Clathrus natalensis
**Clathrus natalensis** G.S. Medeiros, Melanda, T.S. Cabral, B.D.B Silva & Baseia, *sp. nov.*

**Etymology.** Named in reference to the type locality, Natal City.

**Classification.** — *Clathraceae, Phallales, Phallomycetidae.*

Immature *basidiomata* subglobose, 13–18 × 16–22 mm, greyish white (12A1–12B1 KW) with a single and thick rhizomorph greyish white (12A1–12B1 KW). Expanded *basidiomata* obovate to subglobose 46–95 × 24–71 mm. *Arm meshes* pentagonal to hexagonal, rugose at the beginning of development, becoming smooth afterwards, 32–90 × 20–70 mm, dull red to pinkish white (8B3–8A2), transverse section of an arm shows 3–4 tubes subglobose, elongated to piliform. *Pseudostipe* absent. *Gleba* mucilaginous, in all inner part of arms, olive brown (KW 4F4), with an unpleasant smell. *Volva* 50–140 × 10–40 mm, greyish white (12A1–12B1 KW), with thick rhizomorph, greyish white (12A1–12B1 KW). *Basidiospores* cylindrical, 4.6–5.6 × 1.9–2.7 µm (5.2 ± 0.4 × 2.3 ± 0.3 µm; Qm = 2.29; n = 30 spores), wall ≤ 0.7 µm, smooth, hyaline in KOH. Arms exhibiting subglobose to globose and pyriform cells, 19.5–45.6 × 13–33.5 µm, wall ≤ 2.2 µm diam, hyaline. *Volva* composed of filamentous hyphae, 2.7–5.2 µm diam, wall ≤ 1.1 µm diam. *Rhizomorph* composed of filamentous hyphae, 3.2–4.7 µm diam, wall ≤ 0.9 µm diam.


Notes. — *Clathrus natalensis* was found in a remnant of Atlantic rainforest at the Universidade Federal do Rio Grande do Norte (UFRN) and is characterised by robust *basidiomata,* a pale red colouration, rugose arms at the beginning of development, becoming smooth afterwards, with the presence of 3–4 tubes in transverse section. This species presents similarities with *Clathrus cristatus* with the colour of the arms and mesh arrangement, but that presents *basidiomata* with crests along the arm edges (Fazolino et al. 2010), a characteristic absent in *C. natalensis.* In a BLASTn search, the ITS sequence obtained in this study has 94 % similarity to *Clathrus ruber* (GenBank GQ981501). However, *C. ruber* can easily be distinguished by the bright red colour, smaller meshes, and the immature *basidiome* marked by reticulations (Dring 1980). In the phylogenetic analysis, *C. natalensis* does not group with any species available on GenBank; in fact, they are clearly morphologically different. *Clathrus columnatus* and *C. archeri* show distinct receptacle arrangements, columnar in the first, and united arms below with pointed tips initially attached in the latter (Bosc 1811, Dring 1980); *C. crysomycelinus* and *C. delicatus* have white *basidiomata,* the first differs by a glibifer attached at the junction of the arms, and the second by a smaller receptacle (up to 25 mm high × 15 mm wide) and deep grooves in the outer face of the arms (Möller 1895, Dring 1980) — characteristics absent in *C. natalensis.* Thus, both morphological characters and the phylogenetic analysis separate *C. natalensis* from the already known species.

**Phylogenetic tree obtained with MrBayes v. 3.1.2.** (Huelsenbeck & Ronquist 2001) using ITS, nuc-LSU and atp6 (MK035869), under GTR + G (ITS/nuclSU) and HKY + G models (atp6), for 20 M generations. The type specimen is marked with a rectangle. Posterior probability values are indicated on the branches. TreeBASE submission ID 22520.

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