

***Sporidesmium australiense* M.B. Ellis** – agreeing with Ellis’s key, illustrations & description in his 1976 book ‘More Dematiaceous Hyphomycetes’, pp. 77, 92 & 94 respectively.

**Substrate:** dead bark of moist decaying branch (approx. 1 inch diameter). The same branch was the source of *Tubeufia helicoma* (AEB 1003 = PDD 92345) and also an unidentified *Chaetosphaeria* species with 3 septate ascospores.

**Collection site:** Dry Creek entrance to Belmont Regional Park near the base of Hayward’s Hill, along the track and stream leading to the waterfall.

**Collection date:** 2 April 2007

**Collector:** Ann Bell; **Identifier:** Dan Mahoney

**Voucher material:** dried herbarium material (AEB 1004 = PDD 92346), projection slides (one taken under the dissecting scope and a number under the compound) and several semipermanent SMF heated slide mounts.

**Brief description:** **Conidiophores** numerous over the bark but not crowded or conspicuous, simple, mostly straight, smooth, brown, septate with solitary conidia produced terminally, conidiophores 87.5-125 µm long (many shorter) X 7-7.5 µm wide near the darker slightly swollen base and 4-5 µm wide at the truncate apex once the conidium had detached. **Conidiogeny** monoblastic at the conidiophore apex, after which slightly ampulliform percurrent growth (i.e., very slightly wider at the base of the new apical growth) leads to an extension of the conidiophore followed by another monoblastic conidium and so forth up to approx. 6 percurrent extensions. **Conidia** straight to curved, obclavate [but variable with some seeming to have detached prior to maturity and then narrower, less pigmented (light smoky-colored) and longer with an extension of the apical region], truncate basally and nearly apiculate apically, with mostly 8-9 cells. Transverse septations resulted in 1-2 lighter brown, narrow, basal cells (approx. 5 µm wide), approximately 5-6 wider darker brown interior cells which taper apically toward a narrower, hyaline, roughly triangular narrowly rounded apical cell over which I sometimes saw a mucilage cap or remnant thereof (the latter perhaps an anomaly), spores overall measuring 37.5-47 X 10-12.5 µm (n=8) – anomalous spores (immature?) longer, narrower and light smoky-colored throughout.

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**Comments:** The following is Ellis's original brief description from p. 94 of his 'More Dematiaceous Hyphomycetes' book.

“**Colonies** effuse, hairy, black. **Mycelium** mostly immersed, composed of pale to mid brown, 1-3  $\mu\text{m}$  thick hyphae. **Conidiophores** straight or curved, septate, smooth, brown or dark brown, up to 100  $\mu\text{m}$  long, 5-10  $\mu\text{m}$  thick, percurrent with 0-6 ampulliform proliferations. **Conidia** straight or curved, fusiform to obclavate, conico-truncate at the base, 7-9 septate, smooth, brown to dark brown, with cells at each end paler, 40-65  $\mu\text{m}$  long, 11-16  $\mu\text{m}$  thick in the broadest part.”

The type collection described above: on dead cortex of unknown tree, Atkin's Creek, near Laver's Hill, Australia, 3 Sept. 1966, G. Beaton No. 107, IMI 122100

Our collection matched the conidiophore & its conidium (2<sup>nd</sup> from left, of illustrations on p. 92, Fig. 66F). Our conidiophore maximum lengths were slightly greater than Ellis's but many, if not most, conidiophores were within his range. Conidia were within the lower portion of his range although I didn't measure the longer narrower 'immature' conidia. Most importantly, in his key (p. 77), were the matches to 'conidia with cell at each end much paler than the others' and 'percurrent proliferations of conidiophore ampulliform'.



***Sporidesmium australiense*. All photos from water mounts using 100X objectives and brightfield microscopy. A–C. Increasing maturity of terminal conidia. D,E. Different foci of the same conidiophore with the terminal conidium detached. Note the apical 6 nodose percurrent proliferations. F. Mature conidium, 9-celled with cells at each end less pigmented, 47 X 12.5  $\mu\text{m}$ .**