

# ALIEN WEEDS AND INVASIVE PLANTS



A complete guide  
to declared weeds and invaders in South Africa

**Lesley Henderson**

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# **ALIEN WEEDS AND INVASIVE PLANTS**

by  
Lesley Henderson

Plant Protection Research Institute  
Agricultural Research Council



A complete guide  
to declared weeds and invaders in South Africa,  
including another 36 species invasive in that region

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**by Lesley Henderson**

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# FOREWORD

Most people who use this book will know that invasive alien plants are a massive threat to the ecological functioning of natural systems and to the productive use of land. Many will know that these plants have already invaded an area equivalent to the size of KwaZulu-Natal, and that they are spreading so quickly that – if left alone – the area invaded will double within fifteen years.

Extensive research has been conducted to determine the best methods for control of invasive plants. These include both mechanical and biological control measures. Further work needs to be done in the identification, characterisation and classification of invasive plants.

The PPRI, an institute of the Agricultural Research Council, has coupled the educational and legislative efforts in this much-needed field guide to the invasive alien plants of South Africa. This comprehensive guide, backed by the delicacy and accuracy of the line-drawings, colour photos and the pithy descriptions of the plants, will be a vital boost to knowledge of alien invasive plants and the legislation concerning their control.

In terms of the amendments to the regulations under the Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983), landowners are legally responsible for the control of invasive alien plants on their properties. The 198 alien species listed as declared weeds and invaders have been divided into three categories:

- **Category 1 plants** are prohibited and must be controlled
- **Category 2 plants** (commercially used plants) may be grown in demarcated areas providing that there is a permit and that steps are taken to prevent their spread, and
- **Category 3 plants** (ornamentally used plants) may no longer be planted; existing plants may remain, as long as all reasonable steps are taken to prevent the spreading there of, except within the flood line of watercourses and wetlands

This field guide describes all 198 declared species, and has an additional 36 species which the specialists have identified as being potentially invasive. It is a guide that is long overdue, and will provide for a systematic and sustainable assault on invasive alien plants. I would like to commend all the individuals and institutions that have combined their efforts to ensure that this work is published.

I would like to end with a cautionary note. As problematic as these invasive alien plants are, some of these species do have important benefits for our country. We need to be balanced in our approach. If grown in demarcated areas, and if controlled, we can reap the benefits of certain invasive species, without them becoming a problem.

Alien invasive plants are one of the biggest threats to the agricultural resources, and we need to work together if we are to gain control. This ministry is committed to playing its part in making a continued contribution and investment into research which can improve our knowledge base for the sustainable management of our natural resources. It is only through partnerships that we shall have any chance of having success.



THOKO DIDIZA, M.P.

Minister for Agriculture and Land Affairs

June 2001

# INTRODUCTION

The main objective in producing this book is to enable members of the public and law enforcement officers to identify the **Declared Weeds and Invaders** covered by the "Conservation of Agricultural Resources Act" (Act 43 of Republic of South Africa 1983) and amended in 2001. The book includes a further 36 species that are invasive or potentially invasive in South Africa and are not listed in the Act. The book also represents the culmination of the first phase of a mapping project, the SOUTHERN AFRICAN PLANT INVADERS ATLAS (SAPIA), which was started in January 1994 and ended in December 1998.

The plants described in this book are alien species. All have been introduced into Southern Africa, either intentionally or unintentionally, and have become naturalised i.e. are capable of reproducing and spreading without the direct assistance of people. Some species are confined to places of severe human disturbance and are classified as ruderal weeds (of waste places) and agrestal weeds (of cultivated lands). By far the majority of species in this book are invaders of natural and semi-natural habitats and they are classified as environmental weeds or invaders. The most aggressive invaders are capable of penetrating and replacing indigenous vegetation. They threaten both agricultural productivity and natural ecosystems.

This book has been built upon two previous publications: 'Plant invaders of Southern Africa' by L. Henderson (1995) and 'Declared weeds and alien invader plants in South Africa' by M. Henderson, D.M.C. Fourie, M.J. Wells & L. Henderson (1987). The full references to these publications are given in the Chapter: OTHER SOURCES OF INFORMATION.

This book is sub-divided into six major sections: **Grasses and Reeds** (10 spp.), **Aquatics** (10 spp.), **Terrestrial Herbs** (38 spp.), **Climbers** (25 spp.) and **Trees and Shrubs** (155 spp.). Sub-categories within sections provide further assistance in identification. The species appear in alphabetical order within each sub-category. A **QUICK GUIDE** to the identification of invaders has been placed inside the back cover for easy reference. This guide will assist the reader in locating a species within the book based on characteristics that are always visible.

Where two or more species are very similar one species is illustrated and their distinguishing features given in the text. The text includes the scientific name (and synonym where applicable), English and Afrikaans common names, family, short diagnostic description with important features underlined, cultivated use, habitats invaded, region of origin and invasive status. Species that are known to be poisonous or irritant are noted.

Authors of scientific names follow the recommended standard form proposed by R.K. Brummit & C.E. Powell (eds, 1992) Authors of plant names, Royal Botanic Gardens, Kew.

Species **distribution maps** indicate all known sites where a species has been recorded according to information in the SAPIA database which includes surveys by the author dating back to 1979. In a few cases, where there were obvious gaps, additional records were obtained from herbarium records in the Pretoria National Herbarium and the literature. Some of these records predate 1979. Additional records of the *Hakea* spp. were

obtained from the Protea Atlas Project. Full details of the localities and dates of recording are available from the SAPIA Database on request (see OTHER SOURCES OF INFORMATION).

The **invasive status** of each species has been included as it will enable the reader to differentiate between the species based on different levels of invasiveness. This will also assist managers in deciding on priorities for weed control. See INVASIVE STATUS for a discussion of the terms used.

Plants that are known to be **poisonous and irritant** to humans and animals have been noted. This information is important as it provides further motivation for the control or eradication of invasive plants. The plant parts which are most poisonous or irritant are underlined and the human or animal parts that are affected are given in brackets. References consulted are given under OTHER SOURCES OF INFORMATION. Professor Theuns Naudé of ARC-Onderstepoort Veterinary Institute provided valuable comments.

The **legal status** of declared species is indicated in the text as well as by a symbol for quick reference. The chapter on DECLARED WEEDS AND INVADERS should be consulted for the full regulations concerning the control, propagation and trading of these species.

Where a herbicide has been registered for the **chemical control** of a species and where **biological control** is either effective or under investigation this is mentioned at the end of the species description. For more information the reader should consult the literature and addresses given under OTHER SOURCES OF INFORMATION.

Many of the species described in this book are grown either commercially on a large or small scale, or are cultivated in parks and gardens. Their inclusion in this book does not automatically brand them as undesirable plants which should be eradicated in all situations. On the contrary many are extremely valuable plants under cultivation, such as the eucalypts, pines and wattles. The same plants, however, are considered undesirable when they grow in places where they were not intended, particularly in conservation areas and along watercourses.



# ACKNOWLEDGEMENTS

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**Hester Wouda-du Toit** 17

Special thanks to the artists who completed 198 additional drawings which are included in this book:

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habits & dissections: 12, 22, 31–34, 38, 97, 102–104, 110, 115, 118, 131, 139, 142, 144–147, 159, 171, 178, 179, 185, 214, 221, 222, 227

**Wilma Roux** 39, 41, 43, 68, 81–83, 87, 89, 90, 92, 93, 96, 106–109, 111–113, 123–125, 140, 141, 167, 197, 215, 226

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**Tanza Crouch** 46, 51, 148, 176, 187

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**Geoff Nichols**

**Stefan Nesor**

**Carina Cilliers**

**Dave Richardson**

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**The Working For Water Programme**

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## **SOUTHERN AFRICAN PLANT INVADERS ATLAS (SAPIA)**

Many thanks to all SAPIA participants in the first five year phase of this mapping project starting in January 1994 and ending in December 1998.

# GUIDE TO THE IDENTIFICATION OF THE SPECIES

## SEE INSIDE OF BACK COVER FOR QUICK GUIDE

A scale is given for the main drawing. Dissections have the magnification marked on them. The growth habit of each species is usually shown in the lower right corner of each composite drawing. The text should be consulted for the usual height attained. Distribution records have been plotted at the 15 minute square level.

GRASSES & REEDS: 10 – 18

AQUATICS: 19 – 27

TERRESTRIAL HERBS: 28 – 58

CLIMBERS: 59 – 81

TREES & SHRUBS: 82 – 227

# SYMBOLS USED FOR THE DIFFERENT CATEGORIES OF DECLARED PLANTS

An abbreviated interpretation of the regulations contained in Act 43 is given here. The full regulations are given under the chapter DECLARED WEEDS AND INVADERS. Symbols provide quick reference to the legal status of each species. The reader must refer to the accompanying text for any exclusions (eg. cultivars excluded) and specific listings of provinces where the legislation applies.



## Declared Weed (category 1)

- Prohibited on any land or water surface in South Africa
- Must be controlled, or eradicated where possible (except in biological control reserves)



## Declared Invader (category 2)

- Allowed only in demarcated areas under controlled conditions
- Import of propagative material and trading allowed only by permit holders
- Outside demarcated areas must be controlled, or eradicated where possible (except in biological control reserves)
- Prohibited within 30 m of the 1:50 year floodline of watercourses or wetlands unless authorisation obtained.



## Declared Invader (category 3)

- No further plantings allowed (except with special permission)
- No trade of propagative material
- Existing plants may remain but must be prevented from spreading
- Prohibited within 30 m of the 1:50 year floodline of watercourses or wetlands, or as directed by the executive officer.

**NB** All three categories of plants are permitted in biological control reserves which are areas specially designated for the breeding of biological control agents.

## Other Symbols:



Herbicide registered for chemical control



Biological control: effective agents available



Poisonous

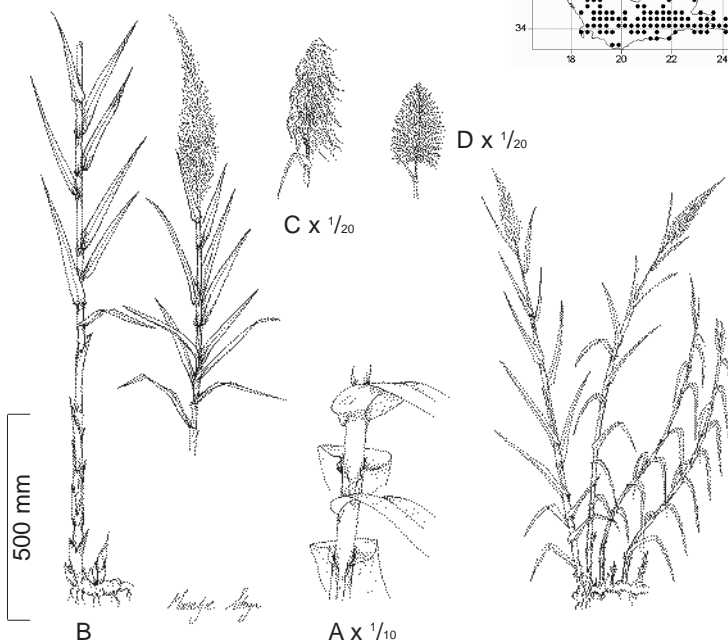
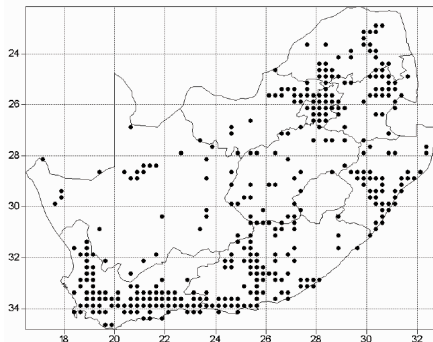


Irritant

***Arundo donax* L.**giant reed  
Spaans(e) riet

Family Poaceae

Photo 1

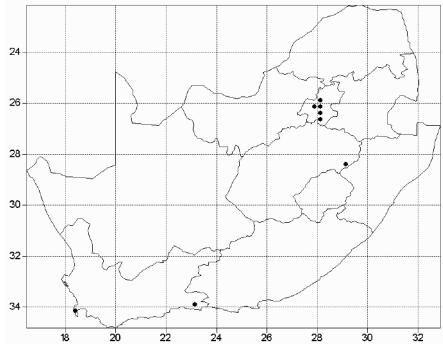


**Description:** Large, robust reed 2–6 m high; rarely branching; spreading from horizontal rootstocks. **Leaves:** Pale green to bluish-green, up to 700 mm long x 80 mm wide; leaf tips soft or firm, not rigid and penetrating (like *Phragmites mauritianus*); leaf blades with large, basal ear lobes (A); leaf sheaths persistent on stem. **Inflorescence:** Cream or brown, silky, compact, spear-shaped (B), 300–600 mm long, all year; rarely flowering above 1000 m altitude and then usually adjacent to busy roads. Compare with the indigenous reeds *Phragmites mauritianus* (C) and *P. australis* (D). **Fruits:** None seen. **Cultivated for:** Ornament, screening. **Invades:** Watercourses; unlike indigenous reeds often occurs on roadsides and other sites away from water. **Origin:** Mediterranean. **Invasive status:** Transformer. **Declared weed.**

# *Cortaderia jubata* (Lem.) Stapf

purple Pampas, Jubata grass  
Pampasgras

Family Poaceae



*Handwritten signature: Manfred Ayala*



**Description:** Robust, tussock grass up to 3 m in diameter; flowering stalks up to 3 m high. **Leaves:** Bright green, up to 1500 mm long x 12 mm wide, reflexed, tips not bristle-like, blade flat to only slightly v-shaped in cross-section, margins rough, cutting; leaves mostly basal to half the height of the flowering stalks.

**Inflorescence:** Yellowish or purple, loosely branching, feathery, 600–800 mm long (A), November–February(–April). **Fruits:** Seeds, falling from old inflorescence which remains a dark or yellowish colour.

**Cultivated for:** Ornament, mine dump stabilization. **Invades:** Grassland, roadsides, rivers, wasteland. **Origin:** W Tropical S America (Ecuador & Peru to Argentina). **Invasive status:** Potential transformer.

**Declared weed. Irritant:** Respiratory tract (flowers); skin (abrasive leaves).

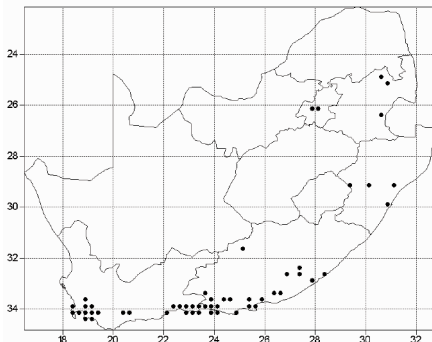


# **Cortaderia selloana** (Schult.) Asch. & Graebn.

Pampas grass  
Pampasgras, silwergras

Family Poaceae

Photo 2



1 000 mm



A x 1/28

Wilmig Kous 09

**Description:** Robust, tussock grass up to 3.5 m in diameter; flowering stalks up to 4 m high. **Leaves:** Greyish- or bluish-green, up to 1 800 mm long x 10 mm wide, reflexed, tips narrowly tapering, bristle-like, blade often v-shaped in cross-section, margins rough, somewhat cutting; leaves mostly basal to two-thirds of the height of the flowering stalks. **Inflorescence:** Silvery-white to pink or mauve, stiffly branching, feathery, 400–700 mm long (A), (January–) February–April (–May).

**Fruits:** Seeds, falling from old inflorescence which then appears white.

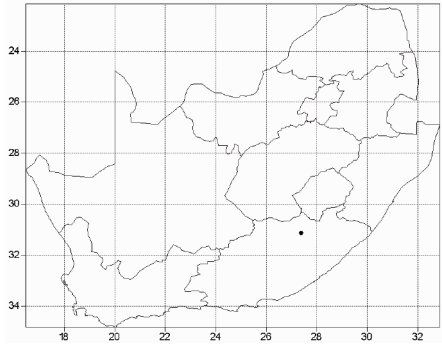
**Cultivated for:** Ornament, mine dump stabilization. **Invades:** Riverbanks, seasonally wet habitats. **Origin:** S America (Brazil, Argentina & Chile). **Invasive status:** Potential transformer. **Declared weed excluding sterile cultivars.**

**Irritant:** Respiratory tract (flowers); skin (abrasive leaves).

***Nassella tenuissima*** (Trin.) Barkworth  
(= *Stipa tenuissima* Trin.)

white tussock  
witpolgras

Family Poaceae



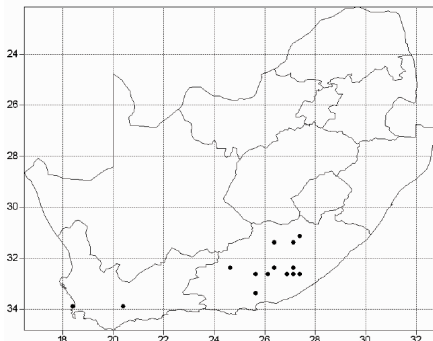
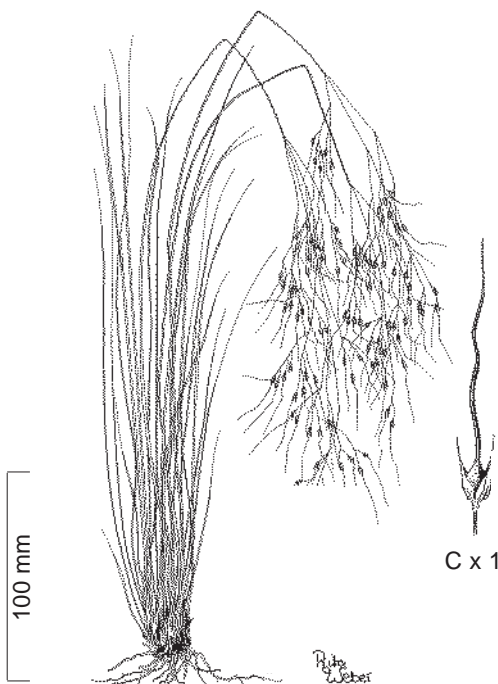
**Description:** Compact, tufted, perennial grass up to 1 m high; tussocks do not collapse untidily and are distinctly white in winter. **Leaves:** Fine, bristly (tightly rolled),  $\pm$  rough to the touch. **Inflorescence:** Slender, compact, 100–300 mm long,  $\pm$  included in the tuft. January. **Fruits:** Seeds (**A**), each held in symmetric bracts; a single bent and twisted awn to 80 mm long arises centrally from the seed; awns often become entangled forming dense “rats nests”. **Invades:** Mountain grassland. **Origin:** S America. **Invasive status:** Transformer. **Declared weed.** **Irritant:** Skin (seed awns).

***Nassella trichotoma*** (Nees) Arechav.  
 (= *Stipa trichotoma* Nees)

nassella tussock  
 nassella-polgras

Family Poaceae

Photo 3



A

B

**Description:** Densely tufted, perennial grass up to 0.6 m high; mature tussocks droop and appear as though they have been lain on (tussock in flower (A), and without flowers (B)). **Leaves:** Fine, bristly, harsh to touch downwards.

**Inflorescence:** Open, loosely branching, at maturity standing well clear of the leaves, but soon detaching and leaving the plants free of inflorescences for most of the year, August–January. **Fruits:** Seeds (C), each held in purplish, asymmetric bracts; a single ± straight, unbranched awn 20–30 mm long arises laterally from each seed. **Invades:** Mountain grasslands, old and degraded lands.

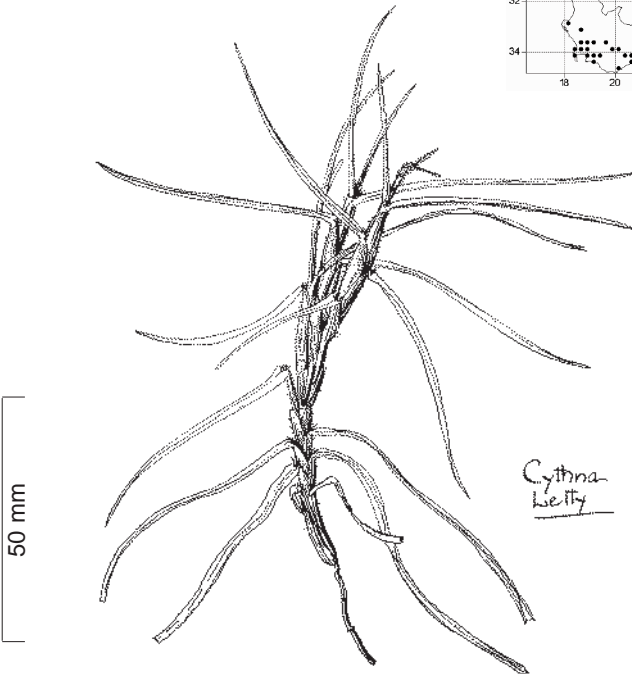
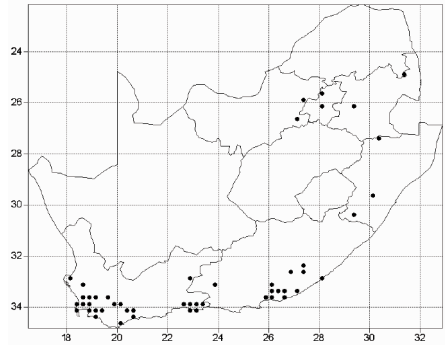
**Origin:** S America (Argentina & Uruguay). **Invasive status:** Transformer. **Declared weed.** **Herbicide registration.** **Irritant:** Skin (seed awns).



## ***Pennisetum clandestinum*** Chiov.

Kikuyu grass  
Kikoejoegras

Family Poaceae



**Description:** Robust, mat-forming, perennial grass, creeping by underground stems (rhizomes) and aboveground runners (stolons), 0.3–0.6(–1.2) m high.

**Leaves:** Bright green, smooth or shortly hairy, folded at first then expanded.

**Inflorescence:** Partly hidden in uppermost leaf sheaths; only white or silvery, feathery stigmas or anthers visible, August–April. **Fruits:** Seeds; often not setting seed. **Cultivated for:** Sandbinding, fodder, lawn grass. **Invades:** Roadsides, urban open spaces, on rich, moist soils in high rainfall areas. **Origin:** Tropical E & NE Africa. **Invasive status:** Potential transformer. **Proposed declared invader.**  
**Herbicide registration.**

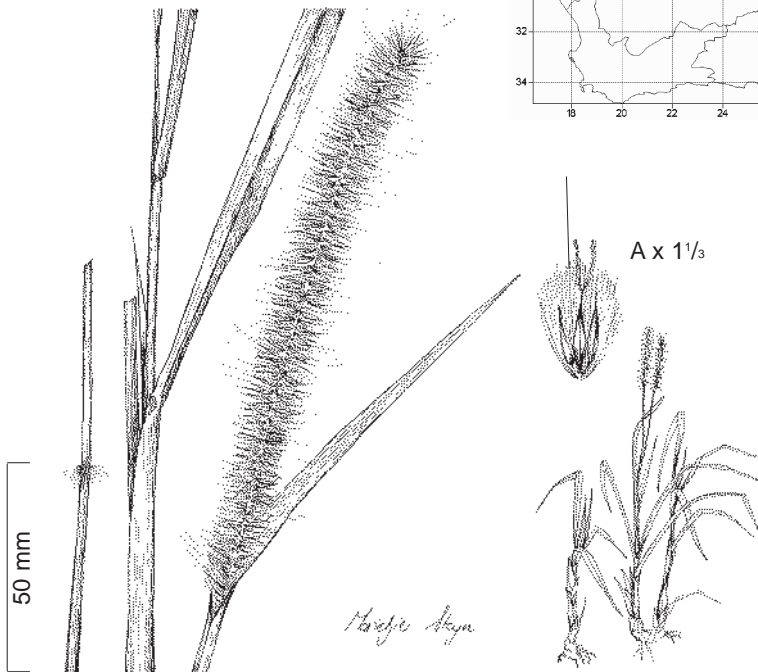
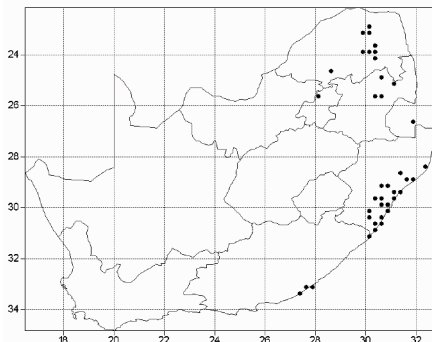




# *Pennisetum purpureum* Schumach.

elephant or Napier grass  
olifantsgras

Family Poaceae



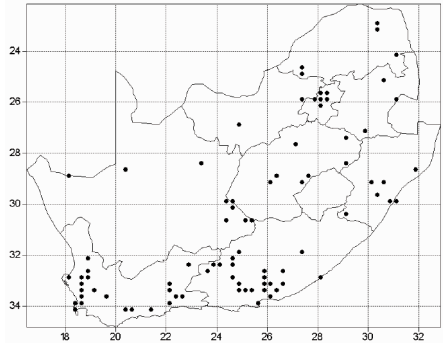
**Description:** Robust, perennial, tufted grass forming bamboo-like clumps 2.0–4.0(–7.5) m high. **Leaves:** Light green to yellowish, blades up to 1200 mm long x 10–30 mm wide, the margins thickened and spiny. **Inflorescence:** Yellow-brown, more rarely purplish, dense, bristly, spike-like, up to 300 mm long, January–June; bristles numerous, in clusters around the spikelets (A), one in every cluster stouter and much longer than the rest, 20–25 mm or longer; bristles detach with the spikelets. **Fruits:** Seeds; occasionally setting seed. **Cultivated for:** Screening, ornament, fodder. **Invades:** Forest margins, riverbanks, valley floors, in subtropical regions. **Origin:** Tropical Africa. **Invasive status:** Transformer. **Proposed declared invader.**

***Pennisetum setaceum*** (Forssk.) Chiov. &  
***P. villosum*** R.Br. ex Fresen.

fountain grass & feathertop  
pronkgras & veergras

Family Poaceae

Photo 4



**Description:** Sparsely branching, tufted perennials 0.2–1.0 m high (*P. setaceum* is tussock-forming; *P. villosum* is more open and creeping); with feathery (bristly), spike-like inflorescences, the bristles long and detaching with the spikelets.

**Leaves:** Up to 40 mm long x 3 mm wide, not rigid or ending in sharp points.

**Inflorescence:** *P. villosum* (A): ovoid, 40–70(–110)mm long and almost as wide, white or light brown, bristles  $\pm$  30 mm long, November–July; *P. setaceum* (B): cylindrical, 100–250 mm long or more, usually purple or rose-coloured, bristles  $\pm$  20 mm long, January–May.

**Fruits:** Seeds. **Cultivated for:** Ornament. **Invasive:** Roadsides, disturbed sites; *P. setaceum* is widespread; *P. villosum* prefers cold, wet areas. **Origin:** N Africa; Ethiopia (*P. villosum*). **Invasive status:** Special effect weeds (competitive, high visual impact). **Declared weeds excluding sterile cultivar *P. setaceum* 'Rubrum'.**

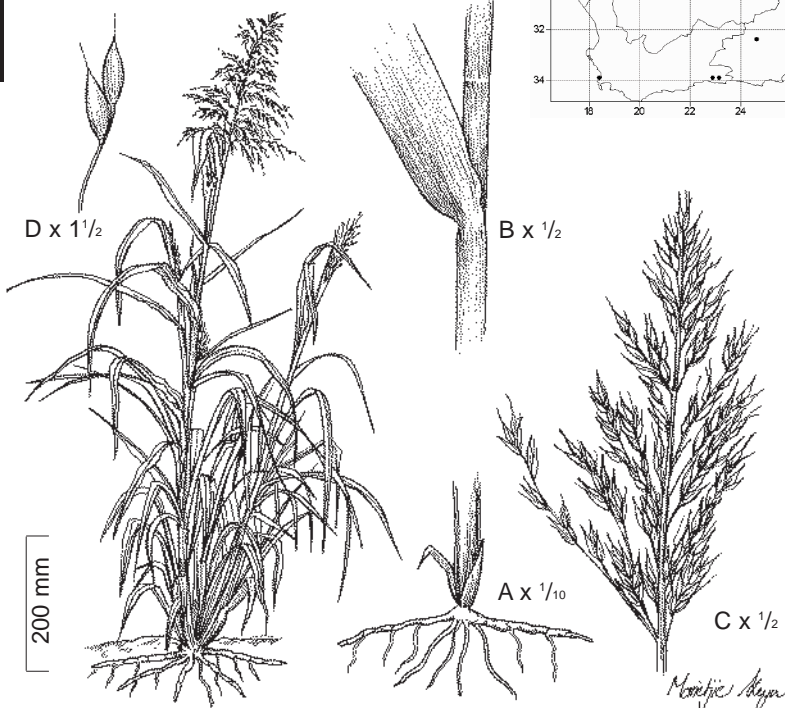
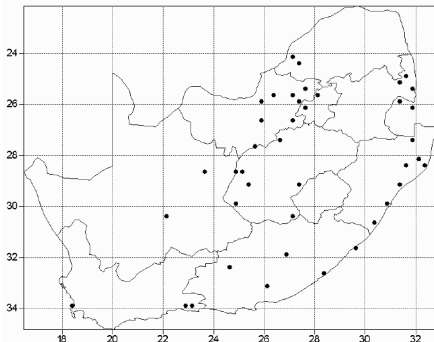


# ***Sorghum halepense* (L.) Pers.**

(= *S. alnum* Parodi)

Johnson or Columbus grass  
Johnson- of Columbusgras

Family Poaceae



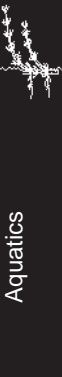
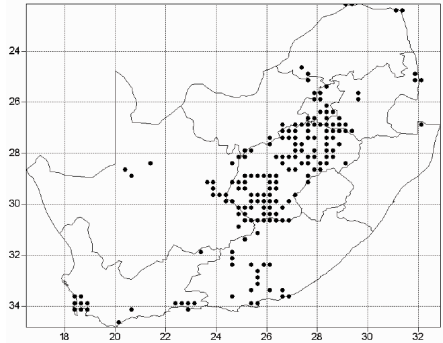
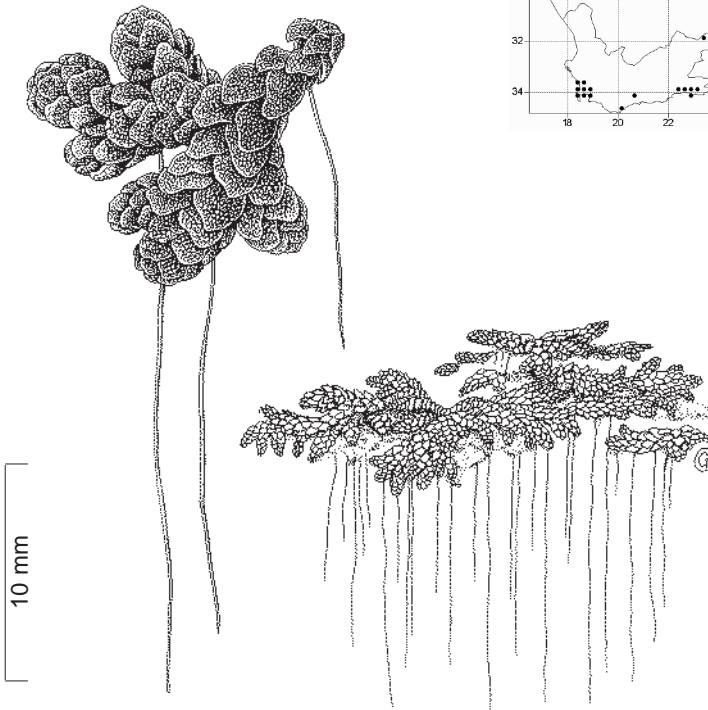
**Description:** Reedlike perennial up to 3 m high, with an extensive system of branched rhizomes (A); stems (culms) (B) stout and erect; nodes without spreading white hairs (as in *S. versicolor*). **Leaves:** Glabrous, striate, up to 600 mm long x 10–30 mm wide. **Inflorescence:** Large, open, reddish-brown, nodding panicle (C) up to 400 mm long, November–April; spikelets paired (D), one sessile (4–5(-7) mm long), the other pedicelled and longer; sessile spikelets variously coloured at maturity (as opposed to black in *S. versicolor*, black wild sorghum). **Fruits:** Seeds. **Cultivated for:** Fodder. **Invades:** Agricultural lands, disturbed sites, roadsides, grassland, riverbanks, riverbeds. **Origin:** Mediterranean. **Invasive status:** Agrestal, ruderal, special effect weed (competitive, poisonous). **Declared invader (category 2).** **Herbicide registration.** **Poisonous:** Wilted foliage, young sprouts.

