeding-den boulder; 5) excellent pika habitat – boulder-stream RIF talus adjacent to wetland.
Photo credits #1: A. Tshcherbina; #2-5: C. Millar

AMERICAN PIKA (*Ochotona princeps*) SURVEY FORM (sample)

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OBSERVATION DATE: July 4, 2008 **SITE SURVEYED FOR** __15__ minutes

SITE NAME: Lundy Cyn **COUNTY:** Mono
SITE #: LC-1 **MTN RANGE:** Sierra Nevada
LOCAL REGION: Moat Lake cirque **STATE:** CA

LAT °N (XX° X.xxx): 38° 3.210 **LONG °W (YYY° Y.yyy):** 119° 16.325 **ASPECT**: 211° (SW)

ELEV: 3159 m_X_ ft__ **Estimated by**: GPS_X_ Map__ eMap (Topo, Google Earth)__ Other:

LANDFORM (see Millar & Westfall, 2007 if possible for specific rock-ice features):

Circle if: talus [be specific to type if possible)

rock glacier boulder stream patterned ground inselberg eroded bedrock

anthropogenic rockfall moraine lava flow/lava cave tephra

rock crevice cliff face *Other and/or more landform detail:*

Large boulder-stream talus field covers extensive slope; adjacent to wetland with abundant vegetation

SUBSTRATE:
Circle if: granitic metamorphic sedimentary igneous

More substrate detail:

PIKA, Circle if: SEEN HEARD PIKA SIGN (below) NO PIKA SIGN (after 30 min search)

PELLETS: fresh_X__ old__ few__ abundant_X_ **COLLECTED** Yes_X_ No___
Caecal feces observed ___ Y or N _X_

URINE SIGN: fresh (silver-white & smeary) _X__ old (chalk white & flakey) __

HAYPILE: present _X_ if yes, plant material green__ or brown _X_ Haypile absent___
Surrounding vegetation (plant species or plant community): Distance to live vegetation __50__m/ft

Salix lakeside community; *Leptodactylon pungens, Artemesia spp, Ericameria suffruticosa, Symphoricarpus spp.*

Sign of other species? Marmot Sm Rodent None Other:
SITE PHOTOGRAPHED: Y_X_ N__

ADDITIONAL NOTES -- use back as needed