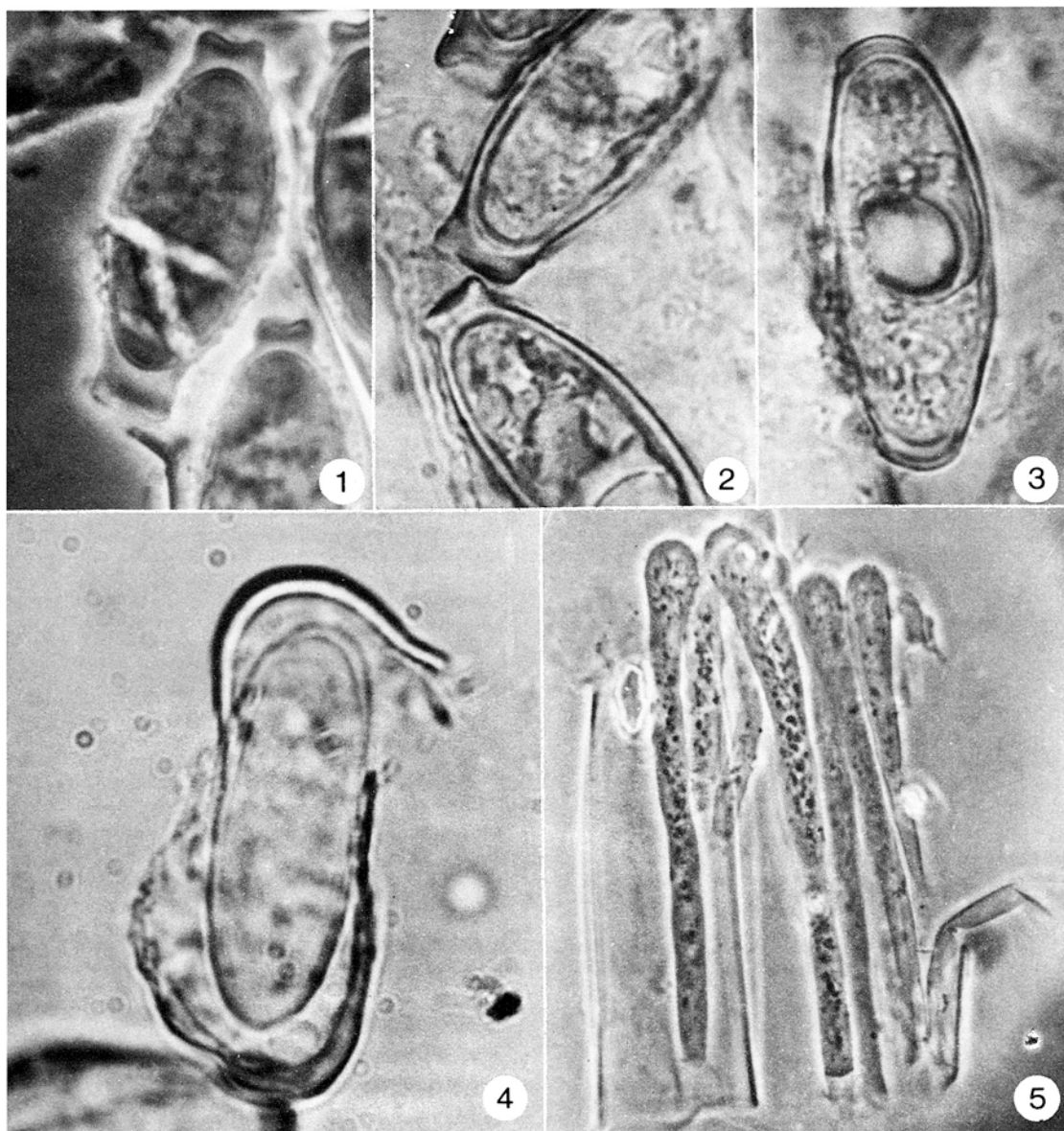


DISCINA LEUCOXANTHA



1, Sculptured sheath and indented appendages on ascospores from DAOM 44184 (ca \times 1430); 2, smooth sheath on ascospores from 7105 (ca \times 1430); 3, thin, cap-like appendages on ascospore from 7105 (ca \times 1800); 4, ruptured sheath of ascospore from 91624 (ca \times 1800); 5, paraphyses from 91624 (ca \times 1125).

