the amount of PAB up to 0.1 mμ mole; it was approximately the same with 0.1, 0.5 and 1.0 mμ mole. Somewhat less growth was obtained with 10 mμ moles of PAB than with 1 mμ mole.

Schopfer[1] reported that *R. aurantiaca* grew poorly in a mineral-dextrose solution containing asparagine. The addition of thiamine doubled growth, but it was still poor. The addition of pyrimidine, thiazole or thiochrome was ineffective. Schopfer's results as far as they go agree substantially with ours.

We concluded that our strain of *R. aurantiaca* suffers from a complete deficiency for thiamine and for PAB. Its sensitivity to PAB appears to be of the same order of magnitude as that of some other organisms to biotin. Its growth on media supplemented with peptone or malt extract demonstrates the presence of PAB (or a substitute therefor) in those natural substances. *R. aurantiaca* might be useful for the microbiological assay of PAB or of molecular thiamine and for the study of the function of PAB and its relation to the sulfa drugs.

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SCIENTIFIC APPARATUS AND LABORATORY METHODS

ATTACHING POINTERS TO MICROSCOPE SLIDES

IN preparing practical slide examinations in such subjects as vertebrate embryology or histology, it is frequently necessary to direct the student to a particular detail selected from many others present in a preparation. Various methods for solving this problem are in use in different teaching laboratories; *e.g.*, (1) accompanying the slide with a mimeographed sketch on which various selected details may be indicated by name or number; (2) covering all extraneous matter with gummed paper, leaving exposed only the detail to be observed by the student; (3) pasting paper pointers to cover slips; (4) using ocular pointers; (5) ringing cover slips with diamond point object markers fitting into the nosepiece of a microscope. It is unnecessary to point out decided disadvantages inherent in each of the methods mentioned above.

Since our difficulties with this problem must be paralleled in many other laboratories, it may be of general interest to describe here a technique which we find to be very satisfactory. Using very sharp scissors, small pointers, in the form of isosceles triangles, are cut from thin, tinted Cellophane. Pointers cut from a good quality of bond paper are often good enough, but under a magnification of 300 or 400 diameters such paper pointers look quite ragged.

The pointers are glued to clean cover slips with thin clarite, balsam or damar, and the cover slips dried on a warming stage. Sections fresh from xylene are mounted in clarite (60 per cent. by weight in toluene) under such cover slips, with the pointer between the section and the cover. By gentle manipulation of the cover slip under a dissecting or compound microscope, it is easy to place the tip of the pointer in any position desired. We have not been troubled by having pointers move during the drying process. After the preparation has been thoroughly dried (*e.g.*, one month at 50° C.), there is no further danger of moving or blunting the pointer. The slide then constitutes a permanent item in a practical examination set.

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[1] W. H. Schopfer, *Protoplasma*, 31: 105–135, 1938.

LOAN TEACHING SETS ON BACILLARY DYSENTERY

THERE are now available for teaching purposes six sets, each consisting of eighty-six 28 × 40 mm slides, thirty-five in Kodachrome, and a condensed lecture brochure. These slides cover the subject of acute and chronic bacillary dysentery, including the newer aspects of the epidemiology, pathology, bacteriology, serology, clinical phases, prophylactic and curative therapy. They are available on loan to Army, Navy, public health and university teachers without cost except that of mailing. The project is part of a long-range plan of the Dysentery Registry for the dissemination of our ever-growing knowledge of the important subjects of bacillary dysentery, enteritis and colitis. It was deemed expedient to stress the military aspects at this time. Requests will be honored in order of their receipt. The date on which the slides will be used should be specified. The total time of presentation is approximately 90 minutes at the ordinary talking speed. The slides are so aranged that they may be presented in a single lecture, two lectures of 45 minutes each or three lectures of 30 minutes each.

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