



AUSTRALIAN MYRTLE

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According to certain experts Australian myrtle (*Leptospermum laevigatum* F. Muell.; fam. Myrtaceae) is potentially one of the most dangerous plants encroaching the sandy regions of the Western Cape. This is due to the fact that the plant is propagated so efficiently after fires and forms such dense thickets that it deprives all other plants in the vicinity of light and water. It threatens both the fauna and flora of the Cape Province, since none of our indigenous bird species are known to nest in the shrub.

The common Afrikaans name for this plant is "Australiese mirt". In Australia it is known as the coastal tea tree or sandstay.

Morphological description

The Australian myrtle has a certain similarity to the ornamental tea bush, which belongs to the same genus. It is a large, compact, multi-branched

shrub or small tree with rigid, spreading branches. It grows to a height of 2 to 8 m, while the shrub form can reach a diameter of 8 m. The mature stems are grooved and twisted, with the bark flaking in thin strips. The stiff, leathery leaves are more or less ovoid, 1,5 to 3 cm long and 6 to 12 mm across, with a dull, greyish-green colour. They are alternate and sessile. The leaves have three to five longitudinal veins, and the young leaves are covered with soft, silky hairs that disappear with age.

During spring or early summer, between late August and November or December, the plants produce numerous sessile flowers, about 2 cm in diameter. Each flower consists of five glabrous, white petals, five green sepals, still persisting on the young fruit, and numerous stamens, arranged in a single row. The solitary flowers in the axils of the leaves produce sub-woody, cup-shaped fruits or capsules which are flattened on top, and open by eight to twelve valves. The capsules are green at first, but



A dense infestation of Australian myrtle
Inset: The white flowers of Australian myrtle

change to yellow in about a year's time. They accumulate on the tree for several years, or until the plant dies, at which time a great number of seeds are released. Two types of seeds are found in the capsule, the first being small, fertile and winged, while the second is sterile and wingless.

Distribution

As the name indicates, Australian myrtle is a native of Australia, from Queensland, through New South Wales, Victoria and South Australia to Tasmania. In their natural habitat the plants usually occur on sandy soil in heath communities, or together with heath elements in other plant communities, mainly near the coast. They generally colonise disturbed soil only.

The Australian myrtle was introduced into South Africa from Australia around the middle of the previous century. The first record of the plant was in 1850, in the White Sands plantation near Cape Town. Originally it was cultured in gardens as a hedge plant and to serve as a windbreak, from whence it eventually spread into the surrounding country-side. The plant has a patchy distribution in the Cape Province, extending from Darling in the south-west to Port Elizabeth in the east. Some of the heaviest infestations occur i.a. at Bainskloof, Wemmershoek, the Cape Peninsula, Hermanus, Franschoek, Villiersdorp, Worcester, Bredasdorp, Sedgefield, George, Van Stadens River and Clarkson.

In South Africa the plants usually grow on sandy flats or on sandy loam soils in areas with Mountain Fynbos and Lowland Fynbos, and also in the southern forests. However, they also survive on lateritic rocks covered with Table Mountain sandstone. They occur in winter rainfall regions and regions with rain all year round, and although they prefer well drained soil, they will even grow in badly drained areas.

Experiments have indicated that seedlings develop poorly in soil with a low nutrient content as the deficiency probably causes the mycorrhiza to fail to develop. However, normal growth is restored by the addition of phosphorus.

In certain areas the Australian myrtle is well established with certain *Hakea* species, and it could possibly take over these areas when cleared of hakea.

Growth and reproduction

Australian myrtle usually flowers during the spring of the second or third growth year. The seeds that are produced persist on the tree for several years or until the mother plant dies, which usually happens when the plant is burnt or cut. Shortly afterwards,

sometimes even within hours, the seeds dehisce and release thousands of seeds. The opening mechanism is probably related to the water content of the plant. The seeds are dispersed by water or wind, and after a veld fire the shrubs spread rapidly to other disturbed areas. Because of their aggressive nature, they even invade otherwise undisturbed plant communities, for instance after fires.

The plants have a well developed lateral root system with mycorrhiza as well as a mass of delicate roots in the upper 5 cm of the soil. These form such an effective water absorption mechanism that few other plants can survive in the vicinity. In addition the shrubs branch so densely that they hardly allow any light to penetrate to smaller plants. This is the reason why plants in these colonies are usually all of the same age.

Australian myrtle is easily propagated by means of cuttings, but doesn't sprout after having been burnt.

Beneficial properties

The plants make excellent low windbreaks and hedges, while the branches are sometimes used in lattice-work. Apart from this, Australian myrtle displays none of the useful characteristics of the rest of the eucalyptus family, for instance useful wood or oil, nor is it particularly efficient as a sand binder.

Legislation

Australian myrtle has been declared an invader plant in Natal and the Transvaal under the Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983). This act states that the plant must be controlled effectively if it occurs on a farm unit in Natal or the Transvaal to such extent that it is or could be to the detriment of the production potential of the natural agricultural resources.

Control

No chemicals have been registered for the control of Australian myrtle. Mechanical control is, however, fairly successful, since the plant reproduces only by means of seeds. These seeds cannot survive long periods in the soil, because of their limited food supply. Furthermore, seeds are only produced from the age of 2 or 3 years.

In the case of light infestations the plants are cut at ground level and then stacked. This ensures the concentration of the seed source and increases competition between the resulting seedlings. Within two years the seedlings should be hand-pulled, or alternatively the whole area should be burnt in order to destroy the new plants before seeds could have been produced. In the case of heavy infestations the plants may be burnt instead of cutting them, followed by a second burning within 2 years.