

stands (useful for pour plates); they were translucent, but deep brown in colour, in spite of using egg-white as a clearing agent. The typhoid bacillus (Rawling's strain), the para-typhoid A & B and vibrio cholera grew rapidly and well on this media (45 ± 4.5 millions per square centimetre of surface by 1 ml. of water after 24 hours, at 37°C .); one obtained about the same quantity of growths as becomes available on ordinary Agar slopes prepared with beef-broth, peptone and 2 per cent. Agar, i.e., the routine Agar media used in this Laboratory. Preservation at ice-box temperature (6°C .) for over a week, dries the media so that only a few discrete colonies grow after 24 hours incubation at 37°C .; splitting of the Agar and drying at the tip of the slant occurs. Ordinary Agar media as prepared in this laboratory can, however, be used after 12 days to a fortnight, just as fresh Agar.

Experiments are also in progress for the preparation of peptone (not easily available in the Indian market now—Witte's peptone is not available, and Difco peptone sells at Rs. 65 per lb.) by the use of papain. Preliminary tests are promising.

It is hoped soon to present a more comprehensive study of the use of silkworm powder for bacteriological purposes.

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POPLITEAL FACET IN SQUATTERS

SOME interest has centred round the variations in the lower end of a femur occasioned by the squatting posture,¹⁻⁴ and the present communication is to record yet another variation in the lower end of femora from Punjabis of lower classes, who adopt the squatting posture not only during work but also during rest. In a series of two hundred femora examined, a curved facet, covered with cartilage, was detected in all of them in the posterior part of the lateral aspect of the lateral condyle. It was well marked in some, less so in others, but was present in all. This facet may be looked upon as an extension of the femoral condylar articular cartilage on the lateral aspect posteriorly, just as quadriceps facet¹ is an extension of cartilage anteriorly.

The popliteal muscle arising from the anterior end of the popliteal groove on the lateral side of the lateral femoral condyle, and getting insertion on the upper end of the posterior surface of the tibia, lies in the popliteal groove in the flexion of the knee joint but moves in an arc on the lateral side of the lateral femoral condyl during the movement of extension, till the tendon lies obliquely from before backwards, bevelling the anterior part of its lower border. The friction between the tendon and the side of the condyle is obviated by the synovial membrane acting as a bursa.

As the movements of the knee joint are more frequent in squatting than non-squatting races,¹ popliteal tendon rubs against the lateral condyle much more frequently in the former

than in the latter. The popliteal facet owes its existence to this fact.

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ON THE DEVELOPMENT OF THE FEMALE GAMETOPHYTE IN *HYDROLEA ZEYLANICA* VAHL.

THE single Indian genus, *Hydrolea*, of the Hydrophyllaceæ, is represented by a single species, *Zeylanica*, throughout India abundantly in wet places and rice swamps according to Hooker.¹ The ovule is anatropous and has a single integument. The female archesporium is hypodermal in origin and is usually a single cell but two such cells are noticed side by side oftentimes. It directly functions as a megaspore mother-cell. As a result of the reduction divisions a normal linear tetrad of four megaspores is produced. Only the chalazal megaspore is functional, while the upper three degenerate. The mature embryo-sac is eight-nucleate and normal. The antipodals lie as nuclei and persist till fertilization. Polar fusion takes place before fertilization of the egg but their nucleoli remain separate and distinct for some time in the secondary nucleus. The synergids are comparatively larger in size and they possess big vacuoles at their upper and lower ends. The apices are rounded and not pointed and pyriform as observed by Svensson² in *Nemophila* and *Phacelia* of the same family. The egg is much smaller in size and lies at the lower level in the much vacuolated cytoplasm of the sac.

Since the formation of the linear tetrad, the nucellar tissue surrounding it begins to degenerate and they lie as disintegrated cells on all sides and persist till the maturity of the embryo-sac. The cells of the jacket layer which is organised by the innermost layer of the integument, enlarge before the tetrad division of the embryo-sac mother-cell; at the apex near the integument they become rich in cytoplasm and elongated in the radial direction. As soon as the cells of the nucellus are disorganised and absorbed, the fully formed embryo-sac is clearly outlined by this jacket layer.

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1. Hooker, Sir J. D., *The Flora of British India*, **4**, 133-34. 2. Svensson, H. G., "Zur Embryologie der Hydrophyllaceen, Borraginaceen und Heliotropiaceen mit besonderer Rücksicht auf die Endosperm-Bildung," *Uppsala Univ. Arsskr.*, 1925, **1**, 176.