Lecanographa Egea & Torrente

After Egea & Torrente (1994)

The descriptions are not quite complete, because I didn't have my Spanish dictionary handy.

Thallus crustose, ecorticate, firmly attached; medulla chalky. Photobiont Trentepohlia. Ascomata lirelliform to round, immersed then sessile, little or not constricted at base; discs covered by persistent whitish, grayish or yellowish pruina; excipulum bronw-black, composed of firmly gelatinized hyphae, the structure difficult to see; without granules or crystals soluble in K; paraphysoids much branched and anastomosed, often forming a loose network over the hymenium; asci clavate, fissitunicate, grumulosa-type, with ring little or not differentiated, 8-spored. Spores oblong-ovoid to fusiform, 3-12-septate, halonate, hyaline, becoming brown only when old. Pycnidia immersed to submimmersed, punctiform. Microconidia 4-17 x 0.8-1.5 um, straight or rarely curved; macroconidia absent. Chem.: atranorin, anthraquinones, and gyrophoric, psoromic, conpsoromic and confluentic acids. On rock or bark, in tropical to temperate or cold climates, oceanic to suboceanic. Type species: Lecanographa lyncea (Sm.) Egea & Torrente

1. On rock. Thallus C+ reddish, P- or P+ yellowish. Ascospores with more than 5 septa, surrounded by a thick gelatinous sheath, fusiform. Paraphysoids branched and anastomosing; asci grumulosa-type. Pycnidia immersed; pycnospores straight. Discs grayish pruinose. Coastal, ombrophobic (i.e., in areas sheltered from precipitation). 2
1. On bark or wood. 3

> **2. Ascospores 19-26(-30) x 4-5.5(-6) um, 6-7-septate. Pycnospores 5-10 x 1 um. Thallus white to creamy white or gray, ecorticate. Ascomata rounded (0.25-0.9 mm) or lirellate (0.8-2 x 0.3-0.6 mm), at first immersed then ± adnate. Paraphysoids to 2 um thick; asci 75-110 x 15-20 um. Thallus P- or P+ yellowish in parts, containing lecanoric and gyrophoric acid, traces of erythrin, and traces of unknowns (HPLC only).** Baja California. ..... L. hypothallina (Zahlbr.) Egea & Torrente (syn. Lecanactis nashii, Opegrapha hassei, Schismattoma hypothallinum, Opegrapha hypothallina)
> **2. Ascospores 25-32 x 6.5-8(-9) um, 7(-8)-septate. Pycnospores 6-9(-13) x 1-1.5 um. Thallus white or gray; cortex inconspicuous or thin. Ascomata round to slightly lirellate, at first immersed then adnate, 1-2.2 x 0.4-1.2 mm. Paraphysoids to 1.5 um thick; asci 80-110 x 18-22 um. Thallus P-, containing erythrin and traces of lecanoric and gyrophoric acid.** Baja California. ..... L. dimelaenoides (Egea & Torrente) Egea & Torrente

3. Spores with the tips narrowed/pointed, assymetrical, with the central cells larger, at the center somewhat constricted, 3-4(-5) um wide, with "delgada" halo. Thallus usually thick, rarely thin, grayish white to pale brownish gray, ± continuous, farinose or cacked-areolate. Apothecia black, at first immersed then sessile, roundish to angular, 0.2-1.1 mm diam., or ellipsoid to elongate to 2 mm long; disc flat, usually white or bluish white-pruinose; true exciple thin, often prominent. Spores 14-23 x 3-4(-5) um, 2-3(-50-septate, oblong-fusiform. Pycnidia

rare; pycnospores curved, 5-7 x 1 um. Thallus and apothecial pruina P-, K-, C+ red (lecanoric acid and erythrin). On dry, ± calcareous rocks and mortar, often on sheltered underhangs and shaded walls. Highly questionable in N. America, but reported from Baja California. ..... L. grumulosa (Dufour) Egea & Torrente