## *Azolla filiculoides* Lam.

red water fern  
rooiwatervaring

Family Azollaceae

Photo 5

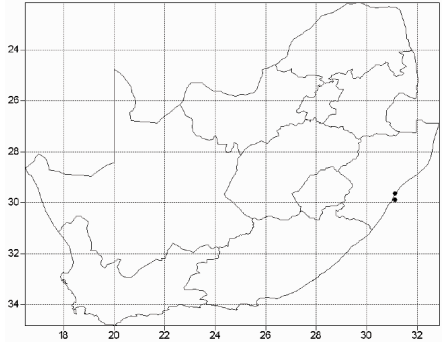


**Description:** Perennial, mat-forming, free-floating, aquatic fern with horizontal stems up to 25–35 mm long; branching pattern is loosely alternate (as opposed to regularly pinnate in the indigenous *A. pinnata*); roots without fine laterals (as in *A. pinnata*). **Leaves:** Silvery-green turning reddish-brown or purplish in winter, 1.0–1.5 mm long, broadly ovate to almost circular, apices blunt. **Fruiting bodies:** Minute, in the axils of the leaves, October–February; reproduction also occurs from detached plant fragments. **Cultivated for:** Ornament. **Invades:** Dams, rivers, vleis. **Origin:** Tropical S America (Argentina, Brazil, Uruguay & Peru); naturalised in USA. **Invasive Status:** Transformer. **Declared weed. Biocontrol:** Effective agents available. **NB** Occurrence in South Africa has been greatly reduced by biocontrol; map predates biocontrol.

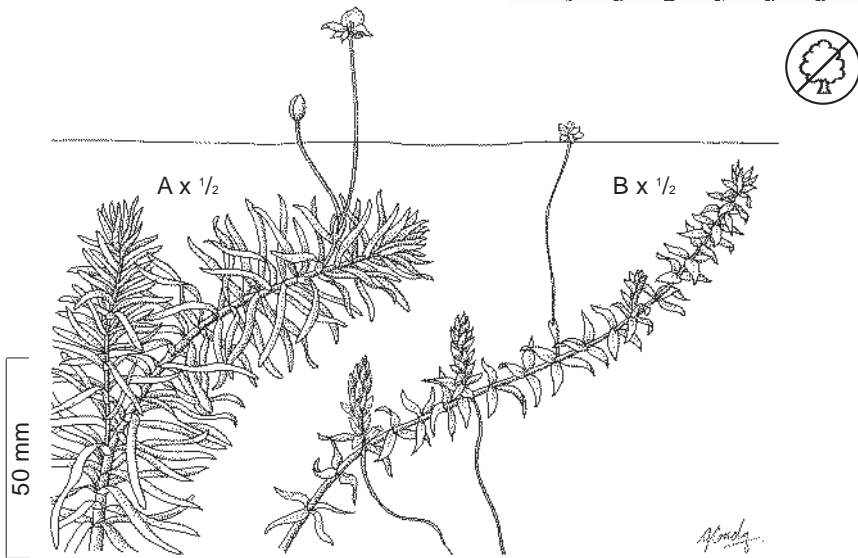
***Egeria densa*** Planch. (= *Elodea densa* (Planch.) Casp.) &  
***Elodea canadensis*** Michx.

dense water weed & Canadian water weed  
 waterpes & Kanadese waterpes

Family Hydrocharitaceae



Aquatics



**Description:** Submerged aquatic plants with slender stems up to 3 m long.

**Leaves:** Green, finely serrated; *E. densa* (A): 15–30 mm long, in whorls of 4–5, sometimes 3–8; *E. canadensis* (B): 5–15 mm long, usually in whorls of three, rarely four. **Flowers:** Yellow or cream, three-petalled; *E. densa*: flowers about 15 mm across, long-stalked and exerted 20 mm above the water surface;

*E. canadensis*: flowers 3–5 mm across, on long, thread-like stalks and float on water surface. **Fruits:** None seen; propagation by stem fragmentation.

**Cultivated for:** Ornament, aquarium trade. **Origin:** S America (*E. densa*) and temperate N America (*E. canadensis*). **Invade:** Still or slow-moving water in lakes and ponds. **Invasive status:** Potential transformers. **Declared weeds.**

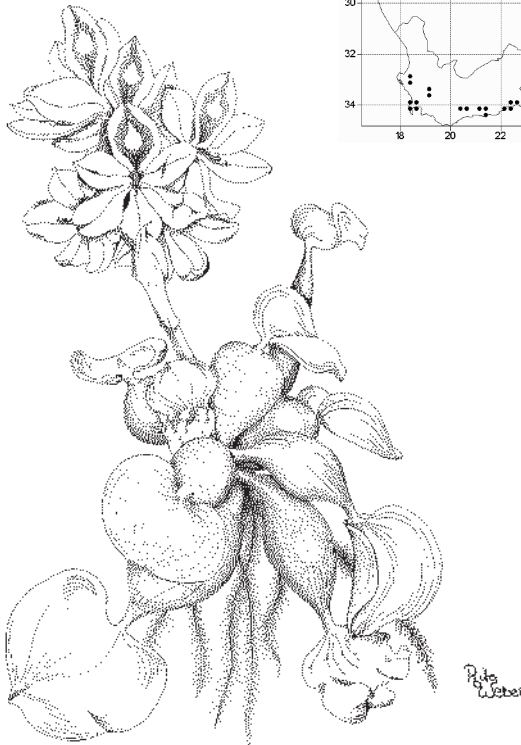
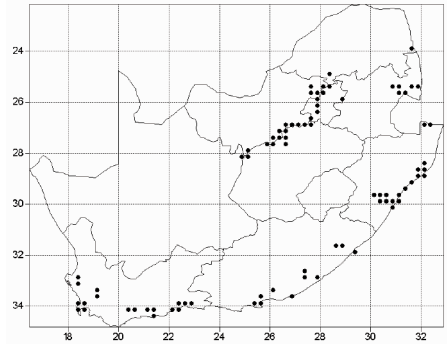
**NB:** Neither species has been confirmed as naturalised; they have been declared weeds as a precautionary measure.

## *Eichhornia crassipes* (C.Mart.) Solms

water hyacinth  
waterhiasint

Family Pontederiaceae

Photo 6



Aquatics

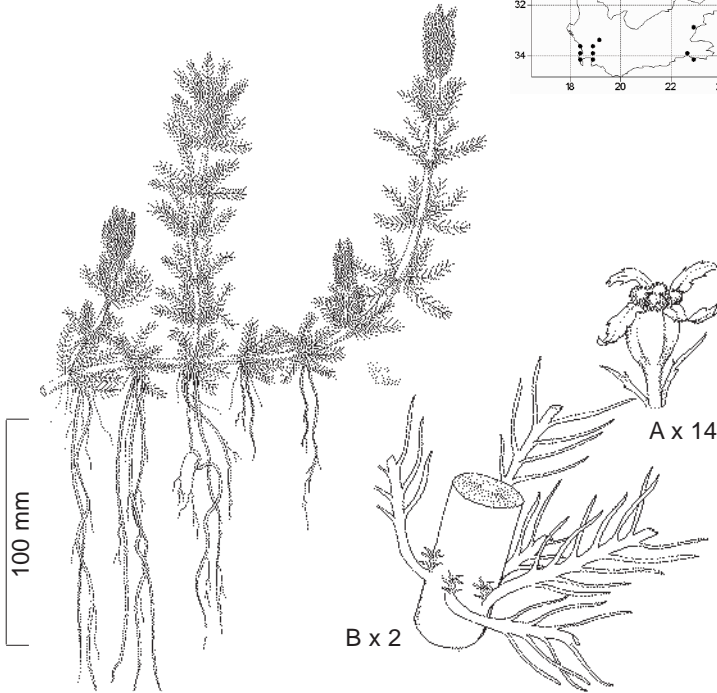
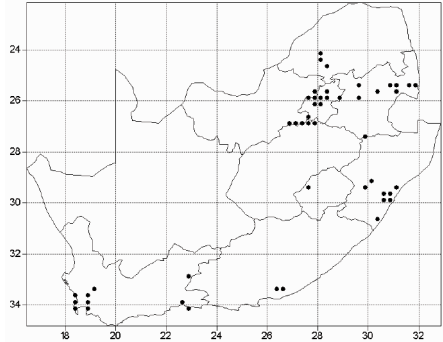
**Description:** Perennial, aquatic plant, free-floating or anchored in shallow water, usually 100–200 mm high but up to 1 m when growing in dense mats; roots of floating plants long and feathery. **Leaves:** Shiny, dark green, in rosettes, erect with distinctive, swollen, bladder-like petioles. **Flowers:** Pale violet or blue, in 8–10 flowered spikes, each flower measuring about 50 mm in diameter, upper petal with a prominent dark blue, yellow-centred patch, November–April. **Fruits:** Capsules with very fine seed. **Cultivated for:** Ornament. **Invades:** Dams, slow-flowing rivers. **Origin:** Tropical S America (?arising in the upper Amazon of Peru and Brazil; also native in Venezuela, Argentina, Uruguay and Paraguay). **Invasive status:** Transformer. **Declared weed. Herbicide registration. Biocontrol:** Effective agents available.

**Myriophyllum aquaticum** (Vell.) Verdc.  
(= *M. brasiliense* Cambess.)

parrot's feather  
waterduisendblaar

Family Haloragaceae

Photo 7



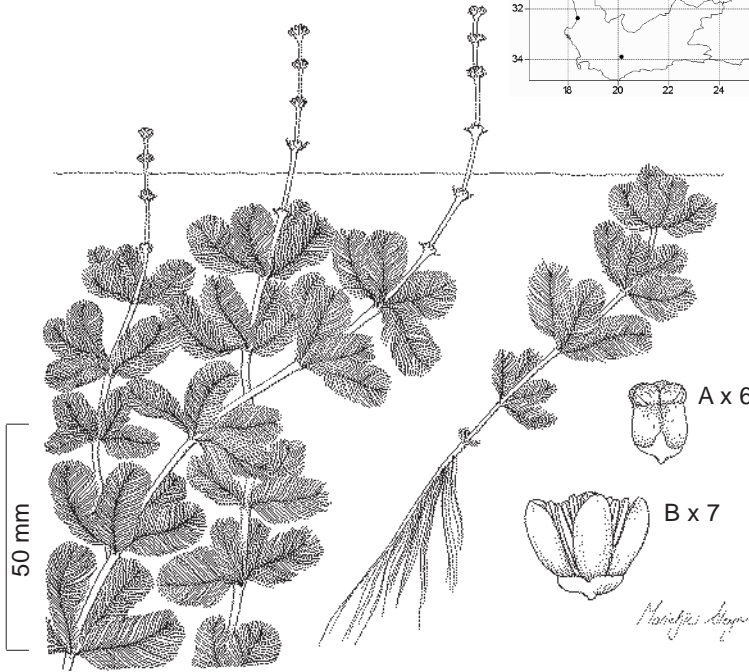
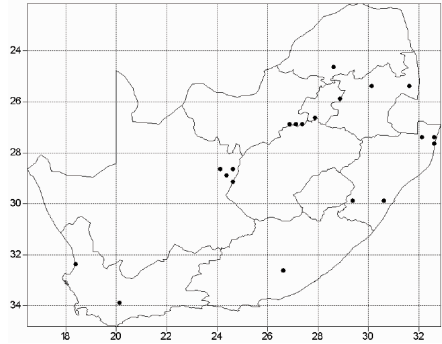
**Description:** Rooted aquatic plant with terminal, leafy shoots emerging 0.2–0.5 m above the water surface; stems up to 1.5(–3.0) m long; many long roots arise from nodes on the stems. **Leaves:** Pale green, finely divided, feather-like, arranged in whorls of 4–6. **Flowers:** Cream (A), 1.2 mm long, inconspicuous, solitary in axils of the leaves (B). May–September; only female plants are known from southern Africa. **Fruits:** None; propagation occurs vegetatively. **Cultivated for:** Ornament. **Invades:** Still or slow-moving water on the banks of rivers, lakes and ponds. **Origin:** S America (Brazil, Argentina, Uruguay, Peru & Chile). **Invasive status:** Transformer. **Declared weed.** **Biocontrol:** Effective agents available.



## *Myriophyllum spicatum* L.

spiked water-milfoil

Family Haloragaceae



Aquatics

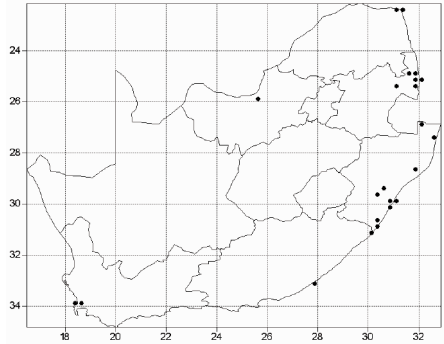
**Description:** Rooted aquatic plant usually completely submerged except for the leafless flowering shoots; stems up to 3 m long; roots are few and small on the lower parts of the stems. **Leaves:** Olive-green, finely divided and arranged in whorls of 4–6. **Flowers:** Cream, small, 1.6–1.8 mm long, female (A) and male (B), arranged in whorls on emergent spikes 50–100 mm long, late summer to early autumn (March–May). **Fruits:** Small nuts about 3 mm in diameter. **Cultivated for:** Ornament. **Invades:** Still or slow-moving water in rivers, lakes and ponds. **Origin:** N America, Europe, Asia & N Africa. **Invasive status:** Potential transformer. **Declared weed. NB:** This species is currently not regarded as troublesome in South Africa and has been declared a weed as a precautionary measure.

# *Pistia stratiotes* L.

water lettuce  
waterslaai

Family Araceae

Photo 8



**Description:** Perennial, mat-forming, usually free-floating aquatic plant, seldom exceeding 150–200 mm in diameter; plants consist of a rosette of leaves with a tuft of long, fibrous roots beneath and resemble floating lettuces. **Leaves:** Pale yellow-green, narrower at the base, rounded, straight or notched at their tips, ribbed, with many longitudinal veins radiating from the base, softly hairy on both surfaces. **Flowers:** Pale green or white, inconspicuous, February–May(–all year).

**Fruits:** Small, green capsules. **Cultivated for:** Ornament. **Invades:** Dams, pans, slow-moving rivers, in subtropical regions. **Origin:** S America (Brazil).

**Invasive status:** Transformer. **Declared weed. Herbicide registration.**

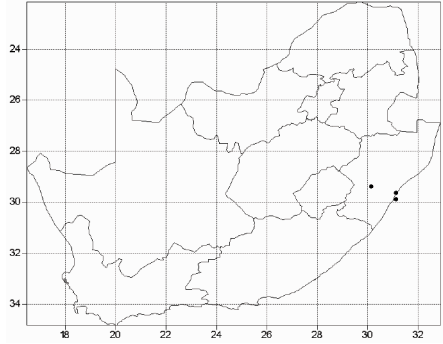
**Biocontrol:** Effective agents available. **Poisonous:** Intense internal irritation (leaves).

# *Pontederia cordata* L.

pickerel weed  
jongsnoekkruid

Family Pontederiaceae

Photo 9



**Description:** Perennial, rooted aquatic plant 1-2 m high, with erect emergent stems and horizontal rhizome, forming colonies. **Leaves:** Light or yellowish-green, one per stem, with long stem-clasping petioles; cordate (heart-shaped) in var. *cordata*, ovate or lanceolate in var. *ovalis*, up to 230 mm long x 70 mm wide. **Flowers:** Blue, in spikes 50-150 mm long; each flower (**A**) about 15 mm long, upper petal with yellow blotch in centre; September-June. **Fruits:** None seen in South Africa; apparently sterile; spreads vegetatively from fragmented rhizomes. **Cultivated for:** Ornament. **Invades:** Riverbanks, drainage lines, irrigated cane fields. **Origin:** N, C & S America (E USA to the Caribbean, Honduras, Brazil & Argentina). **Invasive status:** Special effect weed (competitive). **Declared invader (category 3).**

Aquatics

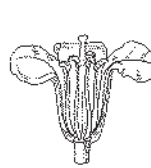
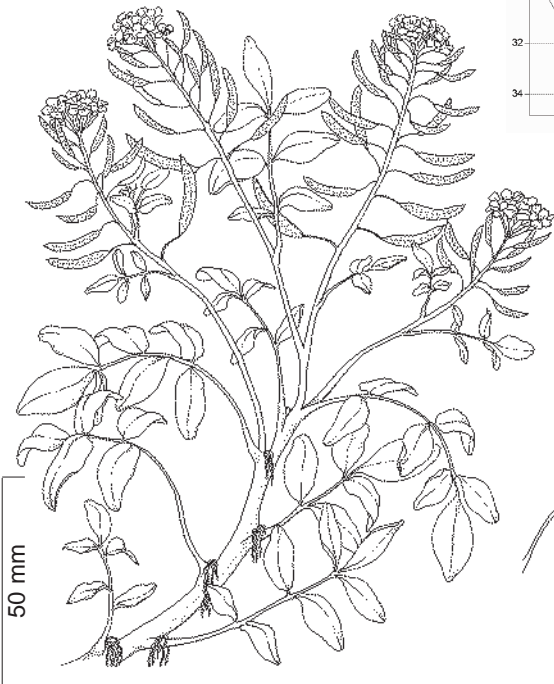
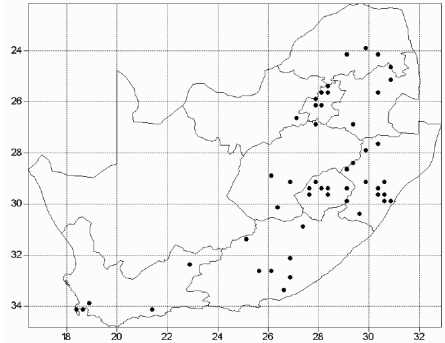
# ***Rorippa nasturtium-aquaticum* (L.) Hayek**

(= *Nasturtium officinale* R.Br.)

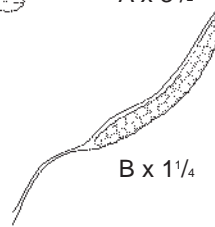
watercress

bronkors

Family Brassicaceae



A x 3 1/2



B x 1 1/4

*Manfredi Steyn*

**Description:** Perennial, aquatic herb with erect, creeping or floating, hollow stems up to 1 m long, rooting at the nodes, mat-forming. **Leaves:** Bright green, pinnate with 3-11 leaflets, terminal leaflet often larger than the laterals, margins entire, somewhat fleshy. **Flowers:** White (**A**), 5 mm long, in terminal, elongated racemes, September-March. **Fruits:** Brown, linear-cylindrical, two-valved siliquae (**B**), curved upwards, with a short, beak-like tip. **Cultivated for:** Food i.e. salads and garnishing. **Invades:** Rivers, riverbanks, wetlands. **Origin:** Europe. **Invasive status:** Special effect weed (competitive). **Declared invader (category 2).**

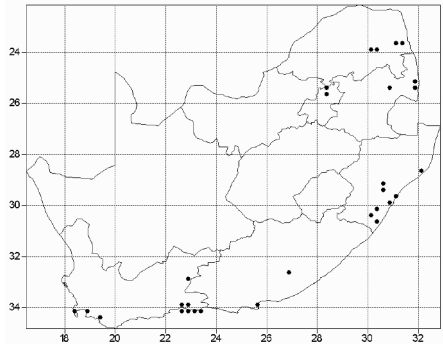
**Salvinia molesta** D.S.Mitch.

(*S. auriculata* misapplied in S.A.)

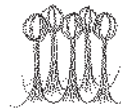
Kariba weed  
waternaring

Family Salviniaceae

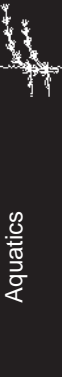
Photo 10



A x  $\frac{2}{3}$



B x 6



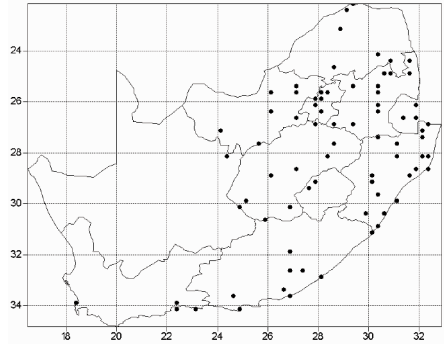
**Description:** Perennial, mat-forming, free-floating fern with horizontal stems 60–250 mm long. **Leaves:** Green to yellow-green, oval, 10–60 mm wide, in pairs (A); unwettable and velvety due to a dense upper surface cover of hairs (B) ending in cage-like structures which trap air bubbles; very modified, feathery, root-like leaves hang down in the water. **Fruiting bodies:** Sterile; reproduces from detached fragments. **Cultivated for:** Ornament. **Invades:** Slow-moving water in rivers and dams, in frost-free regions. **Origin:** S America (Brazil). **Invasive status:** Transformer. **Declared weed. Herbicide registration. Biocontrol:** Effective agents available.

## ***Achyranthes aspera* L.**

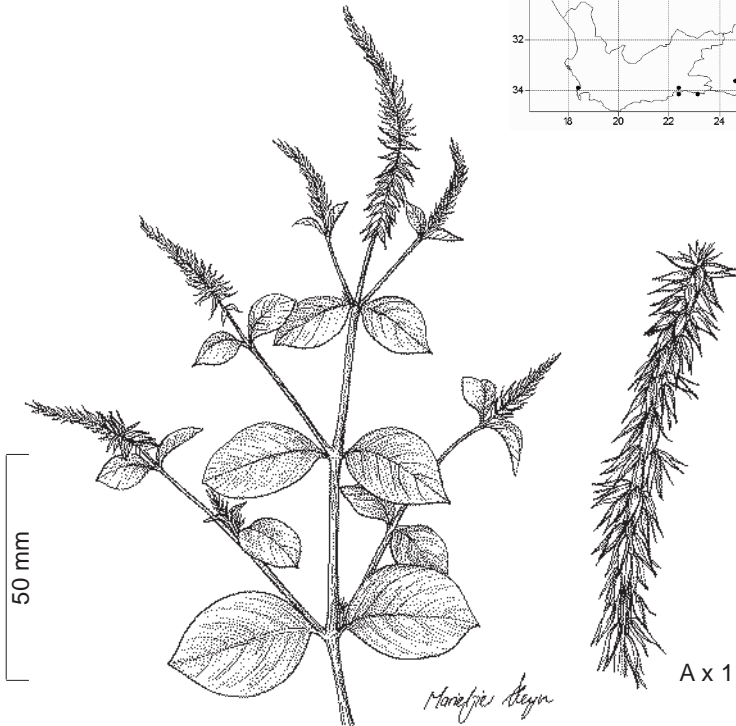
(= *A. argentea* Lam., *A. robusta* C.H.Wright, *A. sicula* (L.) All.)

burweed, chaff flower  
grootklits, langklitskaflom

Family Amaranthaceae



Terrestrial herbs



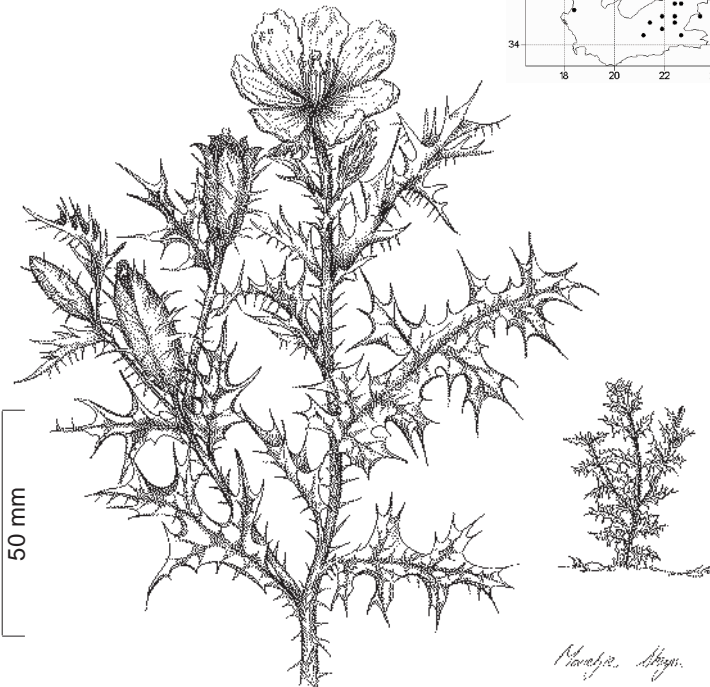
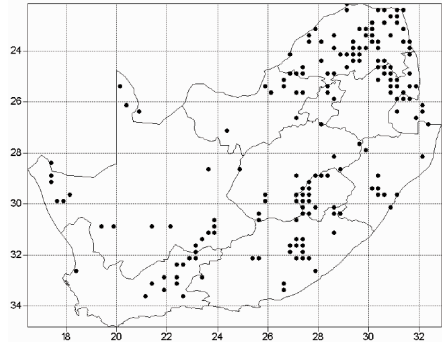
**Description:** Erect to sprawling, pubescent, sub-woody perennial up to 2 m high, with striate branches and a long tap root. **Leaves:** Dark green above, paler below, broadly elliptic to ovate-lanceolate, up to 80 mm x 50 mm, densely to sparsely pubescent, veins prominent below. **Flowers:** Greenish-white, small, deflexed when mature, in terminal pinkish spikes up to 250 mm long; outer floral segments (perianth) are sharp-pointed, December–April. **Fruits:** Straw-coloured, surrounded by the spiky perianth, about 5 mm long; pointed downwards and pressed against the flowering stalk (A); seeds brown, shiny, 3 mm long. **Invades:** Forest margins, grassland, savanna, roadsides, usually in moist or shaded sites, riverbanks. **Origin:** ?Africa; now pantropical. **Invasive status:** Special effect weed (competitive, irritant). **Declared weed. Irritant:** Skin (sharp-pointed fruits).

***Argemone mexicana* L. &  
*A. ochroleuca* Sweet **subsp. *ochroleuca***  
 (= *A. subfusiformis* G.B.Ownbey)**

yellow- & white-flowered Mexican poppies  
 geelblom & witblom bloudissels

Family Papaveraceae

Photo 11



Terrestrial herbs

**Description:** Annual, very spiny herbs up to 0.9 m high; stems exude a yellow sap when cut. **Leaves:** Grey or bluish-green, with prominent white veins, spiny; up to 150 mm x 60 mm. **Flowers:** Bright yellow (*A. mexicana*) and pale yellow or creamy white (*A. ochroleuca*). September–January (–all year). **Fruits:** Spiny capsules, ovoid (*A. mexicana*) to oblong (*A. ochroleuca*), green turning brown, up to 50 mm long, splitting into five lobes and releasing numerous small black seeds. **Invade:** Roadsides, wasteland, abandoned lands, cultivated lands, riverbanks, riverbeds; *A. mexicana* is confined to coastal KwaZulu-Natal and lowveld of Mpumalanga and N Province. **Origin:** C America (Mexico). **Invasive status:** Ruderals & agrestals; special effect weeds (competitive in watercourses, poisonous, irritant). **Declared weeds. Herbicide registration. Poisonous. Irritant:** Skin (sap, spines).

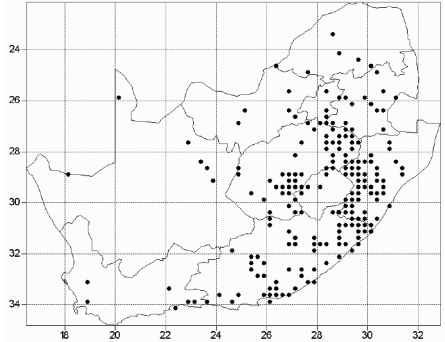
# **Cirsium vulgare** (Savi) Ten.

(= *C. lanceolatum* Scop.)

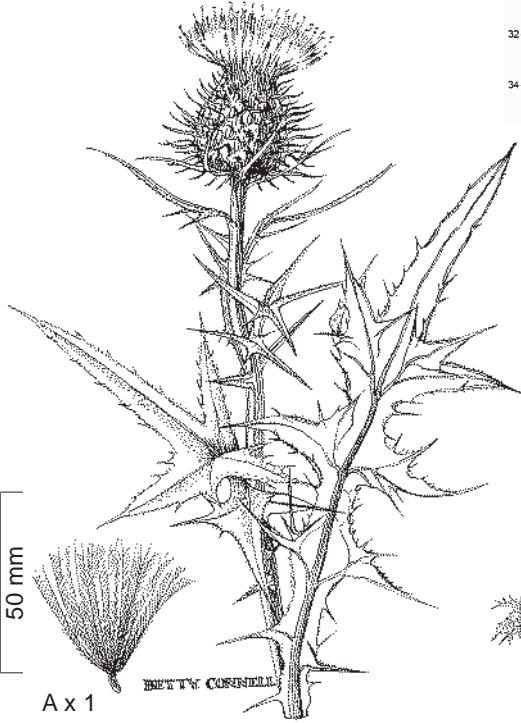
spear or Scotch thistle  
speer- of Skotse dissel

Family Asteraceace

Photo 12



Terrestrial herbs



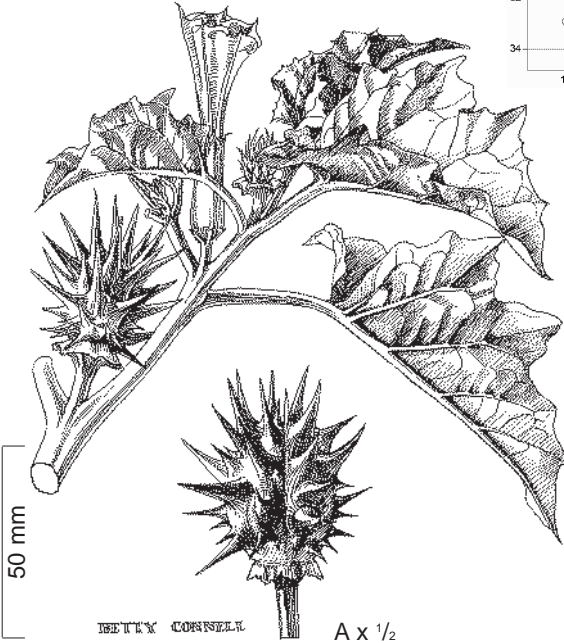
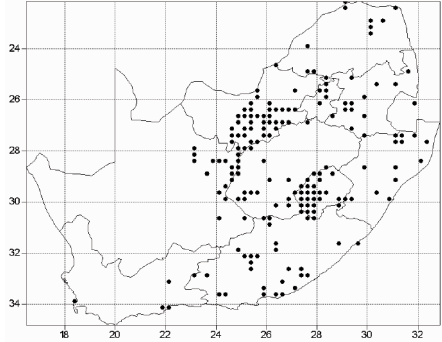
**Description:** Spiny, herbaceous biennial, forming a large, flat rosette of leaves and deep tap-root the first year and much-branched stems up to 1.5 m high in the second year; stems have spiny wings. **Leaves:** Dark green with stiff hairs above, white woolly beneath, deeply lobed, the lobes ending in strong spines. **Flowers:** Pink to mauve, in heads up to 50 mm long x 50 mm wide, surrounded by spiny bracts, September–April. **Fruits:** Achenes (**A**) tufted with silky hairs 20 mm long. **Use:** Honey source. **Invades:** Grassland, roadsides, old lands, vlei and dam margins, riverbanks, in cool, high rainfall areas. **Origin:** Europe incl. Mediterranean. **Invasive status:** Ruderal, agrestal and special effect weed (competitive in moist degraded grassland, irritant). **Declared weed. Herbicide registration. Biocontrol:** Natural enemies released. **Irritant:** Skin (spines).



