These birds are of essential value in ridding the land of mice; they are like winged cats always on the watch for their prey, and very successful they are in catching, not only mice but young rats, sparrows and beetles.

OWL PELLET.

Owls like to roost on certain trees which afford them a thick covert during the day, and beneath those trees I often find large grey pellets consisting of the fur and bones of rats and mice which it is the habit of the owls, as they cannot digest them, to reject each morning after their nightly feast.

When owls are kept as pets, their raw meat diet should include a mixture of small feathers, or fur of some kind, else the birds will not continue in a healthy state.

The frequent occurrence in their pellets of the wing cases of the dark blue dung-beetle shows that this is a favourite article of diet with the owls.

In order to ascertain the number of mice and other rodents destroyed by these useful birds, seven hundred and six pellets of the Barn owl were carefully examined, and in them were found the remains of sixteen bats, three rats, two hundred and ninety-three voles or field mice, one thousand five hundred and ninety shrews and twenty-two small birds.

We thus see that without their aid the farmer would find it very difficult to save his crops from devastation, and that these useful birds should be protected and encouraged by every means in our power.

A few years ago, when the crops in southern Scotland were threatened with complete destruction by field-rats or voles, great flocks of owls appeared on the scene, and corrected a plague which human science had proved quite unable to deal with.

### Leaf-Scars.

Now that the trees are leafless, we can readily observe the marks upon the branches called leaf-scars, which show where leaves have been.

HORSE-CHESTNUT TWIG.

Some trees, such as the sycamore, the wayfaring tree and others have opposite leaves; others produce them alternately or at varying distances and in a variety of ways; the study of leaf position is known in botany as Phyllotaxis, and it is to the individual differences in bud-growth that we owe much of the beauty of our woods.

Each tree has branches varying in form, in lightness and density, and hence arises the exquisite play of light and shade which we cannot fail to admire when trees are grouped together.

One curious fact about the horse-chestnut may easily be noted at this season. Amongst the smaller branching twigs some may be found which are almost exact counterparts of a horse's foot and leg. As shown in the illustration, there are the hoof and six or eight nail marks of the shoe, the fetlock joint and part of the leg.

According to the angle at which the twig is growing will depend its resembling a fore or hind leg. There appear to be three suggested derivations of the name of this tree. The word "horse" is a common prefix denoting anything large or coarse, such as horse-mushroom, horse-radish, horse-parsley, and so it may have been applied to this tree which grows vigorously and has large leaves. One writer, however, explains the name as being a corruption of the word "harsh," as the horse-chestnut fruit is harsh and austere compared with the sweet chestnut with its eatable nuts. There remains the third derivation arising from the curious mimicry we find in the twigs and branches, which seem to be quite a likely reason for bestowing a name alluding to the fact.

A little ingenuity in neatly cutting and trimming the mimic horse's leg will result in a woodland curio which will surprise those who have never happened to notice the shapes which horse-chestnut twigs assume.

WITCHES' BROOMS ON HORNBEAM.

### Hornbeam.

Some Hornbeam trees are attacked by a kind of parasitic fungus (*Exoascus Carpini*), which so seriously interferes with the flow of the sap that a multitude of small interlacing shoots are the result. These give to the tree in winter the effect of being laden with birds' nests.

Each year these tufts increase in size until the branches become weighed down with their unnatural burden. These "witches' brooms," as they are popularly called, occur also upon the birch and several species of pines, larches and spruce firs.

It is still, I believe, a moot question whether these unusual growths may not be the work of a gall fly instead of a fungus, and here is a field for the ingenuity of a young observer to exercise itself upon.

### Ventriculites.

Those who have access to a chalk-pit may like to know that the long slender flints so often to be found there are singularly resonant.

If two flints are attached by a piece of string and struck against each other whilst held suspended in the air, they emit a sweet ringing sound almost like that of a bell.

Certain fossil sponges called ventriculites may also be found amongst chalk *débris*; they are usually met with in two pieces, having snapped asunder at the narrowest part; but by putting the upper and lower halves together we may easily imagine how they looked when growing on some sea-shore countless ages ago.

VENTRICULITE IN FLINT.

VENTRICULITE IN CHALK.

RESONANT FLINT.