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**THE ARBORVITAE WEEVIL, *PHYLLOBIUS INTRUSUS* KONO,
A NEW INTRODUCTION TO BRITISH COLUMBIA**

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The arborvitae weevil, *Phyllobius intrusus* Kono (Coleoptera: Curculionidae) was recently discovered infesting ornamental cultivars of *Thuja occidentalis* (cv. Pyramidalis, Emerald) in a nursery near Langley. This represents the first known occurrence of this Japanese weevil in western North America. The arborvitae weevil was first recorded in North America at a Rhode Island nursery in 1944. It is now generally distributed throughout the northeastern United States and has recently been found in Quebec. Larval feeding on roots may seriously weaken trees and maturation feeding by adults on the new flush causes light scorching of the foliage.

DISTRIBUTION AND HOSTS

Phyllobius intrusus was identified from samples submitted by a retail nursery producing ornamental *Thuja* near Langley, B.C. in May 1994. All field grown *T. occidentalis* examined at this nursery were infested with adult weevils. The nurseryman had observed adult weevils in the nursery over the last three years. During limited surveys in May 1994, the arborvitae weevil was also found on *T. occidentalis* up to 5 km from the original discovery site, but was not found on stock at a large nursery producing ornamental cedar near Chilliwack.

The arborvitae weevil is known to feed on various ornamental cultivars of cedar (arborvitae), cypress and juniper including the following species: eastern white cedar, *Thuja occidentalis*; Chinese arborvitae, *T. orientalis*; Japanese arborvitae, *T. standishii*; Hinoki cypress, *Chamaecyparis obtusa*; Sawara cypress, *C. pisifera*; Chinese juniper, *Juniperus chinensis*; Greek juniper, *J. excelsa*; and eastern red cedar, *J. virginiana*. The suitability of native Cupressaceae (western red cedar, *Thuja plicata*; yellow cypress, *Chamaecyparis nootkatensis*; common juniper, *Juniperus communis*; and Rocky Mountain juniper, *J. scopulorum*) as hosts for this weevil has yet to be determined in British Columbia.

LIFE HISTORY AND RECOGNITION

The arborvitae weevil overwinters as a larva in the soil among the roots. Pupation occurs in April and May with adult emergence occurring May. The life cycle in eastern North America indicates that adults are likely to be present in southern British Columbia from early May through late July, with the majority of the adults being found in May. Adults feed and mate on the tips of the new flush and are capable of flight. Eggs are laid in the soil at the base of the host plants and hatch within 2-3 weeks. A mature larva is a white legless grub about 6 mm in length. The larvae pass through 7 instars while feeding on the roots.

The adult weevil is approximately 6 mm in length and light metallic green in color. Newly emerged and aged adults may appear black.

In eastern North America this weevil is most abundant in older plantings of susceptible hosts. Surveys for this pest should be conducted in established plantings of native *Thuja*, *Chamaecyparis* and *Juniperus* species as well as on ornamental hosts. It is not known if adult arborvitae weevil will feed or oviposit on containerized western red cedar or yellow cypress seedlings grown for reforestation.

Adult weevils may be submitted to the following address for identification.

ATTENTION: Insectary
Natural Resources Canada
Canadian Forest Service
Forest Insect and Disease Survey
506 West Burnside Road
Victoria, B.C. V8Z 1M5

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