

***Lophiostoma macrostomoides* De Not. – AEB 1027 (= PDD 94205)**

Index Fungorum recognizes its current name as *Thyridaria macrostomoides* (De Not.) M.E. Barr

Substrate: wood of downed dead *Pinus*

Collection site: along the path to the Snowbank Trail that is located behind cabin #4 of the Snowbank Lake USDA Forest Service summer lease lot group; 22 miles NE of Ely, Minnesota, U.S.A.

Collection date: 8 September 2007

Collector: Ann Bell

Identifiers: Ann Bell and Dan Mahoney

Voucher materials: Dried herbarium specimen [AEB 1027 (= PDD 94205)] accompanied by 3 Shear's mounting fluid (SMF) semi-permanent slides; Dan's in-situ dissecting-scope ascomata photos (in July 2021 from the original dried herbarium specimen) and his compound scope digital photos of microscopic detail (in July 2021 from the original 2007 SMF slides); Dan and Ann's description and comments.

Brief description: **Ascomata** gregarious, with rough blackish exteriors - developing immersed in the wood and bursting through the bark (with the bark often adherent), wood around the ascomata staining pinkish, ostioles pore-shaped or slot-like with a roundish cavity marking the position of old ostioles. **Peridium** with a petaloid cell arrangement. **Pseudoparaphyses** numerous, branching, hyaline, narrow and septate. **Asci** cylindrically clavate, bitunicate, with simple thickened broadly rounded apices and elongate tapering stipes – discharging ascospores by the jack-in-the-box method. **Ascospores** 8 (or fewer) per ascus arranged irregularly biserially/triserially in the upper portion and uniseriately overlapping basally, uniformly light brown to brown at maturity, straight and symmetrical or curving, covered with low warts at maturity (appearing nearly smooth when younger), the warts sometimes appearing in close longitudinal rows which may account for the longitudinal striations in lower magnification views, elongate ellipsoid with obtuse ends (less often more acute) (4-)5-7(-8) septate with invagination at the suprmedian septum and less so elsewhere, the cell above this septum usually somewhat larger than other cells; measurements: (4-septate spores, 22-25 X 7-9 μm – n=4; 5-septate spores, 24.5-31 X 7-9(-10) μm – n=14; 6-septate spores, 27.5-33 X 7.5-9 μm – n=4; 7-septate spores, 28-36 X 7-8 μm – n=6; 8-septate spores, 36 X 8-8.5 μm – n=2).

Comments: The following is copied from Ann's Mycological Paper description of *L. macrostomoides*:
Citation – Chesters C.G.C. & Bell A. 1970. STUDIES IN THE LOPHIOSTOMATACEAE SACC. Mycological Papers #120, 55 pp. Publ. by the Imperial/Commonwealth Mycological Institute, Kew, Surrey, England.

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“This species is found on wood, especially *Salix* and *Populus*. The pseudothecia are immersed or semi-immersed, the ostiolar necks aligned parallel to the grain of the host wood. The clavate asci form a layer across the base of the mature pseudothecium. Ascospores are oblong elliptical with obtuse ends, (24)27-37 (40) X 6-11 µm and 5-7(8) septate. Many are constricted at the central septum only, but others are more or less constricted at all the septa. The spore walls may show slight punctuation at the polar ends of the spores, suggesting that a tunic surrounds them during development, similar to other *Lophiostomataceae*.”

SPECIMENS EXAMINED:

Ex Herb. NY.

Lophiostoma macrostomoides, on *Populus*, bei Burgdorf, No. 17, (no signature). *Lophiostoma macrostomoides*, on *Salix alba*, exsicc. Cavara, No. 183, (no date). *Lophiostoma macrostomoides*, on *Sambucus*, Tyrol, leg. Rehm, (no date). *Sphaeria macrostoma* Tode, par. J. B. H. Desmazieres, No. 622, (no date). *Lophiostoma salicum*, exsicc. Rehm., No. 1020, (no date). *Lophiostoma macrostomoides*, on driftwood, leg. L. A. Fritch, June 1892.

Ex Herb. B.

Lophiostoma simillimum Karst., on *Clematis vitalba*, leg. Kirschstein, 25/5/1919. *Lophiostoma macrostomoides*, on *Populus nigra*, leg. Hillman, No. 43, 29/7/1916. *Lophiostoma macrostomoides*, on *Salix*, leg. Kirschstein, 1911.

