Do You Know?

Glass-like *needles* embedded in their tissues prevent many species of sponges from having commercial value.

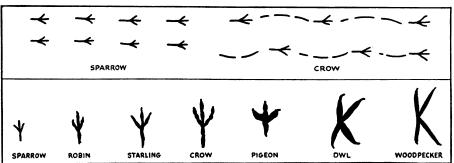
Grenada island, British West Indies, is now the world's largest producer of nutmegs; it produces about 40% of the world's total crop.

Sweden is to have a "Big Inch" pipe-line; it will carry American oil delivered by tankers to the west coast of the country across the nation to Stockholm on the Baltic sea.

There is still more productive *crop* land in the United States per capita than the average of the world as a whole, although much has been lost by erosion and poor farming practices.

Red-hot *steel sheets* are stretched longer and thinner in steel mills by passing through a series of rolls in which tension is introduced by increasing the relative speeds of the rolls in successive stands.





CALLING CARDS—Birds visiting a garden can be identified by the tracks they leave in the snow.

ORNITHOLOGY

How to Be a Bird Sleuth

Hopping birds leave a different kind of tracks from walking birds. Crows, robins, owls and pigeons all have distinctive foot prints that can be recognized easily.

➤ BIRDS VISITING your garden in search of food can easily be identified by the tracks they leave. Although such tracks can be found in sand or soil, they are seen most plainly in freshly fallen snow.

You do not have to live in the country to recognize the prints of wild creatures. In almost every garden and yard, however small, you can find the prints of a few birds, if you look for them. Visitors may come and go unknown to you, but they always leave their calling cards in the snow, states Richard Headstrom, who lectures at Boston's Museum of Natural History.

The lone print of a woodpecker at a feeding station may be a tell-tale sign that the bird made a brief appearance, but found nothing to eat and so flew off to more productive feeding grounds. The aimless tracks of a robin in the cold north may indicate the bird's dependence upon your generosity if he is to survive the winter.

Bird tracks at first look much alike, but with a little practice you can spot the all-important differences. The shape and size of the print, and the number of toes showing are characteristics which aid us in identifying bird tracks. Whether the tracks are in parallel pairs or staggered is also important, Mr. Headstrom states.

Small birds hop as a rule; thus their footprints fall in parallel pairs. Larger birds actually walk, leaving prints in a staggered line. A few birds, such as the robin, divide their locomotion almost evenly between hopping and walking.

The sparrow, a hopping bird, leaves

paired prints. To identify these from the prints of other hopping birds, note that the side toes are commonly shorter than the middle ones. The size, too, is of some help, being about an inch long.

The toes of a crow are distinctive, the middle toe being definitely nearer to the inner than the outer toe. The crow's track is about three and one-half inches in overall length, with the hind toe print about one inch long. The prints may be paired or alternate, for the crow sometimes hops and sometimes walks. When walking, the toes usually drag.

The robin's toes commonly drag and the three front toes are evenly spaced. The prints may be either paired or alternate, but they are much smaller than those of a crow, being around two and a quarter inches in all. While a starling's tracks closely resemble those of a robin, they are about a quarter of an inch longer. The tracks are usually alternate.

A four-toed print, each print bearing the mark of a claw, is left by a domestic pigeon. Owls leave the same kind of print, but whereas the pigeon turns three toes to the front and one to the back, the owl turns two to the front and two to the back. Woodpeckers also turn two toes to the front and two to the back, but their toes are more slender than those of the owl and they do not leave prominent claw marks.

With a little study, it is possible to read bird tracks in the snow as readily as words on a printed page, Mr. Headstrom states. Full details are given in *Horticulture*, official magazine of the Massachusetts Horticultural Society.

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