84

to those originally collected for breeding. Westwood, in his 'Modern Classification of Insects,' (vol. 1, 238), states respecting the larva of an allied species (A. obscurus) which, in Europe, feeds upon the roots of wheat, rye, oats, barley and grass, that according to Bjerkander, a Swedish naturalist, 'it is five years in arriving at the perfect state.' Curtis, in his 'Farm Insects,' (page 16,), makes a similar statement upon the same authority, and adds that those which he had himself fed for ten or twelve months scarcely increased in size during that time. As already stated, however, I am of opinion that our species is by no means so long lived, but that it attains maturity in three years, a period quite long enough, the agriculturist must think, in which to inflict damage upon the crops."

Fig. 53 shews the larva or worm magnified to about twice its natural size, and Fig. 54 the chrysalis under and upper side, also magnified—the hair line between them gives the natural size.

The perfect beetle is about seven-twentieths of an inch long, the body black, punctured with minute dots, and covered with very short hair, the head is large and black, the antennæ and feet reddish.

Adelocera is a genus comprising rather large beetles of a roughish, and often frosted, or rusty, appearance. Their larvæ feed in decaying wood and are generally found upon stumps, trees or fences.

The last genus which I shall mention here, viz.:—*Pityobius*, is remarkable from having twelve-jointed antennæ, which in the males are beautifully bi-pectinate; that is they have on each side spines, or branches, projecting from the joints. There are only two species known in Canada—*P. anguinus*, and *P. Billingsii*—and the beetles are exceedingly rare, while but little is known of their habits.

P. anguinus "is of a dull black colour, with short brown hair." *P. Billingsii* (named after its discoverer, the late Mr. Billings, of Ottawa), has rich and rather glossy black elytra, longitudinally lined, and wider than the thorax. The head and thorax are also deep black but are roughened; the legs and under parts are less black. The head is nearly square above; the eyes are very prominent, being far more conspicuous than in any other of our elaters, which I have seen.

The specimen now before me is about one and a quarter inches long and is decidedly the handsomest click-beetle in my collection. It is probably the second specimen captured and the only one now in a Canadian collection. The larva of this beetle lives in decaying wood, for I found a pupa almost in the heart of an old rotten log, two years ago. Unfortunately the wood in which I kept it was allowed to become too dry, and in consequence the elytra never expanded properly and the specimen was destroyed.

Let me conclude with a few words of advice, which have often been spoken by others, but which will bear repeating. Every farmer and gardener will consult his best interests by paying close attention to all the insects which he finds about his land, and by striving to learn something of their habits. When a strange insect or larva is discovered, endeavour to place a specimen in the hands of the nearest entomologist, who will be always glad to inform you whether its habits are injurious or beneficial to plant-life, or, if they are unknown to him, to try and find out what they are.

THE PLUM CURCULIO (Conotrachelus nenuphar).

BY B. GOTT, ARKONA.

[Figure 55 represents this insect in its various stages, a the larva, b the chrysalis, c the perfect beetle all magnified. The hair lines at the sides slow the natural size.]

For some considerable time past I have closely watched the operations of this familiar insect, and my only apology for bringing again this hackneyed theme to the notice of the public, is that the growing importance of the subject appears to demand it. I purpose to shew in this paper that our fruit is at present in more danger from the depredations of this insect, than from any other single enemy operating on it. Notwithstanding all that has been said and written about this pest, and the good advice which has been given for its destruction, yet comparatively little is done systematically F bud when it of drawing u and remainin twentieths to longer than th Its colour is thor ax is une middle the of 1 band of ochre-y have frequent plums as soon as some say, u cent-like incisi an egg in the

hausted, so tha is some differe a season, but 1 emerging from Its relatic affected more of

of plum, apric grown. We c the fruit, for w a crescent shap the young and its nutritive ju loosens its holo by the larva fo maintained its the fruit is kep and enters at o waits in obscur

Its rapid i rapidly over (meeting of the served that " A full force; and will be by and increasing in 1 this fact has b even the peach,

So far as w insect enemies. c[°] two parasite