

## Cercosporoid hyphomycetes on *Barringtonia* spp.

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Cercosporoid hyphomycetes on *Barringtonia* spp. are discussed. *Pseudocercospora barringtoniae-acuteangulae* sp. nov. and *P. barringtoniigena* sp. nov. are described and illustrated.

Keywords: *Pseudocercospora*, cercosporoid hyphomycetes.

Braun & al. (1999) described *Pseudocercospora barringtoniicola* U. Braun & Mouch., based on material on *Barringtonia speciosa* from Tahiti, French Polynesia, and discussed the taxonomic status of *Cercospora barringtoniae* Syd. & P. Syd. Type material of the latter species has been re-examined, and found to belong to *Cercospora* s. str., because of its conspicuously thickened and darkened loci (scars) in the conidiogenous cells and conidial hila, as well as subhyaline conidia. Hence, the combination *Pseudocercospora barringtoniae* (Syd. & P. Syd.) N. Khan & S. Shamsi (Khan & Shamsi, 1983: 110), based on material of *Barringtonia acuteangula* from Bangladesh, is misapplied. Various collections on *Barringtonia acuteangula*, deposited at IMI, have been examined and compared with type material of *Pseudocercospora barringtoniicola*. The fungus on *Barringtonia acuteangula* is distinguished from the latter species by absent or small stromata, and very long, pluriseptate conidiophores. It represents a new species which is described here as *Pseudocercospora barringtoniae-acuteangulae* sp. nov.

Based on Chinese material on *Barringtonia yunnanensis*, Liu and Guo (1982) referred *Cercospora barringtoniae* to *Pseudocercospora*, which is, however, a misapplied combination. The Chinese fungus has, therefore, to be reassessed and described as a new species. Furthermore, a collection of a cercosporoid hyphomycete on

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*Barringtonia asiatica* from Futuna, a South Pacific island, also belongs in *Pseudocercospora*. It differs from *P. barringtoniicola* and *P. barringtoniae-acuteangulatae* in having large, pustulate to crustose stromata and narrower conidia, and is described here as *P. barringtoniigena* sp. nov.

***Pseudocercospora barringtoniae-acuteangulatae* U. Braun & Mouch., sp. nov. – Fig. 1.**

A *P. barringtoniicola* stromatibus nullis vel minutis et conidiophoris longis et pluriseptatis differt.

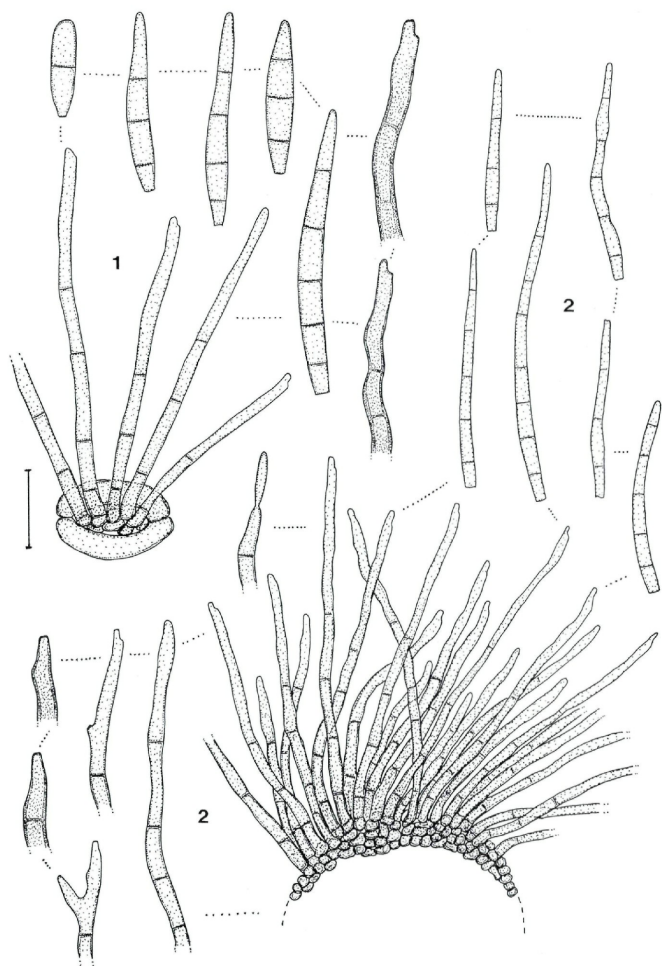
Holotypus. – *in foliis vivis Barringtoniae acuteangulatae* Gaertn. (Lecythidaceae), India, Uttar Pradesh, Gorakhpur, 21 January 1988, S. Chandra KSC 21 (IMI 330830).

