

Placynthium (Ach.) S. Gray
(PLACYNTHIACEAE)

After Henssen (1963) and Thomson (1984)

Rev. 5/94

Thallus closely attached, often rosette-shaped, minutely fruticose, mealy, of closely aggregated filaments, or effigurate-rosettiform with stellate spreading squamules or elongate-cylindrical to flattened lobes, or without lobes, the central area \pm continuous to markedly areolate; surface blue-black, gray, olive, brown, or black, sometimes densely gray- or blue-gray pruinose, not subgelatinous when moist, prothallus absent, or frequently \pm well developed and forming a \pm extended, conspicuous blue-black margin. Lower surface and associated hyphae ("rhizines") dark blue-green or pale. Isidia often \pm densely present, coralloid or \pm flattened. Photobiont Scytonema or Rivularia, or related genera, dispersed and homeomerous, not layered.

Apothecia lecideine, black, hemiangiocarpic; disc fully expanded from the first. Thalline margins sometimes present (according to Galloway, but he, like everyone else, describes the apothecia as lecideine). True exciple and disk dark brown to black, often shining; true exciple opaque, black, tinged brown or purple. Hypothecium brownish or red-brown. Hymenium blue or green in upper part often tinged brown-violet. Paraphyses clearly septate, simple or sparingly branched, apical cells pointed, thickened or not different in shape. Asci cylindrical, Peltigera-type, with apically thickened wall. Spores (4-)8, shortly fusiform or ellipsoid, rarely acicular, (0-)2-4(-7)-septate.

Pycnidia partly immersed, with dark ostioles; conidiophores branched; conidia bacilliform or dumb-bell-shaped. No substances detected by TLC, but dark blue and purplish pigments in the apothecia. On flat, level rock surfaces which are sometimes wet, calcareous or not; very rarely on soil or bark.

1. Apothecia with thalloid margin (concolorous with thallus, soon disappearing). Lobes filiform with colorless (grayish or brownish) underside. Thallus minute, round and stellate, greenish brown, the lobes branched toward the circumference, the central part of thallus becoming squamulose or granulose and sometimes dying out. Apothecia 0.15-0.25 mm across, the disc concave to flat, brown. Spores 1-septate, oblong-ellipsoid, somewhat curved, 13-20 x 3-5 μ m. On calcareous rocks, Alabama.P. stenophyllum

1. Apothecia with proper margin. Lobes flattened, or canaliculate or rarely convex; underside bluegreen.2

2. Lobes flat-squamulose, not effigurate; blue-black prothallus usually developed, conspicuous, sometimes fimbriate. Lobes less than 0.2 mm broad. Spores (1-)3-septate. Thallus to 12 cm diam., often smaller, wide-spreading, brown-black to jet black, sometimes \pm gray-violet pruinose, composed of small, crowded, flat granular squamules 0.4-1.5 mm across, with crenate or digitate margins, scattered or more usually crowded forming areoles 1-2.5 mm diam.; isidia often present, granular to coralloid. Apothecia 0.5(-1) mm diam.; true exciple black, shining, often becoming flexuose; disc brown to black, concave, later flat or weakly convex; epithecium bluegreen. Spores (7-)9-18(-22) x 3.5-5.5(-6) μ m, 13-septate, narrowly ellipsoid. Usually on damp to somewhat dry calcareous rocks but may occur on other rocks in more moist places and rarely on other substrates, especially where indirectly influenced by lime. Arctic to temperate, southward in west-central and eastern U.S. P. nigrum

