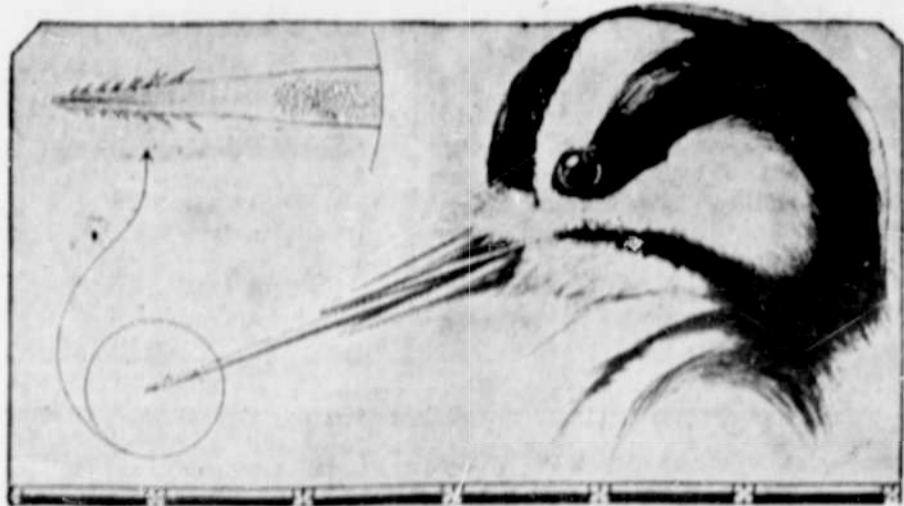


Busy Woodpeckers



A Woodpecker's Tongue is a Concealed Spear.

Prepared by National Geographic Society, Washington, D. C.—WNU Service.

SCIENTISTS have recently discovered in the dark, rain-drenched forests of Haiti a species of woodpecker which builds its own apartment house. They reported seeing a dozen pairs of woodpeckers going in and out of nests in a single dead tree trunk.

There are few birds that so satisfactorily reveal their family connection as do the woodpecker. The beginner in bird study may learn that the meadowlark belongs to the family "Icteridae" but he may be excused if he does not learn at once that the bobolink, the oriole, and the red-winged blackbird, all strikingly different in habits and color, belong to the same family. He may study the wood thrush, and be surprised to find later that the robin and the bluebird bear to it a close family relationship. But if he becomes thoroughly familiar with the appearance and activities of just one woodpecker, he will thereafter be able to recognize at once any other member of the family "Picidae" which he may encounter.

Woodpeckers are of wide distribution. They inhabit all the countries of the globe except Madagascar and the Australian region. More than four hundred species are known, and many geographical races of these have been described.

In North America the family is represented by ten genera, classified into 22 species, several of which in turn are divided into subspecies or geographical races. In all, 64 kinds of woodpeckers are recognized in continental United States, Canada and Baja California.

Sensible and Busy Birds.

Woodpeckers give the impression of being practical, sensible birds. Under ordinary circumstances, they do not show a hysterical fear of man; they are wary, but do not let that interfere with their work. They are very busy birds and most of the time are absorbed in climbing about tree trunks and limbs. They get along together fairly well. One sees few serious combats among them.

They do not possess the stately dignity of the heron, the singing powers of the thrush, or the graceful flight of the swallow. Woodpeckers do not stir the imagination to thoughts of distant lands, as does the wild goose when far overland we see him leading his flock toward the frozen pole. The woodpeckers are known rather as hard-working, substantial citizens of the bird world, rendering service which could ill be spared.

These birds possess highly specialized equipment for their business of getting a living. They are the only birds in our country that can dig holes in solid trees. As a group they pass most of their days pecking decayed trees or stumps for ants or the larvae of wood-boring beetles.

No other bird leaves behind such striking evidence of its presence. A hundred thousand warblers may migrate through a small region, and many may remain for the summer and rear their young. When they have gone, little sign of their former presence is left behind; but a half dozen woodpeckers in the same community will leave very definite evidence of their occupancy. Numerous holes in dead trees, with here and there an entrance to a nesting cavity, will all bear convincing testimony that these birds have been in the forests and the orchards of the neighborhood.

Woodpeckers nest in hollows which they dig in trees, and all of them lay white eggs on a bed of fine chips at the bottom of the cavities.

