Calophoma sandfjordenica
Calophoma sandfjordenica  Crous & Rämä, sp. nov.

**Etymology.** Name refers to Sandfjorden, Berlevåg, Norway, a landscape preservation area with a long sandy beach and dunes, where this fungus was collected.

**Classification.** Didymellaceae, Pleosporales, Dothideomycetes.

Conidiomata pycnidial, solitary, black, globose, immersed to erumpent, ostiolate, 200–300 mm diam; wall of 3–6 layers of brown textura angularis. Micropycnidia present. Conidiophores reduced to conidiogenous cells lining the inner cavity, ampulliform to doliiform, hyaline, smooth, phialidic with periclinal thickening, 5–10 × 5–7 mm. Conidia subcylindrical, straight to curved, ends obtuse, hyaline, smooth, 0(–1)-septate, guttulate, (8-)10–14(–18) × (2-)3 mm.

Culture characteristics — Colonies flat, spreading, with moderate aerial mycelium and smooth, lobate margin, covering dish after 2 wk at 25 °C. On MEA surface dirty white, reverse nectarate aerial mycelium and smooth, lobate margin, covering dish 5–7 mm. Conidia erumpent, ostiolate, 200–300 mm diam; wall of 3–6 layers of brown textura angularis. Micropycnidia present. Conidiophores reduced to conidiogenous cells lining the inner cavity, ampulliform to doliiform, hyaline, smooth, phialidic with periclinal thickening, 5–10 × 5–7 mm. Conidia subcylindrical, straight to curved, ends obtuse, hyaline, smooth, 0(–1)-septate, guttulate, (8-)10–14(–18) × (2-)3 mm.

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Notes — Species of Phoma and related coelomycetous genera have long been known to be frequent in the marine environment, but little effort has been made to identify these fungi to species level. Due to their very indistinct morphological features, the only means to separate species is by phylogenetic inference based on DNA sequence data supplemented with culture characteristics (Kohlmeyer & Volkmann-Kohlmeyer 1991, Jones et al. 2015). Calophoma sandfjordenica described here is the first marine member of this recently established genus (Chen et al. 2015). The species was isolated from driftwood at three locations along the Northern Norwegian coast. Two of the substrates were of Pinus and one on the wood of an unidentified tree. All locations are at the open ocean (Barents Sea). The ITS sequence showed greatest similarity with C. complanata. Some closely related species, such as Phoma herbarum and Phomatoses nebulosa are also known to thrive in the marine environment (Jones et al. 2015).

Based on a megablast search of NCBI’s GenBank nucleotide database, the closest hits using the ITS sequence had highest similarity to Microsphaeropsis olivacea (GenBank MG020349.1; Identities = 521/536 (97 %), 7 gaps (1 %)), Calophoma aquilegiicola (GenBank MH855149.1; Identities = 518/534 (97 %), 4 gaps (0 %)) and Epicoccum huancayense (GenBank MH661244.1; Identities = 520/537 (97 %), 7 gaps (1 %)). Closest hits using the LSU sequence are Calophoma complanata (GenBank EU754180.1; Identities = 875/875 (100 %), no gaps), Phomatoses nebulosa (GenBank MH876211.1; Identities = 889/893 (99 %), no gaps) and Ascochyta herbicola (GenBank KP330421.1; Identities = 889/890 (93 %), no gaps). Closest hits using the actA sequence had highest similarity to Didymella rabiei (GenBank KM244530.1; Identities = 587/623 (93 %), 8 gaps (1 %)), Stagonosporopsis cucurbitacearum (GenBank KX246908.1; Identities = 578/635 (91 %), 11 gaps (1 %)) and Stagonosporopsis citrulli (GenBank KX246907.1; Identities = 577/635 (91 %), 11 gaps (1 %)). Closest hits using the rpb2 sequence had highest similarity to Calophoma complanata (GenBank GU371778.1; Identities = 899/890 (93 %), no gaps), Ascochyta herbicola (GenBank KP330421.1; Identities = 739/823 (90 %), 2 gaps (0 %)) and Nothophoma goessypiciola (GenBank LT593082.1; Identities = 817/912 (90 %), 4 gaps (0 %)).

Colour illustrations. Sørsandfjorden (Hasvik, Sørøya) is one of the locations where Calophoma sandfjordenica was collected from driftwood. Conidiomata on potato dextrose agar; conidiogenous cells and conidia. Scale bars = 10 µm.