

## **Euopsis Nyl.**

After Coppins & Jorgensen, 1992

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Thallus crustose, granular-areolate to minutely squamulose, fragile, dark red-brown, gelatinous when moist, fastened by thick rhizoidal hyphae; cortex not differentiated; hyphae forming a reticulate pattern around the cyanobacterial photobiont, but pseudoparenchymatous in parts with a green algal photobiont. Photobiont Gloeocapsa (cyanobacteria), cells or cell-clusters near the surface with red-brown, K<sup>+</sup> purplish gelatinous sheaths; cells surrounded by single hyphae or hyphal strands; sometimes also with Trebouxia (green algae).

Apothecial lecanorine; discs broadly open from an early stage, glossy, brown; thalline exciple well developed; true exciple narrow, of parallel, compacted paraphysis-like hyphae; hypothecium colorless or pale brownish, of interwoven hyphae; hymenium colorless, I-; epihymenium pale brown; paraphyses septate, slender, sparingly branched, not swollen and monilliform above. Asci cylindrical, thick-walled, 8-spored; discharge unitunicate-rostrate; inner wall I+ blue but apical dome I-, with amyloid collar surrounding upper part of the protoplast.

Pycnidia immersed; conidiogenous cells catenate; conidia bacilliform, acrogenous and pleurogenous. No substances. On moist, acid rocks, sometimes over mosses, soil or peaty debris. Cool temperate to arctic.

Distinguished from Pyrenopsis by the generally more disciform apothecia with glossy discs, I- apical dome of the ascus, and more slender paraphyses. Psorotichia has asci which are completely I-.

**1. Thalline exciple uneven, whitish, containing green algae (Trebouxia, also occurring in patches in the thallus, along with the cyanobacterium Gloeocapsa); thallus mainly granular, with whitish patches, often broken up into nodulose clumps to 1 cm diam. Apothecia to 0.5 mm diam. Hymenium 70-80 µm. Spores 9-12 x 5-7 µm. On moist, siliceous or slightly basic rocks. .... E. granatina**

**1. Thalline exciple crenulate due to granular or subsquamulose outgrowths, sometimes becoming excluded, red-brown, containing cyanobacteria (Gloeocapsa, as in thallus); thallus minutely squamulose, uniformly red-brown. Apothecia to 1 mm diam. Hymenium 100-125 µm. Spores 10-15(-17) x 5-8 µm. On moist, acid rocks (especially mica-schist), often over dead or dying mosses or small accumulations of soil. .... E. pulvinata (synonym Pyrenopsis pulvinata)**

### **E. granatina**

Thallus crustose, of granular, chinky, umbilicate verrucules, red-brown above, black below.

Apothecia to 0.3 mm diam., adnate; margin thin, crenulate, disappearing, of pseudocortex, lacking algae in outer part; disk flat to convex, red-brown, shining; hypothecium brownish; epihymenium brown, inspersed; hymenium hyaline, 125-150 µm; paraphyses slender, not branched, septate, not thickened at tips, 2 µm, gelatinized; asci with I+ blue outer coat and bipartite I+ blue tholus with broad ocular chamber; spores 8, hyaline, simple, oblong to slightly

curved, 9-13 x 4-5.5 um. On acid rocks. Arctic-alpine.

### **Literature**

Coppins, B. and P.-M. Jorgensen. 1992. Euopsis. In: Purvis, et al., Lichen Flora of Great Britain and Ireland.

Thomson, J. W. 1997. American Arctic Lichens. II. The Microlichens.