Their toes usually number four, two of them pointing forward and the others backward. This arrangement enables the birds to grasp firmly the side of a tree, and especially is this the case when they brace themselves with their twelve long, stiff tail feathers.

One Kind Goes After Sap.

The sapsucker, (a species of woodpecker), is looked upon with serious disfavor by foresters and orchardists, some variety of it being found in nearly every part of the country. This dislike arises from its universal custom of pecking holes in live trees. The bird does this chiefly to get the sap which flows upward through the soft cambium, lying just beneath the bark, or inner bark, and it also cuts the

cambium and bast. To get this food the sapsucker drills holes in rings around the tree, or, at times, in rows on the trunk or along a limb.

As the sap collects in the openings, it is consumed by the bird until the little springs begin to fall, when another series of holes is made near the first one. Thus the work continues, until large areas of the tree may be covered with these perforations.

The sapsucker will take the sap of maple, mountain ash, pear, plum, apple, cherry, oak, peach, spruce, and ironwood trees, and of almost all species of pines, firs, hemlocks, cedars, cypress or cottonwoods.

In the northern forests, where many sapsuckers spend the summer, numerous birch trees are killed annually by them. In the Northwest, where at times sapsuckers are usually plentiful, whole apple orchards have been destroyed.

In some trees, such as maples, walnuts, and hickories, their holes often pierce the sap wood beneath the cambium. In the subsequent growth of the trees, these wounds sometimes cause curly or bird's-eye wood well known to lumbermen. More often, however, this exposure of the wood allows insects, fungi, or bacteria to enter. These cause blemishes or decayed areas, which reduce in value the lumber which later may be cut from the tree.

About the rings of holes made by these birds in locusts and sycamores, shoots often sprout from adventitious buds, and thus the symmetry of the tree is marred. Not only are hundreds of thousands of trees injured by sapsuckers, but a considerable proportion of those that are attacked die either the same year or subsequently.

The woodpeckers do not confine their attentions wholly to trees. They make their explorations for sap through the bark of various large vines, such for example, as the Virginia creeper, poison ivy, rattan, and trumpet creeper.

Close about the nesting tree of the sapsucker there are various trees where the old birds go for their sap, and where they take their young when they leave the nest.

Flicker is the Best Known.

Among the woodpeckers the flicker is a bird of distinctive personality, and it attracts universal attention. Undoubtedly it is known to far more people than are the other woodpeckers. Its local names are numerous: "Wilkrissen," "yucker bird," "golden-winged woodpecker," "high-holder," "pigeon woodpecker" and "yellow-hammer" are some of them.

Of late years the custom has developed of adopting a "state bird." Already choice has been made by the organizations of 43 states, and in Alabama, not long ago, the question of which bird should be chosen created hot discussion. In the end the "yellow-hammer" was decided upon. The fight for its name was led by a woman's patriotic organization, members of which called attention to the historic fact that a company of Alabama youths had placed the bird's feathers in their caps and, designating themselves "yellow-hammers," had marched away, singing, to the Civil war.

The red-headed woodpeckers and others of the family will now and then dart down to a road or to the lawn to capture an insect, or to pick up an acorn, but when the flicker drops to the ground he remains there for some time, often until frightened away. In the woods, the field, or the garden, one may come upon him hopping awkwardly through the grass.

His chief interest at such times is ants, which constitute 50 per cent of his food. He secures them by use of his remarkable tongue, which can be thrust outward two and a half inches or more beyond the end of the bill. His tongue is at all times covered with a sticky saliva, which catches and holds the ants as they rush forward to attack what appears to be a long worm that has crawled across their path or entered their burrow.

This tongue is a very wonderful organ. In the mouth it branches, and the two horns pass up the creases of the skull. On top they meet, and close together the two parts run forward and downward over the right eye to the nostril, which they enter, and extend outward to the end of the bill.

Nature Shows Man the Way

The Most Useful and Ingenious Tools Now in Use Are All Copies; We Got the Idea for Them From Various Birds and Animals.

When you look into a box of carpenter's tools and note the extraordinary variety of instruments contained therein, do you wonder how they all came to be thought of and designed?

Necessity, as we know, is the mother of invention; but, myself, I think it more than likely that man, in making tools to serve his needs, took a leaf—and a very big leaf—out of Mother Nature's book. Man likes to pride himself on his constructive ability, but the question is—did he really invent?

