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CHARACTERIZATION OF SNOUT IN THE HILL STREAM FISHES; *BOTIA ALMORHAE* (TELEOSTEI: COBITIDAE), *HOMALOPTERA BRUCEI* (TELEOSTEI: BALITORIDAE) AND *SCHIZOTHORAX RICHARDSONII* (TELEOSTEI: CYPRINIDAE) OF KUMAUN HIMALAYA: A SCANNING ELECTRON MICROSCOPIC (SEM) INVESTIGATION

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ABSTRACT

The present investigation has been designed to conduct a comparative study of the functional organization of the epidermis of the snouts of *B. almorhae, H. brucei* and *S. richardsonii.* The skin of snout is scale-less in *B. almorhae, H. brucei* and *S. richardsonii* (Gray 1830) and the skin is composed of two distinctive layers; epidermis and dermis. The epidermis is both types are smooth or non-keratinized and rough or keratinized. The smooth epidermis of snout possesses epithelial cells and mucous cell apertures interspersed between the epithelial cells in these fishes, with the presence of a thick coat of mucus over the snout of *B. almorhae, H. brucei* and *S. richardsonii* that is liable to more friction when the fish swim upstream is significant. The surface of the epithelial cells is characterized by well-developed microridges, which reflect their high secretory activities in all the above fishes.

KEYWORDS: Epidermis, Snout, Epithelial Cells, Mucous Cell and Microridges