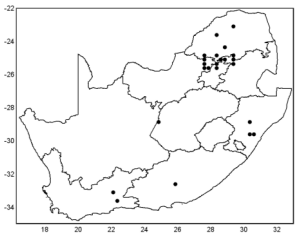

HARRISIA CACTUS, sometimes also called moonlight cactus, is a spiny, trailing shrub from Argentina and Paraguay. The ribbed cladodes are bright green, about 20-40 mm wide, and resemble a plaited rope (i). Spines occur on the cladodes in clusters, with the central thorn longer than those surrounding it. In summer large, funnel-shaped, white flowers open at night (ii). These are followed by round, succulent, red berries (iii). Harrisia cactus is a category 1 declared weed in South Africa and must be controlled, or eradicated where possible.

THE PROBLEM

The cactus is composed of many drooping stems that root wherever they touch the soil. Each of the rooted stems, and any part of the plant that has broken off, will develop into a new plant, eventually forming an impenetrable thicket which displaces the surrounding vegetation and hampers the movement of livestock. Birds and monkeys deposit seeds (each fruit can contain as many as 1000 seeds) at their roosts, causing cactus thickets to develop under trees which prevent stock and game from finding shade. In addition to surface roots, harrisia has underground storage tubers which enable the plant to regrow if the parts above ground die off. If the cactus is removed from the soil, any remnants of the tuber will grow. The spines hamper animal movements, and cause skin irritations .

THE SOLUTION

Harrisia can be controlled mechanically by digging out the plants and burning them. However, this method is impractical because of the spiny nature of the plant, and the fact that any piece of the stem or underground storage tuber can regrow. Biological control is the only cost-effective, sustainable solution and, to date, two biological control agents have been released on harrisia. One is a stem-boring bettle, *Nealcidion cereicola*, which, although extremely damaging, is only present in isolated areas. The other is the cactus mealybug, *Hypogeococcus pungens*. This agent is more widely spread and is also extremely damaging. Unfortunately, only the male mealybug can fly, females and nymphs rely on wind for dispersal to nearby plants. Hence, their dispersal is limited and the insects have to be transferred manually to areas where they do not occur. This is easily done by breaking off pieces of infested plant and placing them on healthy plants in spring and summer—but not after rain, as this may dislodge the insects. For best results, infect as many healthy plants as possible. If sufficient plants have been infected, the damage inflicted should be obvious by the end of the first season. Both these agents are also effective on queen of the night cactus (*Cereus jamacaru*), and can also be harvested from these plants. In areas where either agent is present, harrisia cactus (iv) and queen of the night are considered to be under complete biological control.

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