

***Sporidesmium hormiscioides* Corda and *Chaetosphaeria gallica* (Sacc. & Flageolet) Réblová (?) AEB 1041 (= PDD 94220).** These taxa were originally recorded under *Stanjehughesia caespitulosa* when collected in 2008. However, re-evaluations of our *Sporidesmium* & *Sporidesmium*-like AEB collections in 2019 have resulted in this change (see 'Comments' below)

Substrate: decorticated decaying branch of *Nothofagus*, approx. 2 cm in diameter

Collection site: treeline, near Jumbo Hut in the Tararua Mts., N. Island, New Zealand

Collection date: 28 March 2008

Collector: Ann Bell

Identifier: Dan Mahoney

Voucher materials: dried herbarium material [AEB 1041 (= PDD 94220)]; brief description and comments below; semi-permanent Shear's mounting fluid (SMF) slide mounts; digital (Olympus BX51 compound scope) photos of microscopic details and Zeiss dissecting scope colored slides (best digitized) of in-situ fruiting structures

Brief description of the *Sporidesmium*: **Conidiophores** single or in dense clusters on the substrate surface (mycelium not evident above the substrate surface), short, dark brown, smooth, 0-1 septate (the dark pigment makes this a difficult call in many cases), ampouliiform, mostly 10-13 µm high with a bulbous base (the apical portion cylindrical and truncated where the single conidium separated). Conidiophores and conidia also seen scattered over the peridial surface of many *Chaetosphaeria* perithecia. **Conidia** holoblastic, terminal and single at the conidiophore apex, concolorous dark brown or with basal cell, or cells, darker, smooth, thick-walled, narrow cylindrical, straight or bent (sometimes bent near the middle or near the base) with rounded apex and slight tapering toward a narrower truncated base, with 12-15 very dark non-indented, transverse septa, 99–131 × 9–12 µm (width at widest point) – n=10.

Comments: The genus *Sporodesmium*, with nearly 500 species & varieties recorded in Index Fungorum (December 2019), lacks monographic treatment. Only dichotomous morphologically-based keys to a limited number of species are available (e.g. Ellis MB. 1958. *Clasterosporium* and some allied dematiaceae-phragmosporae. I. Mycological Papers 70, 1–89. & Ellis MB. 1976. More Dematiaceous Hyphomycetes. CMI, Kew, Surrey. 507 p). The present conundrum, with *Sporidesmium* species often segregated into other genera (accepted by some but not others), is best summarized in "Seifert K, Morgan-Jones G, Gams W & Kendrick B. 2011. The Genera of Hyphomycetes. CBS Biodiversity Series no. 9: 1–997. CBS-KNAW Fungal Biodiversity Centre, Utrecht, Netherlands.' (see pp. 413 & 414).

For the present name change to *Sporidesmium hormiscioides*, see Index Fungorum under '*Sporidesmium hormiscioides* synonymy' with Kew Mycology the 2018 contributor (reproduced on p. 4 of this pdf).

Réblová, M. 2004. Four new species of *Chaetosphaeria* from New Zealand and re-description of *Dictyochaeta fuegiana*. *Studies in Mycology*. 50(1):171-186. p. 185

Chaetosphaeria gallica (Sacc. & Flageolet) Réblová, **comb. nov.** Myco-Bank MB500047. Fig. 65.

Basionym: *Zignoëlla gallica* Sacc. & Flageolet, Syll. Fung. 24: 967. 1926.

Anamorph: Unknown.

