GLOBAL INVASIVE SPECIES DATABASE

FULL ACCOUNT FOR: ***Solanum mauritianum***

Solanum mauritianum 简体中文 正體中文

System: Terrestrial

Kingdom	Phylum	Class	Order	Family
Plantae	Magnoliophyta	Magnoliopsida	Solanales	Solanaceae

Common name

pula (English, Tonga), wild tobacco (English), pua nana honua (English, Hawaii), woolly nightshade (English, New Zealand), bugweed (English), flannel weed (English, New Zealand), kerosene plant (English, New Zealand), rau 'ava'ava (English, Cook Islands), tobacco weed (English, New Zealand), igayintombi (Zulu), tree tobacco (English), umbanga banga (Zulu), groot bitterappel (Afrikaans), isigwayana (Zulu), luisboom (Afrikaans)

Synonym

Solanum auriculatum , Aiton 1789
Solanum carterianum , Rock 1913
Solanum tabaccifolium , Vell. 1829
Solanum verbascifolium , L. var. *auriculatum* (Aiton) Kuntze 1891
Solanum verbascifolium , L. ssp. *auriculatum* (Aiton) Hassl. 1918
Solanum verbascifolium , L. forma *typicum* Hassl. 1918

Similar species

Solanum stelligerum, Solanum densevestitum

Summary

Solanum mauritianum is a widespread invasive weed belonging to the nightshade family. It has the ability to crowd out native plants if growing densely, but, if occurring sparsely, it may act as a nursery crop. All parts of Solanum mauritianum plant are poisonous to humans, especially the berries. This plant is dispersed by birds, with the fruit being especially favoured by some species. Biological control of this species has been undertaken in South Africa.

view this species on IUCN Red List

Species Description

\"Shrubs or small trees 2-10m tall, branched above to form a rounded canopy, unarmed, all parts densely pubescent with\nsessile to long-stalked stellate hairs, loose and floccose on young growth. Leaves paler on lower surface, simple, alternate, elliptic, up to0 cm long and 12cm wide on young vigorous growth, usually ca 8 cm long and ca 7cm wide, on mature stems. When crushed they give off a smell of diesel fuel. Margins entire, apex acuminate, base cuneate, often oblique, petioles 3-9cm long, each with 1-2 smaller auriculate leaves in axils, these sessile, rounded, sometime absent from weak or distal shoots. Flowers perfect, actinomorphic, numerous in branched corymbs, peduncles up to 15cm long to first fork, pedicels 2-3mm long; calyx tube short, 2-3mm long, the lobes narrowly triangular, 2-3mm long; corolla lilac blue with a pale star-shaped area at base, stellate, 1.5-2.5cm in diameter; stamens 5, inserted low on corolla tube; filaments ca 1mm long; anthers oblong, 2-3.5mm long, opening by terminal pores; ovary densely pubescent; style pubescent in lower part, 5-7mm long; stigma green, terminal. Berries green, ripening to dull yellow, succulent, globose, 1-1.5cm in diameter, pubescent at least in early stages. Seeds numerous, flattened, 1.5-2mm long, testa minutely reticulate. Self-compatible .\"\" (Wagner *et al*., 1999, in PIER, 2002)\"

Lifecycle Stages
Flowers and fruits all year round (Wildy, 2002). Germination of seeds stored in soil is stimulated by fire (ESC, 2003). Seedlings that become established in summer can flower by autumn. Plants can grow to a height of several metres within 2-3 years. Mature plants begin to die after 15 years (Haley, 1997).

Uses
Can be used as a nursery crop in countries where it is less invasive than elsewhere (e.g. Australia). This is because it can provide a protective environment for native vegetation to germinate and grow underneath. This is dependent on the situation though, as it will not be effective if *S. mauritianum* is so thick that it shades out plants growing beneath it. The fruit may be a valuable food source for native bird species, although these tend to facilitate long-distance dispersal and further invasion (CGC, 2003; T. Olckers, pers. comm.).

Habitat Description
In Hawai‘i, naturalized on slopes and ridges in disturbed wet forest (Wagner et. al. 1999 in PIER, 2002). A coloniser of disturbed sites (KZN Wildlife). Tolerates various soil types and is shade-tolerant to a certain degree (Haley, 1997). In South Africa, the plant invades riparian zones, forestry plantations, natural forest, agricultural lands, urban open space and any other disturbed areas (e.g. along roadsides, powerlines etc.), particularly in the eastern, higher rainfall regions of the country (Henderson, 2001).

Reproduction
Seed. Some 20-80 berries are borne on each inflorescence, each of which contains about 150 seeds (T. Olckers, pers. comm.).

General Impacts
Can invade urban areas, native forest margins and pastoral land. May form dense stands that inhibit the growth of other species through overcrowding and shading (Haley, 1997). Can retard the growth of young pine trees (Pinus spp.) (Wildy, 2002). All parts of the plant are poisonous to humans, especially the green berries (ESC, 2003). These berries also provide winter food for the Mediterranean and KwaZulu-Natal fruit flies, which are horticultural pests. The fine hairs on the leaves can be an irritant, especially when they are dislodged during removal operations (Wildy, 2002).

Management Info
Chemical: Easily killed with herbicides. In South Africa, several chemicals (e.g. glyphosate, triclopyr, imazapyr) are registered as foliar, basal stem or cut stump applications. Manual control involves ring-barking trees or removing seedlings by hand (Wildy, 2002).
\r\nBiological: Biological control has been instituted in South Africa, with the release of a sap-sucking lace bug (*Gargaphia decoris*) in 1999 (Olckers, 1999, 2000). However, this insect has proved ineffective to date. Permission for the release of the flowerbud weevil (*Anthonomus santacruzi*) that prevents fruiting is currently being sought in South Africa (T. Olckers, pers. comm.).

Pathway
Introduced to New Zealand as a garden plant. (Mather, 1998). Introduced for flowers and to attract fruit-feeding birds (T. Olckers, pers. comm.). Invaded rangelands (T. Olckers, pers. comm.). Invaded plantations (T. Olckers, pers. comm.)

Principal source:

Compiler: IUCN/SSC Invasive Species Specialist Group (ISSG)

Review: Dr. Terry Olckers, ARC - Plant Protection Research Institute, South Africa.

Pubblication date: 2006-02-22

ALIEN RANGE

[3] AUSTRALIA
[1] FIJI
[1] INDIA
[1] NEW CALEDONIA
[1] NORFOLK ISLAND
[2] SAINT HELENA
[8] SOUTH AFRICA
[4] TONGA
[2] COOK ISLANDS
[1] FRENCH POLYNESIA
[1] MAYOTTE
[12] NEW ZEALAND
[1] REUNION
[1] SOLOMON ISLANDS
[2] SWAZILAND
[1] UNITED STATES

BIBLIOGRAPHY

34 references found for **Solanum mauritianum**

Managment information

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Environment Waikato. 2002. Woolly Nightshade (*Solanum mauritianum*)
Haley, N. 1997. *Solanum mauritianum* webpage. Environment B.O.P. (Bay of Plenty).
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General information

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