

# DNA solves identities of Australian melons and loofah

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This is a *Luffa saccata* F.Muell. ex I.Telford sp. nov. Image B shows old fruits. Credit: Susanne S. Renner et al.

Molecular data have shown that three Australian *Cucurbitaceae* species initially collected in 1856 but never accepted as separate species are distinct from each other and that one of them is the closest relative of the honeymelon, *Cucumis melo*. The names for these species are sorted out in a study published in the open access journal [PhytoKeys](#).

Research published in the [Proceedings of the National Academy of Sciences](#), USA ([DOI: 10.1073/pnas.1005338107](#)) last year had shown that [northern Australia](#) harbours the sister [species](#) of the honeymelon, *Cucumis melo*, which previously had been hypothesized to occur in Africa. It turned out that the Australian honeymelon relative had in fact been collected and named *Cucumis picrocarpus* by one of the fathers of Australian botany, Ferdinand von Mueller, in 1856, but then been erroneously synonymized. The same thing happened with another of Mueller's discoveries, this one being a species of loofah (the genus *Luffa*), which had been erroneously synonymized and was then forgotten until 2011. Matters were complicated by some of Mueller's 1856 collections arriving in the herbarium of the Royal Botanical Gardens Kew in disarray, so that two species were mounted on one and the same herbarium sheet. This naturally led to a confused idea of the morphology of the supposed species.

The researchers sorted out what is what on the Kew herbarium sheet, which then received an additional new barcode number assigned by the Kew herbarium to reflect that it carries two [plant species](#), not just one. A high-resolution color photo of this historically interesting herbarium sheet is contained in the paper.

The study provides an example of the continuing need to link herbarium science with molecular results to sort out the names and wild relatives of economically important groups, such as melons and loofahs.

**More information:** Telford IRH, Schaefer H, Greuter W, Renner SS (2011) A new Australian species of *Luffa* (Cucurbitaceae) and typification of two Australian *Cucumis* names, all based on specimens collected by Ferdinand Mueller in 1856. *PhytoKeys* 5: 21–29, [doi: 10.3897/phytokeys.5.1395](#)

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