# *Datura ferox* L.

large thorn apple  
grootstinkblaar

Family Solanaceae



Terrestrial herbs

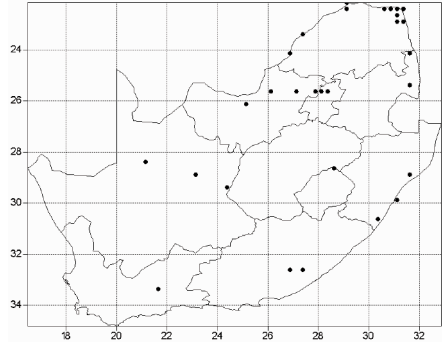
**Description:** Erect, subherbaceous annual up to 1.5 m high; stems sparsely hairy to glabrous, pale green. **Leaves:** Dark green above, paler below, ovate, up to 200 mm long, on long petioles; sparsely hairy, margins coarsely and irregularly toothed or lobed, veins prominent, bad-smelling. **Flowers:** White, solitary, narrowly funnel-shaped, up to 65 mm long, October–March. **Fruits:** Brown, hardened capsules (**A**),  $\pm$  erect, ovoid, up to 70 mm long x 60 mm wide, covered with stout, spreading spines up to 30 mm long. **Invades:** Wasteland, cultivated lands, roadsides, riverbanks, riverbeds. **Origin:** Probably tropical America. **Invasive status:** Ruderal, agrestal and special effect weed (competitive in watercourses, poisonous, irritant). **Declared weed. Herbicide registration. Poisonous:** Whole plant, seeds. **Irritant:** Skin (leaves, flowers, fruits).

***Datura innoxia* Mill.**  
 (*D. metel* misapplied in S.A.)

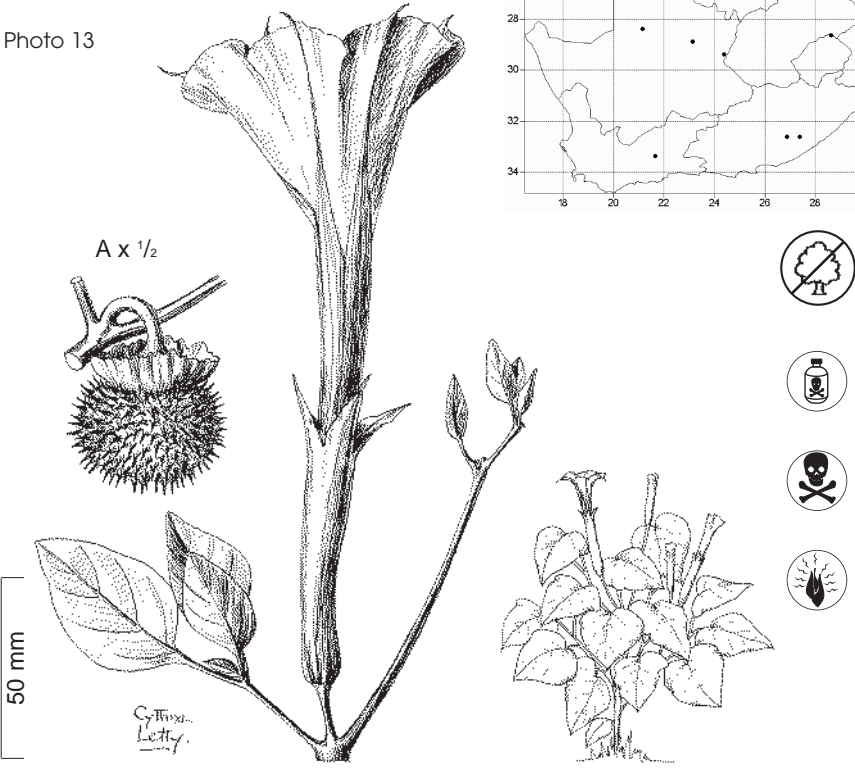
downy thorn apple  
 harige stinkblaar

Family Solanaceae

Photo 13



Terrestrial herbs

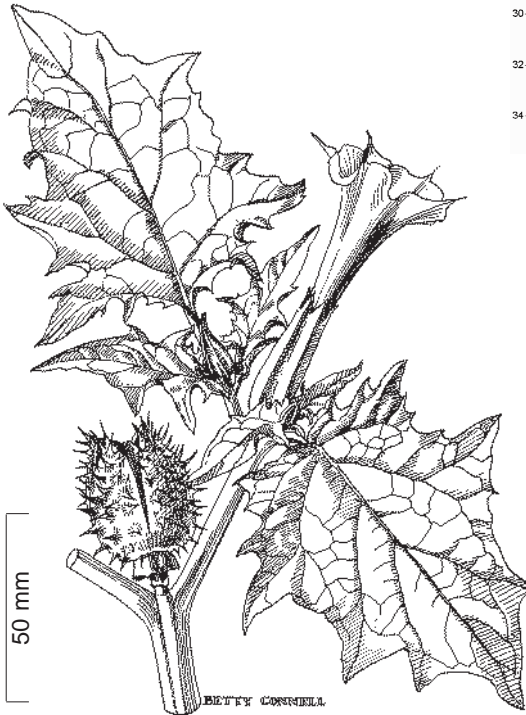
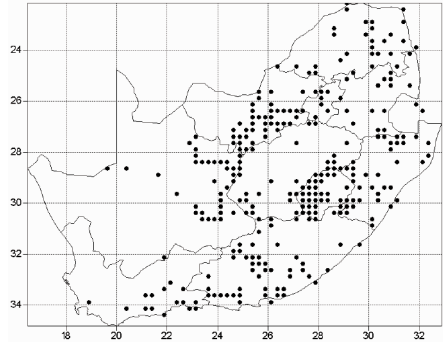


**Description:** Trailing or bushy herb up to 2 m high, softly grey-velvety on all parts.  
**Leaves:** Grey-velvety turning dark green and less velvety, ovate, up to 200 mm long, on long petioles, veins prominent, margins entire to shallowly toothed, bad-smelling. **Flowers:** White, solitary, large, up to 200 mm long x 120 mm wide, funnel-shaped, July–October(–all year). **Fruits:** Brown, hardened capsules (A), reflexed (nodding), globose, up to 50 mm long, densely covered with slender spines up to 10 mm long. **Cultivated for:** Ornament. **Invades:** Riverbeds, roadsides, edges of dams. **Origin:** N & C America (SW USA & Mexico). **Invasive status:** Ruderal, agrestal and special effect weed (competitive in watercourses, poisonous, irritant). **Declared weed. Herbicide registration. Poisonous:** Whole plant, seeds. **Irritant:** Skin (leaves, flowers, fruit).

## ***Datura stramonium* L.**

common thorn apple  
gewone stinkblaar

Family Solanaceae



Terrestrial herbs

**Description:** Erect, subherbaceous annual up to 1.5 m high; stems sparsely hairy to glabrous, green, brown or purple. **Leaves:** Dark green or purple, paler below, ovate, up to 200 mm long, on long petioles, sparsely hairy, veins prominent, margins coarsely and irregularly toothed or lobed, bad-smelling. **Flowers:** White, mauve or purplish, narrowly funnel-shaped up to 100 mm long, October–March (–all year). **Fruits:** Brown, hardened capsules, ± erect, ovoid, up to 50 mm long x 30 mm wide, covered with slender spines up to 10 mm long. **Invades:** Wasteland, cultivated lands, roadsides, riverbanks, riverbeds. **Origin:** Tropical America. **Invasive status:** Ruderal, agrestal and special effect weed (competitive in watercourses, poisonous, irritant). **Declared weed. Herbicide registration. Poisonous:** Whole plant, seeds. **Irritant:** Skin (leaves, flowers, fruit).

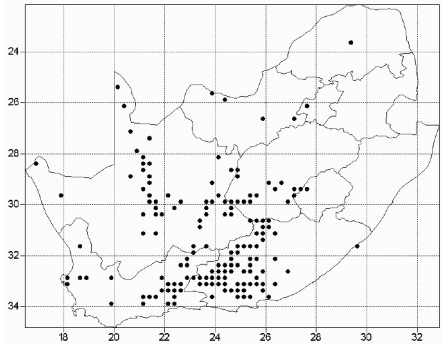
**Salsola kali** L.

(= *S. australis* R.Br.)

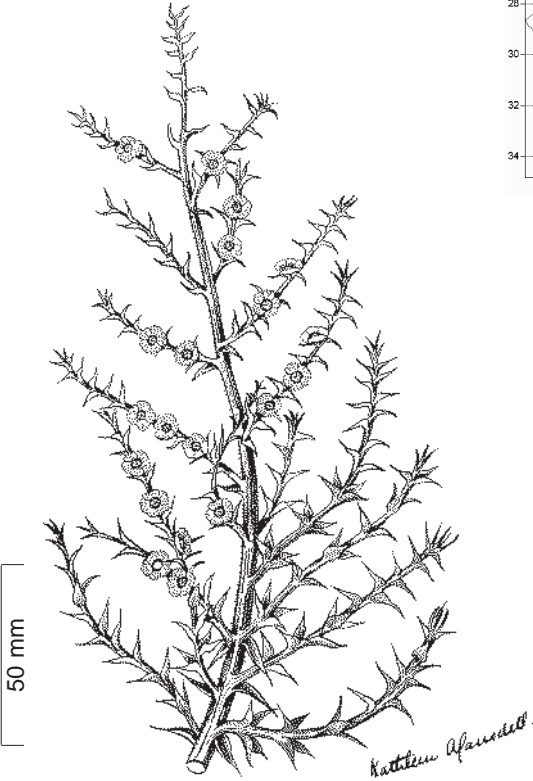
Russian tumbleweed

Russiese rolbossie

Family Chenopodiaceae



Terrestrial herbs



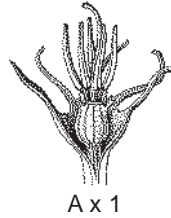
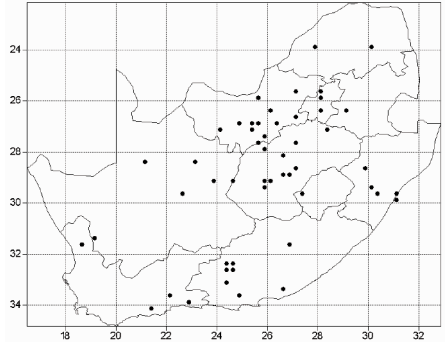
**Description:** Robust, much-branched, rounded annual up to 0.6 m high, with strong tap roots; the aerial portion tumbling with the wind when dry. **Leaves:** Green turning brownish, ± succulent when young, narrowly linear, 10-25 mm long, tips becoming sharp-pointed and rigid with age. **Flowers:** Inconspicuous, white, yellowish or greenish, cup-shaped, in the leaf axils, September–April. **Fruits:** Small, brownish capsules, usually with five spreading membranous, veined wings (illustrated on mature portion of plant). **Invades:** Roadsides, disturbed sites, riverbanks, riverbeds, in dry or somewhat saline areas. **Origin:** Europe & Asia. **Invasive status:** Ruderal and potential transformer. **Herbicide registration.**

# *Solanum elaeagnifolium* Cav.

silver-leaf bitter apple  
satansbos

Family Solanaceae

Photo 14

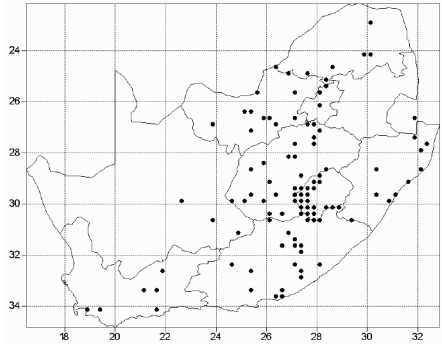


**Description:** Herbaceous shrublet 300–600 mm high, with annual stems and perennial, deep, spreading roots; stems and under-surfaces of leaves covered with white or silvery, felt-like hairs; orange or reddish prickles arm the stems and mainly the undersides of the leaves, or are absent. **Leaves:** Greyish or silvery-green above, often wavy and folded upwards along their midribs to expose silvery or whitish under-surfaces. **Flowers:** Mauve, blue or white (**A**: petals removed), 20 mm long, October–March. **Fruits:** Shiny berries (**B**), 12 mm across, green with white patches, turning yellow. **Invades:** Ploughed lands, grazing camps, forestry plantations, roadsides, water furrows. **Origin:** N, C & S America (SW USA, NE Mexico & possibly Argentina). **Invasive status:** Ruderal & agrestal weed. **Declared weed.** **Biocontrol:** Effective agents available. **Poisonous:** Young fruits, leaves.

# *Xanthium spinosum* L.

spiny cocklebur  
boetebossie

Family Asteraceae



Terrestrial herbs

**Description:** Much-branched annual up to 1.2 m high; stems smooth, green or yellowish, armed with three-pronged spines. **Leaves:** Blue-green, sparsely hairy above, densely white-woolly below, entire or three-lobed,  $\pm$  lanceolate, up to 60 mm long x 20 mm wide. **Flowers:** Greenish, inconspicuous in axils of leaves, October–April. **Fruits:** Burs (**A**)  $\pm$  10 mm long, green, with reddish, hooked spines, turning yellowish then brown. **Invades:** Cultivated lands, old lands, riverbanks.

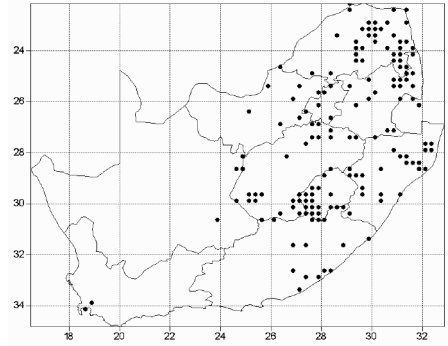
**Origin:** Uncertain, probably S America. **Invasive status:** Ruderal & special effect weed (competitive in watercourses, poisonous, irritant). **Declared weed.**

**Herbicide registration. Poisonous:** Seedlings, seeds, burs. **Irritant:** Skin (burs).

# *Xanthium strumarium* L.

large cocklebur  
kankerroos

Family Asteraceae



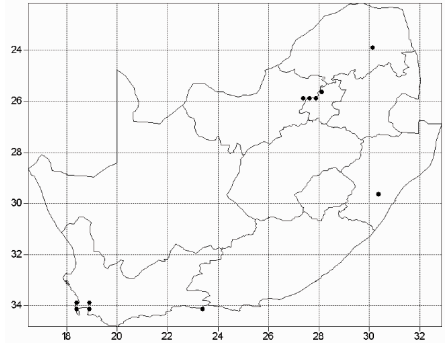
Terrestrial herbs

**Description:** Much-branched annual up to 1.2 m high; stems stout, green, brownish or reddish-brown, often red-spotted, roughly-hairy. **Leaves:** Green, paler below, shortly and harshly hairy on both surfaces; broadly three-lobed, up to 180 mm long x 180 mm wide, on long petioles. **Flowers:** Green, inconspicuous, in the leaf axils, October–April. **Fruits:** Burs (**A**) up to 20 mm long, green turning yellowish then brown, in stalked axillary clusters, each bur crowned with two stout, curved or straight horns and covered with hooked spines. **Use:** Honey source. **Invasives:** Cultivated lands, old lands, roadsides, riverbanks. **Origin:** Uncertain, probably C & S America. **Invasive status:** Ruderal & special effect weed (competitive in watercourses, poisonous, irritant). **Declared weed. Herbicide registration.** **Poisonous:** Seedlings, seeds, burs. **Irritant:** Skin (burs).

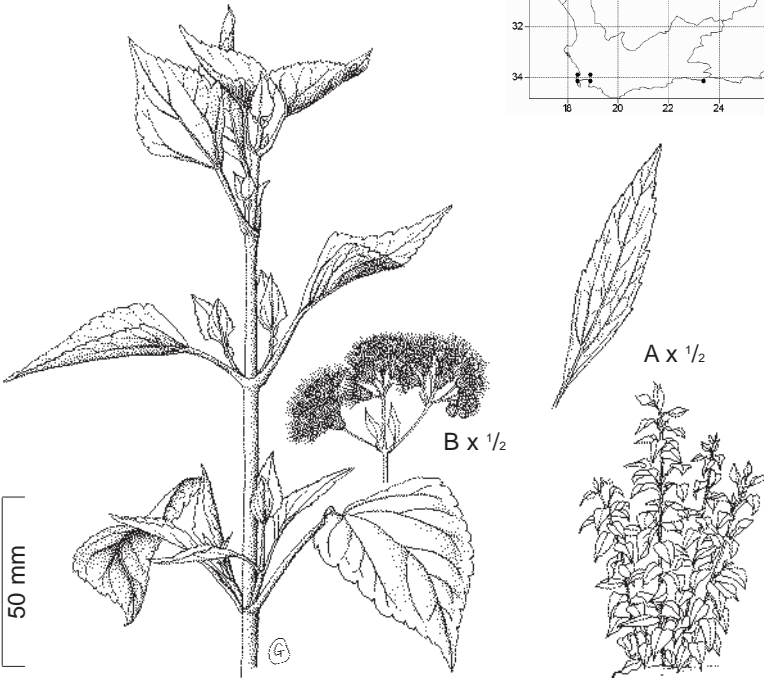
***Ageratina adenophora*** (Spreng.) R.M.King & H.Rob. &  
***A. riparia*** (Regel) R.M.King & H.Rob.  
 (= *Eupatorium adenophorum* Spreng. &  
*E. riparium* Regel)

crofton weed & creeping crofton weed

Family Asteraceae



Terrestrial herbs



**Description:** *A. adenophora* (main illustration): perennial herb or soft shrub up to 2 m high; leaves and stems densely glandular-hairy; stems may be galled; *A. riparia*: weak-stemmed perennial herb up to 1 m high, stems purplish, creeping in lower parts, rooting at nodes, thinly hairy but not glandular. **Leaves:** *A. adenophora*: dark green,  $\pm$  rhombic, 30–60 mm wide, three-nerved from the base, non-aromatic; *A. riparia* (A): narrowly ovate, 8–30 mm wide, main pair of veins arising distinctly above base. **Flowers:** White, in terminal clusters (B),  $\pm$  5 mm long, August–December. **Fruits:** Bristly achenes,  $\pm$  2 mm long. **Cultivated for:** Ornament. **Invade:** Roadsides, streambanks, forest margins, plantations. **Origin:** C America (Mexico). **Invasive status:** Special effect weeds (competitive, poisonous). **Declared weeds. Biocontrol:** Natural enemies released on *A. adenophora*. **Poisonous:** *A. adenophora*.

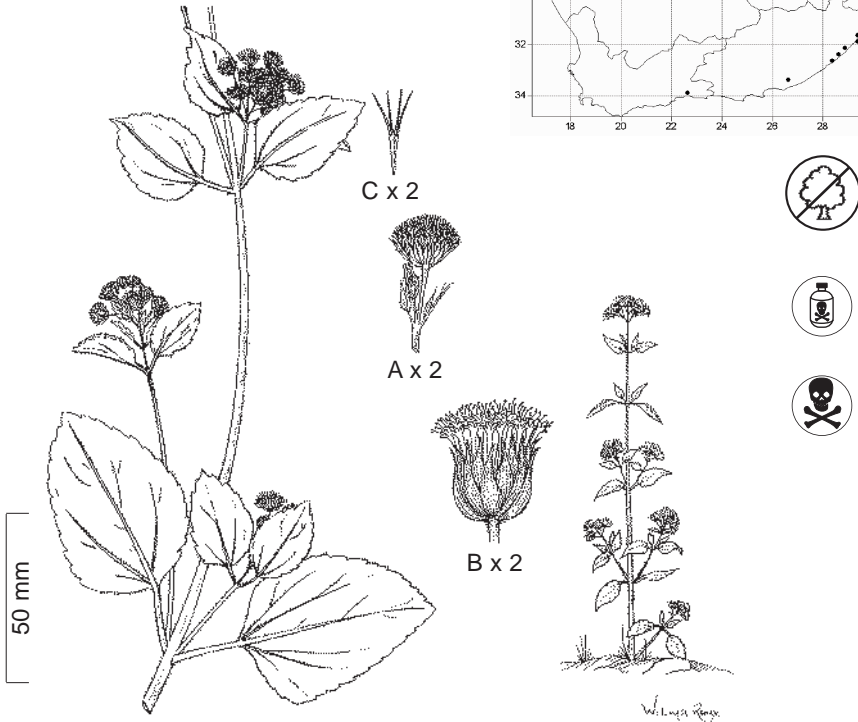
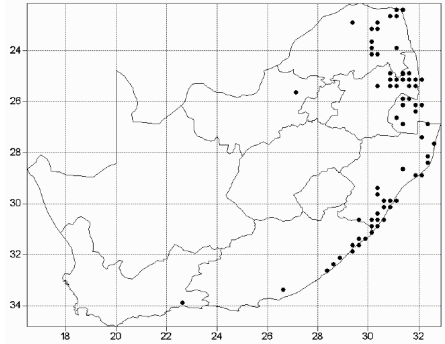


***Ageratum conyzoides* L. &  
*A. houstonianum* Mill.**

invading ageratium & Mexican ageratium  
indringer-ageratum & Mexikaanse ageratium

Family Asteraceae

Photo 15



**Description:** Softly hairy, slightly aromatic, annual herbs with fluffy flowerheads; stems green, purplish or reddish, 0.3–1.0 (–1.5) m high. **Leaves:** Bright green, ovate, in opposite pairs, margins shallowly toothed or scalloped. **Flowers:** Mauve, blue, pinkish or white in compact terminal flowerheads, all year; *A. conyzoides* (main illustration): heads 4–5 mm across (**A**), with slender, hardly exserted styles; *A. houstonianum*: heads 6–9 mm across, showing long, thicker, exserted styles (**B**). **Fruits:** Brown, one-seeded achenes (**C**). **Cultivated for:** Ornament. **Invade:** Forest, woodland, grassland, cultivated lands, riverbanks, wetlands, coastal dunes. **Origin:** C & S America & W Indies (*A. conyzoides*); C & S Mexico (*A. houstonianum*). **Invasive status:** Special effect weeds (competitive, poisonous). **Declared weeds excluding cultivars of *A. houstonianum*.** **Herbicide registration:** *A. conyzoides*. **Poisonous.**

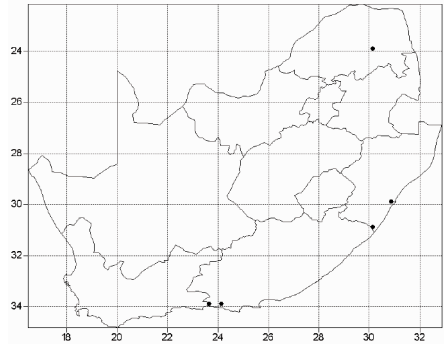
Terrestrial herbs

***Alpinia zerumbet*** (Pers.) B.L.Burtt & R.M.Sm.

(= *A. speciosa* (J.C.Wendl.) K.Schum.)

shell ginger or pink porcelain lily  
skulptgemmer of pienkporseleinlelie

Family Zingiberaceae



Terrestrial herbs

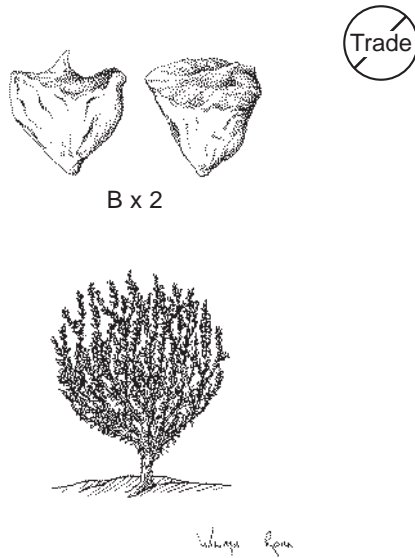
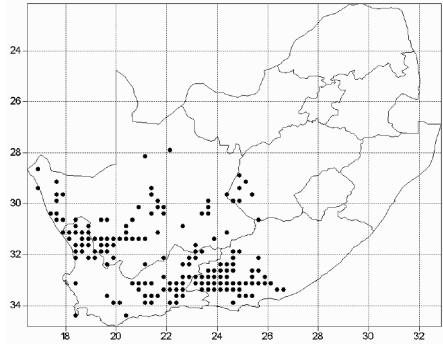


**Description:** Robust, rhizomatous, clump-forming perennial up to 4 m high; leaves broad, lanceolate, sheathing the stems; inflorescence drooping, showy, fragrant. **Leaves:** Bright green, glabrous and shining, up to 600 mm long and 200 mm wide. **Flowers:** In racemes up to 400 mm long, main axis very hairy; white, waxy, pink-tinged bracteoles enfold the buds; flowers orchid-like; corolla white, lip to 40 mm, crinkled, yellow, with red and brown variegations; September–March. **Fruits:** Red capsules (A). **Cultivated for:** Ornament. **Invades:** Watercourses, forest margins, roadsides, urban open space in moist, warm, coastal and inland regions. **Origin:** East Asia (East Indies). **Invasive status:** Potential transformer.

***Atriplex lindleyi* Moq. subsp. *inflata* (F.Müll.) P.G. Wilson**

sponge-fruit saltbush  
blasiesoutbos

Family Chenopodiaceae



**Description:** Low, softly woody shrublet 0.2–0.4(–0.7) m high, with creamy-white branches. **Leaves:** Silver-grey to bluish-green, scaly, about 2 x longer than broad, margins smooth or slightly wavy and toothed. **Flowers:** Cream to yellow, minute, in tight axillary clusters at the ends of leafy stems (A), September– February(–all year). **Fruits:** Utricles (B), grey-green turning pink or straw-coloured, spongy and inflated, sub-globose, upper surface flattened, up to 10 mm long and wide, one-seeded; (C: fruiting stem). **Invades:** Roadsides, degraded land, sandy riverbeds, coastal dunes, pans, low-lying areas, mainly in semi-arid regions. **Origin:** SE, C & SW Australia. **Invasive status:** Transformer. **Declared invader (category 3).**



Terrestrial herbs

***Bryophyllum delagoense*** (Eckl. & Zeyh.) Schinz

(= *B. tubiflorum* Harv.; *Kalanchoe delagoensis* Eckl. & Zeyh.;

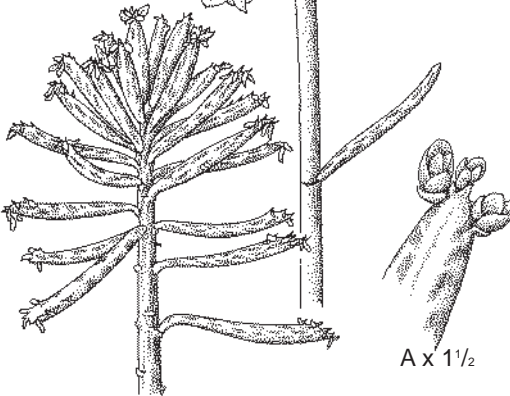
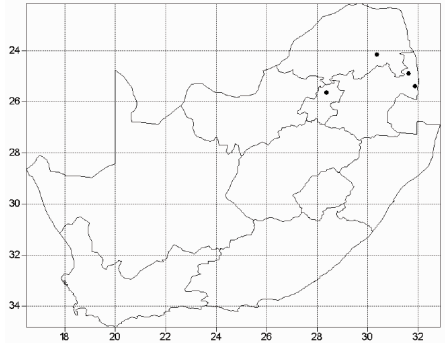
*K. tubiflora* Raym.-Hamet)

chandelier plant

kandelaarplant

Family Crassulaceae

Photo 16



Terrestrial herbs

**Description:** Perennial, erect, hairless, succulent herb or shrublet 0.2–1.2 m high, reproducing rapidly by vegetative offsets at the leaf tips and from seed; often forming dense stands. **Leaves:** Grey-green, mottled with darker green to reddish spots, cylindric, opposite on young shoots, in whorls of three or alternate on older shoots, ± leafless at flowering time; 15–130 mm long and 2–6 mm wide; apex (A) with 2–9 teeth producing plantlets in their axils. **Flowers:** Pale orange to deep magenta, tubular, 30–40 mm long, pendent; in broad terminal clusters up to 150 mm wide, June–July. **Fruits:** Follicles, with numerous seeds 1–2 mm long. **Cultivated for:** Ornament. **Invades:** Hot and dry rocky ridges in savanna; urban open space. **Origin:** Madagascar. **Invasive status:** Special effect weed (competitive, poisonous). **Declared weed. Biocontrol:** Under investigation. **Poisonous.**

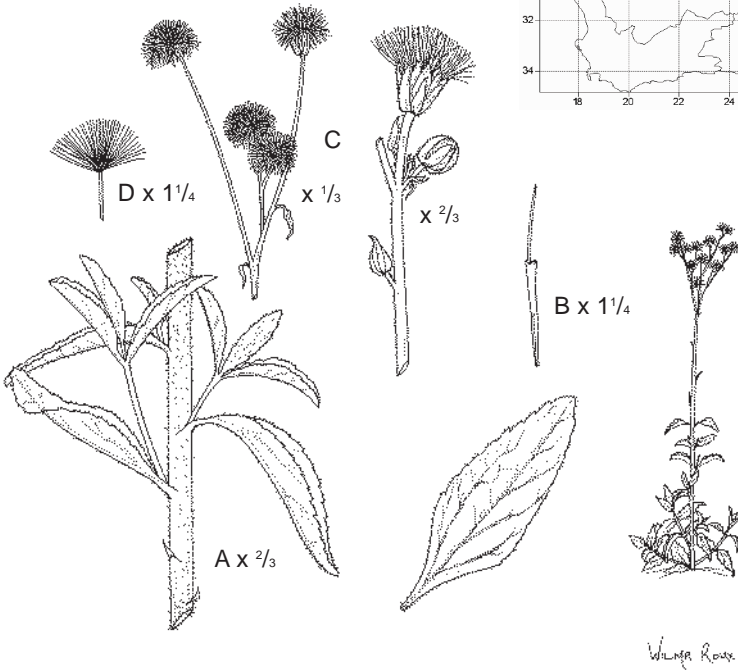
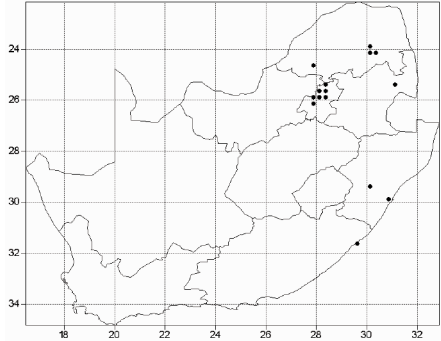
# ***Campuloclinium macrocephalum*** (Less.) DC.

