

## Mildew on Oak Tree

I love trees. About 15 years ago I planted an oak sapling in our small garden behind the house. The only space available was between two large spruce trees, a poor choice, admittedly. For years the small sapling struggled to “reach the sky”, grew long and thin. Then one of the spruce trees became heavily infected by a virus that caused its needles to become red, die off. It had to be cut down, much to my chagrin. Suddenly the small oak tree found itself in bright light, it prospered and grew to be, by now, about 10m tall, with a trunk 6cm diameter at the base. The predominant West winds give it its peculiar one-sided shape (Pict. 1).

Unfortunately, its lower leaves are annually severely infected by mildew, *Ericiphe althoides*. My particular oak tree is an English or European White Oak *Quercus robur*, particularly prone to mildew infection (Pict. 2). The leaves become unsightly white and dry (Pict.3 and 4). They do not drop, though, as a matter of fact, the leaves on this tree remain on it till spring, before they eventually fall off.

I took an affected leaf off to examine it closer microscopically. To do this I installed the epi-condenser IIC on my Zeiss Photomicroscope, inserted an Epiplan HD 16, and my Nikon Coolpix 995 by means of the Leitz Periplan 10x/18 eyepiece on the phototube (Pict. 3 and 4). The uneven curved surface of the leaf made it impossible to obtain an evenly sharp picture, but the spidery web of the multi-cellular fungus ( *hyphae*) can nevertheless be clearly seen (Pict. 5 and 6).

Wikipedia proved again a useful source of information on this subject. For example, that spraying the tree with a 1:10 mixture of milk and water will discourage the growth of the fungus, if applied in time. I shall try this next year before the leaves are fully developed (of course, I shall not be able to reach the upper part of the tree).

Despite the mildew infection my oak tree seems to prosper to my great delight.

Please refer also to *Micscape* Issue 313 April 2022: Powdery Mildew, by Jennie Lawrence, whose article I found after I had decided to write mine.

Pict. 1



Pict. 2

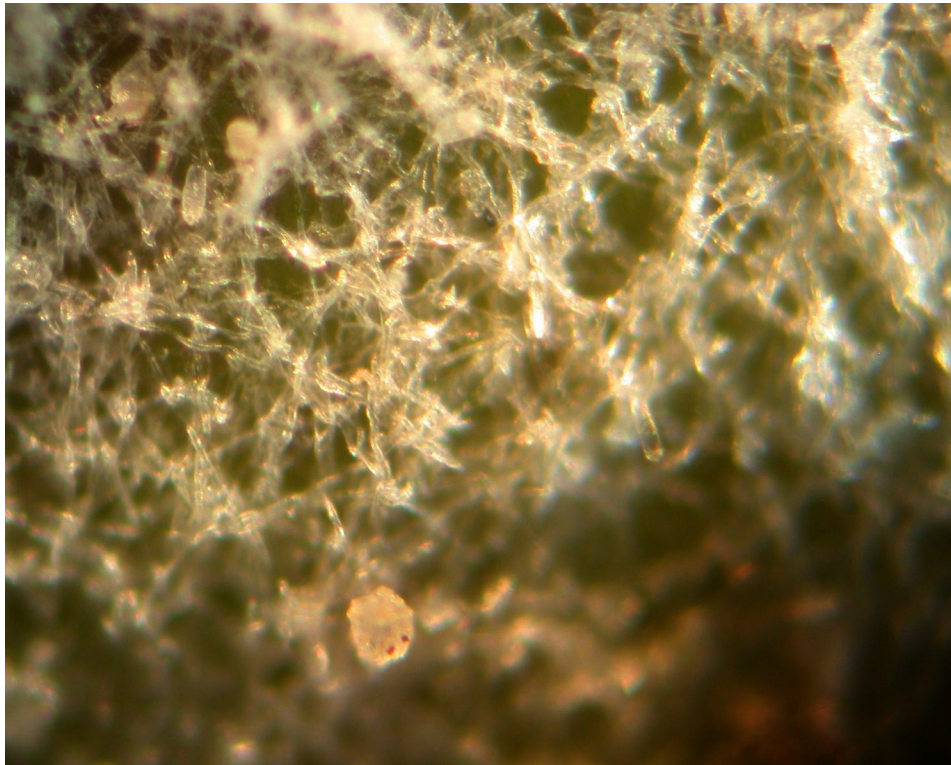


Pict. 3

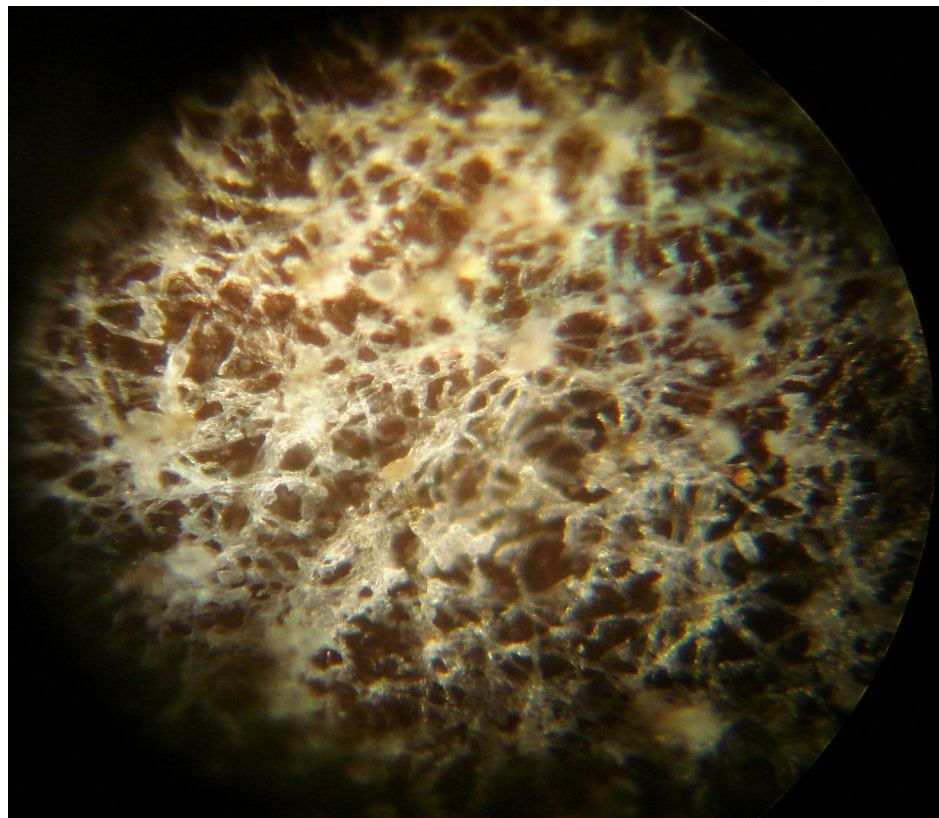


Pict. 4





Pict. 5  
(ca.260x)



Pict.6  
(made with  
Sony Cybershot 7.2  
held over eyepiece)

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