



1, Apothecia from DAVFP 18359 (ca  $\times 0.3$ ); 2, ascospore from 111513 (ca  $\times 1900$ ); 3, paraphyses from DAOM 111513 (ca  $\times 460$ ).

***Discina macrospora* Bubák, Ann. Myc. 2: 395. 1904.**

**APOTHECIA** 3-8 cm in diameter, cupulate to discoid, when large becoming plane or convoluted, fleshy, solitary to gregarious. External surface of apothecium nearly white, drying pale yellow-brown, tan or straw colored, matted tomentose, drying in a pattern of concentric ridges. Stipe centrally attached, short and stout, about 2 cm long and 1.5 cm thick, concolorous with the underside of the cup, fluted with distinct ribs which extend up the side of the cup. Hymenium smooth or irregularly rugose or venose, granulose to farinose, tan, chestnut brown to brown, drying dark brown to blackish.

**ECTAL EXCIPULUM** often pale tan where soil and debris have become interspersed between the hyphae which are typically filamentous, not swollen or inflated. **MEDULLARY EXCIPULUM** whitish, homogeneous, spongy, 1.5-2 mm thick, of the *textura intricata* type; hyphae hyaline, thin-walled, with frequent branches which arise at the mid-point of the cell and extend perpendicular to the parent hypha, cells about 120  $\mu$  long and (7-)22-25  $\mu$  in diameter. **HYMENIUM** composed of asci, ascospores and paraphyses. **PARAPHYSES** with yellow-brown, granular contents, slenderly clavate, 11-13  $\mu$  in diameter at the apex and 6  $\mu$  wide below, branched and septate 110 to 150  $\mu$  below the apex. **ASCI** cylindrical, tapering at the base, 8-spored, IKI-, (500-)525-(550)  $\times$  22-28  $\mu$ . **ASCOSPORES** ellipsoid, flattened on one side, with one large guttule and usually two smaller ones, covered with a gelatinous sheath which is attenuated at each end into a conical, hyaline appendage, the sheath somewhat wrinkled or smooth, and, when fresh, (32-)33-37(-39)  $\times$  (12-)13-15  $\mu$ . Spores from dried specimens, mounted in water, generally shrunken and (23-)27-30(-36)  $\times$  (9.5-)11-12.6(13.8)  $\mu$ ,

excluding appendages, each (3-)3.6-5(-6)  $\mu$  long. The wall, beneath the sheath, hyaline, smooth, IKI-, staining blue in cotton blue.

**SUBSTRATE:** Generally rotting wood and logs, and the base of stumps; also soil and forest duff.

**DISTRIBUTION:** From April through July from Nova Scotia, Quebec, Ontario, British Columbia.

**COLLECTIONS** (selected): N.S., Clarence, 12.IV.1932, DAOM 111513 (K.A. Harrison). Que., Mt. Albert, 12.VII.1957, DAOM 63040 (H.E. & M.E. Bigelow). Ont., Carleton Co., Bell's Corners, 25.V.1953, DAOM 39943 (S.C. Hoare); Norfolk Co., near Lynedoch, 19.V.1967, DAOM 136479 (D. Malloch). B.C., Vancouver Island, Cowichan L., 15.V.1948, DAOM 26093 (W.G. Ziller).

**NOTES:** Observations indicate that *D. macrospora* is generally saprophytic but possibly weakly parasitic. In May and June of 1968, five collections from the interior of British Columbia were found (a) adjacent to a *Pinus* stump, (b) at the base of a dead *Pseudotsuga*, (c) on a root of a recently dead *Populus*, (d) at the base of dead *Pinus* and (e) on gravel roadside near wounded roots of *Thuja* and *Tsuga* (specimens at DAVFP). A similar species, *Rhizina undulata* Fr., recently was shown to be pathogenic on conifers (see *Fungi Canadenses* 16).

Because McKnight's (*Mycologia* 61: 614-630. 1969) key to the six North American species of *Discina* relies on measurements made from material mounted in water, and aberrations in the ascospore sheath occur in KOH (McKnight, *Mycologia* 60: 723-727. 1968), all microscopic measurements given above are from fresh specimens unless otherwise indicated.

The epithet '*macrospora*' is used for specimens agreeing with McKnight's description of the lectotype and other collections. The concept of *D. macrospora* was essentially unknown until McKnight's study. Most collections in DAOM from Canada, labelled *D. ancilis* (Pers.) Sacc. (= *D. perlata* (Fr.) Fr.), are *D. macrospora*. The species is separated from *D. ancilis* on the basis of characters that McKnight (l.c. 1969) and I feel need further evaluation.

*D. warnei* (Peck) Sacc., known (McKnight, l.c. 1969) from one Ontario collection and several New York (including the type) and Michigan collections, is like both *D. ancilis* and *D. macrospora*. *D. warnei* differs principally in having shorter and relatively broader spores ( $17-26 \times 9.7-15 \mu$ , *fide* McKnight). DAOM 39948, collected 16 May 1953 at Lennoxville, Quebec is referred to *D. warnei*. It has spores primarily  $24-26.4 \times 8.4-10.8 \mu$ , (excluding the 3.6-4.8  $\mu$  long appendages), some of which are close to the smaller sizes of *D. macrospora* ascospores.

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