ANTHRACOTHECIUM

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[From *Flora of Australia* volume 57 (2009)]

Anthracothecium A.Massal., *Atti Reale Ist. Veneto Sci. Lett. Arti*, ser. 3, 5: 330 (1860); from the Greek *anthrax* (coal) and *theke* (a cup), in reference to the carbonised ascomatal wall.

Type: *A. doleschallii* A.Massal.

Thallus lichenised, corticate, rarely with pseudocyphellae, superficial on the substratum, continuous, without a distinct hypothallus. Ascomata perithecioid, black, simple or several joined, with fused ostioles. Ascomatal wall completely carbonised, occasionally with a distinct clypeus, lacking crystals. Hamathecium not inspersed with oil droplets, IKI+ blue. Asci lacking an ocular chamber, 200–300 × 40–60 µm. Ascospores 1–8 per ascus, initially hyaline, soon dark brown to blackish, almost euseptate, irregularly muriform-septate; outer wall to 2 µm thick, surrounded by a 2–3 µm thick gelatinous sheath. Conidiomata unknown.

Chemistry: No substances detected.

About 15 species are currently recognised, all on trees in tropical and subtropical regions, mainly in coastal or lowland habitats; some taxa are restricted to primary rainforest. Five species are known from Australia.

The ontogeny of ascospore septation differs from that of normal euseptate spore septation; the first three eusepta develop rather early, when the ascospores are still colourless. The remaining septa appear ±simultaneously at a very late stage.

1 Ascomata solitary 2
1: Ascomata mostly grouped, with a shared ostiole 4

2 Ostiole lateral; ascospores 1–2 per ascus, > 120 µm long *(1)* ..... **1. A. australiense**
2: Ostiole apical 3

3 Ascospores 8 per ascus, to 120 µm long *(2:)* ..... **4. A. prasinum**
3: Ascospores 2–4 per ascus, > 120 µm long ..... **3. A. macrosporum**

4 Ascospores 8 per ascus, to 120 µm long *(1:)* ..... **2. A. gregale**
4: Ascospores 1–2 per ascus, > 110 µm long ..... **5. A. toowoombense**