



# Timber Talks



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## WATCH FOR SEEDLING WEEVILS!

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The forest economy of British Columbia is dependent upon a continuous supply of wood and the ability to successfully compete in highly competitive world markets. To accomplish this the forest should be managed in accordance with principles that are silviculturally and economically sound. Planting of denuded areas is now accepted as an integral part of sound forest management. In British Columbia, this has increased enormously during the past decade, and density of planting reduced to that considered adequate for satisfactory sustained stocking. Such practices necessitate that further reduction in stocking be minimal and that agents causing seedling mortality be controlled. Investigations have shown that a weevil, once considered a mere scavenger, can become an important pest to coniferous seedlings in the coastal forests of B. C.

The adults are yellowish or brown, except when young, and unable to fly. Eggs are laid in niches chewed under bark scales of roots of wind-thrown trees or in buried logging slash. The larvae make irregular galleries in the phloem, and pupation takes place in the sapwood. Douglas-fir and Sitka spruce are the preferred hosts, and brood and insect development is better and mortality less on areas exposed to the sun than in the shade.

Although the weevils eat a variety of plants and fruits that contain starches and sugars, they have a preference in food. The phloem of the stems of attacked plants is chewed just below and above ground level, resulting in complete or partial girdling. Coniferous seedlings, natural or planted, sustain considerable damage but it is usually ameliorated when ground vegetation is plentiful. Seedlings of less than 2 years are often completely girdled, but older plants are usually only partially girdled. In some areas, 40 to 50 percent of planted seedlings and natural regeneration have been infested and about half the seedlings succumbed to the attack. The extent of damage seems dependent on the distance from the breeding material, the insect's preference for organic soil and debris, and conditions associated with feeding.

The change in the status of this insect from a scavenger to an economic pest is related to the practice of large-scale continuous logging, preceded by right-of-way construction that provides an excellent breeding environment. The expanding reforestation program and the loss of natural regeneration makes it important that there be no reduction in number or vigor of seedlings. Although predators and competition for food help to reduce insect populations, forest management practices can further limit damage. Planting should be done immediately after logging and burning. Areas considered hazardous, due to their proximity to favourable breeding habitats, should be planted in the Spring and with seedlings of less preferred ages.