

Observations on the Bacteriology of Influenza.—JORDAN (*Public Health Reports*, 1919, xxxiv, 1413) studied several groups of cases of influenza and other respiratory affections, with the object of ascertaining the frequency of Pfeiffer's bacillus, the Mather's diplostreptococcus and variations in bacterial flora throughout the illness. It was found that by ordinary bacteriological methods the flora varied markedly and that individuals of groups coming in intimate contact tend to a more or less uniform flora. In influenza Pfeiffer's bacillus and Mather's coccus occurred with greater frequency than other pathogenic organisms, and of the two mentioned Mather's organism seemed to be more frequently associated with pneumonia. In colds Pfeiffer's bacillus was relatively infrequent while Mather's coccus was present about as often as in influenza, and the latter organism was present in colds and rhinitis about as often as in influenza. Hemolytic streptococci appeared to be associated with tonsillitis and severe throat inflammation, while this organism was relatively rare in influenza. In the observations on "recurrences" of influenza, organisms different from those in the original attack were observed, and the opinion is expressed that "second attacks" are due to organisms different from those etiologically related to the first one.

Occurrence of Bacillus Botulinus in Nature.—BURKE (*Jour. Bacteriol.*, 1919, iv, 541) made 235 cultures from samples collected in five localities in central California, fifty or more miles distant from each other. The cultures covered a wide range of material, including tap water, hay, leaves, vegetables and fruits in various conditions, insects, spiders, sow bugs, snails, and caterpillars, garden soil, manure from horses, hogs, and chickens and also samples from the claws and beaks, and crop gizzard and intestinal contents of birds. Seven cultures of *Bacillus botulinus* were found in bruised and moldy cherries, bird-pecked cherries, pole bean leaf covered with spots or droppings of insects or small animals, spiders from bush bean plants, bush beans, some of which were slightly scarred, picked over, washed and packed in clean jars for canning, manure from large hog which had recovered from botulism three months before sample was taken, and discolored moldy hay from an outdoor stack. Four cultures were found in which there was evidence of toxin, but it was so weak that the toxin-antitoxin tests were not considered reliable. This material was obtained from earth from spider tube, spider droppings and web, sow bug from bush bean plant, linnet claws, spider and small bugs from bush beans. Burke therefore concludes that *Bacillus botulinus* is widely distributed in nature, and that it is present in the garden and may be on the fruit or vegetables when they are picked. *Bacillus botulinus* is not necessarily associated with active decay. It may be present in the blemishes or spots on the skin of apparently sound fruit and vegetables. *Bacillus botulinus* may remain in the intestinal tract of an animal for at least four months after contaminated food has been eaten. *Bacillus botulinus* may not occur far from the habitation of man. Of the five localities visited, only one failed to give positive results as to the presence of *Bacillus botulinus*. There were no human beings living on the place, no domestic animals other than horses, and there was no vegetable garden. *Bacillus botulinus* may be closely associated with or dis-