



## **Pika Citizen Science Survey Information 2012**

Citizen science has a long history of providing quality data on species presence/absence, population trends, and phenology. Long standing programs such as Audubon's Christmas Bird count and the North American Lilac Blooming program have provided data on birds since 1900 and lilac blooming phenological data since 1956. Both of these programs have provided scientists, managers, and interested citizens information on species distribution and changes in relation to climate for more than a century. Resource managers and scientists utilize these data along with information from other scientific studies to identify population trends, monitor changes in the environment, and develop management policies. More recently many new citizen science programs have been developed utilizing the power and accessibility of the internet, providing outdoor and educational opportunities to a broader audience and a new generation of outdoor enthusiasts.

Pikas are an ideal species to engage the public in citizen science, they are charismatic, easy to identify, amenable to being watched, and are found in spectacular alpine settings. Only a limited amount of training is required to have volunteers ready to participate in collecting data and assure that quality data is collected. Currently there are several pika related citizen science projects throughout the Rocky Mountains and they are providing crucial data on pika habitat and distribution to researchers that will help guide conservation efforts in the future.

### **The American Pika (*Ochotona princeps*)**

Pikas are the smallest member in the rabbit family that includes rabbits and hares. They are distributed throughout the western United States and are found mainly in moist subalpine and alpine habitats that are dominated by talus slopes. Pikas are extremely well adapted to montane environments, but are sensitive to climatic extreme temperatures above 80°F (which can be lethal to pikas in as little as six to eight hours). To stay cool, pikas will stay in rock crevices or under large boulders until the temperature cools.

Pikas do not hibernate and remain active during the winter. They store large "haypiles" or stores of vegetation in the late summer and fall that they cache and will utilize throughout the winter. Pikas are typically found in rocky talus areas throughout its range but can also inhabit lava type environments or mining debris.

### **Issues Background**

In 2009, the American pika was petitioned to be listed as threatened under the Endangered Species Act to the U.S. Fish and Wildlife Service. The petition was prompted by declining populations in the Great Basin area within the past few decades. Pika populations are also moving up in elevation as seen in the Great Basin and in California; this is an indication that climate change is having an affect on pika behavior and distribution. Although the listing was denied in 2010, the Fish and Wildlife Service highlighted the need for additional scientific data on species distribution and under-talus temperature modeling. Since that ruling

there has been an increase in research in the Western United States related to pika distribution and habitat modeling.



(Photo by April Craighead)



(Photo by April Craighead)



(Photo by Greg Winston)

## Life History

- Pikas are small egg shaped mammals with large rounded ears and have no visible tail. They range between 6-8 inches in length and weigh approximately 4-6 ounces. Pikas have many distinctive vocalizations, but the most common is “eeeep” that they vocalize when alarmed. They range in color from brownish gray to gray with rust colored patches.
- Timing of reproduction is highly seasonal depending on their environment, but in mountainous areas young are typically born in May – June with a potential for a second litter in July - August. Young are born after a gestation period of 30 days and are weaned between 3 - 4 weeks of age.
- Pikas are herbivorous eating a variety of flowers, grasses, shrubs and trees. By mid to late summer (July - September) they begin storing food under rocks, creating “haypiles”. These haypiles can be enormous - measuring 3 feet in diameter. Pikas are territorial and these haypiles tend to be built in the same location year after year.
- Pikas are highly territorial and will defend their territories with high-pitched whistles and physical chases. They are diurnal, feeding primarily in the morning and late afternoons depending on the weather.
- Pikas are preyed upon by a variety of predators including coyotes, weasels, hawks, eagles, owls, bobcats, and foxes. They use their alarm calls to notify other pikas of predators. Pikas are commonly affected by parasites including fleas, mites, nematodes, and bot fly larvae.
- Pika scat is characterized by small, dark oval pellets. If the scat is dry and dark, it tends to be older scat; while fresh scat is typically green and moist. Pika urine is white, and tends to stain rocks where it is found in high concentrations.
- Pika tracks are small and relatively indistinct (less than 1 inch) and are usually found on fresh snow or in older snow banks. Pikas have 5 toes on the fore feet and the hind foot is slightly larger with 4 toes.
- Pikas typically live in mountainous regions near treeline, however they can also be found at lower elevations that are comprised of lava formations (Craters of the Moon, Columbia Gorge). When found in areas of talus they utilize both large and small rocks for protection and storing hay. Since they are herbivorous they depend on meadows or vegetation patches nearby. Pikas are found throughout the world, including North America, Asia and the Middle East.

## Other Mammals that Inhabit Pika Environments

While pikas are very unique they can sometimes be confused with other mammals such as chipmunks, marmots, and some species of squirrels. Bushy-tailed woodrats also make haypiles in rocky areas so if you come upon one make sure that you identify pika scat within the haypile. Woodrats are typically nocturnal and they will collect almost anything particularly bones and even camping gear to add to their nest. So if you see other material in the haypile you'll know that it is a packrat haypile not a pika.

\*Please take the time to make sure that you identify a pika correctly.



(Wikipedia photo)

Chipmunk



(Wikipedia photo)

Yellow-bellied marmot



(Photo by M.Dunn)

Golden-mantled squirrel



(NPS photo)

Bushy-tailed woodrat

## Pika Sign

The optimal situation for observational data is to actually see pikas to identify them, however if you are passing through an area in the heat of the day or an area of low densities you might not actually see a pika. Fortunately pikas are highly detectable with their calls, haypiles, and scat.

In late summer, pika haypiles or stores of vegetation can become very large measuring several meters wide and are very conspicuous. This is definitely a sign that an individual pika is hard at work! Pika scat is also quite conspicuous and tends to be deposited at “latrine” sites that build up over time. Fresh scat is green to dark brown and oval (the size of a pepper corn); as the scat ages it tends to become lighter brown to gray. Frequently, urine stains can be found in conjunction with scat; urine stains the rock white over time.