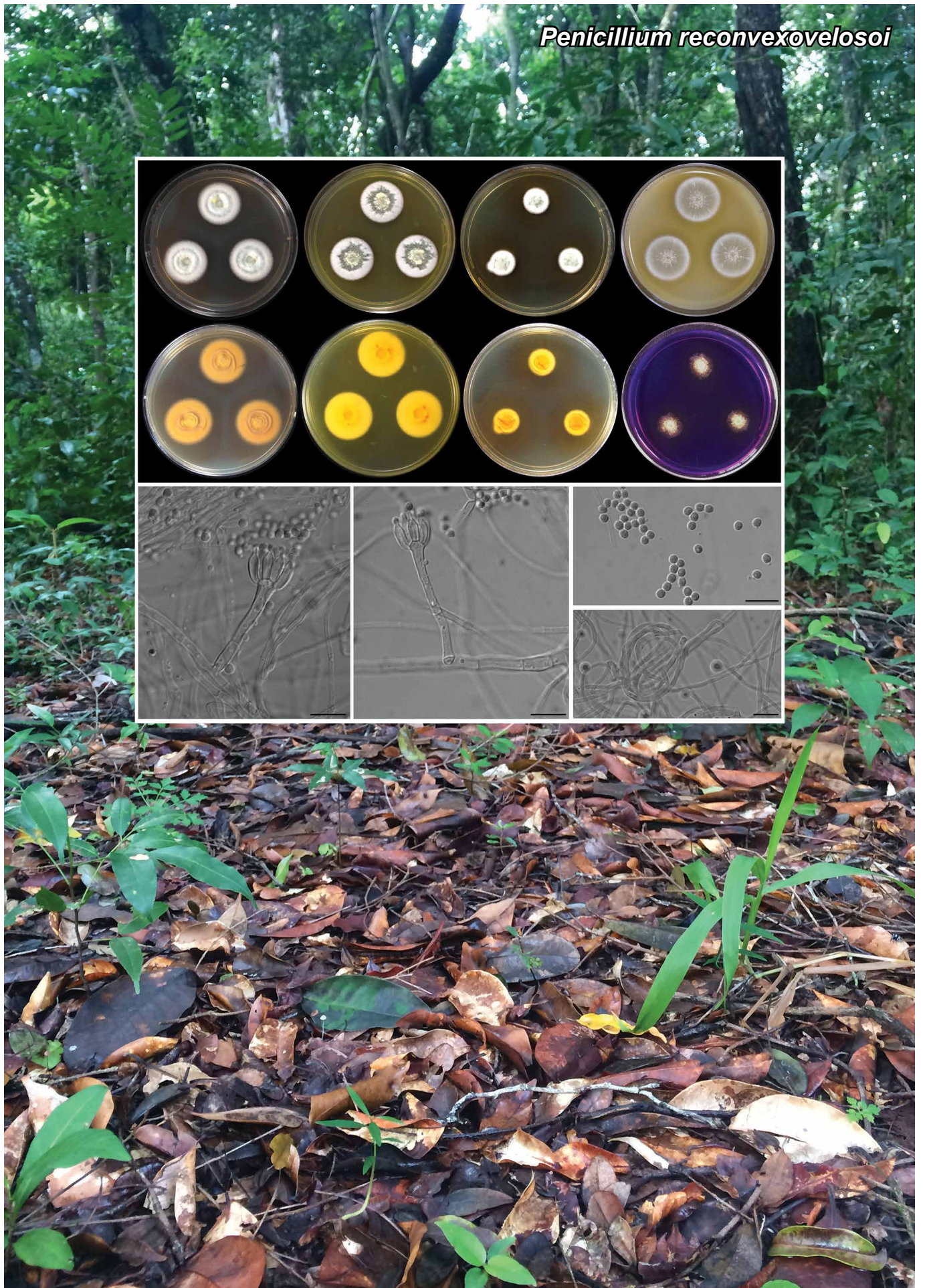


Penicillium reconvexovelosoi



Fungal Planet 1022 – 18 December 2019

Penicillium reconvexovelosoi J.P. Andrade, C.N. Figueiredo, H.G. Souza,
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Etymology. *reconvexovelosoi*, named in honour of the artist Caetano Veloso, an icon of Brazilian culture in the struggle for freedom of expression mainly during the military dictatorship.

Classification — *Aspergillaceae*, *Eurotiales*, *Eurotiomycetes*.

Conidiophores monoverticillate. *Stipes* smooth to finely rough walled, 27–172 × 1.5–3.0 µm, sometimes *vesiculate*, 2–5 × 3–6 µm. *Phialides* ampulliform, 7–11 × 2–3 µm. *Conidia* finely roughened, ellipsoidal to subglobose, 2–2.5 × 2–3 µm. Mycelial coilings sometimes observed.

