Pseudocercospora elaeocarpi sp. nov., from *Elaeocarpus* in India

B. C. Sutton¹⁾ and K. V. Sankaran²⁾

¹⁾ International Mycological Institute, Bakeham Lane, Egham, Surrey TW20 9TY, U.K.
²⁾ Division of Plant Pathology, Kerala Forest Research Institute, Peechi, 680 653, Kerala, India

Accepted for publication 24 October 1994

Pseudocercospora elaeocarpi sp. nov. is described and illustrated from dead leaves of Elaeocarpus sp. collected in India.

Key Words-biodiversity; Elaeocarpus; India; Pseudocercospora.

The Silent Valley evergreen forests situated in the Western Ghats, Kerala, India are an undisturbed protected bioreserve. A report on the hyphomycetes of the Silent Valley and similar areas of vegetation in S.W. India was given by Subramanian and his co-workers (Subramanian, 1986). They recorded 142 species belonging to 95 genera from the Silent Valley alone. *Elaeocarpus* is a large tree species common to these tropical forests and in April 1994 one of us (KVS) collected dead and fallen leaves which bore a hyphomycete belonging to the genus Pseudocercospora Speg. This species is unusual because it is not associated with foliar lesions. Most species in the genus are foliar pathogens. Otherwise it conforms well with the generic criteria outlined by Deighton (1987), Sutton et al. (1987) and Sutton and Pascoe (1988).Subramanian (1986) recorded a single unnamed Pseudocercospora species from the Silent Valley but did not state from which plant host substratum it was collected. A search of the literature shows that not only have no species of Pseudocercospora been described or recorded from Elaeocarpus, but that there have been no species of Cercospora described either. Cercospora is a large genus with several hundred species erroneously described in it and many of these have been subsequently removed to genera such as Pseudocercospora (Pollack, 1987). A check was also made on genera related to Cercospora recorded from Elaeocarpus but again this failed to yield any possible species which might be conspecific with the one described here.

Pseudocercospora elaeocarpi Sutton & Sankaran,

sp. nov. Fig. 1 Laesiones absentes. Coloniae hypogenae, discretae, brunneae, intravenia limitata, 0.2 cm diam. Mycelium immersum intracellulosum, pallide brunneum, ramosum, septatum, usque ad 3 μ m latum. Mycelium superficiale abundans, ex cellulis basalibus stromatum oriundum, circum colonias effusum, medio brunneum, irregulariter ramosum, septatum, laeve, usque ad 3 μ m latum. Stroma usque ad 80 μ m lata × 40 μ m profunda, semi-immersa, ex textura globulosa vel angulare, atro brunnea formata. Conidiophora fasciculata, ad basim atrobrunnea, irregulariter (1) 2-4 euseptata, recta vel flex-Cellulae conidiogenae in uosa. $18-45 \times 3-4 \ \mu m$. conidiophoris incorporatae, terminales vel raro intercalares, cylindricae, apicem versus deminutae, ad locis raro geniculatae, pallide brunneae, laeves, 8-23×4-5 μ m. Loci conidiogeni 1-2, usque ad 3-5 μ m diam, non incrassati, non protuberantes, proliferationibus sympodialibus holoblasticis irregularibus consociati. Conidia sicca, pallide brunnea, holoblastica, recta vel ad apicem leniter curvata, irregulariter guttulata, ad apicem gradatim deminuta, basim truncata, non incrassata, $50-85 \times 3-$ 5 µm.

Holotypus; in foliis emortuis *Elaeocarpi* sp., Silent Valley, Palghat Distr., Kerala, India, K. V. Sankaran, 21 Apr. 1994, IMI 362335, in International Mycological Institute conservatus.

