

Marasmius carbinensis sp. nov.



© Frances Guard

Cap: 10–25 mm diameter; sulcate-striate; cream surface and bifurcating ridges, with purplish buff to fawn (29) central disc and sulci; parabolic to convex, becoming applanate at maturity; translucent.

Stipe: 40–70 × 1.5–2 mm, cylindrical, occasionally flattened with longitudinal crease; vinaceous buff (31) to pale purplish chestnut (21), +/- whitish bloom, darker at base with mycelial mat binding leaf litter.

Lamellae: widely spaced, 12–16; adnate with +/- tooth; lamellulae 2–3 tiers; cream, concolorous with cap, margin not coloured.

Flesh: thin, translucent, cream.

Smell: strong odour of spring onions.

Spore print: creamish-white.

Spores: inamyloid, fusiform, smooth; average $22.5 \times 5.5 \mu\text{m}$, $Q_{av} = 3.96$; range $21\text{--}23.5 \times 5.5\text{--}6 \mu\text{m}$, $Q = 3.39\text{--}4.36$.

Basidia: large, clavate, with 4 spores, av. $33 \times 9.5 \mu\text{m}$; sterigmata $2.5\text{--}4 \mu\text{m}$.

Pleurocystidia: nil.

Cheilocystidia: nil, to sparse smooth cells similar to pileipellis.

Pileipellis: hymeniform palisade of smooth cells, ranging from broadly clavate (common) to bluntly bifurcate, to boot-shaped and globose on narrow cylindric stem; $15\text{--}25 \times 7\text{--}12 \mu\text{m}$.

Substrate: leaf litter.

Habitat: groups of 10–12 in well-vegetated monsoon woodland, riparian *Melaleuca* swamp forest, or disturbed grassy parkland.

Collections examined: FNQ, Mount Carbine, Brooklyn AWC Sanctuary, 5–6 Mar 2018, S.J. McMullan-Fisher, M.D. Barrett & F.E. Guard, SMF3037 (MEL2522017), SMF3046 (BRI AQ1031102), SMF3057 (BRI1032230); NT, Fogg Dam, M. Barrett et al., GMB543, MEL2382888.

Notes: This striking species is widespread across the monsoon tropics of Australia, and is in *Marasmius* sect. *Globulares*, subsect. *Atrorubentes*, ser. *Purpureostriati*. The striped pileus is a feature of the series. DNA places it as sister to *M. ballator* 'the ballet dancer' from Dorrigo in the subtropics and also *M. musisporus*.