Perithecia immersed or semi-immersed, solitary, subglobose to globose, papillate, 200–230 µm diam, 280–350 µm high, dark brown to black, glabrous, not setose, ostiolate. *Ostiole* canal periphysate. *Perithecial wall* 35–48 µm thick, carbonaceous, fragile, consisting of two regions; outer region formed of dark brown, thin-walled, polyhedral cells; inner region formed of hyaline, thinner-walled, elongated, compressed cells. *Paraphyses* persistent, branching, hyaline, septate, 1.5–2 µm wide, not tapering, rounded at the top, longer than the asci. *Asci* unitunicate, cylindrical-clavate, 131–160 (mean ± se = 150 ± 3.2) × (11–)12.5–13.5(–15) (mean ± se = 12.8 ± 0.3) µm, L/W 11.7:1, short-stipitate, truncate at the apex, refractive apical annulus distinct, 2.5–3 µm diam, 1–1.5 µm high. *Ascospores* fusiform, curved or straight, often inequilateral, (21–)23–25 (mean ± se = 23.6 ± 0.2) × 4.5–6 (mean ± se = 5.5 ± 0.1) µm, L/W 4.3:1, (3–)5-septate, not constricted at the septa, hyaline, smooth, obliquely 1-seriate or 2-seriate in the ascus.

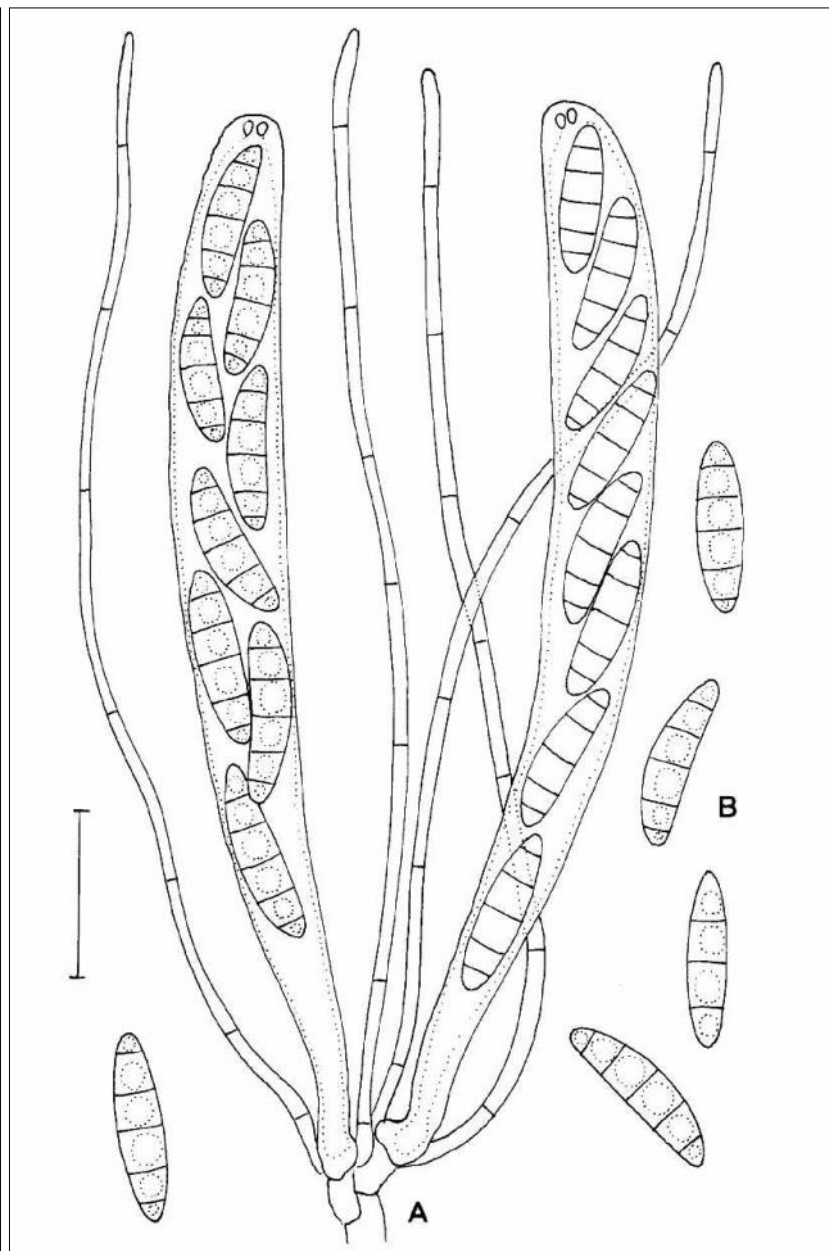
Holotype: **Italy**, on decayed wood, P.A. Saccardo 2823 (PAD).

