

Pyxine Fr.

(LECANORALES: PYXINACEAE)

After Imshaug (1957), and Harris (1990)

Rev. 5/94

Thallus foliose, heteromerous, dorsiventral appressed, radiate, rosetteforming to irregularly spreading, closely attached; upper surface white, grayish green, gray to brownishgray; pruina, pseudocyphellae, maculae, soredia and isidia present or absent; lower surface dark brown to black; rhizines black, simple, often with an anchoring, squarrose tuft at tip; medulla white, pale strawcolored to deep ochraceous orange (pigments K+ purple); upper cortex paraplectenchymatous, of anticlinal hyphae; lower cortex prosoplectenchymatous, of longitudinal, periclinal hyphae; attached to substrate by rhizines. Photobiont ?Trebouxia.

Apothecia sessile, laminal, lecanorine, appearing lecideine; sometimes with thalloid rim disappearing or retained, often not well developed, usually with proper margin; hypothecium dark, brown; epihymenium and tips of paraphyses K+ purple; paraphyses unbranched; asci clavate, Physciatype, unitunicate, I+ blue; tholus I+ blue; 8spored; spores oblong to ellipsoid, 1septate, brown, Physcia or Mischoblastiatype; walls thickened, lumina small.

Pycnidia immersed; fulcrum endobasidial; pycnospores short, cylindrical. Cortex with atranorin and occasionally chloratranorin, and frequently lichexanthone (UV+ citrine yellow); medulla with terpenoids, norstictic acid, anthraquinones, and various other substances. On bark or rock, mainly tropical (to temperate).

Distinguished from other physcioid genera by the lecideine appearance of the apothecia, the K+ purple reaction of the epihymenium, the dark brown hypothecium, black lower surface, and frequent presence of lichexanthone in the upper cortex. Sterile material can be easily confused with Dirinaria (which tends to have plicate lobes) and Diploicia, which lack lichexanthone and [always?] have a white medulla.

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| 1. Thallus UV+ yellow (lichexanthone); medulla P. | 2 |
| 1. Thallus UV; medulla P+ orange or P. | 7 |
| 2. Soredia and dactyls absent. | 3 |
| 2. Soredia or dactyls present. | 4 |

3. Medulla yellow (or rusty?). Spores mischoblastiomorphic. Thallus sometimes UV ?. On bark. Southern. P. berteriana (Fe) Imsh.

3. Medulla white. Upper surface not reticulate; pruina adglutinated, appearing as large flakes; thallus UV+. Apothecial stipe prominent, red (K+ red). Spores mischoblastiomorphic. On rock or bark. [Is this sometimes also sorediate?]..... P. petricola

4. Medulla orange to pale salmon, K+ purple; thallus UV+. 5

4. Medulla white or pale yellow, K+ yellow or K. 6

5. Lobes with laminal soralia originating from elongated verrucae on upper cortex, occasionally becoming globose soralia; Apothecia pruinose. Spores mischoblastiomorphic. More or less southern. P. caesiopruinosa (Nyl.) Imsh. s. lato #1 [possibly P. albovirens (G. Meyer) Aptroot] (Harris, 1990)

5. Lobes with marginal dactyls. With different set of terpenoids. Florida. P. caesiopruinosa (Nyl.) Imsh. s. lato #2 (Harris, 1990)

6. Medulla white. Lobes with patches of pruina. Soralia excavate to capitate. Thallus UV+ yellow. Thallus closely adpressed, orbicular, gray to brownish gray; lobes rounded, sometimes with laminal pseudocyphellae, usually with a white pruina in distinctly delimited patches. Soralia marginal or laminal and then starting as wartlike protuberances, sometimes covering the central parts; soredia granular to powdery. Underside black to grayish black with black, simple rhizines. Upper cortex paraplectenchymatous; lower cortex prosoplectenchymatous. Medulla creamy yellow to yellow. Containing lichexanthone and unidentified triterpenes. On bark or sometimes rocks. Florida. P. subcinerea Stirton

6. Medulla yellow. Upper surface not reticulate; soralia small and punctiform, breaking through surface, laminal, whitish; pruina adglutinated; apothecial stipe red (K+ red). Florida. [Fink's description states that the medulla is white, and therefore refers to another species]. P. cocoes (Swartz) Nyl.

7. Medulla yelloworange, P, not bursting out. Soredia not isidioid. Spores mischoblastiomorphic, 1septate, 1721 x 79 um.

Margins ecorticate, with prominent white lines; soredia dispersed in bluegray mounds, marginal. Thallus ± orbicular, loosely adpressed, gray to brownish gray, somewhat darker towards the margins. Lobes rounded, concave and slightly erose at the ends with marginal, white pseudocyphellae distinctly contrasting with the dark lobe margins. Pruina mostly on the outer parts of the lobes, typically spotted. Soralia marginal, distinctly delimited but spreading onto the lamina and forming round patches; soredia granular and dark gray, giving central parts of thallus a dark gray color. Underside black to grayish black with simple, black rhizines. Upper cortex paraplectenchymatous; lower cortex prosoplectenchymatous. Lichexanthone and unidentified triterpenes. Usually on mossy rocks. Southern U.S., extending up to Great Lakes region and northeastern U.S. P. sorediata (Ach.) Mont.

7. Medulla white or tinted yellow or orange, P+ orange(testacein agg.). 8

8. Lobes with laminal soralia. Medulla white. "Ascospores 2celled" (according to Harris, 1990, but he also says he hasn't seen the ascospores!). Medulla K(without norstictic acid). Florida. P. sp. ("P. eschweileri (Tuck.) Vainio s. lato" sensu Harris, 1990)

8. Lobes with marginal dactyls (isidiate/pustulate). 9

9. Dactyls delicate, almost immediately breaking down into granular, isidioid soredia. Medullary hyphae often bursting out of the margins. Spores not mischoblastiomorphic; spore walls thickened so that sporoblasts are elongated with tendency to become subdivided or 4celled, 2124 x 811 um. Medulla P+ dirty orange. On bark. Southern, to Florida. P. eschweileri (Tuck.) Vainio

9. Dactyls coarse, not becoming sorediate (but may becoming broken in handling). Medulla P+ redorange. Spores 2celled. Florida. P. coralligera Malme

EXCLUDED? (HARRIS, 1990):

Medulla P (without testacein agg.). Terpenoids. Thallus UV. With soredia or isidia. Possibly a misidentification of "P. eschweileri s. lato" according to Harris, 1990. P. daedalea

Upper surface reticulate with white lines; soralia large, partly

laminal. Soredia not isidioid. Apothecial stipe brown (K).
Spores mischoblastiomorphic, 1521 um long. Medulla K+ red
(norstictic acid). Underside yellowish or orangish, P+ orange
(testacein agg.). Probably a misidentification of "P.
eschweilleri s. lato" according to Harris,
1990. P. retirugella Nyl.

Literature

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