

Farnoldia Hertel
(LECANORALES: PORPIDIACEAE?)

After Hawksworth (1992) and Poelt & Vezda (1981)

Rev. 5/94

Thallus immersed or superficial, continuous, grayish or white; medulla, when developed, I+ violet; prothallus absent. Photobiont trebouxoid. Thallus lacking lichen substances. Apothecia sessile, \pm constricted below; disc black, sometimes pruinose, convex; true exciple well developed, raised, of strongly compacted, dark brown hyphae under 5 μ m diameter; hypothecium colorless, greenish to dark brown. Hymenium colorless or greenish, I+ blue; epithecium greenish to brownish. Paraphyses branched and anastomosed, septate, the apices not markedly swollen. Asci 8-spored, elongate-clavate, with a thickened I+ blue tholus, containing a more densely amyloid, tubular pore, *Porpidia*-like, the walls frequently lightly cross-striate; spores ellipsoid, simple, thin-walled, 10-13 μ m long; gelatinous epispore thick. Pycnidia black, scattered on surface of substratum or immersed in thallus; conidiogenous cells \pm cylindrical; conidia bacilliform. No substances. On calcium-containing rocks, arctic-alpine to montane.

A segregate of *Lecidea*. Similar to *Clauzadea*, *Melanolecia* and *Tremolecia*.

1. Epilithic thallus well developed, \pm bullate-areolate, the areoles usually widely separated; medulla mostly strongly amyloid. Spores ellipsoid or assymetric, thin-walled, halonate when young, 15-25 x 7-16 μ m. Thallus crustose, thin to moderately thick, to 1.5 mm thick, white, sooty white, sometimes stained from substratum, areolate, from smooth to bullate in thick material; no hypothallus. Apothecia to 1 mm broad, adnate or between the areolae, black, with prominent margin; exciple black or brown-black often with narrow clear edge; hypothecium 100 μ m, light ochre to dark brown but paler than the sharply distinguished exciple; epihymenium green-black to brown-black, occasionally with light dead overlayer; hymenium 80-120 μ m; subhymenium 30-60 μ m, pale; paraphyses 2 μ m, tips to 3.5 μ m, anastomosing; asci clavate. On rock. [Also see *Lecidea nivalis* in Hertel, Khumbu Himal and *L. rhaetica* in Ozenda & Clauzade].*F. micropsis* (Massal.) Hertel

1. Epilithic thallus absent or poorly developed, mealy granular to indistinctly flat and small-areolate, whitish. Exciple consisting of rather widely dispersed, anastomosing and branched hyphae with narrow lumina. Epihymenium blue-green, N+ pink. Paraphyses anastomosing and branched, not or slightly thickened at apex. Juvenile apothecia with a gymnocarpic development. 2

2. Apothecia distinctly shiny, flat to convex; hypothecium in thin sections slightly paler than exciple; juvenile apothecia with exciple and hypothecium developing separately. Thallus dirty white to grayish, epilithic, thin, areolate, with 0.2-0.7 mm wide areoles, or endolithic. Apothecia sessile, elevated, (0.2)0.5-1.5(-2.5.) mm diam., numerous, generally convex, black, also when moist, not pruinose, often intermingled with juvenile apothecia; exciple rather thick, carbonaceous, K+ purple or K-, hyphae rather widely dispersed, anastomosing and branched, with narrow lumina; hypothecium to 120 μ m or more tall, mostly dark brown to brown-black, often intensely greenish in

upper part, K± purplish in section; hymenium (70-)80-110(-130) µm, 0.3% I+ blue, 1% I+ yellow-brown; epihymenium blue-green, N+ pink; paraphyses anastomosing and branched, not or slightly thickened at apex; spores (11-)13-28(-33.5) x (5.5-)7-14(-20) µm; perispore to 3 µm thick. Thallus where present generally I+ violet. Pycnidia 60-100 µm diam., often present; wall green above, colorless below; conidia 3.5-6 x 0.5-1 µm. Thallus P-, K-, C-, KC-. On hard and dolomitic limestones, often in somewhat damp situations, on weathered cracks and vertical rock faces.F. jurana (Schaerer) Hertel

2. Apothecia dull, soon hemispherical; hypothecium in thin sections darker than exciple, with dark veins protruding into exciple; excipulum and hypothecium continuous in juvenile stages. Thallus white, gray or brownish gray, sometimes reddish due to color of rock, epilithic, continuous or cracked areolate with 0.1-0.5 mm wide areoles, or endolithic. Apothecia elevated, black, also when wet, when young plane, 0.3-1.0 mm wide, with a distinct rim, when fully developed 0.6-1.4 mm wide, without a visible rim, often surrounded by a depression; medulla and exciple I+ violet; exciple extremely thick, dark brown, lighter in the outer parts, with widely dispersed, anastomosing and branched hyphae with narrow lumina; hypothecium brown-black, darker than the exciple; hymenium 60-90 µm high, 0.3% I+ blue, 1% I+ blue; epihymenium blue-green, N+ pink. Spores 7-17 x 3-9 µm. Pycnidia of Umbilicaria-type; conidiogenous cells with sterigmata; pycnospores 4-9 x 1 µm. At the edge of weathered cracks on N-facing vertical calcareous rocks. Arctic. F. hypocrita (Massal.) Fröberg

ADD?

Thallus absent; hypothallus thin, ± dark, indistinct. Apothecia sparse, sessile, often irregular, 0.4-0.8(-1) mm diam., constricted at base, K-; disc plane to concave, irregularly umbonate or gyrose, rarely smooth and round, usually irregular in shape with only small plane parts of the disc separated by ridges from the exciple; margin concolorous, prominent, flexuose. Excipulum and hypothecium brown-black, continuous with each other. Exciple 50-65 µm thick at margin; hypothecium 60-90 µm thick. Hymenium ca. 65 µm. Epihymenium fulvous brown. Spores ellipsoid, 12-14 x 6-7 µm, broadly ellipsoid. Apothecia, especially hymenium N+ orange brown with a violet tone. On sandstone in an open place, without accompanying species. Ohio. Hertel (Cryptothalline Lecidea key) treated this under Melanolecia; although most such species are now in Farnoldia, as I understand it Melanolecia is still a separate genus; I do not understand how the two differ; according to Egan this species is Porpidia spp.]. F? subsimplex (Magn.) [ined.]? [syn.: Melanolecia subsimplex, Lecidea subsimplex]

Literature

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