

**Additional lichen records from Australia 87.**  
***Monoblastiopsis nigrocortina* R.C.Harris & C.A.Morse**

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**Abstract**

*Monoblastiopsis nigrocortina* R.C.Harris & C.A.Morse (lichenized Ascomycota, Pleosporales, *incertae sedis*) and that genus are reported for the first time from Australia. Previously known only from the U.S.A., mainly on calcareous and non-calcareous sandstones, the species was collected on a bonded cement-asbestos tile in the Southern Tablelands, New South Wales.

**Introduction**

Harris & Morse (2008) described their new, pyrenocarpous lichen genus *Monoblastiopsis* from concrete and calcareous rocks in Colorado, Kansas, Missouri and Texas, U.S.A. Two species were reported as new, viz. *M. konzana* R.C.Harris & C.A.Morse and *M. nigrocortina* R.C.Harris & C.A.Morse. The latter was further documented by Morse & Ladd (2015), its updated range covering Arizona, Colorado, Kansas, Montana, Nebraska, South Dakota and Wyoming, as well as additional substrata including calcareous and non-calcareous sandstones. This note records the recent discovery of *M. nigrocortina* growing on a bonded cement-asbestos tile in the Southern Tablelands, New South Wales, Australia.

***Monoblastiopsis nigrocortina* R.C.Harris & C.A.Morse, *Opuscula Philolichenum* 5, 93 (2008)**

*Thallus* ± epilithic, rimose to areolate, forming colonies to c. 30 mm wide, pale greyish green. *Areoles* angular and usually irregular in shape, separated by noticeably whitish fissures, (0.1–)0.3–0.6(–1) mm wide, 0.08–0.15(–0.2) mm thick, slightly concave to plane; surface dull, minutely and irregularly uneven. *Cortex* lacking, but the thallus with an uppermost alga-free layer, 15–30 µm thick, which is anatomically similar to the medulla, although lacking substratum material. *Algal layer* well delimited, dominating the thallus, 50–90(–120) µm thick; cells chlorococcoid, ± globose to broadly ellipsoid, thin- to rather thick-walled, (7–)12–22(–26) µm wide; interstitial hyphae long-celled, 1.5–2.5(–3) µm wide. *Medulla* dominated by fragments of the substratum, including asbestos fibres; hyphae forming a rather loose network, 1.5–2 µm wide. *Prothallus* whitish, marginal, poorly delimited or not apparent. *Ascomata* perithecia, numerous, usually solitary or in small clusters, 2/3-immersed in the thallus to almost superficial, (0.06–)0.13(–0.18) µm wide [*n* = 50], ± globose or somewhat distorted due to mutual pressure when clustered; surface ± smooth, slightly glossy, jet-black; ostiole apical, in a shallow depression 20–40 µm wide; some post-mature ascomata collapsing at the apex, some others leaving the blackish remnants of the cup-like perithecial base visible in the thallus. *Involucrellum* absent. *Excipulum* pseudoparenchymatous, dark brown to blackish and 22–32 µm thick at and near the ascumatal apex, with the cells ellipsoid to globose, thick-walled, 4–6 µm wide; basal excipulum dark brown to blackish, 14–20 µm thick, consisting of periclinally elongate, moderately thick-walled cells 5–8 × 3–4 µm. *Subhymenium* hyaline, 12–20 µm thick. *Interascal hyphae* distinct and persistent, simple, branched or sparingly anastomosing and long-celled below, distally with more abundant anastomoses, shorter-celled and 1–1.5 µm wide, not constricted at the septa, without obvious inclusions. *Periphyses* rather sparse, short, unbranched or possibly sparingly branched, 8–10(–15) × 1–1.5 µm, thin-walled, short-celled, the apices subglobose or broadly clavate. *Asci* fissitunicate, 8-spored, narrowly ellipsoid or narrowly to broadly clavate, 66–80 × 15–20 µm [*n* = 12]; immature asci with a developing, needle-like ocular chamber c. 0.5 µm wide, this comparatively broad and shallow at maturity, sometimes scarcely apparent; ascus wall I–, KI–; ascoplasm KI+ golden yellow to pale orange-brown. *Ascospores* usually irregularly biseriolate in the ascus, simple, colourless, narrowly ellipsoid or oblong-ellipsoid, occasionally soleiform, the distal end frequently slightly broader, ± straight, with rounded ends, (15–)20(–24) × (6.5–)8(–10) µm [*n* = 82]; wall c. 0.5 µm thick,

lacking an epispore; contents minutely granulose and usually with at least 1 or 2 large vacuoles. *Pycnidia* not seen. [Figs 1, 2]

