

Gypsoplaca Timdal

January 15, 1997

After Timdal (1990), and McCune and Goward

Thallus squamiform, monophyllous (may break up when old), attached by well developed, corticate rhizine strands of Squamarina-type. Upper cortex of "Kegelrinden" type; algal layer discontinuous; medulla non-amyloid; lower cortex absent.

Apothecia laminal, brown, discrete when young but soon becoming confluent. Hymenial gelatin non amyloid. Paraphyses branched and anastomosing, rather thin-walled, apical cell not, or only slightly, swollen. Spores 8 per ascus, simple, colorless, ellipsoid to subglobose, without halo.

Pycnidium immersed in the thallus, visible only as a faintly paler pore in the cortex; conidiophores richly branched at the base, terminal cell elongated and producing pycnoconidia terminally; pycnoconidia bacilliform or more often asymmetrically bifusiform (i.e., usually with one or two subapical swellings).

Chemistry: triterpenoids.

G. macrophylla (Zahlbr.) Timdal

Thallus squamulose; squamules to 30(-40) mm diam., orbicular, concave; upper surface olive brown, epruinose or sometimes faintly pruinose along the margin, soon displaced by the apothecia. Upper cortex 70-200 µm thick, formed by thick-walled, anticlinally to irregularly oriented hyphae with shortly cylindrical to thread-shaped lumina; algal layer more or less discontinuous; medulla well developed, containing crystals of calcium oxalate.

Apothecia reddish brown, orbicular when young, later irregular in outline, without an organized margin, rather merging smoothly in the squamules, often the entire upper surface of the squamule transformed into apothecia; discs epruinose. Thin section of apothecia distinctive in lacking an exciple and hypothecium but with true paraphyses present. Hymenium richly interspersed with "oil" droplets. Spores 13-17 x 7-9 µm.

Pycnoconidia 8-10 x c. 1.5 µm.

Thallus K-, C-, KC-, P-, usually containing triterpenoids.

Photobiont green, unicellular.

On exposed gypsum or calcareous soils and rock in arid or semiarid areas. Alaska and NW Territories, Yukon and Colorado.

Literature

McCune, B. and T. Goward. 1995. Macrolichens of the Northern Rocky Mountains. Mad River Press, Eureka, California.

Timdal, E. 1990. Gypsoplacaceae and Gypsoplaca, a new family and genus of squamiform lichens. Bibl. Lichenol. 38: 419-427.