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Arctic Hare

Lepus arcticus



Arctic Hare, public domain image from the US Fish and Wildlife Service.

By Clara Johnson

The Arctic Hare is a furry mammal with a round body and short pointed ears. When a well fed Arctic Hare nestles down for a rest to conserve heat it tucks in its ears, tail, and front legs to form an almost perfect sphere. On the tundra where Arctic Hares live together in large groups, they look like hundreds of large snowballs on the ground. When they energetically hop and run Arctic Hares look like snowballs popping up and down like popcorn on the snowy winter tundra. In the Arctic the local name for an Arctic Hare is Ukaliq pronounced *ook-ah-lick*.

Characteristics

Arctic Hares are very large hares when compared to other members of the lepus family like the Snowshoe Hare. The average adult Arctic Hare is about 4-5 kg (9-11 pounds) and is about 58cm (23 inches) long from nose to tail. They have two big powerful hind feet and two smaller front feet. They have short ears to minimize heat loss, with black fur on the tips to help absorb heat from the sun. They have very large front teeth and long toenails which they use to dig for food.

The Arctic Hare has very good eye sight and can see almost 360 degrees around itself without moving its head. It has very good hearing and moves its ears to find the source of sounds. It also has a very good sense of smell.

In the winter time Arctic Hares are bright white to blend into the background of the tundra where they live. The hare is well equipped to live in this cold climate with three types of fur in its thick coat: underfur which is about 15 mm long (1/2 inch); pile hair which is about 25 mm long (1 inch); and guard hairs which are about 40 mm long (1 1/2 inches). They do not hibernate, so this winter coat is very well insulated to help them survive.

In the summer – which lasts about 6 to 8 weeks in the Arctic – the hares moult their winter coats and become a grey-brown colour. The amount of colour change observed in Arctic Hares depends upon where they live. Some hares in the highest areas of the Arctic stay mostly white during the summer.

Male and female Arctic Hares look very much alike, but females are often slightly larger than males. Young Arctic Hares are born in the summer and are greyish-brown to blend into the tundra. At the end of the summer the young will grow the same protective white winter coat as the adults.

Arctic Hares look very similar to Snowshoe Hares, but the species inhabit very different regions. The Snowshoe Hare lives in forested areas of Canada while the Arctic Hares live north of the tree line. The Arctic Hare is about three times the size of a Snowshoe Hare.

Hares and jackrabbits are part of the same animal family. Hares and jackrabbits are much bigger than the rabbits which are in a different branch of the animal family tree. Hares and jackrabbits are born in depressions made in the ground, and are born fully furred and with their eyes wide open for survival. Rabbits are born in underground dens, and are born blind and hairless, so they need more protection and nurturing by their parents.

Life Cycle

The breeding period for Arctic Hares starts in the spring when the weather warms up around April or May. Arctic Hares congregate in large groups of up to thousands of hares. Males will attempt to breed with any other Arctic Hare – they do not immediately know whether another hare is male or female, so they try to mate with all of the other hares. There are no battles for mates. Males and females will breed with any other hare.

The young Arctic Hares, called leverets, are born in June in shallow depressions on the tundra. There are between 2 to 8 leverets in each litter. Hares usually have one litter per year, but if the climate is warmer, the hares can have two litters per year with fewer leverets in each litter.

The mother hare stays with the young leverets for 2 to 3 days after birth, but by the 3rd day the leverets can hide in bushes, or stay still so that they look like rocks, so the mother can leave her young. A couple of weeks after their birth the leverets are visited by their mother to feed on her milk only once every 18 to 19 hours. The young leverets are well tuned to their mother's timing and join their siblings for this event at the correct time and place each day.

Young leverets will be weaned by late August and independent of their mother, but they may stay together with their siblings for a while longer. By September they will have a white winter coat and will be prepared for the winter.

Arctic Hares will breed when they are one year old. Some sources think Arctic Hares only live for a year in the wild but they may live up to 4 or 5 years. The oldest tagged - and followed by scientists - hare likely lived for 5 years. See the Canadian Museum of Nature Ukaliq website listed the bibliography for more fascinating details about the study of the Arctic Hare's life cycle.

Habitat

The Arctic Tundra is the home of the Arctic Hare. This is typically a very cold place where the sun sets in late November, does not rise again until early February, and the temperature drops to -30 to -40 degrees Celsius (-22 to -40 degrees Fahrenheit).

In the summer this is the land of the midnight sun where the sun comes up in mid April and then does not go down again until late August. The summer tundra is still quite cold with temperatures between 1 to 5 degrees Celsius (33 to 41 degrees Fahrenheit).

There is very little precipitation on the tundra; it gets about the same amount of precipitation as the Sahara desert. The tundra does not have any trees, and the ground vegetation consists of willow sedges that grow close to the ground and some ground-hugging flowering plants that grow quickly and bloom in the summer. The Arctic Hare eats all of the plants that grow on the tundra, and they compete with the much larger Caribou and Muskoxen for these plants. Hares do not like deep snow cover because they need to dig through the snow for food in the winter.

The Arctic Hare is mostly an herbivore, but it will eat meat if it comes across a dead animal.

The Arctic Hare lives mostly above ground on the tundra but has been known to dig tunnels in the snow for shelter from the wind in the darkest winter time.

