

ANIMAL STUDY.

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SOME WINTER HABITS.

Our wild animals are on the whole not conspicuous subjects for nature study during the winter months. It is true that a few of the hardier sort still frequent their old haunts and are at "business as usual," but they are only a small part of all the forms that crowded their varied activities into the summer of last year.

What has become of the many forms of a few months ago? Where are they now, and how are they passing the winter? These and many other similar questions, about their food, their habits, and the rounds of their daily life, must come to the mind of every student of nature.

We have long been taught that many of our summer birds have migrated to other countries; they are living under fairer skies and enjoying the luxuries of other climes. But in a few weeks a change will be in progress; they will be returning to us, dressed in richer robes and with sweeter songs than they have ever known before. Let us make ready to greet them and mark their return.

In a list of our winter birds we find some, like the snowy owl and snow bunting, that are not resident for the whole year, but are winter migrants from the north. The robins and song sparrows that sometimes winter with us are, most likely, also northern migrants.

A short time ago a note was sent to me, asking for an explanation of the sudden appearance of large flocks of the snow bunting, during snow storms, in localities where immediately before not one was to be found anywhere in woods or fields. As an explanation I may say that I have noticed the same thing many times in my home locality, and at the same time have found that a ramble on the Grand Pré dyke meadows, only a few miles distant, will show these birds feeding on fine days in flocks by thousands. During snow storms they leave the dyke lands and are only found on the higher grounds. In parts remote from such feeding grounds, or when they are covered with deep snow, these birds are frequently found feeding in barn-yards.

Make a list of our winter birds. Where is each found? On what do they live? How does the winter plumage compare with that of the

summer? What effect does winter have upon their habits, calls, songs, etc?

Our four-footed animals do not migrate for the winter, but find advantage and protection in other ways. Some lead an active life all winter, knowing no restraint save that set by the laws of fear and hunger. Nature is kind to some of these forms, as the rabbit and weasel (ermine), and changes their coats to white when cold weather sets in. The tawny coat of summer and the white coat of winter are good examples of protective coloration, and make for greater "fitness" in these animals—and "the fittest survive."

Protective coloration is much more common among our wild animals than one might at first suppose, but there are also many other factors of "fitness" that at first consideration may seem even less obvious. How long would any particular species of our forest animals survive in the great struggle that is constantly being waged in the world, if it had to rely on protective coloration alone? The sharp eye, the quick ear, the keen scent, the fleet foot, the sharp claws or powerful hoofs, the threatening horns, the rending fangs, and cunning calculating brain, all play their part in the preservation of the different species.

Some animals like the bear, raccoon, skunk, woodchuck (ground hog), flying squirrels and bats have found an alternative for migration—the torpid sleep of hibernation is a good substitute for a trip to the south.

The subject of hibernation suggests many questions. How do such animals generally prepare themselves for their long winter sleep? How long do they remain in hibernation? How was the habit first acquired? What peculiarities do the different species show in the time, manner, etc., of their hibernation?

Bats hibernate together in numbers in hollow trees, caves, etc; they attach themselves to supports by their hind feet and hang with their heads downward. This position indicates some peculiarity in the system of veins and arteries not ordinarily met with in the higher animals. Flying squirrels are also gregarious in their