tention, it is not necessary to argue the question. I have examined diseased larvæ from Canada, from Europe (France, Switzerland, Austria, Germany, Italy and England), Cuba, and 13 States of the Union, ranging from New York to California and from Michigan to Florida, and have succeeded in isolating *B. alvei* from all of them. It is true that some of the cultures show certain differences, but they have not been sufficiently pronounced to constitute even a well marked variety of the species. The pathogenicity of the bacillus no doubt varies in different countries; of that we have abundant evidence, and the possible explanation is given by Bertrand, who thinks that where bees have been kept for many years the disease has existed for a long time and remains in an endemic state; but there has been produced in these countries a race of bees which have acquired a relative immunity, which considerably diminishes the effects of the disease, and enables apiculturists to treat it more easily. In new countries into which the disease has been introduced it rages with great virulence, and remedies giving good results in the older countries are worthless in the new. As an example of this statement, we have the different methods of treatment used in Canada and in Europe.

Bertrand (32) reports the disease as being present in every country in Europe. Benton (33) says that he has never met with the disease during the six years he has kept bees in the Orient. Della Rocca (7) described a terrible epidemic in the Levant in 1780. Bovill (34) says that he has never seen it in Cyprus. In Africa, Feuillebois (35) reports it in Algeria, and Bochatey (81) in Tunis. In Australia it is present in all the colonies, and especially so in New South Wales (86) and South Australia (37). Brickwell (38) reports that New Zealand is full of the disease.

The Organism.

Bacillus Alvei, Cheshire and W. Cheyne, 1885, from the larvæ of bees suffering from the disease known as foul brood, la loque (Fr.) and faul brut (Ger.).

Morphological Characteristics.—In form the organism is a slender bacillus, with ends slightly pointed and rounded. "In the larval juices it is about $\frac{1}{7,000}$ of an inch in length and $\frac{1}{20,500}$ in breadth. On agar the bacilli vary considerably in size, averaging $\frac{1}{7,260}$ inch, some as small as $\frac{1}{10,000}$ inch, and others as large as $\frac{1}{5,000}$ inch. When they have attained the latter size, division of the rod seems to begin. They are always somewhat pointed at their ends. Their average breadth is $\frac{1}{30,000}$ inch, ranging from $\frac{1}{35,000}$ to $\frac{1}{25,000}$ inch (23). Klamann (25) states that a clear space often appears in bacilli with pointed ends. From agar cultures 24 hours old, at 37° C., the bacilli average 4 μ in length and 1.0 μ in breadth. On gelatine cultures, grown at 22° C., they are somewhat shorter. They grow singly, but occasionally form chains of various length.

Stains.—With the ordinary aniline stains the bacilli colour rather badly—Eisenberg (39) and Klamann (25). The best stains are methelene blue and methyl violet. The bacilli accept Gram's stain, but the spores are not colored by it. I find the most satisfactory stain is methyl violet.

Capsule.—No capsule has been demonstrated by Welch's method.

Flagella.—The bacilli are actively motile and possess a single flagellum at one pole. The motility of the bacillus is quite pronounced in fresh cultures obtained from bouillon, agar and gelatine. The flagella stain by Pitfield's, Loeffler's and Van Ermegen's method.

Spore Formation.—Spores are formed by the bacillus, and are large