

Ramaria xanthosperma (Peck) Corner, *Ann. Bot. Mem.* 1: 632 (1950)

var. **australiana** R.H.Petersen & Watling, *Notes Roy. Bot. Gdn. Edinburgh* 46: 156 (1989)

A.M.Young, Apr. 2014

Preliminary Notes: This is another Australian taxon for which our reference material has been permanently "taken" from Australia. Three collections were made of this variety: two from Victoria and one from the ACT, and **ALL** of those three collections (which includes the holotype) have been taken out of Australia and lodged in Edinburgh herbarium (E). With such a quantity of collections, this author cannot understand why material (type or isotype) was not deposited in MEL. No colour image of the variety is known to exist.

Description

Fruiting body –10 × –6 cm; overall shape ±spherical; *apices* sulphur-yellow, finely divided, minutely awl-shaped, minutely double dichotomous and in age expanding into palmate or mitten-shaped forms reminiscent of *Ramaria capitata* (Lloyd) Corner, dry; *major branches* several and cream-coloured to ivory; *minor branches* concolorous with major branches, curved-ascending and more cylindrical upwards, surface context not recorded; *axils* narrowly rounded; *stipe* –2 × –1 cm, small, sharply tapered to a rounded base, white to off-white but naturally stained plum-coloured or carmine, pruinose where protected; aborted branches present. *Flesh* white, solid and suffused red from surface stains; *odour* and *taste* not recorded. *Rhizomorphs* not recorded.

Macrochemical reactions: unknown.

Basidiospores (9.4–)10.8–13.7 × (3.6–)4.3–5.8 (–6.5) μm, mean 11.5 × 4.8 μm, Q: (1.9–) 2.1–2.8(–3.2), mean Q: 2.51, cylindrical, inclusions 1–several guttulate or absent and granular, hilar appendix often curved, ornamentation of randomly scattered flattened warts or ridges which may be occasionally arranged longitudinally, profile finely rough; *basidia* 66–79 × 9–12 μm, mean 61.9 × 10.1 μm, 4-spored, clamps absent; *sterigmata* up to 9 μm long, distinctly long-conical, straight or slightly curved; *branch trama* composed of thin-walled, clamped, hyaline hyphae 3–9(–10) μm diam., ampulliform septa –15 μm diam., with statitic ornamentation, gleoplerous hyphae present 2–3 μm diam.; *stipe trama* similar but hyphae –15 μm diam., and some hyphae with thickened walls.

Habit: on the ground. *Habitat:* wet sclerophyll forest.

Known distribution: ACT (Blue Range Block, nr. Cotter Dam); Vic. (Gembrook, Olinda).

Notes: While the lack of a good colour image of the species is a definite disadvantage, this species is so distinctive that it should be easily recognised. The bright sulphur-yellow apices, white to cream coloured branches and the plum-coloured to reddish stains on the stipe are unique as a combination amongst Australian species of *Ramaria*. Microscopically, the long spores with occasional longitudinally arranged warts or ridges are also unusual and there should be little difficulty in identifying and re-collecting this species when it occurs. To assist with re-collection, the locations where the species is known to have occurred have been listed above.

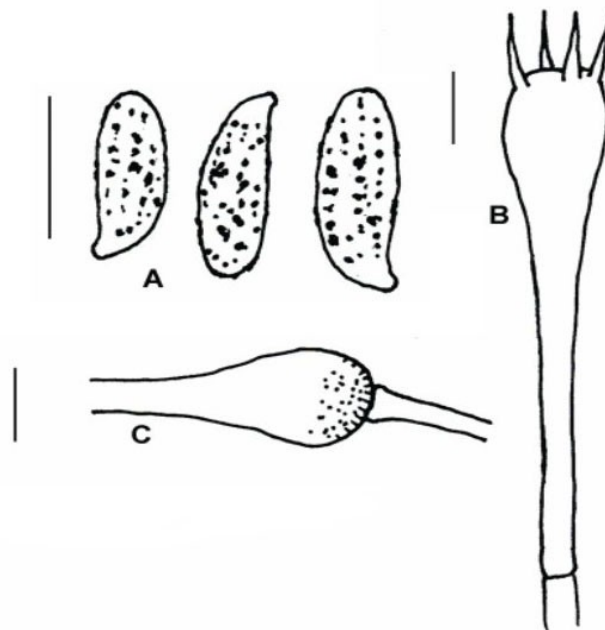
Petersen & Watling separated var. *australiana* on the basis that it differed from the American species *Ramaria xanthosperma* (Peck) Corner "*only in spore dimensions*". Given that Petersen & Watling cite *R. xanthosperma* as having spores measuring 11.5–14.8 × 3.7–5.2 μm, the spore range overlap is considerable and it is very hard not to conclude that there is virtually no difference in the two "varieties" other than that each country displays one end of a common range of spore sizes. If this is the case, then var. *australiana* is synonymous with var. *xanthosperma* and only a single species exists in both North America and Australia. More collections should establish this point one way or another.

