



LANTANA CAMARA

A POISONOUS DECLARED WEED

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Lantana camara is a poisonous but highly decorative garden plant that has become an aggressive invader of veld and plantations. It varies from a compact shrub, less than 1 m high, to an untidy scrambler, 3 or more metres high. Its ridged, often four-angled branches are generally covered with short stiff hairs and recurved prickles. The leaves are borne in opposite pairs, each pair being set at right angles to the pairs above and below. The leaves have rounded bases, pointed tips and serrated margins. They are rough to the touch and emit a pungent *Verbena*-like scent when crushed. The flowers are in compact heads and may be white, pink, red, crimson, orange or yellow, and often combine several colours in one head. The fruits are glossy green, becoming purplish black when ripe.

Plants vary not only in flower colour, prickliness, and growth form, but also as to where they grow, in toxicity, rate of growth, seed production and invasiveness.

There are over 50 different variants of *Lantana camara* in South Africa, and several hybrid colonies have been found, in which no two individuals are precisely the same. Although some of the variants found in South Africa also occur elsewhere, the particular assemblage of variants found here is unique.

Relationships

The genus *Lantana* includes about 150 species, mostly from South and Central America. There are four species indigenous to South Africa: *L. rugosa*, *L. dinteri*, *L. mearnsii* and *L. angolensis*. They are all easily distinguished from *L. camara* in being straggly shrubs or shrublets of grassveld and open tree veld, with rather insignificant pale mauve flowers. They are neither decorative nor weedy and have not been found to be toxic. However, indigenous members of the closely allied genus *Lippia* (which differs from *Lantana* in having hard, dry fruits) sometimes cause poisoning symptoms similar to those of *Lantana camara*.

The other common introduced garden *Lantana*, *L. montevidensis* (previously known as *L. sellowiana*) can also cause poisoning, but is not a troublesome weed in South Africa. It is easily distinguished from *L. camara* by its purplish mauve flowers, its generally less robust, creeping habit and its much larger floral bracts (Fig. 6(a) and (b)).

Distribution

Nurserymen in Europe bred and selected over 650 cultivars of *Lantana* from material collected in America, and these were distributed all over the globe in colonial times. Many of these cultivars became weeds in their adopted countries and gave rise to new hybrids from which local nurserymen selected and exported more cultivars.

The alien *Lantana* species were first recorded in South Africa in 1858 in the old Cape Town Gardens. In 1883 more material arrived in Durban from Mauritius, and there were probably other introductions. *Lantana camara* was widely established in Natal prior to 1909 and by 1950 had infested 8 000 ha. A survey in 1962 showed that 25 000-30 000 ha were infested - of which 80% was in Natal, 14% in the Transvaal and 6% in the eastern Cape, with a trace in the Orange Free State. No comprehensive surveys have been carried out more recently but *Lantana camara* is now found in farm and city gardens in all but the driest and coldest parts of the country and can be seen to be spreading rapidly in the Eastern and Northern Transvaal. It has certainly not yet attained the limits of its potential distribution in South Africa.

Ecology

Once introduced to an area by gardeners and nurserymen *Lantana camara* seed is soon spread by birds, by animals such as monkeys, and possibly by rodents. If conditions are suitable the species soon becomes naturalised. It grows on a wide range of soils, but thrives best in sandy, disturbed and eroded



FIG. 1 - A few colour-variations that may occur among *L. camara* and which appear in South African gardens



FIG. 2 - Although the flowers of *L. camara* may sometimes be very attractive, this declared weed poses a great threat to the country

FIG. 3 - Toxic *Lantana camara* is replacing large areas of grazing





FIG. 4 - Browsing of *L. camara* may cause hair loss and severe skin damage



FIG. 5 - The typically purple-black berries of all *Lantana* species. These berries as well as the leaves and stems of certain variants are poisonous to animals

areas. Increasing disturbance of the veld in South Africa is providing more suitable habitats for the plant.

