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Hybrid Oaks in Iowa

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COMPARATIVE RATES OF IMBIBITION IN APPLE
WOOD TISSUE

CHARLES F. ROGERS

Experiments were conducted to find a possible relation between the rate of imbibition in apple wood, and its capacity to withstand adverse climatic conditions. Air dry tissue was ground so that 99.5 percent passed through a 100-mesh sieve. The twelve varieties used were subjected to a saturated atmosphere at constant temperature. The amount of imbibition was determined by frequent weighings. The maximum rate, and the greatest total imbibition occurred in those varieties which have proved to be least hardy in Iowa.

HYBRID OAKS IN IOWA

B. SHIMEK

A brief review of the hybrid oaks reported from Iowa, with notes on the additional hybrids *Q. imbricaria* x *velutina* and *Q. imbricaria* x *marilandica* from southern Iowa.

THE MORPHOLOGY OF BASIDIOPHORA KEL-
LERMANII¹

GUY WEST WILSON

This interesting fungus was first brought to the notice of mycologists in 1889. It was originally collected two years earlier by Dr. W. A. Kellerman at Manhattan, Kansas. It has since been frequently collected from Kansas and Colorado northward and eastward to Manitoba and Wisconsin. Specimens are variously labelled in herbaria under *Albugo*, *Plasmopara*, *Peronospora* and *Basidiophora*.

The fungus is abundant and conspicuous in the field on its single host, *Iva xanthifolia* Nutt. The first impression is that of a downy mildew, but a closer view suggests a white rust. The taxonomic position of this fungus has been a puzzle to mycologists. It presents some problems of great morphological and phylogenetic significance. The conidia are borne above the epidermis, on conidiophores quite similar to those of *Basidiophora*, but grouped into a sorus as in *Albugo*. This last character distinguished it from the *Peronosporaceae* while the production of spores singly on the short branches of the conidiophore separate it from *Albugo*.

¹ Abstract. Paper to be published in MYCOLOGIA.