2. Lobes stellate-radiating; prothallus usually lacking.3

3. Lobes 0.05-0.2 mm broad.4

3. Lobes more than 0.2 mm broad.5

4. Lobes flat, crenate at tips, rarely with terminal convex elongations, tightly packed, radiating or parallel, flattened to \pm unevenly convex, 2 x 0.05-0.2 mm wide, apices sometimes indented; surface dark olive brown to blackish; prothallus inapparent; isidia sparse when present, to 0.4 mm long, globose or subcylindrical, erect, irregular, scattered or crowded. Ring- or arc-formation common; center \pm bare or with dark olive-brown, \pm scattered, nodular-contorted areoles; older areoles may become secondarily lobed and generate a new thallus within the original one. Surface not or little gray-pruinose. Spores (9-)11-13(-15) x (5-)6-7(-8) μ m, 1-septate, ellipsoid. Thallus to 1.5 cm diam. Apothecia very rare, to 0.5 mm diam. On dry to irrigated, well-illuminated, hard, often vertical limestone. Western Canada.P. subradiatum

4. Lobes filiform or canaliculate, \pm shining. Thallus densely granulose or isidiose in center, aggregated into areolate masses, not pruinose. Dendroid prothallus sometimes developed, usually not. Spores (11.5-)15-19(-21) x (4.5-)5.5 μ m, (1-)3-septate, (4-)8 per ascus, ellipsoid or slightly clavate, \pm indented at the septa. Thallus to 2 cm diam., rosette-like, olive to black; lobes very narrow, 1.5 x 0.05-0.2 mm, \pm decumbent and radiating at the margin. Isidia nodular, granular-coralloid, or \pm erect, extended-cylindrical and finger-like. Apothecia concolorous with thallus, \pm immersed to sessile; epithecium blue-green-black; hypothecium \pm reddish brown, K \pm intensified. On moist, calcareous and siliceous rocks, common in the arctic, south to

Colorado and North-Central U.S.P. asperellum

5. Spores 1-septate. Thallus center dying off, covered by lobe fragments or bare and then thallus ring-shaped; isidia very rarely developed.P. petersii

5. Spores (2-)3-septate.

6. Thallus center regenerating, densely covered by flat isidia.

Spores 3-septate, oblong-ellipsoid, 16-20 x 5-7 μ m. Thallus thin, composed of small pale lead-colored to ashy or brown, irregularly lobed squamules; marginal lobes narrow, elongated, \pm flat (Phaeophyscia-like), much divided, longitudinally striate and expanded toward circumference, round and heaped toward center, on an indistinct bluish black hypothallus. Apothecia 0.2-0.4 mm diam., partly immersed to closely adnate; disk flat to slightly convex, reddish brown to black, the proper exciple thin, becoming black, and rarely disappearing. On granite or other acid rocks, in mountain streams, by lake margins, and associated with seepage tracks and frequently submerged. New Hampshire, Vermont, Maine, and Minnesota.P. flabelliforme

6. Without isidia, or isidia terete. Lobes flat (to \pm convex and terete in P. pannariellum), 0.5-1 mm broad, the tips fan-shaped broadened. 7

7. Dark prothallus present, conspicuous; thallus appearing dwarf fruticose, but margin strongly radiating; dull olive-brown, blackish brown, dark olive or blackish; central lobes cylindrical or flattened, smaller than marginal ones; marginal lobes \pm convex to terete, their ends fan-shaped, \pm branched, to 0.7-1 mm wide (Vestergrenopsis-like); central part with \pm terete to \pm flattened, erect, finger-like or coralloid isidia, sometimes forming a thickened densely isidiate areolate-crust; epithecium greenish blue, blue or brown; hymenium 80-115 μ m; spores 15-20 x 5-7 μ m, (1-)3-septate. Apothecia to 1 mm diam., dark brown. Thallus 1-5 cm diam., often forming wide-spreading patches as dark rosettes. On \pm basic or sometimes siliceous rocks, semi-inundated in streams and lakesides and in seepage tracks, occasionally on mica-schist soils, arctic-subarctic or alpine, Greenland. (P. pannariellum)

7. Dark prothallus not noticeable; thallus an areolate crust, the central part squamulose; epithecium brown; hymenium 83-95 μ m. On siliceous rocks occasionally covered by flowing water, Greenland. (P. rosulans)

ADD? (not in Egan):

P. lubrigum

P. siliceum Gyelnik--spores 1-septate

Literature

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