This article was downloaded by: [University of Glasgow]
On: 05 October 2014, At: 00:19
Publisher: Taylor & Francis
Informa Ltd Registered in England and Wales Registered
Number: 1072954 Registered office: Mortimer House, 37-41
Mortimer Street, London W1T 3JH, UK

Transactions of the Botanical Society of Edinburgh

Publication details, including
instructions for authors and
subscription information:

<http://www.tandfonline.com/loi/tped18>

Notes on Recent Experiences with Dry- Rot

Dr. James Hunter F.R.S.E.

Published online: 29 Nov 2010.

To cite this article: Dr. James Hunter F.R.S.E. (1905) Notes on Recent Experiences with Dry-Rot, Transactions of the Botanical Society of Edinburgh, 22:1-4, 106-109, DOI: [10.1080/03746600509480336](https://doi.org/10.1080/03746600509480336)

To link to this article: <http://dx.doi.org/10.1080/03746600509480336>

PLEASE SCROLL DOWN FOR ARTICLE

Taylor & Francis makes every effort to ensure the accuracy of all the information (the "Content") contained in the publications on our platform. However, Taylor & Francis, our agents, and our licensors make no representations or warranties whatsoever as to the accuracy, completeness, or suitability for any purpose of the Content. Any opinions and views expressed in this publication are the opinions and views of the authors, and are not the views of or endorsed by Taylor & Francis. The accuracy of the Content should not be relied upon and should

be independently verified with primary sources of information. Taylor and Francis shall not be liable for any losses, actions, claims, proceedings, demands, costs, expenses, damages, and other liabilities whatsoever or howsoever caused arising directly or indirectly in connection with, in relation to or arising out of the use of the Content.

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing, systematic supply, or distribution in any form to anyone is expressly forbidden. Terms & Conditions of access and use can be found at <http://www.tandfonline.com/page/terms-and-conditions>

NOTES ON RECENT EXPERIENCES WITH DRY-ROT.

By Dr. JAMES HUNTER, F.R.S.E.

(Read 12th December 1901.)

It is not to be understood that the present brief paper is given as an intended addition to the already voluminous technical descriptions of the biological characters of either the *Merulius*, the *Telephora*, or any of the fungi already so well known to be connected with the peculiar form of decay in timber generally called dry-rot. Neither is it my present purpose to recount, even in epitome, a selection of the various "cures" for this pest, which have, at one time or other, been suggested by either those who consider themselves best qualified, as so-called "scientists," or as so-called "practical men," connected with buildings, etc., to deal with this matter.

Till but recently, I must confess, my own interest in this subject was merely academical, having simply made myself acquainted with some of the fungi in question for purely educational purposes. I may, however, mention that for some months past my attention has been drawn to by no means trifling "outbreaks"—if one may call them so—of dry-rot in my neighbourhood, some of which have been the cause of very considerable loss, so that my microscopical acquaintance with *Merulius* became renewed. With this I should have, possibly, been contented, so far as scientific interest went, but, as it turned out, circumstances so arranged themselves as to furnish me with the rather questionable convenience of a home-study of this interesting subject. Fortunately the occurrence of the destructive agency in question was confined to a piece of timber of a structure standing in my garden at a considerable distance from the house I occupy. Perhaps it might be said that—instead of retaining that single beam in its place (though the process of decay was ostensibly limited to but a very small portion of it) and attempting, as I did, any means to destroy the vitality of the attacking fungus by way of experiment or otherwise—my best plan would have been to remove at once the faulty piece of wood entirely.

In effect I practically did so, by so isolating it that no contiguous piece could become affected by direct contact during the time I have allowed it to remain for the sake of experiment. Had the structure been part of a valuable building I should, no doubt, have acted otherwise. The affected beam being however one of a few newly added parts, while the older parts were very hard, sound, and well protected with paint, the experiments were, under the circumstances, so far excusable.

They were these—The mycelia of the fungus, which showed only the white cottony filaments forming the early stage of the “pileus” were, as tested by cutting, confined to quite a superficial layer along one edge which was exposed and perfectly accessible, quite characteristic. These mycelia were first carefully removed, and the underlying surface of wood repeatedly soaked on successive days with a strong solution of copper sulphate. The “hymenium,” with its characteristic wrinkling and rusty spores, not having been developed, I concluded that the chances of the fungus spreading (should it do so) to other timbers would only take place by burrowing of the mycelia. This process of repeated soakings with the saline solution, with thorough drying in the intervals—the ventilation being very perfect—was continued for some weeks before the “curative” part of the experiment was concluded by coating the piece of wood upon every surface with a thick layer of paint and varnish.

