Excellent results were obtained when 0.05 per cent potassium tellurite was added to plain nutrient broth and used as an enrichment medium. The materials to be cultured, nasal swabs, straw, feces, etc., were added directly to the broth and incubated 6 to 24 hours at 37 C. A loopful of this material was then plated on plain tryptose agar and incubated for 20 to 24 hours at 37 C. Examination of the plates with the aid of the dissecting microscope revealed the absence or presence of Listeria. With this method nearly pure cultures of Listeria could be obtained providing the number of micrococci in the material was not too great. With this technique it was possible to isolate Listeria in nearly pure culture from the feces of a rabbit that for 21 days received a broth culture of Listeria as the sole source of fluid intake.

Acetic acid added to deep brain medium to make concentrations ranging from 0.1 to 1 per cent also proved effective in the higher levels when exposed to conditions similar to those previously described.

A MOTILE LACTOBACILLUS FROM THE CECAL FECES OF TURKEYS

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Although motility has been reported in a few strains of Streptococcus, the family Lactobacteriaceae as a whole is considered as consisting of nonmotile bacteria. The genus Lactobacillus, particularly, was always thought to contain nonmotile species only.

During a study of the bacterial flora of the cecal feces of turkeys, a gram-positive rod was isolated which shows the typical behavior of a Lactobacillus in all respects except that it possesses active motility. The presence of peritrichous flagella is demonstrated in the accompanying photomicrograph (figure 1). Furthermore, an electron micrograph1 (figure 2) has been prepared that seems to exclude the contention that the flagella in figure 1 could possibly be staining artifacts. Numerous parallel isolations have given strains that in cultural characters agree with the motile strain but are typical nonmotile lactobacilli (of the species L. plantarum).

The motile strain has never been observed to form spores; it does not reduce nitrate or produce catalase. It is a facultative anaerobe, showing more surface growth when incubated under anaerobic than under aerobic conditions. In tomato juice glucose broth the rod averages 0.9 by 4 μ, although some very long cells may be encountered. It occurs singly or in pairs; long chains are never ob-

1 We are indebted to Major R. L. Reagan, Department of Veterinary Science, University of Maryland, for the preparation of the electron micrograph.
Figure 1. Photomicrograph of *Lactobacillus plantarum* var. *mobilis* from a 37 C, 9-hr, tomato juice glucose broth culture. Stained by a modification of Leifson's method.

Figure 2. Electron micrograph of *Lactobacillus plantarum* var. *mobilis* from 37 C, 9-hr, tomato juice glucose broth culture. Shadowed with chromium tangent 1/6.
served. The cells are frequently curved, particularly in tomato broth, but they are straighter in milk culture.

A flask of tomato juice glucose broth was inoculated in order that the products of glucose fermentation might be determined. After the 2-week incubation period at 37°C, the culture was analyzed, and it was found that less than 3 per cent of the glucose was fermented to volatile acid (as acetic acid). Zinc lactate was prepared by adding zinc carbonate to the ether extract of the steam-distilled culture and the salt collected in 3 fractions. Dextro-lactic acid is the optical isomer produced in the greatest amount.

The organism ferments (produces a pH of 4.5 or less) the following: glucose, sucrose, maltose, lactose, trehalose, melibiose, raffinose, mannitol, and salicin. The following are not fermented: xylose, arabinose, rhamnose, inositol, and sorbitol. Curdling of litmus milk may require about one week, growth in this substrate being rather slow. Reduction of the litmus takes place. Motility may be observed in milk, although it is seen more easily in a tomato juice glucose broth incubated for about 9 hours at 37°C.

We believe that this is the first time a motile rod has been shown to possess all the characteristics necessary for its placement in the genus *Lactobacillus*. Orla-Jensen (Zentr. Bakt. Parasitenk., II, 22, 305, 1909) listed *Lactobacillus* as the fourth genus “*Caseobacterium*” in the order “*Peritrichinae*” indicating that, although the genus did not possess flagella, its place in his system would be among the peritrichous rather than the cephalotruchous bacteria. The actual finding of a peritrichous *Lactobacillus* is interesting from a general systematic point of view.

There seems little justification at the present juncture to establish a particular species name for this strain, which we will simply label *Lactobacillus plantarum* var. *mobilis*.

THE PROPAGATION OF BORRELIA ANSERINA IN EMBRYONATED EGGS EMPLOYING THE YOLK SAC TECHNIQUE

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In an attempt to maintain a strain of *Borrelia anserina* by a simpler and more economical method than the utilization of baby chicks, embryonated eggs were inoculated allantoically, and on the chorioallantoic membrane, with infected chicken blood. Infection of the embryos was irregular in the eggs inoculated by the former route but occurred consistently when the spirochetes were placed on the membrane. Although the latter method gave satisfactory results, it involved a rather time-consuming procedure and offered few, if any, advantages over the