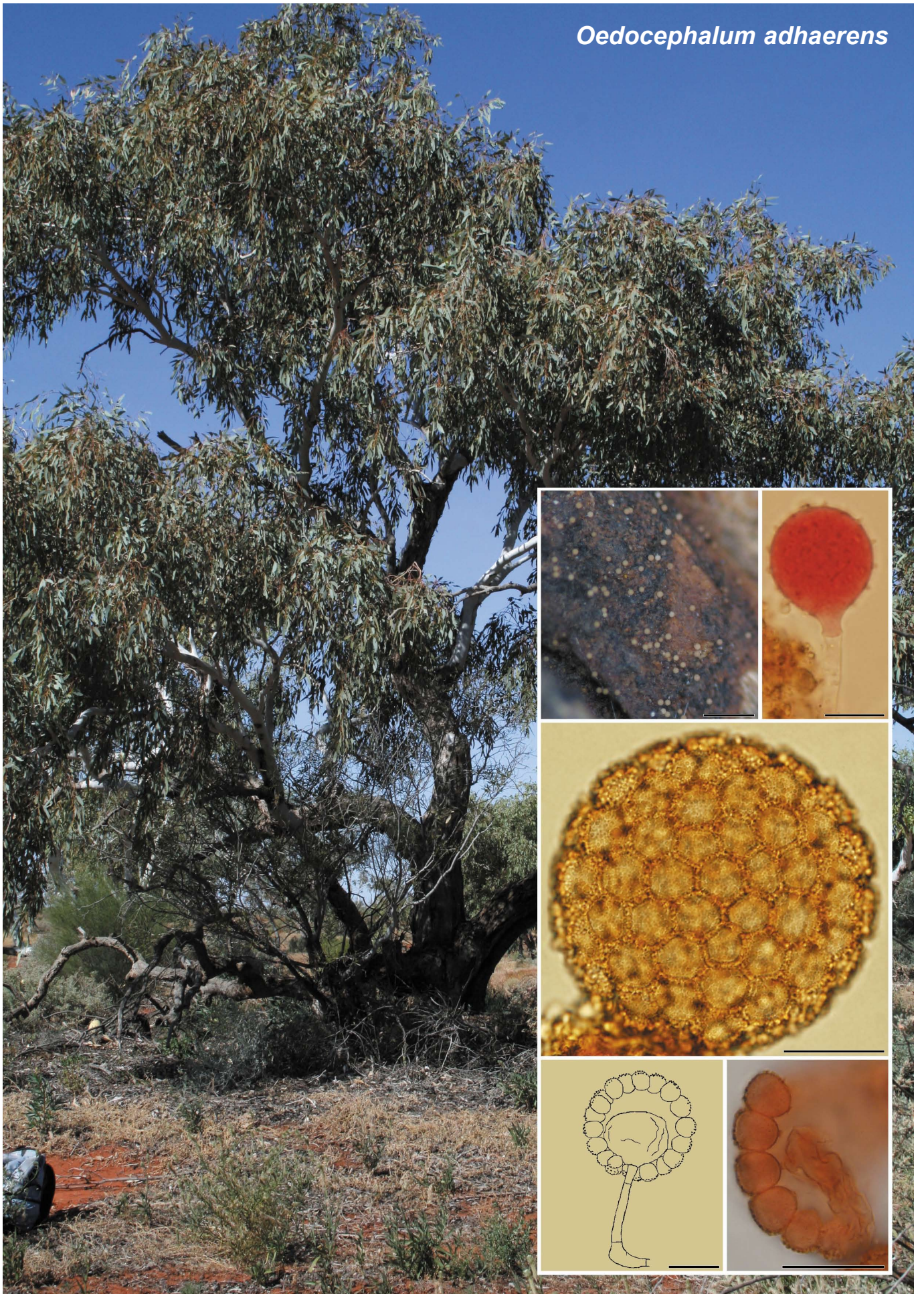


*Oedocephalum adhaerens*



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***Oedocephalum adhaerens* E.M. Davison & R.G. Shivas, sp. nov.**

Hyphae hyalinae, tenui-tunicatae, 8 µm diam. Conidiophorae erectae, hyalinae, non ramosae, vesicula terminali conidiogena denticulata cum 70–180 sporis. Denticuli ad 2 µm longi. Conidiogenesis holoblastica. Secessio schizolytica. Conidia adhaerens in capitulo, unicellulata, (sub)globosa, rugosa, primo alba, deinde brunnea, (42–)47–88(–95) µm diametro.