3. Spores not narrowed or pointed at the tips, symmetrical, with all the cells similar, not constricted. 5

> **4. Spores 14-27 x 2-3 um, 3(-5)-septate; apothecia usually absent,** 0.2-1(-1.5) mm diam.; discs concave, epruinose to whitish pruinose (rarely greenish); true exciple black. Pycnidia unknown. Thallus thick, chalky-white, white-powdery, with numerous, evenly scattered, pale brown, granular flecks (apparently ascomatal initials) to 0.2(-0.3) mm diam. Apothecial pruina and thallus P-, K-, KC-, C-; medulla UV+ citrine-glaucous (unknown and an unsaturated fatty acid, UV+ blue after charring). On dry bark of old oaks, usually low down, often in concavities between root buttresses, always where not directly wetted by rain; in old woodlands. Listed by Esslinger, but Egea & Torrente do not mention the species as occurring in N. Am. [If spores (11-)15-20 x 2.5-3.5(-4) um and thallus P+, occurring in Mexico (Morelos), see L. illebrosula (Müll. Arg.) Egea & Torrente] ..... L. amylacea (Ehrh. ex Pers.) Egea & Torrente
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> **4. Spores 15-24(-27) x 3-3.5(-4) um, with (4-)5-6(-7) septa.** Thallus epiphloedal, whitish crem color, rimose to areolate, well delimited, 300 um thick; surface pulverulent; hypothallus forming a black line; medulla little differentiated, chalky. Ascomata rounded to somewhat irregular, 0.3-1 mm diam., sessile, constricted at base; discs plane to slightly convex, whitish to grayish pruinose; margin smooth, finally disappearing. Hymenium 100-11120 um, I+ blue; sybhymenium 20-30 um, hyaline or rosy-tinged; paraphysoides numerous, very coherent, 1.5 um thick; apical cells somewhat thickened, coralloid; asci clavate to cylindrical-clavate, 45-70 x 10-13 um. Spores fusiform, with cell walls "delgada" and ± uniform; halo "delgada". Thallus P+ yellow, with psoromic and conpsoromic acids. On bark (e.g., Torrey pines), coast of S. California. ..... L. subdryophila (Follm. & Vezda) Egea & Torrente

7. Spores 23-28 x 5-6 um. Thallus epilithic, crustose to cushion-like, effuse, areolate, pruinose, white, sometimes with grayish tinge, 1-10 mm thick; prothallus absent; calcium oxalate sparse. Soredia and isidia absent. Ascomata (discothecia) numerous, evenly dispersed over thallus surface, pluricarpocentral (hymenial strands present), solitary, usually elongate to lirelliform or circular in outline, the litellae unbranched, sessile, with base not constricted, 2 x 0.5 mm; disc exposed, concave, pruinose; disc tomentum absent; thalline margin conspicuous in young individuals, often decaying and exposing the proper exciple with age; proper exciple of intertwined coalescent carbonaceous hyphae; hypothecium dark brown (carbonaceous), not extending down to substrate; hymenium hyaline, 55-70 um; paraphysoids sparsly branched, hyaline, 1 um or less diam., septate; epithecium brown, sometimes with greenish tinge; spores oblong to slightly fusiform, straight or slightly curved, smooth, (6-)7-(-8)-septate, not constricted, hyaline. Pycnidia solitary, immersed, dark brown; microconidia bacilliform, 6-8 x 1 um. Thallus and disc C+ red (lecanoric acid and sometimes traces of erythrin). On northerly exposed rocks and cliffs along the coast, central California to Baja California. ..... Lecanographa. hypothallina (Zahlbr.) Egea & Torrente

7. Spores 15-24 x 3.5-5.5 um. Thallus thin to moderately thick, becoming chinky to

subareolate, crumbling or powdery, dull dirty whitish, on a very thin, grayish, lead colored hypothallus, the margin becoming obscurely lobulate. Apothecia 1.5-4 x 0.4-0.8 mm, ± irregular, with obtuse ends, adnate to subsessile, scattered or clustered, curved ± strongly, becoming 1 or 2 times branched furcately; disc open, flat, brown to brownish black, ± grayish pruinose; exciple thick, dark brown to blackish, ± irregularly covered toward the base by thalline margin; hypothecium hyaline or tinged ± brown; spores oblong-dactyloid, usually 7-septate. On rocks (probably siliceous), Santa Catalina Island, southern California. ..... O. hassei = Lecanographa hypothallina

Literature

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