(= *Eupatorium macrocephalum* Less.)

pom pom weed  
pom-pom bossie

Family Asteraceae

Photo 17



**Description:** Erect, perennial herb with fluffy, pink flowerheads; stems green to purplish, up to 1.3 m high, dying back annually to a root crown; roots thickened, tuber-like; stems and leaves (A) covered with rough, bristly hairs. **Leaves:** Light green, lanceolate-elliptic, up to 80 mm long x 20 mm wide, margins serrated, becoming small and more distant upwards. **Flowers:** Pink (B: single flower), surrounded by purple bracts, in compact terminal heads 15 mm long x 25 mm wide (C), December–March. **Fruits:** Brown, one-seeded achenes (D), 5 mm long, ringed with a tuft of bristles. **Cultivated for:** Ornament. **Invades:** Grassland, road-sides. **Origin:** S America (Argentina & Brazil). **Invasive status:** Transformer. **Declared weed.**

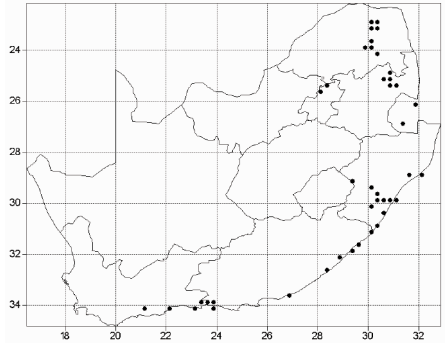
Terrestrial herbs

***Canna indica*** L. (= *C. edulis* Ker Gawl.) &  
***C. X generalis*** L.H.Bailey

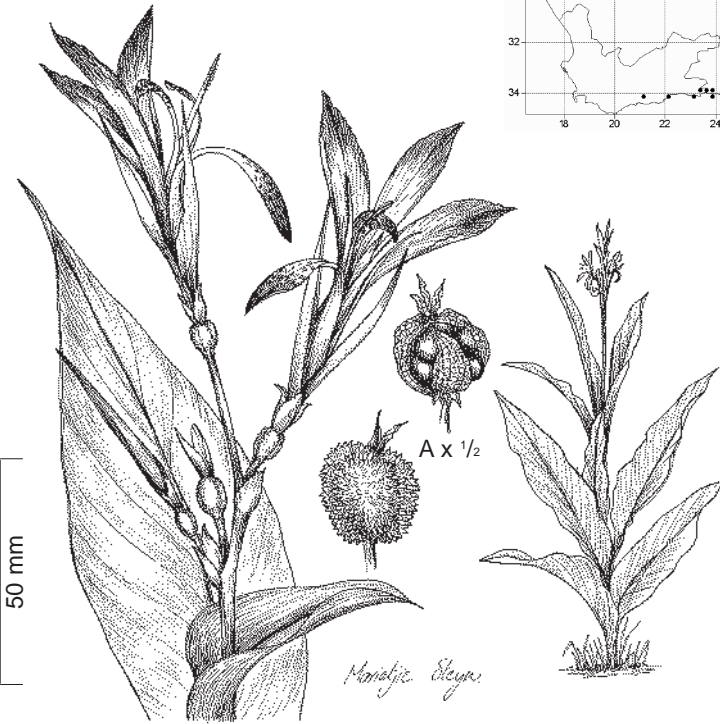
Indian shot & garden canna  
 Indiese kanna & tuinkanna

Family Cannaceae

Photo 18



Terrestrial herbs

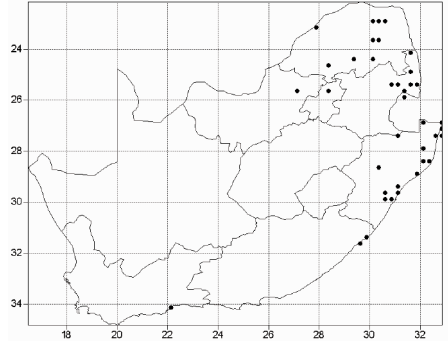


**Description:** Perennial rhizomatous herbs with erect, unbranched, leafy shoots 1–2 m high; leaves large, narrowly ovate to elliptic, sheathing the stem; flowers showy, non-fragrant. **Leaves:** Green (*C. indica* illustrated), glaucous or purple-bronze (*C. X generalis*), 200–600 mm x 100–300 mm, tapering to a point. **Flowers:** Red or orange, usually yellow below, narrow, 40–50 mm long (*C. indica*); yellow, red, orange, white, other colours, broad, 80–90 mm long (*C. X generalis*), September–April (–all year). **NB** *C. glauca*, ?naturalised, has narrow glaucous leaves to 150 mm wide, and yellow flowers. **Fruits:** Green, spiny, three-valved capsules (A). **Cultivated for:** Ornament. **Invade:** Streambanks, moist sites, forest & plantation edges. **Origin:** Tropical America (C & S America & W Indies). **Invasive status:** Potential transformers. **Declared weed (*C. indica* excluding hybrid cultivars).**

**Catharanthus roseus** (L.) G. Don  
 (= *Vinca rosea* L.; *Lochnera rosea* (L.) Spach.)

Madagascar periwinkle  
 begraafplaasblom

Family Apocynaceae



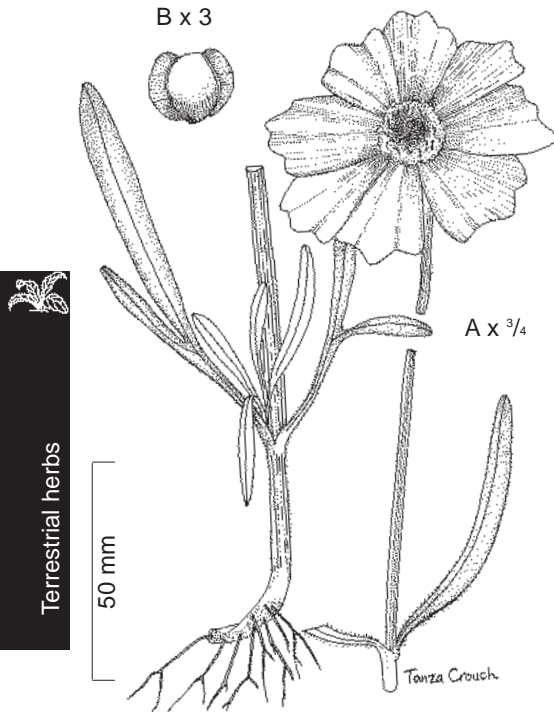
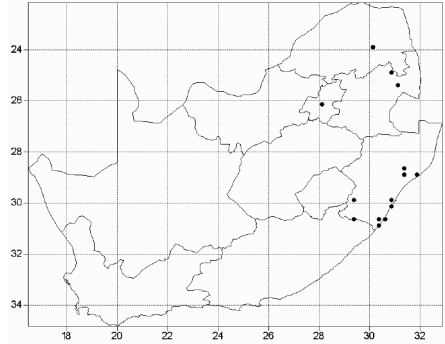
Terrestrial herbs

**Description:** Erect perennial herb, woody at the base, up to 1 m high. **Leaves:** Bright green and glossy, sometimes yellowish, midvein prominent; 40–80 mm long and 10–30 mm wide. **Flowers:** Pink or white, solitary or paired in the axils of the upper leaves; flowering all year. **Fruits:** Green cylindrical follicles (A) 25–35 mm long (easily mistaken for unopened flower buds). **Cultivated for:** Ornament, medicinal purposes. **Invades:** Riverbanks, rocky outcrops, roadsides, waste places in dry savanna but also plantation, forest and coastal scrub margins. **Origin:** Madagascar. **Invasive status:** Special effect weed (competitive, poisonous). **Poisonous:** Whole plant.

## *Coreopsis lanceolata* L.

tickseed  
coreopsis

Family Asteraceae



**Description:** Perennial herb producing offsets from a short rhizome; flowering stems 300–500 mm high; stems longitudinally ridged and sparingly branched; stems and leaves thinly hairy or glabrous; leaves mostly in a tuft near the base.

**Leaves:** Dull green, linear to oblanceolate and tapering to the base, 50–150 mm long, upper entire, lower usually pinnatifid (with lateral lobes). **Flowerheads:** Bright yellow and showy (A), to 60 mm across, solitary on very long peduncles; about eight petals (ray florets) two to three toothed, October–December.

**Fruits:** Small brown achenes, 3 x 3 mm, concave, broadly winged (B).

**Cultivated for:** Ornament. **Invades:** Grassland, roadsides. **Origin:** E USA (Michigan to S Florida & New Mexico). **Invasive status:** Special effect weed (competitive). **Proposed declared invader.**

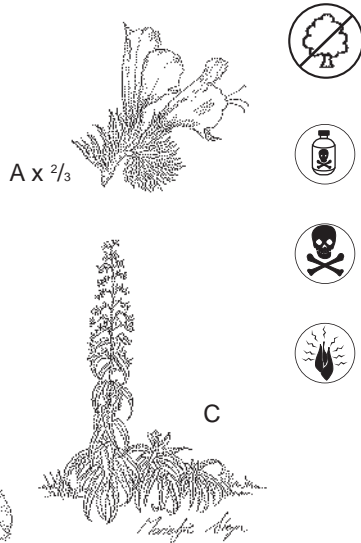
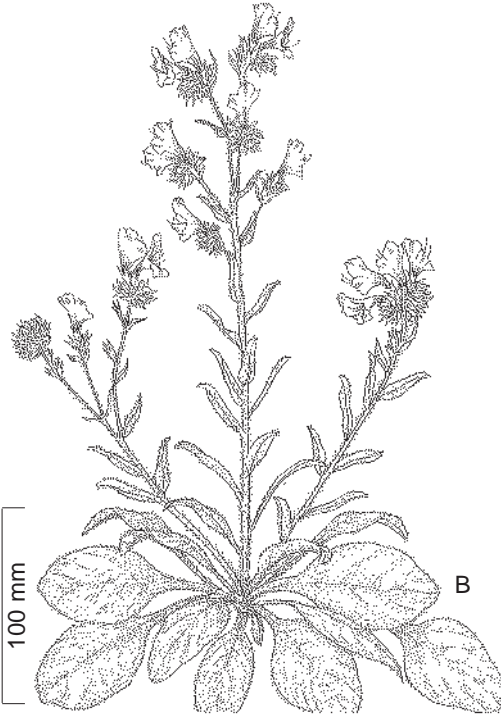
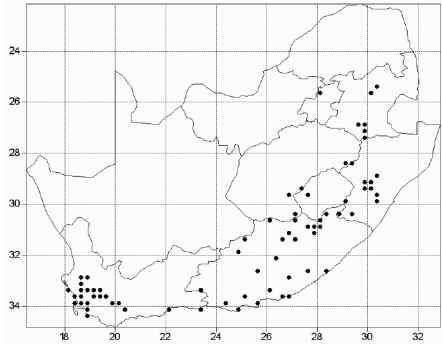


***Echium plantagineum* L. (= *E. lycopsis* L.) & *E. vulgare* L.**

Patterson's curse & blue echium  
pers-echium & blou-echium

Family Boraginaceae

Photo 19



Terrestrial herbs

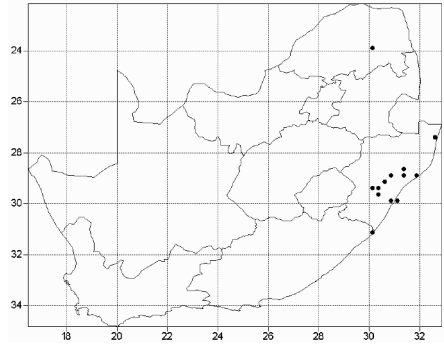
**Description:** Deep-rooted biennials, up to 1 m high; leaves and stems covered with coarse, white hairs with bulbous bases. **Leaves:** Stem leaves small, sessile; basal rosette leaves large, petiolate or sessile. **Flowers:** Blue or purple (A), in one-sided racemes up to 300 mm long, October–April. **Fruits:** Small nutlets. **NB *E. plantagineum* (A & B):** inflorescence laxly branched, two exerted stamens per flower; basal leaves broad, petiolate, with prominent lateral veins. ***E. vulgare* (C):** inflorescence spike-like, dense, 4–5 exerted stamens per flower; basal leaves narrow, sessile, without prominent lateral veins. **Cultivated for:** Ornament; honey source. **Invasive:** Cultivated lands, pastures, roadsides. **Origin:** Europe & Asia. **Invasive status:** Ruderal & agrestal weeds. **Declared weeds. Herbicide registration. Poisonous. Irritant:** Skin (hairy stems).

***Hedychium coccineum* Sm. &  
*H. gardnerianum* Ker Gawl.**

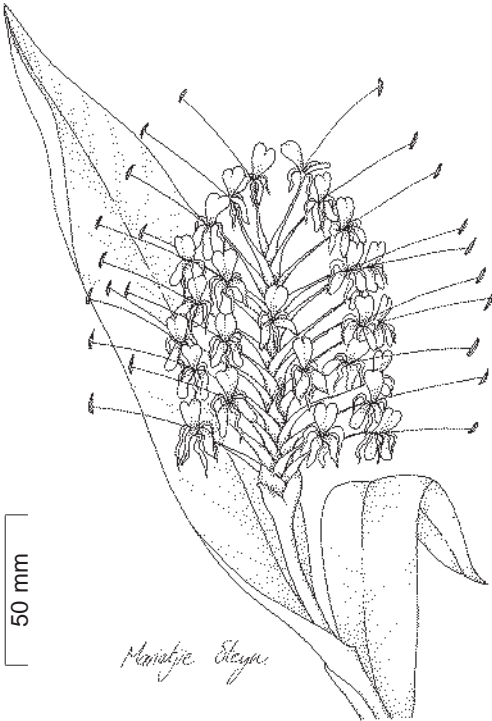
red & kahili ginger lilies  
rooi- & kahiligemmerlelies

Family Zingiberaceae

Photo 20



Terrestrial herbs

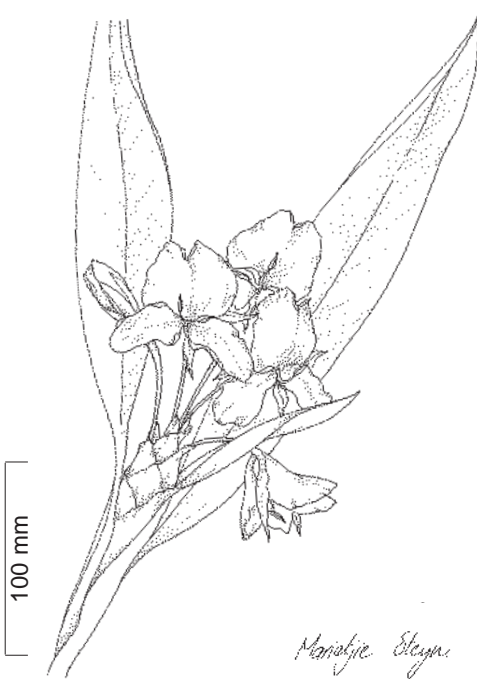
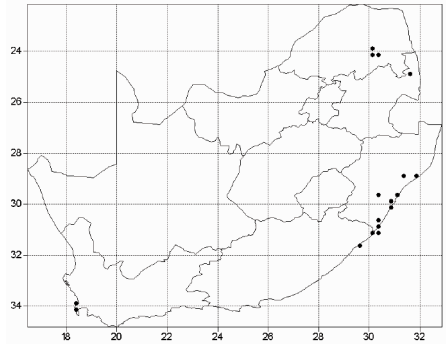


**Description:** Robust, rhizomatous herbs up to 2 m high; leaves broad, lanceolate, sheathing the stems; flowers showy, fragrant, with long-exserted stamens. **Leaves:** Bright green or greyish-green, tapering, up to 500 mm long, downy beneath. **Flowers:** In spikes up to 350 mm long; each flower has a slender tube, three narrow and three broad petal-like lobes, floral bracts  $\pm$  cylindrical, January–March; *H. coccineum*: red flowers, pink stamens; *H. gardnerianum* (illustrated): yellow flowers, red stamens. **Fruits:** Capsules. **Cultivated for:** Ornament. **Invade:** Forests, plantations, riverbanks, moist shaded sites. **Origin:** Asia (Himalayas). **Invasive status:** Transformers. **Declared weeds.**

***Hedychium coronarium*** J.König &  
***H. flavescens*** Roscoe

white & yellow ginger lilies  
wit- & geelgemmerlilies

Family Zingiberaceae



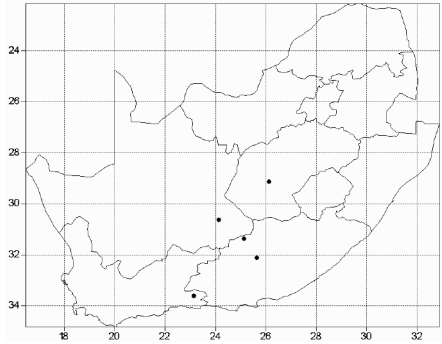
**Description:** Robust, rhizomatous herbs up to 2 m high; leaves broad, lanceolate, sheathing the stems; flowers fragrant, stamens not or only slightly exerted. **Leaves:** Bright green, up to 600 mm long, tapering, downy beneath. **Flowers:** In spikes up to 300 mm long; each flower has a slender tube, three narrow and three broad, petal-like lobes, floral bracts large, broad, tightly over-lapping, January–April; *H. coronarium* (illustrated.): white, sometimes yellowish basally; *H. flavescens*: yellow, sometimes reddish-yellow basally, calyx ± the length of corolla tube (differs from *H. flavum*: yellow, calyx nearly as long as the corolla tube). **Fruits:** Capsules. **Cultivated for:** Ornament. **Invasive:** Forests, plantations, riverbanks, moist shaded sites. **Origin:** Asia (India to Indonesia & Himalayas respectively). **Invasive status:** Transformers. **Declared weeds.**

# ***Lepidium draba* L.**

(= *Cardaria draba* (L.) Desv.)

hoary cardaria  
peperbos

Family Brassicaceae



Terrestrial herbs



**Description:** Perennial sparsely hairy, densely leafy herb 150–600(–900) mm high with erect whitish stems and deep roots; regenerating from root suckers. **Leaves:** Bright green, densely softly pubescent on the lower half of the stem, glabrous on the upper half; up to 100 mm long, entire to sharply toothed; upper leaves clasping the stem with rounded or acute lobes. **Flowers:** White (**A**), minute, sweetly scented in conspicuous, dense terminal heads, September–December. **Fruits:** Capsules (**B**), about 2 mm long, inflated, indehiscent, heart-shaped with prominent style, splitting into two valves. **Invades:** Roadsides, cultivated lands, waste places. **Origin:** Mediterranean & Eurasia. **Invasive status:** Ruderal & agrestal weed. **Declared weed. Herbicide registration. ?Poisonous:** Suspected of livestock poisoning.

## *Lilium formosanum* A. Wallace

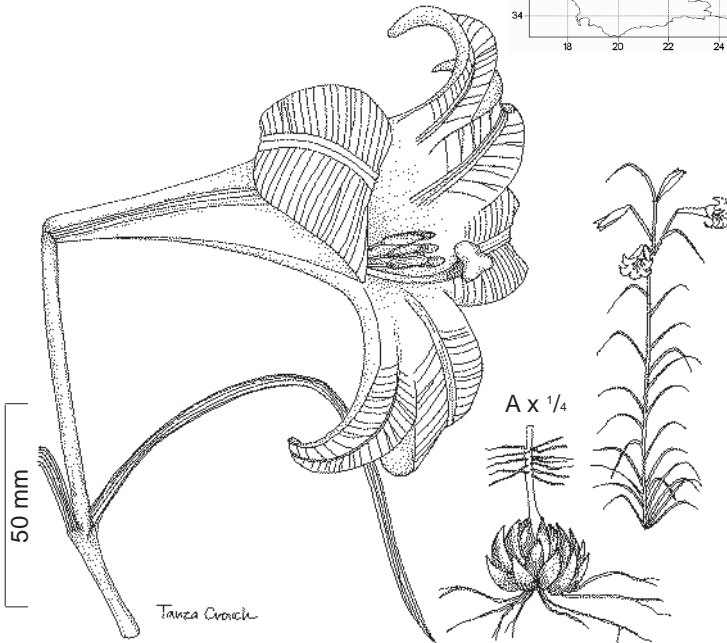
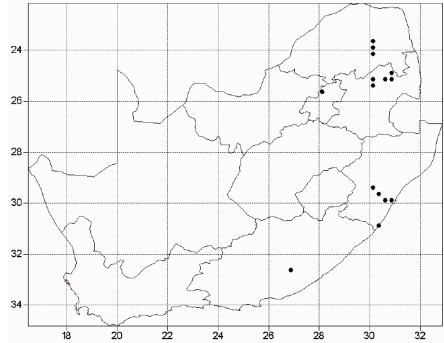
(= *L. longiflorum* Thunb. var. *formosanum* Baker)

(*L. longiflorum* sometimes misapplied in S.A.)

St Joseph's, trumpet or Formosa lily  
Sintjosefs- of trompettelie

Family Liliaceae

Photo 21



**Description:** Bulbous herb (A); stems 1.5–(2.0) m high, purplish-brown towards the base, usually ± rough-hairy. **Leaves:** Dark shiny green, scattered, narrow, 5–(10) mm wide x 75–200 mm long, linear to narrowly oblong. **Flowers:** White, flushed with reddish-purple outside (rarely pure white), white inside, narrowly funnel-shaped, 120–200 mm long, fragrant, usually 1 or 2 (up to 10), borne horizontally on stalks 50–150 mm long; nectary-furrows bordered with hairs and warts; filaments papillose towards the base; pollen yellow; January–March.

**Fruits:** Capsules, 70–90 mm long. **Cultivated for:** Ornament. **Invades:** Grassland, moist sites, roadsides, plantations. **Origin:** Asia (Taiwan). **Invasive status:** Special effect weed (competitive). **Declared invader (category 3).** NB *L. longiflorum* is usually shorter, 0.3–1.0 m, with pure white flowers, leaves 10–15 mm wide; filaments smooth; nectary-furrows hairless.

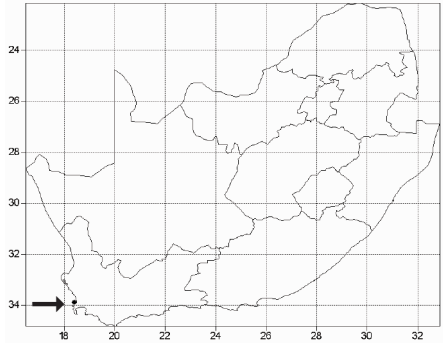


# *Lythrum salicaria* L.

purple loosestrife

Family Lythraceae

Terrestrial herbs



*Plouffe degn.*

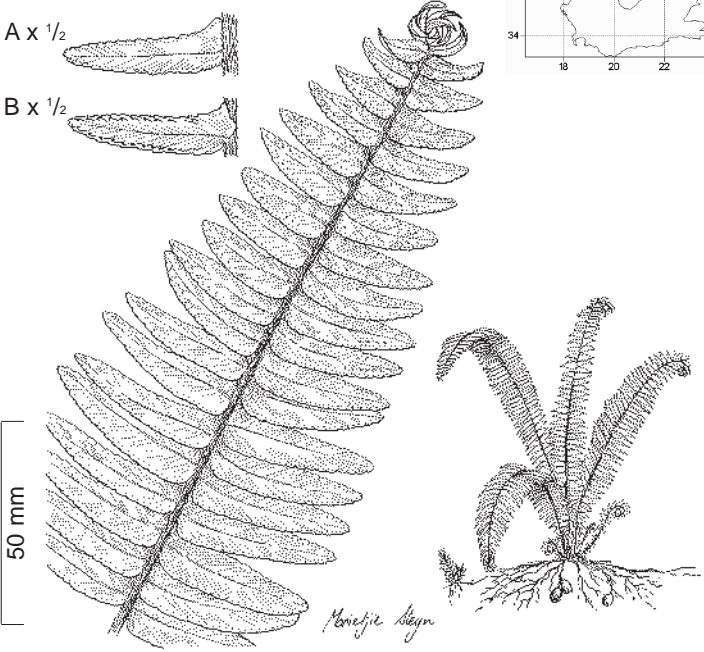
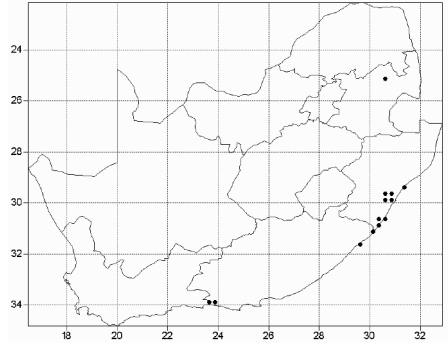
**Description:** Erect, shortly hairy perennial with showy spikes of rose-purple flowers; stems stout, four-angled, almost simple, up to 2 m high from a rootstock. **Leaves:** Stalkless, half-clasping the stem, lanceolate, mostly opposite or in whorls of three. **Flowers:** Rose-purple, 10–15 mm across (**A**), in axillary whorls and forming a dense spike 150–250 mm long; flowering in summer. **Fruits:** Capsules 5 mm long. **Cultivated for:** Ornament. **Invades:** Moist sites, watercourses; to date only recorded from the Liesbeeck River, Cape Town. **Origin:** Eurasia (Britain, C & S Europe, C Russia, Japan, China, SE Asia & N India). **Invasive status:** Potential transformer. **Declared weed.**

# *Nephrolepis exaltata* (L.) Schott

(= *Polypodium exaltatum* L.)

sword fern  
swaardvaring

Family Davalliaceae



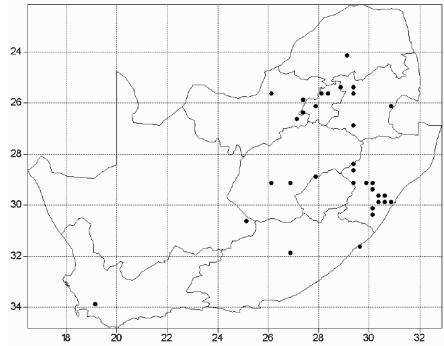
**Description:** A stiff evergreen fern up to 1 m high; terrestrial or epiphytic; forms extensive colonies by means of stolons; produces tubers. **Leaves:** Pale green, pinnate, up to 1 000 mm x 60 mm; pinnae touching or overlapping, oblong with distinct auricles at the base; rhachis densely hairy (A). Distinguished from the alien (?naturalised), *N. coralifolia*, which has a hairy pinna midrib above, from the African spp., *N. biserrata*, with large fronds up to 4 m long & linear pinnae without auricles, & *N. undulata* (north of Limpopo River) which has a glabrous rhachis. **Fruiting bodies:** Brown, 1.0–1.5 mm wide, on the undersurface of the pinnae (B). **Cultivated for:** Ornament. **Invades:** Swamp forest, forest margins and coastal bush on sandy soils. **Origin:** N & C America (Florida & Mexico) & W Indies. **Invasive status:** Transformer. **Declared invader (category 3) excluding cultivars.**

Terrestrial herbs

# *Oenothera* spp.

evening primroses  
aandblomme

Family Onagraceae



Terrestrial herbs



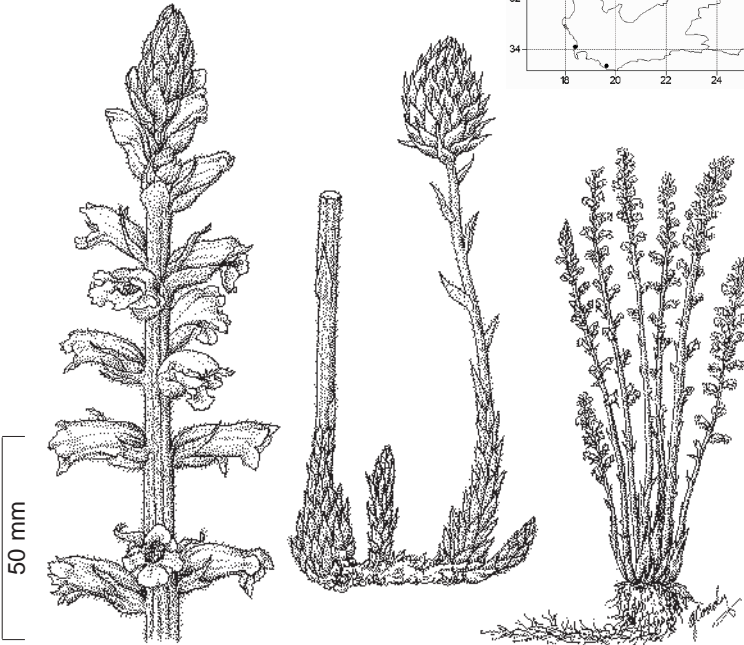
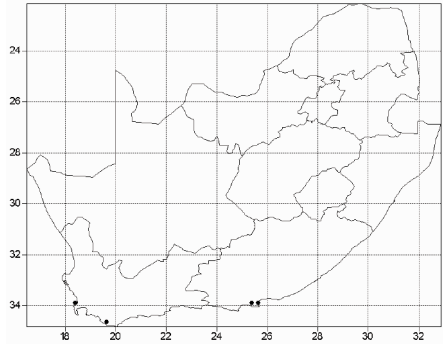
**Description:** Annual, biennial or perennial herbs 0.2–2.0 m high, stems erect, simple or branched, with or without a basal rosette; stems hairy, often with red-based glandular hairs; flowers sometimes fragrant;  $\pm$  14 spp. naturalised; map shows *O. biennis* (illustrated) and *O. jamesii*, common and giant evening primroses. **Leaves:** Lanceolate to elliptic or obovate, up to 200 mm long; stipules absent. **Flowers:** Yellow, white or rose-purple, 10–80 mm across, with floral tube; axillary, often clustered near ends of stems, opening near sunset or sunrise, usually fading within a day; September–April. **Fruits:** Capsules (**A**) 8–55 mm long. **Cultivated for:** Ornament; medicinal value. **Invade:** Riverbanks, moist sites, roadsides, waste places. **Origin:** N & S America. **Invasive status:** Ruderals & potential transformers. **Proposed declared invaders. Herbicide registration.**



## ***Orobanche minor*** Sm.

clover or lesser broomrape  
klawerbesemraap

Family Orobanchaceae



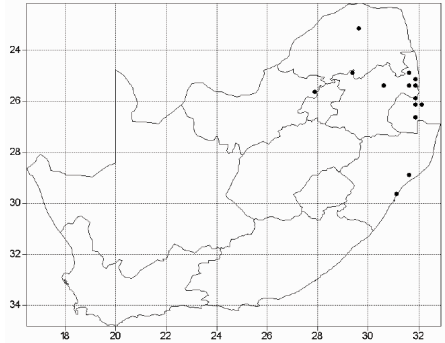
**Description:** Erect herbaceous annual up to 500 mm high with purple, sticky pubescent stems branching only at the base; root-parasite without chlorophyll; parasitic on leguminous crops and various other plants. **Leaves:** Purplish-brown bracts up to 15 mm long. **Flowers:** Yellowish, flushed and veined with purple, 20 mm long, subtended by a purplish-brown bract, no bracteoles present; in dense terminal spikes, September–November. **Fruits:** Brown membranous capsules splitting into two valves with numerous small seeds less than 0.5 mm long. **Invades:** Agricultural crop lands, pine plantations, gardens. **Origin:** Europe. **Invasive status:** Agrestal and ruderal weed. **Declared weed.** **NB:** A similar species, *O. racemosa*, usually has a branched stem and each flower is subtended by a bract and two linear bracteoles.



