

BACTERIOLOGY

Chairman: C. M. PALMER, Butler University

The BACTERIOLOGY SECTION met with the Indiana Branch, SOCIETY OF AMERICAN BACTERIOLOGISTS.

Mr. F. A. Miller, Eli Lilly and Co., was elected chairman of the section for 1946.

Some of the factors influencing death from gas gangrene. VERSA V. COLE, H. R. HULPIEU, and L. A. WEED, Indiana University.—The factors in death from gas gangrene which have been recently investigated are: total carbon dioxide content of blood, blood sugar, temperature of the infected region, and narcosis of the animal. None of these have shown an effect on death rate. All except the blood sugar seemed to exert some effect on survival time. Infection with *Clostridium welchii* lowered the carbon dioxide content of the blood up to death. However, those dogs which had a high normal carbon dioxide content had a shorter survival than those which had a low normal carbon dioxide content. Blood sugars at death were usually low. The survival time was increased by narcosis and was further increased by cooling the infected region.

A dichotomous key to the species of the genus *Bacillus*. C. M. PALMER, Butler University.—A key to the species of the genus *Bacillus* has been formulated which is dichotomous and more complete than the types such as are presented in Bergey's Manual of Determinative Bacteriology. Nine groups of species are first distinguished and keys to the species in each group (excepting the thermophilic) have been constructed. Care has been taken to use clearly recognizable distinctions throughout the key.

Influenza virus vaccine for general use. H. M. POWELL, Lilly Research Laboratories, Indianapolis, Indiana.—Experimental evidence is presented that influenza virus vaccine, types A and B, can be prepared on a large scale with much greater yield than similar vaccine for military use has shown heretofore. This may make this vaccine practicable for general use, provided the actual results in prevention of influenza are finally satisfactory.

Greater yield is obtained by using more than the customary one-tenth volume of saline in eluting the virus following its adsorption on red blood cells during the process of purification of the raw virus-containing periembryonic chick embryo fluids. Resultant vaccine when given in two weekly doses of 0.1 cc each to Swiss mice immunizes against 10,000 LD 50 of active type A mouse lung viruses, and when given in two weekly doses of 0.001 cc each to Swiss mice immunizes against 1,000 LD 50 of active type B mouse lung virus.