Schizopelte Th. Fr.
(ARTHONIALES)

After Tehler (1990), Fink (1935) and Hale & Cole (1988)

Rev. 5/94

Thallus foliose to fruticose, erect, ± thickly lobed, forked or branched; lobes or branches terete, smooth to rough; cortex of transversely extending, cohering hyphae; algal layer ± distinct; medulla of longitudinally extending hyphae. Cortex palisade. Soredia absent. Ascocarps round, irregularly incised or parted (lobate), terminal (or lateral according to Fink); disk concave to flat; thalline exciple irregular; proper exciple colored like the disk, soon disappearing. "Hypothecium" dark brown. Hymenium hyaline or brownish above. Paraphyses branching. Asci clavate. Spores dark, oblong to fusiform, 47locular. Photobiont Trentepohlia. Erythrin, lecanoric acid (trace), schizopeltic acid, 2 unindentified substances. On rocks and soil. Monotypic.

Although Egan treats S. californica under Combea, it does not belong there, and differs in apothecial characters, according to Tehler.

S. californica Th. Fr.

Thallus fruticose, erect, sparsely dichotomously branched, 13 cm high, composed of few, clustered, rather stout and knobby, distinctly but sparsely branched, solid branches, soft and leathery but breaking apart when preserved; both main and terminal branches terete (to irregular in cross section), smooth or rough to finally scaly, with old parts sometimes rugose, sparsely pruinose, creamy white to grayish white; branches 12(3) mm thick; holdfast included in a small crustose or suffruticose, effuse, primary thallus; prothallus brown; calcium oxalate present. Cortex with hyphae interwovenly arranged, 5065 um; hyphae smooth, hyaline; surface gel granular, only incorporated in coertex, hyaline. Medulla white, cretaceous, except in top of young brancheds where it is brown and byssoid; thallus gel granular, hyaline; thalline hyphae verrucose, thinwalled, 1 um, hyaline, 34 um diam.; hypomedullary plectenchyma present in holdfast and basal plate, with reddish parts. Soralia and isidia absent.

Ascomata numerous, multiascal locules, pluricarpocentral (hymenial strands present but thin), discothecia (pseudoapotheciaascolocular), (2)58(20) mm diam., rounded,

becoming fanshaped or irregular; solitary, developing mutually with the thallus, terminal on branches or on short lateral branches, circular in outline but when old sinuate, sessile to subpedicellate, with constricted base; disc exposed, concave to rarely flat, dull black, gray from thin, smooth, white pruinose layer. Thalline margin concolorous with thallus, prominent, becoming crenate, with algae and cortex; proper exciple a thin parathecium, sometimes inconspicuous. Hypothecium distinct, darkbrown (carbonaceous), extending down into medulla. Hymeniumm 70100 um; paraphysoids parallel, not seprable, sparsely branched, hyaline, 12 um diam., septate with conspicuous cells 1015 um. Epihymenium brown, 2030 um; gel brownish and granular; hyphae intertwined, richly branched, with tips cylindrical, 12 um diam., smooth, hyaline; calcium oxalate present. Asci clavate, 70 x 14 um. Spores oblong or slightly fusiform, straight or slightly curved, verrucose, 57septate (immature spores 3septate), constricted at flat septa, brown, (18)1923(25) x 35(7.5) um.

Pycnidia aggregated in groups in well defined, whitepruinose, ascomalike synpycnidia ca. 2 mm diam., but solitary, immersed, black pycnidia ca. 0.1 mm diam. may also be present; microconidia filiform, curved in a semicircle, (10)1113(14) x under 1 mm; macroconidia not seen. Photobiont Trentepohlia; cells coccal, 1015 um, in an algal layer. Cortex C+ red turning yellow; medulla C; thallus and apothecial tissues, P, I, K (hypothecium, epihymenium and spores oliveblack in K); hymenium and asci K/I+ blue (reaction in best seen in asci with immature spores); pycnidial wall K/I. Schizopeltic acid, erythrin, trace of lecanoric acid. On shrubs, especially Boxthorn (Lycium) and (more often) on rocks or soil on cliffs in headlands, in fog zones in coastal scrub, usually near the sea on vertical and overhanging cliffs exposed to the north, above the littoral and away from direct sea spray. Coast of southern California to Baja California. Common on the Channel Islands, rarer southwards.

Literature

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