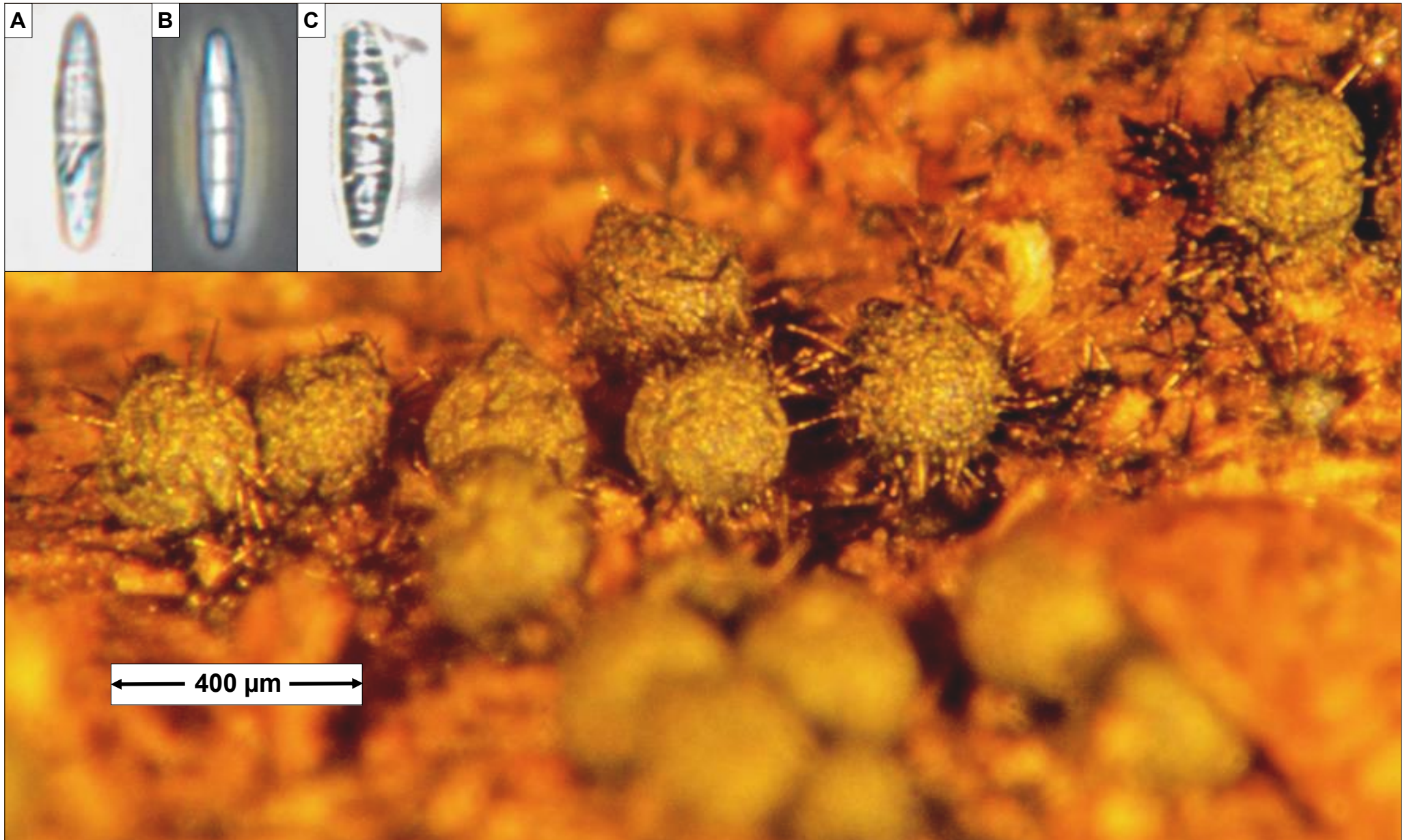
Known distribution: Italy.