Ex Herb. IMI.

Lophiostoma excipuliforme, on *Salix atrocinnerea*, leg. Ellis, 22/7/1940, IMI 5500. *Lophiostoma salicum*, on *Salix*, 1946, IMI 5492.

Ex Herb. PAD.

Lophiostoma salicum, exsicc. Rehm., No. 1020, 10/11/1899.

Ex Herb. CP.

Lophiostoma macrostomoides, on *Salix*, leg. A. Munk, 20/1/1965. *Lophiostoma macrostomoides*, on *Salix cinerea*, leg. J. Lind, 8/10/1908. *Lophiostoma macrostomoides*, on *Salix aurita*, leg. A. Munk, 25/11/1963.

From Ann's original copy of her Ph.D. thesis "Studies in the Lophiostomaceae (Sensu Saccardo)" 1966, University of Nottingham, England

Fig. 104. A&B = asci, ascospores & pseudoparaphyses of *Lophiostoma macrostomoides* de Not.

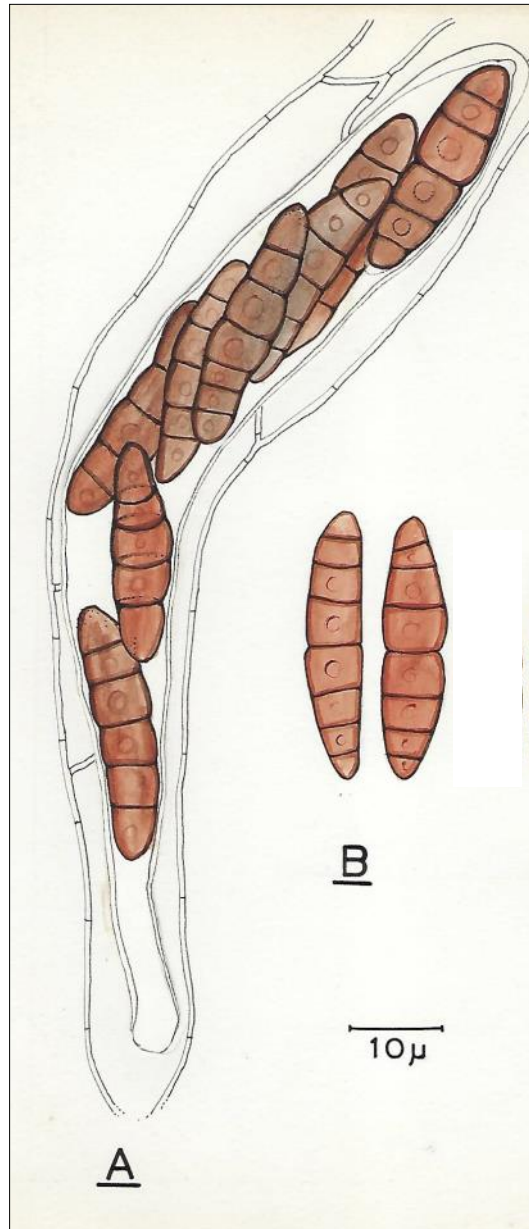
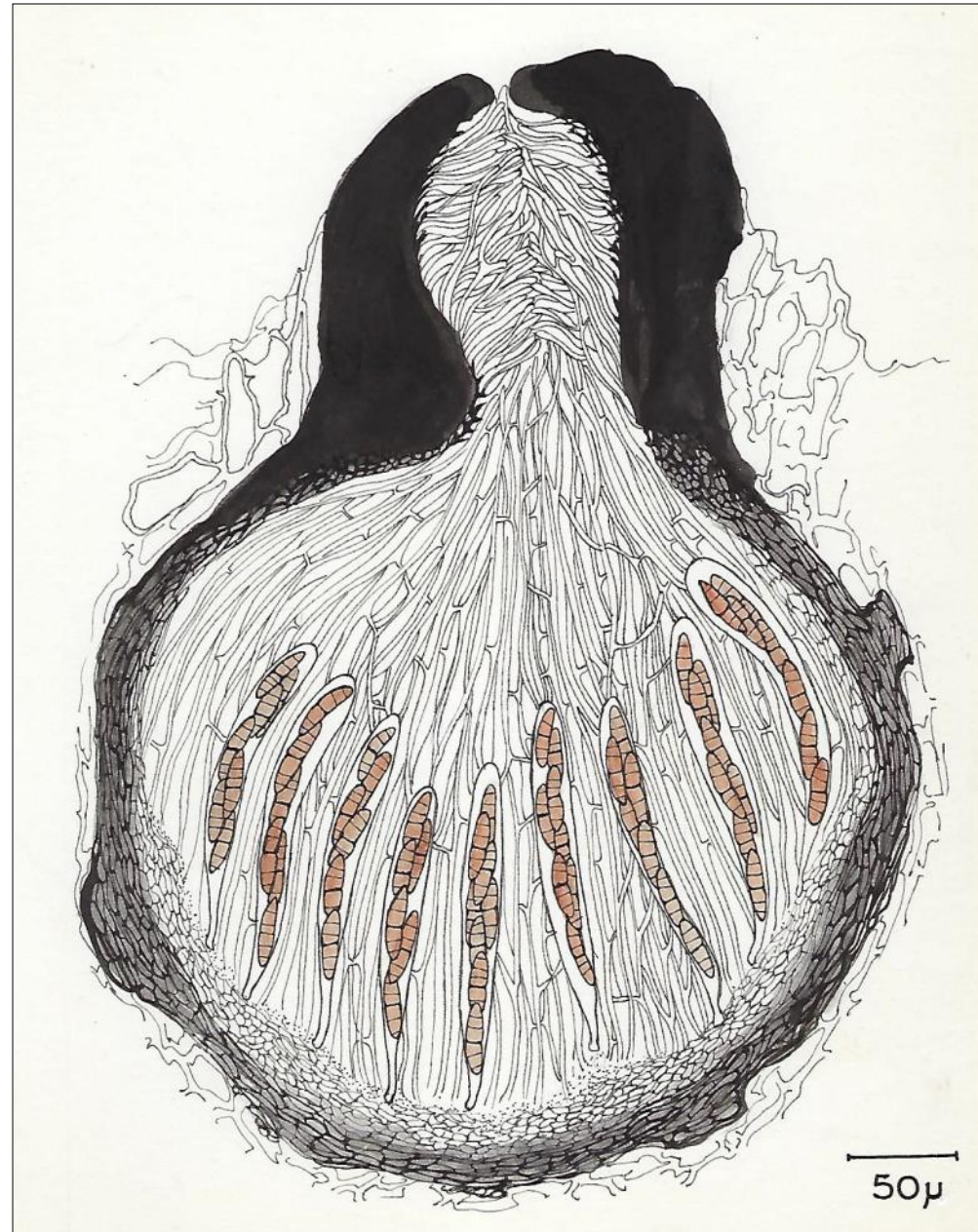
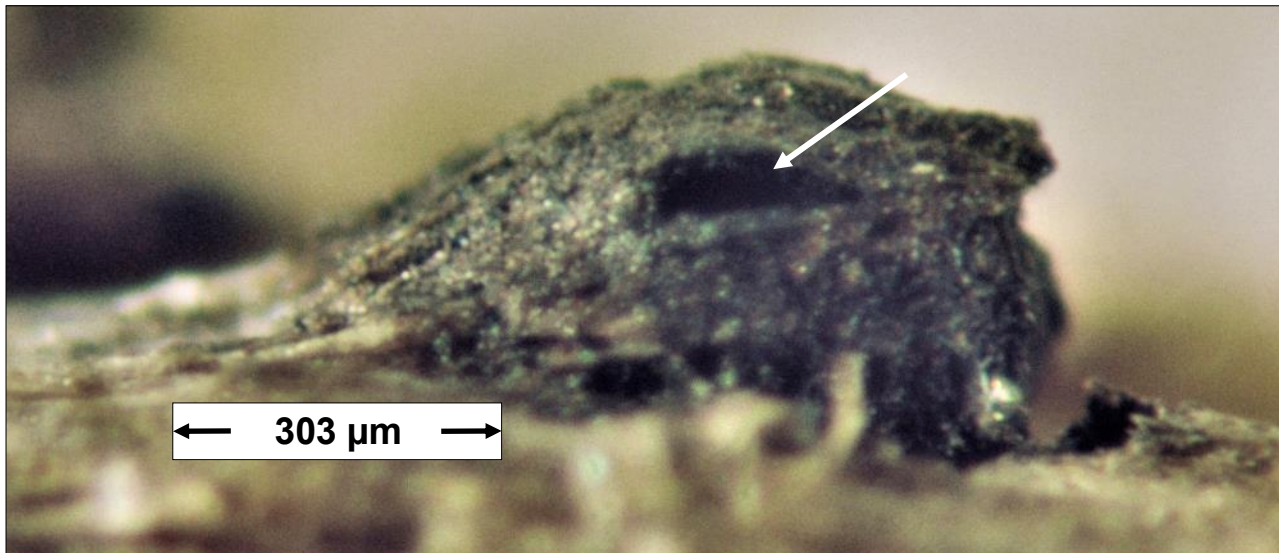
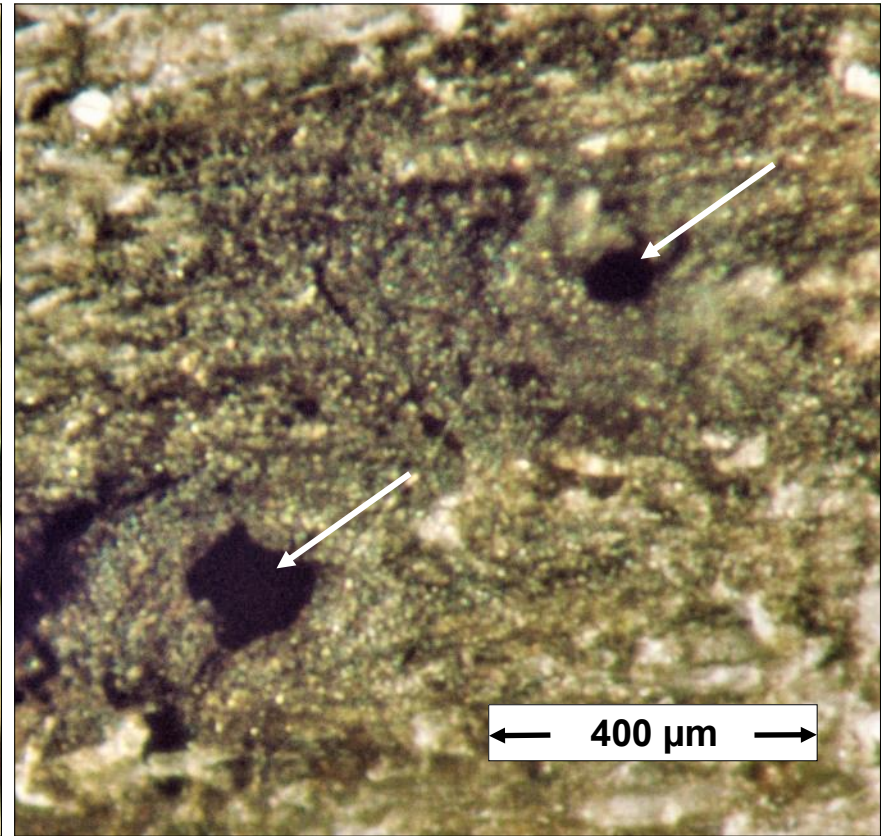
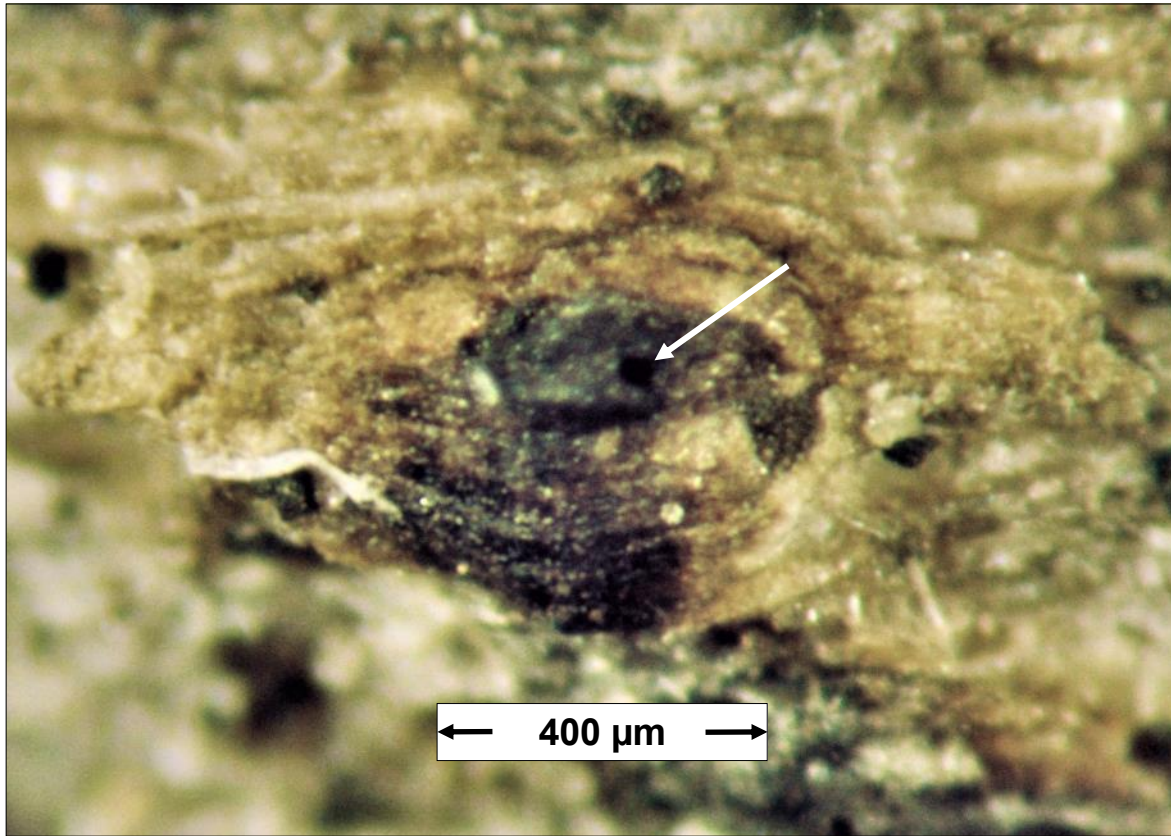
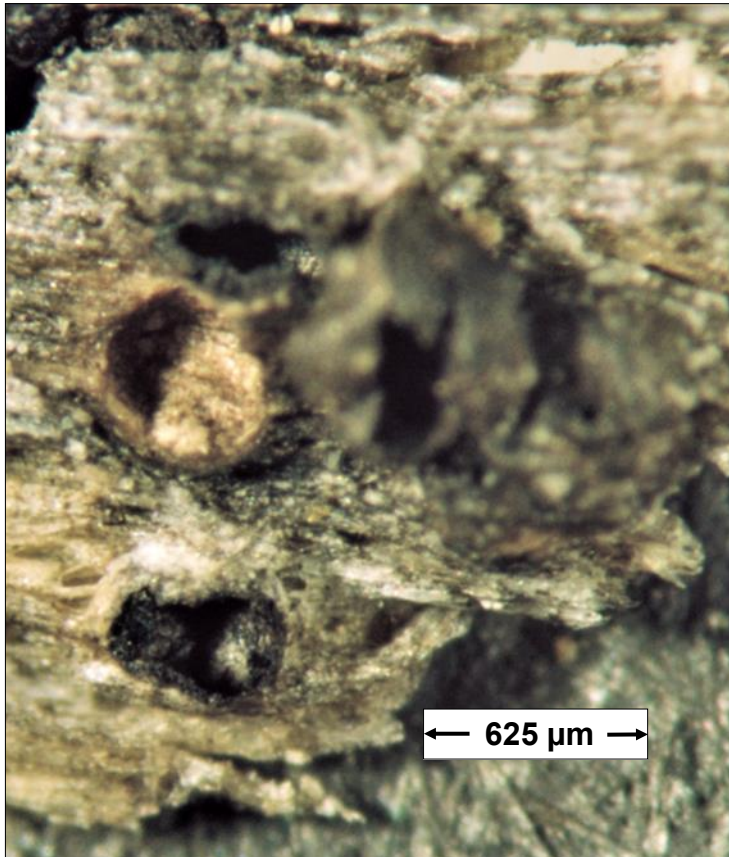


