



The correct name for the New Zealand endemic conifer Hall's totara (Araucariales: Podocarpaceae)

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Abstract

Podocarpus laetus is the earliest available legitimate name for the New Zealand conifer Hall's totara, presently known as *P. hallii* or *P. cunninghamii*. The status of these two names is discussed, and the background of *P. laetus* and species it has been associated with are reviewed. The name *P. laetus* is reinstated and typified.

Introduction

For 126 years, *Podocarpus hallii* Kirk (1889: 14) has been the name widely used for the endemic New Zealand conifer popularly known as Hall's totara. Although the name *Podocarpus hallii* has not been formally typified, its validity has not been challenged. What has been questioned is the taxonomic rank of Hall's totara. Is it a distinct species, or merely a variety of the previously described *P. totara* G.Benn. ex D.Don in Lambert (1832: 189), as proposed by the German conifer specialist Robert Pilger (1903: 84) as '*P. totarra* A.Cunn. Var. *Hallii* Pilger'.

The resident New Zealand taxonomist Thomas Cheeseman (1906: 649) held a similar view, and communicated his opinion through a specimen of Hall's totara he sent to Pilger at Berlin (B10 0426224!). Attached to the specimen is Cheeseman's label in his hand that reads '*Podocarpus* "Hallii" Kirk Jollies' Pass Hanmer Jan. 1893 T.F.C.' To the right of his label is a smaller one written in German in an unknown hand which translates to read 'T. F. Cheeseman thinks that this species is not sufficiently separated from *P. Totara*' (Robert Vogt (B) pers. comm. 26 January 2012). Above Cheeseman's label is Pilger's determinavit slip in his hand, which reads '*Podocarpus totarra* A.Cunn.1902 Pilger', a determination identical to the one he attached to another specimen of Hall's totara collected from New Zealand by Joseph Hooker in 1841, and labelled in Hooker's hand with '*Podocarpus Totarra* A.C. Hooker 244' (B10 0426225!). It should be noted that the isolectotype of *P. totara* is also stored in the Berlin herbarium (B10 0448001!) with Pilger's determinavit slip attached that reads '*Podocarpus Totarra* A. Cunn.'

Few botanists, national and international, have accepted Pilger's varietal rank for Hall's totara and its recognition at species level is the consensus viewpoint, supported by its morphological and ecological distinctness, and sympatry and hybridisation with *P. totara*, *P. nivalis* Hooker (1843: 582) and *P. acutifolius* Kirk (1884: 370); (see also Cockayne 1932 and Webby *et al.* 1987).

Over the last 30 years, an earlier name, *Podocarpus cunninghamii* Colenso (1884: 58) has gathered increasing support nationally and globally as a prior name for Hall's totara. This recent surge in support for Colenso's name has not gained universal acceptance against Kirk's name and both names continue to be used orally and in the literature for this widespread element of New Zealand's conifer tree flora. For example, both names appear separately in the list of conifer species used in the phylogenetic analysis of Conran *et al.* (2000: 717), and in a recent issue of the *Smithsonian Institution Contributions to Botany*, Hall's totara is referred to as *P. cunninghamii* in one article (Biffin *et al.* 2011), and as *P. hallii* in another (Coomes & Bellingham 2011).

In contrast to *P. hallii*, the name *P. cunninghamii* has been formally typified by Farjon (2010: 826), but its validity has been questioned. The name first appeared in Colenso's narrative *In Memorium, Paper II* (1884: 58) recounting his observations on the flora of the Ruahine Mountain Range on separate journeys in 1845 and 1847. In it Colenso wrote: