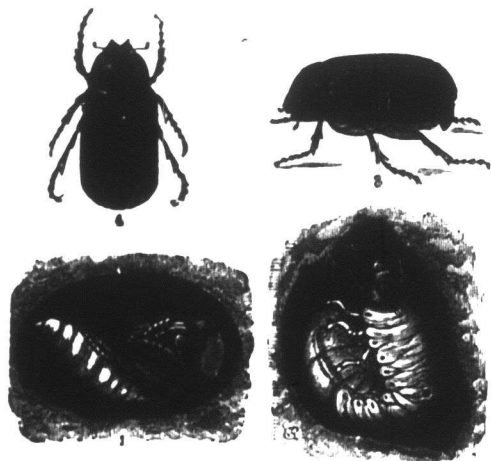


FERNDALE SCHOOL.

No. XVIII.—THE JUNE BEETLE.



LACHNOSTERNA FUSCA (Fröhl).

TEACHER.—What is this?

CHORUS.—The May-beetle—the June-bug—the Cock-chaffer—the May-bug.

T.—Is it a bug or a beetle?

S.—It is a beetle, because it has two hard wing-covers, which are raised up when it goes to fly in order to let the thin flying wings be used.

T.—At what time of the year may we expect it?

S.—About the first of June. In the evenings they fly against the windows, and if the window is open they come in with a great buzzing and fly about, hitting whatever may be in the way, and sometimes get entangled in somebody's head-gear, causing a great sensation, especially if ladies are present.

T.—Very good. It is a beetle, and in this country it generally makes its appearance about the first of June. June-beetle is, therefore, its most appropriate name. Let us describe it. Its length is—

CHORUS.—Nearly an inch.

T.—Its color—

CHORUS.—Blackish—brownish; its wing-covers are shining brownish black, and its legs tawny yellow, with yellowish hairs.

T.—It flies about—

CHORUS.—At night.

T.—They feed upon—

CHORUS.—Leaves of trees—the cherry, the plum, the lombardy poplar, the oak.

T.—Now, let us follow its life-history. The female is supposed to place its eggs—which are small white specks, smaller than the head of a pin—between the roots of the grass. When the egg is hatched, what do you suppose the grub feeds upon?

S.—Upon the roots. They turned up ugly white grubs when they were ploughing our pasture land. Were the bugs the larvæ of the June-beetle?

T.—Very probably, but they live in the ground for at least two or three years before they are mature. Figure 2 shows the full-grown larvæ in its burrow beneath the sod, eating the rootlets coming within its reach.

S.—It must live on its back if it is going to browse on the ceiling of its room.

T.—Quite true. Sometimes they are driven out of their burrows by a rain storm, and it is a very strange sight to see them making their way over hard, smooth ground on their backs. They move along by the successive contraction of the rings of the body.

S.—Some of them eat holes in our potatoes in the field.

S.—Some of them were eating the roots of our strawberry plants. The white grub was turned up with the spade just where the roots were eaten.

T.—Very likely; all true. I have heard of a ten-acre pasture having the sod withered and nearly completely severed from the soil below by this grub. But they are not often so numerous.

S.—Won't the frost kill them?

T.—They go down deeper into the earth in winter, and when mature they pass into the pupa stage, figured at 1. This oval little cave is nicely lined with silk. The warmth of May causes the pupa to develop, so that about the first of June the *imago* comes out, and when they are numerous the buzzing noise made by the beetles is something astonishing.

S.—What can be done to prevent their increase?

T.—Man can not do very much more than to turn up the soil and expose the grubs to the view of insectivorous birds, etc. But in addition to the action of wet and freezing weather in destroying them, there is a small four-winged, wasp-shaped fly called *Tiphia*, which places its own eggs in the body of the grubs, which are thereby destroyed.

A fungus looking like two whitish roots or horns are often found growing out from near the head, one on each side, of unequal length generally, and sometimes three, four or even more inches in length. This vegetable parasite appears sometimes to be very destructive to them.

[NOTE.—At the last meeting of the Institute of Natural Science of Nova Scotia, Mr. Harry Piers exhibited several specimens of the larvæ of *lachnosterna fusca*, from Arichat, Cape Breton, which were affected with this fungus. The two fungous horns were not so long as the dimensions given above. The fungus is probably *Torrubia Melolonthæ* (Tulasne). *Torrubia Taylora*, which grows from the caterpillar of a large moth in Australia, is probably one of the finest examples of the genus. There are several insects known to be affected by certain species of this genus in Central America, South America, West Indies, New Zealand, etc.—ED.]