Fig. 105. Mature pseudothecium of *Lophiostoma macrostomoides* de Not.

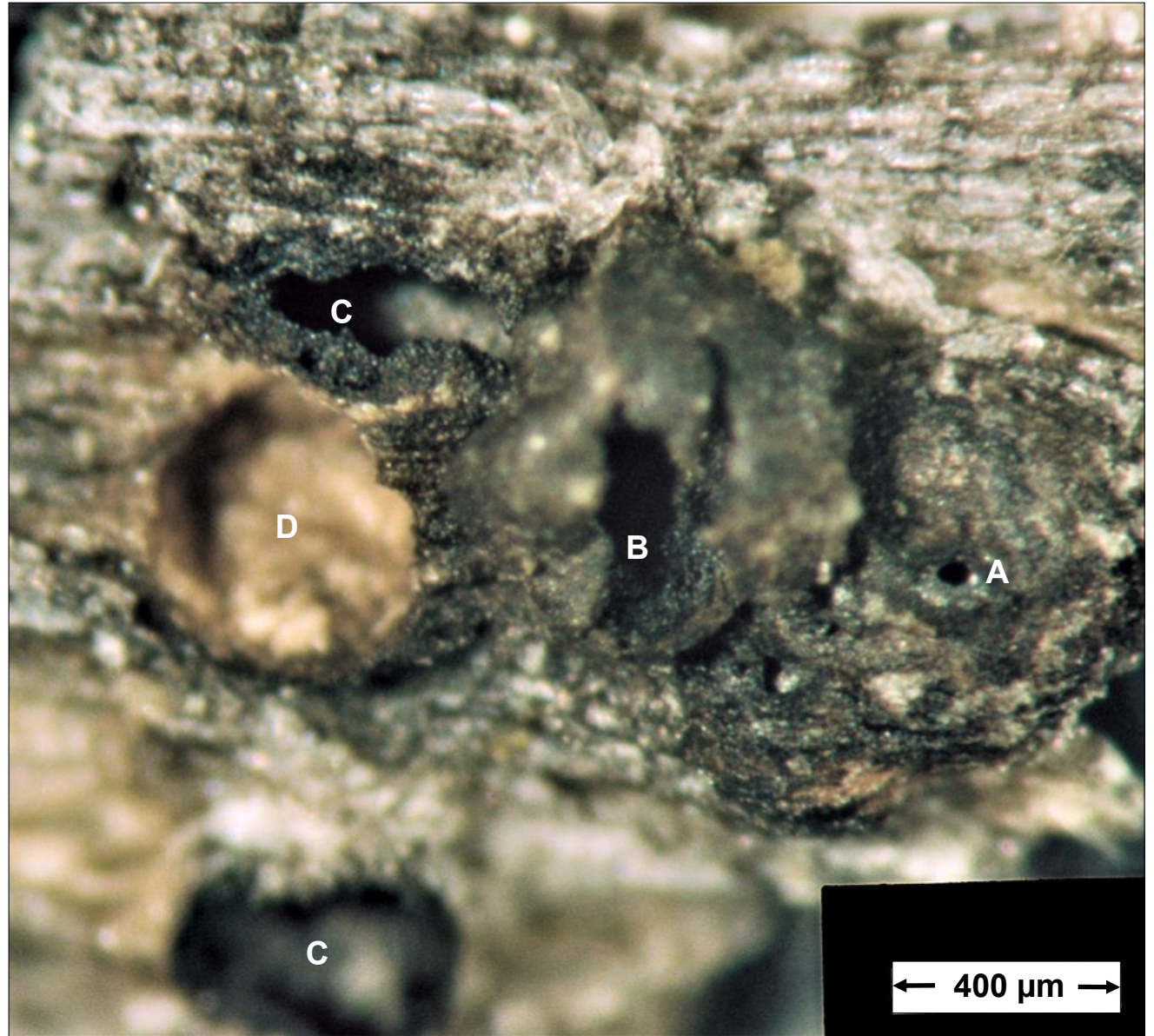


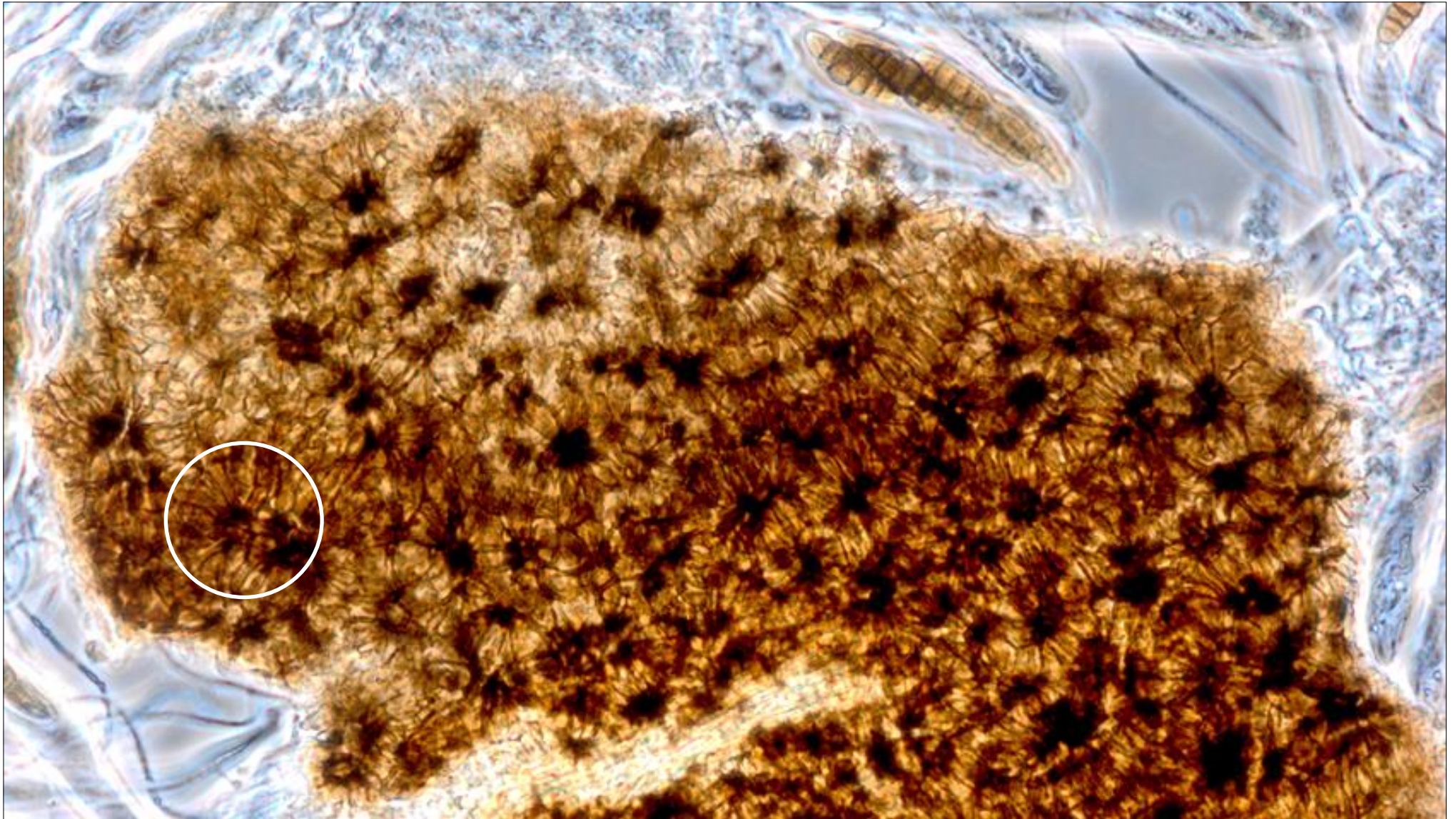


In-situ dissecting scope views of dried ascomata. Photos taken in July 2021 from the dried 2007 herbarium material. Black ascomata immersed to semi-immersed in the *Pinus* dead wood/bark. Ostiolar remnants pore to slot-like (arrowed).

