

KEY TO THE SPECIES OF *BIONECTRIA*

1. Ascospores more than 15 μm long, warted 2
1. Ascospores generally less than 15 μm long, smooth, warted or spinulose 3
2. On living leaves, possibly associated with stromatic fungi; ascomata with warts up to 50 μm high; ascospores 19.5–24.5 \times 5.5–6.5 μm *B. tonduzii*
2. On decaying bark or wood; ascomata smooth; ascospores 16–33 \times 4.5–9.5 μm *B. apocyni*
3. Ascomata orange with conspicuous white warts; ascospores ellipsoid, (10–)11–14(–16) \times 4–5(–6) μm , smooth or spinulose *B. byssicola*
3. Ascomata orange to brown, smooth to slightly scaly or covered with a thin layer of hyphae 4
4. Ascomata smooth; ascospores 8.5–15 \times 2.5–5 μm , spinulose or warted *B. aureofulva*
4. Ascomata slightly scaly or covered with a thin layer of hyphae; ascospores 7.5–14.5 \times 2.5–4.5 μm , slightly spinulose *B. ochroleuca*

BRYONECTRIA Döbberler, Nova Hedwigia 66: 334. 1998.

Type: *B. hylocomii* (Döbberler) Döbberler (\equiv *Nectria hylocomii* Döbberler, Mitt. Bot. Staatssamml. München 14: 78. 1978).

Ascomata superficial, with hyphae penetrating the host cells, solitary or rarely aggregated, non-stromatic, globose to obpyriform, 80–200 μm diam, hyaline to white, not changing color in KOH or lactic acid or rarely reacting. Smooth or with short setae. Ascomatal wall of thick-walled cells. Asci ellipsoid to cylindrical, with or without an apical ring. Ascospores ellipsoid, 1- or 2-septate, hyaline, often with a guttule in each cell. Anamorph unknown. Parasitic on liverworts and mosses.

NOTES.—*Bryonectria* was described to accommodate six species of hypocrealean fungi that occur on foliose liverworts and mosses.

CLIBANITES P. Karst., Bidrag Kännedom Finlands Natur Folk 19: 14. 1871.

\equiv *Peziza* sect. *Clibanites* P. Karst., Monogr. Peziz. Fenn. p. 155. 1869. — Type: *C. paradoxa* (P. Karst.) P. Karst. (\equiv *Peziza paradoxa* P. Karst.).

Stroma of intertwined hyphae in the middle and at the base, with highly compacted hyphae near the surface, ascomata immersed in a stroma, loosely united in groups up to ten. Ascomata globose, dark yellow, non-papillate, apex not differentiated, ostiolar canal periphysate, not collapsed upon drying. Ascomatal wall ca 10 μm thick, of several layers of small, flattened cells. Asci subcylindrical, apex broad, blunt, with a ring, as-

cospores biseriate. Ascospores narrowly cylindrical, equally 2-celled, not constricted, hyaline, smooth. Anamorph unknown. On well-rotted wood of *Quercus*. NOTES.—*Clibanites* is a unispecific genus originally described by Karsten as a discomycete. An examination of the type specimen reveals that, based on the small, thin-walled, pallid ascomata and non-disarticulating ascospores, *C. paradoxa* is similar to *Nectriopsis* in the *Bionectriaceae*. It differs from *Nectriopsis* in having relatively thick-walled ascomata loosely united in a common stroma and in the non-fungicolous habit.

Clibanites paradoxa P. Karst., Bidrag Kännedom Finlands Natur Folk 19: 14. 1871. — Plate 1, g–i, Plate 2, a.

\equiv *Peziza paradoxa* P. Karst., Monogr. Peziz. Fenn. p. 155. 1869.

Stroma superficial on decorticated wood, evident as pallid scurf, dissected and squamose (possibly as an artifact of drying), entire stromal aggregate easy to remove; ascomata loosely united into groups of up to 10, immersed in a stroma, adjacent ascomata evident as slightly tuberculate, ostiolate areas, ascomata joined by a subiculum of smooth-walled, 2–3 μm wide, branched, septate hyphae with few free ends, thin-walled, hyaline in transmitted light. Stroma 25–30 μm thick, surface consisting of highly compacted, ca 3 μm wide hyphae; internally hyphae more loosely disposed. Ostioles visible as viscid dots against the dull background of the ascomatal wall. Ascomata globose, ca 100–160 μm diam, pale yellow, KOH–, non-papillate, not collapsed on drying, ostiolar canal periphysate. Ascomatal wall ca 10 μm thick, of one region of small,