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**A CONIFER SEEDLING WEEVIL
IN BRITISH COLUMBIA**

by

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Introduction

The seedling weevil, Steremnius carinatus (Boheman), (Coleoptera: Curculionidae) was considered a scavenger until 1961, when it was recognized as a pest of coniferous plantations and natural regeneration in coastal British Columbia.

Adult weevils may feed on newly planted seedlings, and may frequently cause mortality of economic importance. Losses in recent years have become more significant with the increased rate of forest planting and reduction in seedling density in the new plantations.

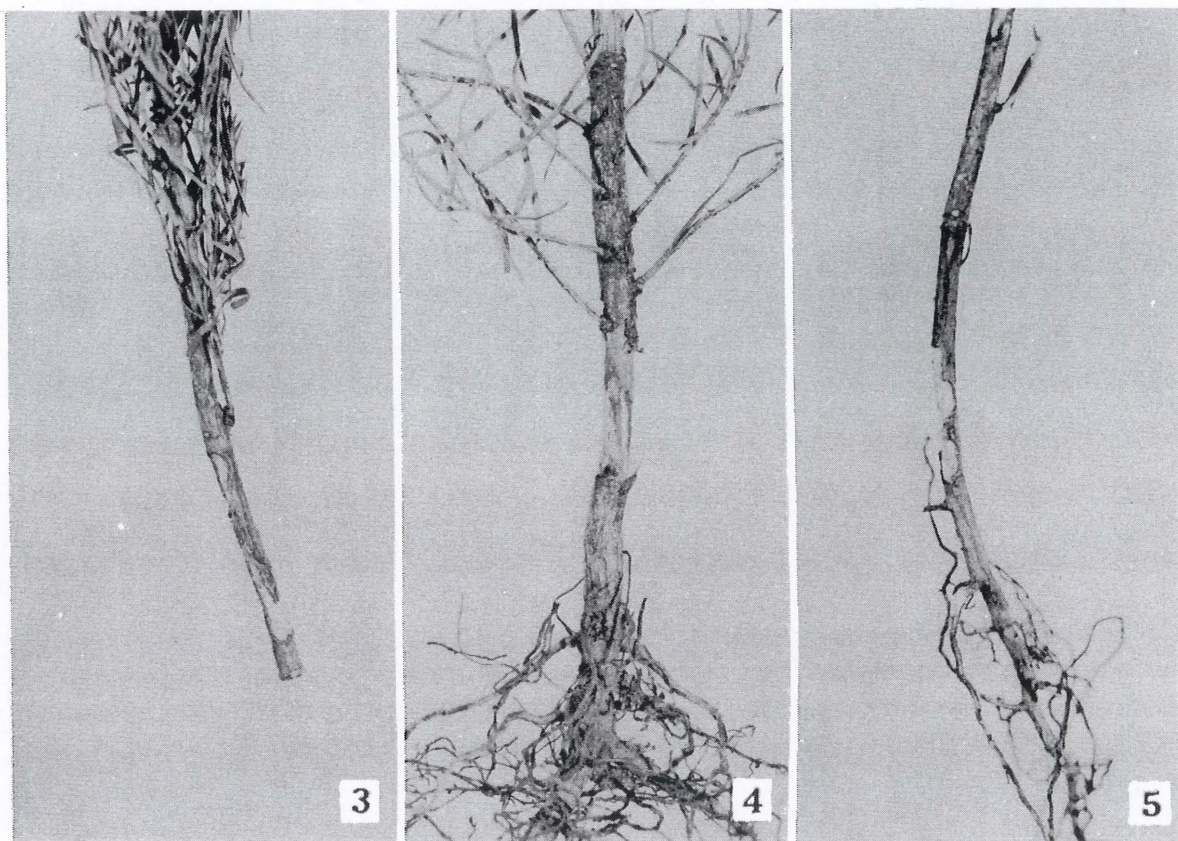
Hosts and Distribution

These weevils normally feed in the undisturbed forest on ground vegetation, coniferous foliage on the ground and other detritus. In logged-over areas they feed on the stems of Douglas-fir (Pseudotsuga menziesii (Mirb.) Franco) plantation seedlings, and on natural regeneration Sitka spruce (Picea sitchensis (Bong.) Carr), western hemlock (Tsuga heterophylla (Raf.) Sarg.), western red cedar (Thuja plicata Donn) and some other softwood species.

S. carinatus is found on the Pacific Coast from Alaska to California and in the interior wet-belt areas of British Columbia. Damage has been recorded in plantations on damp, cool sites on Vancouver Island and the Queen Charlotte Islands.

Description

- Egg: The egg is smooth, white, elliptical, and approximately 1 mm long.
- Larva: The larva is white and grub-like with a brownish head; about 9-10 mm (3/8 inch) long when full grown.
- Pupa: The pupa is about 10 mm long, is initially white, turning dark with development; snout and legs are discernable.
- Adult: The adult (Figs. 1 and 2) is about 6-9 mm (1/4 to 3/8 inch) long, cylindrical with a tapered body, rough, ridged, brick-red to brown or yellowish, with a prominent snout. It cannot fly since the wings are undeveloped.



Steremnius carinatus Boh. Figs. 3, 4, and 5. Douglas-fir nursery stock showing characteristic feeding damage caused by adult weevils.

Douglas-fir plantation seedlings younger than 2-0 stock are attacked more frequently and damaged more severely than older seedlings. In some plantations 40 to 60% of the seedlings have been attacked and about half of these girdled. Little damage occurs after the first growing season following planting because of increased age of seedlings and availability of ground vegetation.

Larvae feed in the phloem of stump roots and buried slash.

In the spring or autumn indications of weevil numbers on a particular site may be obtained by trapping them, using bundles of freshly peeled conifer bark, dipped in an approved insecticide, and placed on paper towelling in the shade. A total catch of 30 or more weevils in 10 traps over a two-week period indicates a potential hazard.