Necrotic lesions absent. Colonies visible only on the lower surface of the leaves where they form discrete brown vein-limited areas up to 0.2 cm diam. Immersed mycelium intracellular, pale brown, branched, septate, up to 3 µm wide. Superficial mycelium abundant, formed from the base of the stroma, spreading around the colonies, medium brown, irregularly branched, septate, smooth, up to $3 \,\mu$ m wide. Stroma up to $80 \,\mu$ m wide \times 40 μ m deep, semi-immersed, composed of dark brown textura globulosa to textura angularis. Conidiophores fasciculate, dark brown at the base, pale brown at the apices, smooth or rarely verrucose at the base, irregularly septate, mostly (1) 2-4 septate, straight or flexuous, 18-45 \times 3-4 μ m. Conidiogenous cells integrated, terminal or rarely intercalary, cylindrical, tapered towards the apices, rarely geniculate at conidiogenous loci, pale brown, smooth, $8-23 \times 4-5 \ \mu m$. Conidiogenous loci 1-2, up to $3.5\,\mu\text{m}$ diam, unthickened, non-protuberant, formed in association with irregular holoblastic sympodial proliferation of the conidiogenous cell. Conidia dry, pale brown, holoblastic, straight or slightly curved at the apex, thin-walled, smooth, 5-7 euseptate, not constrict-

B. C. Sutton and K. V. Sankaran

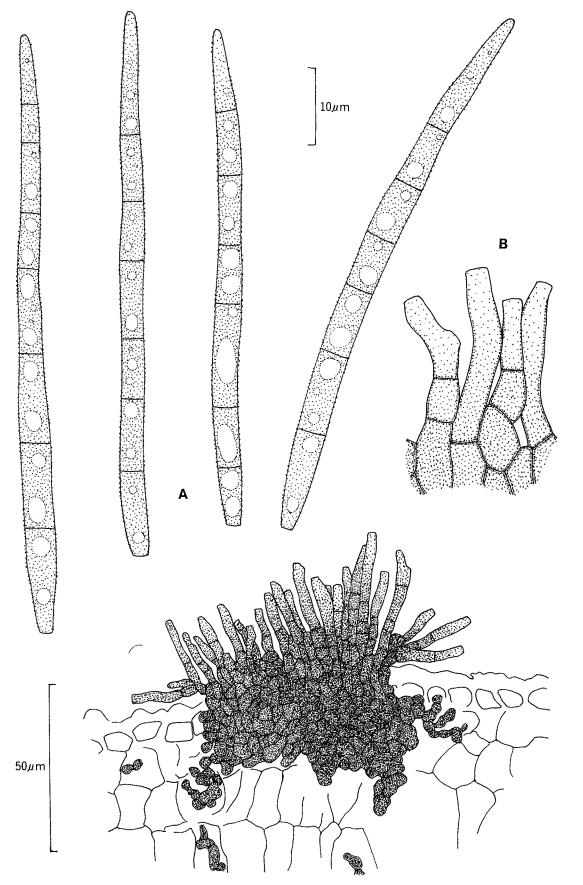


Fig. 1. Pseudocercospora elaeocarpi, IMI 362335. A. Conidia. B. Conidiophores and conidiogenous cells. C. Vertical median section of a conidioma.

ed at septa, irregularly guttulate, tapered gradually towards obtuse apices, base truncate, unthickened, 50-85 \times 3-5 μm .

This work was carried out by K. V. Sankaran during the tenure of a Darwin Fellowship at IMI awarded by the UK Department of the Environment.

Literature cited

Deighton, F. C. 1987. New species of *Pseudocercospora* and *Mycovellosiella*, and new combinations into *Pseudocer*-

cospora and Phaeoramularia. Trans. Br. Mycol. Soc. 88: 365-391.

- Pollack, F. G. 1987. An annotated compilation of *Cercospora* names. Mycol. Mem. **12**: 1–212.
- Subramanian, C. V. 1986. The progress and status of mycology in India. Proc. Indian Acad. Sci. (Pl. Sci.) **96**: 379-392.
- Sutton, B. C. and Pascoe, I. G. 1988. Pseudocercospora correicola sp. nov., another leaf pathogen of Correa species from Australia. Austral. Syst. Bot. 1: 87–94.
- Sutton, B. C., Pascoe, I. G. and Sharma, I. K. 1987. Pseudocercospora correae sp. nov., a leaf pathogen of Correa species from Australia. Austral. JI Bot. 35: 227–234.