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Morphological Studies on the Injury to Apple Caused by *Ceresa bubalis*

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ZOOLOGICAL ABSTRACTS

MORPHOLOGICAL STUDIES ON THE INJURY TO APPLE CAUSED BY *CERESA BUBALIS*

J. C. GOODWIN AND F. A. FENTON

Histological studies through lesions made in apple wood by *Ceresa bubalis*, the buffalo treehopper, revealed the cause of the peculiar rolling out of the wood characteristic of wounds produced by this insect. Sections were made through one, two and three year old lesions. A layer of corky tissue is formed over the wood cells that are cut by the ovipositor and exposed to the air. The two layers of corky bark adjacent to each other do not unite and this bark formation results in a wedge-shaped section of the limb being separated from the remainder. Because of this, part of the cambium layer is isolated from the rest, and is prevented from uniting with the other cambium to heal over the wound. The severed part, as well as the other cells, continues to grow and the force exerted results in the peculiar rolling of the tissue. Older lesions increase in width but there is a corresponding decrease in depth. The mechanical injury is very severe and there are evidences that decay sets in due to the wounds. While these may eventually heal over the decay has already entered the heart wood and ultimately this secondary injury may kill the entire limb.

IOWA STATE COLLEGE

NEST-DIGGING AND EGG-LAYING HABITS OF BELL'S TURTLE

(*Chrysemys Marginata Belli* Gray)

FRANK A. STROMSTEN

During the summer of 1921 some forty or fifty Bell's turtles dug their nests on the side of a small hill just north of the Iowa Lakeside Laboratory. This afforded an excellent opportunity for the study of the nest-digging and egg-laying habits of this