### **Defenders of Wildlife**

# **Climate Change and the Pika**



### **Description & Taxonomy**

Pika is the name given to roughly thirty species of hamster-sized animals that live in some of the coldest regions of the world, mainly the mountains and steppes. Most species of pika live in Asia and Europe, but two are found in North America. The collared pika (*Ochotona vollaris*) lives in Alaska and the Yukon, and the American pika (*Ochotona princeps*) is distributed more widely through British Columbia and the western U.S.



Photo: U.S. Fish and Wildlife Service. http://www.fws.gov/mountain-prairie/

### Fast Facts

**Length:** 6 ¼ to 8 ½ inches. **Weight:** 3 ¾ to 4 ½ ounces **Lifespan:** 5 to 7 years

**Diet:** Mainly grasses and grass-like plants called sedges, but will also eat flowering plants, twigs, moss and lichens.

#### **Population**

Overall species population size is unknown, but the more important issue is what is happening with each local population. Pikas are confined to high mountain ranges because of their intolerance to hot temperatures. Therefore, pika populations are isolated from each other, with various mountain ranges acting like islands surrounded by a hostile sea of warmer lowlands. Thus the various North American pika populations have diverged into a wide array of subspecies – 36 in all. Eight of these are considered by the IUCN to be "threatened" or "near threatened" with population size under 1,000.

### Range

Mountainous regions of the Western U.S. and Canada, from California north to British Columbia, and through the Rocky Mountains to northern New Mexico. Due to their sensitivity to high temperatures, pikas are confined to the highest elevations in the southernmost part of their range.

### Behavior

Pikas live on rocky mountain slopes called talus, located adjacent to patches of grass and other vegetation where they can feed. American pikas don't dig burrows so they need rocks big enough to have spaces underneath where they can shelter from predators or extreme temperatures. Pikas are colonial, with individual territories of 0.1 to 0.2 acres within the colony. As mentioned above, they communicate with each other extensively with whistles, bleats and sharp alarm calls that send the animals scurrying for cover when a predator nears.

Pikas are active in the daytime year round; since they do not hibernate, they must store food to get them through the long winters. Pikas harvest vegetation and stack it into "haypiles" to dry; once dry, they store it under the talus in piles that can reach 50 pounds in size. Pikas have a "two-stage" digestion process that helps them digest their high-cellulose diet: partially digested vegetation is excreted, then re-consumed to extract the remaining nutrients.

### Reproduction

Mating season: Begins in April

**Gestation:** 30 days

**Litter size:** 2 to 6 young (usually 3), born in May-June. Sometimes there is a second litter in August-September. **About the young:** young are born blind and hairless. They are helpless for about 18 days, weaned between 3 and 4 weeks.

Young pikas disperse short distances from their den site, generally 300 yard or less. The maximum dispersal distance is about 2 miles, with low elevation and unsuitable habitats acting as major barriers.

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### **Climate Change and Other Threats**

Suitable pika habitat is restricted to regions of less than 30 days per year above 95°F. They keep their warm winter coats year-round, and are thus very sensitive to air temperatures above about 75°F. Long exposure to these temperatures kills them outright. The climate warming we have experienced over the last century is already having an effect, particularly in the southern part of their range – New Mexico, Nevada, California and Utah. Nearly a third of the populations in the Great Basin region have vanished in recent years. There is also a pattern of population losses at lower elevations. As climate change continues to heat up their mountain strongholds, pika will be squeezed further and further upslope, with the potential for complete loss of habitat on individual mountain tops.

Other threats appear to be the presence of grazing cattle that compete with pikas for vegetation, and as populations decline they face problems with inbreeding.

## **Reasons for Hope**

Most pika habitats are in some state of federal ownership. Some are in national parks, where they are well protected from disturbance, hunting, and grazing. Management changes in other parts of their range, like national forests, may be able to help pika survive. Also, some evidence indicates that as daytime temperatures rise, pikas are capable of changing their behavior to be active more during the cooler dawn and dusk, so they can persist as long as they have access to cool burrow areas.

### Legal Status/Protection

IUCN: Least concern for species overall; however 8 of the 36 subspecies are classified as Vulnerable.

USFWS. Petition for Threatened listing filed in October 2007. Unfortunately, in February 2010, FWS declined to list the species.

### How You Can Help

Take Action for Wildlife by visiting: <a href="http://www.defenders.org/take\_action/index.php">http://www.defenders.org/take\_action/index.php</a>

#### For Additional Information

Defenders of Wildlife's Climate Change pages www.defenders.org/climatechange

**Species Spotlight** 

http://www.defenders.org/newsroom/defenders\_magazi ne/winter\_2010/species\_spotlight\_pika.php

#### **IUCN Redlist**

http://www.iucnredlist.org/apps/redlist/details/41267/0



Photo: U.S. Fish and Wildlife Service <a href="http://training.fws.gov/EC/Resources/csp\_climate\_change\_se">http://training.fws.gov/EC/Resources/csp\_climate\_change\_se</a> ries/index.htm

### Did you know?

- Pikas are distinctive for their outsized alarm calls, used to warn other members of the colony of predators. Early explorers were astonished to find that the loud sounds ringing through the mountains came from such tiny animals.
- The name "pika" may come from the Russian word "pikat," meaning "to squeak."
- Other names for pika include "cony," "rock rabbit," and "whistling hare."
- Despite their resemblance to hamsters and other rodents, pikas are more closely related to rabbits and hares.

### References

International Union for the Conservation of Nature. RedList Profile.

http://www.iucnredlist.org/apps/redlist/details/41267/0

Idaho Museum of Natural History Profile. http://imnh.isu.edu/digitalatlas/bio/mammal/Lagom/pika/pika.htm

NatureServe Profile

USFWS Pika Page. <a href="http://www.fws.gov/mountain-prairie/species/mammals/americanpika/">http://www.fws.gov/mountain-prairie/species/mammals/americanpika/</a>