

***Sporidesmium larvatum* Cooke & Ellis AEB 1289 (= PDD 117232) My December 2019 re-evaluation of the 'Sporidesmium species complex' reveals that this species is now recorded in Index Fungorum as *Stanjehughesia larvata* (Cooke & Ellis) Subram., Proc. Indian natn Sci. Acad., Part B. Biol. Sci. 58(4): 184 (1992).**



Collection date: 31 October 2016

Collection site: Rimutaka Forest Park
Catchpool Loop Track (note red arrowhead)

Substrate: dead wood on sawed trunk end of a downed, long-dead, large decaying Kahikatea (*Dacrycarpus dacrydioides*)

Collector and identifier: Dan Mahoney

Voucher material: dried herbarium specimen AEB 1289 (= PDD 117232) – herbarium packet includes various semi-permanent slide mounts; Dan's in situ dissecting scope photos (scanned and digitized) and his compound scope digital photos of microscopic detail; Dan's brief description.

Brief description: Sporulating copiously (often in raised woody patches) on a long-dead, sawed surface of a large Kahikatea trunk AND over the surface of moss protonema outgrowths on the same sawed surface. Mycelium consisting of light brown hyphae seen among cells of the moist decaying wood. **Conidiophores** simple, smooth, regularly septate, short to roughly 80 µm long with brown to dark brown cells. No percurrent growth or annellations observed. 25–80 X 5 µm. **Conidia** terminal, solitary, monoblastic, dry, schizolytic. Conidia brown smooth euseptate phragmospores with 4–13 transverse septa, obclavate to cylindroid, straight to curving, not rostrate with apical cells narrower but still broadly rounded, concolorous or with slightly paler ends, (especially apically - but then many of these spores were still elongating). 21–68 X 5–10 µm.

Continued from page 1:

Discussion: The keys and illustrations in Ellis's 1976 book entitled 'More Dematiaceous Hyphomycetes' place this specimen close to *Sporidesmium larvatum* – a common species on conifer wood. Although most records are from non-podocarpous conifers in the N. Hemisphere, Hughes' 1978 treatment 'New Zealand Fungi 25. Miscellaneous species' reports it from worked wood of conifer collected near Hamilton (an exotic N. Hemisphere conifer?, a podocarp?).

PDD 26225

- Recorded name: *Sporidesmium larvatum* Cooke & Ellis
- Determined name: *Sporidesmium larvatum* Cooke & Ellis
- Determiner: S.J. Hughes
- Collector: S.J. Hughes 24/01/1963
- Substrate: worked wood
- Country: New Zealand
- District: Waikato
- Locality: Hamilton, Brooklyn

Specimen AEB 1289, however, is clearly from the conifer family Podocarpaceae, but as such still a conifer.

Reblová (1999) reports it (pp. 30, 32, 33) as the anamorph of her new pyrenomycete *Miyoshiella larvata* – on conifer woods in the Czech and Slovak Republics. Her observations support a view that conidiophore lengths may vary. She found that conidiophores on the natural substrate and on the perithecia themselves were macronematous while those grown in culture were much shorter and only semi-macronematous. This differs from the shorter conidiophores reported by Ellis (1976) and Subramanian (1992). Subramanian transferred *Sporidesmium larvatum* to *Stanjehughesia larvata* because of its very short to non-existent conidiophores but Reblová retains it in *Sporidesmium* (based on its macronematous conidiophores on natural substrates). My specimen also is very similar to *S. larvatum* based on Reblová's comments concerning conidiophore size on the natural substrate. In further agreement is the treatment by Delgado (2008, see page 231 below) and others.

Delgado page 231:

"Reblová (1999) also discussed the variations in conidiophore morphology of another species, *Stanjehughesia larvata* (Cooke & Ellis) Subram. (= *Sporidesmium larvatum* Cooke & Ellis) under natural and culture conditions, retaining the latter name for the anamorph of *Miyoshiella larvata* Reblová. Several collections having distinct, macronematous, multicelled conidiophores and 0-1 proliferating conidiogenous cells support Reblová's opinion to maintain this anamorph in *Sporidesmium* (Hughes & Illman 1974, Matsushima 1975, Reblová 1999, Wu & Zhuang 2005)."

Continued from page 2:

References:

- Delgado G. 2008. South Florida microfungi: a new species of *Stanjehughesia* (hyphomycetes) from *Sabal* palm. Mycotaxon 103: 229-234.
- Hughes SJ. 1978. New Zealand Fungi 25. Miscellaneous species. New Zealand Journal of Botany 16: 311–370. (for *Sporidesmium larvatum* see page 349)
- Hughes SJ, Illman WI. 1974. *Sporidesmium larvatum*. Fungi Canadenses 59: 1-2.
- Matsushima T. 1975. Icones microfungorum a Matsushima lectorum. Published by the author, Kobe, Japan. 209 pp.
- Reblová M. 1999. Studies in *Chaetosphaeria* sensu lato III. *Umbrinosphaeria* gen. nov. and *Miyoshiella* with *Sporidesmium* anamorphs. Mycotaxon 71: 13-43.
- Subramanian CV. 1992. A reassessment of *Sporidesmium* (Hyphomycetes) and some related taxa. Proc. Indian Natn. Sci. Acad. B58 No. 4 pp. 179-190.
- Wu WP, Zhuang W. 2005 *Sporidesmium*, *Endophragmiella* and related genera from China. Fungal Diversity Research Series 15, 1–351.

