

Cyphocleonus achates

Knapweed Root Weevil

Weed(s) Attacked: Diffuse and Spotted Knapweed
SCNWCB February 2006

GENEALOGY

Original sources for U.S. release was Austria, Greece, Hungary, and Romania. First U.S. releases made in 1988. Now established in Colorado, Montana, Oregon, and Washington. There are populations established in Stevens County.

LIFE CYCLE

In Stevens county, overwintered adults emerge from the knapweed roots mid to late July and into September. Mature adults are up to 20 mm long. They feed on younger leaves if available, leaves, and tissue from the stems. Females place a single egg in a chewed out hole on the root crown just below soil level. She may produce more than 100 eggs in her lifetime. Adults die before winter. When the eggs hatch the larvae begin tunneling into the knapweed roots. The larva overwinters in the root.

EFFECT

The larval root tunneling severely damages the weed. Adults eat above ground plant parts.

REDISTRIBUTION

This agent does not fly and spreads slowly if not manually redistributed. Not easy to spot in the field due to it's mottled color and habit of sitting perfectly still. When disturbed they often drop to the ground. Best chance to see and collect them is in the heat of the day. To collect, quickly bend the entire plant over into a collection net or pan. It is harder to hand pick them. They have a powerful grip but do not bite. For making a new release 50 adults is considered a workable number. A new colony stands the best chance of survival and establishment at new sites which are dominated by Diffuse Knapweed, spaced enough (1-2 feet) to allow the soil to become hot and dry. South facing slopes and/or large open fields of knapweed are best. A site free of disturbance (including development, traffic, herbicides, and regular grazing) increases the chances of establishment.

COMMENTS

The year 2000 marked the beginning of an effort to distribute this agent in Stevens County. Although *Cyphocleonus achates* is an excellent agent once established, it's inability to fly to new weed patches is a drawback. Therefore, the seed head weevil *Larinus minutus* (a strong flyer) has proven to be a more valuable natural enemy against Diffuse and Spotted Knapweed.