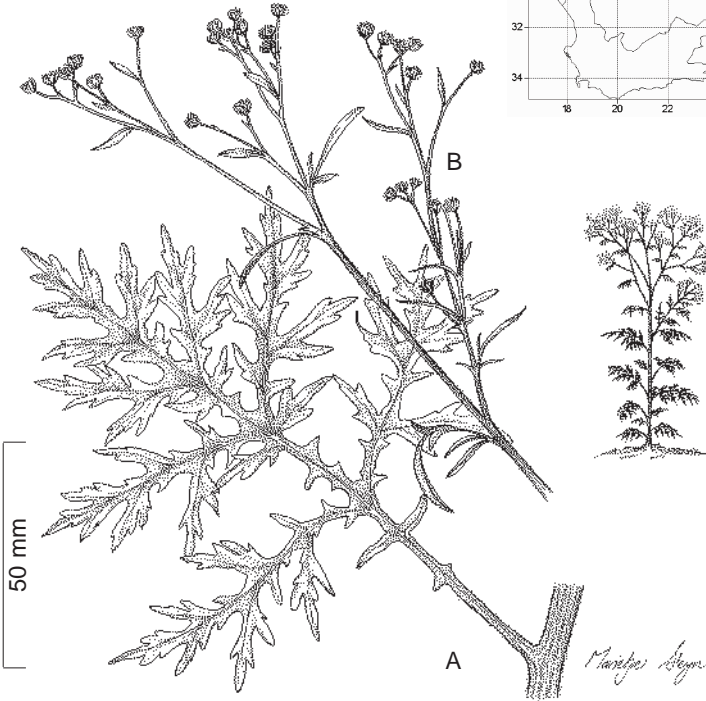
# *Parthenium hysterophorus* L.

parthenium, feverfew, congress grass  
parthenium

Family Asteraceae



Terrestrial herbs

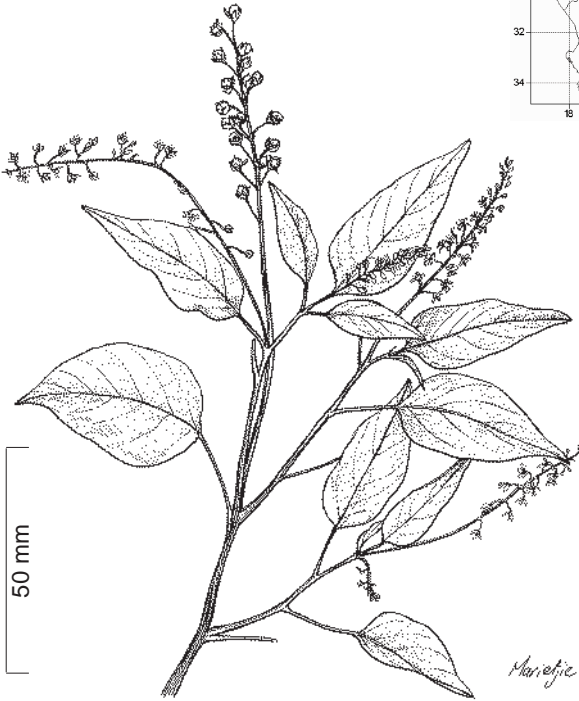
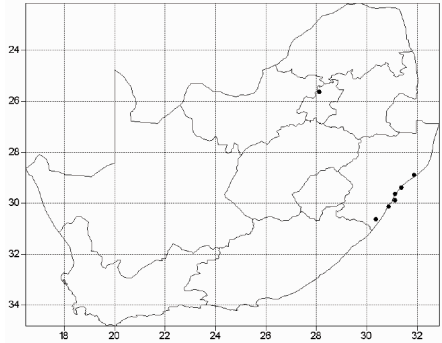


**Description:** Annual herb, 0.3–1.5 m high, with an erect, longitudinally grooved stem and deep tap-root; stems and leaves shortly hairy; regular contact with the plant causes allergic dermatitis and asthma. **Leaves:** Pale green with some of the hairs containing allergens; rosette and lower stem leaves deeply pinnately lobed (A), 80–200 mm long; upper stem leaves shorter, less divided. **Flowers:** White, bisexual, in small compact heads, about 3 mm across, on slender peduncles in a terminal, open panicle (B), September–May. **Fruits:** Achenes; seeds black, 2 mm long. **Invades:** Roadsides, railsides, watercourses, cultivated fields, overgrazed land. **Origin:** Caribbean. **Invasive status:** Special effect weed (Irritant). **Declared weed. Herbicide registration. Irritant:** Whole plant (skin & respiratory tract).

# Rivina humilis L.

bloodberry  
bloedbessie

Family Phytolaccaceae



A x 3



B x 3



C x 4

Marcello Aeyen

**Description:** Perennial herb, sometimes woody at the base, 300–900 mm high with spreading branches; pubescent when young. **Leaves:** Light green, thin, ovate to ovate-elliptic, blades up to 90 mm long and 40 mm wide, on long, slender petioles. **Flowers:** White or greenish to rosy (A), small, ± 2–3 mm across, in a slender, loose, many-flowered axillary raceme up to 100 mm long, October–June(– all year). **Fruits:** Bright red berries (B), 2–3 mm across, containing one hairy seed (C) per fruit. **Cultivated for:** Ornament. **Invades:** Forest, riverbanks, urban open space. **Origin:** N America (Arkansas, Florida to Texas), W Indies, C & S America. **Invasive status:** Special effect weed (competitive, poisonous). **Declared weed. Poisonous:** Leaves, roots, fruits.

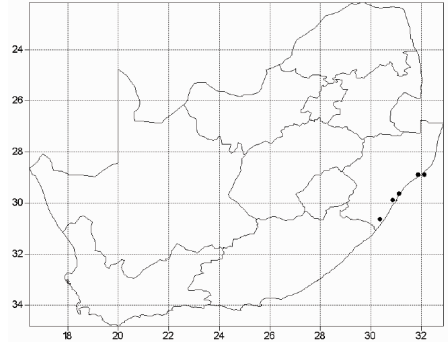


***Thelechitonía trilobata*** (L.) H. Rob. & Cuatrec.  
 (= *Wedelia trilobata* (L.) Hitchc.)

Singapore daisy  
 Singapoer-madeliefie

Family Asteraceae

Photo 22



Terrestrial herbs

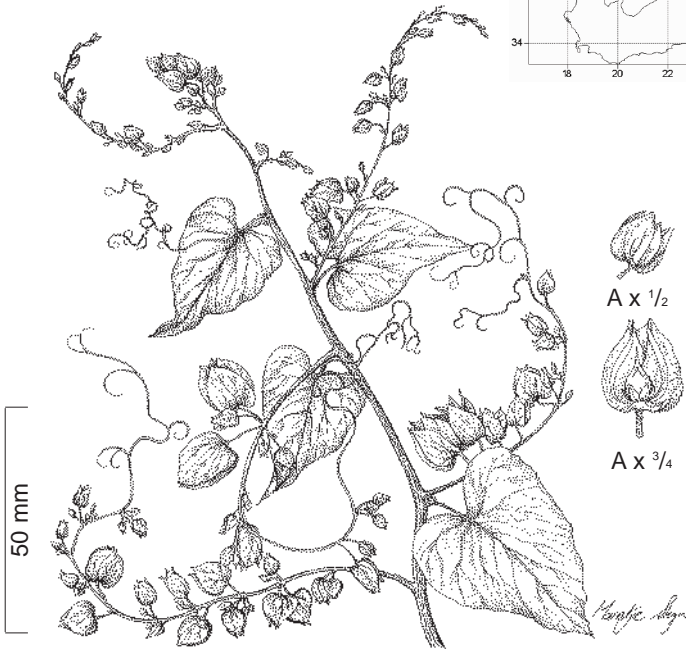
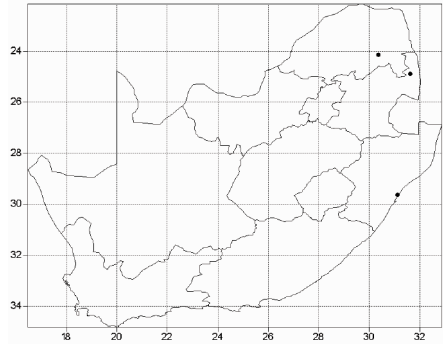


**Description:** Perennial herb up to 300 mm high with creeping and rooting stems to 2 m long. **Leaves:** Dark green, rough, glossy, three-lobed, weakly lobed to entire, or toothed, up to 120 mm long. **Flowerheads:** Yellow to orange yellow to 30 mm across, solitary, terminal, on erect, long peduncles up to 150 mm long, all year. **Fruits:** Small brown achenes. **Cultivated for:** Ornament, groundcover. **Invades:** Roadsides, riverbanks, wetland edges, coastal dunes, urban open space. **Origin:** Tropical America. **Invasive status:** Ruderal weed and transformer. **Declared weed in KwaZulu-Natal & declared invader (category 3) elsewhere in South Africa.**

## ***Antigonon leptopus*** Hook. & Arn.

coral creeper  
koraalklimop

Family Polygonaceae



**Description:** Perennial tendril-climbing vine with slender, angular stems up to 12 m high; glabrous or with young shoots pubescent; all floral parts coloured and showy. **Leaves:** Green, membranous, very veiny, broadly ovate, heart- or spear-shaped, slightly acuminate, 50–120 x 30–80 mm. **Flowers:** Bright pink, sometimes white, enlarging to 35 mm long; 6–20 in axillary racemes that terminate in tendrils, November–April. **Fruits:** Brown achenes, conical, sharply three-angled above, loosely covered in the enlarged, persistent papery perianths (A). **Cultivated for:** Ornament; provides honey; tubers edible. **Invades:** Coastal and inland bush and thicket. **Origin:** C America (Mexico). **Invasive status:** Special effect weed (competitive, high visual impact).

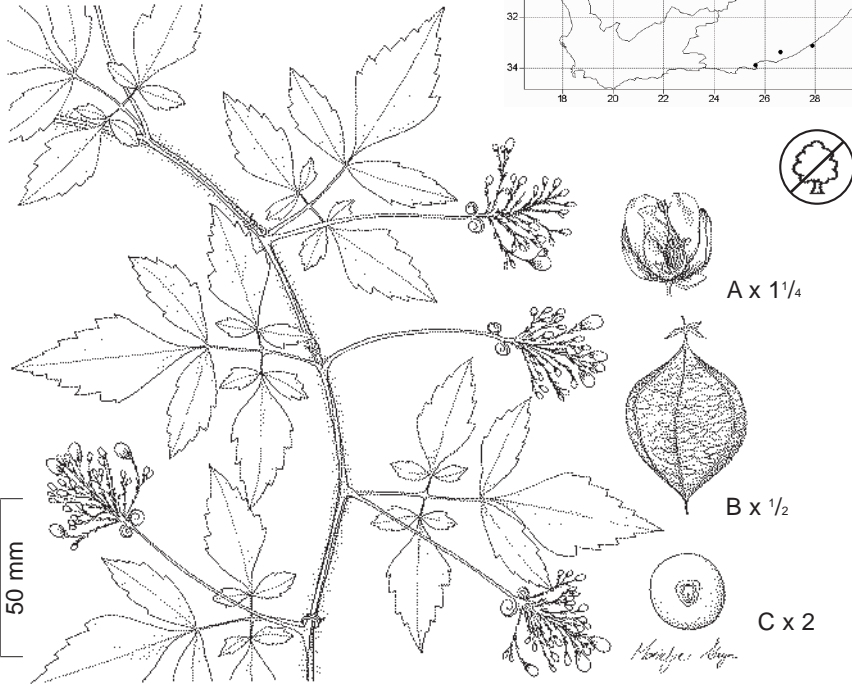
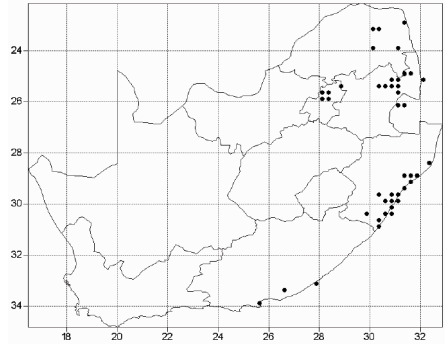


# *Cardiospermum grandiflorum* Sw.

balloon vine  
blaasklimop

Family Sapindaceae

Photo 23

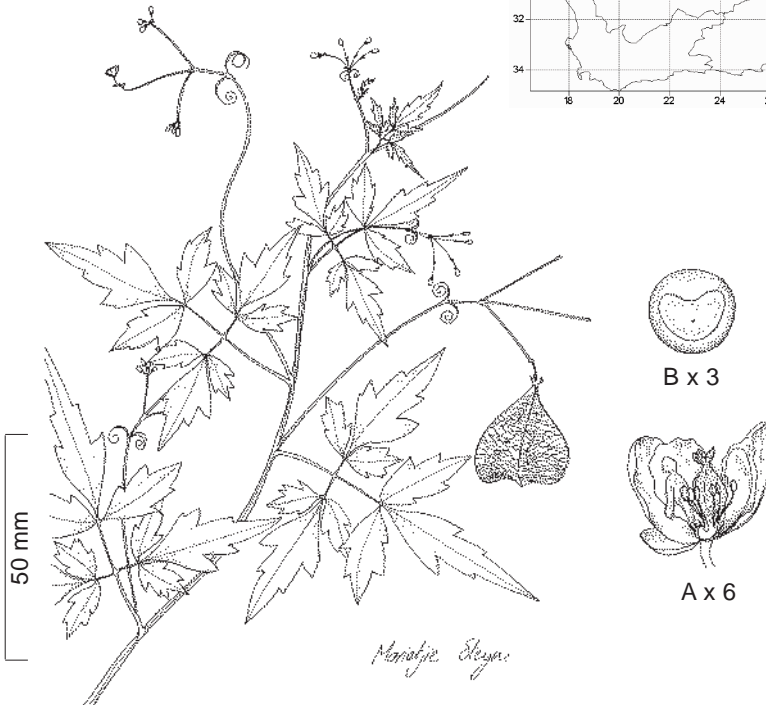
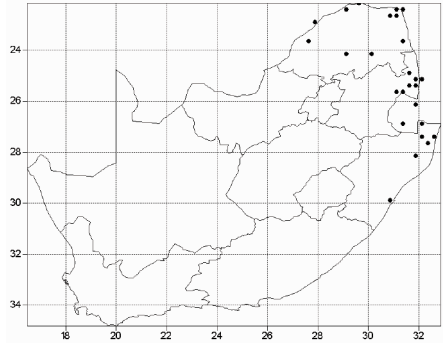


**Description:** Perennial, slightly woody climber with tendrils, 2–5 m or higher; often draping itself over trees; stems usually covered with bristly hairs. **Leaves:** Bright green, biternate, margins serrate, variously hairy. **Flowers:** White or yellow (A), fragrant, 7–11 mm long, in many-flowered and compact heads, October–January (–all year). **Fruits:** Membranous, inflated capsules (B), 45–65 mm long, green turning brown, pointed, much longer than broad; seed (C) black, round, with an oblong white spot (hilum). **Cultivated for:** Ornament. **Invades:** Forest margins, watercourses, urban open spaces, in subtropical regions. **Origin:** Tropical America (Brazil & E Argentina). **Invasive status:** Transformer. **Declared weed.**

## ***Cardiospermum halicacabum* L.**

heart pea, lesser balloon vine  
blaasklimop

Family Sapindaceae



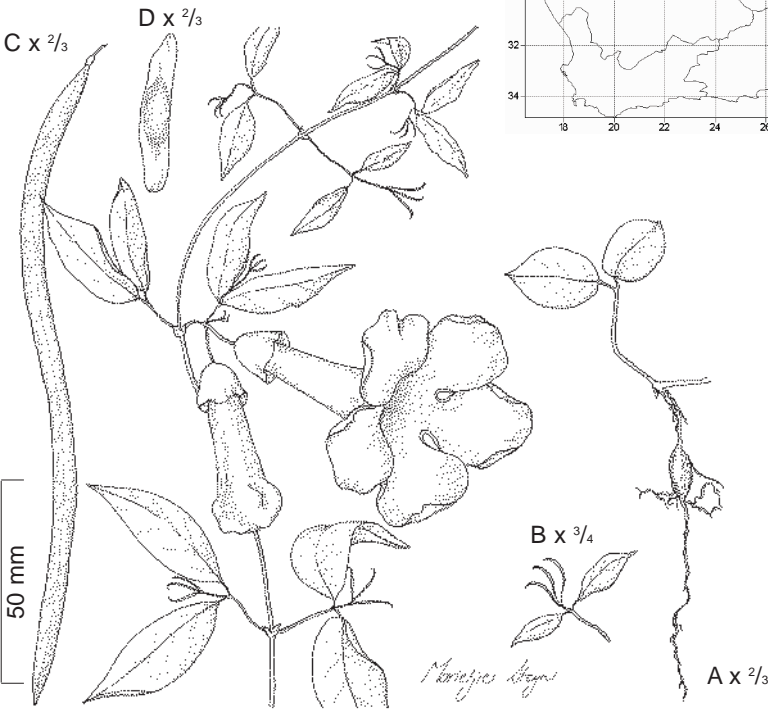
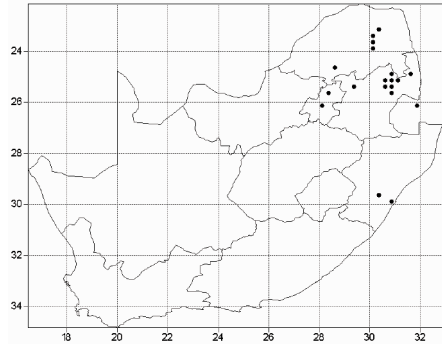
**Description:** Herbaceous or slightly woody climber with tendrils, 1–3(–6) m high; stems and leaves minutely hairy to glabrous. **Leaves:** Bright green, biternate, margins serrate (scalloped or lobed in *C. corindum*, a closely related pantropical species). **Flowers:** White or yellow (A), 2–3 mm long, in few-flowered, open clusters, January–June(–all year). **Fruits:** Membranous, inflated capsules, 25–30 mm long, green turning brown, nearly globular; seed (B) black, round, with a kidney-shaped white spot (hilum). **Cultivated for:** Ornament. **Invades:** Forest margins, woodland, grassland, riverbanks, kloofs, floodplains, rocky sites. **Origin:** Uncertain; ?N & Tropical America; now occurs throughout the subtropics and tropics. **Invasive status:** Minor weed or non-invasive in S Africa but weedy and invasive in other parts of the world.

# *Macfadyena unguis-cati* (L.) A.H.Gentry

cat's claw creeper  
katteklouranker

Family Bignoniaceae

Photo 24



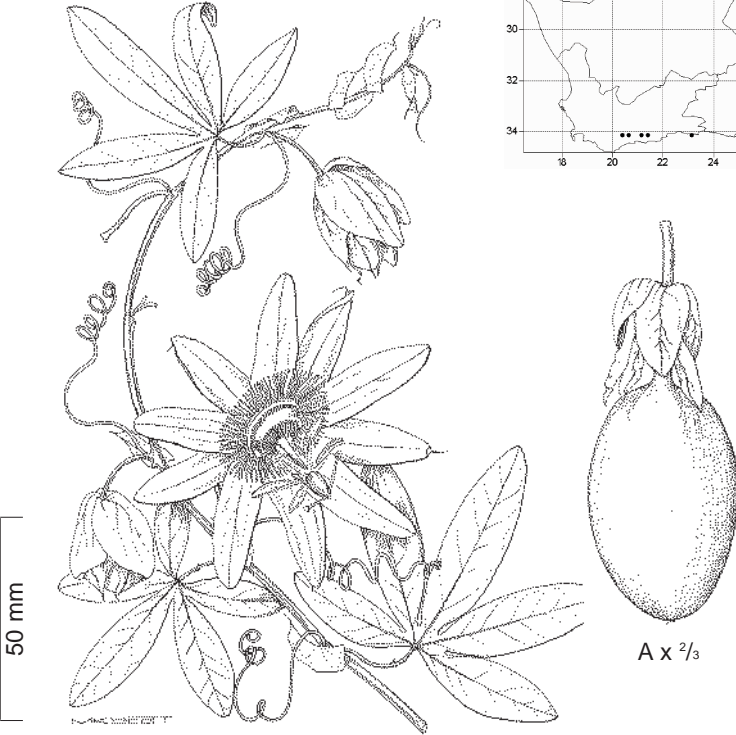
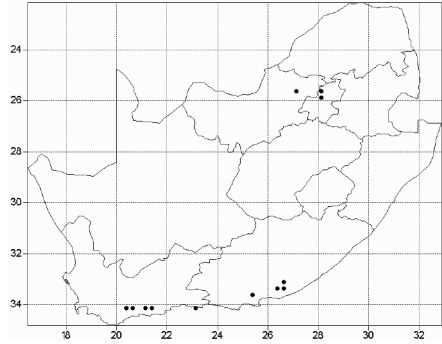
**Description:** Vigorous, evergreen, woody-stemmed, tendrill climber with tuberous roots (A), up to 9 m or higher. **Leaves:** Bright green, with two leaflets and a terminal, three-parted, claw-like tendril (B); leaflets lanceolate to oblong, 25–80 mm long, margins entire to slightly wavy. **Flowers:** Bright yellow, trumpet-shaped, up to 80 mm long x 100 mm wide, axillary, solitary or in clusters of two or three, September–February. **Fruits:** Brown, leathery capsules (C), flattened, to 300 mm or longer and 12 mm wide, splitting open to release many papery, winged seeds (D). **Cultivated for:** Ornament. **Invades:** Forest margins, woodland, plantations, roadsides, urban open space. **Origin:** C & S America (Mexico to Argentina). **Invasive status:** Transformer. **Declared weed.** **Biocontrol:** Natural enemies released.



# *Passiflora caerulea* L.

blue passion flower  
siergrenadella

Family Passifloraceae



**Description:** Glabrous, perennial, tendrill climber; stems cylindrical or slightly angular, to 5 m or higher. **Leaves:** Somewhat greyish- or bluish-green, usually deeply five- to seven-lobed, the lobes lanceolate and sharp-pointed, margins entire; stipules large, sickle-shaped, 10–20 mm long. **Flowers:** Sepals and petals white to pinkish inside; coronal filaments purple at base, white in middle, blue at apex, distinctly shorter than petals, August–March. **Fruits:** Green turning yellow or orange, ovoid berries (A), reddish inside, to 60 mm long. **Cultivated for:** Ornament. **Invades:** Forest margins, bush clumps, roadsides, riverbanks. **Origin:** S America (Brazil to Argentina). **Invasive status:** Special effect weed (competitive, ?poisonous). **Declared weed. ?Poisonous:** ?Roots and leaves.

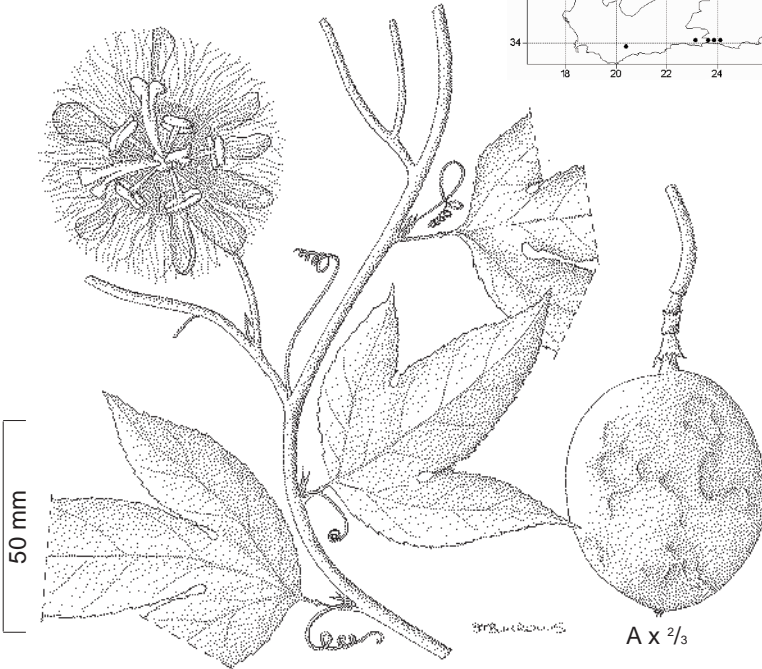
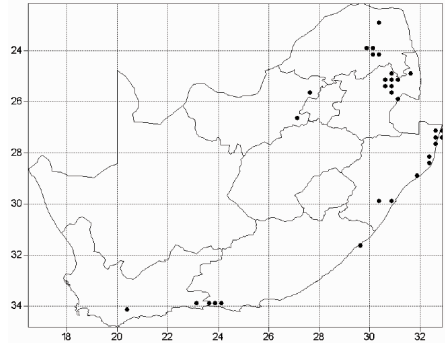


Climbers

# *Passiflora edulis* Sims

purple granadilla, passion fruit  
grenadella

Family Passifloraceae

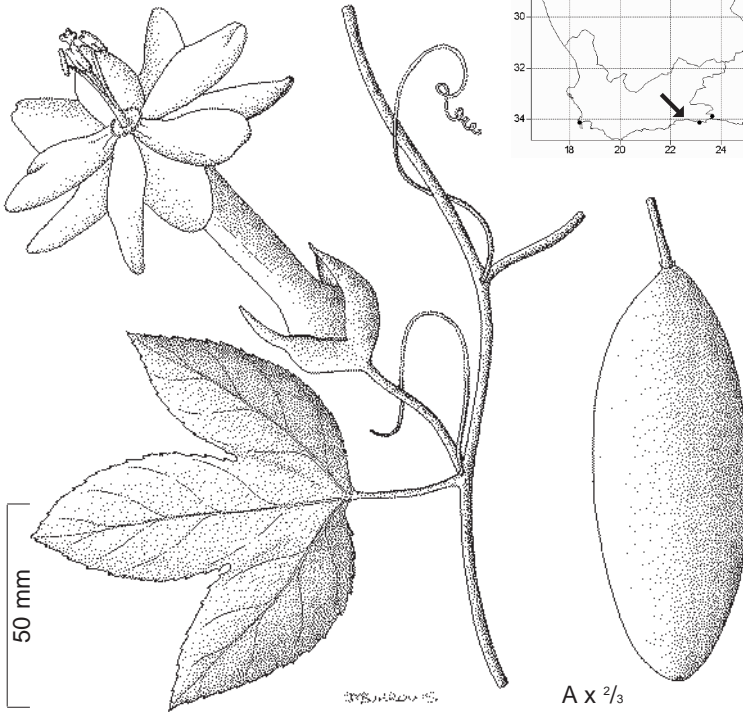


**Description:** Glabrous, perennial, tendril climber; stems sometimes  $\pm$  angular, up to 15 m high. **Leaves:** Deeply three-lobed, lobes elliptic to oblong, apex pointed, shortly tapering, margins serrated, glossy dark-green above, stipules small, linear-lanceolate to 10 mm long. **Flowers:** White, except base of corona which is purple; coronal filaments curly, as long as petals; 50–75 mm across, October–April. **Fruits:** Globose berries (**A**), greenish-yellow turning deep purple, glabrous, to 60 mm long, pulp sweet and edible, rind hard. **Cultivated for:** Edible fruits, ornament. **Invades:** Forest margins, plantations, riverbanks. **Origin:** S America (Brazil). **Invasive status:** Special effect weed (competitive). **Proposed declared invader.**

**Passiflora mollissima** (Kunth) L.H.Bailey

banana poka, bananadilla  
piesangdilla

Family Passifloraceae



**Description:** Softly hairy, perennial, tendril climber; stems cylindrical up to 20 m high, densely and softly red- to yellow-pubescent. **Leaves:** Deeply three-lobed, lobes ovate-lanceolate, pointed, sharply serrated, dark green and downy above, paler and velvety below, stipules small and linear. **Flowers:** Sepals white inside, petals pale pink, corona reduced to a short, purple rim, floral tube elongated 60–120 mm long, December–March. **Fruits:** Oblong, yellow berries (A) to 130 mm long, pubescent, edible, superficially resembling bananas. **Cultivated for:** Ornament, edible fruits. **Invasives:** Forest margins in cool, moist regions. **Origin:** S America (Venezuela to Bolivia). **Invasive status:** Potential transformer. **Declared weed.**

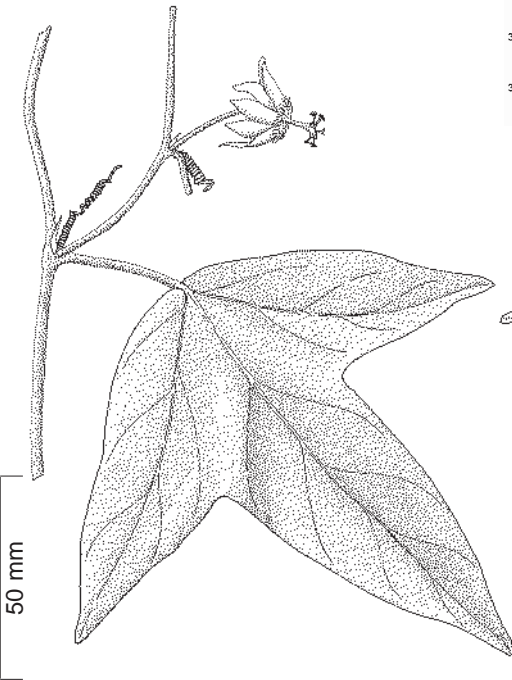
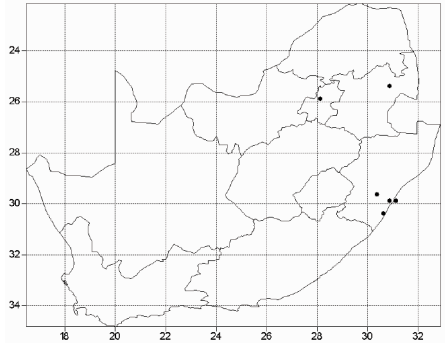


Climbers

# *Passiflora suberosa* L.

devil's pumpkin, indigo berry

Family Passifloraceae



Climbers

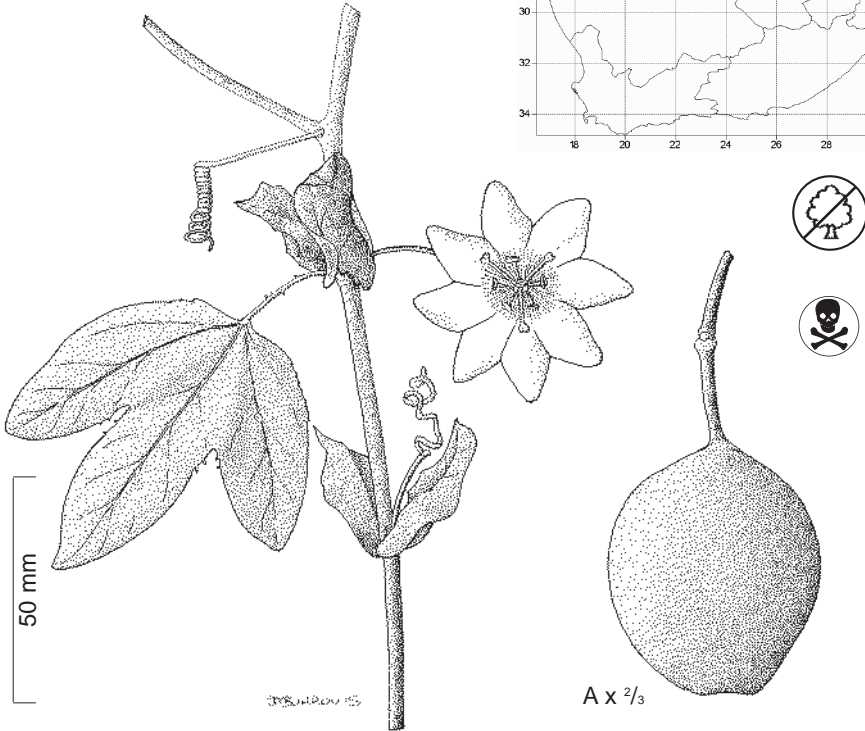
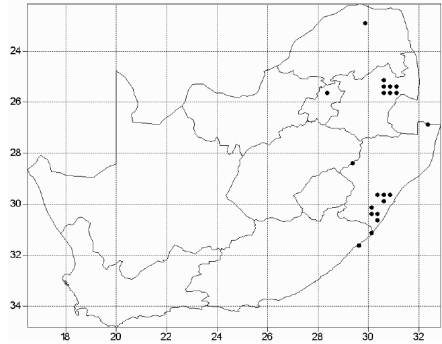
**Description:** Glabrous to densely hairy, perennial, tendrill climber, up to 6 m high; stems ± angular, corky when older. **Leaves:** Ovate and entire to deeply three-lobed, margins entire, lobes triangular to lanceolate, pointed to tapering, stipules small, linear, 5–8 mm long. **Flowers:** Sepals greenish-yellow, petals absent, coronal filaments white, yellow at the apex, purple below; 25–30 mm across, November–April. **Fruits:** Globose berries (**A**), green turning purple or black, glabrous, to 20 mm long. **Cultivated for:** Ornament. **Invades:** Forest, woodland, bush clumps, roadsides, riverbanks, coastal dunes. **Origin:** S America. **Invasive status:** Special effect weed (competitive, poisonous). **Declared weed.** **Poisonous:** Unripe fruit, stems, leaves.

