Fungi from palms. II. *Kirschsteiniothelia aethiops* from the date palm, *Phoenix dactylifera**

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Type material of *Amphisphaeria phoenicis* Pat. was examined and was found to be conspecific with *Kirschsteiniothelia aethiops*. This is the first report of this taxon from palms. The fungus is illustrated with light interference contrast micrographs.

Keywords: *Amphisphaeria, Kirschsteiniothelia, Phoenix,* palm fungi.

During studies of ascomycetes which have been described from palms, it was found that *Amphisphaeria phoenicis* Pat. was conspecific with *Kirschsteiniothelia aethiops* (Berk. & Curtis) D. Hawksw. The fungus was found at the base of rachids of *Phoenix dactylifera* in Tunisia (Patouillard, 1892). *K. aethiops* has not previously been reported from palm material or from Africa and in this paper the taxon is briefly described and illustrated with interference contrast micrographs.

Kirschsteiniothelia aethiops (Berk. & Curtis) D. Hawksw., Bot. J. Linn. Soc. 91, 185, 1985. – Figs. 1–9.

= *Amphisphaeria phoenicis* Pat., Enum. Champ. Tunisie, 12. 1892.

Ascomata 320–520 µm high, 320–585 µm diam, subglobose, superficial, black, coriaceous, solitary or gregarious, base applanate and immersed (Figs. 1,5). – Peridium dark brown, up to 70 µm thick, comprising thick-walled angular cells forming a *textura angularis*, outwardly deeply pigmented with palisade-like cells at the lower sides (Figs. 2–4). – Ostiole short, papilliform, mostly eccentric (Fig. 1). – Pseudoparaphyses hypha-like, persistent, abun-

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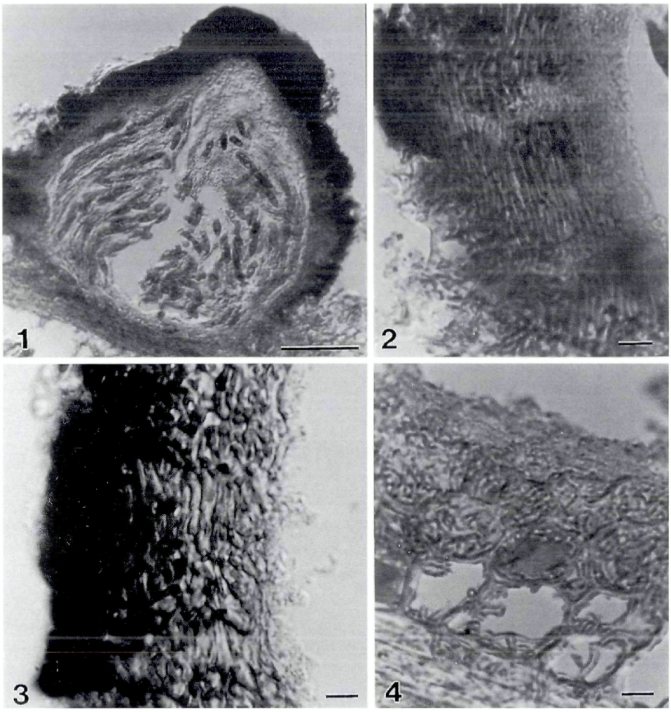
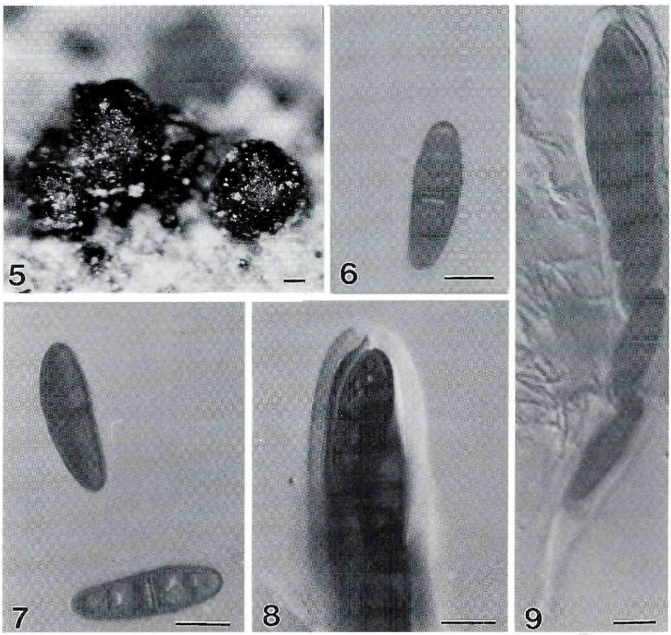
* I in Sydowia 44: 32–54.



Figs. 1–4. – Interference contrast micrographs of *Kirschsteiniothelia aethiops* from date palm. – 1. Vertical section through ascoma. – 2. Peridium. – 3. Palisade-like cells near base of ascoma. – 4. Base of ascoma. Scale bars : 1 = 100 µm; 2–4 = 10 µm.

dant, 2–3 µm diam, septate, branched and anastomosing (Fig. 9). – Asci 120–140 x 16–22 µm, 8-spored, broadly subcylindrical, short-stalked, bitunicate, fissitunicate, apically rounded with an ocular chamber and faint ring, arising from the base of the ascomatal cavity (Figs. 1, 8, 9). – Ascospores 28–37 x 9–12 µm, 2-seriate, ellipsoidal, rounded at the apices, 1-septate, the upper cell shorter and wider, weakly constricted at the septum, brown, relatively thick-walled, with a minutely verrucose ornamentation (x 1000) and lacking any sheath (Figs. 6, 7).



Figs. 5–9. – *Kirschsteiniothelia aethiops*. – 5. Surface view of ascomata. – 6–9. Interference contrast micrographs. – 6, 7. Ascospores. – 8, 9. Asci with an ocular chamber (8) and fissitunicate dehiscence (9). Scale bars: 5 = 100 µm, 6– 9 = 10 µm.

Material examined. – Tunisia, La Marsa, Gafa, Monastir, at the base of rachids of *Phoenix dactylifera*, Mar 1891, Pat. 593, (FH 5518, holotype).

Taxa occurring on palms with similar brown bicelled ascospores include *Amphisphaeria* Ces. & de Not., *Astrosphaeriella* H. Sydow & P. Sydow and *Didymosphaeria* Fuckel. *Amphisphaeria* is a unitunicate genus with asci provided with a J^+ apical apparatus. *Astrosphaeriella* is melanommataceous with a hamathecium of trabeculate pseudoparaphyses held in a gelatinous matrix and fusiform ascospores, while *Didymosphaeria* is characterised by trabeculate pseudoparaphyses, immersed ascomata with hyphal walls becoming deeply pigmented and being clypeate around the ostiole (Hawksworth, 1985b). In *Kirschsteiniothelia* D. Hawksw. ascomata are erumpent and finally

superficial, while the ascomatal wall is pseudoparenchymatous with angular cells and a wedge of palisade cells often visible at the periphery, while pseudoparaphyses are cellular. *Amphisphaeria phoenicis* is clearly wrongly placed and should be included in *Kirschsteiniothelia*, where it is conspecific with *K. aethiops*.

The ascus length in the *Kirschsteiniothelia aethiops* collection from date palm are within the range given for the species by Hawksworth (1985a), but slightly larger than those of the holotype. However, overlap in ascospore size in *K. aethiops* depending on the collection is reported by Hawksworth (1985a). All collections, including the one from palm have a delicate verruculose ornamentation. This is the first record of *Kirschsteiniothelia aethiops* from Africa and from a palm host.

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