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# A new combination in Ackama (Cunoniaceae)

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#### **Abstract**

Taxonomic revisions of the genera *Ackama* and *Caldcluvia* have left one taxon without a current validly published name under the *International Code of Nomenclature for algae, fungi and plants* (ICN, McNeill et al. 2012), and the new combination *Ackama paniculosa* is made.

#### Introduction

Caldcluvia paniculosa (F.Muell.) Hoogland is a pioneer tree of eastern Australian rainforest with soft, pale, cork-like bark. There is currently a lack of consensus amongst Australian herbaria and floras as to the correct generic placement and name of this taxon, which has been referred to either *Ackama* or *Caldcluvia*. The Australian Plant Census (2012) recognises this species as a *Caldcluvia* and this is followed by some local Floras (eg, Harden 1990, Pellow et al. 2009) but a recent field guide (Harden et al. 2006) treats it as *Ackama*.

The genus *Caldcluvia* was erected in 1830 by David Don for the Chilean taxon originally described by Cavanilles in 1797 as *Weinmannia paniculata* Cav. The genus *Ackama* was established in 1839 by Allan Cunningham for the New Zealand taxon, *A. rosifolia* A.Cunn. A number of names were published in *Ackama* over the next century or so, but Hoogland (1979) subsumed *Ackama* under a broadly defined *Caldcluvia* that also included the genera *Betchea*, *Opocunonia*, *Spiraeopsis* and *Stollaea*.

Molecular phylogenetic studies of relationships in Cunoniaceae (Bradford & Barnes, 2001; Sweeney et al., 2004; Heslewood, unpublished analysis), corroborated by morphological differences (Bradford & Barnes 2001, Bradford et al. 2004, Godley 1983, Webb & Simpson 1991) indicate that species from Australia and New Zealand, assigned to *Caldcluvia* by Hoogland (1979), should again be referred to *Ackama*. In the course of a phylogenetic study of Australian Cunoniaceae (Heslewood, unpublished data), it became apparent that the taxon currently known as *Caldcluvia paniculosa* has no valid combination in the genus *Ackama*.

Under the revised view of the Caldcluvieae (Bradford & Barnes, 2001), there are currently four taxa that would be assigned to *Ackama*: the type, *A. rosifolia* A.Cunn. plus a second, recently described, New Zealand taxon, *A. nubicola* de Lange (de Lange et al. 2002) and two Australian species, *A. australiensis* (Schltr.) C.T.White and a species variously known as *A. paniculata* Engl. (Harden et al. 2006) or *A. paniculosa* Beuzev. & C.T.White (Sweeney et al., 2004). The origin of the last two names lies in the publication of the name *Weinmannia paniculata* by Mueller (1860), a name that is an illegitimate homonym due to the earlier publication of the same binomial by Cavanilles in 1797. Mueller soon realised this and published the replacement name, *Weinmannia paniculosa*, the following year (Mueller 1861).

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When later botanists adopted the generic concept *Ackama*, they introduced the replacement names *Ackama muelleri* Benth. (1864) and *A. paniculata* Engl. (1891) rather than make a new combination based on Mueller's *Weinmannia paniculosa*. It should be noted that Engler's name is incorrectly cited as *Ackama paniculosa* Engl. on Tropicos (<a href="http://www.tropicos.org">http://www.tropicos.org</a> accessed 19 October 2012).

As the latest research supports moving the Australian and New Zealand species assigned to *Caldcluvia* by Hoogland back to *Ackama*, it is now necessary to address the validity of the name *Ackama paniculosa* Beuzev. & C.T.White that has been in limited use (Sweeney et al., 2004). This name appeared in comments under the description of a new species of *Longetia* (now *Austrobuxus*, Picrodendraceae) and was mentioned, only peripherally, by those authors and without stating a basionym or place of publication. Even though it is clear that this name is based on *Weinmannia paniculosa* F.Muell., the name does not satisfy the requirements for valid publication under the ICN and is therefore *nom. nud.* and *nom. inval.*, as indicated in the Australian Plant Name Index. *Accordingly*, if this taxon is considered a member of the genus *Ackama*, it has no validly published combination based on the earliest legitimate name, *Weinmannia paniculosa* F. Muell. Herein this oversight is corrected and the new combination made.

