

Nature Week at Heritage Village - July 26th

Chipmunks vs. 13-lined Ground Squirrels

Let me introduce the chipmunk and the 13-lined ground squirrel (or gopher), two small mammals of the squirrel family that are often confused. Both are about 10-inches long and have stripes; chipmunks have five while gophers have 13 every-other-one decorated with dots. Both are active in the daytime scurrying about collecting food and digging burrows. In some circumstances they can be a bit of a pest because they have both adapted to living around humans – chipmunks at the bird feeder and gophers in the garden.

We see them in different locations because their diets differ slightly. Chipmunks live at the edge of a woods and mainly eat seeds. Not being too particular they may also eat insects, worms, bird eggs and even baby birds and mice. Interestingly they also eat that underground fungus that connects maple trees and trout lily. Gophers live in grasslands and prefer to eat greenery like green shoots, roots, vegetables, fruits and grains as well as insects like grasshoppers, caterpillars, and beetles.

Gopher with long, narrow claws definitely made for digging



Minnesota is mostly grasslands, the ideal habitat for gophers; hence the mascot, although it is not a good likeness.



Chipmunk with a stripe down each side of its face and five down its back.

Since both gather seeds for the winter and store them underground in their burrows they are important in seed dispersal. Chipmunks are also important in spreading those amazing underground fungi.

Obesity research

As we head into August and seeds and nuts begin to form, both chipmunks and gophers are preparing for a type of hibernation called torpor. Torpor saves energy over the winter by dropping the animal's heart rate to about 1% of normal while also dropping their body temperature to about 2 degrees above the burrow temperature, as low as 40°F.

But there is a big difference between their winter sleep. Chipmunks do not add body fat in the fall, rather they hide a lot of food, wake up every few days all winter to eat, then return to sleep. That is why in July and August we see chipmunks with their cheeks puffed up, using three special pockets in their mouth to carry a lot of seeds to their burrows.

Gophers, on the other hand, store extra energy by putting on body fat and only cache enough seeds for an extra winter snack now and then.

Gopher fat has scientists intrigued. About 5% of their total fat is called "brown fat" and it can be turned quickly into heat; raising their body temperature by 60°F in just two hours. The rest of their fat is "white fat" like adult humans have. Since humans are born with "brown fat" but lose it as they mature researchers hope to find the trigger for this fat-switch to be able to switch human obesity into human heat. The research continues at the Univ. of Minnesota Duluth (where else?).



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