# *Passiflora subpeltata* Ortega

granadina

Family Passifloraceae

Photo 25



**Description:** Glabrous, perennial, tendril climber; stems cylindrical, up to 5 m high. **Leaves:** Rather shallowly three-lobed, bluish- or greyish-green beneath, margins entire or glandular-serrulate in or near the lobe sinuses, lobes elliptic to oblong, obtuse or pointed, not long-tapering; stipules large, ovate-oblong, 15–40 mm long. **Flowers:** Pure white to 50 mm across, November–June. **Fruits:** Berries (A), green becoming yellowish, ellipsoid or globose, ± leathery, about 50 mm long. **Cultivated for:** Ornament. **Invades:** Woodland, bush clumps, roadsides, riverbanks. **Origin:** C & S America (C Mexico to Colombia & Venezuela). **Invasive status:** Special effect weed (competitive, ?poisonous). **Declared weed. ?Poisonous.**



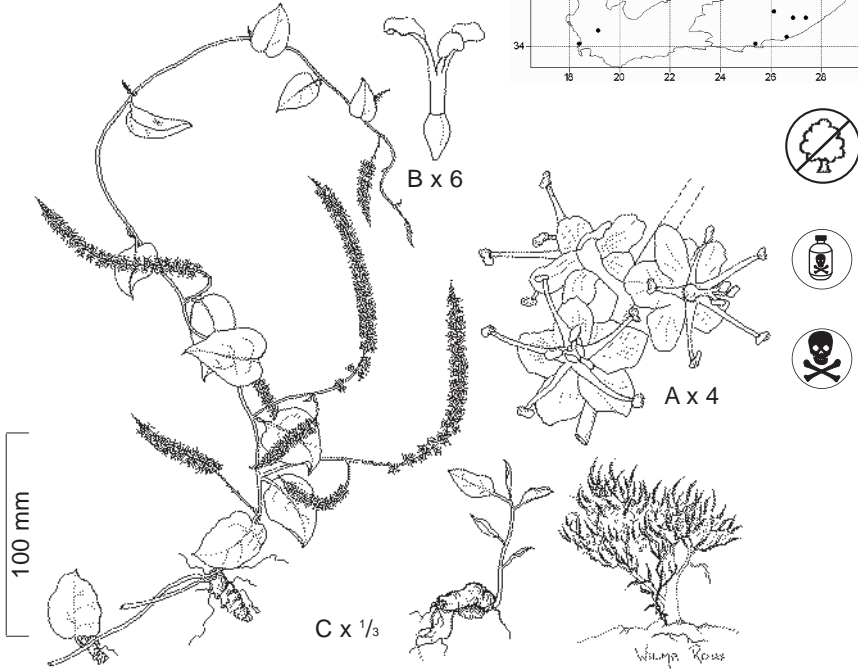
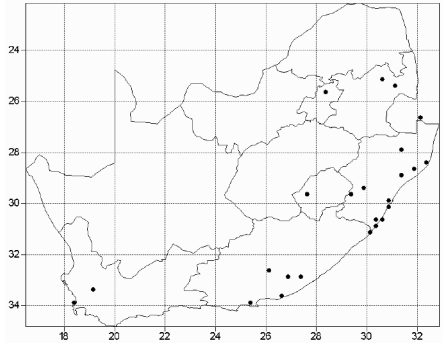
Climbers

**Anredera cordifolia** (Ten.) Steenis  
(*A. baselloides* (Kunth) Baill. misapplied in S.A.)

bridal wreath, Madeira vine  
Madeira ranker

Family Basellaceae

Photo 26



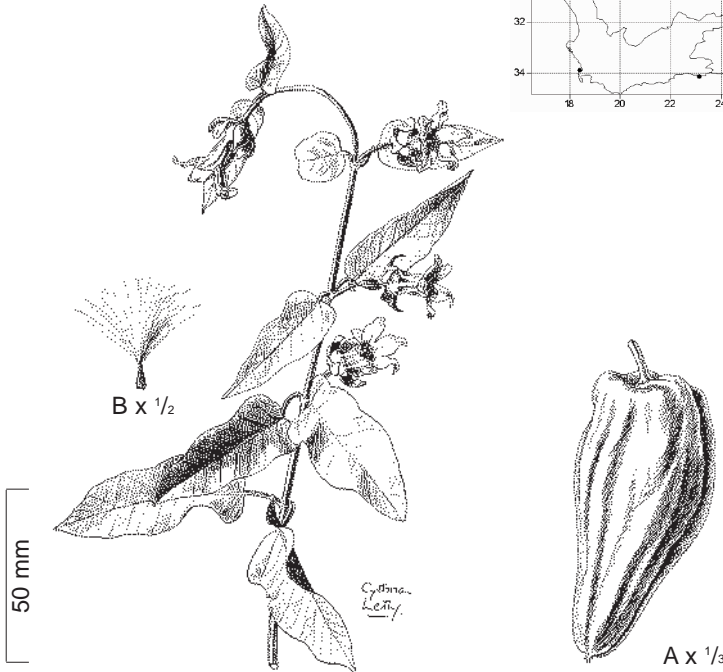
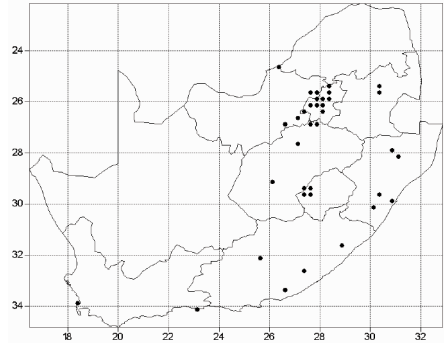
**Description:** Perennial, much-branched climber 3–6 m or higher, draping itself over other plants; leaves and stems semi-succulent. **Leaves:** Bright green, glossy. **Flowers:** White (A), showy, fragrant, 5 mm across, produced in spikes up to 300 mm long; stigma three-cleft, style divided to various degrees (B) (as opposed to *A. baselloides* with style undivided); February–May. **Fruits:** None; reproduces from aerial tubers (C), produced in the axils of the leaves, and which later drop to the ground. **Cultivated for:** Ornament, and its edible tubers. **Invades:** Woodland, urban open space. **Origin:** Subtropical S America. **Invasive status:** Potential transformer. **Declared weed. Herbicide registration.** **Poisonous:** Water extracts.

## ***Araujia sericifera*** Brot.

moth catcher  
motvanger

Family Asclepiadaceae

Photo 27



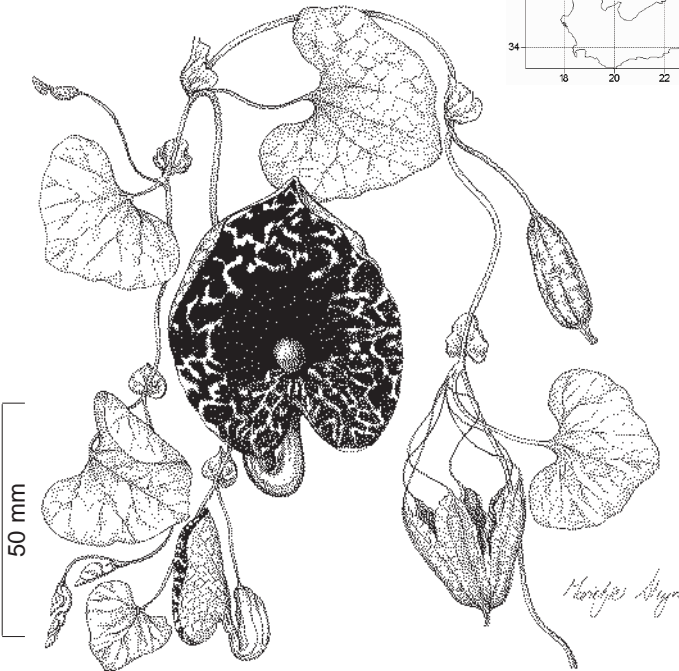
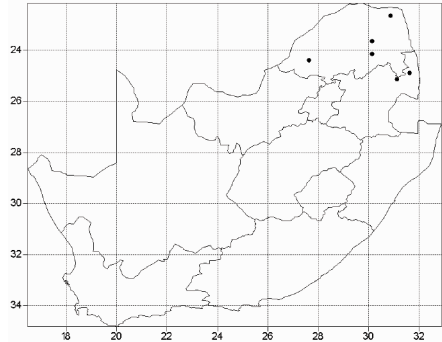
**Description:** Robust, sub-woody climber with milky juice, up to 5 m or higher. **Leaves:** Dark green and smooth above, pale green or whitish below with very short, dense hairs; up to 50 mm long x 30 mm wide. **Flowers:** White, cream or pale pink, often with maroon streaks inside, November–April. **Fruits:** Green, spongy, deeply grooved follicles (A) up to 120 mm long x 60 mm wide, turning brown and woody, splitting to release numerous blackish seeds (B) each with a tuft of silky hairs ± 25 mm long. **Cultivated for:** Ornament. **Invades:** Forest clearings, woodland, plantations, wasteland, urban open space, watercourses, wooded kloofs. **Origin:** S America (Brazil). **Invasive status:** Special effect weed (smothering, poisonous, irritant). **Declared weed. Poisonous:** Whole plant. **Irritant:** Skin (sap).



# *Aristolochia elegans* Mast.

calico flower, Dutchman's pipe  
sisblom

Family Aristolochiaceae



Climbers

**Description:** Glabrous, woody-stemmed, evergreen, twining climber 2-3(-7) m high, with slender, pendulous flowering branches. **Leaves:** Bright green above, greyish below, membranous, heart- to kidney-shaped, 5-7 nerved from the base, 20-80(-120) mm long; stipules round to kidney-shaped, 10-20 mm long. **Flowers:** Maroon with white marbling, throat yellow, heart-shaped, 50-100 mm long, February-May. **Fruits:** Brown capsules, sausage-shaped, 40-60 mm long, six-ribbed, like hanging baskets after dehiscence. **Cultivated for:** Ornament. **Invades:** Riverine forest, plantations. **Origin:** S America (Brazil). **Invasive status:** Special effect weed (competitive, poisonous). **Poisonous.**



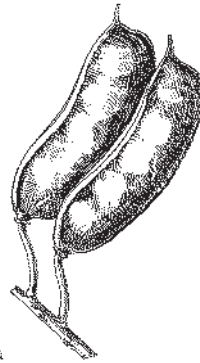
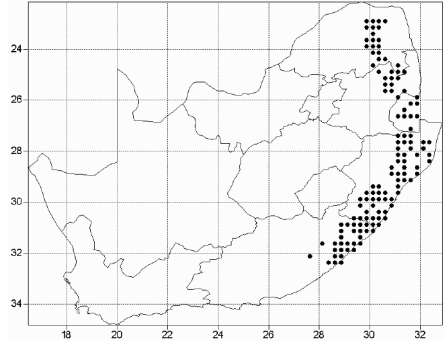
# *Caesalpinia decapetala* (Roth) Alston

(= *C. sepiaria* Roxb.)

Mauritius or Mysore thorn  
kraaldoring

Family Fabaceae

Photo 28



A x 1/3

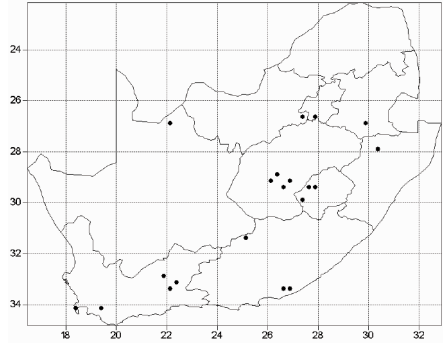


**Description:** Robust, thorny, evergreen shrub 2–4 m high or climber up to 10 m or higher; often forming dense thickets; stems minutely golden-hairy; stem thorns ± straight to hooked, numerous, not in regular rows or confined to nodes. **Leaves:** Dark green, paler beneath, not glossy, up to 300 mm long; leaflets up to 8 mm wide. **Flowers:** Pale yellow, in elongated, erect clusters 100–400 mm long, May–November. **Fruits:** Brown, woody pods (A), flattened, unsegmented, smooth, sharply beaked at apex, ± 80 mm long. **Cultivated for:** Security hedging, ornament. **Invades:** Forest margins and gaps, plantations, roadsides, watercourses. **Origin:** Asia (India, Sri Lanka, China, Japan & Malaysia). **Invasive status:** Transformer. **Declared weed. Herbicide registration. Biocontrol:** Seed feeders released.

## *Convolvulus arvensis* L.

field bindweed  
akkerwinde

Family Convolvulaceae

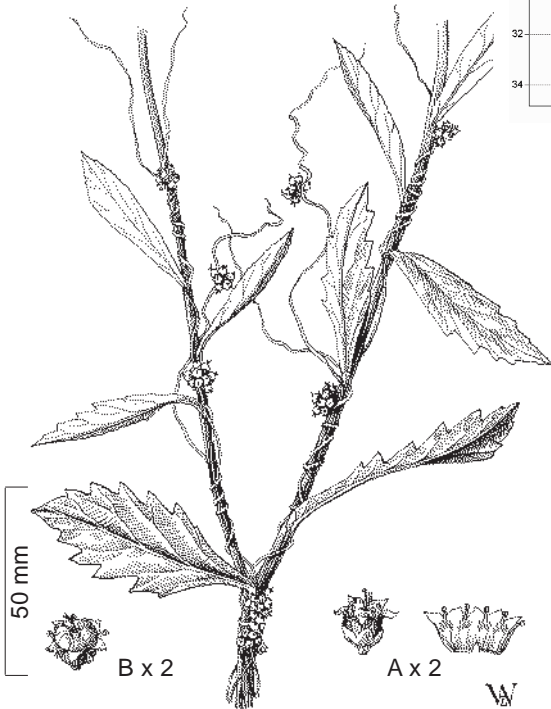
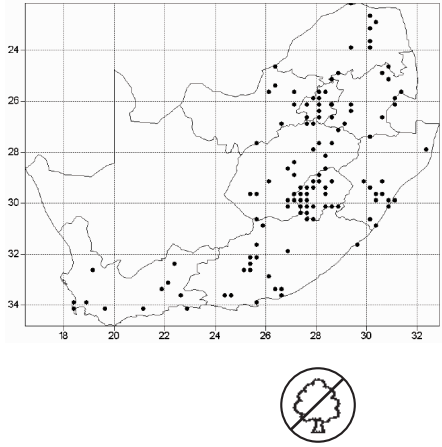


**Description:** Slender, prostrate or twining, herbaceous perennial with stems up to 3 m long and deep, spreading roots. **Leaves:** Bright green, sparsely pubescent to glabrous, ovate-oblong with arrow-shaped bases, up to 60 mm long. **Flowers:** Pale pink or white, sometimes with red stripes; 30 mm across; usually solitary on long stalks; October–March. **Fruits:** Brown capsules splitting into four valves, four-seeded. **Use:** Honey source. **Invades:** Roadsides, waste places, agricultural crop lands, disturbed grassland. **Origin:** Europe & Asia. **Invasive status:** Ruderal and agrestal weed. **Declared weed. Herbicide registration. Biocontrol:** Under investigation.

***Cuscuta campestris* Yunck. &  
*C. suaveolens* Ser.**

common & lucerne dodder  
gewone & luserndodder

Family Convolvulaceae



**Description:** Slender, leafless, parasitic herbs with yellow or whitish, twining stems up to 2 m high and forming dense patches up to 6 m across. **Leaves:** None; leaves in illustration belong to the host plant. **Flowers:** Whitish (**A**),  $\pm 3$  mm long, November–April. **Fruits:** Greenish-yellow capsules (**B**),  $\pm 3$  mm long.

**NB** *C. campestris* (illustrated) has small flowers (1.5–3.0 mm long) in compact, globose clusters; *C. suaveolens* has larger flowers (3–4 mm long) in loose clusters.

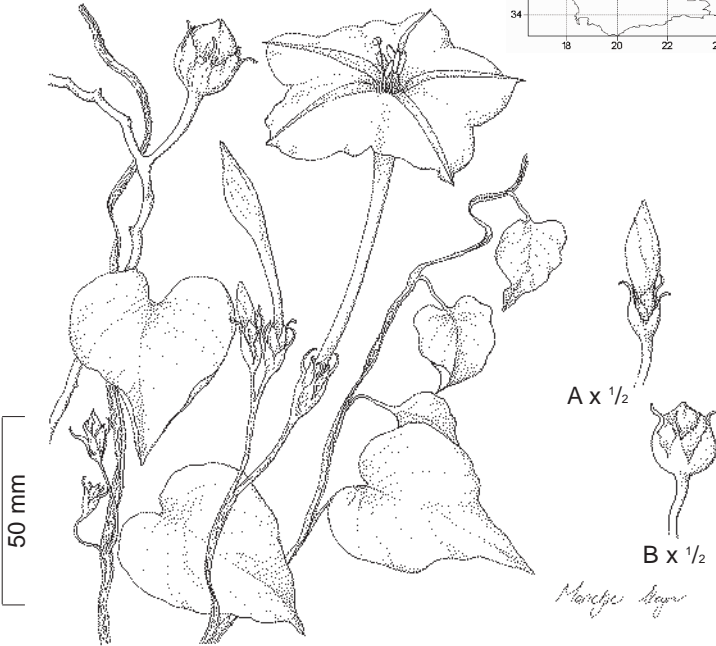
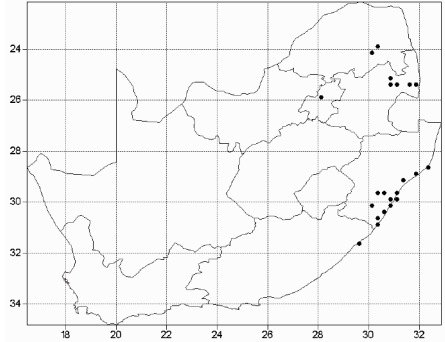
**Invasive:** A wide range of habitats, particularly riverbanks, other moist sites and irrigated croplands. **Origin:** N & S America respectively. **Invasive status:** Special effect weeds (smothering and parasitic). **Declared weeds.**

# *Ipomoea alba* L.

moonflower  
maanblom

Family Convolvulaceae

Photo 29



**Description:** Sub-woody, glabrous, annual or perennial climber with milky latex, stems  $\pm$  prickly, up to 5 m long. **Leaves:** Bright green, broad ovate, entire or three-lobed, 60–200 mm long. **Flowers:** White (**A**: bud), often banded with green, up to 120 mm long, fragrant, opening at night; outer sepals with a long awn-like appendage 4–10 mm long at the apex, October–June (–all year).

**Fruits:** Ovoid capsules (**B**),  $\pm$  20 mm long. **Cultivated for:** Ornament.

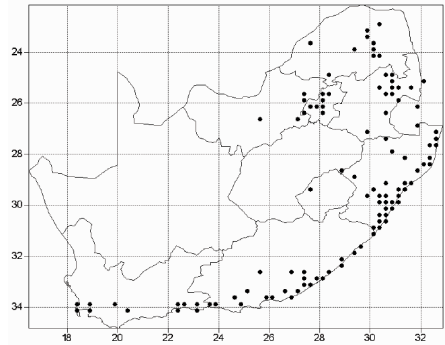
**Invades:** Forest, woodland, wasteland, riverbanks, wetlands, coastal dunes.


**Origin:** Tropical America. **Invasive status:** Transformer. **Declared weed in KwaZulu-Natal, Mpumalanga & N Province and declared invader (category 3) elsewhere in South Africa.**

***Ipomoea indica*** (Burm f.) Merr. (= *I. congesta* R.Br.) &  
***I. purpurea*** (L.) Roth

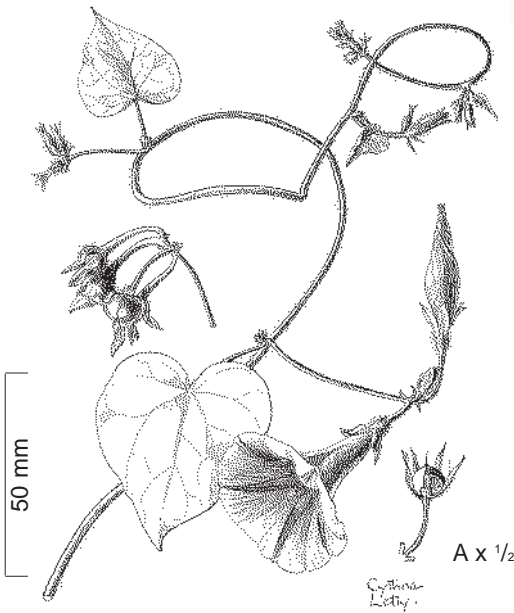
morning glories  
 purperwinde

Family Convolvulaceae



 only  
*I. indica*

 Trade



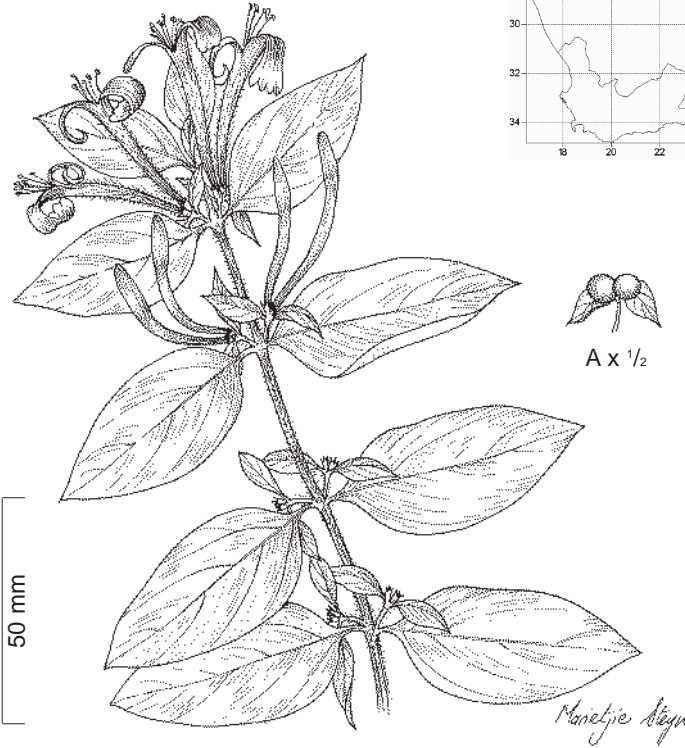
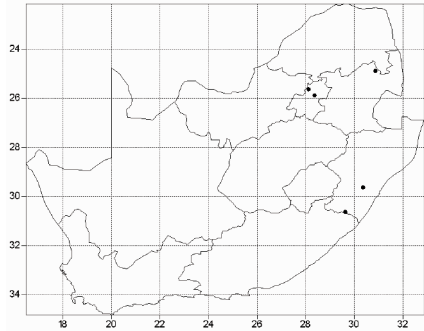
**Description:** Herbaceous annual (*I. purpurea*) and perennial (*I. indica*) twiners with hairy stems to 3 m or more. **Leaves:** Bright green, sparsely hairy, ovate, entire or three-lobed, 40–150 mm long. **Flowers:** Purplish-blue, reddish, magenta or white, sometimes with contrasting stripes, funnel-shaped, to 85 mm long, Nov–May (–all year); *I. indica*: sepals long-tapering, 14–22 mm long, with flattened hairs at base; *I. purpurea* (Illust): sepals pointed but not long-tapering, 10–15 mm long, bristly at base. **Fruits:** Globose capsules (**A**), 10 mm across. **Cultivated for:** Ornament. **Invade:** Woodland, wasteland, arable land, roadsides, riverbanks, coastal dunes. **Origin:** Tropical America (*I. purpurea*) & ?W Indies (*I. indica*). **Invasive status:** Transformer (*I. indica*), special effect weed (competitive) (*I. purpurea*). **Declared weed (*I. indica*, in KZN, NP & Mpum) & invaders (categ 3) both spp. Herbicide registration.**

***Lonicera japonica* Thunb. var. *Halliana* Nichols**

(= *L. flexuosa* var. *Halliana* Dipp.)

Japanese or Hall's honeysuckle  
Japanse kanferfoelie

Family Caprifoliaceae



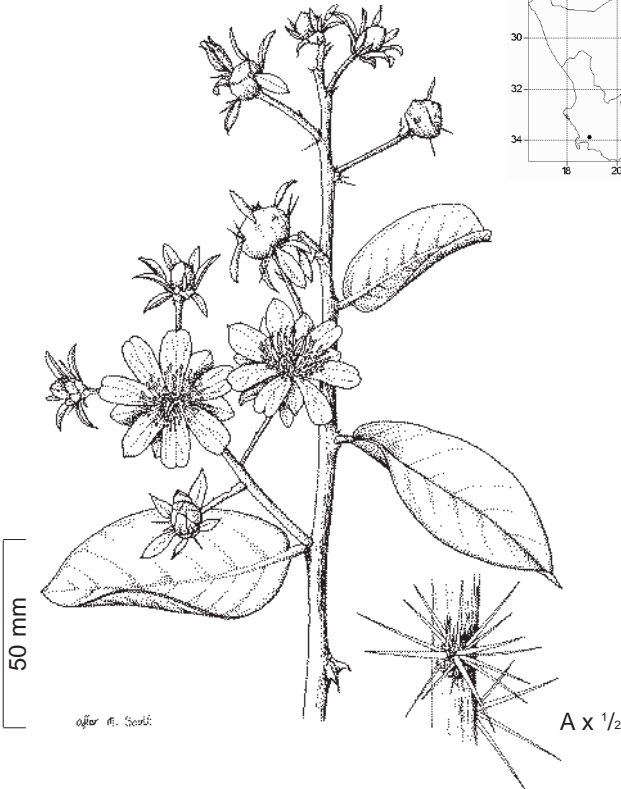
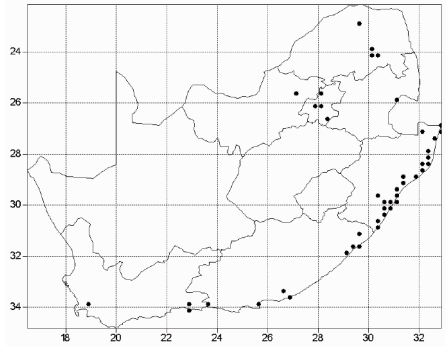
**Description:** A vigorous semi-evergreen or evergreen climber up to 9 m high; stems hollow, twining, hairy; **flowers fragrant**. **Leaves:** Dark green and glabrous above, pale and slightly downy beneath; ovate, 30–90 mm long. **Flowers:** White, ageing to yellow; floral tube (corolla) slender, hairy, two-lipped, up to 40 mm long; in axillary pairs, subtended by leafy ovate bracts 12–18 mm long, October–March. **Fruits:** Black berries (**A**), 7–10 mm across. **Cultivated for:** Ornament. **Invades:** Woodland, riverbanks. **Origin:** East Asia (Japan, Korea, China). **Invasive status:** Potential transformer. **Proposed declared invader.**

## *Pereskia aculeata* Mill.

pereskia, Barbados gooseberry  
pereskia, Barbadosstekelbessie

Family Cactaceae

Photo 30



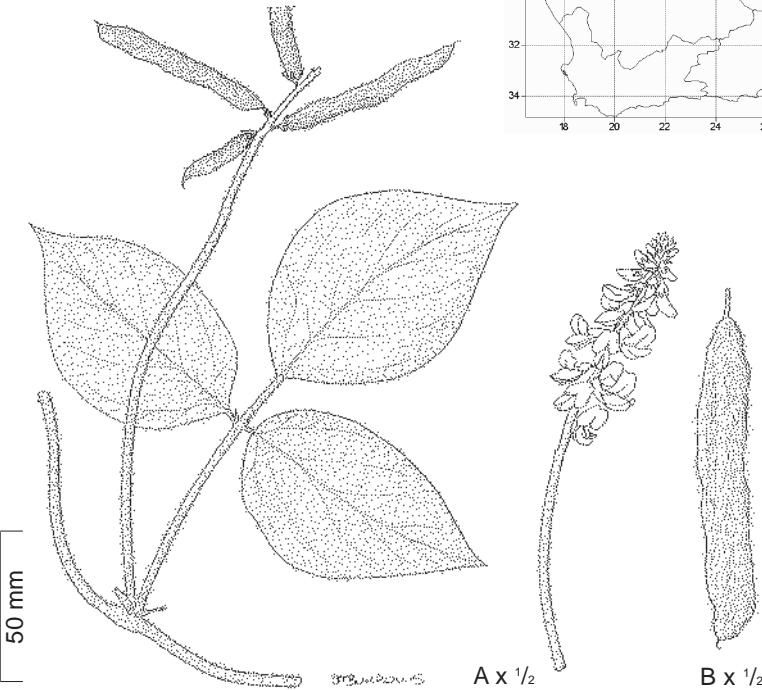
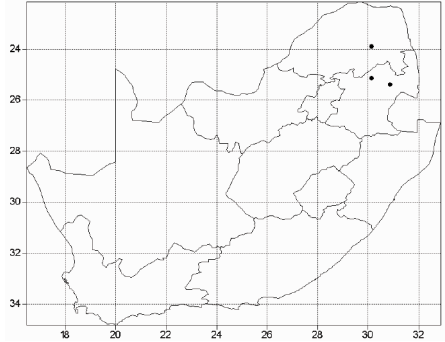
**Description:** Spiny, shrubby to clambering vine with long, whip-like branches, 2–10 m or higher, resembling *Bougainvillea*; young stems and leaves semi-succulent with pairs of short, hooked spines in the leaf axils; older stems woody with clusters of hard, straight spines (A) 30–40 mm long. **Leaves:** Bright green, glossy. **Flowers:** White, cream or yellowish, lemon-scented, March–July. **Fruits:** Green turning yellow, succulent berries, about 20 mm across, encircled by a whorl of deciduous leaf-like scales. **Cultivated for:** Ornament, security hedging. **Invades:** Forest margins and gaps, plantations. **Origin:** West Indies & S America (Brazil & Argentina); probably naturalised in Florida and Mexico. **Invasive status:** Transformer. **Declared Weed. Herbicide registration. Biocontrol:** Natural enemies released.



# *Pueraria lobata* (Willd.) Ohwi

kudzu vine  
kudzuranker

Family Fabaceae



Climbers

**Description:** Perennial, very long-running, hairy vine up to 18 m high, somewhat woody, with tuberous roots; leaf stalks and stems covered with rusty-brown hairs.

**Leaves:** Light green, finely hairy, three-foliolate, leaflets entire or shallowly lobed, 70–150 mm long, abruptly sharp-pointed but not bristle-tipped (as in *Mucuna* spp). **Flowers:** Reddish-purple, fragrant, in spikes (**A**) up to 300 mm long, March–April. **Fruits:** Flattened pods (**B**), 50–130 mm long, covered with long, rusty-brown hairs. **Cultivated for:** Ornament, shade, soil-binding, edible roots. **Invades:** Forest margins and gaps, riverbanks. **Origin:** Asia (E India, China & Japan).

