The process techniques used were developed by Lemin et al (For. Sci. 6: 306-314, 1960) for use in similar studies on western white pine (*Pinus monticola* Dougl.). Macerated Douglas fir foliage, when treated with methylene chloride, gave excessive amounts of residue which was reduced in amount through the addition of reagent grade acetone. Only that portion of the residue soluble in acetone was used in chromatographic separation. Aliquots of extracts 0.1 ml in volume were spotted on Whatman No. 1 paper and 0.005 ml of a solution of crystalline Actidione (cycloheximide) in methanol was spotted on the same paper as a standard. Papers were equilibrated overnight in a chamber saturated with a 1:1:2 mixture of benzene, methanol, and distilled water and were developed with the upper phase of the mixture as the solvent. Developed chromatograms were air-dried, placed on an agar tray previously inoculated with the yeast assay organism, and incubated overnight at 30°C. The agar trays showing inhibition caused by cycloheximide were photographed immediately after incubation.

The results of the experiment showed that detectable amounts of Actidione may be found in the foliage of trees 192 days after being stem-treated with concentrations of Actidione as low as 100 ppm. Evidence of upward translocation of the antibiotic was found in the upper foliage extracts of all trees sampled the first day after spraying.

Some trees failed to give positive results. These failures, occurring in 25 per cent of the sampled trees, have been attributed to differences in translocation rate and pattern between trees as shown by Hendrickson and Vité (Contrib. Boyce Thompson Inst. 20: 353-362, 1959) and to dissipation of the antibiotic prior to sampling. One-half of the negative results occurred in samples taken after 4 months and the remaining half were interspersed with positive results throughout the earlier sampling periods.

The data indicate that Actidione, applied to the stems of Douglas fir trees under 20 years of age will, in the majority of cases, be translocated to the foliage and persist for at least six months.—L. C. Weir.

Pine Butterfly Infestation in Interior British Columbia.—A localized infestation of pine butterfly, *Neophasia menapia* Feld., was discovered in a discrete open stand of ponderosa pine in the summer of 1962 at Okanagan Landing, Vernon, B.C. This is the first known pine butterfly infestation in the interior of British Columbia; several have been recorded in Douglas fir at the Coast. The Okanagan infestation blanketed some 400 acres of lightly timbered hill-side facing eastward onto Okanagan Lake. Excepting several trees, defoliation in 1962 was barely noticeable; on the other hand production of adults and eggs was tremendous. The number of eggs per cluster ranged up to 30, with an average of 7.6 and mode of 12. A sample ponderosa pine tree, 14 inches d.b.h. and 40 feet tall, bore about 26,000 eggs on the old foliage and almost 25,000 eggs on the new foliage.

The majority of eggs overwintered successfully and hatching began late in May, 1963. The larval population was extremely large but severe defoliation did not become apparent until the first week in July; by that time some 100 acres of ponderosa pine 2 to 14 inches d.b.h. had been almost completely stripped of needles. By June 28, pupae were present; by July 9, male butterflies were in flight. By mid-July butterflies were flying about the infested trees in spectacular numbers.

The population in this stand of marginal ponderosa pine may decline because of the current unfavourable weather conditions and reduction in the available foliage. Nevertheless a good population probably will persist in 1964 around the periphery of severe infestation and it is predicted that some tree mortality will occur.

Some dispersal of adults beyond the infested stand occurred late in July on hot, calm days and this could result in an increase in the number of infestations.—D. A. Ross.

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O. H. M. S.

DOUGLAS C. EIDT,
FOREST ENT. & PATH LAB.,
CANADA DEPT. OF FORESTRY, (3-6)
COLLEGE HILL, L-205
FREDERICTON, N.B.

DEPARTMENT OF FORESTRY
OTTAWA