The Arctic Hare lives in Greenland and in Canada north of the tree line in the areas of Nunavut, the Northwest Territories, and Newfoundland and Labrador.

The Arctic Hare, or *Lepus arcticus*, is closely related to the Alaskan or Tundra Hare, or *Lepus othus*, which lives only on the western edge of Alaska. The Arctic Hare is also closely related to the Mountain Hare, or *Lepus timidus*, which lives in the high Arctic areas of Asia, Northern Europe and high mountain areas in central Europe.

Behaviour

Arctic Hares are very social. They will sometimes live in pairs, but typically stay in groups of 30 to 100 hares, and have been reported to be seen in groups of thousands. They have home ranges and tend to follow well-worn paths. They can also swim short distances.

Arctic Hares do not hibernate.

Arctic Hares typically stand on their four paws when eating, but stand up on their hind legs to better see the area around them. When they feel the need to run for the best speed they will hop on their two hind legs much like kangaroos. They can hop up to 64km/hour (40 miles/hour).

Arctic Hares are typically silent but will scream when captured, and the females will make low growling sounds to indicate to the leverets when to feed. Most Arctic Hare communication is done by smell and ear position for visual signals.

Sometimes pairs of Arctic Hares can be seen standing up on their hind legs batting their front paws each other. This boxing action is typically started by a female to shoo away a male when she does not want to mate. Boxing between two males over a food source occurs occasionally, but not often.

Threats

There are no current estimates of how many Arctic Hares exist, but biologists do not consider the species to be at risk. However, the small populations of Arctic Hares on the island areas of Newfoundland may be endangered.

Arctic Hares are an important source of food for many animals including Arctic Foxes, Arctic Wolves, Ermines, Gyrfalcon, Peregrine Falcons, and Snowy Owls.

The Arctic Tundra has changed significantly over time. The warming temperatures seen in the past 30 years have caused a large amount of the Arctic ice to melt. This has changed many areas of tundra into wetland areas. For the Arctic Hare and other Arctic animals to survive, they must adjust to this change in the environment. See the National Oceanic and Atmospheric Administration (NOAA) website listed in the bibliography for details of scientific research being done around this environmental change.

What We Can Do To Help

Some specific things everyone can do to reduce global warming and the melting of the Arctic ice:

- Use less power. Simple things like making sure your car is properly tuned, walk or ride a bike when you can, turn lights off when you're not in the room.
- Recycle. Garbage that is put in landfills generates methane. Garbage that is burned releases carbon dioxide and hydrocarbons into the air. Recycled goods take less energy to produce than products made from scratch.
- Plant trees and other plants. Plants absorb carbon dioxide and produce oxygen, this will help moderate the climate close to you and globally.

See the How Stuff Works website listed in the bibliography for more helpful information.

Other Interesting Facts

Woolly Mammoths were likely very familiar with Arctic Hares!

Some fossils of Arctic Hares found in the north date back to the last Ice Age when the land bridge between North America and Asia was above water. Many of the animals that lived during the Ice Age no longer exist, but hares survived as a species and still live in large numbers in northern North America. See the Yukon Beringia Interpretive Centre website listed in the bibliography for more information about Arctic Hares in the Ice Age.

Where & When to View the Arctic Hare

If you are in the Arctic regions of Canada where Arctic Hares live it is easiest to spot them during the summer months when their white or grey-blue coat stands out against the green tundra background. To get close to the hares, the best time to approach them is during the winter when they are confident enough in their camouflage to let people get close enough to even touch them, but they will be harder to find in the snow. The Quttinirpaaq National Park on Ellesmere Island is a popular place for tourists to go to photograph Arctic Hares. See the Great Canadian Parks website in the bibliography for more information on this park.

A warmer alternative to going to the Arctic to view the hares is to see video images of them online. The Canadian Museum of Nature Ukaliq website listed in the bibliography has many entertaining videos of Arctic Hares which you can watch right now.

Bibliography

Web Resources:

Canadian Museum of Nature Ukaliq website – a great resource for information on the Arctic Hare including several fun video clips in their Games and Activities section:

<http://www.nature.ca/ukaliq>

Atlantic Canada Conservation Data Centre website – focuses on the hares studied in Newfoundland:

<http://www.accdc.com/products/profiles/arctichare.php>

University of Michigan Museum of Zoology Animal Diversity website – educational website written largely by college students:

http://animaldiversity.ummz.umich.edu/site/accounts/information/Lepus_arcticus.html

National Oceanic and Atmospheric Administration (NOAA) website – information on the arctic ecosystem and climate including climate change indicators:

<http://www.arctic.noaa.gov>

How Stuff Works website – advice on how to help slow global warming:

<http://science.howstuffworks.com/global-warming7.htm>

Yukon Beringia Interpretive Centre website – a look back into the past when the Bering Land Bridge between North America and Asia was above water and Arctic Hares lived with Mammoths:

<http://www.beringia.com> recommended virtual tour at: <http://www.beringia.com/01/01maina.html>

Great Canadian Parks website page on Ellesmere Island - to read more about a great place to see Arctic Hares

<http://www.greatcanadianparks.com/nunavut/ellesnp/index.htm>