Earlier collections also identified (at least initially) as species of *Sporidesmium*:

1. *Sporidesmium australiense* M.B. Ellis (AEB 1004 = PDD 92346) – agreeing with Ellis’s key, illustrations & description in his 1976 book ‘More Dematiaceous Hyphomycetes’, pp. 77, 92 & 94 respectively.

PDD 92346

- Recorded name: *Sporidesmium australiense* M.B. Ellis
- Determined name: *Sporidesmium australiense* M.B. Ellis
- Determiner: D.P. Mahoney [DPM 1004]
- Collector: D.P. Mahoney 02/04/2007
- Substrate: dead wood
- Country: New Zealand
- District: Wellington
- Locality: Lower Hutt, Belmont Regional Park, Dry Creek

Continued from page 3:

2. *Stanjehughesia caespitulos* AEB 1041. I originally identified this as *Sporidesmium caespitosum* (Jumbo Hut treeline, 28-3-08). The reasons for my change to *Stanjehughesia caespitulos* can be found in the references by Subramanian 1992, Wu & Zhuang 2005 and Delgado 2008. **Since then, however, my re-evaluation in 2019 has resulted in a further name change to *Sporidesmium hormiscioides* (see Index Fungorum under *Sporidesmium hormiscioides* synonymy with Kew Mycology the 2018 contributor). The *Sporidesmium* 'species complex' is presently in a state of flux.**

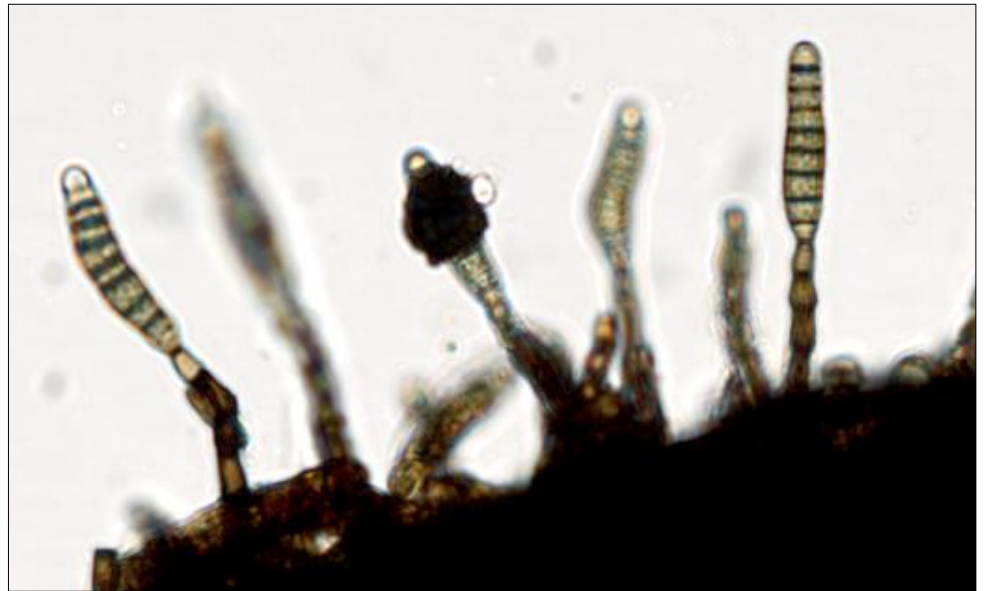
PDD 94220 - now recorded online as '*Sporidesmium hormiscioides* & *Chaetosphaeria gallica* PDD 94220 (= AEB 1041)'

The earlier online record is presented below:

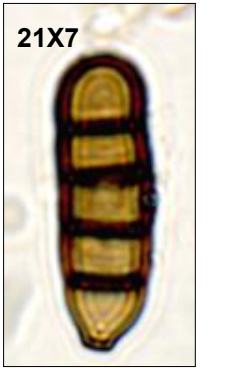
- Recorded name: *Stanjehughesia caespitulos* (Ellis & Everh.) Subram.
- Determined name: *Stanjehughesia caespitulos* (Ellis & Everh.) Subram.
- Determiner: D.P. Mahoney [AEB 1041]
- Collector: A.E. Bell 29/03/2008
- Association: *Nothofagus*
- Substrate: dead wood
- Country: New Zealand
- District: Wairarapa
- Locality: Tararua Range, near Jumbo Hut



Sporidesmium larvatum growing among moss on the dead wood surface. Note the conidia on short conidiophores. Left photo X20 objective, right photo X40 obj.; water mounts, brightfield.



Sporidesmium larvatum. Left photo growing among moss on the dead wood surface, X20 objective, water mount, brightfield microscopy. Right photos growing on the dead wood, X40 objective, water mounts, bright-field microscopy.



Sporidesmium larvatum conidia. All X100 objective and brightfield microscopy. Those with an * in water mounts, others in SMF. Note variations in shape, size and septation.