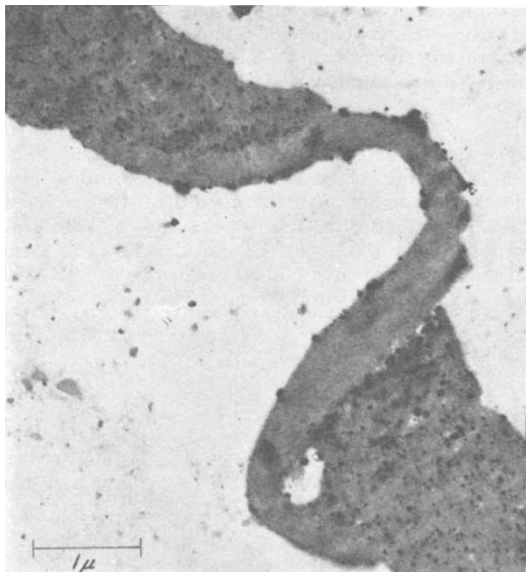

Fig. 3. Bordered pit torus of loblolly pine after treatment with hydrofluoric acid with less than 0·2 per cent carbohydrate remaining. The torus is in the aspirated state, slightly stretched and composed primarily of lignin. (× *c.* 16,000)

constituents of the tenuous parts of the original primary walls disappear but are retained in the torus.

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* Operated by the Forest Service, U.S. Department of Agriculture, in co-operation with the University of Wisconsin.

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Laboratory Culture of *Dacryomyces deliquescens* (Duby)

SPOROPHORE material of the lignicolous basidiomycete *Dacryomyces deliquescens* was collected from sites in Warwickshire. The material was washed repeatedly in sterile water and then transferred to standard malt agar slopes maintained at room temperature.

The implants grew to form a pale orange-buff mycelium with an irregular surface on which numerous small convex protuberances were frequently developed. Circular oidial areas, pigmented deep orange, were later formed on these upgrowths. Microscopic examination confirmed the presence of oidia of normal size in large numbers together with small conidia (oidia, 12–15 × 2–4μ; conidia, 2μ diameter).

Oidial sporophores in culture have frequently become larger and more convoluted than those encountered in the field. Similar cultures to the same stage have been developed on slopes of standard prune and potato–dextrose agar.

In 2 per cent aqueous malt medium, implants have grown to form a buff-yellow mycelium which has later developed a surface pellicle with orange oidial areas. Growth on stronger media of this type has resulted in the formation of a firmer pellicle and oidial sporophores of similar form to those developed on malt agar.

Growth to the oidial sporophore stage has been observed on sterilized twigs of pine, holly and lilac which were kept suitably moist following inoculation with mycelial material from malt agar cultures. Fructifications obtained in these wood cultures have been implanted on malt agar slopes and subsequent growth has shown typical development to the same sporophore stage.

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Ammonium as an 'Attractant' for a Soil Nematode

IN a recent report[1] it was shown that *Rhabditis oxycerca*, a nematode which feeds on bacteria, was 'attracted' to colonies of certain soil fungi and actinomycetes, as well as bacteria, on agar plates. Culture filtrates of most of the organisms tested of the latter two groups caused a similar effect with this nematode as well as with another bacterium-feeder *Caenorhabditis briggsae*[2]. The medium used in these experiments contained yeast extract and peptone and the reaction of most of the fluid cultures was *p*H 8·0 or over, suggesting ammonia production, as was indeed found to be the case. Tests were then initiated to determine whether ammonia itself would influence these nematodes. The method of testing was as follows: 12 ml. sterile 1·5 per cent Difco agar was poured into Petri plates, and excess moisture allowed to evaporate at room temperature for 3–4 days. The plates were each flooded with 1 ml. 1 : 10,000 merthiolate solution and kept for 24 h at room temperature so that the germicide was completely absorbed by the agar. A drop of the medium, culture filtrate or other solution was placed on the agar near the edge of the plate, and after this had dried additional drops were added as desired, to increase the concentration of the test substance at the point of application. Water or uninoculated medium applied on a spot about 1 in. away from the test solution served as control. A nematode suspension[1] was placed at the edge of the plate opposite the two spots. The live nematodes moving at random over the plate were observed to accumulate, often very quickly, on the area containing the 'attractant' as shown in Fig. 1.

Bacteria and actinomycetes were grown on a glycerol–peptone–yeast–extract salts medium on a shaker at 26° C for 2 and 7 days, respectively. After the cells or mycelium had been removed by filtration the *p*H of all the filtrates was adjusted to 7·2 and drops placed on the water agar as described here. A solution of ammonium chloride containing 50 mg/ml. was used in a similar manner either alone or mixed with the uninoculated culture medium.

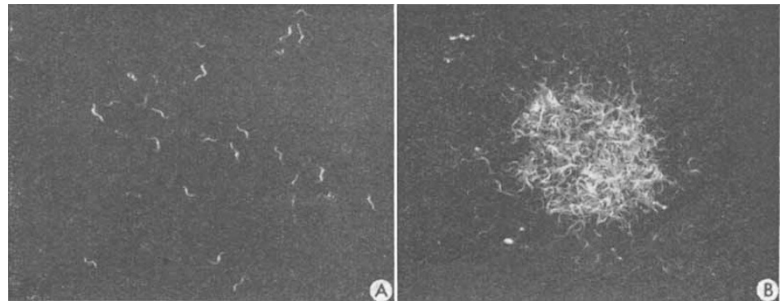

Fig. 1. Accumulation of *Rhabditis oxycerca* on areas of agar containing *A*, culture medium; *B*, culture filtrate of a soil actinomycete