

Sigridea Tehler
(ARTHONIALES)

After Tehler

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Thallus crustose, epiphloeodal, homiomorous, effuse, coherent, compact, smooth to rugose, epruinose or finely pruinose, white, thin (0.05-0.2 mm); calcium oxalate absent. Cortex usually present but thin (ca. 10 μ m thick), inconspicuous or sometimes absent; hyphae interwovenly arranged, smooth, hyaline. Medulla absent or indiscernable; hypomedullary plectenchyma absent. Soredia and isidia not developed.

Ascomata numerous, pluricarpocentral, discothecial, solitary, developing mutually with the thallus, circular in outline and sometimes slightly undulating, elevated with constricted base, (0.2-0.5-1.6) mm diam.; disc exposed, pruinose, without tomentum. Thalline margin present, with algae and usually cortex. Proper exciple parathecial, but sometimes thin; hyphae parallel arranged, brown; pruina absent. Hypothecium dark brown (carbonaceous), extending down to substrate. Hamathecium with paraphysoids parallel, sparsely branched, hyaline in a clear hyaline gel, \pm unseparable, ca. 1 μ m diam., septate with cells ca. 10 μ m long, septation often inconspicuous; epithelial hyphae brown or brownish, smooth to verrucose, richly branched and intertwned, \pm unseparable usually in a brownish granular gel, ca. 23 μ m diam.; calcium oxalate absent. Asci clavate, (40-50-65-80) x 10-14 μ m. Spores fusiform usually with one end tapering more than the other, curved, 3-septate, hyaline.

Pycnidia solitary, immersed, dark brown; microconidia bacilliform, curved, 1-septate, hyaline. Photobiont Trentepohlia sp., cells coccal, 8-15 μ m diam. Thallus C, K or yellowish, P or + yellow. Hypothecium K+ olive black. Hamathecium hemiamyloid (K/I+ blue), rarely amyloid (I+ blue). Psoromic acid. On bark of various trees and shrubs, in coastal or nearcoastal areas.

The genus is best recognized by: 1) thallus white without creamy tinge; 2) discothecia circular and not or only slightly undulating; 3) conidia bacilliform; 4) containing psoromic acid. Schismatomma differs in the smaller, usually elongated ascomata with a poorly developed thalline margin, absence of cortex plectenchyma and different chemistry.

S. californica (Tuck.) Tehler
(Syn. Schismatomma californicum)

Thallus homoiomerous, effuse, coherent, compact, well defined and delimited, but sometimes small (ca. 1 mm diam.), growing in mosaic patterns, thin, (0.05)0.10.2(0.3) mm thick; surface smooth to rugose, white to creamy white, epruinose or finely pruinose, without calcium oxalate. Soralia and isidia not developed. Cortex plectenchyma present, inconspicuous or very thin, or absent. Medulla inconspicuous.

Ascomata apothecioid, numerous, solitary or sometimes aggregated, developing mutually with the thallus, circular, not or only slightly undulating, (0.2)0.51(1.6) mm diam., sessile, elevated, with constricted base; disk exposed, pruinose, whitegrayish, without tomentum; thalline margin usually conspicuous but sometimes thin or poorly developed and then of the same color as the thallus, usually entire or slightly undulating, slightly pruinose; proper exciple parathecial, but sometimes thin and inconspicuous. Hypothecium dark brown to black (carbonaceous), extending down to substrate, sometimes inconspicuous. Hymenium 6070 μ m. Hymenial strands inconspicuous or absent; epithecium 1020 μ m, without gelatinous patches. Paraphysoids \pm unseparable, in lower part hyaline and unbranched, less than 1 μ m diam., in epithecium brown or brownish, branched or sparsely branched, loosely intertwined, smooth, ca. 2.0 μ m diam. Spores obtusely fusiform, usually with one end tapering more than the other, straight or slightly curved, hyaline, 3-septate, (12)1315(18) x 34(5) μ m.

Pycnidia numerous, few, or absent, usually restricted to certain parts of the thallus, immersed, black or dark brown; microconidia hyaline, bacilliform, straight or slightly curved, 24 x 1 μ m. Photobiont Trentepohlia. Thallus P+ yellow (psoromic acid). Thallus C, K, KC; disk K+ quickly turning black. Hymenium I. On bark of trees and shrubs (e.g., Quercus, Heteromeles, Adenostoma, and Pinus), or on wood. Southern to central coast of California.

Similar to Schismatomma rediunta, but has larger sessile ascocarps with a constricted base and less conspicuous pruina, shorter and narrower spores, shorter microconidia, paraphysoids smooth in the epithecium and only loosely intertwined without a gelatinous matrix, and contains psoromic acid.

Literature

Tehler, A. 1985. Three species of Schismatomma. Lichenologist 17(2): 205-212.

Tehler, A. 1993a. Schismatomma and three new or reinstated genera, a reassessment of generic relationships in Arthoniales. Cryptogamic Botany 3: 139151.

Tehler, A. 1993b. The genus Sigridea (Arthoniales, Enascomycetidae). ("in manuscript", cited by Tehler, 1993a).
[Need to see this to get a better description of the species]