#### Ackama paniculosa (F.Muell.) Heslew., comb. nov.

Weinmannia paniculata F.Muell., Fragmenta 2(13): 83 (1860) nom. illeg., non Cav. (1797).

Type citation: "Ad amnes fluvii Clarence River, e.g. ad torrentem Cloud's Creek. Dr. Beckler."

Type: Clouds Creek (Holo MEL 532193, photo!).

Weinmannia paniculosa F.Muell., Fragmenta 2(15): 126, 175 (1861) nom. nov. pro Weinmannia paniculata F. Muell., nom. illeg., non Cav.

Ackama muelleri Benth., Flora Australiensis 2: 444 (1864)

Ackama paniculata Engl., Nat. Pflanzenfam. 3 (2a, 56): 99 (1891)

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#### References

Australian Plant Census (2012) IBIS database, Centre for Australian National Biodiversity Research, Council of Heads of Australasian Herbaria, (<a href="http://www.chah.gov.au/apc/index.html">http://www.chah.gov.au/apc/index.html</a> accessed 19 October 2012).

Bradford JC, Barnes RW (2001) Phylogenetics and classification of Cunoniaceae (Oxalidales) using chloroplast DNA sequences and morphology. *Systematic Botany* 26: 354–385.

Bradford JC, Fortune-Hopkins HC, Barnes RW (2004) Cunoniaceae. Pp. 91–111 in Kubitzki K (ed.) Flowering Plants, Dicotyledons: Celastrales, Oxalidales, Rosales, Cornales, Ericales. *Families and Genera of Vascular Plants*, vol. VI (Springer, Heidelberg)

Godley EJ (1983) The fruit in Ackama, Caldcluvia, and Weinmannia (Cunoniaceae) New Zealand Journal of Botany 21: 455–456.

Harden GJ (1990) Cunoniaceae. Pp. 517–521 in Harden GJ (ed.) Flora of New South Wales, vol. 1. (UNSW Press: Kensington).

Harden GJ, McDonald WJF, Williams JB (2006) *Rainforest trees and shrubs: a field guide to their identification.* (Gwen Harden Publishing, Nambucca Heads).

Hoogland RD (1979) Studies in the Cunoniaceae. II. The genera *Caldcluvia*, *Pullea*, *Acsmithia*, and *Spiraeanthemum*. *Blumea* 25: 481–505.

McNeill J, Barrie FR, Buck WR, Demoulin V, Greuter W, Hawksworth DL, Herendeen PS, Knapp S, Marhold K, Prado J, Prud'homme van Reine WF, Smith GF, Wiersema JH. Turland N (eds.) (2012) *International Code of Nomenclature for algae, fungi, and plants*. Regnum Vegetabile 154.

Mueller F von (1860-1) Fragmenta Phytographiae Australiae, vol. 2. Government Printer, Melbourne.

Pellow B, Henwood M & Carolin R (2009) *The Flora of the Sydney Region*, edn. 5. (Sydney University Press, Sydney)

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Sweeney PW, Bradford JC, Lowry PR (2004) Phylogenetic position of the New Caledonian endemic genus *Hooglandia* (Cunoniaceae) as determined by maximum parsimony analysis of chloroplast DNA. *Annals of the Missouri Botanical Garden* 91: 266–274.

Tropicos (2012) Missouri Botanical Garden (http://www.tropicos.org accessed 19 October 2012)

Webb CJ & Simpson MJA (1991) Seed morphology in relation to taxonomy in New Zealand species of *Weinmannia, Ackama*, and the related South American *Caldcluvia paniculata* (Cunoniaceae). *New Zealand Journal of Botany* 29: 451–453.

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