**Invasive status:** Potential transformer. **Declared weed. Herbicide registration.**



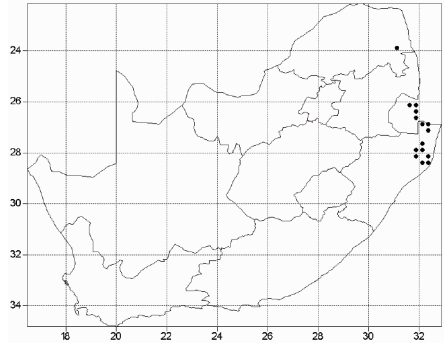
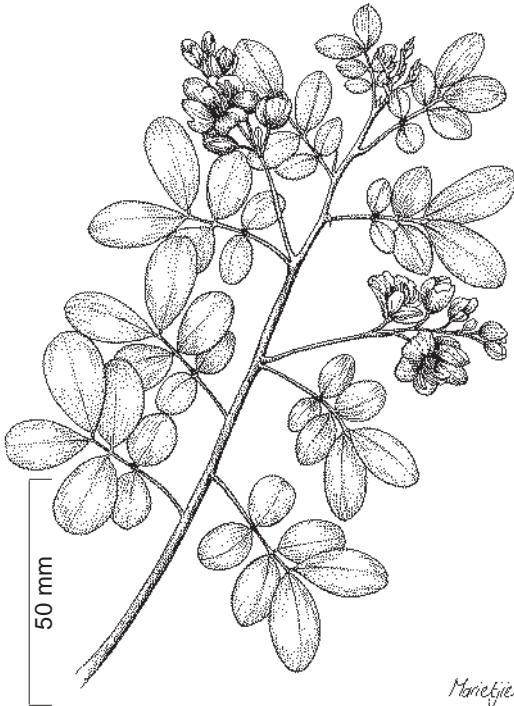
***Senna bicapsularis*** (L.) Roxb.

(= *Cassia bicapsularis* L.)

rambling cassia

Family Fabaceae

Photo 31



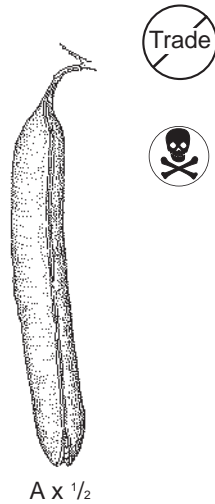
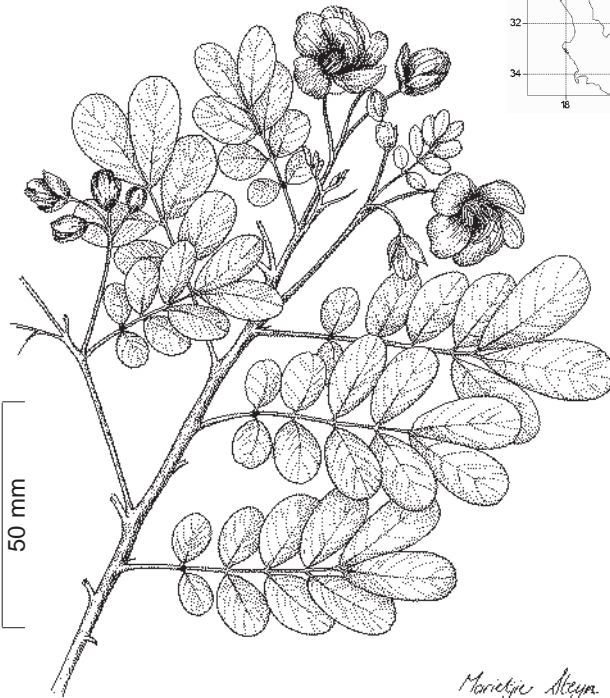
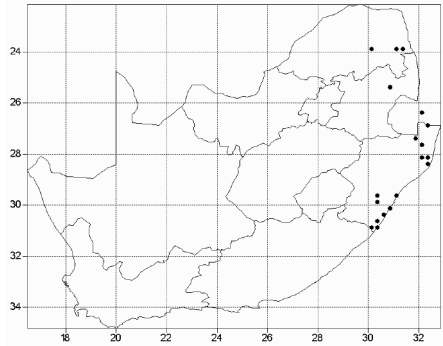
A x 1/2



**Description:** Glabrous shrub, often scrambling or climbing, 1.5–3.0(–9.0) m high. **Leaves:** Green, margins yellow; leaflets in (2–)3 pairs (compare with *S. pendula*), obovate, elliptic or oblong-elliptic, 9–32 mm long, tips rounded; petiolar gland absent; rachis with a gland between lowest pair of leaflets only. **Flowers:** Yellow (smaller, and with brown veins more clearly marked than in *S. pendula*); pedicels of open flowers less than 10 mm long (compare *S. pendula*); axillary racemes 60–120 mm long, numerous towards ends of branches; May–October. **Fruits:** Pods (A), brown, ± straight, cylindrical, ± inflated, rounded at apex, septate, 50–60(–150)mm long. **Cultivated for:** Ornament, hedging. **Invades:** Savanna, coastal bush, riverbanks. **Origin:** S America & West Indies. **Invasive status:** Potential transformer. **Declared invader (category 3).** **Poisonous:** To birds & bees (?nectar).

***Senna pendula*** (Willd.) Irwin & Barneby **var. *glabrata*** (Vogel)  
 Irwin & Barneby  
 (= *C. coluteoides* Collad.)

Family Fabaceae



*Monetia Atcyra*

Climbers

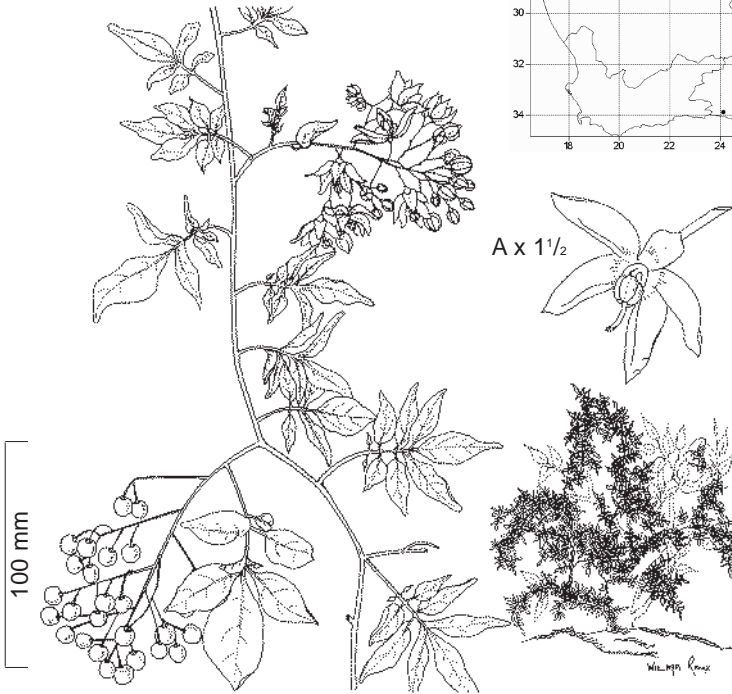
**Description:** Glabrous or softly pubescent, scandent shrub or small tree 2–4 m high, with ± rounded, densely leafy crown and arching branches. **Leaves:** Green, margins yellow, leaflets in 4–5 pairs, obovate or elliptic, 13–40 mm long, tips rounded; petiolar gland absent; rachis with a gland between the lowest pair of leaflets only. **Flowers:** Bright yellow, in axillary racemes 40–100 mm long, numerous towards ends of branches; pedicels of open flowers 20–30 mm long; April–May(–all year). **Fruits:** Pods (**A**), brown, ± straight to slightly curved, pendulous, cylindrical, ± inflated, rounded apically, septate within, 180–200 mm long, not or slowly dehiscent. **Cultivated for:** Ornament. **Invades:** Savanna, watercourses, roadsides. **Origin:** S America. **Invasive status:** Potential transformer. **Declared invader (category 3). ?Poisonous.**

## *Solanum seafortianum* Andr.

potato creeper  
aartappelranker

Family Solanaceae

Photo 32



**Description:** Slender, herbaceous or softly woody climber or trailer 2–3 m or higher, without hairs or thorns. **Leaves:** Bright green, thinly textured, deeply lobed into leaflets; leaflets mostly unequal with margins entire and often undulate.

**Flowers:** Blue to purple (**A**), showy, about 20 mm across, in long, drooping clusters, December–March. **Fruits:** Small, shiny berries, 5–10 mm across, green turning red, in pendulous bunches.

**Cultivated for:** Ornament. **Invades:** Woodland, bush clumps, riverine forest. **Origin:** Tropical America (including Brazil).

**Invasive status:** Special effect weed (competitive, poisonous). **Declared weed.**

**Poisonous:** Fruits, leaves, stems.

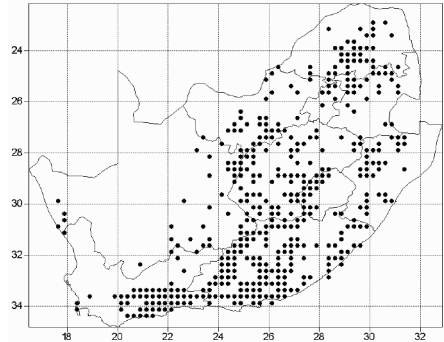


# *Agave americana* L.

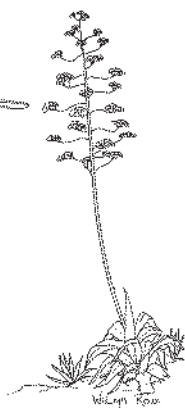
American agave  
garingboom

Family Agavaceae

Photo 33



C x 2/3



B x 1/2

**Description:** Succulent shrub with a basal rosette of thick, heavy leaves up to 2 m high; suckers from the base; flowering pole 5–9 m tall. **Leaves:** Light grey, with toothed margins (A) and terminal spine; leaves reflexed in var. *americana* (illust.) and unreflexed in var. *expansa*; variegated forms have grey to dark green leaves with yellow or white margins or central stripe. **Flowers:** Pale yellow (B), 80 mm long, December–March. **Fruits:** Capsules (C), 40 mm long. **Cultivated for:** Ornament, fodder, security hedging; flowering poles used for fencing; provides food for bees but honey with unpleasant flavour; relic plantings occur all over southern Africa. **Invades:** Dry habitats, rocky outcrops, drainage lines. **Origin:** C America (Mexico). **Invasive status:** Special effect weed (competitive; high visual impact). **Proposed declared invader. Poisonous:** Leaves, in quantity, when fed to ruminants. **Irritant:** Skin (sap & spines).

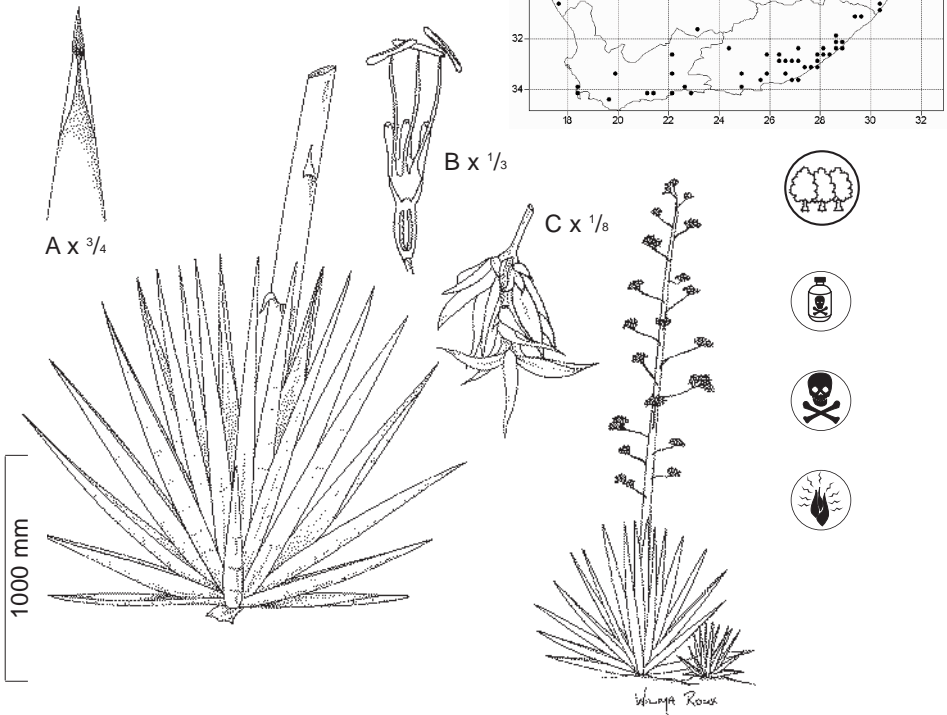


# *Agave sisalana* Perrine

sisal

Family Agavaceae

Photo 34



**Description:** Succulent shrub with thick, sword-shaped leaves in a basal rosette up to 2 m high; suckers from the base; flowering pole 5–6 m tall. **Leaves:** Bright green, with minutely toothed to smooth margins and terminal spine (A). **Flowers:** Greenish-yellow (B), 100 mm long, December–March. **Fruits:** None; flowers are replaced with small plants (bulbils)(C), ± 150 mm long, which fall to the ground and take root. **Cultivated for:** Fibre, security hedging; honey source. **Invades:** Subtropical and tropical savanna, erosion channels, watercourses. **Origin:** C America (Mexico). **Invasive status:** Potential transformer. **Declared invader (category 2).** **Herbicide registration.** **Poisonous:** Leaves, in quantity, when fed to ruminants. **Irritant:** Skin (sap & spines).

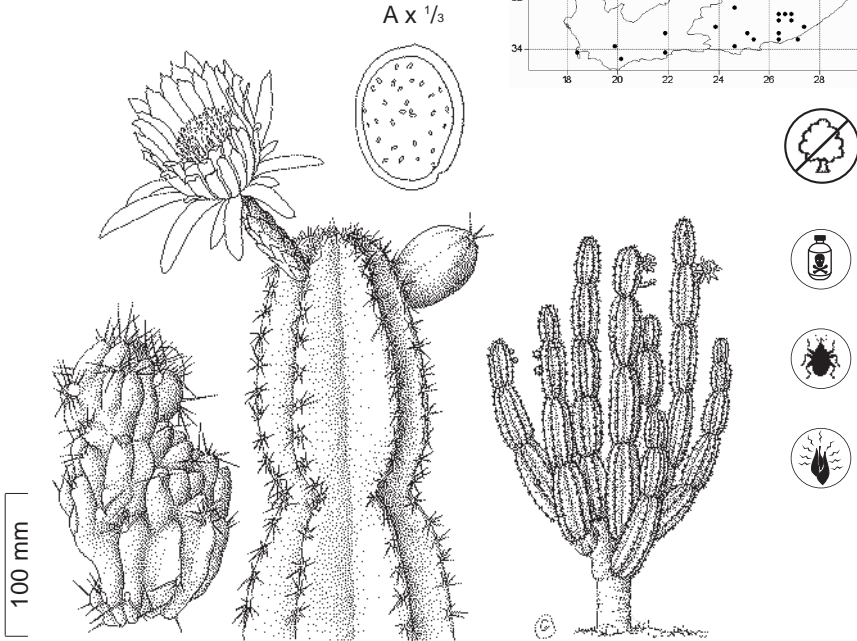
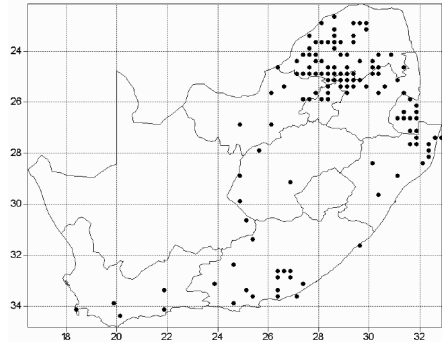


***Cereus jamacaru* DC.**  
 (*C. peruvianus* misapplied in S.A.)

queen of the night  
 nagblom

Family Cactaceae

Photo 35



**Description:** Spiny tree 3-7(-15) m high with thick, succulent branches arising from a short, woody trunk; resembles the indigenous *Euphorbia ingens* (naboom) but its spines are in groups of 5-10 and its cut stems do not exude a milky latex; branches green to blue-green with (4)-6-(9) prominent ribs; ribs sometimes broken and wavy. **Leaves:** None. **Flowers:** White, showy, up to 250 mm long, nocturnal, November-January. **Fruits:** Yellowish-pink, pink or red, succulent berries (A), ± 60 mm long, white inside with small, black seeds. **Cultivated for:** Ornament, hedging. **Invades:** Savanna, rocky ridges. **Origin:** S America (NE Brazil). **Invasive status:** Transformer. **Declared weed. Herbicide registration. Biocontrol:** Effective agents available. **Irritant:** Skin (spines).

***Echinopsis spachiana*** (Lem.) Friedrich & Rowley

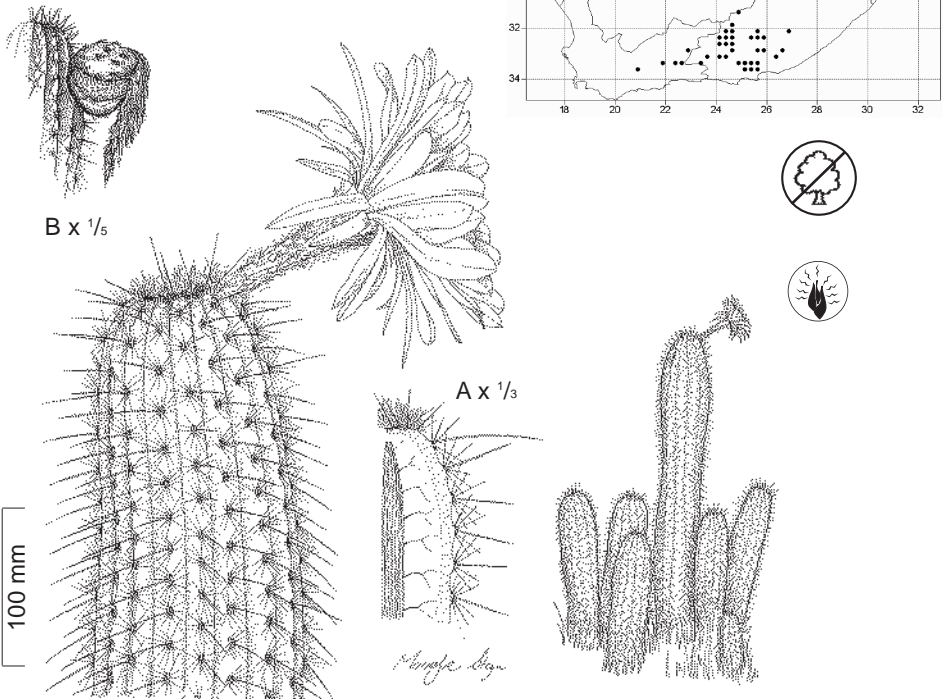
(= *Trichocereus spachianus* (Lem.) Riccob.)

torch cactus

orelkactus

Family Cactaceae

Photo 36



**Description:** Spiny, multistemmed, succulent shrub 1.0–1.5(–2.0) m high, stem sections (cladodes) green, erect, columnar, with 10–15 ribs; spines numerous, in groups of 8–10, amber-coloured turning grey, central spine longer than radials (A: longitudinal section of stem).

**Leaves:** None. **Flowers:** White, showy, up to 200 mm long, nocturnal, floral tube covered with long hairs, November–March.

**Fruits:** Green, hairy, ± 50 mm long (B), white inside with small black seeds.

**Cultivated for:** Hedging, ornament. **Invades:** Dry savanna, karoo. **Origin:**

S America (W Argentina). **Invasive status:** Potential transformer.

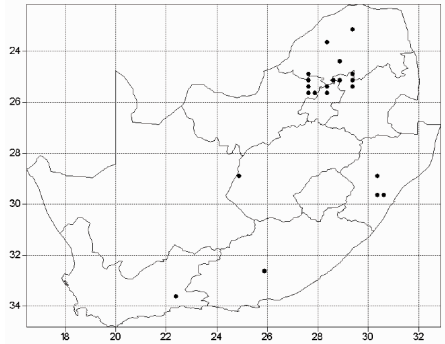
**Declared weed. Irritant:** Skin (spines).

***Harrisia martinii*** (Labour.) Britton & Rose  
 (= *Eriocereus martinii* (Labour.) Riccob.)

moon cactus  
 toukaktus

Family Cactaceae

Photo 37



**Description:** Spiny, succulent shrub 1–3 m high with long, clambering, much-branched stems; stems often arching downwards and rooting where they touch the ground; cladodes bright green, cylindrical, 20–40 mm wide, ribbed and resemble plaited rope; spines in groups, one or two central spines much longer than radials. **Leaves:** None. **Flowers:** White, showy, 150–200 mm long, nocturnal, November–January. **Fruits:** Bright pinkish-red, succulent berries, white inside with small, black seeds. **Cultivated for:** Ornament. **Invades:** Savanna. **Origin:** S America (Argentina). **Invasive status:** Transformer. **Declared weed. Herbicide registration. Biocontrol:** Effective agents available. **Irritant:** Skin (spines).

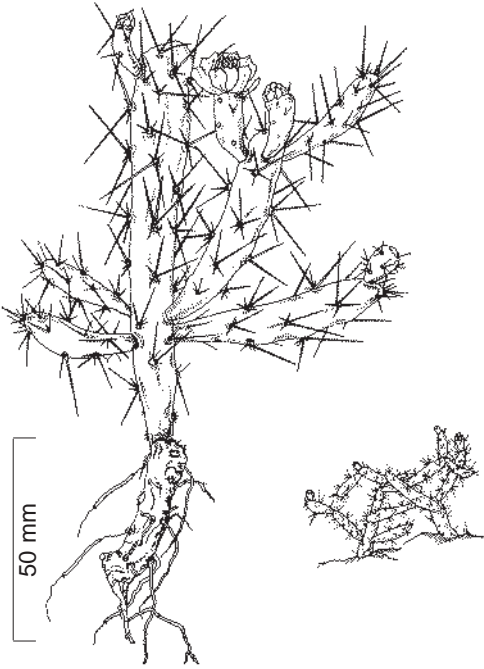
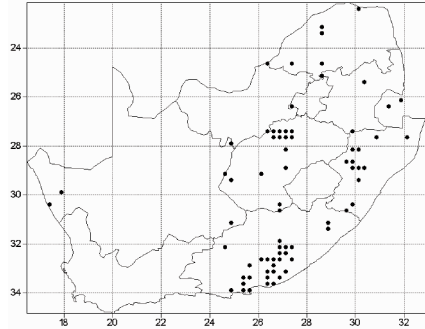


# *Opuntia aurantiaca* Lindl.

jointed cactus  
litjieskaktus

Family Cactaceae

Photo 38



Wilmig Roux



**Description:** Spiny, much-branched, spreading, succulent shrublet, 0.3–1.5 m high with underground tubers; seldom exceeds 0.5 m high in dry, open veld but up to 2 m when supported in dense bush; cladodes cylindrical to slightly flattened, bright green, sometimes tinged a reddish-purple, 60–200 mm long x 10–30 mm wide, armed with barbed spines 10–30 mm long. **Leaves:** None.

**Flowers:** Bright yellow, November–January. **Fruits:** Reddish, succulent berries, sterile. **Cultivated for:** Ornament. **Invades:** Karoo, savanna, pastoral land. **Origin:** S America (E Argentina & S Uruguay). **Invasive status:** Transformer. **Declared weed. Herbicide registration. Biocontrol:** Effective agents available. **Irritant:** Skin (spines, glochids).

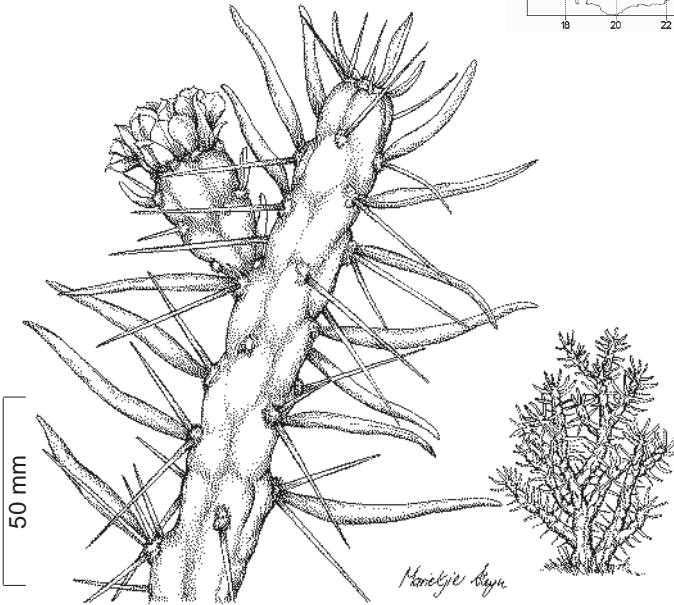
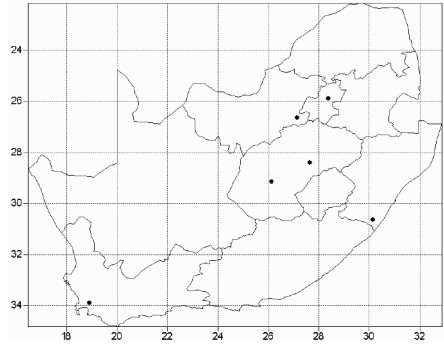


## ***Opuntia exaltata*** A.Berger

(= *Austrocyllindropuntia exaltata* (A.Berger) Backeb.) (perhaps only a form of *O. subulata* (Muehlenpf.) Engelm.)

long-spine cactus  
langdoringkaktus

Family Cactaceae



**Description:** Spiny, much-branched succulent shrub, 2–5 m high, developing a trunk with age; cladodes curved, cylindrical, tuberculate (with knobby projections), about 30 mm broad, glaucous-green; spines arise from white woolly pits (areoles) in groups of 1–2(–3), straight, strong, yellow-brown, up to 50 mm long. **Leaves:** Elongated, 30–60(–120) mm long, curved, fleshy, persistent. **Flowers:** Orange or greenish-yellow. **Fruit:** Not seen in South Africa; green, pear-shaped, about 90 mm long, usually sterile. **Cultivated for:** Ornament, hedging. **Invades:** Savanna, grassland. **Origin:** S America (probably arising in the Andes of Peru but now also in Ecuador and Bolivia.) **Invasive status:** Potential transformer. **Declared weed.** **Biocontrol:** Natural enemies released. **Irritant:** Skin (spines, glochids).

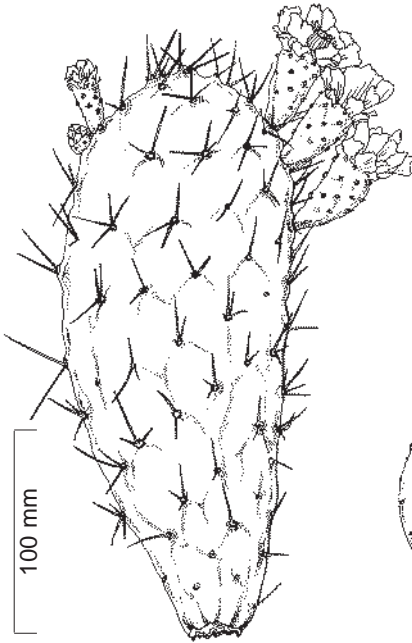
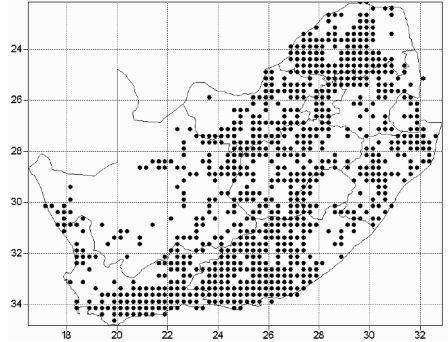
**Opuntia ficus-indica** (L.) Mill.

(= *O. megacantha* Salm-Dyck)

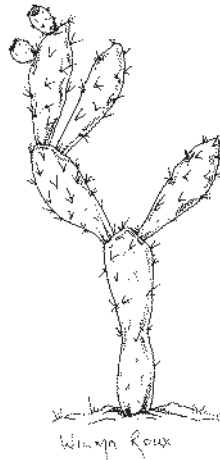
sweet prickly pear  
boereturksvy

Family Cactaceae

Photo 39



A x 1/4



**Description:** Succulent, branched shrub or tree 1.5–3.0(–5.0) m high, forming a sturdy trunk with age; cladodes flattened, grey to grey-green, much longer (300–600 mm) than broad (60–150 mm), varying from heavily spined to spineless.

**Leaves:** Minute, early deciduous. **Flowers:** Bright yellow or orange, showy, October–December. **Fruits:** Yellowish turning reddish, succulent berries (**A**), ± 80 mm long, covered with clusters of minute spines. **Cultivated for:** Edible fruits, animal fodder, security hedging.

**Invades:** Many habitats but mainly dry and rocky places in savanna and karoo. **Origin:** C America (Mexico). **Invasive status:** Transformer. **Declared weed excluding spineless cultivars. Herbicide registration. Biocontrol:** Effective agents available. **Poisonous:** Cladodes, in quantity, when fed to ruminants. **Irritant:** Skin (spines, glochids).



## *Opuntia fulgida* Engelm.

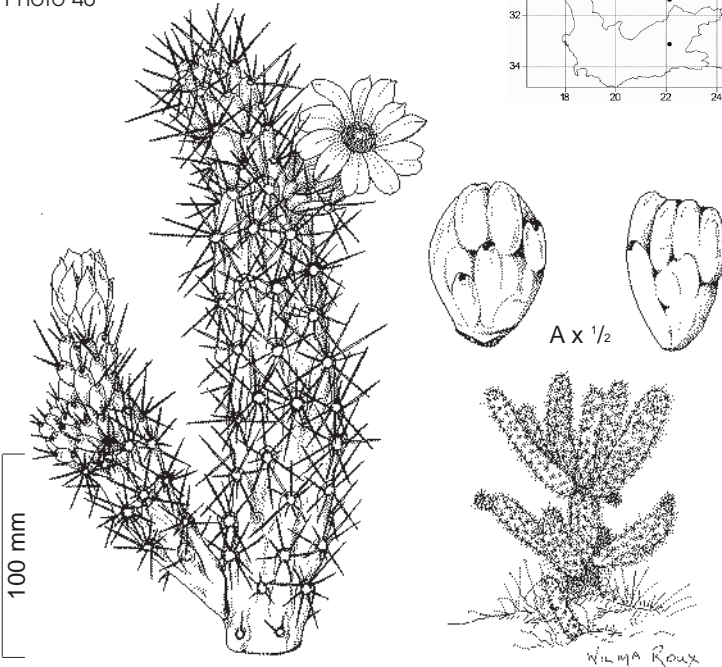
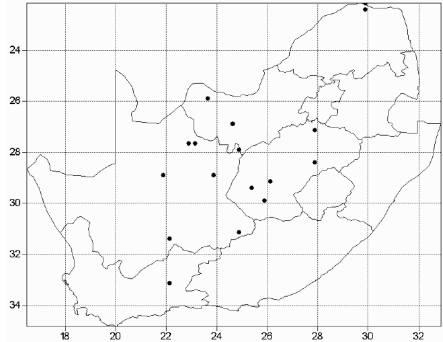
(*O. rosea* DC. &

*Cylindropuntia rosea* (DC.) Backeb.  
misapplied in South Africa)

rosea cactus  
roseakaktus

Family Cactaceae

Photo 40



**Description:** Very densely spiny, compact, succulent shrub 0.5–1.5 m high; cladodes cylindrical, 100–300 mm long x 20–50 mm wide; spines barbed, 25–40 mm long, covered with white, papery sheaths; spines almost hiding the cladodes. **Leaves:** None. **Flowers:** Deep pink, showy, petals characteristically curve backwards with age, November–January. **Fruits:** Yellow, succulent berries (**A**),  $\pm$  35 mm long, forming chains in older plants. **Cultivated for:** Ornament.

**Invades:** Dry savanna & karoo. **Origin:** N & C America (SW USA & Mexico).

**Invasive status:** Transformer. **Declared weed. Herbicide registration.**

**Biocontrol:** Under investigation. **Irritant:** Skin (spines, glochids). **NB** Identification of this species as *O. rosea* was thrown into doubt following investigations into its biocontrol. The evidence points to *O. fulgida* which characteristically produces chains of fruits which can persist for several years.

