

Spilonema Bornet
(COCCOCARPIACEAE)

After Poelt (1969)

Rev. 5/94

Thallus filamentous or dwarf fruticose, blackish, usually forming low mats or small, convex cushions of \pm erect, terete, densely branched and \pm completely interwoven or overlapping filaments, appearing felted, coralloid, or almost powdery; undifferentiated; filaments consisting of photobiont strands surrounded by a \pm irregular network of periclinial hyphae; attached to substrate by a bluegreen, N+ purplered, rhizinelike hyphae. Photobiont Stigonema or Hyalomorpha.

Apothecia, when present, lateral (terminal according to Rogers and according to Galloway), small, sessile, brown to blackish; disk flat to convex (convex from the first according to Galloway); thalline exciple absent; proper exciple \pm thin, soon disappearing, of radiating pseudoparenchymatous cells; apothecia internally with green or violaceous, N+ reddish pigments; hypothecium pseudoparenchymatous, brown; hymenium bluegreen to violet, I+ blue; paraphyses rather stout (thick), branched (simple according to Rogers), septate, with pointed apices; asci cylindrical to oblongclavate, unitunicate, I+; tholus I+ blue; spores 8, oblongellipsoid to ovoid, narrow, simple (to 1septate according to Galloway), hyaline, thinwalled.

Pycnidia lateral, sessile (immersed according to Rogers), convex to globose, black, wall greenblack, N+ red; conidiogenous cells short, catenate, acrogenous and pleurogenous (endobasidial according to Rogers); pycnosporos bacilliform, simple, colorless. No substances. On moist siliceous (or ultramafic) rocks; some species also on bark, detritus, mosses, etc.

Distinguished from Ephebe by the narrower filaments with bluegreen rhizoidal hyphae, and the lack of a thalline exciple. May also be confused with Thermutis, which has narrower photobiont filaments (Scytonema) and more scattered hyphae.

1. On bark. Thallus delicate fruticose, in small straggling tufts; branches dichotomously dividing, thin, delicate, translucent, shining, bluish green, terete, 1.5 mm long, 0.5 mm thick. Apothecia unknown. S. dendroides Henssen (see Henssen, 1981)

1. On rock. 2

2. Thallus forming thick cushions of crowded, erect branches. Apothecia (often absent), hidden within thallus cushion.

Hypothecium dark, violaceous. Thallus minutely shrubby, blackish, forming compact cushions 515 mm wide, 0.36 mm high, covered with a single series of bluegreen "rhizines". Filaments to 60 um wide. Hyphae 47 um wide. Apothecia and pycnidia sunken in the cushions. Apothecia uncommon, often absent, to 0.5 mm wide, each borne laterally on a filament. Hypothecium 100180 um. Hymenium 4555 um tall, bluegreen or partly violaceous above. Pycnidia to 0.2 mm diam.; conidia 2.5 x 1 um. Photobiont cells 1020 x 914.5 um. On moist, acidic or ultramafic rocks. Washington; Channel Islands of S. California?. The cushionforming habit is reminiscent of Thermutis velutina, which has narrower photobiont filaments (Scytonema) with more scattered hyphae. S. revertens Nyl.

2. Thallus loosely turflike or producing loose cushions or mats of loosely interwoven filaments. Apothecia borne on surface of thallus mat. Hypothecium colorless. Thallus with downcurving, + basally branched filaments 1540 um long and 14 mm wide, which usually bear smaller onesided sparse branches, with bluegreen rhizinehyphae at the base. Hyphae 47 um wide. Thallus dark olivaceous to blackish. Apothecia to 11.8 mm wide, borne on surface of thallus mat, laterally sessile on the filaments. True exciple often indistinct. Hymenium 5560 um tall, bluegreen or violaceous above. Hypothecium 200240 um tall. Paraphyses 22.5 um wide. Asci 4050 x 79 um. Spores 79 x 2.5(3.5) um. Subhymenial layer pale. Pycnidia to 0.2 mm diam.; conidia 2.54 x 1 um. Photobiont cells 916 x 912.5 um. On moist, exposed acidic rock. When sterile, easily mistaken for Ephebe, but distinguished by the narrower filaments and the bluegreen rhizoidal hyphae. S. paradoxum Bornet

Literature

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