A new species of *Cryptovalsa* from Mai Po mangrove in Hong Kong

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Cryptovalsa mangrovei is described and illustrated as a new species from a wood test block submerged in the intertidal zone of Mai Po Mangrove in Hong Kong and compared with *C. halosarceiicola*, another mangrove species, and *C. suaedicola* from an intertidal salt marsh plant.

Cryptovalsa contains 19 species which grow on wood in terrestrial habitats and are geographically widely distributed. Two species have been described from mangrove or coastal habitats. *Cryptovalsa suaedicola* Spooner was described from *Suaeda fruticosa* in a salt marsh at Colne Point Nature Reserve U.K. (Spooner, 1981), while *C. halosarceicola* K. D. Hyde was described from decaying, intertidal *Halosarceia halocnemoides* at Cairns airport mangrove, Australia (Hyde, 1993). During a study of the colonization of test panels of mangrove wood in the intertidal zone of Mai Po mangrove in Hong Kong, a *Cryptovalsa* differing from *C. halosarceicola* and *C. suaedicola* was found. This species is described and illustrated in this paper.

TAXONOMY

Cryptovalsa mangrovei Abdel-Wahab & Inderb., sp. nov. (Figs 1–6)

Ascomata 420–500 μm alta, 260–350 μm lata, nigra, immersa in strato singulo in stromate effuso, ostiolis protrusis. Asci 77–206 × 9·5–15 μm, clavati, longe stipitati, polyspori, cum annulo apicali inamyloideo. Ascosporae 5·5–18 × 1·5–3·5 μm, allantoideae, flavae. Paraphyses septatae, deliquescentes.

Holotypus: in ligno emortuo *Kandelia candel*, Hong Kong, IMI 379746.

Etym.: referring to its mangrove habitat.

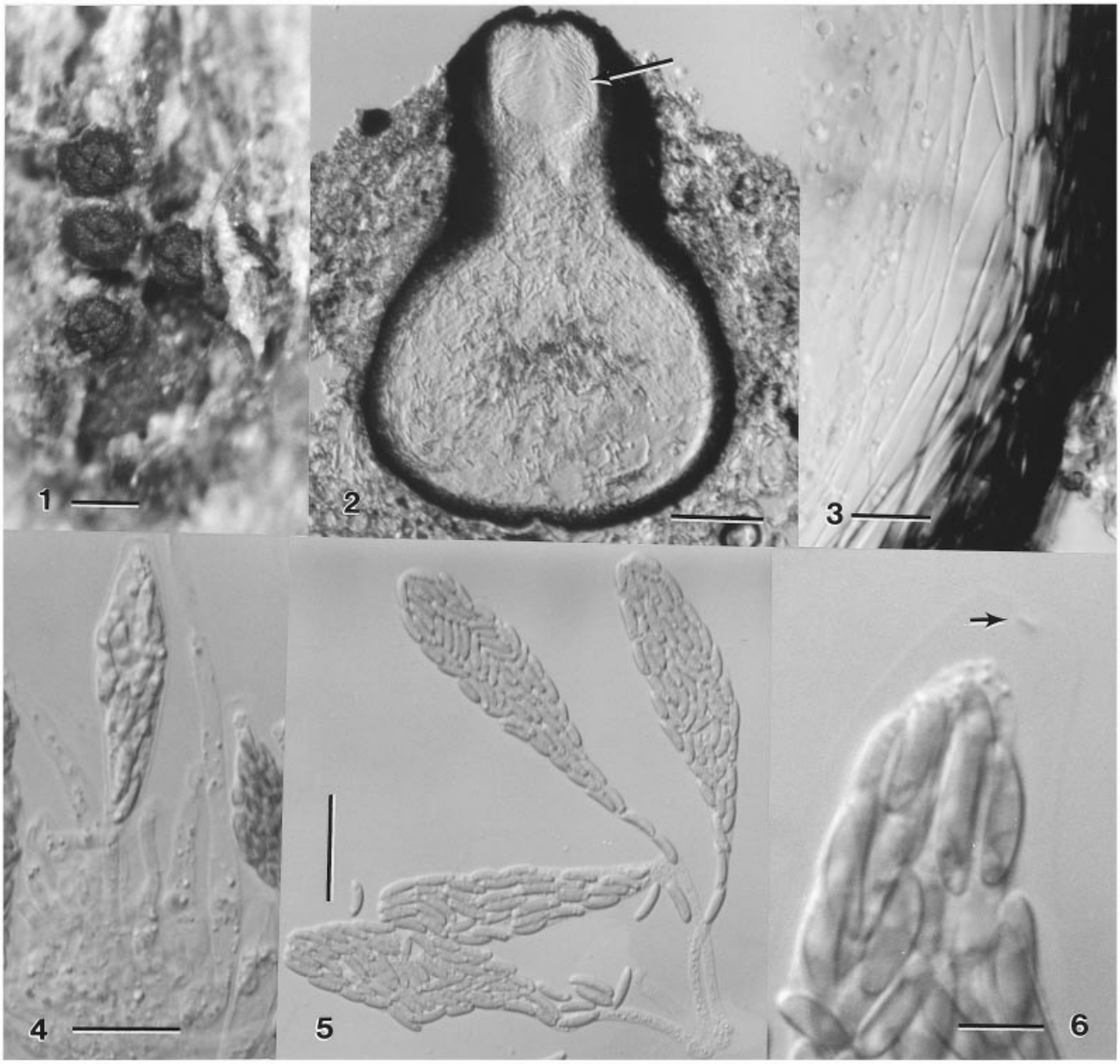
Ascomata in decorticated wood test blocks of *Kandelia candel* (exposed in the intertidal zone of Mai Po Mangrove) in groups of 3–10, sometimes confluent, in 1–3 rows, immersed, raising the substratum, or erumpent (Fig. 1). *Entostroma* effuse, a faint black line between the groups sometimes present, wood softened; a thin layer of white pulvinate fungal material sometimes present around the ascomal venter. *Ascomal venter* 240–270 μm high, 260–350 μm wide, subglobose to broadly ellipsoidal, with a flattened base (Fig. 2). *Necks* 180–230 μm long, 190–210 μm wide, ostiolate, periphysate (36 × *ca* 1 μm), comprising an outer layer of completely melanized cells 32–40 μm wide, and an inner layer, up to 32 μm wide, of less pigmented, elongate cells; singly erumpent, protruding up to 80 μm above the level of the raised substratum, straight; the outermost ascomata in an aggregate often bent towards the centre of the group, with four narrow furrows on the dome-shaped apex. *Peridium* in transverse section with an outer, layer of small, thick-walled, melanized, rounded cells 8–20 μm wide, and an inner layer, up to 12 μm wide, of hyaline, elongate cells in *textura angularis* (Fig. 3). *Asci* clavate, truncate, with a stalk (77–)88–180(–206) × 9·5–15 μm (av. 127 × 12 μm, S.D. = 30·8, 1·35 μm; $n = 31$), spore-bearing part 45–96 (–136) μm long (av. 65 μm, S.D. = 17·6 μm; $n = 31$), multi-spored (Figs 4, 5); apex up to 4 μm thick, with a refractive subapical, non-amyloid ring at the base of an invagination of the ascus apex (Fig. 6). *Ascospores* allantoid, pale yellow to pale brown, (5·5–) 8–15·5 (–18) × 1·5–3·5 μm (av. 11·3 × 2·4 μm, S.D. 2·29, 0·37 μm; $n = 60$), *ca* 128 per ascus (Figs 4, 5). *Paraphyses* hyaline, septate, deliquescent, up to 160 × 11 μm (Fig. 4).

