

THE AMERICAN THRUSHES VALUABLE BIRD NEIGHBORS.

THE ROBIN, BLUEBIRD, AND OTHER MEMBERS OF THE THRUSH FAMILY ENTERTAIN WITH THEIR SONGS AND HELP THE FARMER BY EATING MANY DANGEROUS PESTS.

Prepared from data furnished by Prof. F. E. L. BEAL, *Biological Survey*.

WHEN our English ancestors first came to America they found a bird with a brown back and a red breast that reminded them of the robin redbreast so often alluded to by the British poets, and they proceeded to call the new bird by the old name. The bird, however, was not the same. Our so-called "robin redbreast" is really a thrush, although few of us would think of him as related to the sober brown wood thrush or the distinctive bluebird. The English robin redbreast is actually more like our bluebird than like our robin. The fallacy of the earliest settlers who transferred their affection from the real redbreast to our robin has been largely responsible for the esteem in which we now hold our little American bird neighbor.

The object of this transferred affection, however, is worthy of our kind consideration, as are practically all members of the American thrush family, to which it belongs. This family is one of the most prominent and widely spread of the various bird families in the United States. The birds have retiring habits and their songs are pleasing. Their plumage is modest, indeed, it is almost somber, the blue of the bluebird (most noticeable of the thrushes) being the most brilliant tint displayed by any of the family. The general character of the thrushes' plumage is a brown back with a spotted breast. The robin and the bluebird have red breasts.

Through close association with man and his works, this group of birds have endeared themselves to our rural population and are often protected merely because their presence is enjoyed. In addition, they fulfill a useful function by reducing the insect life constantly preying upon the crops.

A large part of their food, particularly of the young ones, consists of insects. Unless nature provided checks like the thrush family to keep the balance between the insect and the vegetable kingdoms, vegetation would soon be destroyed.

The thrush family is a very large one, and itself is made up of a number of smaller groups or species. These are usually well known to the farmers in the vicinities they frequent. The following are the common names for species of the well-known family of thrushes:

Robin (Pl. XV).	Veery.
Oregon robin.	Gray-cheeked thrush.
Bluebird.	Olive-backed thrush.
Western bluebird.	Hermit thrush (Frontispiece, lower figure).
Mountain bluebird.	
Wood thrush (Frontispiece, upper figure).	

THE SHYEST MEMBER OF THE FAMILY.

One little member of this family is so seldom noticed that he has no popular name. Scientists call him "Townsend's solitaire." He inhabits mainly inaccessible mountain gorges in the West, subsists largely on wild berries, and so comes into contact with man only infrequently.

ROBIN AND BLUEBIRD ARE MORE DOMESTIC.

In contrast to the "solitaire," the robin and the bluebird are the most domestic of the family. Their songs are among the earliest to announce the coming of spring, as they return to their breeding places in March or early April. The robin is found as far north as Alaska. Generally, however, he is fond of the districts east of the Great Plains, which are more thickly settled by man.

The Oregon robin is a slightly different fellow, being found westward toward the Pacific. Both robins are for the most part migratory in the northern half of this country, but some individuals remain throughout the winter in the north where shelter and food are assured. Cedar swamps where there are many berries are favorite winter resorts for the robin. The robin, and the bluebird also, habitually winter as far north as southern Illinois, and not infrequently the former remains as far north as Massachusetts or southern Michigan, if food is abundant. The robin is probably more familiarly known and has figured in our American literature to a greater extent



ROBIN (*PLANESTICUS MIGRATORIUS*)

than all other birds together. The bluebird has also come in for a larger share of attention than most of the thrushes.

The first of the thrushes to leave for the South in the fall are the wood thrush, the veery, the gray-checked, and the olive-backed thrushes. The olive-back usually stays longest in southern climes, and only makes its first appearance in the North in May.

