

Eopyrenula R. C. Harris
(PLEOSPORALES: PLEIOMASSARIACEAE)

After Aptroot; Coppins; Harris, 1973

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Thallus immersed, inconspicuous or whitish, effuse. Perithecia \pm globose or hemispherical, simple, with a dark brown involucrellum, which either clasps the sides of the centrum or spreads outwardly (involucrellum absent or much reduced according to Harris); true exciple cellular (textura angularis), pale brown, colorless, or almost inapparent below, not carbonized; dark tissue K. Hamathecium (interthecial hyphae) of numerous cellular pseudoparaphyses (referred to as paraphysoids by Coppins), simple or sparingly branched or anastomosed; paraphyses short, sometimes evident near the ostiole; gelatin I+ yellowish or pale bluish (especially around the asci). Asci subcylindrical, without apical ringstructure or (usually) distinct ocular chamber, the wall K/I or + blue (especially below), 8 spored but often up to 6 spores aborting. Spores (1)36-septate transversely, with true septa, rather small (less than 30 μ m long), walls little thickened, brown; end cells often paler, without conspicuous perispore or ornamentation. Pycnidia black; conidiogenous cells \pm cylindrical or narrowly lageniform, enteroblastic; conidia of two types: macroconidia ellipsoid, oblong to cylindrical, brown, 13-septate; microconidia bacilliform to filiform, straight, colorless, simple. Photobiont Trentepohlia, or ?nonlichenized. No substances. Mostly on smooth bark, in woodland. Type species: E. leucoplaca.

Differs from Pyrenula by ascospores without lenticular lumina, straight microconidia, and brown, septate macroconidia.

1. Thallus corticate, smooth. Spores small (1315 x 45 μ m).

Thallus brownish to green, not blackened around ascocarps, smooth, superficial, continuous, with a conspicuous, to 30 μ m thick, cortical layer, without crystals, without hypothallus. Lichenized, probably with Trentepohlia. Ascocarps simple, without pseudostromatic tissues, without crystals, conical, distinctly flattened, superficial on the substratum, partly covered by thallus, 0.3-0.5 mm diam., 0.1-0.2 mm high. Ascocarp wall not carbonized, without distinct clypeus, to 50 μ m thick. Ostiole black, obconical, apical, 20-30 μ m diam. Hamathecium not interspersed, not gelatinized, I-. Interthecial hyphae cellular pseudoparaphyses, simple, not branched at tips, 11.5 μ m thick.

Periphyses absent. Asci bitunicate, cylindrical, without ocular chamber, 5070 x 710 um. Spores 8, irregularly arranged, brown, ellipsoidal with rounded ends, slightly asymmetrically septate, not constricted, 1315 x 45 um, with 3 distosepta 1 um thick; endospore to 1 um thick; wall smooth, without granules, without gelatinous sheath, under 1 um thick. Anamorph unknown. No substances. On Alnus and Pinus, below 100 m. British Columbia; Washington. E. parivspora R. C. Harris & Aptroot

1. Thallus ecorticate, matt. Spores larger (over 16 x 5 um). Thallus whitish gray, not blackened around the ascocarps, immersed in the substratum, continuous, without crystals, without hypothallus. Lichenized, probably with Trentepohlia algae. 2

2. Spores (3)56(7)septate; macroconidia with 3(4) septa. Perithecia simple, without pseudostromatic crystals, without crystals, hemispherical, often distinctly flattened, especially in the apical part and sometimes even depressed, erumpent from substratum, exposed, 0.20.4 mm diam., 0.10.2 mm high. Ascocarp wall not carbonized, without distinct clypeus, to 100 um thick. Ostiole black, obconical, apical, 2040 um diam. Hamathecium not interspersed, gelatinized, I+ blue. Interthecial hyphae cellular pseudoparaphyses, simple, not branched at tips, 11.5 um thick.Periphyses absent. Asci without ocular chamber, 6090 x 712 um. Spores 8, uniseriate, brown, fusiform with subacute ends, asymmetrically septate, constricted at the septa, (16)2027(33) x 69 um; distosepta 1 um thick; endospore to 1 um thick; wall smooth without granules, without gelatinous sheath, 12 um thick. Pycnida black, globose, of two types, (a) wall completely carbonized, to 20 um thick, ca. 100200 um diam. with macroconidia and conidiogenous cells 611 x 1.82.5 um, (b) ca. 4060 um diam. with microconidia and conidiogenous cells 59 x 11.5(1.8) um. Macroconidia brown, with dark septa, middle two cells darker than outer cells, asymmetrically fusiform, distal apex obtuse, proximal apex narrower and truncate with an unthickened scar, 1217 x 4.55 um. Microconidia colorless, filiform, straight, 914 x 0.5 um. No substances. On deciduous trees. Minnesota, Iowa, Michigan, Ontario. E. intermedia Coppins

2. Spores (1)3(5)septate. Macroconidia 1(3) septate or occasionally simple. Thallus endophloedal, white to pale gray, smooth. Trentepohlia abundant, well developed, cks 912 um diam., forming short chains. Perithecia scattered, simple, without pseudostromatic tissues, without crystals, not distinctly flattened, immersed then erumpent from substratum, finally 1/22/3 exposed, 0.20.4 mm diam., hemispherical to ± globose, usually

depressed in the center, 0.10.2 mm high, black to dark brown, shiny or appearing pruinose due to the remains of the covering bark layer; wall not carbonized, to 100 um thick, entire, brown above, 6090 um thick, colorless below and thinner. Ostiole black, obconical, apical, 100150 um diam. Without distinct clypeus (involucrellum clasping sides of centrum). Hamathecium not inspersed, not gelatinized, I. Interthecial hyphae cellular pseudoparaphyses, simple, not branched at tips, rarely anastomosed, 1 um thick. Periphyses absent. Asci cylindric, without ocular chamber, sometimes with a very shallow indentation formed by a slight thickening of the wall at the tip, 6090(100) x 1012(15) um. Spores 8, obliquely uniseriate, brown, ellipsoid to clavatefusiform or fusiform with subacute ends, asymmetrically septate, not constricted, (12)1826 x 610(12) um; distosepta 12 um thick; endospore to 2 um thick; wall smooth, without granules, without gelatinous sheath, 12 um thick; septum dark; middle 2 cells darkest and outer cells progressively paler. Pycnidia black, of two types, ca. 100200 um diam.; wall completely carbonized, to 30 um thick. Macroconidia 6.59.5 x 34 um, fusiform, ellipsoid, ovoid, or pyriform; septa pale. Microconidia filiform, straight, 610 x 0.50.7 um, filiform. No substances. On bark of deciduous trees. Common in the Great Lakes region (Ontario, Michigan, Minnesota, Wisconsin), rarer elsewhere (e.g., New York, Iowa, Quebec). E. leucoplaca

Literature

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