

“SOFT-ROT” IN A WOOD SAMPLE OF DICRANOSTYLES: A RECTIFICATION

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SUMMARY

Peculiar slit-like apertures in the walls of the fibre tracheids of *Dicranostyles mildbraediana* described in a previous paper, were recognized by the co-author as the result of a ‘soft-rot’ fungal attack. Consequently these structures are not a characteristic feature of this species.

In my paper on the wood structure of *Dicranostyles* (1969) I described and figured a peculiar feature of the walls of the fibre tracheids in the sample of one of the species, *D. mildbraediana* (Tessmann 4069). The numerous large irregular slits in the walls gave the impression of helical sculpturing. I had great difficulty in interpreting this structure, which did not occur in any of the other species. Therefore I am much indebted to Dr. Jutte, to whom I showed the sections and macerations and who immediately suggested that the large slits were due to attack of the wood by a “soft-rot” fungus. During her stay at Imperial College, London, she had an opportunity to study a sample of the wood by various methods. Her results run as follows:

“A further study of longitudinal sections in polarized light revealed that the helical structure showed a strong resemblance to the destruction pattern caused by “soft-rot” fungi. These fungi give a spectacular destruction because they make characteristic cavities with a regular geometrical form in cell walls following the direction of the cellulose microfibrils.

With the aid of the scanning reflection electron microscope it was found in radially split splinters that the fibre walls were indeed heavily attacked by “soft-rot” fungi, the cavities giving rise to helical sculpturing of the secondary wall (*fig. 1*). In some of the cavities fragments of the hyphae were still present towards their pointed ends (*fig. 2*).

It is clear that in the ordinary light microscopy this type of corrosion can easily be misinterpreted as helical sculpturing.”

From the foregoing it is obvious that the unusual structure of the fibre tracheids of *D. mildbraediana* is not of any systematic significance, and therefore this species fits quite well with the other species studied.

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Fibre tracheids of a wood sample of *Dicranostyles mildbraediana* attacked by 'soft-rot' fungus.
 Fig. 1. Cavities in the walls follow the direction of the cellulose microfibrils $\times 2000$.

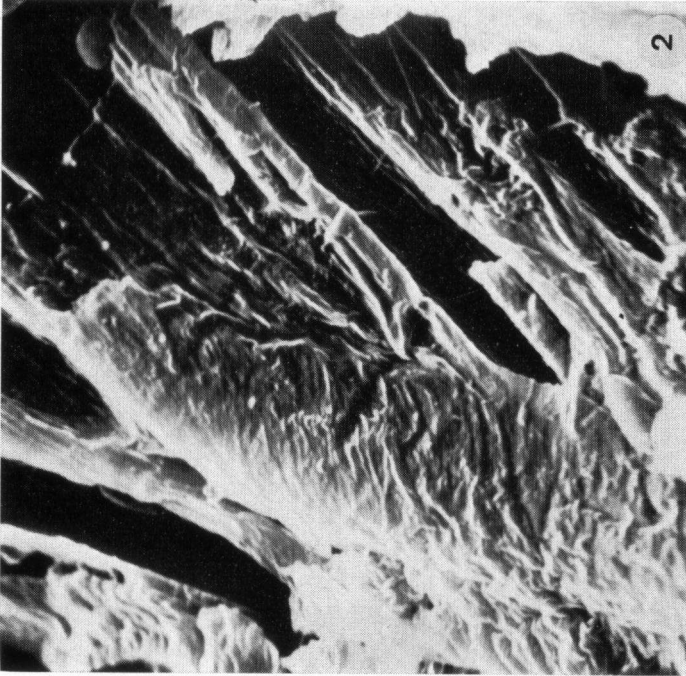


Fig. 2. 'Soft-rot' destruction in the secondary wall, showing the characteristic pointed ends of the cavity, in which a hypha fragment is still present. $\times 5500$.

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