Habitat: Saprobic on decayed wood.

Commentary: *Chaetosphaeria gallica* is similar to *Ch. curvispora*, but differs by longer asci, longer ascospores and glabrous perithecia that were half-immersed in the wood on the type material.

Fig. 65. *Chaetosphaeria gallica*. A. Asci with paraphyses. B. Ascospores. From PAD (holotype). Scale bar = 10 µm.





Relatively fresh, 2008, in-situ view of *Chaetosphaeria gallica* (?) perithecia on decorticated decaying branch of *Nothofagus*. Note the *Sporidesmium hormiscioides* fruiting bodies scattered over the perithecial surfaces. A–C are ascospores from the 2019 long-stored AEB 1041 herbarium material mounted in SMF. Ascospores are 3, 4 & 5 septate – measuring 20, 22.5 & 23 × 5 μm, respectively.

One opinion in chronological sequence: **1.** (pale yellow background) MB Ellis 1958, pp. 40–41. **2.** (right upper portion) MB Ellis 1976, p. 96. **3.** (right lower portion) Kew Mycology 2018. Morphological & sequencing data have to date not resolved the taxonomy surrounding the *Sporidesmium* complex (491 species recorded in Index Fungorum) which includes many recent segregate genera (*Stanjehughesia* being one). Initially, I chose *Stanjehughesia caespitulosum* for AEB 1041 but now have settled on *Sporidesmium hormiscioides*. Not all would agree.

(16) *Sporidesmium caespitulosum* (Ell. & Ev.) M. B. Ellis comb. nov.

Clasterisporium [*Clasterosporium*] *caespitulosum* Ellis & Everhart, June 1889, *J. Mycol.*, 5, p. 70.

Stigmia caespitulosum (Ell. & Ev.) Pound & Clements, 1896, *Bull. Minn. Geol. & Nat. Hist. Surv.*, 9, p. 661.

Hymenopodium caespitulosum (Ell. & Ev.) Höhnelt, 1924, *Strasser Verh. Zool.-Bot. Ges. Wien*, 73, p. 233.

Colonies black, tufted or subeffused. Mycelium partly superficial, but mostly immersed in the substratum, composed of branched, septate, brown, smooth-walled, 2–4 μ thick hyphae. Conidiophores arising occasionally singly but usually in large fascicles terminally and laterally on the hyphae, erect or suberect, simple, straight, mid to dark reddish brown, smooth-walled, non-septate, 12–15 μ long, bulbous and 8–11 μ thick at the base tapering to 4–6 μ at the apex. Conidia formed singly at the apex of each conidiophore, straight or occasionally bent or curved, cylindrical to subfusiform, truncate or conico-truncate at the base, smooth-walled, dark reddish brown, with 8–20 very dark transverse septa, 65–150 μ long, 13–17 μ thick in the widest part, sometimes tapering to 8–10 μ near the rounded apex, 4–6 μ wide at the base, septa averaging 8.4 μ apart.

On maple wood, New Jersey, U.S.A.

