Proceedings of the Iowa Academy of Science

Volume 29 | Annual Issue

Article 41

1922

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Recommended Citation

Jaques, H. E. (1922) "Brood A of the May Beetles Extends Its Range in Iowa," *Proceedings of the Iowa Academy of Science, 29(1),* 163-164.

Available at: https://scholarworks.uni.edu/pias/vol29/iss1/41

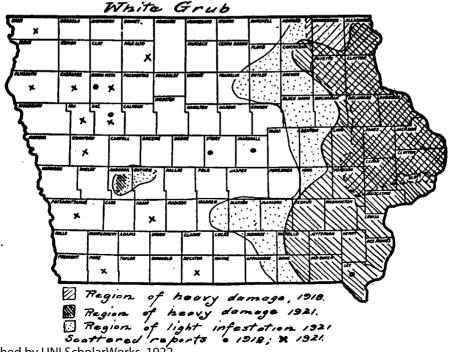
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BROOD A OF THE MAY BEETLES EXTENDS ITS RANGE IN IOWA

H. E. JAQUES

Among the well known insect pests with which the farmer must contend are the May beetles which in the larva stage, as white grubs, do heavy damage to the grasses, corn, potatoes, strawberries and garden crops. There are about one hundred species of May beetles known to occur in the United States all of which belong to the genus Phyllophaga. Forbes* in examining 114,493 May beetles in Illinois found 34 species, but less than half of these were sufficiently abundant to be of serious economic importance.

The more destructive species of May beetles have a three year life cycle, with the grubs doing serious damage during but one summer of the three. In any locality all stages may be found, indicating the presence of three broods which have been named broods A, B and C. Brood A, which appeared as adults in 1920 and as destructive grubs in 1921 is the largest of the three broods



and is the one which has caused most of the damage during the past fifteen years or more.

As early as the summer of 1909, brood A in numbers sufficient to do serious injury was spread over a large area in southern Wisconsin, northern Illinois, northeastern Iowa and a small corner of southeastern Minnesota. The grubs have reappeared in this territory in the summers of 1912, 1915, 1918 and 1921. In 1921 the area of damage in Iowa was much enlarged over that of previous years, and southeastern Iowa came in for a heavy share of the loss. Twelve counties untouched in a serious way in 1918 were invaded. The accompanying map shows in a comparative way the infested regions of 1918 and 1921. These data were secured through personal visits to infested regions and by correspondence with the County Agricultural Agents. Mr. Fred D. Butcher, Extension Entomologist, gave valuable information also.

In many parts of the newly infested area the injury was severe. Reports of losses range from 15 per cent of the crop to a total loss in some fields. Corn and potatoes suffered heavily but blue grass pastures seemed to be most seriously damaged. In many pastures the grubs were so abundant as to entirely cut loose the roots until the sod could be rolled up like a rug.

From Lee county came the report of grubs as thick as "75 to 150 per square foot" with a 30 to 50 per cent loss of corn and a 70 per cent loss of blue grass in some fields. Many large counts of grubs were made though no other reports showed as many grubs to a given area as this. Twenty-seven grubs were found in a post hole left open for two hours, while in a corn field twenty-two grubs were found in two hills.

The adult May beetles of this brood will appear in the spring of 1923 and it is planned to make a study of them to determine the number of species involved and their relative importance.

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