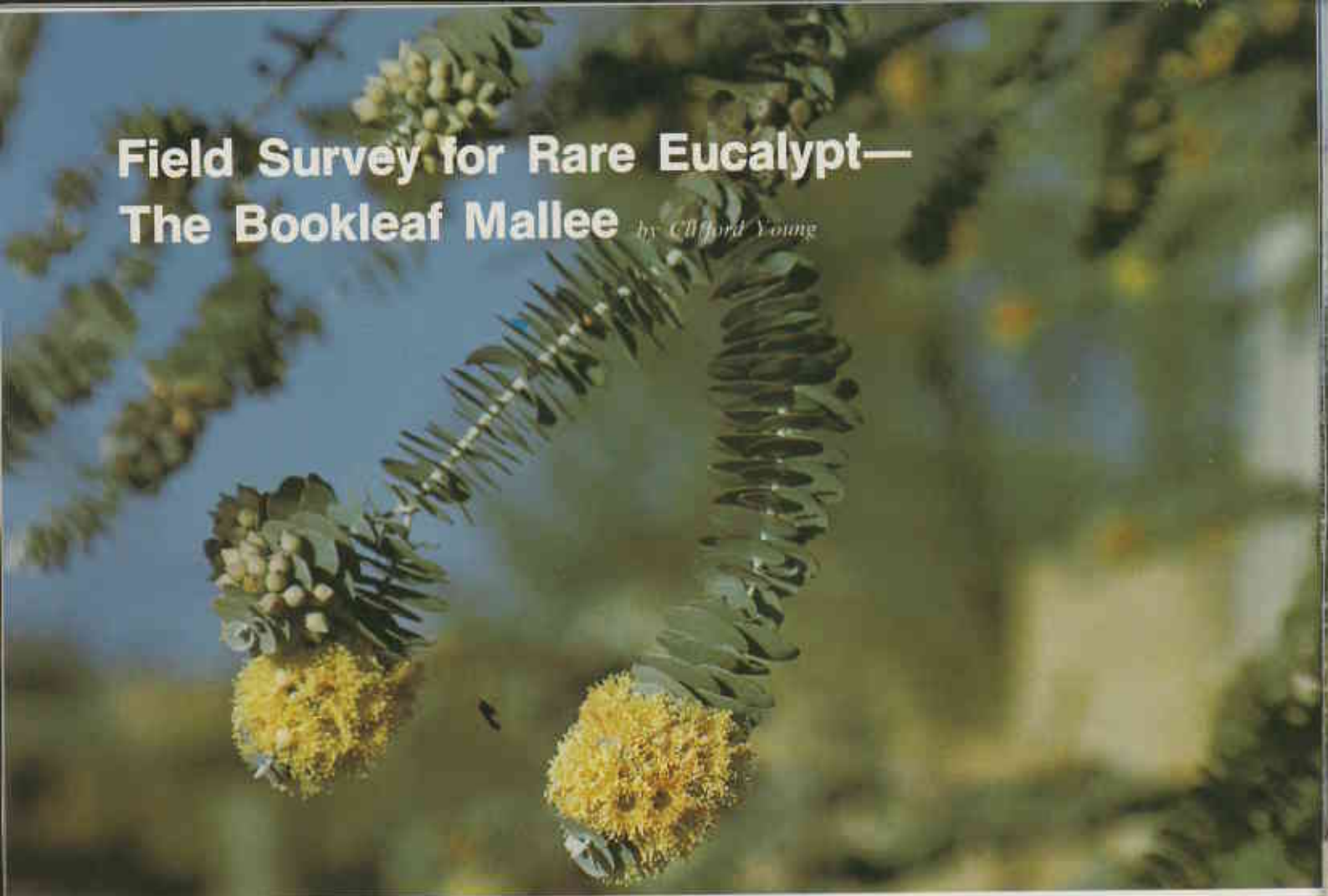


# Field Survey for Rare Eucalypt— The Bookleaf Mallee

by Clifford Young



▲ Buds, flowers and fruits of *Eucalyptus kruseana*. (Photo B. Haberley).

Field officers from the Department of Fisheries and Wildlife have located several more populations of the rare eucalypt, *Eucalyptus kruseana* or Bookleaf Mallee, during a recent survey of country east of Kalgoorlie.

