

## Foreword

---

Eucalypts are the dominant trees in Australia. Consequently they play significant roles in the landscape, in the ecology of our land, in forestry, in apiculture and in horticulture. Over 890 species and subspecies are currently recognised, many of which have a high profile in the above disciplines. As the genus is large and has many similar species, identification is a serious practical problem. This has been dealt with herein using the latest electronic approach to handling large banks of data. In this edition of EUCLID, 205 northern Australian taxa have been included to complement the earlier editions, providing a complete coverage of the eucalypts in Australia.

It has, however, to be noted that the genus and its species delimitation(s) are still being actively researched. Indeed, the eucalypts have been split into smaller-component genera, viz., *Angophora*, *Corymbia* and *Eucalyptus* sens. str. These generic delimitations are derived from the latest hypotheses which, in turn, have been vindicated from recent research methods, additional to those of traditional morphology, although there is not universal agreement on this subject.

At the practical level of identification, both the number of taxa and the "cryptic" nature of the characters available for discrimination, represent a serious communication problem.

Traditional paper-based Flora treatments have 2-dimensional limitations which cause them to be much less ideal from the users' point of view. EUCLID, the key, is interactive allowing the user to work with the morphological characters available. Often these are far from a complete set, making the sequence-based, traditional, dichotomous keys very difficult, if not impossible, to use reliably. From an historic point of view, EUCLID is an electronic adaptation of the old card-sorting key. The card-sorting key, similarly, allowed the use of characters available and one could access these in whatever sequence the user chose.

Traditional Flora treatments permit a word description together with additional data. So does EUCLID. Indeed both also permit illustration. EUCLID, however, does not have the constraints of length and versatility which are tied to paper-based Floras. All of the species have an associated comprehensive set of data (the most complete ever produced) – nomenclature, description, photographic illustration (including type specimens) with over 9000 images, distribution map, and documentation of closely related, or easily confused, species. A record of the derivation of the name brings a further element of historic or linguistic appreciation.

The Centre for Plant Biodiversity Research, Canberra, has hosted the development of the tool for the identification of this large, and often inscrutable, group. The interactive key, EUCLID, forms the framework of the tool which embraces an electronic document that might be better described as a comprehensive electronic Flora treatment. Indeed EUCLID is the most recent and most comprehensive treatment of the eucalypts to be produced to date. Earlier treatments, such as those of Bentham (1867, 139 species), Maiden (1909–1933, c.350 species), Blakely (1934, 500 species; 1965, 522 species), Chippendale (1988, 520 species), and Brooker & Kleinig, (1983, 1990, 1994; c. 700 species) have all been superseded with this publication. The gradually increasing numbers of taxa treated in each of these works grew as further field work and research has gradually revealed the true extent of the group.

Armed with a little knowledge of botany and a little computer literacy, this tool makes our most significant group of plants, the eucalypts, available to all from the enthusiastic amateur to the practical users and to the professional scientists.

By Helen Hewson

---

Copyright © CANBR 2020, all rights reserved.



Web edition hosted at <https://apps.lucidcentral.org/euclid>