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Effects of X-Rays on the Early Development of the Grasshopper

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author hopes is simpler than that in "Fresh Water Biology" by Ward and Whipple.

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EFFECTS OF X-RAYS ON THE EARLY DEVELOPMENT OF THE GRASSHOPPER

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Eggs of Melanoplus differentialis were irradiated with different dosages of X-rays on the first day of development. Effects were noted on the subsequent increase in number and kinds of cells, weight and rate of oxygen consumption.

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THE TIME OF EMBRYONIC DETERMINATION OF SENSORIA AND ANTENNAL COLOR, AND THEIR RELATION TO THE DETERMINATION OF WINGS, OCELLI, AND WING MUSCLE IN APHIDS

Karl A. Stiles

Intermediate-winged aphids of the species Macrosiphum solanifolii were studied in an effort to determine the time of embryonic segregation of the sensoria and antennal color, and their relation to the determination of wings, ocelli, and wing muscle.

Dark antennal color and increased sensoria of winged aphids are considered to be characters closely correlated in development; for, in general, when there was a darkening of antennae, there was a corresponding increase in the number of sensoria. In practically all cases increased sensoria were correlated with a relatively large amount of nondegenerate wing muscle. It is concluded that embryonic determination of dark antennal color and increased sensoria takes place in a comparatively short period of time as compared with that of wings, ocelli, and wing muscle. The data make