2. Conners, I.L. 1967. An annotated index of plant diseases in Canada. Can. Dep. Agr. Pub. 1251. 381p.

3. Creelman, D.W. 1967. Summary of the prevalence of plant diseases in Canada in 1965 [1966]. Can. Plant Dis. Surv. 47: 31–67.

NEWLY RECORDED FUNGI FROM COLONIAL BENTGRASS IN COASTAL BRITISH COLUMBIA

D.J. Ormrod, E.C. Hughes[1], and R.A. Shoemaker[2]

During a routine laboratory examination of a turf disease specimen some difficulty was experienced in detecting a known pathogen which might account for the visual symptoms of damage.

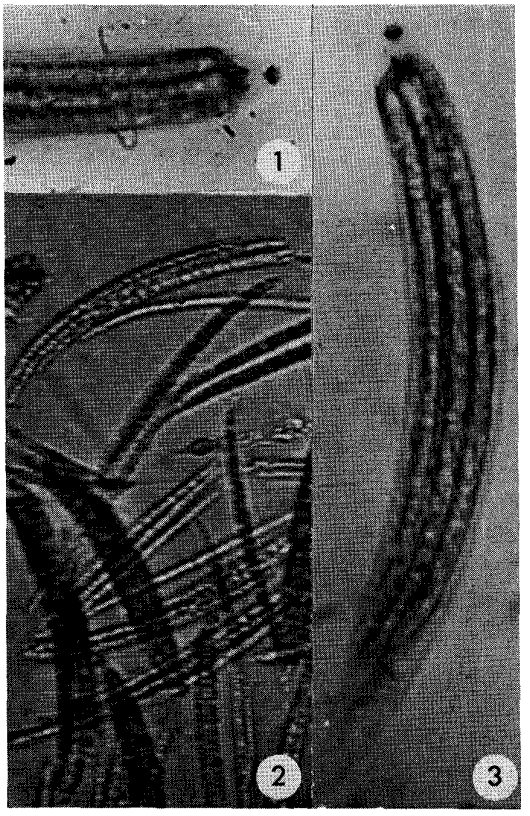
The over–all appearance of the disease, in a home lawn in Delta, B.C., corresponded to ophiobolus patch (Gaeumannomyces graminis (Sacc.) v. Arx & Olivier ≡ Ophiobolus graminis Sacc.), a disease which is common in Western Washinqton and which is believed to be common in the Fraser Valley of British Columbia, although not officially recorded (1,4). The symptoms of the disease were the same as Ophiobolus patch, namely depressed, circular areas of straw colored grass ranging from a few inches to several feet in diameter with the centres of the larger patches eventually filling in with coarse grasses and broad–leaved weeds (2).

Detailed laboratory examination of the samples received in June, 1970 failed to reveal the presence of G. graminis. As a result, further samples were o tained in July and August, at which times information on the history of the lawn was obtained.

The lawn was established as part of a new landscape project in the spring of 1969. A mixture of Kentucky bluegrass (Poa pratensis L.), creeping red fescue (Festuca rubra L.), and 'Highland' colonial bentgrass (Agrostis tenuis Sibth.) was used. Balanced fertilizer, hydrated lime, and sugar beet seed cleanings, as a mulch, were added and the lawn grew well until September of 1969 when the disease first appeared. No fungicides were applied and by the summer of 1970 large areas of the lawn were virtually destroyed.

During the laboratory examination, it was found that bentgrass comprised over 90% of the turf, the other grasses having been decimated by the close–mowing regime. Thus, the disease was primarily affecting Highland colonial bentgrass (Agrostis tenuis Sibth). Kentucky bluegrass and creeping red fescue were among the species which recolonized the centers of the patches.

In the last sample, after many fruitless searches, G. graminis was found. It matched the description given by Dickson (3) (Figs. 1–3).



Figures 1–3. Gaeumannomyces graminis. Figures 1 and 3. Asci stained with ink to show apical ring, DAOM 19596, X1000. Figure 2. Asci and ascospores, DAOM 133679, X ca. 450.

Various other fungi were found in the samples. Two, in particular, were noted because they had not been seen previously in numerous investigations of this kind over the past few years. These have been identified as Leptosphaerulina australis McAlpine, DAOM

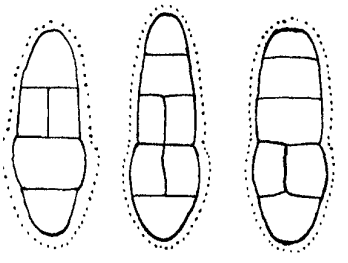


Figure 4. Leptosphaerulina *australis*, DAOM 116550, ascospores, X1000.

[1] Plant Pathologist and Field Crops Specialist, respectively, British Columbia Department of Agriculture, Surrey, B.C.

[2] Plant Research Institute, Canada Department of Agriculture, Ottawa, Ontario.

130612 (Fig. 4), and Robillarda agrostidis Sprague (Mycologia 31:47. 1939), DAOM 130613 (Fig. 5). This is the first Canadian record

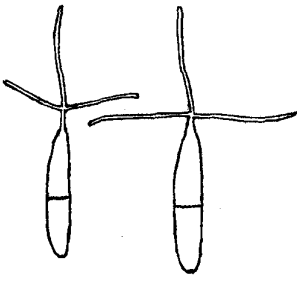


Figure 5. *Robillarda* ogrostrdrs, DAOM 130613, conidia, X1000.

of the latter and the first published record of the Leptosphaerulina although there are Canadian herbarium specimens: DAOM 116550, bowling green grass (? Agrostis tenuis Sibth.), Kamloops, B.C., H.S. Pepin, 27 July 1967. DAOM 124546 isolated from Bromus inermis Leyss., leafspot, Saskatoon, Sask., J.D. Smith, 28 Sept. 1968.

The role of these two fungi in the overall disease syndrome is unknown. Robillarda agrostidis is listed as causing leaf rot of colomial bentgrass in Oregon (5). As the seed used on this lawn was grown in Oregon, the source of inoculum would appear to be self-evident.

Literature cited

1. Conners, I.L. 1967. An annotated index of plant diseases in Canada. Can. Dep. Agr. Publ. 1251. 381 p.

2. Couch, H.B. 1962. Diseases of turf grasses. Reinhold Publication Corp., New York. 289 p.

3. Dickson, J.G. 1947. Diseases of field crops. McGraw Hill Book Co., New York. 429 p.

4. Toms, H.N.W. 1964. Plant diseases of Southern British Columbia - a host index. Can. Plant Dis. Surv. 44:143-225.

5. U.S. Department of Agriculture. Agricultural Research Service, Crops Research Division. 1960. Index of plant diseases in the United States. U.S. Dep. Agr. Handbook 165. 531 p.