



## *Novitates neocaledonicae I: An additional new species of *Planchonella* (Sapotaceae) endemic to the Roches de la Ouaième*

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### Abstract

A new species of *Planchonella*, endemic to the Roches de la Ouaième in northeastern New Caledonia, is described and illustrated. *Planchonella ulfi* morphologically resembles *P. roseoloba*, while molecular data indicate a closer relation to *P. minutiflora* and *P. koumaciensis*, with all three species belonging to a clade characterized by ridged fruits. The new species brings the total for the genus to 37 species in New Caledonia, 36 of which are endemic to the archipelago. With a single known population comprising 10 individuals, a preliminary risk of extinction assessment using the IUCN Red List criteria indicates that it is Critically Endangered due to risk of fire faced by the shrubby vegetation found of the summit crest of the Roches de la Ouaième. The level of micro-endemism found at this site is discussed.

**Key words:** Sapotaceae, *Planchonella*, Roches de la Ouaième, New Caledonia, IUCN Red List assessment, new species

### Introduction

In November 2010 an expedition using the Rapid Assessment Protocol (RAP) was organized in the Mt. Panié range and the nearby Roches de la Ouaième in northeastern New Caledonia. A series of plots were established to characterize the vegetation and to contribute to the New Caledonian Plant Inventory and Permanent Plot Network (NC-PIPPN) (Ibanez *et al.* 2014). In parallel, general plant collecting was done in order to facilitate the identification of material recorded from inside the plots and to contribute to the overall botanical inventory of the targeted sites. Several taxa were immediately identified as potentially new to science, as indicated in a preliminary report (Munzinger *et al.* 2011), several of which have since been published, including *Meryta rivularis* Lowry (in Callmänder & Lowry II 2011: 264; Araliaceae) and *Pandanus taluucensis* Callmänder (in Callmänder & Lowry II 2011: 268; Pandanaceae), *Podonophelium pachycaule* Munzinger, Lowry, Callmänder & Buerki (2013: 1118; Sapindaceae), while another, referred to in the report as '*Tapeinosperma* sp. (JM3527)' was ultimately described as a new variety: *Tapeinosperma tchingouense* var. *longipetiolatum* Schmid (2012: 336; Primulaceae). A full summary of results of the RAP, including data from the plots and list of all the collections made, was recently published (Munzinger 2013).

During inventory work on the summit of the Roches de la Ouaième, fertile material was collected of a plant belonging to the genus *Planchonella* Pierre (1890: 34; Sapotaceae) that had first been observed sterile in 2005 (JM pers. obs.) but could not be identified at the time to a known species. This new material supported the idea that it represented a new entity, and this was confirmed when immature fruits were collected during a subsequent field trip in 2013, making it possible now to provide a detailed description of this new species. Material was also included in a recent molecular phylogenetic study (Swenson *et al.* 2014), which indicated that its closest relatives are *P. minutiflora* Munzinger & Swenson (2009: 182) and *P. koumaciensis* Aubréville (1967: 154), although morphologically it most closely resembles *P. roseoloba* Munzinger & Swenson (in Swenson *et al.* 2007b: 342).

*Planchonella* has been the subject of intensive study during the last decade as part of a thorough revision of Sapotaceae in New Caledonia. First, the genus was re-circumscribed, merging it with the previously recognized genera *Albertisiella* Pierre ex Aubréville (1964: 42), *Bureavella* Pierre (1890: 16), *Iteiluma* Baillon (1890: 892) and *Pyriluma* (Baill.) Aubréville (1967: 83), and transferring one species from *Planchonella* to *Pichonia* Pierre (1890: 22) (Swenson *et al.* 2007a). A proposal was then made to conserve the name *Planchonella* against *Iteiluma* and *Peuceiluma* Baillon

initiated here. A second contribution will soon follow, describing a new species of *Acropogon* Schlechter (1906: 186) (Malvaceae) (Callmander *et al.*, 2015).

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