Rock Sheoak

by Tim McDonald

Of the many trees that grace the wheatbelt, the sheoaks are perhaps the ones that least catch the eye. Specialists in difficult sites, sheoaks, trees and shrubs of the genus *Casuarina,* are often perched on top of gravel breakaways or around granite boulders , tucked along the saline margins of creeks or dug in on the freely-draining sands that are so exasperating to crop. Consequently farming operations frequently leave them untouched in their preferred infertile ground. Because they are not worth removing they become, it seems, a forgotten part of the landscape.

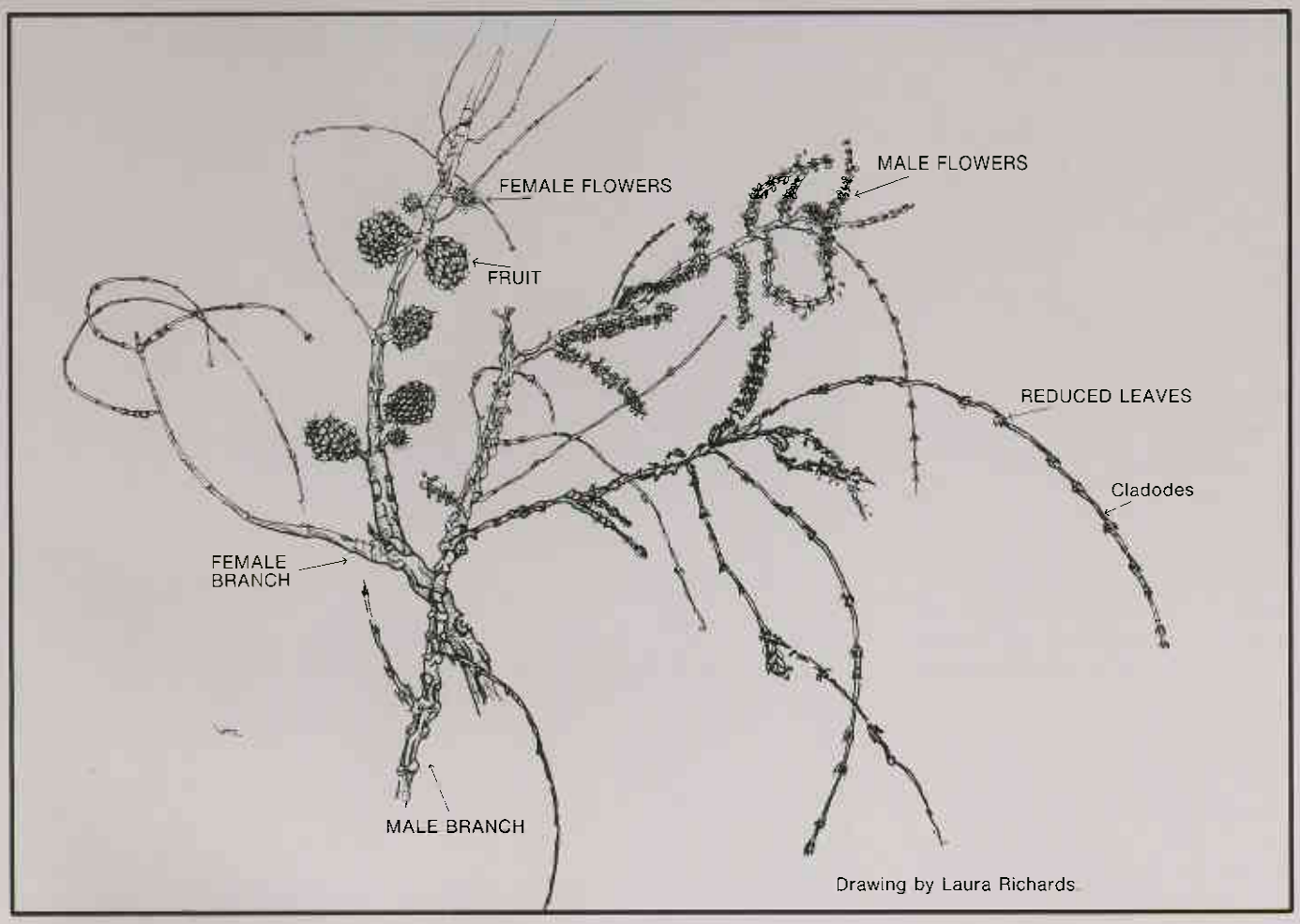
But, despite their sombre colouring, they can be quite attractive plants. This is particularly true of one species native to much of the wheatbelt and the eastern jarrah forest, the rock sheoak *(C. huegeliana).* It is a slender tree with erect branches and a dark green spray of foliage. The moderately dense crown, carried on the upper two-thirds of the rough-barked trunk, is usually shaped into a compact ovoid or globe, often giving the tree an oddly formal appearance. It can reach twelve metres in height but is normally six to nine metres tall.

