The pitch moth population is extremely large as indicated by the proportion of attacked trees in the stands and the intensity of the attacks on individual trees. Forty-five fresh pitch nodules and approximately as many old nodules were counted on one tree of 12 inches d.b.h.

The moths lay their eggs on that portion of the stem within the crown, all or parts of which are eventually girdled by the larval tunnels in the cambium. As the top dies, the moths continue their activities in the green part of the crown. The entrance to the irregularly shaped tunnel is usually indicated by a pitch nodule. Where trees offer little resistance to attack, the entrance may be indicated by the presence of webbed larval castings. At the time of the inspections only late-instar larvae were found.

Because of the frequent association of the pitch moths with blister rust, it is difficult to separate those symptoms attributable only to the attacks of the pitch moths. Infested trees, however, generally exhibit all or some of the following symptoms: (1) yellow, sparse, stunted foliage; (2) red foliage on a section of the crown or on individual branches; (3) spike-top; (4) pitch nodules and resinosis.—J. Walters.

***Root Rot of Douglas Fir.***—A root disease, similar to yellow ring rot caused by *Poria weirii* Murr. on western red cedar, is causing considerable localized damage to young stands of Douglas fir in British Columbia. Preliminary sporophore examinations have been undertaken to ascertain the relationship between the two diseases. Results of these investigations may be summarized as follows:—

*Sporophores on Douglas fir.*—Fruit bodies abundant in the fall of occasional years on the base of logs and upturned stumps, not usually forming until the wood is in a final stage of decay, common on the coast while sparse to absent in the interior, annual, soft and pliable when fresh, rigid and fragile when dry, separating readily from the substratum; tubes 2-6 mm. long; pore surface coarse to moderately smooth, deeply cracked in old specimens; pore mouths angular, thin-walled, entire, 4-6 mm.; spores smooth, hyaline, 2.4-3.4 x 4.6-5.4μ; setae abundant, 2.7-9.3μ diameter, tapering to a point, projecting up to 60μ above the basidial layer.

*Sporophores on western red cedar.*—Fruit bodies very abundant in the interior but relatively sparse on the coast, perennial up to a maximum of 15 years (commonly 6 to 8 years), separating readily from the substratum; tube layers 1-4 cm. thick, definite subicular mat between each layer, tubes 2-8 mm. long each season; pore surface fine, occasional deep cracks when dry, pore mouth angular, thin-walled, entire, averaging 3-5 per mm.; spores smooth, hyaline, globose to subglobose when young, ellipsoid when mature, 3.0 x 5.6μ; setae abundant, tapering to a point, projecting well above the basidial layer.

With the exception of viability and regional distribution, it is apparent from the above that no significant differences have been found to date between the sporophores of the fungus on Douglas fir and *P. weirii* on cedar.—G. W. Wallis.

***Pole Blight of Western White Pine.***—Of the nine fungi most frequently isolated in 1949 and 1950 from white pines affected by the pole blight, only a species of *Leptographium* (syn. *Scopularia* Preuss, and *Hantzschia* Awd.) was found capable of producing lesions similar to those associated with the disorder. Since that time, ten other fungi have been tested in inoculation experiments. None of these have shown ability to produce any of the pole blight symptoms. Although *Leptographium* sp. has been isolated more consistently from lesions occurring on pole-blighted trees in the interior of British Columbia, than has any other single organism, the frequency of isolation has been low. The fungus has been isolated from only 24 of the 304 lesions sampled. The lesions were collected for culturing from the stems of 123 trees. Since the discovery of a disorder similar to pole blight in the coastal region of British Columbia in 1951, the fungus has been isolated from 100 of the 132 lesions on 27 trees sampled in this region.

Inoculation experiments have been undertaken in the interior and coastal regions to determine the role played by the *Leptographium* sp. in the pole blight complex. Of the 149 trees between 40 and 100 years of age inoculated during the past three years, none have developed any of the crown symptoms attributed to pole blight. All have developed resinosis above and below the points of inoculation, indicating the presence of lesions. In many cases the number of lesions present as a result of inoculation was more numerous than that found on diseased trees. Up to this time, the short-term inoculation experiments on white pine with *Leptographium* sp. have indicated that: lesions similar to those found on pole-blighted trees are produced by the fungus; trees from 1 to at least 175 years of age are susceptible; roots and all parts of the stem are susceptible; trees are susceptible at all times of the year: wounding is necessary for entrance for establishment of the fungus; individual isolates from the interior and coastal regions may vary somewhat in pathogenicity but there are no consistent differences between those from one region as compared with those from the other.

The above isolation and inoculation studies indicate an association of the *Leptographium* sp. with pole blight. In the light of data obtained through current studies and from previous analyses of affected trees, however, there is considerable doubt that this fungus is the sole cause of the disorder.—A. K. Parker.

## CORRECTION

Our attention has been drawn to an error in the article *"Damage to Red Pines by the Saratoga Spittle bug"* by L. A. Lyons, Vol. 8, No: 6. Sentence 1, paragraph 2, reads as follows: "Adult spittle bug feeding... results in shortened growth during year of attack and sometimes death of subsequent shoots." The author has pointed out that "Adult feeding does not result in shortened growth during the year of attack; shortened growth does not appear until two years following the year of attack". —Editor.

EDMOND CLOUTIER, C.M.G., O.A., D.S.P., Queen's Printer and Controller of Stationery, Ottawa, 1953.