

## Cercosporoid hyphomycetes on *Barringtonia* spp.

Uwe Braun and Jean Mouchacca<sup>1</sup>

Martin-Luther-Universität, FB. Biologie, Institut für Geobotanik und Botanischer  
Garten, Neuwerk 21, 06099 Halle (Saale), Germany  
Muséum National d'Histoire Naturelle, Laboratoire de Cryptogamie, 12 rue Buffon,  
75005 Paris, France

Braun, U. & J. Mouchacca (2000). Cercosporoid hyphomycetes on *Barringtonia* spp. – *Sydowia* 52 (2): 73–77.

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 sub-hyaline 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

---

<sup>1</sup> Corresponding author

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

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

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

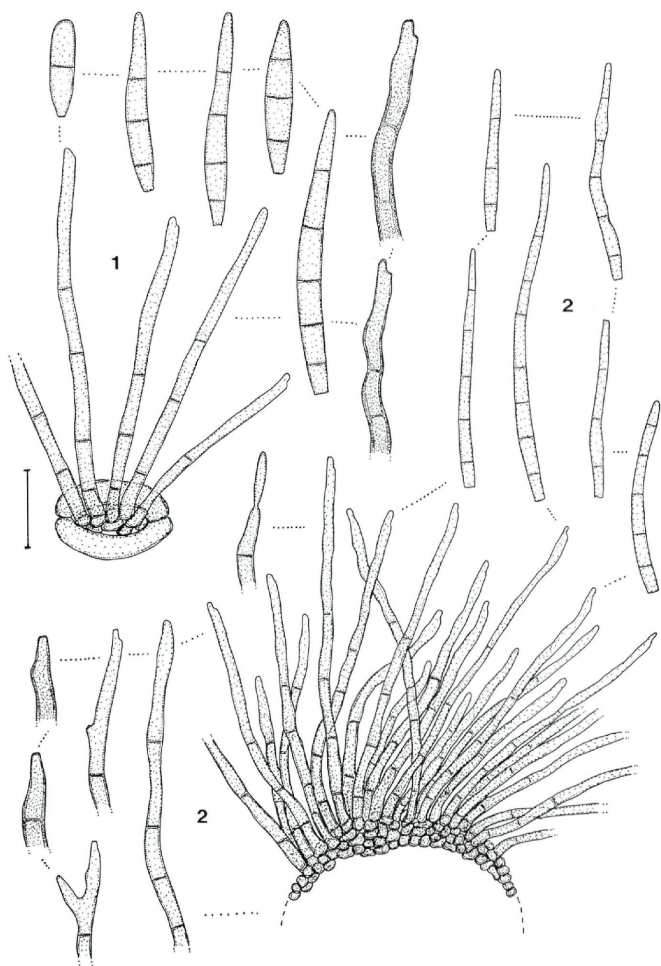
Holotypus. – *in foliis vivis Barringtoniae acuteangulae* Gaertn. (Lecythidaceae), India, Uttar Pradesh, Gorakhpur, 21 January 1988, S. Chandra KSC 21 (IMI 330830).

Paratypi. – *in foliis vivis Barringtoniae acuteangulae*, 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-subcylindrical, 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-subcylindrical, 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*

### Acknowledgments

The present study was undertaken as part of the multidisciplinary project Land Biodiversity in New Caledonia of the Muséum National d'Histoire Naturelle, Paris, France, which supported J. Mouchacca in all respects.

Prof. Ph. Morat and Dr. M. Schmid of the Laboratoire de Phanérogamie, Muséum National d'Histoire Naturelle, are gratefully acknowledged for their help in the identification of the plant-host of the South Pacific studied specimen. Prof. P. Crous kindly accepted to review the manuscript.

### References

- Braun, U., J. Mouchacca & E. H. C. McKenzie (1999). Cercosporoid hyphomycetes from New Caledonia and some other South Pacific islands. – N.Z. J. Bot. 37: 297–327.
- Khan, A. Z. M. K. & S. Shamsi (1983). Cercosporae from Bangladesh. II. – Bangladesh J. Bot. 12: 105–118.
- Liu, X.-J. & Y.-L. Guo (1982). Studies on some species of the genus *Phaeoramularia* in China. – Acta Phytopathol. Sinica 12: 1–15.

(Manuscript accepted 18<sup>th</sup> May 2000)

# ZOBODAT - [www.zobodat.at](http://www.zobodat.at)

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Sydowia](#)

Jahr/Year: 2000

Band/Volume: [52](#)

Autor(en)/Author(s): Braun Uwe, Mouchacca Jean

Artikel/Article: [Cercosporoid hyphomycetes on Barringtonia spp.. 73-77](#)