Let's have a look at the world of Nature and see how many of his ideas were "original."

Picture to yourself a caveman—a big, strapping, brawny, but not very brainy specimen—looking at the ground and wondering how he can best make a hole big enough to hide the carcass of a goat which he has just pinched from a neighbor's rhode.

What he wants, of course, is a spade, but since no one had yet been clever enough to invent a spade, he has to do a bit of thinking. Next minute he sees a mole digging its way through the earth, and there, in the mole's paws, is the very model which he must copy!

There is his idea for a spade. All he needs now is a little constructive ability to run up a useful tool for digging.

We can safely presume that man fashioned most of his other implements by studying, in a similar fashion, the beasts of the field.

Few trades are older than the carpenter's, yet there were perfect chisels in existence long before these tools found a place on the carpenter's bench.

Four of the best chisels imaginable were—and are—to be seen in the jaws of the humble bunny or any rodent. And—mark this—they are much more serviceable chisels than any of our man-made imitations, because they won't wear out. The more use they get the sharper they become.

If only our chisels did the same! The world's earliest men must have got quite a lot of ideas as a result of studying the beaks of birds. The long, slender, delicate bills of the snipe and woodcock are perfect examples of natural forceps, enabling their owners to pick up tiny objects from the soft mud in which they feed.

Compare these beaks with the "modern" surgical forceps used in our big hospitals today and—well, cleanliness apart, there is not so very much difference.

The broad bills of the ducks make excellent spoons, while the crow can boast of fine "pickaxes," constructed so as to stand any amount of wear and tear.

Then the fish-eating birds, who have given man a large number of useful "tips." The heron's long beak would naturally suggest the spear, while the crooked beak of the merganser, a diving bird, provides a perfect model of a "hook."

Again, suppose you wanted to make a paddle for a canoe you had built, what better source of inspiration could you wish than the webbed feet of the gulls and ducks?

Or suppose you wanted to make a pair of snowshoes, so that you would be able to walk across snow without sinking into it; you could, surely, get a pretty good idea of what is wanted from watching how the webbed feet of some of the wading birds enable them to walk over soft mud with perfect ease!

The valiant gentlemen of the Middle Ages who invented and perfected the suit of mail, no less than the modern designers of the war-time "tank," doubtless prided themselves on their cleverness.

But what about the crab and the lobster, or—if you want a land animal—as an illustration—what about the armadillo, that strange-looking South American mammal whose fat, squat body is entirely encased in a

horn-like covering—a "suit of mail" that defies almost anything but the business end of a pickax.

One might find hundreds of such "models" in Nature, without having to go very far into the wild; but in most cases man does not make an exact copy of the natural thing, but adapts it to his own individual requirements.

There are exceptions, however. I want to show you a couple of "models" which man has copied almost exactly, without any modification to speak of.

Shoemakers use a pair of special pliers which are almost identical in shape and design with the claws of the lobster, while on many a carpenter's bench today you will see a pair which, though larger, are shaped exactly like the "pincers" affixed to the rear end of the common earwig.

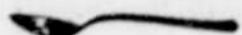
Truly there is nothing new under the sun!—Craven Hill, famous English scientist, in London Answers.

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The World's Wealth

The world's real wealth is not gold but labor in its actual results, either manual or mental.—Sir Henri Deterding.

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MEMBER N. R. A.

Bang! Bang! Bang! "Sir, your car is at the door." "Yes, I hear it knocking."

Up to Him Adversity toughens a man, but not unless he conquers it.

Whose Fault?



When a Child Won't Study

"Kept after school!" And it isn't the child's fault, or the teacher's. His mother is to blame. How can a boy get his lessons when his senses are dulled day after day by dosing with sickening purgatives? When a child's bowels are stagnant they need help, of course. But not some drastic drug to upset the stomach, perhaps weaken the entire system; or form the laxative habit. On the right, parents will find a happy solution of this problem:

Here's a boy who gets good marks, has time and energy for play. He is never ill, hardly ever has so much as a cold. When he does show any symptoms of being sluggish, his mother knows just what to do. She gives him a little California Syrup of Figs—and that is all. It's a natural, fruity laxative that is agreeable to take, and its gentle laxative action comes from senna. Parents are urged to use just pure California Syrup of Figs. Be sure bottle says "California".

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