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an agent nontoxic for patients and thus obtain a potential antituberculosis substance.⁶

Great strides have been made in a very short time. The direction for research to pursue in this field is now well mapped. Experience has afforded methods of evaluation and criteria for the acceptance of new antituberculosis drugs. The ideal is not now at hand, although streptomycin and PAS are greatly beneficial in many cases. Investigations are expanding, and there is now reason to believe that new and better antituberculosis agents will be made available to physicians for the treatment of tuberculosis.

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THE EFFECT OF THE REMOVAL OF THE ADRENAL GLAND IN PIGS

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SOME OBSERVATIONS ON THE CIRCULATORY SYSTEM OF LUMBRICUS TERRESTRIS

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A PRELIMINARY REPORT OF A SURVEY OF THE AQUATIC INSECTS OF THE AMITY CREEK (WEST BRANCH OF LESTER RIVER)

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ABSTRACT

Weekly bottom samples (one square yard) were collected at six stations from April 15 to November 15, 1950. Factors such as pH, temperature of air and water, light (direct and reflected), various types of stream bottoms were studied in relationship to the bottom fauna. Dipterous larvae were the most dominant group, Trichoptera ranked second and Ephemeroptera composed the third largest group.

⁶ Zeller, E. A., Owen, C. A., Jr. and Karlson, A. G.: Diamine Oxidase of *Mycobacterium Smegmatis*: Effect of Streptomycin and Dihydrostreptomycin. *J. Biol. Chem.* 188:623-630 (Feb.) 1951.

THE HOUSEFLY AS A VECTOR OF THE AGENT OF WHITE DIARRHEA AND FOWL TYPHOID OF CHICKENS

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ABSTRACT

Five hundred pupae were processed for each bacterial organism studied. Fifty-one chickens were utilized for each of the bacterium species considered.

Salmonella pullorum (white diarrhea) was disseminated by 40 per cent of the experimental flies. Fifty per cent of the experimental flies harbored *S. pullorum*. The test bacterium was disseminated for nine days. The life span of the flies used in the bacterial-fly-longevity study was 16 days. All of the experimental flies gave evidence of harboring *S. pullorum* prior to the ninth day. Experimental flies infected with *S. pullorum* were fed to chickens, three weeks old, and in three days the test bacterium was recovered from the chicken's excrement. All 50 of the experimental chickens produced *S. pullorum* from their excrement on or before the twelfth day.

Salmonella gallinarum (fowl typhoid) was disseminated by 45 per cent of the experimental flies. The test bacterium was disseminated by one of the flies for nineteen days. The life-span of the flies used in the study was 20 days. Seventy-two percent of the flies studied in the bacterial-fly-longevity phase gave evidence of harboring *S. gallinarum*. Experimental flies infected with the test bacterium were fed to mature chickens and in six days the test bacterium was recovered, first from the excrement, then from the chicken's blood. All of the experimental chickens (50) produced *S. gallinarum* from their excrement and blood on or before the thirteenth day.

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SOME NEW FACTS IN THE BIOLOGY OF THE BOX ELDER BUG

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There are a number of questions about the box elder bug (*Leptocoris trivittatus* Say) that have been puzzling. Why is the bug not noticeable during most of the year even though large numbers congregate on buildings in the fall? Why do large fall aggregations occur periodically? For example, outbreaks occurred during the drought years in the thirties and in 1948 and 1949, but not in between. And why are the bugs limited to pistillate box elder trees?