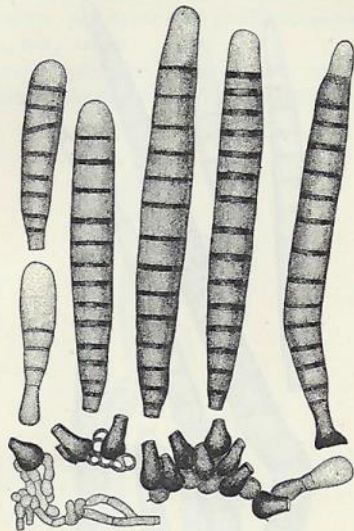


FIG. 25. *Sporidesmium caespitulosum* ($\times 500$)

SPECIMEN EXAMINED

Clasterosporium caespitulosum folder in Herb. N.Y. Bot. Gard.

Clasterisporium caespitulosum, type collection, on rotten maple, Newfield, N.J., summer 1879 (58516).

Sporidesmium hormiscioides Corda, 1838, *Icon. Fung.* 2: 6.

Clasterosporium vermiculatum Cooke, 1875.

C. caespitulosum Ellis & Everh., 1889.

(For other synonyms see Hughes in *Can. J. Bot.* 36: 808, 1958).

(Fig. 67F)

Colonies effuse, dark blackish brown to black. Mycelium mostly immersed. Conidiophores 10–25 \times 5–11 μ , mid to dark reddish brown. Conidia 65–270 \times 10–17 μ , 4–7 μ wide at base, mid to dark reddish brown with thick, black transverse septa, smooth.

On dead wood of *Acer*, *Fagus*, *Quercus* etc.; Europe including Great Britain.

Synonymy Index Fungorum

Current Name:

Sporidesmium hormiscioides* Corda, *Icon. fung. (Prague) 2: 6 (1838)

Synonymy:

Chaetosphaeria caesariata (Clinton & Peck) F.A. Fernández & Huhndorf, *Fungal Diversity* 18: 49 (2005)

Clasterosporium hormiscioides (Corda) Sacc., *Syll. fung. (Abellini) 4: 383 (1886)*

Clasterosporium vermiculatum Cooke, *Grevillea* 4(no. 30): 69 (1875)

Helminthosporium hormiscioides (Corda) Sacc. [as '*Helmisporium*'], *Michelia* 1 (no. 1): 85 (1877)

Lasiosphaeria caesariata (Clinton & Peck) Sacc., *Syll. fung. (Abellini) 2: 192 (1883)*

Phaeotrichosphaeria caesariata (Clinton & Peck) M.E. Barr, in Barr, Rogerson, Smith & Haines, *Bull. N.Y. St. Mus.* 459: 12 (1986)

Sphaeria caesariata Clinton & Peck, in Peck, *Ann. Rep. N.Y. St. Mus. nat. Hist.* 29: 60 (1878) [1876]