Habitat and distribution: Intertidal zone of Mai Po Mangrove, Hong Kong.

Holotype: Mai Po Mangrove, Mai Po Marshes Nature Reserve, New Territories, Hong Kong, on wood test block of *Kandelia candel* (L.) Druce, leg. 6 Aug. 1998. M. A. Abdel-Wahab (Holotype: IMI 379746).

DISCUSSION

Cryptovalsa includes diatrypaceous species with singly or *Eutypa*-like arranged ascomata with polysporous asci (Spooner, 1981), *Cryptovalsa mangrovei* possesses these characters and



Figs 1–6. Differential interference micrographs of *Cryptovalsa mangrovei*. **Fig. 1.** Aggregation of ascomata on wood test block. **Fig. 2.** LS through ascoma with short neck lined with periphyses (arrows). **Fig. 3.** Peridial wall comprising two layers: an outer zone of thick-walled melanized cells and an inner zone of elongate, hyaline cells. **Fig. 4.** Young asci with paraphyses. **Fig. 5.** Mature asci with pale yellow to pale brown ascospores, *ca* 128 per ascus. **Fig. 6.** Ascus apex with refractive subapical ring (arrowed) at the base of an invagination. Scale bars: Figs 1, 2 = 100 μm, Figs 3, 6 = 10 μm, Figs 4, 5 = 20 μm.

Table 1. Comparative data on *Cryptovalsa* species from saline habitats (measurements μm)

	C. mangrovei	*C. halosarceicola*	*C. suaedicola*
Ascomata	420–500 high, 260–350 wide	130–185 high, 185–260 diam.	300–350 diam.
	Blackened zone around ascomal venter absent	Blackened zone around ascomata present	Blackened zone around ascomata present
Necks	With four horizontal furrows	Lacking furrows	With four vertical furrows
Asci	77–206 × 9·5–15	75–95 × 7–9	95–135 × 7–9
	Clavate	Cylindric-fusoid	Cylindric-fusoid
Ascospores	5·5–18 × 1·5–3·5	4–7 × 1·5–2	5·7 × *ca* 1
	Pale yellow to pale brown	Hyaline	Hyaline
Paraphyses	Deliquescent	Persistent	Probably persistent

can readily be included in the genus. The necks of *C. mangrovei* are not collectively erumpent, and are mostly straight. Sometimes the outermost ascomata in a group comprise necks which are slightly curved towards the centre of the group, presenting an intermediate condition between singly and *Eutypa*-like arranged ascomata.

In Table 1 comparative data on the three maritime *Cryptovalsa* species are presented. *C. mangrovei* differs from the other two by its larger ascomata, asci and ascospores, clavate asci, horizontally furrowed necks, pigmented ascospores and deliquescent paraphyses. The blackened zone around the ascomatal venters of *C. halosarceicola* and *C. suaedicola* was not observed in *C. mangrovei*.

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