

and transform to beetles about September, but do not come out until the following spring. This long larval stage accounts for the fact that in some localities the beetles only appear once in three years. (Fig. 17).

The grubs, when fully grown, are thick, fat creatures, white in color—hence their name—with the body partially curled up and the last segments discolored from the food showing through the skin. When an old pasture is broken up they live for a time on the grass and roots that have been turned under and then attack whatever plant may

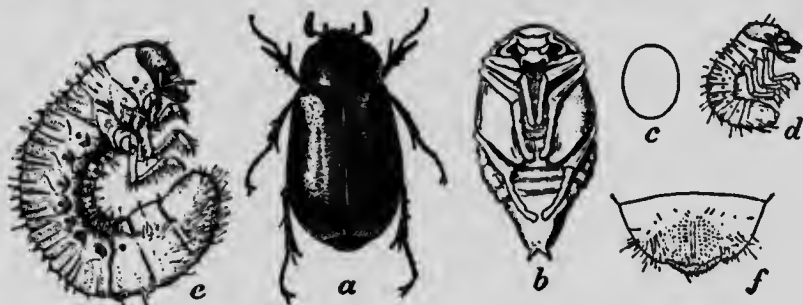


Fig. 17. White-grubs: a, beetle; b, pupa; c, grub; d, pupa
(Chittenden, U.S. Dept. Agric.)



Fig 18. a, Wire-worm;
b, Click-beetle.

be grown. The first and second crops usually suffer most, especially strawberries and corn; clover is least affected by them and may be seeded down with rye, then small grains followed by corn or potatoes. Late and deep plowing will break up the winter quarters of the grubs and beetles and expose them to frost and also to the various animals that prey upon them. Pigs and poultry greedily devour them; crows and other birds and skunks also destroy large numbers when they can get access to them.