in nearly every instance examined the peculiar Sacchus-butyric type of bacterial decomposition here found is dependent upon *B. welchii* (*B. ærogenes capsulatus*). Evidence is furthermore brought forward to show that this organism is a prominent and perhaps specific factor in some cases of advanced "primary" anemia. The overgrowth of the gas-bacillus is associated with a partial disappearance of *B. coli*. During convalescence the gas-bacillus recedes numerically and *B. coli* resumes a dominant position.

39 (131). **"Absorption of typhoid bacilli from the peritoneal cavity"**: **B. H. BUXTON** and **J. C. TORREY.**

Shortly after injection of typhoid bacilli into the peritoneal cavity of a rabbit the organs in most experiments are found to be invaded by the bacilli, more particularly the liver and spleen, in which there may be enormous numbers. By means of injection of lamp black, the peritoneal path for this rapid rush to the organ is shown to be by way of the anterior mediastinal lymphatic trunks. Even in five minutes after injection the trunks and the anterior mediastinal lymph node are markedly blackened.

On plating out the lymph nodes after injection of typhoid bacilli, they are often found to contain many millions of bacilli, and, as a general rule, if there are many bacilli in the lymph nodes there are also many in the organs.

40 (132). **"The dicrotic elevation at different points of the arterial tree"**: **PERCY M. DAWSON.** (Presented by **J. R. MURLIN.**)

In a number of dogs the form of the pulse-wave was studied by means of the Hürthle manometer. The arteries upon which the observations were made were the following—aorta, brachiocephalic, innominate, carotids, thyroids, vertebrals, internal mammaries, axillaries, brachials, left subclavian, celiac axis, superior mesenteric, left renal, inferior mesenteric, left iliac, deep femoral, femoral, saphenous and peripheral end of the carotid, *i. e.*, a side branch of the circle of Willis. The exact values of the apex and base of the pressure triangles were determined from readings of the systolic and diastolic pressures obtained by means of a valved manometer.

A careful study and comparison of the results has led to the following conclusions.

1. In passing from the heart to the periphery the dicrotic elevation increases in distinctness and in the special case of the aorticofemoral system the dicrotic elevation occurs lower on the catacrotic limb of the fundamental wave. On the other hand as the arteries decrease in size, the dicrotic elevation soon disappears, *e. g.* in the thyroid, saphenous and so forth. Consequently there is in every system of arteries (aorticofemoral, brachiocephalic and left subclavian) a region lying somewhere between the aortic arch and the periphery in which the dicrotic elevation is maximal.

2. In the aorticofemoral system the side pulse shows a maximal dicrotic wave between the origin of the renal and that of the deep femoral artery; in the brachiocephalic system, between the origin of the carotids and that of the vertebral or thyroid artery; in the left subclavian system the dicrotic wave is less pronounced in the mammary than in the vertebral artery and consequently the maximum in question must lie central from the origin of the former artery. In the case of the end pulse, the region of the maximal dicrotic wave is in or peripheral to the brachial, femoral and carotid arteries but it is impossible to say whether the maximum occurs in them or peripheral to them, because they were the most peripheral of the arteries examined in this connection.

3. In the femoral pulse wave the dicrotic elevation is normally much more distinctly marked and begins much lower on the catacrotic limb of the fundamental wave than is the case with the carotid pulse.

4. Certain operative procedures (namely determination of the blood pressures in various deep seated arteries after opening the thoracic or abdominal cavity) cause the predicrotic notch in the femoral to become more and more pronounced so that ultimately the dicrotic wave appears as an elevation on the ascending limb of the fundamental wave which immediately follows. In the case of the carotid pulse this effect of operation is very rarely seen. As yet the writer is unable to offer any satisfactory explanation of these local variations in the character of the dicrotic elevation. He has however begun an investigation with the view of elucidating this question.