The different species that make up the great thrush family have each developed little peculiarities of their own. These are particularly noticeable in the homes which the different species choose for themselves. The hermit thrush and veery generally build on the ground in thick cover. If possible they choose a locality near running water. Other members of the family usually build upon shrubs or small trees.

THE BLUEBIRD MOST PARTICULAR ABOUT HIS HOME.

The bluebird is the most exclusive in the matter of homes. He usually selects a place completely inclosed, sometimes moving into the cozy hollow of a tree that has been carefully cleaned out by an obliging woodpecker. He will also show partiality for dwellings rigged up by human hands for his special accommodation, as a box or birdhouse placed on a post.

The robin also likes shelter, but does not insist upon being as exclusive as the bluebird. A beam under a shed, a cranny in a wall, a cornice under a gable, or the fork of a tree usually satisfies his more democratic tastes.

THE WOOD THRUSH THE MOST OPERATIC MEMBER.

All the members of the thrush family can sing, but the most operatic of them all is the wood thrush. The wood thrush, however, is so modest that many country people who know his song do not know him by sight. His favorite time for singing is in the early evening or toward the close of a sultry afternoon, when a shower has cooled the air. At such times his song has a peculiar sweetness unlike that of any other bird. The veery and hermit thrush are also good singers.

As is usual among birds, the gayest colored members of this family are the poorest musicians. So it happens that the bluebird and the robin sing less frequently than the more somber-colored thrushes. However, they do sing, and

their notes are listened for in the early spring by country folk, who welcome these earliest heralds of warmer weather and flowers.

THRUSH FAMILY NOT VEGETARIANS.

While all the thrushes like berries and fruit, they are fonder of animal food. They are especially partial to beetles, and these make up about one-fifth of their animal diet. The bluebird members are most addicted to the beetle diet, and as many beetles are very destructive to crops, the farmer feels kindly toward these little bird neighbors that help him out.

Indeed, the diet of such a large and widely distributed group of birds is of more economic importance to man than might at first appear. Thrushes eat many other pests besides the beetle. They also eat certain fruits and berries of value to the farmer. It is, therefore, important to find out just how many destructive and how many valuable things thrushes eat in order to determine whether these birds should be discouraged or encouraged. The report of the scientists who have spent considerable time on the problem has been in favor of the thrushes.

The fruit raiser as well as the farmer may well be interested in knowing exactly what is the ordinary food of the thrushes. According to the scientists their diet is quite varied. Some idea of it may be obtained from the following menu which the average thrush would enjoy, although he would hardly sample all the items at one meal.

A THRUSH MENU.

Spiders.		Snails.		Grasshoppers.
	Ants.		Angle worms.	

BETTERLES.

(Choice varying according to thrush.)

Potato beetle.	Plum curculio.	Clover-leaf weevil.
May beetle.	Corn weevil.	Spotted squash beetle.
	Alfalfa weevil.	

CATERPILLARS.

Army worm.	"Cutworm."	Yellow bear.
Codling moth.	Yellow-necked appleworm.	Cabbage worm.

the same fondness for them as for caterpillars. The three bluebirds, which seem to be the biggest eaters, are fondest of them, and one-fifth of their food consists of this insect. Other members of the thrush family eat them only on special occasions. It is hardly necessary to comment on the harm that grasshoppers might do to crops if it were not for birds that prey on them.

The quantity of so-called "bugs" eaten by thrushes is relatively small. However, considering their undesirable quality, it is important to note this item. The chinch bug, in particular, is a most harmful enemy of the wheat crop. The black olive scale and the 17-year locust are most dangerous to fruit and forest trees, and their elimination is to be desired.

Spiders would not seem to be an appetizing food, but are fairly well liked by the thrush. About 4 per cent of the average food of the thrush family is spiders. The wood thrush, veery, and hermit thrush eat about twice the average amount, while the robin very rarely cares for spiders.