Paratypi. – *in foliis vivis Barringtoniae acuteangulatae*, India, Uttar Pradesh, Gorakhpur, 13 December 1989, A. S. Moses (IMI 337596); Bangladesh, Dhakar, 11 March 1976, Quyyum 40 (IMI 262433).

Leaf spots indistinct to distinct, at first visible as small angular-irregular to subcircular discolorations, 1–2 mm diam., dull grey-olivaceous to brown, margin indefinite, later confluent, forming large patches, sometimes with a purplish border. – Caespituli hypophyllous, rarely epiphyllous, finely punctiform to subeffuse, loose to dense, grey-olivaceous to brown. – Mycelium internal; stromata lacking or very small, composed of a few swollen hyphal cells, brown, substomatal. – Conidiophores in small fascicles, mostly in groups of 2–8, loose, arising from internal hyphae or substomatal hyphal aggregations, emerging through stomata, erect, straight, subcylindrical to geniculate-sinuuous in the upper half, unbranched,  $30\text{--}185 \times (3\text{--})4\text{--}7 \mu\text{m}$ , pluriseptate (usually 2–6 septa), olivaceous to medium brown, paler towards the apex, wall somewhat thickened, smooth. – Conidiogenous cells integrated, terminal,  $10\text{--}40 \mu\text{m}$  long, occasionally becoming intercalary, proliferation sympodial, loci (scars) inconspicuous, occasionally subdenticulate. – Conidia solitary, obclavate (-subcylindric),  $20\text{--}70\text{--}(85) \times (4\text{--})4.5\text{--}7\text{--}(8) \mu\text{m}$ , 1–6(–7)-septate, pale olivaceous to olivaceous brown or light brown, thin-walled, smooth, apex obtuse, base obconically truncate, hila  $1.5\text{--}2.5 \mu\text{m}$  wide, unthickened, not darkened.

***Pseudocercospora barringtoniigena* U. Braun & Mouch., sp. nov. – Fig. 2.**

A *P. barringtoniicola* caespitulis punctiformibus, pustuliformibus vel crustaceis, conidiophoris longis et conidiis  $1.5\text{--}5 \mu\text{m}$  latis differt.



Figs 1-2. - Conidiophore fascicles, conidiophores, conidia. - 1. *Pseudocercospora barringtoniae-acutangulae*. - 2. *Pseudocercospora barringtoniigena*. - Bar = 20  $\mu$ m (drawn by U. Braun).



3. Stromata large, 20–80  $\mu\text{m}$  diam.; caespituli punctiform, pustulate to crustose; conidia filiform-acicular to narrowly obclavate-subcylindric, 20–90  $\times$  1.5–5  $\mu\text{m}$ ; on *Barringtonia asiatica*, Futuna .....  
..... *Pseudocercospora barringtoniigena*
- 3.\* Stromata smaller or caespituli subeffuse to punctiform, but not pustulate-crustose; conidia obclavate-subcylindric, 4–8  $\mu\text{m}$  wide; on other hosts ..... 4
4. Stromata absent or very small, composed of a few swollen hyphal cells, substomatal; conidiophores 30–185  $\mu\text{m}$  long, pluriseptate (usually 2–6 septa); on *Barringtonia acutangula*, Bangladesh, India ..... *Pseudocercospora barringtoniae-acutangulae*
- 4.\* Stromata well-developed, 30–60  $\mu\text{m}$  diam., substomatal to intraepidermal; conidiophores shorter, 10–50  $\mu\text{m}$  long, 0–2(–3)-septate; on *Barringtonia speciosa*, Tahiti (French Polynesia) .....  
..... *Pseudocercospora barringtoniicola*

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