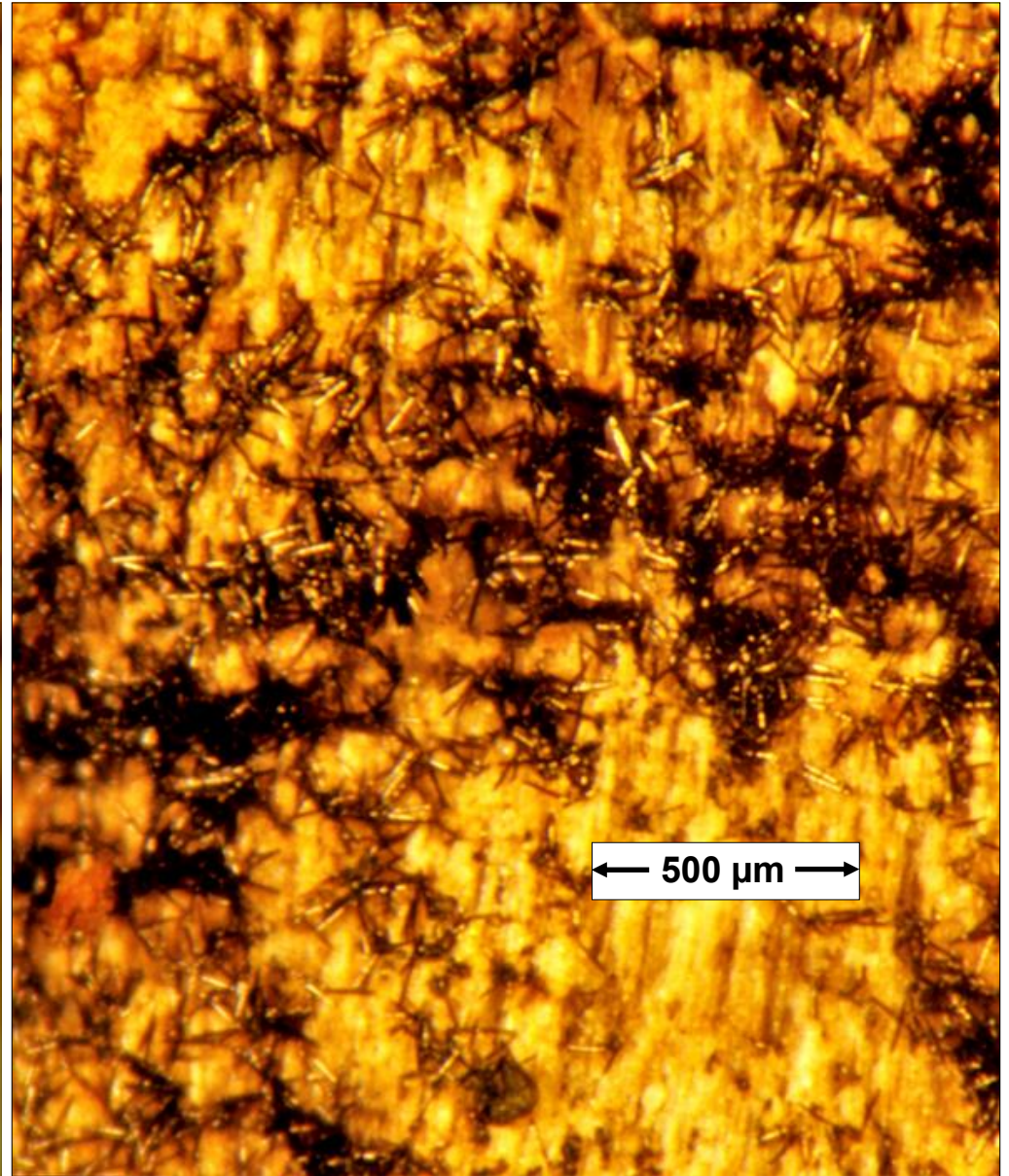
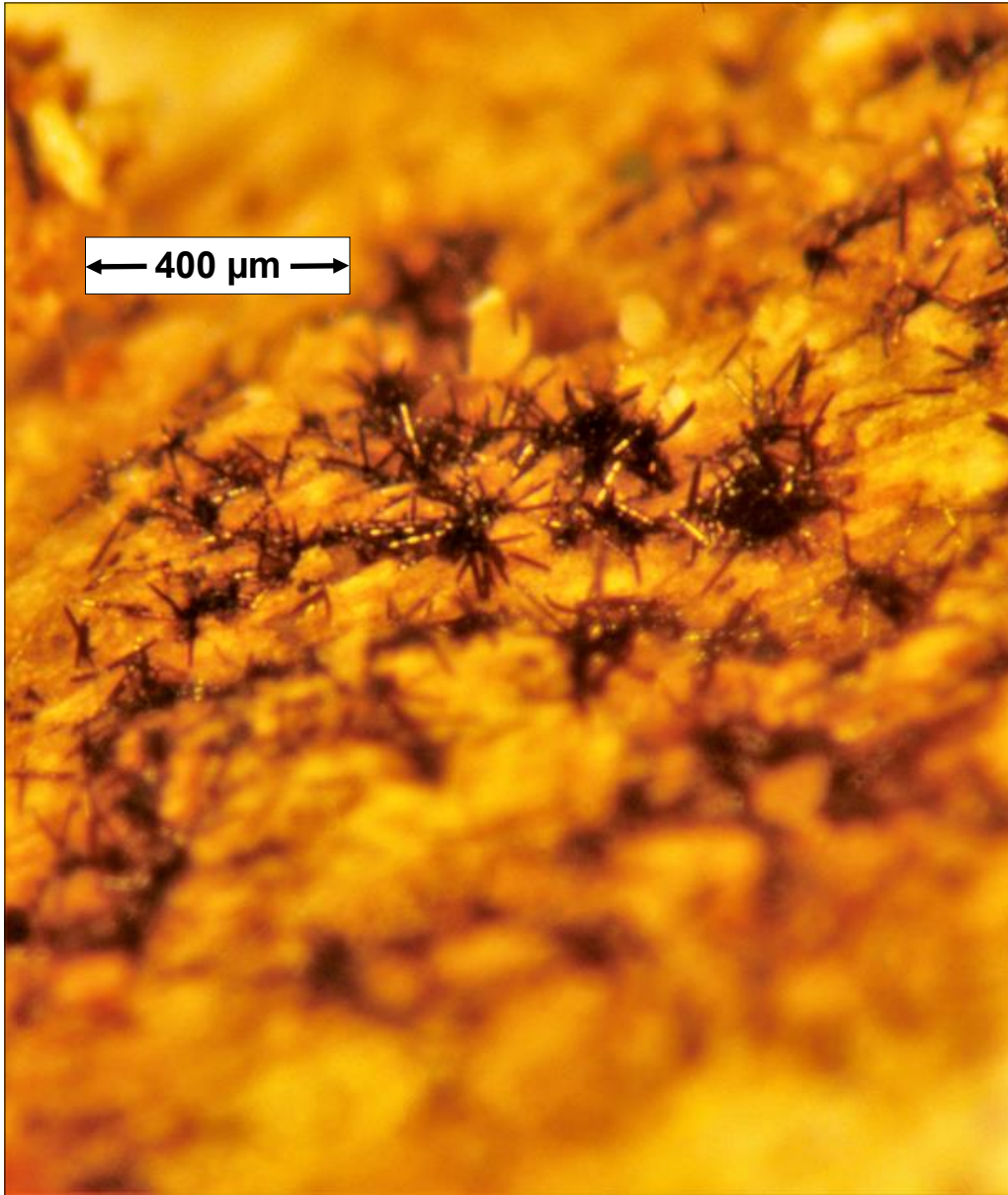
Sporidesmium vermiculatum (Cooke) M.B. Ellis, *Mycol. Pap.* 70: 41 (1958)