Lantana camara is at its most invasive in tropical and subtropical areas similar to those in its native areas of America. In South Africa it is at its most invasive in disturbed areas of the Natal coast belt and Transvaal Lowveld. It is less aggressive in the cooler climates of the Cape and in the Highveld where it is at present only a pest on the warmer, north-facing ridges. However, some variants are able to withstand the long winter drought and several degrees of frost.

Lantana camara thrives in full sun and tends to grow through and over other plants, some aggressive variants smothering trees up to 10 m tall in their search for sunshine. It can also do well in light shade, e.g. beneath plantations, although it does not always flower and fruit prolifically under those conditions.

Importance

Lantana camara has been rated as one of the world's ten worst weeds, and has been a declared weed in South Africa for over 30 years (see Legislation). Because of its decorative qualities people are tempted to continue growing it in gardens, but in so doing assist in spreading the plant.

It replaces indigenous veld, reducing the amount of food available to stock, threatening the survival of indigenous plants, increasing water run-off and soil loss on steep slopes and affecting farming and forestry activities.

Lantana camara poisoning is particularly painful and unpleasant. The poison attacks the liver



(a) *L. montevidensis*

FIG. 6(a) - The less harmful *L. montevidensis* which, with its less powerful, crawling way of growth, light purple flowers and larger floral bracts can be distinguished from the declared *L. camara*

FIG. 6(b) - The declared *L. camara* consists of many cultivars and hybrids - some of which are poisonous



(b) *L. camara*

Floral bracts



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(b) *L. camara*

and results in animals (usually cattle) becoming highly sensitive to sunlight. The skin, particularly on light-coloured or soft parts of the body such as the nose, eyes, lips and ears, becomes swollen and inflamed. The skin peels, develops a crusty covering which hardens and cracks. Sores develop, animals have difficulty eating and breathing, their kidneys are damaged and they often die.

In Natal, *Lantana camara* poisoning can at times account for up to a quarter of the cattle reported as being poisoned by plants. Accurate figures and financial losses cannot be calculated as many cases of poisoning are not reported. Since *Lantana camara* poisoning severely damages the liver beasts become unthrifty, even if they do not die immediately. Thus the hidden losses due to reduced production, veterinary expenses, unused pasture, and efforts to control the weed probably far exceed direct losses due to stock deaths.

Children are known to have died from neuro-circulatory collapse after eating the fruit.

Because of its ability to hybridise freely and to produce fertile seed asexually, *Lantana camara* can produce a wide range of variants adapted to different conditions. New, more vigorous or more poisonous variants may arise at any time. Even apparently sterile variants cannot be regarded as 'safe' since they may suddenly start reproducing viable seed when moved to another area or where cross-pollinated to another variant.

Legislation

Lantana camara has been a declared noxious weed in Natal since 1946 (proclamation No. 167 of

1946 in terms of the Weeds Act No. 42 of 1937) and was subsequently declared a noxious weed throughout the country (proclamation No. 37 of 1954 in terms of the same act). It is currently a declared weed in terms of the Conservation of Agricultural Resources Act (Act 43 of 1983).

Only the creeping species *Lantana montevidensis*, previously known as *L. sellowiana*, may be cultivated.

Control

The most recent developments in the control of *Lantana camara* are set out separately in Leaflet Weeds A.27.1; also consult the latest edition of "A guide to the use of herbicides", Department of Agriculture and Water Supply, Plant Protection Research Institute, Pretoria.

Notes

Lantana is the ancient name of *Viburnum*, a European plant that has similar foliage. The name *camara* possibly comes from the Greek word 'kamara' meaning a 'vaulted chamber', but it could also be an adaptation of a vernacular name. Common names that have been applied to *L. camara* include: bird's brandy, cherrypie, tickberry, Jamaican mountain sage, wild sage, confetti bush and (Afrikaans) *gomdagga* and *wilde roosmaryn*.