

Ropalospora Massal.
(FUSCIDEACEAE)

After Ekman, Tonsberg, and others

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Prothallus dark. Apothecia brown to black. Excipulum hyphae at least partly narrow (1.5-4) evenly thickened, with at least some lumina three or several times as long as wide. Asci with a \pm pronounced swelling near the apex; tholus consisting of an inner amyloid zone surrounding the young spore mass, and an outer amyloid zone along the inside of the ascus wall (thin but distinct in very young asci), and a less amyloid zone in between; outside of ascus surrounded by a slightly amyloid gelatinous matrix; relative thickness of the amyloid zones varies somewhat between the species. Spores multiseptate, acicular. Conidia bacilliform. Containing perlatolic, gyrophoric, usnic, atranorin, parietin, unidentified aliphatic substances and other compounds.

1. Thallus sorediate, C+ red. Thallus pale gray-green to dark chocolate-brown, areolate; areoles to 1 mm diam., discrete and thinly dispersed or contiguous, often becoming confluent, irregularly rounded, flat to weakly convex; soralia 0.2-0.3(-0.4) mm diam., pale ochre yellow to pale yellow-green, discrete or \pm confluent, mostly irregularly rounded, erose, weakly concave to flat; soredia farinose; prothallus dark brown, K+ fuscous brown, N-, discontinuous, irregular. Cortex and soralia KC+ red, C+ red, UV+ bluish white. Apothecia brownish black; proper exciple brownish black along edge, colorless inside; hyphae 1.5-4 μ m wide, evenly or unevenly thickened, tortuous; lumina varying from being as long as wide to many times as long as wide; hypothecium colorless; spores acicular with one attenuate end, ca. 40 x 2.5-3.2 μ m; asci clavate, 8-spored, with a tendency toward conoidal ocular chamber in some asci; inner amyloid zone thick, outer one thin but distinct in very young asci, later becoming rather thick. Pycnidia brown, half immersed, globose, to 150 μ m wide, arising singly; conidia bacilliform, 2.4-4.4 x 0.8-1.1 μ m. Containing gyrophoric acid, aliphatic compounds, and one unidentified nonaliphatic compound (same as in R. lugubris). On vertical surfaces of acidic rocks, often in crevices and gullies. Alaska. H. hibernica (P. James & Poelt) Tonsb.

1. Thallus sorediate or esorediate, C-. 2

2. Thallus dominated by soralia, usually or always sterile. 3

2. Thallus without or with few and small soralia, almost always fertile. 4

3. Corticolous; thallus \pm greenish, soralia UV+ white. Thallus grayish green, indistinct, \pm immersed or areolate; areoles to 0.2 mm diam., matt, discrete or \pm contiguous, rounded, convex; soralia green, yellowish green or straw-colored, effuse, irregular, often becoming confluent; soredia farinose; prothallus \pm distinct, brown. Apothecia 0.2-0.5 mm diam., very rare, sparse, sessile, black; disc flat. Excipulum persistent, brown; hyphae ca. 2 μ m wide, evenly thickened, tortuous at least in lower part of excipulum; most lumina at least four times as long as wide. Asci 12-16-spored; spores 22-31(-44) x (1.7-)2-2.5(-3.7) μ m, narrowly clavate, attenuate, often curved, 5- to 6-septate. Thallus and medulla P-, K-, KC-. C-. Containing perlatolic, hyperperlatolic, isohyperperlatolic, and superperlatolic. On Betula close to sea level on the Pacific coast. British Columbia. [See Tonsberg, 1992, for more info.; I think this is already on the

computer somewhere]. R. viridis (Tonsb.) Tonsb. (syn. Fuscidea viridis)

3. Saxicolous; thallus ± dark brown; soralia UV-. Sweden. (R. atroumbrina (Magnusson) Ekman

4. Corticolous; asci usually with ca. 30 or more spores (but variable and difficult to count). Spores (16.1-)20-40(-54.6) x (1.2-)2-3 µm, 6.5-25.0 times as long as wide, acicular with one attenuate end (which is again slightly thickened at outermost tip), straight or curved, indistinctly septate or with 3-5 septa. Apothecia usually presnet, black, (0.2-)0.4-1.5 mm diam., flat to convex, often irregular in shape, distinctly marginate when young; disc brown-black to black, smooth or finely rugulose; margin smooth or crenulate to flexuose, gray to brown, brown-black or sometimes black, often somewhat paler than disc. Epihymenium and outside of exciple brown. Excipulum ± brown along edge (K+ greenish), inside colorless to straw colored; hyphae ca. 2 µm wide, evenly thickened, tortuous at least in lower part; lumina at least four times as long as wide. Hypothecium 62-108 µm high, inspersed. Hymenium 62-108 µm, inspersed, colorless in lower part, ± brown in upper part (K+ greenish), with vertical strands of brown pigment reaching deep down. Paraphyses unbranched except in upper part, slightly thickened at top, of two forms: the dominating ones rather thick, 1.5-2.0 µm wide, mixed with a few thin ones ca. 0.8-1.0 µm wide. Asci ± clavate; amyloid zones thin in young asci, thicker with age. Pycnidia usually abundant (especially along edges of thallus), arising singly or in clusters on degenerated ascocarps, brownish-gray to dark brown, sessile, globose or irregular, 60-170 µm wide, one-chambered, brownish pigment in wall K+ greenish; conidia bacilliform, 2.4-4.0 x c. 0.8 µm, without guttulae. With perlatic acid, with or without parietin. Thallus K-, C-, KC-, P-. Thallus pale yellowish green, pale green, pale gray-green, pale brown, gray-green, gray-brown, or green-brown (grayish olive to slightly brownish), continuous and rimose, or more commonly verrucose and composed of somewhat scattered fragments, sometimes bullate; often with a brownish black prothallus, usually esorediate but sometimes small patches break up forming soralia; soredia 19.8-77.2 µm. Photobiont green, 6-11 µm diam. On Acer. Nova Scotia to Tennessee, west to the Great Lakes region. On broadleaved trees and conifers, usually on trunks, but often also on smooth bark of thin branches; in shady and humid as well as rather open and dry localities. R. chlorantha (Tuck.) Ekman

4. Saxicolous; asci with 8 spores. Thallus thick, dark gray-brown or black-brown, often purple-tinged, continuous, finely cracked-areolate or areolate; areoles somewhat verrucose, ± convex; prothallus dark; usually esorediate but rarely with a few distinct soralia. Apothecia abundant, brownish black to black, to 0.5-1.5 mm diam., sessile, discrete or often ± crowded; disc matt, flat to ± convex; hypothecium pale straw to red-brown, semi-opaque; proper exciple ± occluded, thick, concolorous with thallus, brownish black along edge, inwards gradually paler, faintly brownish, with dark brown spots; hyphae strongly conglutinated, in inner part 2-3 µm wide, ± evenly thickened, lumina about as long as wide. Asci clavate; ocular chamber lacking; inner amyloid zone thick, outer one thin but distinct in very young asci, persistently rather thin. Spores 17-48 x 4-7 µm, 8-11.6 times as long as wide, narrowly clavate or acicular, often attenuated at one end, often curved, 6- to 7-septate. Pycnidia rather abundant, to 120 µm wide, usually in clusters, dark brown-black, when young immersed in thallus, later becoming sessile; conidia bacilliform, 3.2-4.4 x ca. 0.8 µm. Thallus P-, K-, KC-, C-, containing ± usnic

acid, \pm parietin, and one or two unidentified substances. On exposed, vertical, siliceous, acid rock outcrops. New Hampshire. R. lugubris (Sommerf.) Poelt in Hertel

Literature

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