Discina leucoxantha Bres., Rev. Mycol. 4(16):212. 1882.

APOTHECIA 4-7 cm in diameter, subglobose at first, expanding and finally plane, substipitate. Stipe about 1 cm long and broad, fluted, solid or apparently partially hollow. Exterior pale yellow-brown or pale yellow, smooth to wrinkled, often in a pattern of concentric ridges. Hymenium smooth or irregularly rugulose, when fresh yellow-ochraceous or bright ochraceous brown, drying pale brown (Munsell Colors 5YR 3/2, 2/4 or 3/4) to blackish.

ECTAL EXCIPULUM of filamentous hyphae, the apical cell narrowly clavate; oleiferous hyphae common, scattered, with oily, refractive contents. **MEDULLARY EXCIPULUM** homogeneous, about 1.5 mm thick, of the *textura intricata* type, the hyphae hyaline, thin-walled, frequently septate and branched, 5-13(-19) μ in diameter with occasional fusiform or subglobose, inflated cells to 30 μ in diameter. **HYMENIUM** of asci, ascospores and paraphyses. **PARAPHYSES** slenderly clavate, 4.5 μ , swelling to 8 μ in diameter at the apex, septate and branched 70 μ or more below apex; the apical cell with contents coarsely granular, yellow brown in water, pale yellow in Melzer's and fading to hyaline in KOH. **ASCI** cylindrical, tapering at the base, 8-spored, IKI-, 340-450 \times 20-30 μ , the immature asci staining bright orange yellow in Melzer's. **ASCOSPORES** ellipsoid, hyaline, smooth to coarsely wrinkled, IKI-, 26-31 \times 10-13 μ , excluding appendages. The appendages, one at each end, are broad, truncated, usually centrally depressed, 1.8-3.6 μ long (in some collections mostly about 1 μ thick and broadly rounded), and are enlargements of a gelatinous sheath which encloses the spore.

SUBSTRATE: Soil in woods of mixed hardwood and coniferous species.

DISTRIBUTION: In May and early June from Quebec and Ontario, south of 47°N Lat.

COLLECTIONS: Que., Gatineau Park, Camp Fortune, 17.V.1941, DAOM 7105 (H.E. and I.L. Connors), Meach Lake, 24.V.1954, DAOM 44184 (S.C. Hoare), L'Islet Co., St. Aubert, 1.VI.1945, DAOM 87516 (H.A.C. Jackson); Ont., Carleton Co., Fallowfield, 14.V.1963, DAOM 91624 (G. Bourque and M.E. Elliott), locale lacking, 10.V.1942, DAOM 7733 (M.K. Nobles).

NOTES: The apothecia are similar to those of *D. ancilis* (Pers.) Sacc. and *D. macrospora* Bubák. According to the original description and the rare subsequent reports, the distinguishing macroscopic feature of *D. leucoxantha* is the beautiful yellow ochraceous hymenium of fresh specimens. However, McKnight (Mycologia 60: 620-622. 1969) found that North American herbarium collections lack data on the hymenial color when fresh. Thus his report of a fresh specimen with a 'bright ochraceous brown' hymenium is important. The identification of specimens is made usually by determining, microscopically, the characters of the distinctive spore appendages. In *D. ancilis*, *D. warnei* (Peck) Sacc., and *D. macrospora*, each appendage is pointed, either acute or obtuse and, in the latter, over 3.5 μ long. The other type of appendage in species of *Discina* is the relatively thin (less than 2 μ thick), broadly truncated or rounded to nearly lacking, which is found in *D. olympiana* Kanouse and *D. apiculatula* McKnight. The appendages are part of a gelatinous sheath which encloses the spore and since it swells and often dissolves in KOH the spore measurements given above are from sections mounted in water. In the specimen 91624 most spores have a broad, thin (1-1.5 μ thick), cap-like appendage; thus the collection was initially keyed out to *D. apiculatula* in McKnight's paper. However, after an intensive search a few spores with the typical, centrally depressed appendage of *D. leucoxantha* were found. The immature asci in 91624 stain in Melzer's the bright, orange yellow color which is characteristic of *D. leucoxantha*.

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