

the largest quills to the finest hairs. What does this teach you about the quills? With what are they homologous?

Examine the feet and note their shape and color. How does this color compare with the body color both dorsal and ventral, and with the color of the mouth parts, ears and tail? Note the claws. Are they sharp or dull?

The porcupine is often found climbing trees. Why? It can hardly be to escape his enemies, for other animals give him little concern. Standing trees and fire-wood often show portions with the bark gnawed away and ornamented with teeth marks. Here we have a hint as to his food, which consists mainly of bark and green leaves. As far as I have observed, he seems especially fond of the bark of the maple and the beech. Which maple is his choice? Note other trees on which he sometimes feeds.

Among lumbermen he is often called the quill-pig, and they consider his roasted flesh as good as young pork.

#### Rats and Mice.

We mention rats and mice as rodents that should be studied only with a view to extermination. They are among the worst enemies with which man has to deal, and are dangerous pests wherever found. The only use they seem to serve is that of providing some people with a paltry excuse for keeping cats.

The ordinary house mouse is a contribution from India, and like our rats, which are also foreign, they still have the travelling instinct. "They travel back and forth, crossing the ocean in all sorts of ships. They also travel across the continent on trains. Wherever our food is carried they go."—MRS. COMSTOCK.

Among our native mice, the white-footed or deer-mouse, and the meadow-mouse, are most commonly found.

The deer-mouse lives in woods, and around clearings. They are reddish brown above, with white below, being noted for their beautiful white-pink feet; even the underside of the tail is white. They have large ears and eyes, and a long tail. This is our prettiest mouse, and makes a good caged specimen. If you have several in one apartment feed them well, otherwise you will find some missing, for they are strongly cannibalistic. These mice are active in winter and are mainly responsible

for the mice tracks found in the snow. Note the arrangement of the tracks and the tail mark

The meadow-mouse is blackish in color, with a heavy body, short ears, and short legs and tail. This is the mouse that makes the runways or tunnels in the old grass and stubble under the snow. Look for the mouse-paths as the snow is going off. They tell us something about his winter life and habits. At times we find the meadow-mouse wintering in our dwellings, but he is more frequently found in barns, where he seems especially content if he is well supplied with grain. Here they nest, and breed even during the winter. Their nests with young are often found, the young being small, pink, hairless, blind little creatures, closely huddling together in the nest for warmth.

Look for the nest of the meadow-mouse in the fields. It is common during the haying season, often found torn and mangled by the raker. How does it compare with the nest in the barn? Of what does the house-mouse make his nest? The nest of the deer-mouse is sometimes formed from a deserted birds' nest, but more frequently it is built in old stumps, logs, hollow trees, or hay stacks.

Two kinds of rats have been reported in the Maritime Provinces,—the brown or Norway-rat, also called wharf-rat; and the black-rat. The latter is now very scarce, but in early colonial days was the only kind known. They have both been introduced from Europe, and their history in America illustrates very well the keen competition that often exists between even closely related species.

The black rat was first introduced into America about 1544. They multiplied and spread rapidly, and soon crowded out native species. How does this compare with the progress that the English Sparrow is making in America? These black-rats held the field till the introduction of the brown-rat about 1775, which in turn has practically exterminated the black-rat. Its fitness for the conditions of our country must be greater than those of the black species, and "the fittest survive."

Impress upon your pupils something of the great destruction to property by these small rodents, rats and mice. We quote some authorities on this subject:—"A single field-mouse devours in one year from twenty to thirty-six pounds of green vegetation, and a thousand mice in a meadow would require at least twelve tons annually. Damage is