Before this was done, chips and borings were examined which showed the mycelia in the surface layers apparently completely shrivelled and devitalised,—a consummation the *permanence* of which it will be the purpose of an investigation some months hence to corroborate, or otherwise.

From recent tests and present experiences I am, however, of opinion that those portions of the fungus which come within the range of the treatment just mentioned are not likely to crop up again, and the affected part, being perfectly local, is but little likely to give further opportunities of varying the experiment. Regarding any fears I might have respecting the possibilities of the fungus, which in this instance is

decidedly *Merulius lacrymans*, spreading to what are at present perfectly fresh timbers, I do not think that it has been established that such fresh timbers, if kept dry by good ventilation, are (even without a coating of paint) liable to attacks of this pest, at least by germination of fungus spores; for a hypha to perforate an adjoining piece of wood is another matter. Were spore transference at all potent in sowing such fungi on timbers which had been well seasoned, dry, and under the conditions of even moderate ventilation, one can scarcely see how such ravages should not be very much more frequent and severe than they are.

Of course, as a matter of sound practice in dealing with such occurrences in costly buildings, it is, perhaps, best to err on the safe side by the removal of much contiguous timber which may have been suffered to have come within the range of contamination, rather than resort to the more doubtful procedure of attempting to "cure" or arrest the progress of the fungus where it may have been supposed to have just got a hold, as in my experimental case. On the other hand, it is scarcely to be thought wonderful, or very much beyond the range of very ordinary possibilities, that the vitality of so delicate an organism as the spore or hypha of a fungus should readily succumb to quite a large number of destructive agencies, so chosen that all the valued qualities and characteristics of the infested wood, even its ornamental ones, may remain practically unaltered. The only difficulty—a very real one in most instances where buildings are concerned, as compared with isolated poles, etc.—is of the nature of the one experienced in endeavouring to catch a bird by "putting salt on its tail." At the same time, it is well to know that there are several very effective means of thoroughly destroying dry-rot fungi other than by prompt commitment of the whole affair to the flames. I only chose the copper salt because it came readiest to hand. As we all know, creosote has perhaps the greatest reputation in this direction. If one who can lay no special claim to a knowledge of this subject might venture to express an opinion as to the means of prevention, I think it will

be found that the two great "predisposing causes," as physicians would say, are in this case the use of imperfectly seasoned timber, and the enclosing of timbers where good ventilation is impossible.

THE PHANEROGAMIC FLORA OF THE CLOVA MOUNTAINS
IN SPECIAL RELATION TO FLOWER BIOLOGY. By J. C.
WILLIS, M.A., and J. H. BURKILL, M.A.

(Read 12th December 1901.)

The present paper enumerates the Phanerogamic Flora of Clova, classifies the species in it by their flower biology, and gives our own observations upon their distribution in altitude and time of flowering. Our purpose is to trace any connection which may exist between the flower biology and the two latter attributes.

To us the Clova region means strictly the southern face of the Grampians within convenient distance of Milton of Clova, *i.e.* Glen Clova above Dykehead, Glen Prosen above Inchmill, and the moors of the North Esk above Loch Lee. The whole area approximately comprises—

Above 3000 feet, one-third square mile.			
2500–3000 feet, 20 square miles.			
2000–2500	„	28	„
1500–2000	„	18	„
1000–1500	„	28	„
500–1000	„	9	„

It consists of three conditions—the valley bottoms or straths, the hillsides with their crags, and the peaty moors. The latter begin at 2500–2600 feet.

82 Phanerogams grow on the moors, 4 being confined to them.					
263	„	„	hillsides, 35	„	„
298	„	„	straths, 97	„	„

The total number of self-maintaining Phanerogams is 363; there are also 16 others maintained by man through agriculture or arboriculture, and these are distinguished in the list which follows by wanting the consecutive numbering, and by inclusion at the same time in brackets.

Of the 363 self-maintaining Phanerogams, 81 are to be reckoned as alpine, and 282 as lowland plants. All the