There is little doubt that the species found at Kinglake and identified as *Clavaria sanguinea* Fr. ex Pers. by Fawcett in 1939, is identical to *Ramaria xanthosperma*. Her description correlates almost perfectly and the

reddish brown staining she reports is very distinctive for this taxon. Fawcett also gives the fruiting body colour as pallid yellow deepening to "maize yellow" and a spore range of $9-11 \times 3-4.5 \mu\text{m}$ which intergrades with the spore range found by Petersen & Watling quite well, given the variability of spore size in these taxa depending upon age of (and even location on) the fruiting body. Unfortunately, there are no specimens in MELU labelled as *Clavaria sanguinea* so that it is impossible to verify Fawcett's diagnosis.

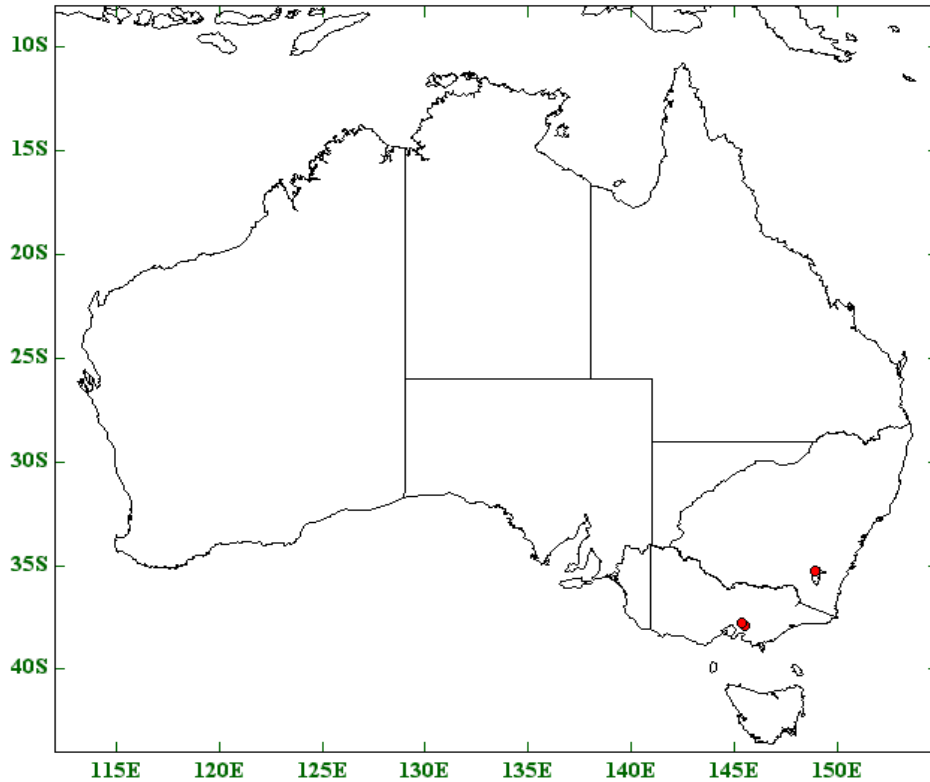


Ramaria xanthosperma var. *australiana*, the type collection held in Edinburgh (E). Although this is dried material, it does show the "±spherical, compact and clustered" nature of the fruiting body together with the short stipe. © A.M.Young



Ramaria xanthosperma var. *australiana*, microdetails. A. basidiospores; B. basidium; C. ampulliform septum. Each scale bar = $10\mu\text{m}$. © A.M.Young.

Ramaria xanthosperma var. australiana



Ramaria xanthosperma var. *australiana*. Known Australian distribution.

Acknowledgements

This document was produced from material contained in the 2007 Interim Submission (The Taxonomy of genus *Ramaria* in Australia: coralloid macrofungi) forwarded to ABRS at the cessation of the *Ramaria* project. ABRS is both acknowledged and thanked for their kindness in permitting me to make this information available to the Australian mycological community.