

Setophaeosphaeria hemerocallidis
& *Setophaeosphaeria badalingensis*



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***Setophaeosphaeria* Crous & Y. Zhang ter, gen. nov.**

Etymology. Named after the presence of setae and its morphological similarity to the genus *Phaeosphaeria*.

Ascomata pseudothecial, immersed on leaves and stems, subepidermal with central ostiole, somewhat papillate, globose, somewhat dispersed, up to 200 µm diam; wall of 2–3 layers of brown *textura angularis*. *Asci* narrowly ellipsoid, bitunicate, 8-spored, 2–3-seriate, rostrate, short stipitate, apical chamber inconspicuous, straight to curved; intermingled among hyaline hyphal pseudoparaphyses. *Ascospores* pale brown, fusoid-ellipsoid, with mucoid caps at each end, guttulate, smooth,

5-septate, second cell from apex somewhat swollen. *Conidiomata* developing in culture, pycnidial, brown, globose, erumpent, with central, round to ellipsoid ostiole; wall of 2–3 layers of pale brown *textura angularis*. *Conidiophores* reduced to conidiogenous cells. *Conidiogenous cells* ampulliform, hyaline, smooth; proliferating several times percurrently at apex. *Conidia* hyaline, smooth, subcylindrical, guttulate, aseptate, apex bluntly rounded, base truncate with marginal frill.

Type species. *Setophaeosphaeria hemerocallidis*.
Mycobank MB808945.

***Setophaeosphaeria hemerocallidis* Crous & Y. Zhang ter, sp. nov.**

Etymology. Named after the host genus from which it was collected, *Hemerocallis*.

Ascomata pseudothecial, immersed on leaves and stems, subepidermal with central ostiole (20–30 µm diam), somewhat papillate, globose, somewhat dispersed, up to 200 µm diam; wall of 2–3 layers of brown *textura angularis*. *Asci* narrowly ellipsoid, bitunicate, 8-spored, 2–3-seriate, rostrate, short stipitate, apical chamber inconspicuous, straight to curved, 40–50 × 8–10 µm; intermingled among hyaline hyphal pseudoparaphyses, 1.5–2.5 µm diam. *Ascospores* pale brown, fusoid-ellipsoid, with mucoid caps (3 µm long) at each end, guttulate, smooth, 5-septate, second cell from apex somewhat swollen, (23–)24–25(–27) × 4(–4.5) µm. *Conidiomata* developing in culture, pycnidial, brown, globose, erumpent, up to 400 µm diam, with central, round to ellipsoid ostiole, 20–40 µm diam; wall of 2–3 layers of pale brown *textura angularis*. *Conidiophores* reduced to conidiogenous cells. *Conidiogenous cells* ampulliform, hyaline, smooth, 8–15 × 3–5.5 µm; proliferating several times percurrently at apex. *Conidia* hyaline, smooth, subcylindrical, guttulate, aseptate, apex bluntly rounded, base truncate with marginal frill, (11–)13–16(–19) × (3–)3.5(–4) µm.

Culture characteristics — Colonies reaching 20 mm diam after 2 wk at 22 °C. On MEA colonies folded, with sparse aerial

mycelium and smooth, even margin; surface pale olivaceous-grey, reverse olivaceous-grey. On OA olivaceous-grey. On PDA surface pale olivaceous-grey, with patches of olivaceous-grey, reverse olivaceous-grey.

Typus. CHINA, Beijing, Badaling, N40°20'45.1" E116°00'48.3", on leaf die-back of *Hemerocallis fulva* (*Hemerocallidaceae*), 1 Sept. 2013, P.W. Crous & Y. Zhang (holotype CBS H-21720, culture ex-type CPC 23645 = CBS 138006; ITS sequence GenBank KJ869161, LSU sequence GenBank KJ869218, MycoBank MB808946).

Notes — The genus *Phaeosphaeria* (typified by *P. oryzae*) was recently epitypified by Quaedvlieg et al. (2013), and shown to be the sexual morph of the genus *Phaeoseptoria* (based on *P. papaya*). *Setophaeosphaeria* is distinguished from *Phaeosphaeria* in that the latter lacks ascomatal setae and phoma-like asexual morphs. Phylogenetically, *S. hemerocallidis* is closely related to *Phaeosphaeria setosa*, which has a phoma-like asexual morph. The two species can be distinguished based on dimensions of their ascospores, those of *P. setosa* being smaller (4–5-septate, 18–22 × 5–5.5 µm; Leuchtman 1984). A new combination is herewith also introduced in *Setophaeosphaeria* to accommodate *P. setosa*.

***Setophaeosphaeria setosa* (Leuchtm.) Crous, comb. nov.**

Basionym. *Phaeosphaeria setosa* Leuchtm., Sydowia 37: 159. 1984.
Mycobank MB808947.

***Setophaeosphaeria badalingensis* Crous & Y. Zhang ter, sp. nov.**

Etymology. Named after the location from where this species was collected, Beijing, Badaling.

Conidiomata immersed (on OA) to erumpent (on PNA), brown in surface view, but at higher magnification (1 000×) body pale brown, apex brown, globose, up to 250 µm diam with central ostiole and papillate neck; wall of 6–8 layers of *textura angularis*, pale brown on outside, becoming hyaline inwards. *Setae* brown, unbranched, flexuous, septate, covering conidioma, flexuous, smooth, with obtuse ends, up to 200 µm long, 2–2.5 µm wide. *Conidiophores* reduced to conidiogenous cells. *Conidiogenous cells* lining the inner cavity, hyaline, smooth, ampulliform, 4–7 × 3–4 µm; apex with prominent periclinal thickening.

Colour illustrations. *Hemerocallis fulva* at Badaling, China; ascomata, asci and ascospores of *Setophaeosphaeria hemerocallidis* in culture (left column); conidiomata, setae, conidiogenous cells and conidia of *S. badalingensis* in culture (right column). Scale bars = 10 µm.

Conidia solitary, hyaline, smooth, guttulate, subcylindrical with obtuse ends, straight or gently curved, (5–)6(–7) × (2.5–)3 µm.

Culture characteristics — Colonies reaching 25 mm diam after 2 wk at 22 °C. On MEA spreading, with sparse aerial mycelium, surface folded, margins even, lobed, surface smoke-grey, reverse olivaceous-grey. On OA surface olivaceous-grey. On PDA surface and reverse olivaceous-grey.

Typus. CHINA, Beijing, Badaling, N40°20'45.1" E116°00'48.3", on leaf die-back of *Hemerocallis fulva* (*Hemerocallidaceae*), 1 Sept. 2013, P.W. Crous & Y. Zhang (holotype CBS H-21721, culture ex-type CPC 23643 = CBS 138007; ITS sequence GenBank KJ869162, LSU sequence GenBank KJ869219, MycoBank MB808948).

Notes — *Setophaeosphaeria badalingensis* is phylogenetically distinct from *S. setosa* and *S. hemerocallidis*, and also has smaller conidia than those observed in *S. hemerocallidis*, (11–)13–16(–19) × (3–)3.5(–4) µm.

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