

Lichinella Nyl.
(LICHINACEAE)

After Henssen, Budel & Nash (1985); Henssen, 1963, 1968

Rev. 5/94

Thallus dwarf-fruticose, green or blackish, with colorless rhizines; main branches bifurcate; lateral branches angular, attenuate, pointed at the ends; hyphae of one- to several series of branches in branching fountain-like system, with short or long cells. Photobiont a member of the Chroococcaceae. Haustoria not thickened.

Apothecia gall-like, terminal, expanded, with algal cells on the disk, with thalloid margin. Paraphyses branched, anastomosing, septate, with thickened apices. Asci 8-10-many (24-48) spored. Spores simple, ovoid, colorless.

Pycnidia terminal or lateral, flask-like, simple. Fulcra simple, thin; pycnospores terminal, cylindrical. On rock.

Description of Gonohymenia (need to incorporate into description of Lichinella)

Thallus crustose, squamulose to lobed, delicately to coarsely squamulose and imbricate, pulvinate- or umbilicate-foliose-fruticose, often with differentiated marginal lobes, not rarely proliferating; layered or unlayered, \pm gelatinous when wet, tough, leathery or \pm rigid when dry, dark grayish- or greenish- black, matt, attached by aggregates of medullary hyphae. Photobiont Xanthocapsa.

Apothecia \pm immersed, single or in rounded groups, thallinocarpous, not readily seen without dissection; in final stage the hymenium may be segregated into small parts which become surrounded by excipular hyphae, giving the thallinocarp the spurious appearance of a thallus with grouped individual fruiting bodies; epithecium \pm strongly developed, algae-containing, enclosing the disks in a layer or in the form of a single spot and passing over into the thallus. Hymenium with an entire to cracked epithecium containing algae. Paraphyses thread-like. Asci 8- to many-spored. Spores hyaline, ellipsoid to spherical, simple, thin-walled.

Pycnospores ellipsoid. Mostly on rock, mainly in rather arid areas. Arctic to warm-temperate.

1. Thallus dwarf-fruticose. Apothecia gall-like, expanded.

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1. Thallus crustose, squamulose to lobed, delicately to coarsely squamulose and imbricate, pulvinate- or umbilicate-foliose-fruticose, often with differentiated marginal lobes. Apothecia \pm immersed, single or in rounded groups, thallinocarpous, not readily seen without dissection. 3

2. Thalli in dense tufts; lobes terete, stiffly erect, repeatedly bifurcate, 0.5-2(-3) mm long, 0.04-0.1(-0.18) mm wide. Thallus dwarf-fruticose to areolate, to 5 mm high. Apothecia rare, to 0.3 mm wide; disks red-brown. Hymenium 55-65 μ m. Spores to 36-48 per ascus, ovoid, 5.5-7.5 x 2.5 μ m. On rocks that are moist for a very short time and periodically very dry, in arid areas. L. stipatula Nyl.

2. Thalli in single rosettes; lobes terete or flat, to 0.65 mm broad. On rocks, southwestern. L. americana Henssen

3. **Thallus granulose to squamulose, not umbilicate.**4
3. **Thallus foliose to fruticose, umbilicate.**5
4. **Thallus minutely granulose, slightly lobed. Apothecia 0.3-0.5 mm diameter; spores 3-6 x 2-3 um.** Apothecia immersed 1-several in plainly raised wartlike elevations of the thallus; disc punctiform, black. Spores subspherical to ellipsoid. Thallus minute to small, irregular, smooth to more commonly uneven, adnate to raised, rigid, black. On rocks. Great Lakes area (Minnesota). L. minnesotensis (Fink) Essl.
4. **Thallus squamulose, orbicular, lobed/effigurate. Apothecia to 0.3 mm diam.; spores 5-8 x 3-5 mm.** Thallus to 3 mm wide; squamules 0.5-1 mm, attached by hyaline rhizines. Apothecia punctiform. On seepage rocks, Vermont. L. melanophylla (Tuck.) Essl.
5. **Thallus granular-isidiate, with abundant fine isidia. Spores 8 per ascus, 8-14 x 5-8 um.** Thallus rosettes about 1 cm wide, often closely turf-like crowded; lobes up to 3 mm wide, irregularly divided, the ends often shell-form. Apothecia 0.4-1.2 mm. Pycnosporos 3-4 x 1-1.5 um. On base-containing rocks. L. nigritella (Lettau) Moreno & Egea
5. **Thallus not isidiate. Spores to 12-24 per ascus, 7-9 x 3-4 um.** Thallus (3-)8-15 mm wide; lobes leaflike flattened, 0.5-2 mm wide, \pm strongly divided, often almost loculate, gray-black. With aggregated Xanthocapsa photobiont especially at the margins. Apothecia punctiform, perithecia-like, grouped on a projection 1-1.5 mm diameter, in form of a \pm clearly sessile, often apothecia-form warty-rough disc ("false apothecium" or "composite fruit"). On various rocks. G. cribellifera (Nyl.) Moreno & Egea

ADD:

On S-facing, steeply inclined faces of siliceous rocks. Channel Islands of S. California. Not yet reported for N. America. L. cf. robustoides Henssen

Literature

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