

ing a definite scum on broth, and at other times not, and the experience in the Molson laboratory that the form of organism which produced a scum always did so, and the form not producing such a scum invariably failed to do so—has led us to formulate these two types. In fact, the majority of bacilli which were encountered in Montreal correspond to type B. rather than type A., but for uniformity of description Fuller and Johnston's colon has been considered the model form.

Between Colon B. and the next type C. may be most conveniently placed those forms which have lost their pathogenicity. This doubtless may occur with any variety of colon under unfavourable conditions of growth and cannot be said to constitute a different variety. This loss in pathogenicity was encountered in only one form, a variety obtained from Dr. Harris in Baltimore. All other varieties of colon, with one exception to be mentioned later on, were pathogenic in intraperitoneal inoculations.

If we combine loss of pathogenicity with loss of motility we have a form which is identical with *B. Lactis aërogenes* of Escherich, not producing indol or a faecal odor, but agreeing in its other reactions with *B. Coli Communis*. As has been indicated above, these differences should suffice to make this form a distinct variety, separated as it is by constant unvarying characters.

Under Colon C., have been included those forms which agree with the typical colon in most of its reactions, but differ in the fermentation of the sugars. Dextrose and lactose are fermented, saccharose never. A scum is produced on broth, indol is formed and a faecal odor exudes from the cultures. This variety also has been encountered a number of times.

Colon D. includes bacilli similar in all respects to the preceding, in respect of the fermentation of lactose and dextrose, but like Colon B., the corresponding first derivative from Colon A., it fails to produce a definite pellicle on broth.

A further derivative of the pure colon is that form which produces fermentation with dextrose and saccharose but not with lactose. It has been described frequently by earlier writers and is a well recognized variety of *B. Coli Comm.* In our case it was not pathogenic, did not produce indol, nitrites, or a faecal odor, but otherwise was identical with the prototype Colon A.

As we pass from these varieties of paracolibacillary organisms which ferment two of the three sugars, to those which ferment but one, namely dextrose, we enter upon the intermediate group of Gærtner, or the Hog Cholera group. The first form which is encountered here, which goes by the name of paracolon, is the organism of Cushing called by