

**Scoliciosporum Massal.**

After Fink, 1935, Purvis, 1992, and others

Rev. 4/96

Thallus crustose, thin, finely granular to scurfy to almost powdery, reminiscent of a "Pleurococcus" bloom, glaucous green, green, gray-white or brownish black, ecorticate, without isidia and rarely with indefinite soralia, without prothallus. Algae Protococcus-like, the spherical cells to 25  $\mu$ m diam., piled into larger or smaller conglomerates (goniocysts).

Apothecia biatorine, sessile, usually constricted below, rarely stalked; disks convex almost from the first, whitish, yellowish, light brown to black brown or black, the color often varying by habitat, but the younger apothecia usually paler than the older; margin compressed. Thalline exciple absent. True exciple evident in young apothecia, soon excluded, pale or colorless, of branching and anastomosing hyphae richly embedded in gelatin, radiating from below to the upper surface. Hypothecium colorless or pale, upper part of erect hyphae, lower part randomly oriented. Hymenium colorless below, I+ blue. Epihymenium colorless, brownish, blue-green or olivaceous, sometimes (when colorless) interspersed with and "surrounded by" numerous small granules. Paraphyses septate, branched and anastomosing in a gelatinous matrix, with unthickened or slightly clavate tips, of similar appearance to the hyphae of the excipulum; boundary between excipulum and hymenium fluid; apices not or only slightly thickened, sometimes a few with dark brown caps in young apothecia. Asci broadly spherical or clavate to cylindric, with thick I+ blue tholus with broad apical cushion, Lecanora-type. Spores 8, acicular, strongly sickle-like or spiraled curved, rarely elongate fusiform and more narrowed at one end, straight or curved, colorless, parallel 4-many-celled, the septa very thin and sometimes indefinite.

Pycnidia spherical,  $\pm$  immersed to emergent, wall dark brown to colorless; conidia of two types: macroconidia rod-shaped, straight or slightly curved; microconidia curved. Usually on bark or rock, rarely on other substrates,  $\pm$  nitrophilous, preferably growing in the shade, habitat varying by sites. Often overgrowing large surfaces.

Differs from Bacidia in the  $\pm$  from the first marginless apothecia, branching and anastomosing excipulum hyphae and paraphyses, Lecanora-type ascus, and the often spiralling spores. However, there are several N. American species presently treated under Bacidia that have spiralled spores, and may belong here.

**1. Thallus with irregularly scattered yellowish green, ovoid or punctiform soralia. Spores (22-)30-40 x 2(-4)  $\mu$ m, 4-8-celled, S-shaped, helicoid.** Thallus smooth and continuous, Apothecia convex, 0.2-0.5 mm diam., immarginate, brown. Hymenium hyaline, 50-60  $\mu$ m, I+ blue. Epihymenium pale. Hypothecium hyaline, well delimited. Asci 8-spored, amyloid. Paraphyses branched and anastomosing, pigmented at tips. Soralia 0.1-0.4 mm across, little prominent, discrete then confluent. C+ reddish, containing gyrophoric acid. Algae protococcoid. Inconspicuous, superficially resembling unlichenized green algae. On deciduous trees in humid sites, usually in or near cities. Western Washington (Seattle area) and British Columbia (Vancouver); Nova Scotia, Newfoundland. .... S. sarothamni (Vainio) Vezda.

**1. Thallus without yellowish soralia, at best granular-dusty, not yellowish. Spores usually**

- over 2 um wide (except in S. pruinose). ..... 2
2. Apothecia whitish; epihymenium granular; ascospores 1-1.2 um wide. .... S. pruinose (P. James) Vezda
2. Apothecia usually dark; epihymenium not granular (at least in S. umbrinum and S. chlorococcum); ascospores 2-5 um wide. .... 3
3. Spores curved to almost straight, 20-40 x 4-5 um, commonly 7-septate, elongate-fusiform, tapered at one end. Apothecia mostly 0.2-0.3 mm diam., convex, red-brown to dark brown-black, often shiny; epithecium pale brown to deep fuscous brown, occasionally with a greenish blue tinge, rarely entirely deep blue-green. Thallus irregularly granular but not sorediate; granules scattered or contiguous, dirty gray green, dark green or blackish green. Mostly on shaded, damp,  $\pm$  nutrient-enriched bark, often on branches or twigs, less often on wood and Calluna stems, pollution tolerant. Resembles, and often occurs with, the alga Desmococcus olivaceus and may form similar large patches. .... S. chlorococcum (Graewe ex Stenh.) Vezda
3. Spores spirally twisted or contorted, under 4 um wide. Apothecia brown to black. Thallus not sorediate. .... 4
4. Hypothecium dark purplish, K+ green. Spores 3-7-septate, 20-40 x 2-3 um. On wood or bark. Thallus thin and inconspicuous, green-gray. Apothecia 0.15-0.55 mm. .... (see Micarea endocynea)
4. Hypothecium pale. Apothecia 0.3-0.8 mm wide. .... 5
5. Epithecium  $\pm$  greenish or bluish (blue-green to olive-brown, the colors often intermixed). Usually on rock or wood. Spores (15-)20-30(-40) x 2-3 um, 3-7-septate, acicular, spirally twisted. Thallus very variable, thin, scurfy-uneven,  $\pm$  cracked, to often well-developed and rather thick, nodular-uneven, gray-brown to dark green-black, occasionally rusty. Apothecia 0.3-0.8 mm diam., red-brown to dark brown-black. Paler true margin sometimes persisting. On  $\pm$  basic or siliceous rocks, branches, twigs, wood and man-made substrata in coastal and upland areas. Pollution tolerant. Northern U.S., S to N. Carolina, W to California. May include S. umbrinum v. compacta (Körber) Vezda ..... S. umbrinum (Ach.) Arnold
5. Epithecium red-brown. On bark. Spores 22-35 x 2.5-4 um. Thallus thin, whitish. .... (see Bacidia hegetschweileri)

### **"S." pruinose (P. James) Vezda**

Thallus thin, sub-leprose-granular or almost absent, glaucous to gray-white, often wide-spreading, effuse. Apothecia 0.1-0.3 mm diam., convex from initiation, becoming almost globose; true exciple obscured, sometimes becoming irregularly tuberculate; disc very pale pinkish, yellowish or brownish white, becoming browner when mature,  $\pm$  white-pruinose; epithecium colorless or pale brownish yellow, with numerous colorless interspersed granules to 1 um diam., dissolving in K. Ascospores (22-)25-32(-40) x 1-1.2 um, spirally twisted in ascus, sigmoid-curved or more rarely straight on release, septa 3-5, very indistinct. On alder at low elevation, Washington. Belongs to the "Bacidia lutescens" group.

### **Literature**

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