Arthrinium gutiae
**Arthrinium gutiae** Kajale, Sonawane & Rohit Sharma, sp. nov.

**Etymology.** Name refers to the gut of an insect from which this species was isolated.

**Classification.** Apiosporaceae, Xylariales, Sordariomycetes.

*Mycelium* on MEA consisting of smooth, hyaline, branched, septate, 1–2.5 μm diam hyphae, partly immersed and partly superficial; sporulation not uniform, occurring in patches. Sporulation was observed on MEA and OA after 15–20 d incubation at 25 °C. *Conidiophores* hyaline, macronematous, mononematous, arising from long, ampulliform conidiophore mother cells, transversely septate, thick-walled, brown, 21.5–50 × 2–2.5 μm. The conidiophore cells are usually narrow, but broaden at the point of septation. *Conidiophore mother cells* borne directly on hyphae are hyaline, smooth, lageniform, 3–7 × 2–4 μm. *Conidia* borne as bunches on conidiophores, lateral and terminal, brown, smooth, aseptate, globose in surface view, lenticular in side view, with pale equatorial slit, (4.5–)5.5(–6) μm diam in surface view, (2–)4(–6) μm diam in side view, with a central scar. Anomalous conidia not observed.

**Culture characteristics.** Colonies on MEA at 25 °C were fast growing and spreading, flat, with moderate aerial mycelium, covering the dish after 7–10 d. The fungus grows optimally at 20 to 25 °C.

**Habitat.** Gut of grasshopper.

**Distribution.** India (Bhimashankar, Pune, Maharashtra).

Notes — Based on the concatenated sequence analysis of the internal transcribed spacers (ITS) and large subunit nrDNA (LSU), *A. gutiae* is phylogenetically closely related to *A. jatrophiæ*, forming a separate monophyletic branch within *Arthrinium*. This finding is also supported by the *tef1* and *tub2* concatenated sequence analysis that also shows *A. gutiae* to cluster on a separate branch. *Arthrinium gutiae* is morphologically similar to *A. jatrophiæ* in the formation of circular or nearly circular lenticular conidia. However, the conidia and conidiophores of *A. gutiae* are small in comparison to *A. jatrophiæ*. Furthermore, it does not form anomalous conidia as observed in *A. jatrophiæ* (Sharma et al. 2013). Although the genus *Arthrinium* is widespread, occurring as plant pathogen, endophyte or saprobe (Ellis 1971, 1976, Croux & Groenewald 2013), the habitat of *A. gutiae* is unique as it was isolated from the gut of a grasshopper.


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**Neighbour-joining phylogram of ITS/LSU and *tef1/tub2* sequence analysis, showing the clades and subclades, with *Chaetomium jatrophiæ* as outgroup. The phylogenetic position of *Arthrinium gutiae* is indicated in bold. Branches with bootstrap support (BS) values ≥ 50 % (based on 1 000 replicates) are shown. The alignments were submitted to TreeBASE (S17561, S17562).**

**Colour illustrations.** Collection site in Western Ghats, Maharashtra state, India; colony of *Arthrinium gutiae* on PDA, PCA, CDA, OA, MEA (clockwise), conidiophore mother cells, conidia, grasshopper host. Scale bars = 10 μm.

**Fungal Planet 394 – 4 December 2015**

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