



Figure 16. *Haematomyxa vinosa* (K - holotype). A, Ascus, scale = 20 µm. B, Ascospores, scale = 10 µm.

170 × 30-40 µm (this size estimated from the drawing of Cooke & Ellis 1876: pl. 68, fig. 10c). Ascospores biseriate, obovate or oblong with rounded ends, rarely tapering at the lower end, straight or slightly curved, muriform, with 9-12 transverse and 1-2 longitudinal septa, slightly constricted at the centre, the upper part wider, brown, and not surrounded by mucilaginous sheath, (28-)32-44 × (12-)14-18 µm (45-50 × 18 µm *vide* Cooke & Ellis 1876).

Anamorph: Not reported.

Habitat: On decorticate *Quercus* wood.

Distribution: U.S.A.; known only from the type locality.

Illustrations: Cooke & Ellis (1876: pl. 68, fig. 10), Seaver (1951: pl. 150, fig. 1).

Notes: The type specimen of this interesting fungus now consists only of a single black rugose 0.8 mm diam fruitbody attached to decorticate wood. Although groups of mature ascospores were present, mature asci were not observed during our microscopic study of a small piece of an ascoma. The very thick-walled juvenile asci and asymmetrical muriform ascospores indirectly suggest that the asci could be bitunicate, but, at the moment there is no definite evidence to confirm this. No parts of the ascoma stained blue in Lugol's solution and Melzer's reagent, with or without 5% KOH pretreatment.

Seaver (1951) synonymized *H. vinosa* with *H. rufa* (Ellis & Ev.) Rehm (*Ann. Myc.* 10: 397 1912), but that species has smaller (25-27 × 9-10 µm) and less septate (5 transverse and 1 longitudinal) ascospores, as well as a hypothecium and hymenium staining blue in iodine. Without comment and mentioning the specimens examined he gave the ascospore measurements for both species as 25-30 × 8-10 µm. Rehm (1912) had already correctly noted the significant differences between both species: "*H. vinosa* ist durch 'spora multiseptatae, 45-50 × 8-10 µm.' offenbar verschieden"; Rehm's width measurement contradicts the original description and our observations.

H. ascoboloides Ellis & Everh. (*Bull. Torrey Club* 27: 60, 1900) differs in having smaller ascospores, 18-20 × 8-10 µm with fewer septa (3-transverse and 1-longitudinal).

H. tetraspora E.K. Cash (*Mycologia* 50: 640, 1958) has shallow cup-shaped margined apothecia, a developed light-coloured exciple, an ascus pore staining intensely blue in iodine, and hyaline muriform ascospores. The species clearly does not belong to this genus.

H. pakistani E. Müll. & S. Ahmad is referred in our study to the genus *Tryblidaria*, and *H. sequoiae* (Plov.) Bonar is the type species of the genus *Muranium*. See under those generic names below for discussions of these fungi.

HOLMIELLA Petri, Samuels & E. Müll., *Ber. Schweiz. Bot. Ges.* 89 (1/2): 83 (1979).

Caldesia Rehm, *Rabenh. Krypt. Fl.* 1 (3): 290 (1896).

Non *Caldesia* Parl., *Fl. Ital.* 3: 598 (1860) [*Monocorythedones*: *Alismataceae*].

Non *Caldesia* Trev., *Hebwigia* 10: 151 (1871) [lichenized fungi].

Type species: *Holmiella sabina* (De Not.) Petri, Samuels & E. Müll.

Ascomata at first closed and immersed, later opening by an irregular splitting of the upper surface of the ascoma into lobes to expose a black disc, apothecioid, erumpent, sessile. Exciple pseudoparenchymatous, two-layered, the outermost layer composed of dark brown thick walled cells. **Hypothecium** prosenchymatous. **Hamatecium** of paraphyoids, branched and anastomosing, exceeding