

## Winter Moth, *Operophtera brumata* – An Alien Invasive Species



Originally from Europe, the Winter moth came to Nova Scotia in the 1950s and to the Pacific Northwest in the 1970's. In each case, a decade long outbreak has been successfully and permanently controlled by the introduction of a tachinid fly, *Cyzenis albicans* also from Europe.

These parasitic flies successfully caused the collapse of high density populations of Winter moth. Since the 1980s, the Winter moth has been kept nicely in check by this little fly.

This year, the Winter moth population seems to be on the upswing. Fluctuations in Winter moth have been seen before in the 1990s. Questions are being asked as to whether this is normal in the cycle of the insect or if something has put the Winter moth out of synchrony with its fly parasite.

The City of Victoria is cooperating with Dr. Imre Otvos of the Canadian Forestry Service and Dr. Joseph Elkinton of the University of Massachusetts to further understand these fluctuations in Winter moth populations.

Not all trees are attacked by Winter moth. This insect particularly favours broadleaf trees such as oaks, fruit trees, horse chestnuts, elms, maples, lindens and other ornamentals.

The Winter moth adults emerge from pupae in the soil under the trees in the fall after the first cold spell, generally after Halloween. The female, pictured above, is wingless and crawls up the tree trunk into the crown of the tree to lay her eggs. A good way to disrupt this cycle is to place a sticky band at about 1.5 metres (5 feet) above the ground around the trunk of the tree to trap the females, to prevent them from laying eggs.



The City's Parks Division offers a fall workshop for the public to learn how to band their trees to manage Winter moth.

Populations of Winter moth observed in Victoria this year are not sufficient to damage healthy trees. Victoria is working with researchers to understand these population fluctuations. Fall banding of Winter moth susceptible trees on residential properties is a good management method.