

KIMBERLEY WATTLES: THEIR NAMES AND USES

At the meeting 7 October 1998, the President Kevin Kenneally introduced Bruce Maslin, a Principal Research Scientist with CALM and one of the foremost experts on Acacias in Australia and overseas. Bruce has spent the last 30 years on Acacias, mostly on taxonomy. He explained that taxonomy is the science of classifying and naming organisms—names are not merely labels but rather the key to clusters of information concerning these organisms; information which can then be used in a range of social, scientific and applied ways. Bruce's primary research thrust today is to explore ways of applying his taxonomic knowledge and to provide computer-aided tools to enable people to name wattles and to access relevant information about them. Unfortunately, money to develop these aids has been short and most presently available aids, though useful, could be a lot better.

Bruce took time out to show some dramatic slides of the Kimberley with a background of didgeridoo music "to set the mood" for what was to follow. He explained where the Australian Acacias stood in the world scheme, which comprises 3 large Groups or subgenera; two pan tropical, characterised by bi-pinnate leaves, represented in Australia by a total of about 10 species. The third Group comprising most of the Australian Acacias have phyllodes which have a different structure from leaves. The Acacias are the largest group of vascular plants in Australia numbering about 1000 species, e.g. there are about 120 species in the general Wongan Hills area. The highlands along the East coast of Australia are also quite species rich. Rich pockets tend to occur throughout arid Australia on rocky uplands, whilst sandy desert areas are poor in species though quite often these species are the major plant species present. There are 120 species known in the Kimberley, some as yet undescribed. In showing slides of wattles and his collecting expeditions to the Kimberley, Bruce told us that the slender young man was in fact K.F.K. Who would have believed it if we hadn't been told?

Bruce spoke about other species of *Acacia* with a wide range of morphological characteristics e.g. occurring as large trees in Queensland (e.g. *A. aulacocarpa*) and smaller in the Kimberley. The most common Kimberley species *Acacia tumida*, the Pindan wattle, is very variable, being shrublike near Broome, prostrate in coastal regions, and inland growing into a tall shrub or tree 5 metres high. A group in Canberra is currently researching this species in order to better understand its variation. It is likely that in time *A. tumida* will be split into a number of separate entities which in turn will convey more accurate and appropriate information about them.

The variations within species pose problems for buyers of wattles given that the plants are ordered by name. Australian Acacias are grown in such places as North

Africa for firewood and food and, in the Asian region, some of the Queensland species (e.g. *A. auriculiformis*, *A. mangium*) are extensively cultivated for timber and pulp. When seed is obtained from Australia the recipients naturally expect it to grow into the trees or shrubs they know.

In the early 19th century Alan Cunningham, the botanist on the *Mermaid* on Philip Parker King's voyage of exploration, made extensive collections in the Kimberley, and these have finished up in Herbaria all over the world. One collection in Kew somehow had two separate species on the one sheet named *Acacia neurocarpa*. One is what is now the well-known Elephants Ear Wattle, *Acacia dunnii*, and as this has nerved pods, the name *neurocarpa* was clearly intended for this species. Rather than change this well known name, Bruce chose to apply the name *A. neurocarpa* to the other specimen. *A. neurocarpa* was previously called *Acacia holosericea*, from which Bruce also split another entity called *Acacia coleii* (very common in the Kimberley). This is a very important plant for providing seed used for human consumption in Africa (Niger) and elsewhere. Australian Aborigines are reported to have eaten the seeds and sometimes the pods of at least 50 *Acacia* species. They may eat them straight, grind them into a paste and eat it uncooked, or cook it in a sort of damper.

In illustration of his work, Bruce then demonstrated the CD he recently prepared entitled the "Wattles of the Kalannie Region". The Gordon Reid Foundation funded the project and the CD was produced to assist the people in the region to better manage their natural environment. It provides a very "user friendly" means of identifying 70 *Acacia* species and the conditions under which they grow for revegetation uses. When one of the 48 identification characteristics is selected, a picture comes up to show what is meant, e.g. for "tree" a couple of typical trees are shown with a person's image providing the scale. Selection of "tree" reduces the list of possible wattles from the original 70 to 30. Selection of a few more easily identified features will usually quickly reduce the possible identity of a plant to very few species. Then, using other facilities of the CD, one can show those characteristics needed to clearly identify the plant. The ease of use of such a computer key compared with the usually tortuous written keys is impressive.

The CD has similar easily-used features to select species suitable for growing in a required combination of environmental conditions. Further work is also under way with the Dalwallinu Shire funding Bruce to put the information contained in the CD into a book. The Kalannie project was seen by Bruce as a prototype scheme for the more ambitious job of doing the same for all the Australian *Acacias*. This project is called WATTLE and Phase I is currently in progress with funds provided by the Australian Biological Resources Study.

Kevin Kenneally, in thanking Bruce for his most informative talk, pointed out what an enormous job Bruce had done. The meeting ended at 9.15 p.m. and some of those present then socialised over supper.

Gilbert Marsh

Editor's note: *The West Australian*, 21 September 1998, p. 34, carried an article on the speaker's work and reported that the newly released book *Edible Wattle Seeds of Southern Australia*, co-authored by Bruce Maslin and Sheila Hamilton-Brown is available for \$39.95 plus postage from CSIRO Publishing, PO Box 1139, Collingwood, Vic, 3036.