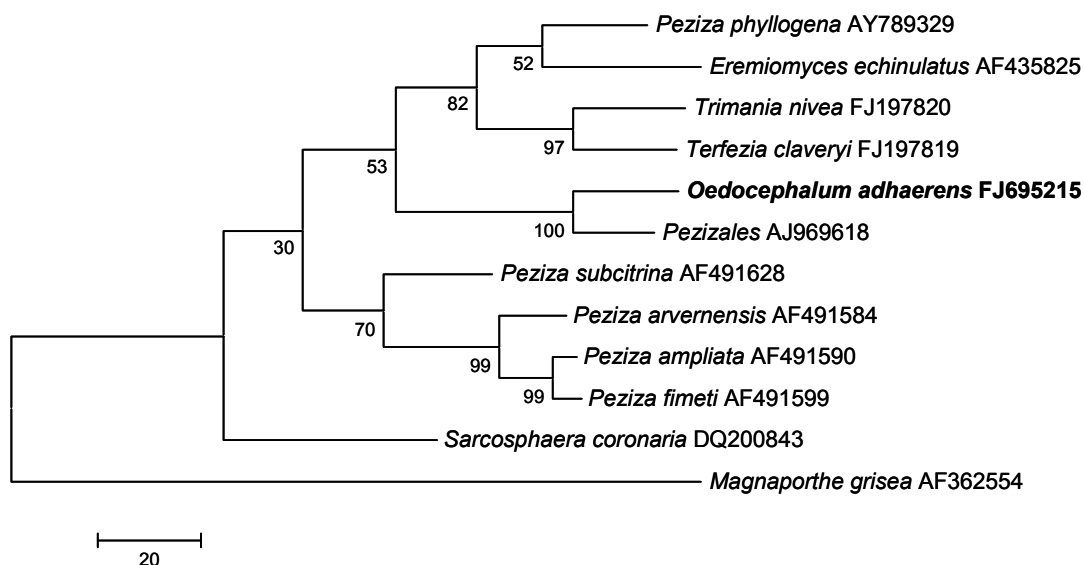
*Etymology.* Derived from the Latin *adhaerens*, in reference to the conidia that cling together to form spore balls.

*Mycelium* superficial, hyphae hyaline, septate, thin-walled, with chains of intercalary ellipsoidal cells up to 20 µm wide. *Conidiophores* erect, solitary, unbranched, hyaline with a terminal, spherical conidiogenous vesicle delimited by a septum; conidiogenesis holoblastic synchronous, with localised wall building occurring simultaneously at different loci over the entire surface, with each locus forming one conidium. Delimitation of conidia by one septum, secession schizolytic, and no proliferation of conidiogenous cell. After secession, the conidiogenous cell and conidiophore collapse. *Conidia* aseptate, 12–15 × 10–14 µm; the outermost wall ornamented with prominent golden brown tubercles, up to 2 µm diam; tubercles largest where adjacent conidia touch, and fit together like teeth of a zipper, forming tightly adherent conglobate spore balls. *Conidial spore balls*

initially white, becoming pale brown and finally brown to dark brown, (42–)47–88(–95) µm diam, composed of approximately 70–180 spores. After 2 wk in daylight at 20 °C on 2 % potato-dextrose agar, colonies pinkish to salmon, about 4 cm diam, with adpressed mycelium and irregular to undulate margins.

*Typus.* AUSTRALIA, Northern Territory, Simpson Desert, 24° 17' 19" S, 137° 27' 44" E, developed in moist chamber (PJND & EMD 522) on fresh bark of *Eucalyptus coolabah* ssp. *arida*, 4 July 2007, E.M. Davison, BRIP 52200, holotype; PERTH 07930437, D 189869 isotypes; PERTH 07930445, D 190016 paratypes; culture ex-type BRIP 52200, GenBank FJ695215, MycoBank MB512926.

*Notes* — *Oedocephalum adhaerens* fits within the concept of this genus as defined by Stalpers<sup>1</sup>. It differs from described species<sup>1,2</sup> in having balls of brown conglobate conidia that develop from conidiogenous cells that collapse after secession. *Oedocephalum adhaerens* is widespread in arid areas of Australia, being found in the Northern Territory and Western Australia. It has developed in moist chamber cultures of bark from living trees of *Erythrina vespertilio* and dead trees of *Atalaya hemiglaucula* and *Acacia aneura*.



The most parsimonious tree (TL = 557; CI = 0.599; RI = 0.576) was obtained from a max-mini branch-and-bound search of an ITS sequence alignment using MEGA4<sup>3</sup>. The scale bar shows 20 changes, and bootstrap support values from 1 000 replicates are shown at the nodes. The species described here is printed in **bold** face. The tree was rooted to *Magnaporthe grisea* (GenBank AF362554).

*Colour illustrations.* The *Eucalyptus coolabah* ssp. *arida* tree that yielded the type collection: mature spore balls on bark in moist chamber; immature conidiogenous cell and conidiophore (stain: 3 % erythrosine in 10 % NH<sub>4</sub>OH); mature spore ball; delimitation of conidia and collapsed conidiogenous cell (stain: 1 % Congo Red). Top left inserted image has scale bar = 1 mm; other scale bars = 25 µm.

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*References.* <sup>1</sup>Stalpers JA. 1974. Revision of the genus *Oedocephalum* (Fungi Imperfecti). Proceedings of the Koninklijke Nederlandse Akademie van Wetenschappen Series C 77: 383–401. <sup>2</sup>Watanabe T. 1991. New species of *Oedocephalum* and *Papulaspora* from Japanese soils. Mycologia 83: 524–529. <sup>3</sup>Tamura K, Dudley J, Nei M, Kumar S. 2007. MEGA4: Molecular Evolutionary Genetics Analysis (MEGA) software v4.0. Molecular Biology and Evolution 24: 1596–1599.

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