The snail naturally falls a prey to the thrush when he seeks out dark, shady nooks for a drink at some spring, and finds this tempting morsel awaiting him. The Oregon robin, however, is the only thrush that is really a snail epicure.

The fruit and berry diet of the American thrush, while it contains certain items relished by human beings, is largely made up of articles that would be very disagreeable, if not dangerous, for human consumption. The reason certain wild berries are found along farm fences, as though especially planted there, is that the original seeds were dropped by birds resting on the fences.

THRUSHES LIKE NOVELTIES IN FRUIT.

Thrushes, like many people, are fond of novelties of diet. They will eat an unusual quantity of something new, and then finally go back to their former diet, leaving the novelty alone. When certain fruits were first introduced in California the birds did so much damage to them that it was thought that the crop would be unprofitable because of them. Several years later, however, the birds settled down and bothered the orchards very little. The same thing happened when grapes were first grown in Texas. The first year the

birds gorged themselves on grapes, but later on they seemed sated with this novelty and caused little appreciable damage.

In general, the thrushes as a group do little injury to the fruit crop. These birds visit swamps and underbrush in preference to orchards and gardens when looking for fruits and berries. In some cases where cities are built up the thrush is compelled to go to orchards for its vegetable diet, as there are no wild berries.

In New Jersey it has been found that if wild berries are planted around cultivated berries the thrushes will show such a preference for the former that they will scarcely touch the latter. Some thrushes also prefer fallen fruit to that still on the trees, even though the latter is better from our point of view. Under ordinary conditions of country life wild fruits are so abundant that thrushes seldom trespass upon cultivated varieties.

Of all the thrushes the popular robin, under exceptional conditions as above described, is the greatest destroyer of fruit. It must be remembered, however, that during the earlier season he steadily works to help make that crop a possibility. When the fruit ripens, the robin has already a standing account with the farmer for services rendered, for he has been eating injurious insects and taking them in the very act of harming the tree.

SCARECROWS RATHER THAN GUNS FOR TROUBLESOME THRUSHES.

When robins are too numerous they may, of course, overdraw their account, but it is sometimes difficult to determine whether they have actually done so. They may not even be condemned for a whole year's showing, because their services to the farmer in several previous years may far more than offset the bad record of one. Also a bird that has done damage to one crop, as for instance cherries, may merely be taking his pay for protecting other crops of greater value.

It must also be borne in mind that birds may be fostered by so much human care and protection that they become so

plentiful that the available supply of insects and wild fruits will not feed them. They are then naturally forced to seek the orchards for sustenance. Under normal conditions nature arranges that when insect and berry supplies are rare the birds decrease in number; when the insect pests become more numerous the number of birds increases.

In any case, when thrushes become troublesome an effective remedy may usually be found. Devices for frightening birds are always better than those for destroying them. Scarecrows will probably frighten the thrushes from the vicinity, and certain fruit-bearing shrubs planted about the dooryard will attract them from the cultivated crops. Destroying the birds will do more harm than good in the long run.

The biologists have encountered much difficulty in determining the thrush menu set forth above. Formerly it was the custom to watch birds and make more or less satisfactory guesses as to what they were eating; now, instead, the stomachs of a sufficient number of birds are examined to enable the investigators to draw general conclusions. In some cases very strange things were found in the stomachs of thrushes. The shell of something that puzzled one investigator proved to be the jaw of a caterpillar. Sometimes an indigestible part of a vegetable would turn up which had not been eaten directly by the thrush, but by an insect which the thrush had eaten in turn. It has taken several years sometimes to determine positively that certain articles of diet are generally eaten by thrushes. The painstaking work of the ornithologists has, however, eventually given us the complete menu which is of such importance in determining the status of this bird family.

On the whole, thrushes make interesting and valuable bird neighbors to our farmers. They are a sociably inclined family, usually selecting by preference places where man has taken up his abode. Their presence and their songs are very generally welcome. Economically they are valuable little neighbors as well.