

SHORT COMMUNICATION

The scantily collected *Corymbia punkapitiensis* (Myrtaceae) is not distinct from the widespread arid-zone species *C. aparrerinja*

When *Corymbia punkapitiensis* K.D.Hill & L.A.S.Johnson was described (Hill & Johnson 1995), it was known only from the type specimens (*A.C. Kalotas* 1658, consisting of an insect-attacked leafy branchlet and a single unattached fruit) plus one other collection (*P.K. Latz* 2672), both of which were collected from the Walter James Range, north-east of Giles in Western Australia (near the Northern Territory border). The authors of the species had not seen the species in the field and relied entirely on these two collections in describing the new species. No other collections determined as *C. punkapitiensis* have been collected from Western Australia since that time. The authors of *C. punkapitiensis* (Hill & Johnson 1995) considered the new species to be most closely related to *C. aspera* (F.Muell.) K.D.Hill & L.A.S.Johnson, presumably because both species have neotenous crowns composed of ovate, ± setose juvenile leaves (described as ‘neotenous adult leaves’ by Hill and Johnson (1995), although more commonly referred to as juvenile leaves, they occur on reproductively adult shoots but display strong ontogenetic reversion towards the juvenile leaf stage). Hill and Johnson (1995) also differentiated *C. punkapitiensis* from *C. candida* K.D.Hill & L.A.S.Johnson and *C. ferriticola* (Brooker & Edgecombe) K.D.Hill & L.A.S.Johnson on the basis that these latter two species are not neotenous and develop non-setose adult leaves. It is worth noting that Hill and Johnson (1995) made no comparison of the new species with *C. aparrerinja* K.D.Hill & L.A.S.Johnson, another species that typically develops a crown of lanceolate, non-setose adult leaves. *Corymbia punkapitiensis* was not included in Euclid (Slee *et al.* 2006) due to the paucity of data and specimens, with only a brief mention of the species made under *C. aspera*.

On 9th July 2008, I collected specimens (*D. Nicolle* 5216) from a tree that I identified as *C. punkapitiensis*, above Kings Canyon in the George Gill Range of the Northern Territory, about 290 km east of the type locality (Figure 1). The tree from which *D. Nicolle* 5216 was collected, plus several nearby trees, displayed features that were consistent with the description and specimens of *C. punkapitiensis* as cited in Hill and Johnson (1995), most notably a crown composed of shortly petiolate, ovate leaves on bristly branchlets (Figure 1B). The rocky ridge habitat of *D. Nicolle* 5216 is also consistent with that described for *C. punkapitiensis* in its protologue (Hill & Johnson 1995). Interestingly, on the same ridge at Kings Canyon, and elsewhere in the general area, are scattered trees of the widespread arid-zone species *C. aparrerinja*. These typical *C. aparrerinja* trees were readily distinguished from the trees identified as *C. punkapitiensis* by their more uniformly coloured, paler bark and their crowns being completely composed of petiolate, lanceolate leaves on glabrous branchlets (Figure 2).

Just over six years later, on 26th August 2014, I revisited the Kings Canyon site. It was immediately evident that all the *Corymbia* K.D.Hill & L.A.S.Johnson trees growing on the site were *C. aparrerinja*, including trees previously (and now evidently erroneously) identified by me as *C. punkapitiensis*. Indeed, the tree from which *D. Nicolle* 5216 was collected was now indistinguishable from other nearby *C. aparrerinja* trees, having uniformly pale-coloured bark and a crown mostly composed of petiolate, lanceolate leaves on glabrous branchlets. A few shortly petiolate, ovate leaves on bristly branchlets were still present in the crown of this tree, mostly restricted to a single branch (Figure 3); this branch



Figure 1. Tree originally identified as *C. punkapitiensis* when collected in July 2008 (D. Nicolle 5216). A – tree *in situ*; B – foliage from crown entirely composed near-sessile, ovate, juvenile leaves; C – trunk with colourful bark. Photographs by D. Nicolle.



Figure 2. *C. aparrerinja* (previously identified as *C. punkapitiensis*) as observed in August 2014 (D. Nicolle 5216). A – tree *in situ*; B – foliage from crown almost completely composed of petiolate, lanceolate, adult leaves; C – trunk with pale bark. Photographs by D. Nicolle.



Figure 3. Part of the crown of *D. Nicolle* 5216 in August 2014. Note the canopy of the limb on the left hand side (and in most of the tree outside of the image view) is completely composed of petiolate, lanceolate, adult leaves, while the canopy of the limb on the right hand side has a mixture of near-sessile, ovate, juvenile leaves, intermediate leaves, and petiolate, lanceolate, adult leaves. Photograph by D. Nicolle.

was also composed of a mixture of juvenile, intermediate and adult leaves when observed on 9th July 2008. I hypothesise that this tree, plus several nearby trees, were subject to a defoliation event prior to July 2008, leading to a crown of juvenile leaves which match the type of *C. punkapitiensis*. In their description of this species, Hill and Johnson (1995: 450) noted that ‘the specimens show some characteristics of reversion shoots from damaged canopies’ and I also hypothesise that *A.C. Kalotas* 1658 and *P.K. Latz* 2672 most likely represent collections from reproductively mature individuals of *C. aparrerinja* in the reversionary, juvenile leaf phase, likely following insect attack or leaf drop following drought conditions.

Taxonomy

Corymbia aparrerinja K.D.Hill & L.A.S.Johnson, *Telopea* 6(2–3): 453 (1995). *Eucalyptus aparrerinja* (K.D.Hill & L.A.S.Johnson) Brooker, *Austral. Syst. Bot.* 13(1): 137 (2000). *Type*: Gosse Range, south-west MacDonnell Ranges, Northern Territory, May 1925, *H. Basedow s.n.* (*holo*: NSW 10075 *n.v.*, *fide* Hill & Johnson 1995).

Eucalyptus papuana var. *aparrerinja* Blakely, *Trans. & Proc. Roy. Soc. South Australia* 60: 154 (1936), *nom. inval.*

Corymbia punkapitiensis K.D.Hill & L.A.S.Johnson, *Telopea* 6(2–3): 449 (1995). *Type*: Punkapiti, Walter James Range, Western Australia, 20 May 1984, *A.C. Kalotas* 1658 (*holo*: DNA, image seen; *iso*: PERTH 01465856!).

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References

- Hill, K.D. & Johnson, L.A.S. (1995). Systematic studies in the eucalypts. 7. A revision of the bloodwoods, genus *Corymbia* (Myrtaceae). *Telopea* 6(2–3): 185–504.
- Slee, A.V., Brooker, M.I.H., Duffy, S.M. & West, J.G. (2006). *Euclid, eucalypts of Australia*. 3rd edn (CSIRO Publishing, Australia.)

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