Crepidotus innuopurpureus
**Crepidotus innuopurpureus** McMull.-Fish., T. Lebel, Senn-Irlet, *sp. nov.*

**Etymology**. Named for the brightly coloured pigments (magenta to violet) on pileus and lamellae, particularly margins of the lamellae, that are lost with exposure to the elements, so often ‘hints of purple’ remain, *innu* (L. for hint) and *purpura* (L. for purple).

**Classification** — *Crepidotaceae, Agaricales, Agaricomycetes.*

*Basidiomata* small, kidney-shaped, younger specimen hoof-shaped. *Pileus* 3–10 mm (radius), convex to near plane, outer surface matt, clay pink, mid-pink, grey red, to lilac, becoming ochraceous to brown with age or exposure, finely tomentose, and some basidiomata radially wrinkled, outer rim paler to concolourous, margin inrolled in younger specimens, to undulating in some older specimens. *Lamellae* close to subdistant, conspicuously magenta, clay pink, mid-pink to mid-red to brown-red (8B5–8C5, Komerup & Wanscher 1978) with strongest colour concentrated at margins. Lamellulae present, in two tiers. *Attachment* astipitate, sessile with lateral, eccentric to dorsally attached basal pad of white to pale tomentum. *Spores* 5.5–7.1(–8) × 5–6.3 μm (av. 6.8–5.8 μm), Q = 1–1.4 (av. = 1.14, n = 73), globose to subglobose, brown, distinctly but finely warty, ornamentation 0.5–0.8 μm high. *Basidia* four-spored. *Cheilocystidia* variable in shape, from lageniform to cylindrical, sparsely to clavate to broadly utriform, sometimes branched, often coloured and often with external crystals. *Pileipellis* a thin cutis with diverticulate hyphae, containing dark red to violet pigment, pigment is concentrated in scattered patches. *Pigment deposits* — inside elements coloured, some with crystals present on outside of cheilocystidia, and patchy in concentration, densest at lamellae edges and on the pileipellis, pigment colour dissipates in weak (3 %) potassium hydroxide. *Clamp connections* present at base of basidia and cheilocystidia, and on pileipellis, trama and basal pad hyphae.

Habit, Habitat & Distribution — Small, gregarious, fan-shaped mushrooms found on bark of living rough barked rainforest trees and stags or logs, sometimes without bark; often amongst bryophytes. Currently known from rainforest, with subtropical rainforest at Mary Cairncross Scenic Reserve near Maleny, Blackall Range, Queensland and in tropical rainforest below sandstone cliff at in the Jameson Arch, near Mt Agnes, West Kimberley, Western Australia. Expected to have a tropical and subtropical distribution across northern Australia.

**Typus.** **Australia**, Queensland, Blackall Range, Mary Cairncross Scenic Reserve, subtropical rainforest, on dead wood of leafy trees, 2 Feb. 1996, T.R. Lohmeyer (holotype MEL 2503290; ITS and LSU sequences MZ870345 and MZ870347, MycoBank MB 840921).

**Additional material examined.** **Australia**, Western Australia, West Kimberley Region, Jameson Arch, tropical rainforest, 28 Jan. 2007, M.D. Barrett, MDB F82/07 (ITS and LSU sequences MZ870344 and MZ870346).

Notes — Other pink, peach, lilac and purple coloured *Crepidotus* occur across Australia but *C. innuopurpureus* is distinctive microscopically with the strong pigments found within pileal elements and cheilocystidia, and coloured crystals observed on the outside tip of some cheilocystidia. These patches of pigment may survive drying and are most obvious on lamellae edges and on the surface of the cap but fade with age and likely exposure to light and other environmental elements. The bright magenta pigment patches are often still obvious in dried specimens; the pigment dissolves in seconds if examined under KOH. The overall colour of the basidiomes is a pale pink brown to lilac brown, that becomes a pale dull brown colour with any exposure to light.

*Crepidotus innuopurpureus* is part of a small but strongly supported clade, including *C. parietalis*, which is currently known from Australia, India and New Zealand. *Crepidotus parietalis* has small yellowish basidiomata, that similarly has crystals on the outside tips of the cheilocystidia, warty spores, and loses pigment in KOH (Horak 1978, 2018). The Indian collection (GenBank MK567976) is labelled as ‘*C. roseus*’ (Manoj et al. 2018). However, none of the descriptions of *Crepidotus roseus* mention crystals or pigmentation in the pileal elements or cheilocystidia (Singer 1947, Guzmán-Dávalos et al. 2017). Further collections and analysis of Indian collections are needed to determine relationships with our new species. Examination and analysis of more tropical and subtropical Australasian collections will likely provide further taxa in this intriguing group.

**Supplementary material**

FP1344 Phylogenetic tree.

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Bayesian (Mr Bayes v. 3.2.6) 50 % majority-rule consensus tree of the ITS-nrDNA alignment for a selection of *Crepidotus* species. **Bold** lines indicate posterior probability values > 0.95 (above lines) and Maximum-likelihood bootstrap support > 75 % (below lines).

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