

**Lopadium** Körber  
(LOPADIACEAE)

After Various Authors

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Characterized by the asci which lack a distinct apical dome and the thick, + simple paraphyses with dark brown conical caps. Schadonia has thin, branched paraphyses and the asci have a distinct I+ blue tholus.

**I. On leaves.**

(see Calopodia puiggarii, C. fuscum, and Tapellaria epiphylla).

**II. On bark, moss or rock.**

**II-a. Apothecia at least partly deep yellow, orange, red, or brown, K+ red or purple.**

**1. Spores rarely more than 50 um long, frequently 2 or more per ascus.** Apothecia over 0.5 mm diam. On bark. Southeastern. ....  
Letrouitia

**1. Spores rarely less than 50 um long, 1 (rarely 2) per ascus.** Asci with I+ blue tholus. .... Brigantiaea

## **II-b. Apothecia brownish black to bluish black, K-.**

(If spores brown, also see Buellia).

**1. Spores brown,** mostly under 50 um long, 1-3/ascus. Growing in California. Thallus thin, forming transverse ashy or dusky patches 2.5-5.0 x 0.8-1.8 cm across, on the greenish bark of the branches; surface thickly sprinkled with minute warts and granules, without soredia or isidia, K-. Apothecia lecideine, sessile, scattered or clustered, circular, black; disk flat then finally convex, to 0.8 mm diam.; margin thin, concolorous with disk, entire, epruinose, at last excluded. Hymenium hyaline, 90-105 um, I+ deep blue; paraphyses distinct, free, often branched or with forked tips, the tips brown capitate; hypothecium brownish or dusky brown, 50-60 um; asci 1-3-spored; spores brown, ellipsoid to oblong but often with a pointed tip, muriform, 7-11-septate transversely, 2-4-septate longitudinally, 38-53 x 15-20 um. On smooth bark of densely shaded larger branches of Quercus agrifolia. Pacific Grove, central California coast. .... L. dodgei Herre

**1. Spores colorless.** ..... 2

**2. Spores 2-8 per ascus, under 50 um long. Ascus with I+ deep tholus; paraphyses branched and sometimes anastomosed, relatively thin (1-1.5 um). On mosses, arctic-alpine.** ..... Schadonia

**2. Spores 1 per ascus, mostly over 50 um long.** [Species actually belonging to Lopadium s. str. have ascus wall I+ deep blue, but without tholus; paraphyses simple or forked, relatively thick (2.5 um)]. ..... 3

**3. Apothecia 0.25-0.5 mm diam. Florida to Texas.** Thallus thin, often scanty, granulose, greenish gray. Apothecia sessile; disk flat to slightly convex, blackish; exciple thin, "hanging", white; hypothecium reddish brown. Spores 1 per ascus, 40-60 x 14-20 um, 9-13-septate transversely and 3-5-septate longitudinally. On trees. .... L. augustini

**3. Apothecia over 0.5 mm diam. Northern or western areas.** Thallus of flattened granules or squamules. .... 4

**4. Thallus becoming finely branched to coralloid, the branches ± erect.** Thallus brownish olive to ashy olive, verruculose. Spores 1 per ascus, (70-)82-115 x 20-40 um, oblong, with rounded tips, muriform with many cells, hyaline to brownish. Paraphyses scarcely branched, slender, coherent; tips usually capitate, to 2-3 um thick. Asci clavate. Apothecia top-shaped to cup-shaped, short-stalked, the base narrowed; margin prominent, persistent, black or dark olive brown; disk black, concave, shining, epruinose; epithecium dark brown; hypothecium brown or slightly paler; exciple brown, interior paler; hymenium 180 um, I+ blue, upper part brown. On mosses, humus, plant remains, and rocks, rarely on bark. Arctic, Alaska to Greenland. .... L. coralloideum

**4. Thallus verruculose-unequal or dispersed.** ..... 5

**5. On bark, boreal-temperate. Thallus green-brown or brown, often**

**with paler or white margins.** Spores 70-115 x 23-45 µm. Thallus granular or minutely squamulose; squamules 0.1-0.4 mm diam., sometimes producing marginal isidia-like granules 0.05-0.1 mm diam., green-brown or brown, matt, often with paler or whiter margins. Apothecia 0.4-0.8 mm diam. On mossy, acid-barked trees, especially Quercus, but also Fraxinus, Alnus and Corylus. When sterile may resemble Protoparmelia ochrococca, which has uniform brown, shiny granules and occurs on conifers. .... L. disciforme

**5. On moss or humus, Arctic. Thallus dark brown-black.** Thallus granular-warted, sometimes subsquamulose, but not becoming finely branched or coralloid. Spores (44-)70-100(-135) x (18-)23-40(-46) µm, 1/ascus, muriform with many cells, hyaline to brownish. Apothecia 0.7-1(-2) mm diam., top-shaped or peltate; disc black, dull or shining, concave to flat, often minutely tuberculate; margin black, smooth, entire; exciple radiate, paler within, the edge red-brown to black-brown, ± shiny. Hypothecium brown or brownish above, paler below; hymenium 120-170 µm; asci 1+ blue becoming wine red, the rest 1+ yellow, upper part brownish; paraphyses scarcely branched, coherent, slender, the tips to 2-3 µm and darkened; asci clavate. On mosses and plant remains, on the ground. Thomson's (1997) concept includes L. disciforme ..... L. pezizoideum

## Literature

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