The latest finds bring the total known number of specimens of *E. kruseana* to 875 in six separate populations, all of which are located east of a line between Kalgoorlie and Norseman. Despite this, the species cannot be considered secure as the specimens are not located within any established Nature Reserves, but are growing in areas subject to grazing and mining—two adverse forces affecting native flora and fauna in Western Australia today. For example, the largest population of *E. kruseana*, a stand numbering about 400 specimens or almost half the total known number of the species, is located on the very edge of a rock quarry. Attempts are now being made to secure the land around

the quarry as a protected reserve but whether or not this move will be successful is still to be seen. Most of the other specimens are on station country.

The Bookleaf Mallee, a name which refers to the closeness of the leaves to one another on the stem, was first described by Ferdinand von Mueller in the *Australian Journal of Pharmacy* in 1895 from specimens collected in the Fraser Range which lies some distance eastwards from Norseman. However, the plant remained little known until it was again collected in 1909, this time east of Kalgoorlie, by Henry Dean, a consulting engineer for the Trans-Australian Railway. Unaware of Mueller's earlier description, Dean's specimen was named *Eucalyptus morrisonii* but its true name remained *E. kruseana* after John Kruse who was at one time Victorian Government Analyst and was involved in establishing the College of Pharmacy in Melbourne.

Despite its relative scarceness in the wild, the Bookleaf Mallee is widely cultivated as a decorative shrub, growing equally well in the light sand of the western coastal regions as in the clay soils of the interior. In the wild, however, it is usually found associated with granitic soils.

The plant is well suited to use as a decorative shrub having attractive yellow flowers which, with its small crowded grey leaves and unusual habit of growth, renders the species quite distinctive from all others.

In its natural occurrence the plant rarely grows higher than 2 to 3m, but under cultivation it can attain a height of 4-5m with usually a single stem and more or less horizontally spreading branches with dense foliage. In the wild it tends to be more shrubby, often having several thin stems in place of a single main stem.



▲ A large specimen (about 5m) of *Eucalyptus kruseana*. (Photo B. Haberley).

▼ A Singing Honeyeater feeding on *E. kruseana* flowers. (Photo B. Haberley).



◀ An example of *E. kruseana* regrowth after disturbance by a grader. (Photo B. Haberley).





▲ Quarry wall with large stand of *E. kruseana* in the background. (Photo B. Haberley).

▼ *Eucalyptus kruseana* regrowth about 5m from the quarry edge. (Photo B. Haberley)



The wildlife officers who conducted the recent survey through the Goldfields also noted the importance of *E. kruseana* in relation to the local avian population. The officers, R. Piggott, B. Haberley and D. Coughran, noted seven species of birds feeding on the flowers of *E. kruseana*, and a further 10 species were seen alighting on the shrubs but not feeding. Those feeding were the White-eared Honey Eater, Yellow Throated miner, Yellow Plummed Honey Eater, Brown Honey Eater, Singing Honey Eater, Red Wattle Bird and Wee Bills (yellow form). Those birds sighted amongst *E. kruseana* but not feeding on the flowers included the Red Cap Robin, Crested Bell Bird, Chestnut Rump Thornbill, Little Wattle Bird, Blue Breasted Wren, Spiny Cheeked Honey Eater, Rufous Tree Creeper, Striated Pardalote, Jacky Winter and Elegant Parrot.

While mapping the occurrence of *E. kruseana*, the field party made another interesting discovery. A small number of another rare eucalypt species, *E. brachyphylla*, were found sharing the same habitat as the Bookleaf Mallee at several locations. This eucalypt, which has been described and published as a separate taxa although some botanists consider it either a variety or a subspecies of *E. kruseana*, is not known to occur anywhere else in Western Australia. A total of 30 specimens of *E. brachyphylla* were found during the recent excursion. The name *brachyphylla* refers to the shortness of the leaves.

Although the Bookleaf Mallee is widely cultivated, its natural occurrence is very restricted. Under its gazetted status as a rare and endangered plant, *E. kruseana* is protected by law and cannot be taken by anyone except with the written permission of the Minister responsible for Fisheries and Wildlife. Anyone contravening the provisions of this law is liable on conviction to fines of up to \$1 000.

However, the ultimate role of protecting this and other rare species and ensuring their survival lies with the general public.