

Roccellina Darbish.
(ARTHONIALES)

After Tehler (1983)

Rev. 5/94

Thallus suffruticose, placoid, effigurate or crustose, incoherent or effuse with the surface becoming cracked, when young often initially crusose later becoming areolate, squamulose or bullate and finally suffruticose, without rhizines; color varying from white or white-grat to dark brown or yellowish; pruinose or subglabrous, rarely glabrous; prothallus brown or dark brown, consisting of loose hyphae, but when contiguous it is crust-like and black; placoid and suffruticose species usually do not exhibit any free-growing prothallus. Soralia when present punctiform or usually maculiform, rarely rimiform or capitate. Cortex usually thick and well developed, of mixed and intertwined hyphae, rarely anticlinally arranged, in a hyaline or yellow-brown gelatinous substance, rarely opaque and granularized; separate hyphae hyaline or brown-tipped, sometimes with epicortex; crystals seldom incorporated; in some species the cortex is reduced and thin but then with brown tipped hyphae. Medulla consisting of brittle or loose hyphae, in most species with an upper white and a lower brown part, or white with the hypothecium extending down to the substrate, or both, rarely with altogether white medulla.

Ascomorphs apothecioid or stromatoid, lecanorine or rarely biatorine, nearly always present and numerous (except in sorediate forms), solitary or aggregated, usually sessile or substipitate and with constricted base, sometimes immersed, \pm evenly dispersed over the central part of the thallus; disc pruinose, white-gray to nearly black; thalline margin as young entire but when mature usually undulating or strongly undulating; proper exciple (parathecium) thin or sometimes thick and conspicuous. Hypothecium carbonaceous or dark brown, rarely defined towards a white medulla. Hymenium hyaline; paraphysoids unbranched or sparsely branched; hymenial strands conspicuous, inconspicuous or lacking. Epithecium brown or brownish, 25-60 μ m thick; paraphysoids continued up from the epithecium, 1-2 μ m diam., branched and intertwined especially in the lower part, tips usually ornamented, 2-4 μ m in diam.; incorporated crystals few. Asci hyaline, clavate, bitunicate, constantly 8-spored. Spores hyaline, smooth, when old sometimes brownish, fusiform or obtusely fusiform, usually curved but sometimes straight, and often with one end tapering more than another.

Pycnidia numerous to few or absent, evenly dispersed over thallus surface with no special preference for thallus margin, immersed or slightly elevated, like black or dark brown dots; microconidia hyaline, thread-like and sickle-shaped, 9-17 x 1 μ m; one species with rod-shaped, slightly curved macroconidia, 11-19 x 2-3 μ m. Photobiont Trentepohlia. Erythrin, lecanoric

acid, roccellic acid, schizopeltic acid, atranorin and unidentified substances; norstictic and psoromic acids sporadic or rare. Cortex often C+ red, rarely K+ yellowish, KC+ often reddish, rarely P+ red or yellow. Hymenium I+ blue, best seen in the transition zone epithecium/hymenium, the lower hymenium, the hymenial strands, and the proper exciple; this reaction sometimes vague or inconspicuous. On rock or bark.

Similar to Dirina.

1. Thallus P+ yellow-red; spores 25-31 um long; ascocarps always sessile with constricted base; thallus creamy brown to green-brown.

On bark. R. conformis

1. Thallus P-; spores 22-25 um long; ascocarps sessile or immersed, base sometimes slightly constricted; thallus white-gray, seldom gray-brown. On bark or rock. R. franciscana

R. conformis Tehler

Thallus crustose, smooth or slightly verruculose, effuse, not lobate or effigurate, tightly attached to the substrate, creamy brown to green-brown, subglabrous or slightly pruinose, 0.3-0.7 mm thick; cortex well developed, with mixed and intertwined hyphae in a brownish gelatinous substance without granules, 20-40 um thick; epicortex lacking; medulla white, cretaceous, but near the substrate loose; soralia not seen. Ascocarps apothecioid, lecanorine, numerous, sessile with constricted base, 0.8-1.2 mm diam.; disk white-gray; hypothecium extending down to the substrate; hymenial strands not seen; epithecium with paraphysoid tips 2-3 um diam.; spores fusiform, curved or straight, (20.6-)25-31(-36.3) x (3.9-)5-6(-6.9) um (spores of California population average shorter than those of Baja California population). Only microconidia seen. Containing unidentified substance G; all parts C-, K+ yellow turning red, P+ yellow-red. Hymenium I+ blue. Individuals generally grow together in a mosaic pattern. On bark of various trees and shrubs, coast of Baja California, and Santa Catalina Island, California.

R. franciscana (Zahlbr. ex Herre) Follm. in Huneck & Follm.

Thallus crustose, areolate, probably effuse, sometimes and especially when saxicolous forming small cushions, not effigurate or lobate, easy to separate from the substrate but not in coherent pieces, white-gray to brownish, slightly pruinose, 0.5-1.0 mm thick if crustose, cushions around 10 mm; cortex well developed with mixed and intertwined hyaline hyphae in a nearly hyaline or slightly brownish gelatinous substance without granules, 25-50 um thick; epicortex thin or lacking; medulla in upper part white, in lower part brown to dark brown (but only if well developed; the thin thin thallus parts are all white), cretaceous but near the substrate loose; soralia

not seen. Ascocarps apothecioid, lecanorine, numerous, immersed or sessile with base not or only slightly constricted, 0.5-3.0 mm diam.; disk gray; hypothecium extending down to the substrate or fusing with the brown medulla; hymenial strands common and conspicuous; epithecium with paraphysoid tips 2-4 μ m diam.; spores fusiform, straight or curved, (19.6-)22-25(-28.4) \times (3.9-)5-6(-6.9) μ m. Only microconidia seen. Containing roccellic acid; all parts C-, K-, P-. Hymenium I+ blue. On bark of Cupressus and Pinus; rare on rocks, coast of central California.

Literature

Tehler, A. 1983. The genera Dirina and Roccellina.