

Metzneria paucipunctella

Knapweed Seed Head Moth

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

GENEALOGY

Original source for U.S. release was Switzerland. First U.S. releases were made in 1980. Now established in Idaho, Montana, Oregon, and Washington. In Stevens county 10,600 adults were released between 1986 and 1990. This agent is established in Stevens county, but is not very important.

LIFE CYCLE

Larvae which have overwintered inside the seed head pupate into adults in May. Adults are small moths about 7 mm long. They only fly at dusk and are rarely seen. Starting in June females lay between 60 and 100 eggs on the flower head. Eggs are reddish-brown, oval, less than 1mm long, and turn yellowish as they mature. Hatched larvae crawl into the opening flower head and begin to consume the contents. Larvae are aggressive and kill each other, and other larva in the seedhead. Generally, only one larva survives per seed head to start overwintering. Good snow cover increases the chances of larval survival for the winter.

EFFECT

In a single seedhead a young larva will consume a few seeds and reduce the viability of surviving seeds as it mines the seedhead receptacle. The older larva will web seeds together, preventing dispersal.

REDISTRIBUTION

Adult moths in the field are seldom seen or collected. The better method is to collect seed heads in early spring from sites where you have confirmed the presence of pupa and/or larva.

COMMENTS

Although Metzneria larvae kill one another, and other larval species in the seed head, it is thought the best possible impact occurs when Metzneria shares the knapweed patch with two gall fly species: Urophora affinis and Urophora quadrifasciata. Adult Urophora gall flies are everywhere in Stevens county. The distribution and density of Metzneria in the county is unclear. It is likely they are being supplanted by the much more important agent Larinus minutus. If other knapweed agents are absent, the impact of Metzneria and the two gall flies are minimal.



Metzneria paucipunctella pupa (left) and larva (right)