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NEW DISEASE REPORT

# *Armillaria mellea* can infect the perennial weed, *Rumex obtusifolius*, in the UK

J. S. West[a]*, C. Hughes[b] and R. T. V. Fox[b]

[a]*IACR – Rothamsted, Plant Pathology Department, Harpenden, Herts, AL5 2JQ, UK;* [b]*Horticulture and Landscape, The University of Reading, Reading RG6 2AU, UK*

*Armillaria mellea* is a common pathogen of trees, woody shrubs and some herbaceous plants, causing root, root-collar and butt rot (Fox, 2000). On examination of a wilted broad-leaved dock (*Rumex obtusifolius*), growing on the edge of woodland, near Reading, UK, in 1994, the main root and root-collar region was found to be colonised with mycelial fans, typical of *A. mellea*. Rhizomorphs were found in the soil adjacent to the plant. The mycelium was isolated onto Malt Extract Agar and its identity was confirmed to be *A. mellea*.

To fulfil Koch's postulates, 10 potted dock plants were each inoculated with an isolate of *A. mellea* by placing colonized sections of hazel (*Corylus avellana*) branch (≈ 6 cm long by 2·5 cm in diameter (West, 2000)) adjacent to the tap root of the plants. Additionally an isolate of *A. ostoyae*, which is a serious pathogen of coniferous trees, was tested against 10 similar plants. After 7 months, the foliage of most plants (7 out of 10, for both isolates) was observed to be wilted or senesced. Examination of the roots and collar region of these plants showed extensive rotting and fans of white mycelium confirming infection by *Armillaria*. All other plants also had infected roots but, as the infection had not yet reached the root collar, the foliage had not been affected.

*A. mellea* and *A. ostoyae* were also found to infect artificially inoculated docks in field conditions.

Broad-leaved dock is a common perennial weed of short-term leys and permanent pastureland. Salmon (1923) had noticed that '*Armillaria mellea*' (at that time '*sensu lato*' – which in Britain was a complex of several species) spread from an apple tree to brambles (*Rubus* sp.) and docks (*Rumex* sp.) but the species of dock was unknown and it was not reported whether the docks were killed. Our study confirms that there is potential for docks to assist the vegetative spread of both *A. mellea* and *A. ostoyae* across pasture or other treeless habitats and into woodlands in a similar way to that proposed for *Epilobium angustifolium* by Klein-Gebbinck *et al*. (1993).

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*E-mail: jon.west@bbsrc.ac.uk
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