Stanjehughesia hormiscioides (Corda) Subram., *Proc. Indian natn Sci. Acad.*, Part B. Biol. Sci. 58(4): 184 (1992)

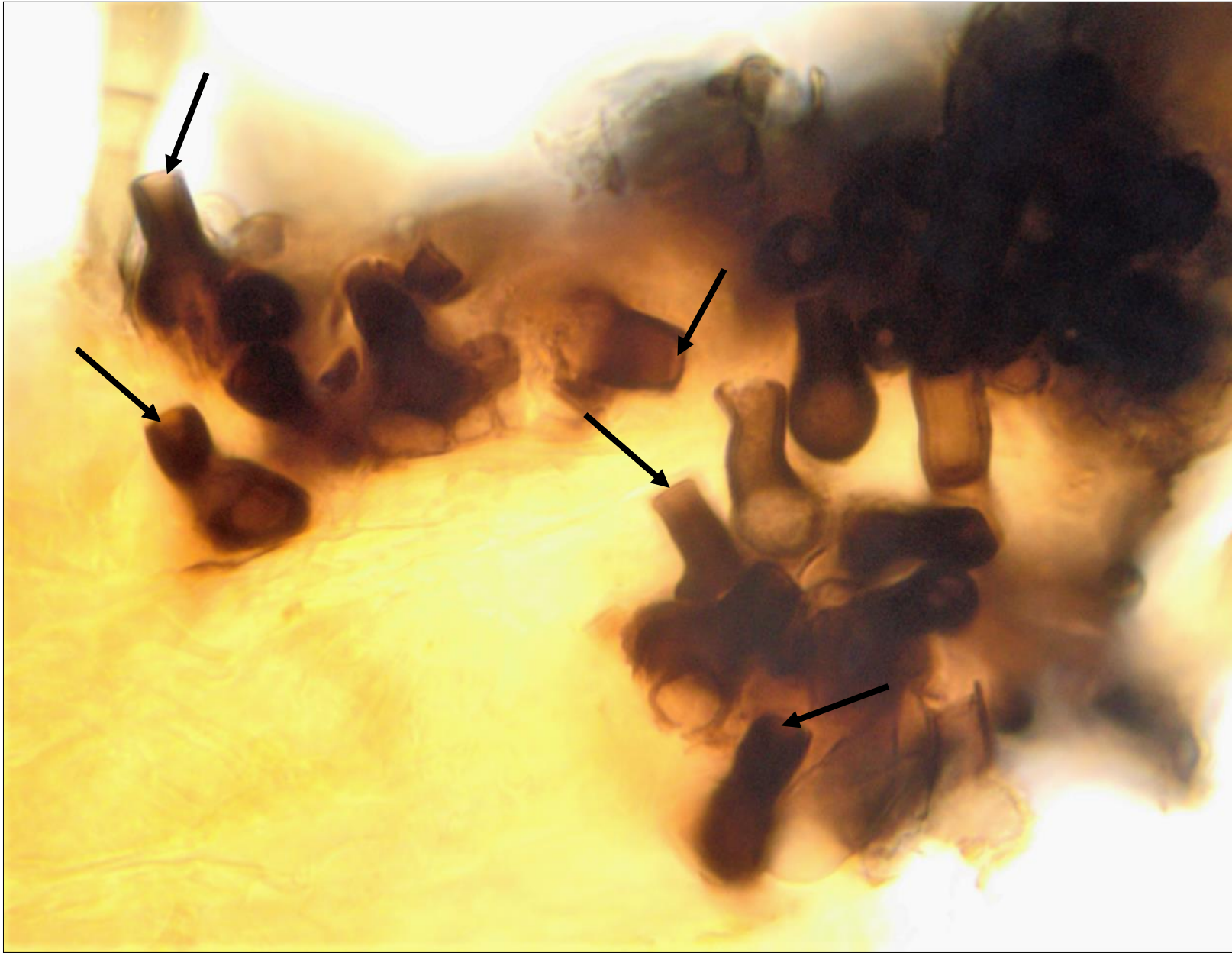
Stanjehughesia vermiculata (Cooke) Subram., *Proc. Indian natn Sci. Acad.*, Part B. Biol. Sci. 58(4): 184 (1992)

Umbrinosphaeria caesariata (Clinton & Peck) Réblová, *Mycotaxon* 71: 18 (1999)

Synonymy Contributor(s): Kew Mycology (2018)



Dissecting scope in-situ photos of fresh fruiting clusters of *Sporidesmium hormiscioides* on the dead decorticated wood. The obvious dark needle-like structures in each cluster are the long conidia which each originate apically & singly from the very reduced, usually crowded, conidiophores (see the next page).



Fresh in-situ clusters of short, dark brown, smooth conidiophores. Conidia have detached and only the point of dehiscence is evident (arrowed). SMF mount, X100 objective, brightfield microscopy.



Conidia mounted in Shear's mounting fluid and photographed under the X40 objective using bright-field microscopy. Overall, conidia had 12-15 very dark non-indenting, transverse septa and measured 99–131 × 9–12 μm (width at the widest point).