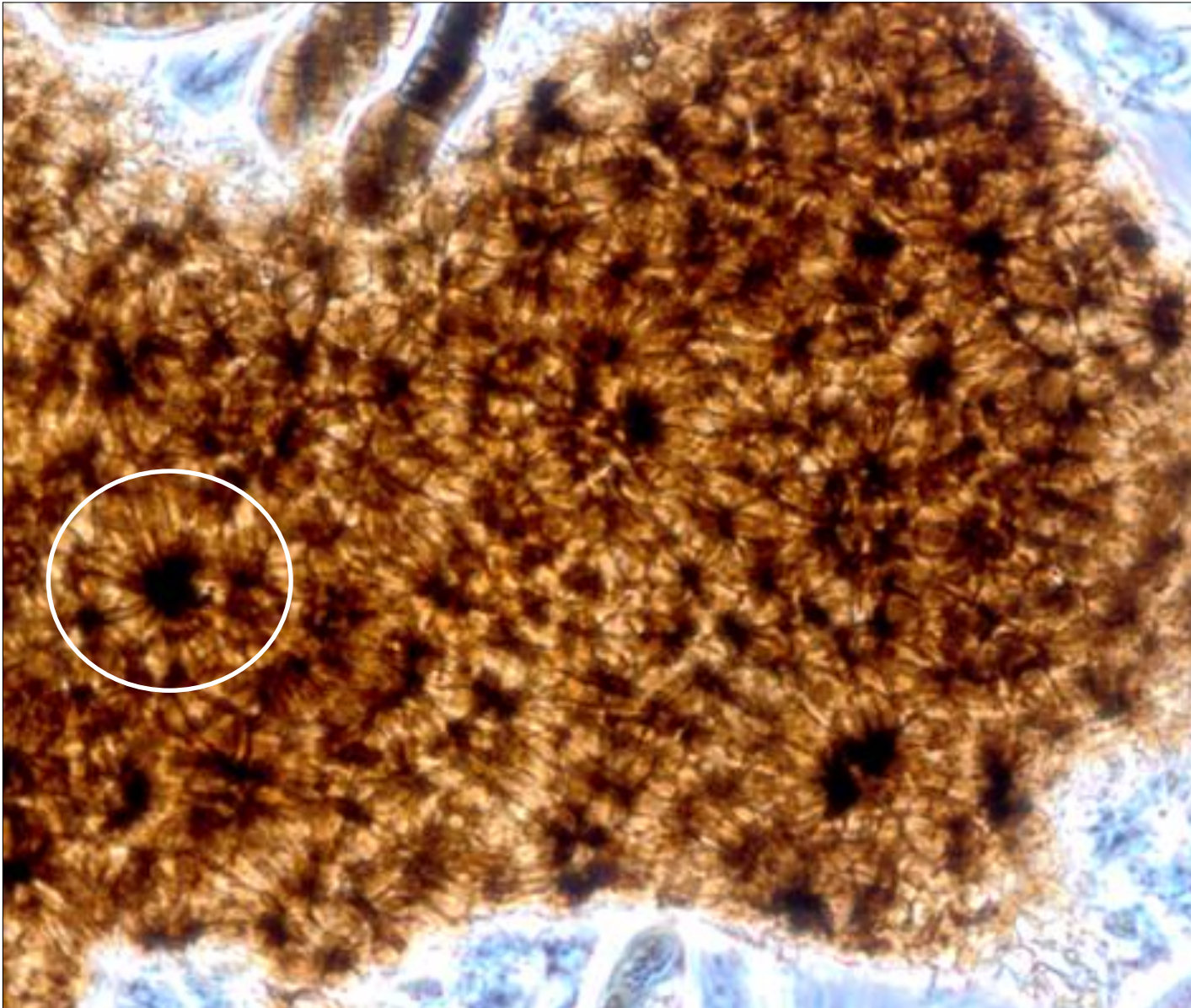


In-situ dissection scope views of dried ascomata. Photos taken in July 2021 from the dried 2007 herbarium material. Both photos same field of view but different magnification & focus. Note the various ascomata remnants: A) ostiole intact, B) open but residual contents, C) open without contents & D) ascoma gone





Ascoma fragment with peridium detail photographed (X40 objective, phase microscopy) in July 2021 from a SMF slide prepared in 2007 using fresh material. Note the petaloid cell arrangement (circled) with numerous cells surrounding a central core.



Ascoma fragment with peridium detail photographed (X40 objective, phase microscopy) in July 2021 from a SMF slide prepared in 2007 using fresh material. Note the petaloid cell arrangement (circled) with numerous cells surrounding a central core.



Asci and ascospores in various stages of development. Photographed (X40 objective, phase microscopy) in July 2021 from a SMF slide prepared in 2007 using fresh material.



A–D. Mature bitunicate asci with the outer walls still present basally and apically (both arrowed) but absent or indistinct in middle portions. Photographed (X40 objective, phase microscopy) in July 2021 from a SMF slide prepared in 2007 using fresh material.

**A. 167.5 × 22.5 μm
 B. 160 × 25 μm
 C. 145 × 22.5 μm
 D. 165 × 22.5 μm**
Size differences shown aren't necessarily accurate – the measurements given are. Others measured: 140–172.5 × (17.5–)20–22.5(–25) μm – n = 10

The longitudinally striate appearance of the ascospore cells is worth noting as are the nearly smooth to warty ascospore walls (note especially the uppermost ascospores in photo C).