



Timber Talks



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ALLURE OF FEMALE BEETLES

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The Spruce Beetle is a potential hazard to the mature spruce forests of British Columbia. Endemic attacks are mainly confined to freshly wind-thrown trees and to logging slash, to which the insects have been attracted by wind-dispersed natural odours that emanated from the woody material. In some instances, the logs become more attractive after an initial attack. The secondary attractiveness is from an odour produced by the "pioneer" beetles. This phenomenon of insect attraction suggests a means of control. Large populations of insects might be directed into traps, particularly if the secondary attraction following entry of the first beetles can be prolonged throughout the whole flight period. The effect of attack by unmated spruce beetles on log attractiveness was investigated.

At six locations and under forest shade, six short logs were placed on separate wooden trap boxes. Newly emerged female spruce beetles were introduced into three logs. Two were sprayed with 0.1% lindane solution, although the areas where the insects were introduced were protected by a plastic covering; the third log was protected from natural populations by a wire screen. The other three logs were sprayed with lindane, protected with a wire screen or left untreated. Test logs and traps were examined weekly and the number of beetles and galleries counted.

Most beetles were caught in trapping units where female beetles had been introduced. The number caught increased when the number of introduced beetles were increased and again when the logs were sprayed with lindane solution. The attractiveness of logs with introduced female adults persisted throughout the whole flight period; logs without introduced females were attractive only during the initial flight period. Male beetles predominated in all traps during the early part of the flight but later approached a 1:1 sex ratio in untreated logs.

Well distributed traps with a secondary attractant may be a way of removing the large number of beetles required to successfully attack large areas of trees. Such measures of control must be efficacious and inexpensive. Synthesized secondary attractants will undoubtedly become available but knowledge must be attained on their use in natural environments. Wind-thrown trees and logging slash will continue as breeding sites but where such material is sparse and insect populations large, traps could be effective.

REPORT: Attractiveness of logs containing female spruce beetles, Dendroctonus
obesus (Mannerheim) (Coleoptera: Scolytidae). E. D. A. Dyer and
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