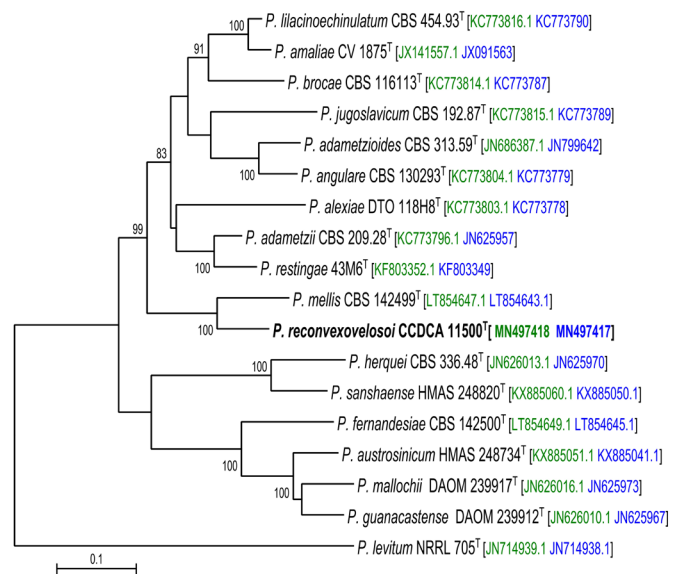
Culture characteristics — Colony diam (7 d, in mm): Czapek Yeast Autolysate agar (CYA) 28–29; CYA 30 °C 15–18; CYA 37 °C no growth; MEAbI 26–27; Yeast extract sucrose agar (YES) 21–23; Dichloran 18 % Glycerol agar (DG18) 27–29; Czapek Yeast Autolysate agar with 5 % NaCl (CYAS) 22–25; Oatmeal agar (OA) 28–30; Czapek's agar (CZ) 25–27; Creatine sucrose agar (CREA) 12–15, weak acid production. CYA, 25 °C: Colonies deep, concentrically sulcate, crateriform; margins low, wide, entire; mycelia white; texture floccose; sporulation moderate, conidia *en masse* white to light grey (1A1–D1) (Kornerup & Wanscher 1978); exudate light yellow, soluble pigment light brown; reverse greyish yellow to light orange (4B4–6A4) at centre and light orange (5A5) at margin. MEAbI, 25 °C: Colonies low, slightly raised in the centre, margins low, narrow, entire; mycelia white; texture floccose; sporulation moderate; conidia *en masse* white to olive grey (1A1–E2); exudate absent, soluble pigment golden yellow; reverse greyish yellow (3B5). YES, 25 °C: Colonies deep, radially and concentrically sulcate, crateriform, margins low, narrow, entire; mycelia white; texture floccose; sporulation sparse; conidia *en masse* white to light grey (1A1–D1); exudate absent, soluble pigment golden yellow; reverse greyish orange (5B4) light yellow (4A5) at margin. DG18, 25 °C: Colonies low, raised in the centre, margins low, narrow, entire; mycelia white; texture floccose; sporulation moderate; conidia *en masse* grey (3B1–C1); exudate absent, soluble pigment brilliant yellow; reverse greyish yellow (3B5). CYAS, 25 °C: Colonies radially and concentrically sulcate, crateriform, margins low, narrow, entire; mycelia white; texture floccose; sporulation sparse, conidia *en masse* yellowish white to grey (1A2–C1); exudate absent, soluble pigment light brown; reverse greyish yellow to reddish orange (4B6–7A8) at centre light orange (5A5) at margin. OA, 25 °C: Colonies low, plane; margins low, narrow, entire; mycelia white; texture velutinous; sporulation dense; pale yellow sclerotia present; conidia *en*

Colour illustrations. Leaf litter at Guaibim environmental protection area located in Bahia, Brazil. Seven-day-old colonies growing at 25 °C, top row left to right, obverse CYA, MEAbI, YES and OA; bottom row left to right, reverse CYA, MEAbI, YES and obverse CREA, conidiophores, conidia and coiling of mycelia. Scale bars = 10 µm.

masse olive grey (2D2); exudate clear, soluble pigment golden yellow. CZ, 25 °C: Colonies low, plane; margins low, wide, entire; mycelia white; texture floccose; sporulation sparse, conidia *en masse* pale grey (1B1); exudate absent, soluble pigment light brown; reverse pale orange (6A3) at centre and light brown (6D6) at margin.

Typus. BRAZIL, Bahia, in leaf litter from the Guaibim sandbank, S13°18' W38°57', 20 Aug. 2012, V. de J. Nunes (holotype HURB 18575 (dried culture on MEA); culture ex-type CCDCA 11500 = 45, LSU, *BenA* and *CaM* sequences GenBank MN497417, MN497418 and MN503515, MycoBank MB 832747).

Notes — *Penicillium reconvexovelosoi* is phylogenetically related to *P. mellis* (Barbosa et al. 2018), both included in the section *Sclerotiora*. *Penicillium mellis* grows faster than *P. reconvexovelosoi* on CYA 30 °C (33–35 mm) and YES (34–36) and grows slower on OA (24–25), DG18 (24–25) and CREA (10–11). *Penicillium reconvexovelosoi* does not grow on CYA 37 °C, but *P. mellis* grows (2–4 mm). *Penicillium reconvexovelosoi* may produce a soluble light brown pigment on CYA and weak acid production on CREA, but *P. mellis* does not produce soluble pigments in CYA and neither acid on CREA. *Penicillium reconvexovelosoi* has longer stipes than *P. mellis* (25–40 × 2–3.5 µm) and produces mycelial coils, but these structures were not reported for *P. mellis*. All macroscopic and microscopic measurements were done twice, independently, for isolate CCDCA 11500.



Maximum likelihood tree obtained by phylogenetic analysis of the combined *BenA* and *CaM* sequences from *Penicillium reconvexovelosoi* and phylogenetically related species in section *Sclerotiora* performed in MEGA v. 6.06 software employing K2+G+I model with 1 000 bootstrap re-samplings. Bootstrap support values (BS > 80 %) are presented at the nodes. *Penicillium levitum* NRRL 705^T was used as outgroup. The new species is presented in bold font (^T = ex-type). GenBank accession numbers are given between square brackets (*CaM* = green, *BenA* = blue).

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