

Click Beetles (Elateridae)

By: Art Antonelli and Jenny Glass, WSU Puyallup REC

The Elateridae family of beetles contains many farm and garden pests- such pests are particularly prevalent in Eastern Washington. Normally in Western Washington, click beetles only create problems when pasture or weedy or unmaintained land is turned into crop land or a garden spot. The pasture-like habitat is an ideal breeding ground for the larvae, which are called wireworms. When this kind of land is planted to crops, undeveloped wireworms found on the site begin feeding on vegetable plants and can wreak havoc for several years. Several newly introduced wireworm species, first observed in the Fraser River Delta of Southern British Columbia, pose a serious threat to certain crops grown in Western Washington.

Adult click beetles (Fig. 1) are elongate, variable in size, somewhat flattened in appearance. The color of the beetles is usually dark brown or black, though a few species are brightly colored or metallic-looking. This family of beetles has several features that aid in their identification.



Fig. 1. Adult click beetle

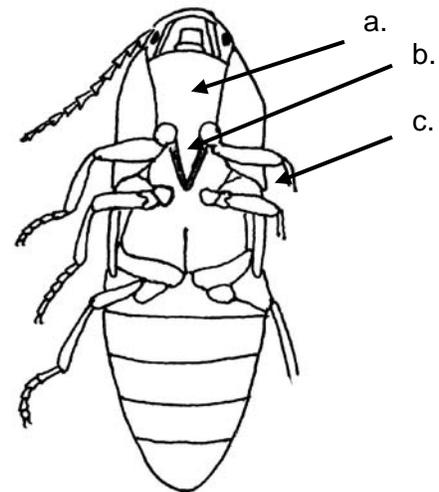


Fig. 2. Ventral view of an adult click beetle (a. sternum; b. sternal spine; c. backward pointed pronotal spine.).

First, the pronotum (first thoracic segment behind the head) has pointed or extended spine-like rear corners (Fig. 2c); second, they have an unusual spine and groove arrangement (Fig. 2b) under their body that enables them to “click” and jump. In other words, if a click beetle is placed on its back on a flat surface it can snap and somersault itself right side up. Also click beetles have eleven (usually) serrated (saw-like) antennal segments.

Click beetle larvae or wireworms are somewhat hard-bodied, elongate, and often yellowish brown to brown in color. The terminal abdominal segment on many species is somewhat spatulate or flattened and “toothed” or spiny (Fig. 3).

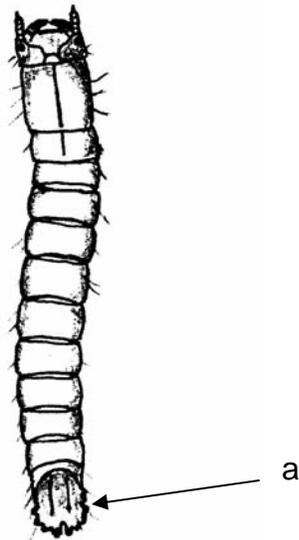


Fig. 3. Wireworm larva (note the flattened toothed terminal abdominal segment– a).



Fig. 4. Wireworm damage to potato

Adult beetles are often found on flowers, under bark, in rotten wood and are often accidentally brought into the home on firewood.

These beetle larvae are pests of cereals and vegetables including corn, potatoes, and beets. Wireworms burrow into and feed within tubers like potato (Fig. 4). They will even burrow into fruits that are touching the soil (Fig.5). Oddly, a few wireworm species are predacious against other insects- one species seeks out and destroys white grubs.



Fig. 5. Wireworm in tomato fruit

Management: Currently, homeowners need to manage wireworm problems through cultural and mechanical methods as no pesticides are registered for wireworm control in home gardens. For example, wireworm problems (and other pests) may be anticipated for the first few years after creating a new garden spot from ground that was once pasture-like situation. To eliminate some of the problem, consider extensive rototilling or soil prep to physically destroy wireworms or expose them to birds and other predators. Allowing the site to be fallow for a year may also result in starvation of many of the wireworms in the soil

References:

- Arnett, R.H. 1971. *The Beetles of the United States*. The American Entomological Institute, USA. 1112 pp.
- Triplehorn, C.A. and N.F. Johnson. 2005. *Borror and DeLong's Introduction to the Study of Insects*. 7th Edition. Thompson Brooks/Cole. 864 pp.