An intriguing feature of the tree is the pine-like needles making up the foliage. These are actually flexible branchlets, named cladodes, that have taken over the functions of leaves. the cladodes are cylindrical, grooved and rather lengthy—sometimes more than 40cm. The true leaves are the tiny scales that encircle and seemingly segment them every few centimetres.

The genetic name is derived from this unusual adaptation. The bunched cladodes of the first described species (horsetail sheoak) supposedly resemble the drooping tail feathers of the cassowary, which the Malays call *casuaris*—hence *Casuarina*. *C. huegeliana* itself is named in honour of Baron Von Hugel, an Austrian naturalist who collected plants from parts of W.A. in 1833.

The vernacular name sheoak is one that could not be coined now, in the age of feminism. Australia's early settlers noticed a visual similarity in wood grain between casuarinas and the English oak, but considered the former inferior timber. So they indicated their opinion by calling it 'she' oak.

The rock sheoak almost always grows in shallow sands around the



granite outcrops that distort many undulating wheatbelt contours. (This habitat explains the tree's full common name.) While often associated with York Gum *(Eucalyptus loxophleba)* and jam wattle *(Acacia acuminata)*, it also forms a low woodland unmixed with other trees in which the dense shade, ground-litter of needles and virtual absence of undergrowth is reminiscent of pine groves.

If the closely packed trees are examined it can be seen that they are not of one sex only. All sheoaks have unisexual flowers and most are dioecious—that is, some trees are male and some are female. Thus we have the paradox of a masculine sheoak. On *C. huegeliana* the female flowers are small maroon cones attached to the thicker branchlets and the male ones are numerous russet clusters on the cladodes (see drawing). The abundance of male blossoms is characteristic of wind-pollinated plants; it allows the breeze to blanket the females so heavily with pollen that they cannot avoid being fertilised. After the spring flowering the female cones ripen into woody fruit about the size and thickness of a small olive. These often stay on the branch for several years, releasing the tiny winged seeds on the wind when conditions are favourable.

Rock sheoak woodland can be home to a diverse collection of wildlife. Vincent Serventy succinctly described its role at Dryandra State Forest near Narrogin: when the plant 'first appears above the ground it is food for the Tammar; at 5 to 7 years it becomes a shelter; when between 11 and 15 years it is the home of the Wambengers; and finally, when mature, it is the habitat of the Ringtail Possum'[1]. In addition it provides food to the Red-tailed Black Cockatoo and nesting sites to many birds, including the Scarlet Robin and the Ground Cuckoo-shrike.

Of course this wildlife is not found where rock sheoak is reduced to scattered trees in paddocks and on road verges but where it stands undisturbed and in some quantity—now a rather rare occurrence. Although it grows in places too rocky to crop, it is as open to interference by stock animals and burning-off fires as any other species. Seedlings on farms are grazed or trampled by stock; and I have seen mature trees ringbarked by both sheep and open-ranging pigs. Sheep do it by using isolated trees as rubbing posts and pigs by gnawing the bark. Pigs also kill rock sheoaks by uprooting them in search of underground food. All this could be prevented by a simple—but for pigs, strong—wire fence around what is agriculturally useless land.

A danger the rock sheoak has not been subject to is unwise commercial exploitation. Its wood has never been used much, probably because of the tree's small size and the availability throughout its range of all-purpose timbers such as wandoo, jarrah and jam wattle. However it can be turned on a lathe to produce ornamental pieces and is good firewood. The Forests Department maintains that rock sheoak 'merits greater attention than it has hitherto received for shade planting on poor, shallow sandy soils . . . (and) ornamental planting on difficult sites'[2]. Seeds and

▼ A male sheok (Rock sheok, *Casuarina huegeliana)* in flower. (Photo D. Purton.)

▲ A rock sheok woodland with fringing sheet granite. Flowering male trees are russet-coloured, females dark green. (Photo D. Purton.)

seedlings are available in Perth and in such regional centres as Wongan Hills and Narrogin or through the Forests Department.

There are at least twenty species of casuarina other than rock sheoak that are indigenous to W.A. They range from a 30cm shrub to trees of up to 18m in height, and in habitat from the wet karri forests to the Great Sandy Desert. Many are as attractive and potentially useful as the rock sheoak. Maybe now, as farmers and gardeners increase their interests in planting native species, they will become recognised as members of a genus that ranks only behind *Eucalyptus* and *Acacia* in its importance in the Australian flora.

References

1. Vincent Serventy, 1970, *Dryandra: the story of an Australian forest.* A. H. & A. W. Reed, Sydney: p. 12.

2. Norman Hall, *et al.* 1972. *The use of trees and shrubs in the dry country of Australia.* A.G.P.S., Canberra:p360.