



# PERESKIA

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*Pereskia* (*Pereskia aculeata* Mill., family Cactaceae) constitutes a tremendous threat for vegetation in Natal, Kwazulu and the Eastern Cape. It is a reasonably vigorous creeper that overgrows other trees and could eventually kill them, and its vicious thorns make the infested area inaccessible. In addition its vegetative propagation is highly successful, making it extremely difficult to eradicate.

The species is also known as *Pereskia* creeper, Barbados gooseberry, lemon vine or leafy cactus, while the names *pereskia* and 'Barbadosstekelbessie' are used in Afrikaans.

## MORPHOLOGY

*Pereskia* belongs to a primitive group of cacti with true leaves. It is a shrubby to clambering plant with long, whip-like branches. On the basal woody part of the plant vicious, straight, 30 - 40 mm long spines occur in groups on raised nodules on the stem. On the young stems the spines are short and curved and they occur in pairs in the leaf axils. These curved spines help the plant to climb while the long, straight thorns protect the vulnerable parts of the plant.

The succulent, shiny, dark-green leaves are oval to elongate, 50 - 70 mm long and 30 - 40 mm wide. They have short petioles and are arranged alternately. Numerous white, cream-coloured or yellowish flowers occur near the tips of the branches in terminal clusters. The flowers are 25 - 45 mm in diameter and have numerous petals and stamens. The flowers have a pleasant lemon scent and bees are partial to them.

The flowers develop into green fruits about 20 mm in diameter, that turn yellow or orange when they ripen. The ripe fruits are encircled by a whorl of leaf-like scales, sometimes spiny, which drop off when the fruit matures. The fruits contain as many as five flat, black seeds, but usually only one or two of these develop to their full size and are viable. The edible fruit can be used for making jam.

At first glance *pereskia* resembles and grows much like *bougainvillea*, but it can be identified by the older stems that bear closely-spaced groups of spines. There is also a variegated form of *pereskia*, belonging to the same species, and a golden form which may revert to the wild, green form.

## ORIGIN AND DISTRIBUTION

*Pereskia* is indigenous in South and Central America and the West Indies. It has been known in Natal for many years - it was recorded as early as 1881 that the fruit was used for making jam - but it was only recently recognised as a dangerous invader plant.

The fact that most infestations occur near the kraals of Blacks leads one to suspect that the Zulus used the plant as a protective fence around the livestock and graves, whence it spread to the surrounding veld.

At present *pereskia* occurs in isolated patches over a very wide area. The entire Natal coastal belt, from Margate in the south to Mtubatuba in the north, the interior as far as Pietermaritzburg and the forest areas of KwaZulu are infested, with major infestations at Lake Sibaya, Lake St Lucia and Umzinto. There are also small infestations near Waterpoort in the Transvaal and at Bathurst in the Eastern Cape.

This invader plant thrives in environments that vary from coastal areas to the mistbelt Natal Midlands and penetrates both plantations and natural forests.



FIG. 1 - Numerous cream-coloured flowers occur in terminal clusters

FIG. 2 - Inset: The green fruits are encircled by a whorl of leaf-like scales which drop off when the fruit matures



FIG. 3 - Groups of long straight spines on nodules on the stem



FIG. 4 - Pereskia can overgrow and eventually kill other vegetation

## GROWTH AND PROPAGATION

Propagation by means of seed is fairly effective. Although each fruit usually contains at most two viable seeds, this is enough to start a new infestation. The fruit are eaten by birds, and possibly also monkeys, that spread the seeds to other areas. The seeds germinate readily in sunshine or in shade, and seedlings establish easily.

Once a seedling has become established in the shade it starts climbing up against other trees with the aid of its spines until it reaches sunlight. Once this has been achieved the branches spread to form a dense, impenetrable mass of thorny branches above the canopy of the forest. It overshadows all other vegetation and even big trees could collapse under the mass of the tangled branches.

Runners of pereskia also spread along the ground to make the whole area inaccessible.

Remnants of stems that remain in the tree canopy after the rest of the plant has been removed, can remain alive for quite some time. Instances are known where such remnants were still alive 3 years after the plant had been chopped down. When such a piece of stem drops to the ground it can root and give rise to a new plant. Any piece of stem - even shorter than 10 mm - has the potential to form a new plant. This exceptional capacity for vegetative propagation means that no timber may ever be removed from an infested plantation because of the high risk of spreading the invader. It may sometimes be advisable to fence off an infested area to restrict movement to and from the area.

Another common way in which this weed spreads is when gardeners trim their pereskia hedges and discard the cuttings in the veld where they start a new infestation. Such hedges are found at homes in Natal and at Port Alfred in the Eastern Cape and some nurseries even sell this weed as an ornamental.

## LEGISLATION

Pereskia has been declared a weed under the Conservation of Agricultural Resources Act (Act No. 43 of 1983). The plant may therefore not be distributed or be allowed to be distributed. All urban areas in the Republic and all farm units in the Cape Province and the OFS must be free from the weed. Should it occur on any other farm units in the Republic, it must be controlled.

## CONTROL

Unfortunately no herbicide has as yet been registered for the chemical control of pereskia, but the Plant Protection Research Institute is investigating the use of a variety of possibly effective herbicides. Information will be released in due course.

In the case of minor infestations the stem of the weed can be removed immediately above the soil surface, the roots pulled up and the branches be pulled from the leaf canopy as effectively as possible. All the plant material should then be stacked to dry out and then be burnt. Follow-up work will be necessary to destroy all regrowth and seedlings that may have emerged. Regular repetition of this process will prevent fruit formation.

A method applied in the past to obtain total control of a serious infestation, was to destroy all the vegetation in the infested area. The limits of the infestation were carefully established, all trees inside the area were chopped down and the undergrowth cut down. All the plant material was then stacked in heaps. When it was fairly dry it was soaked with diesel and set alight. Each stack was carefully examined to ensure that all the plant material had been destroyed. Regular follow-up work was done to prevent regrowth.