**Remarks**

The Australian specimen possesses most of the diagnostic attributes of *Monoblastiopsis*, including the chlorococcoid photobiont, simple perithecia with anastomosing interascal hyphae as well as periphyses, fissitunicate asci and simple ascospores. Moreover, it seems to be a good match for *M. nigrocortina* as described and illustrated by Harris & Morse (2008) and Morse & Ladd (2015). Unfortunately, the abundant pycnidia noted by Morse & Ladd (2015) and their conidia [(2.5–)3–3.5(–4) × c. 1 µm] were not seen in this Australian collection. Doubtfully significant differences between the Australian and American material involve the much thinner and rather nondescript thallus and somewhat larger ascomata [0.15–0.2(–0.3) mm wide] of the latter (Harris & Morse 2008).

Morse & Ladd (2015) noted potential nomenclatural difficulties due to the name *Thrombium mongolicum* H.Magn. having been applied by Anderson (1962) to American specimens that are now unambiguously referable to *M. nigrocortina*, combined with uncertainty over the actual identity of *T. mongolicum* and some similar “*Thrombium*” species.

**SPECIMEN EXAMINED**

*New South Wales*. ● Southern Tablelands, beside Kings Highway, c. 12 km E of Bungendore, 35°15'01"S, 149°34'29"E, 865 m alt., on discarded, bonded cement-asbestos tile on forest floor, P.M. McCarthy 4924, 20.ii.2020 (CANB).

**References**

- Anderson, RA (1962): The lichen flora of the Dakota Sandstone of north-central Colorado. *Bryologist* 65, 242–261.  
Harris, RC; Morse, CA (2008): *Monoblastiopsis* (Dothideomycetes, Pleosporales, *incertae sedis*), a new genus from the Great Plains and Ozark Highlands. *Opuscula Philolichenum* 5, 89–96.  
Morse, CA; Ladd, DM (2015): *Lichenes Exsiccati Magnicamporum* Fascicle 1, with comments on selected taxa. *Opuscula Philolichenum* 14, 66–81.



Figure 1. *Monoblastiopsis nigrocortina* (P.M. McCarthy 4924). Scale: 1 mm.

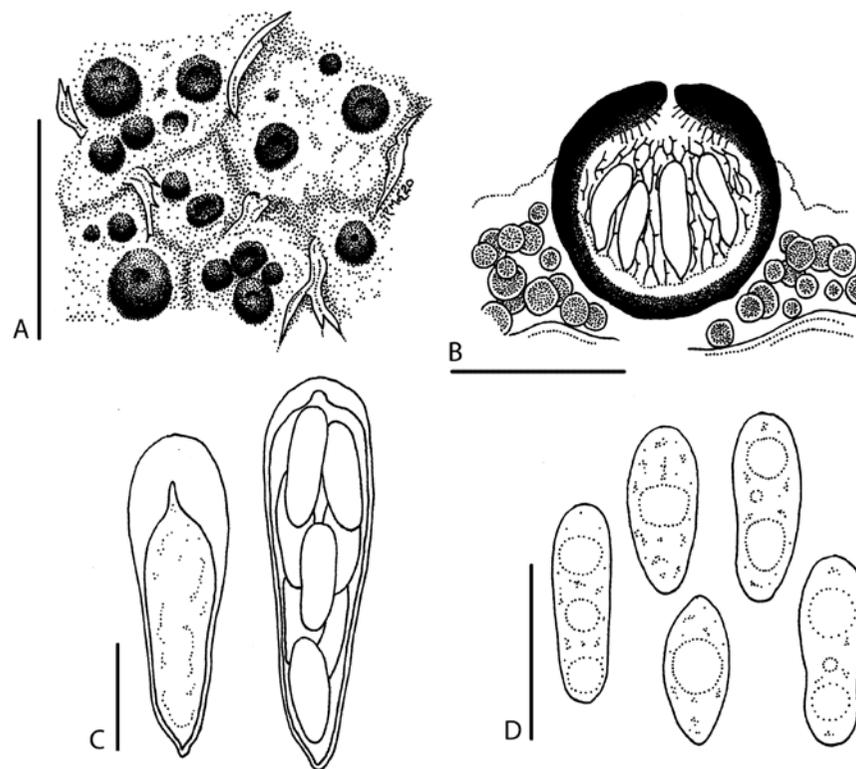


Figure 2. *Monoblastiopsis nigrocortina* (P.M. McCarthy 4924). A, Habit of thallus and perithecioid ascomata (with asbestos fibres); B, Sectioned perithecium and adjacent thallus (semi-schematic); C, Immature (left) and mature asci; D, Ascospores. Scales: A = 0.5 mm; B = 0.1 mm; C, D = 20  $\mu$ m.