



# Timber Talks



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## SHOULD SITKA SPRUCE BE PLANTED?

No. 25

Except in the Queen Charlotte Islands, Sitka spruce in British Columbia is attacked by the Sitka spruce weevil. Height growth is retarded and leaders often killed, resulting in forked tops and crooked boles. The economic loss has only been estimated but it is undoubtedly serious. Control of this pest is a formidable task and to develop a program to reduce the loss, the life history of the insect and the effect of its attack were studied and methods of control investigated.

The adults, reddish-brown weevils about 1/4" in length, emerge in early Fall from holes chewed in tree leaders, feed on branch terminals and over-winter in the duff. The following Spring they emerge to resume feeding and shortly afterwards lay eggs in holes bored just beneath the terminal buds. After the small yellowish-white larvae hatch, they mine and feed down the terminal shoot until pupation in mid-summer.

Early recognition of an attack is that the current year's terminal shoot is curled or has a shepherd's crook. In late summer the shoot becomes yellowish, red or brown. Small holes in the bark near the top of the previous year's terminal also indicate a new attack, but they are difficult to detect. Evidence of previous attack is multiple and forked leaders; trees subjected to repeated attacks are often bushy and stunted. Trees, whose leaders exceed 16" in length and 0.3" in diameter, are favoured hosts and those that have been previously attacked are very susceptible to re-attack.

Natural mortality of Sitka spruce weevil broods is high but ineffective for an infestation. Most important is the reduction of larvae by predation and the drowning of eggs and larvae by pitch flow stimulated from egg and feeding punctures, but neither factor affords adequate control. Repeated hand-spraying of terminal branches with an aqueous solution of 5% and 1% D.D.T. or 5% Phosphamidon is effective but impractical for extensive infestations. Aerial applications of these sprays, and possibly others, would probably provide effective and economically sound control and warrants consideration. Until this insect can be effectively controlled, the establishment of Sitka spruce plantations in British Columbia seems questionable, except on the Queen Charlotte Islands.