

**Phaeorrhiza** Mayrh. & Poelt  
(LECANORALES: PYXINACEAE)

After Poelt & Vezda

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Thallus squamulose to almost foliose; upper cortex definite, paraplectenchymatous; medulla thick; lower cortex indefinite; attached by numerous thick-walled brown rhizines. Photobiont protococcoid. Apothecia sunken and cryptolecanorine to sessile and lecanorine or biatorine-lecideine; disks dark brown. Hypothecium colorless to brownish. Paraphyses capitate thickened. Asci Physcia-type. Spores to 8, gray to brown when ripe, 1-septate, with rather thin septa; walls rather uniformly thin, at first weakly thickened at the ends, but clearly many-layered. Pycnospores peg-form. On mineral-rich or salty soils or over plant debris, arctic-alpine.

**1. Apothecia first immersed-cryptolecanorine then sessile-lecanorine, sometimes color of margin later darker when algae die. Hymenium only rarely inspersed.** Thallus brown or reddish brown, sometimes whitish pruinose, in shade pale yellowish to ochre, areolate centrally, lobate at the margins, the lobes to 1 mm broad, incised or subcrenate, sometimes overlapping, matt, sometimes slightly pruinose, K-, P-. Cortex cellular, the cells thin-walled. Apothecia to 1 mm broad; margins concolorous with thallus or sometimes pruinose; disc flat, black, pruinose or not; epithecium brownish; hypothecium pale or dark brown; hymenium 90-110 µm, I+ blue or greenish blue as is hypothecium; paraphyses unbranched, free in K, tips brown-capitate; spores 8/ascus, 2-celled, slightly constricted, the walls uniform in thickness, greenish brown, 15-22 x 8.5-10 µm. On soil or humus, sometimes over mosses. Arctic-alpine, south to Colorado and New Mexico. .... P. nimbosa (Fr.) Mayrh. & Poelt

**1. Apothecia well developed true lecideine, with radiate, dark, algae-free exciple. Hymenium inspersed.** Thallus squamulose, 1-3 mm broad, with long lobes, forming hummocks or scattered, flat to swollen, brown, sometimes (v. sphaerocarpa (Th. Fr.) Mayrh. & Poelt), finely but clearly whitish pruinose, less pruinose and yellow-green in shade; upper cortex 30-40 µm thick, paraplectenchymatous; lower medulla and underside turning intense violet in K, red in P. Apothecia at first partially immersed, soon adnate with a thin, soon disappearing thalloid margin, disc soon convex; exciple dark; hypothecium hyaline, base sometimes reaching the lower cortical region; hymenium 85-100 µm, inspersed, with red-brown epihymenium. Paraphyses poorly visible, ca. 1.5-2 µm thick, the ends brown-capitate, thickened to 2.5-3 µm or (v. sphaerocarpa) paraphyses definite, 2-3 µm thick, the ends thickened to 5-6 µm. Spores 8, brown, thin-walled, 1-septate, tips often thickened, center constricted, 17-21 x (7-)8-9(-10) µm. On saline "primitive" soils (on moss and humus according to Thomson 1997), or (v. sphaerocarpa) on dry calcareous slate soils. Arctic-alpine, south to Colorado. .... P. sareptana (Tomin) Mayrh. & Poelt

### Literature

Mayrhofer, H. and J. Poelt. 1978. Phaeorrhiza, eine neue Gattung der Physciaceae (Lichenes). Nova Hedwigia 30: 781-798.

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