EUCLID Eucalypts of Southern Australia (Second Edition)

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This is a computer program designed to provide information about, and aid in the identification of, species of Eucalyptus (in the broad sense) that occur naturally in the southern half of Australia. It covers 690 of the more than 800 currently described species. Those species recently included in the newly described genus Corymbia (Hill and Johnson 1995) have here been included under Eucalyptus, following the publication of a transfer of these species back to Eucalyptus (Brooker 2000). Due to its close affinity with Eucalyptus, the genus Angophora has also been included in this publication.

This publication takes full advantage of the strengths of an electronic key, i.e. multi-entry points to the key and interactive illustrations. The species are extensively illustrated with high quality photographs and, where available, show habit, bark, flower buds, fruits, foliage and juvenile foliage.

The geographical area covered by this program is essentially the southern half of Australia, including Tasmania (the first version was restricted to the southeastern sector of southern Australia).

Eucalyptus is synonymous with Australia. Its species form a major part of the landscape of the continent. Species of this genus have also been introduced extensively to other parts of the world and it is now probably the most widely planted hardwood in the world. The rich variation found within the genus has provided ample material for trial in many countries and continents, including South Africa, and now forms (along with some species of Pinus) the backbone of the commercial forestry industry here and in countries such as Brazil. Certain species have become the first choice for use in woodlots for fuel and shelterbelts for the protection of livestock. They are also an important element in the honey production industry. Commercially, its wood is used for construction sawtimber, pulp and dissolving pulp.

Some 134 species of eucalypt have been planted in South Africa in various trials to test their suitability for local timber production (Poynton 1979). Many of these failed or were found entirely unsuitable for the purpose. However, a number of these were found to be suitable for various purposes, including timber, fuelwood, shelter and ornament, and now form a not insignificant part of our landscape, from extensive plantations through woodlots in rural communities to shade trees around farmsteads in some of the hottest and driest parts of the country.

Of the 134 species introduced since 1828 one is likely to come across no more than about 50 species, and of these, only about 16 could be considered ‘common’. On a regular basis, depending on the area of the country, one is only likely to meet one of the following: Eucalyptus camaldulensis, E. ficifolia, E. grandis, E. lehmannii, E. sideroxyylon and E. viminalis. Of the 50-odd species likely to be encountered, only three are not included in the EUCLID program. One of these is from Queensland, while the other two are extra-Australian in origin.

The program opens with a page which offers the user the option of either learning about eucalypts, identifying a eucalypt, browsing through the species or learning about EUCLID. The first option takes one through an informative section dealing with a number of subjects including the evolution and distribution of eucalypts, their identification, the inspection of specimens, descriptions of various parts of a Eucalyptus plant, the history of eucalypts and a glossary of terms.

The identification section begins with a short tutorial on how to use the key. The key itself is straightforward and easy to use, even for a non-botanist. This window has four panels, one with a list of all characters available for identification, one for the characters which are selected during the identification process, a third which lists the species which have been rejected during the selection process and the last panel listing the species which agree with the selected criteria. The last may contain any number of species, but obviously the more information one is able to provide the shorter this list should be, and ideally one should end up with a single species. If a character has been selected by mistake it is very simple to drag it back to the first panel and then select another in its place.

Each of the available characters is illustrated with a photograph or a drawing and this helps tremendously in the selection process. It is no longer necessary to try to decipher vague technical terms. All one need do is select the picture that comes closest to the specimen one is trying to identify. On selecting one character, one is automatically taken to the next logical character in the set from which one can either select or close the window and move on to a different section.

Once a point has been reached where one can no longer reduce the short-list of possible species it is then a matter of
examining the description accompanying each of these species and trying to make a decision based on this additional information. The information included for each species covers the history of the species, its taxonomy, the morphology of the bark, flower buds, fruits, seeds, foliage and juvenile foliage. There is also information on the habit as well as uses. A useful feature is a list of similar species and how they differ from the species in question. The authors have added the ability to write individual notes for a species by means of a notepad linked to each species. This is especially useful for recording information such as where it has been seen or notes on invasiveness, etc.

Browsing through the species is a matter of selecting a letter of the alphabet, which will provide a list of species beginning with that letter and then selecting the species one would like further information on. All the species are illustrated with excellent photographs and these can be enlarged by selecting them with the mouse.

The real strength of this key is the ability to enter from any point, based on the specimen that is available. If one only has buds, fruit and leaves but no bark description or description of habit one can still end up with a useful short-list of species. Conventional keys (except for card keys which were cumbersome to use) only allow for one entry point and if the information allowing for entry into the key is not available then the key becomes useless or unreliable.

This is an excellent program which has been well thought out and well constructed. It is easy to use and I found it reliable at arriving at the correct conclusion. I would recommend it to anyone needing to identify eucalypts on a regular basis or who needs information on the species in its natural habitat.

I did find one program fault. On the page describing the types of bark where the rough bark types are illustrated, there is a half sentence under the photograph showing Tesselated bark. I think this should read: ‘...(includes bloodwoods)’, but this is a minor blemish on an otherwise good effort. I would make one suggestion for improvement, however. All the characters used in the key are illustrated. The glossary is extensive and the descriptions are good but I would suggest that links be provided in the glossary from each term to its associated photograph. The illustrations are already available; why not use them here?

An issue which is becoming more relevant in South Africa, and other countries where extensive breeding programmes are taking place, is that of hybrids. At the moment one is only likely to come across these in commercial plantations but I have no doubt as time goes by we will begin to see more of these being used in situations where one is more likely to cross their paths.

Due to the exchange rate this product would set you back about R500. This is value for money for institutions and for the really keen eucalypt enthusiast. For the organisation that requires reliable information and identification of eucalypt species, this is an excellent investment.

References


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