

him *Bacillus O.* or by other authorities, *Paracolon Cushing*. It may well be called *Paracolon A.*, and may serve as the introduction to the intermediate group. Isolated by Cushing from an abscess over a rib, this form possesses characters intermediate between typhoid and colon. It grows very slowly on potato, giving a visible growth only after several days incubation; it ferments dextrose, not lactose and saccharose; it does not coagulate milk or produce acidity; it produces indol after the lapse of a number of days, has a faecal odor and is pathogenic to mice.

With the *paracolon* of Cushing may be grouped *B.*, variety *Hatton*, of Durham and *B. Morbificans Bovis* of Basenau, which isolated from far different sources by different observers agree in so many details as to be placed by Durham in this intermediate group, all the members of which are pathogenic. Included in the same group are the so-called "icteroides" isolated by Sanarelli and Reed from yellow fever patients. These bacteria differ from the preceding only in the formation of a moist luxuriant growth on potato, fermenting only one sugar—dextrose—as the other forms do. Associated with these icteroides we have placed a further variety which has been called *Paracolon B.* It was obtained from the liver of a healthy rabbit and was originally considered to be a simple colon derivative. It agrees in all cultural features with the organisms of Reed and Sanarelli, and without doubt belongs to this group—failing to ferment lactose and saccharose and failing to produce acidity in, or to coagulate milk.

Among the intermediate members of this group should doubtless be included *paracolons* isolated by Widal and Gwynn. The description given by Widal is too meagre to furnish a means of classification but the work of Gwynn and of Cushing on the *paracolon* isolated by the former shows clearly the place this bacillus should occupy. From Gwynn's description has been compiled the life history of this bacillus and it has in this way been included in the chart. It is actively motile, grows on bouillon as a distinct cloud, not forming a pellicle, acidifies milk faintly, without coagulating, gives a luxuriant growth on potato and does not liquify gelatine. It ferments dextrose, not lactose or saccharose and it does not produce indol.

The next member of this group is the *B. Cholerae Suis*, which is identical with the others in the main characters, yet liquifies gelatine and blood serum. Because of these characters it has been placed last in this group and has been associated with the *B. Cloacæ* which is yet more positive in liquifying gelatine, casein and blood serum. The latter produces indol, nitrites and faecal odor, has a luxuriant growth on potato and produces a scum on broth. Naturally it does not belong