

# EOPHYCOMYCES

Allison in Allison & Awramik 1989

p. 291

Kingdom Fungi

Division Chytridiomycota

*Eophycomyces* Allison, n. gen.

*Type species. Eophycomyces herkoides* Allison n. sp.

*Diagnosis.* Tubular filaments, branched, septate, cylindrical with varying diameter, and gently to strongly curved. The surface texture is finely granular. The filament has thin walls, more or less circular in cross-section, rarely compressed or collapsed, and typically  $\sim 11 \mu\text{m}$  in diameter. Septae are infrequent,  $\sim 1 \mu\text{m}$  thick. Branches are one-half to seven-eighths of the diameter of the parent filament, and arise at angles up to  $90^\circ$  from the parent filament.

*Etymology.* From the Greek *eos* = dawn, *phykos* = seaweed, and *mykes* = fungus.

*Discussion.* The marked irregularly bulbous and septate nature and thumblike protrusions in this pale fossil (Fig. 12.6) do not invite referral of it to the algae, cyanobacteria or other bacteria. It can, however, be compared to oomycetous chytridiomycetes, perhaps most closely to *Allomyces* according to I.K. Ross (personal

communication, 1986), who examined the specimen.

*Eophycomyces herkoides* Allison n. sp. (Figs. 12.5-12.7 and 13.5)

*Diagnosis.* Qualitatively, as for genus. The distance between septae may be as little as  $40 \mu\text{m}$ , but one segment  $130 \mu\text{m}$  long has none. Septae may be as close as  $3.8 \mu\text{m}$  or as far as  $45 \mu\text{m}$  from the point of branching. The filaments range in diameter from  $7.6$  to  $19 \mu\text{m}$ .

*Type specimen.* CA 644-2 at  $4.1 \times 19.9$ .

*Etymology.* From the Greek *herkos* = wall.

*Discussion.* Branched non-septate tubular filaments as much as  $10 \mu\text{m}$  in diameter, referred to the paleogenus *Archaeorestis*, are reported from the Gunflint chert (Barghoorn and Tyler, 1965; Awramik and Barghoorn, 1977). The presence of distinctive bulbous swelling in *E. herkos*, and lack of septae in *A. schreiberensis*, Barghoorn (in Barghoorn and Tyler, 1965), however, preclude assignment of *Eophycomyces* to this otherwise generally similar taxon.

*Occurrence.* CA 644; upper Tindir Group, Unit 5, upper Tindir Creek.

