ON *ENTAMOEBA PLANORBI* N. SP. FROM *PLANORBIS PLANORBIS* LINNAEUS
WITH A NEW REPORT OF *ENDAMOEBA BLATTAE* BUTSCHLI
FROM KASHMIR.

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Raina, M.K. and Anjali Kaul
- Department of Zoology, University of Kashmir, Srinagar (J & K), India

*Entamoeba planorbi* n. sp. from *Planorbis planorbis* is described. *Endamoeba blattae* from cockroaches is recorded from Kashmir for the first time.

The hosts were collected from different localities. The smears, prepared from their alimentary tracts, were fixed in Schaudinns fixative and subsequently stained with either Heidenhain’s haematoxylin or Delafield’s haematoxylin or Basic fuchsins. Cysts were obtained by Formol-ether method.

*Entamoeba planorbi* n. sp. inhabits the intestine of *Planorbis planorbis*. The trophozoites are sluggish amoebae, measuring 8—22 μm and are more or less rounded at rest (Fig.1), and oval when in motion (Fig. 2&3). The plasmamembrane is distinct, and differentiated into ectoplasm and endoplasm. The cytoplasm is highly vacuolar. In living specimens the nuclei are visible as hyaline areas with a very thin nuclear membrane. No endosome is visible in any of the specimens studied. In stained specimens, the nucleus measures 3.8 μm in diameter, with a ring of peripheral chromatin granules attached closely to the inner side or the nuclear membrane. The cysts are uninucleate and measure 12—16 μm in diameter (Fig.4). No chromatoid bodies are seen in the cyst. Literature available reveals that *Entamoeba* has not been reported from molluscs so far. The only other amoeba reported from molluscs is *Acanthamoeba*¹, but on the basis of nuclear structure, the present genus has been identified as *Entamoeba*, Casagrandi and Barbagallo, 1895.
Entamoeba planorbi n. sp. and Endamoeba blattae

On comparison with other species of the genus, the present specimens show some relationship with *Entamoeba phalusi*ae, in having a uninucleate cyst. However, the present species differs from *E. phalusi*ae in host range, geographical distribution and morphometric characters. *E. phalusi*ae has been reported from an ascidian, *Phalusia mammaliata* in Plymouth (trophozoites 15 to 30 μm x 10 to 15 μm, nucleus 5 μm. cysts 20 μm). However the present species is found in a gastropod, *Planorbis planorbis* in Srinagar, Kashmir (trophozoites 8 to 22 μm, nucleus 3 to 8 μm, cysts 12 to 16 μm). The present species is also found to be devoid of endosome. Therefore, in view of the above differences and also because of the geographical separation of the host of these two species, the present form is given a separate specific status and is named *Entamoeba planorbi* n. sp. after its host.

![Diagram](image)

Figs 1-6 : 1-3. Trophozoites of *Entamoeba planorbi* n. sp. showing rounded and oval shapes. 4. Uninucleate cyst of *E. planorbi* n. sp. 5 & 6. Trophozoites of *Endamoeba blattae* Butschli.

**Abbreviations**:

CG — Chromatin granules; ECT — Ectoplasm; END — Endoplasm;

ES — Endosomal ring; FV — Food vacuole;

NU — Nucleus; CS — Cyst;

*Endamoeba blattae* Butschli, (Fig. 5 & 6) was found in the posterior most part of the gut of *Blatta orientalis* and was invariably accompanied by *Nyctotherus* infection. On comparison with the known species of *Endamoeba*, the present species is found to be nonspecific with *Endamoeba blattae* and is, therefore, relegated to this species. Kudo,1 while describing
E. blattae gave the diameter of the trophozoite as 10 to 150 µm, whereas, Mackinnon and Hawes reported that their average diameter is 50 µm. However, in the present case the trophozoite has a diameter of 57-86 µm, which comes within the range of the species.

REFERENCES