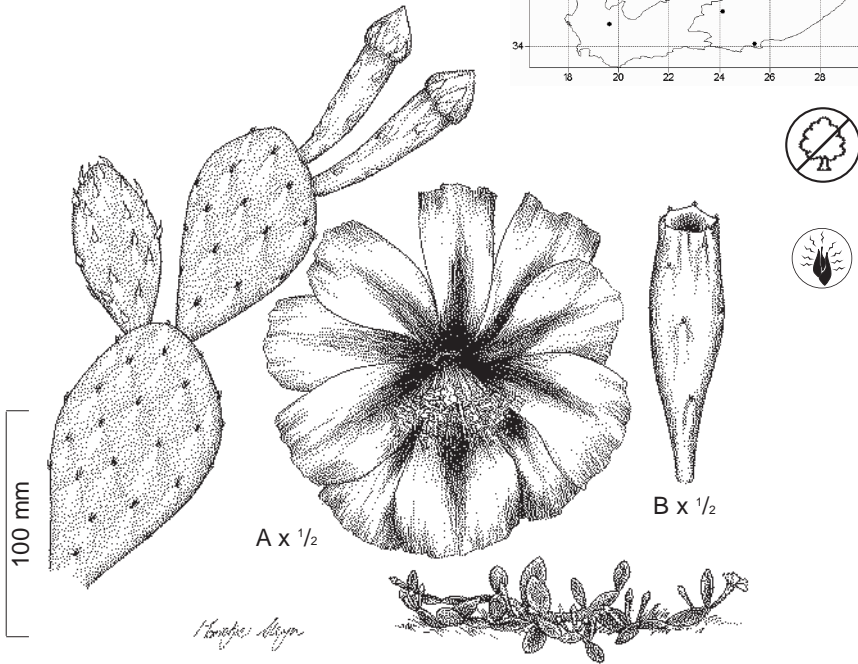
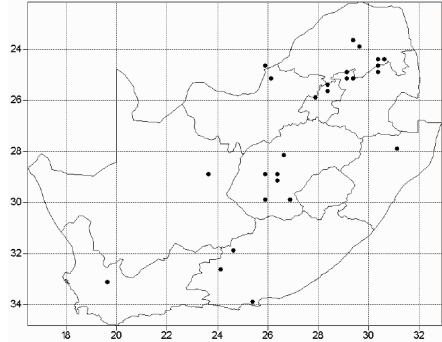


***Opuntia humifusa*** (Raf.) Raf.  
 (*O. compressa* (Salisb.) J.Macbr. illegitimate)

large-flowered or creeping prickly pear

Family Cactaceae

Photo 41



**Description:** Succulent, low, spreading shrublet up to 0.3 m high; cladodes prostrate or reclining and no more than two pads high, green to grey-green, flattened, round to obovate, up to 150 mm long; spines absent or with 1-2(-3) main spines, confined to the upper half of the cladode; areoles with dense glochids. **Leaves:** Small, pointed, up to 10 mm long, prominent on young cladodes, early deciduous. **Flowers:** Golden-yellow, usually with orange or red in the throat (A); showy, large, up to 100 mm long x 80 mm wide, receptacle (floral tube) up to 60 mm long and narrow, October-December. **Fruits:** Red or purple, succulent berries (B), narrow, elongated (to 60 mm), sweetish to taste. **Cultivated for:** Ornament. **Invades:** Dry grassland & savanna. **Origin:** N America (C & E USA). **Invasive status:** Potential transformer. **Declared weed. Irritant:** Skin (spines, glochids).

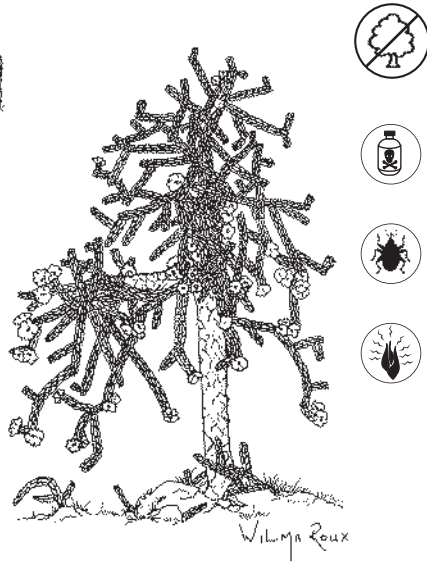
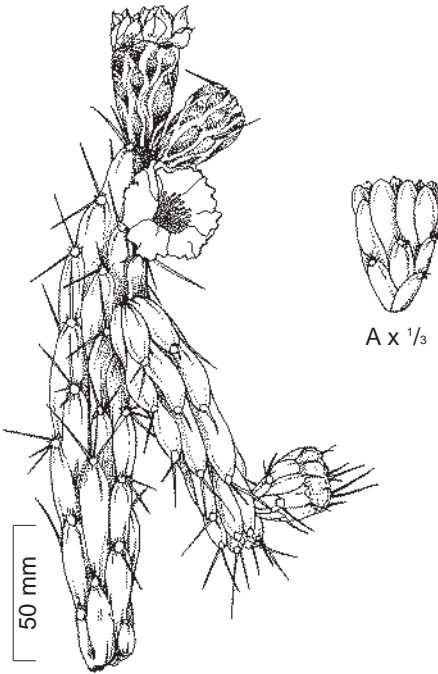
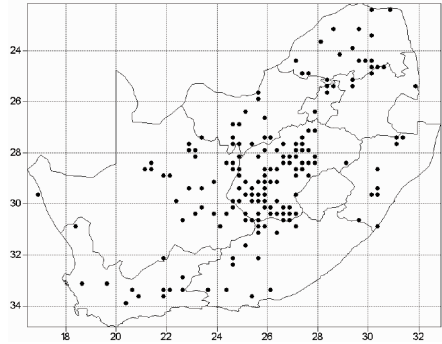


***Opuntia imbricata*** (Haw.) DC.  
 (= *Cylindropuntia imbricata* (Haw.) Knuth)

Imbricate prickly pear  
 kabelturksvy

Family Cactaceae

Photo 42



**Description:** Spiny, much-branched, succulent shrub 1.5–2.0(–3.0) m high with an erect main stem; old branches hang downwards; cladodes dull grey-green, cylindrical with raised edges giving the effect of a woven rope, up to 400 mm long x 50 mm broad; spines up to 30 mm long, initially covered with loose, white, papery sheaths. **Leaves:** Small, 10–20 mm long, early deciduous.

**Flowers:** Purple-red, showy, November–January. **Fruit:** Yellow, succulent berries (A), ± 50 mm long. **Cultivated for:** Ornament. **Invades:** Karoo, dry savanna & grassland. **Origin:** N & C America (S USA & Mexico). **Invasive status:** Transformer. **Declared weed. Herbicide registration. Biocontrol:** Effective agents available. **Irritant:** Skin (spines, glochids).

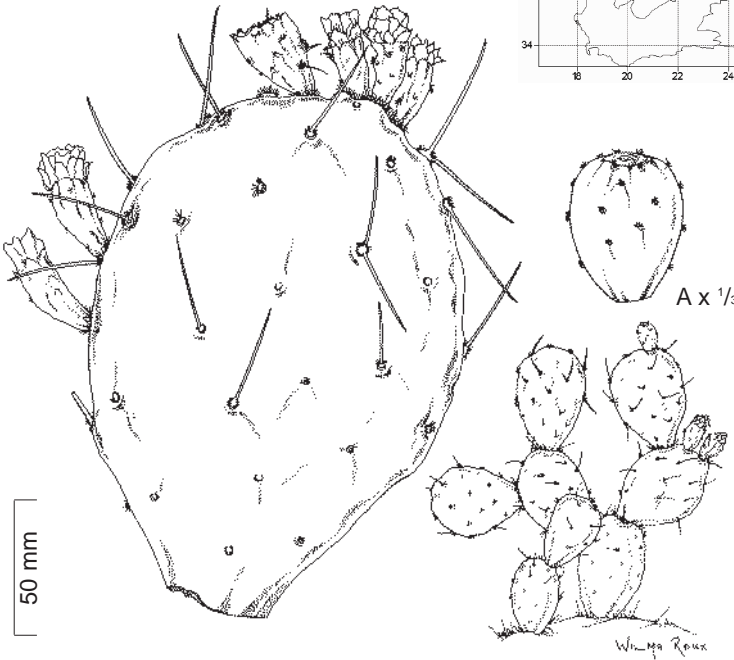
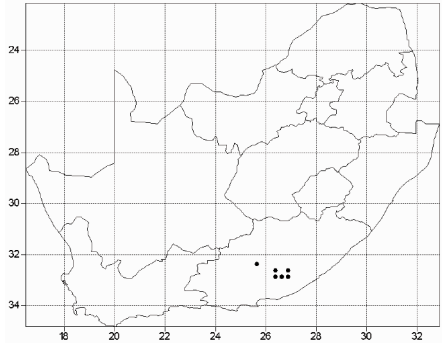


# *Opuntia lindheimeri* Engelm.

(= *O. tardospina* Griffiths)

small round-leaved prickly pear  
kleinrondeblaarturksvy

Family Cactaceae



**Description:** Succulent, branched shrub 1.0–1.5 m high; cladodes green to grey-green, flattened, rounded in outline but broader at apex than base, about 200 mm long x 160 mm broad; spines in groups of one to three but usually single, up to 50 mm long, slightly curved, very hard, usually confined to upper half of cladode. **Leaves:** Minute, early deciduous. **Flowers:** Yellow, showy, October–December. **Fruits:** Purple, succulent berries (**A**),  $\pm$  70 mm long, flesh green inside. **Cultivated for:** Ornament. **Invades:** Savanna. **Origin:** N & C America (S USA & Mexico). **Invasive status:** Minor weed due to biocontrol. **Declared Weed.** **Biocontrol:** Effective agents available. **Irritant:** Skin (spines, glochids). **NB:** A similar species recently identified as *O. engelmannii* var. *lindheimeri* is very abundant in the Free State. Its fruits are purple inside when ripe. See photo 43.

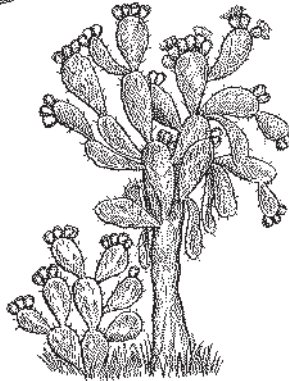
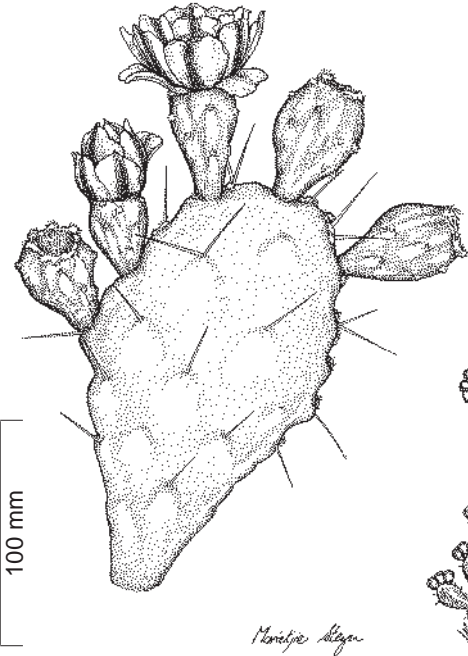
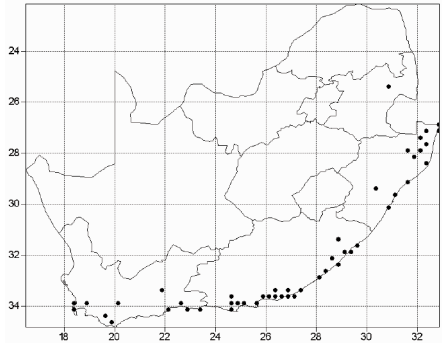
# ***Opuntia monacantha*** Haw.

(*O. vulgaris* Mill. misapplied)

cochineal or drooping prickly pear  
luisies- of suurturksvy

Family Cactaceae

Photo 44



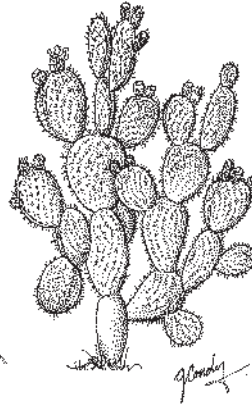
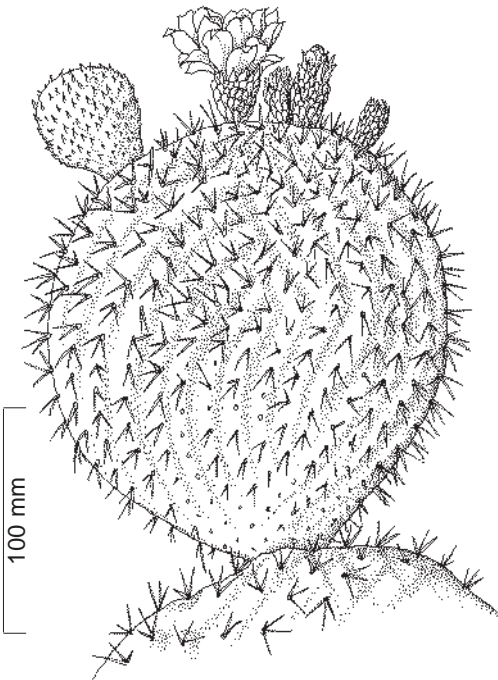
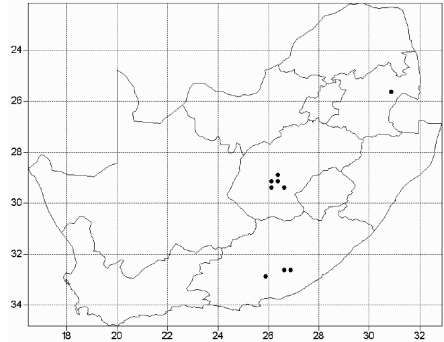
**Description:** Succulent shrub or tree up to 5 m high, often with a definite trunk, usually with a large, much-branched top and drooping upper segments; cladodes flattened, usually thin, appearing wilted, bright green and shiny at least when young; longer (100–300 mm) than broad (50–100 mm); spines 1–2(–3) per group (on the trunks up to 12), 30–70 mm long. **Leaves:** Minute, early deciduous. **Flowers:** Yellow, outer petals with red markings; 70–90 mm long; October–April. **Fruits:** Reddish-purple, obovoid, about 60 mm long; long persistent, sometimes proliferous. **Cultivated for:** Edible fruits, animal fodder, security hedging, cochineal dye. **Invades:** Coastal bush, moist savanna. **Origin:** S America (Brazil to N Argentina). **Invasive status:** Minor weed due to biocontrol. **Declared weed. Biocontrol:** Effective agents available. **Irritant:** Skin (spines, glochids).



# *Opuntia spinulifera* Salm-Dyck

saucepan cactus  
grootrondeblaarturksvy

Family Cactaceae



**Description:** Spiny, much-branched succulent shrub up to 3 m high; cladodes slightly bluish-green, flattened, almost round, 200–400 mm across; densely covered with spines in groups of 3–6, of varying lengths up to 20 mm, in a regular sub-spiral arrangement. **Flowers:** Yellow, with a cup-shaped calyx tube 25 mm long, densely covered by areoles containing bristles around the mouth, November–December. **Fruit:** Small berries  $\pm$  25 mm long. **Cultivated for:** Ornament, hedging. **Invades:** Savanna, grassland. **Origin:** C America (Mexico). **Invasive status:** Potential transformer. **Declared weed.** **Biocontrol:** Natural enemies released. **Irritant:** Skin (spines, glochids).

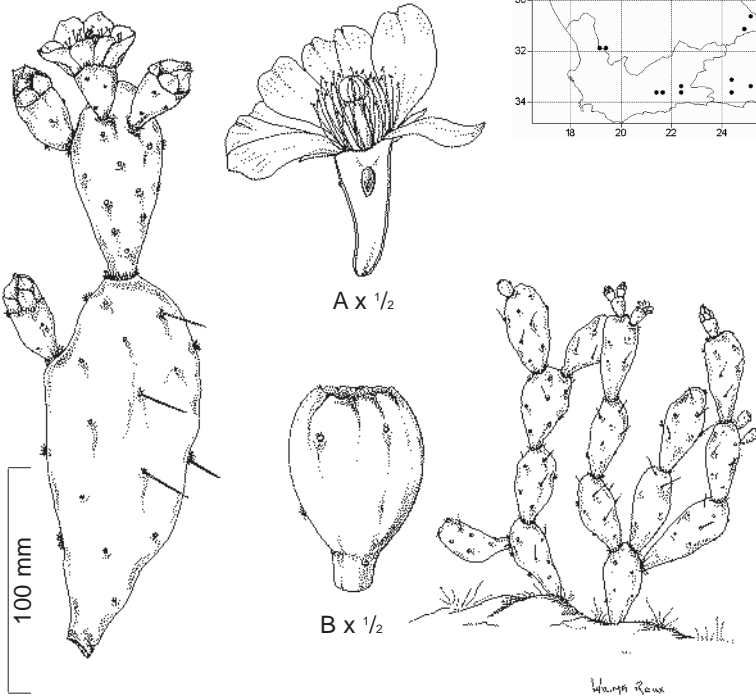
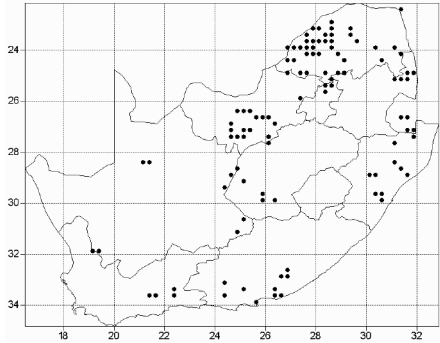
**Opuntia stricta** (Haw.) Haw.

(= *O. dillenii* (Ker Gawl) Haw.)

Australian pest pear  
suurturksvy

Family Cactaceae

Photo 45



**Description:** Spreading, much-branched, succulent shrub 0.5–1.5(–2.0) m high; cladodes green to bluish-green, flattened, longer than broad (up to 230 mm x 100 mm); spines up to 40 mm long, usually one or two in a group, or absent.

**Leaves:** Minute, early deciduous. **Flowers:** Yellow (A), showy, large, up to 70 mm long, November–January. **Fruits:** Red turning purple, succulent berries (B), ± 50 mm long, outer surface smooth, typically narrowed at the base, flesh purple inside, sour tasting. **Cultivated for:** Ornament. **Invasives:** Savanna, dry grassland.

**Origin:** N America & West Indies (Florida, Texas & Cuba). **Invasive status:** Transformer. **Declared weed. Herbicide registration. Biocontrol:** Effective agents available. **Irritant:** Skin (spines, glochids).

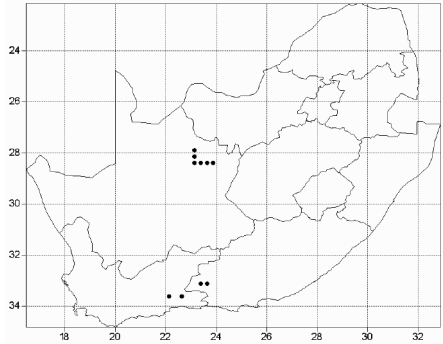
***Alhagi maurorum*** Medik.

(= *A. camelorum* Fisch.)

camelthorn bush  
kameeldoringbos

Family Fabaceae

Photo 46



**Description:** Much-branched, thorny, almost leafless shrub up to 1.5 m high; aerial stems annual, green turning yellowish, striate, glabrous, upper branches ending in hard, sharp spines; underground stems extensive. **Leaves:** Dark green, simple, up to 20 mm long, sparse. **Flowers:** Purple, solitary, borne on the spine-tipped branches, December-January. **Fruits:** Brown pods (**A**), one- to two-seeded. **Invades:** Dry savanna, karoo, ploughed lands, riverbanks; prefers deep soils. **Origin:** Europe & E Asia. **Invasive status:** Agrestal weed and potential transformer. **Declared weed. Herbicide registration.**



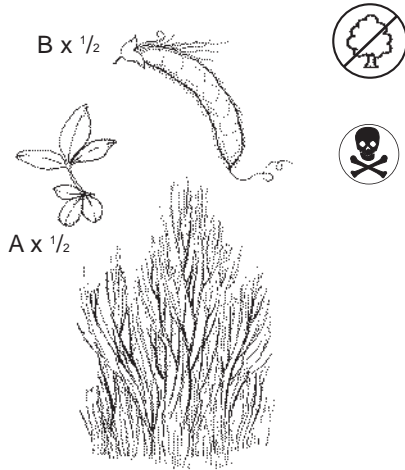
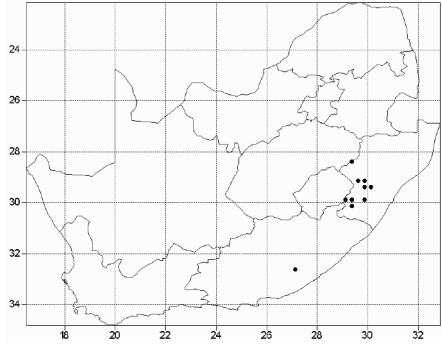
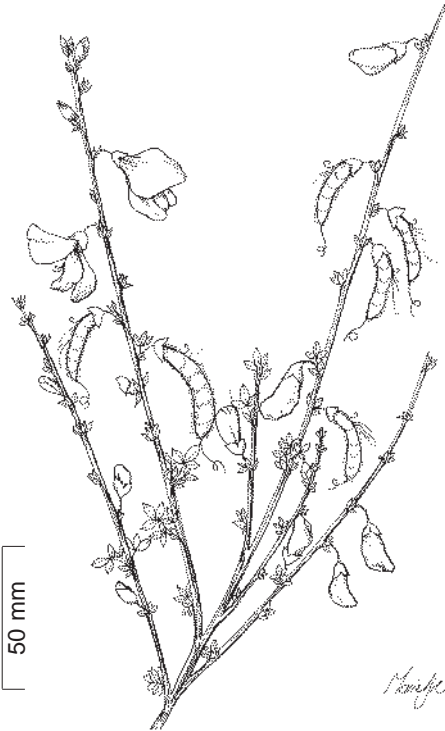
# **Cytisus scoparius** (L.) Link

(= *Genista scoparia* (L.) Lam.)

Scotch broom

Skotse brem

Family Fabaceae



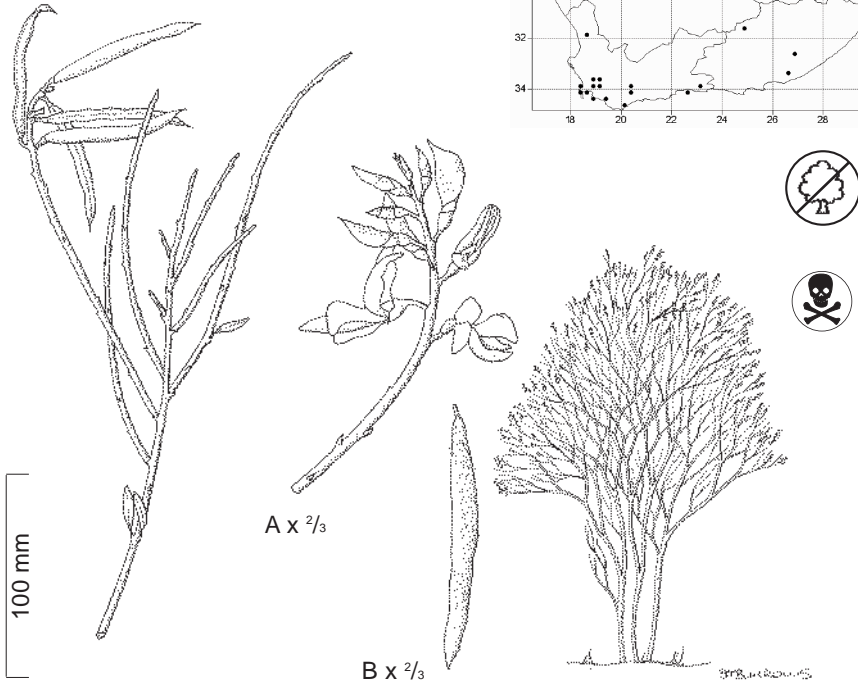
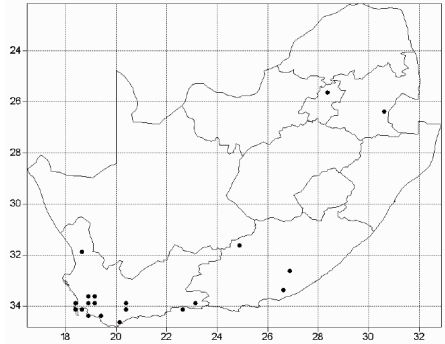
**Description:** Unarmed shrub to 4 m high with many, slender, erect, prominently ridged or grooved, green branches, becoming almost leafless and rush-like.

**Leaves:** Dark green, 8–15 mm long, three-foliolate (A), but upper leaves often reduced to one leaflet, deciduous. **Flowers:** Bright yellow, 25 mm long, mostly solitary or paired, axillary, September–March. **Fruits:** Brownish-black pods (B), 35–50 mm long, glabrous except for silky hairs at the margin. **Cultivated for:** Ornament, shelter. **Invades:** Grassland, forest margins, roadsides. **Origin:** Europe & Britain. **Invasive status:** Potential transformer. **Declared weed. Poisonous:** Fruit.

# *Spartium junceum* L.

Spanish broom  
Spaanse besem

Family Fabaceae



**Description:** Unarmed shrub 1.5–2.5(–4.0) m high, with long, slender, ascending, cylindrical, green branches, rush-like and almost leafless. **Leaves:** Blue-green, silky beneath, simple (undivided), deciduous. **Flowers:** Yellow, fragrant, 25 mm long, in terminal racemes (A) 300–400 mm long, August–November. **Fruits:** Brown pods (B), flattened, to 75 mm long, initially entirely covered with white, silky hairs.

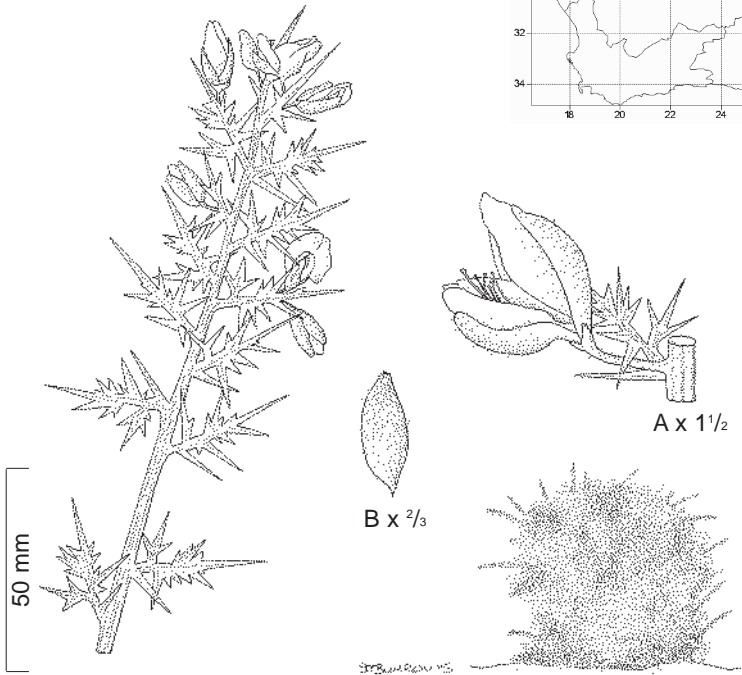
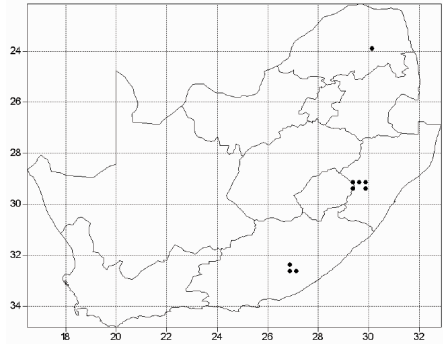
**Cultivated for:** Ornament, hedging. **Invades:** Fynbos, roadsides, urban open space, wasteland. **Origin:** Europe incl. Mediterranean. **Invasive status:** Potential transformer. **Declared weed. Poisonous.**

## *Ulex europaeus* L.

European gorse  
gaspeldoring

Family Fabaceae

Photo 47



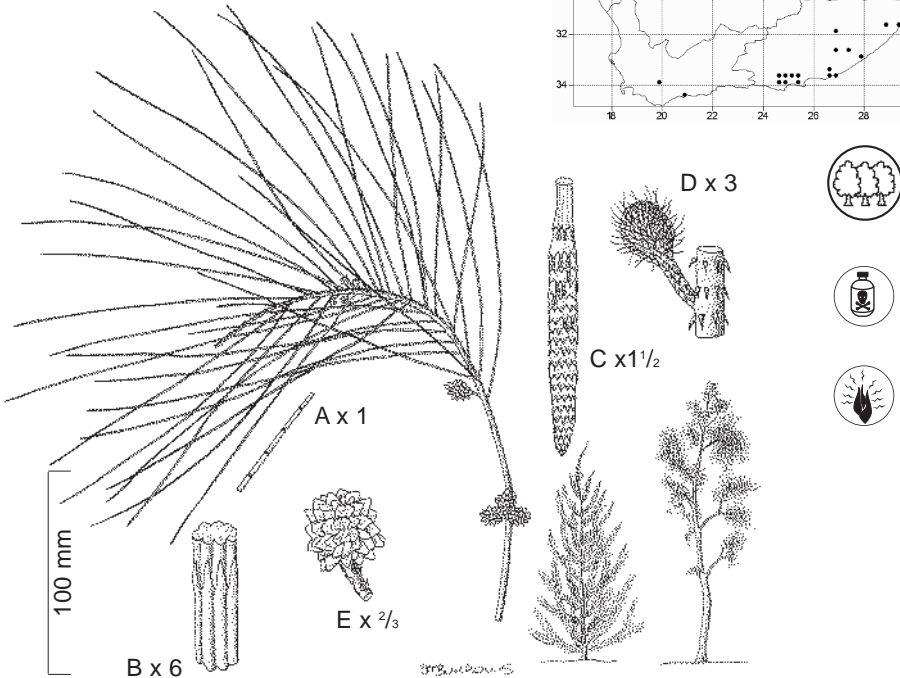
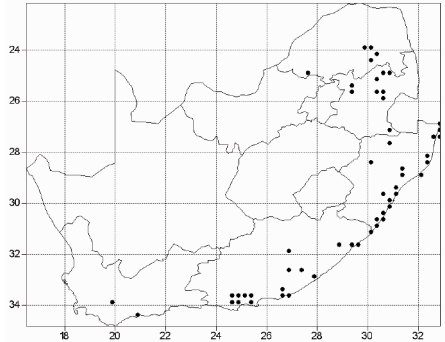
**Description:** Much-branched, densely spiny shrub 0.5–1.5(–3.0)m high; branchlets striated, hairy when young; spines green, branched, deeply furrowed, rigid and sharp-pointed, 15–35 mm long. **Leaves:** Dark green, minute; three-foliolate on young plants; spinous or scale-like on mature plants. **Flowers:** Bright yellow (A), crowded towards the ends of branchlets, fragrant, spring–all year. **Fruits:** Dark brown or black pods (B), hairy, 20–25 mm long. **Cultivated for:** Ornament, hedging; honey source. **Invades:** Grassland, vleis, valleys, in moist mountain regions. **Origin:** Europe & Britain. **Invasive status:** Potential transformer. **Declared weed.** **Poisonous:** Seeds.

**Casuarina cunninghamiana** Miq. &  
**C. equisetifolia** L.

beefwood & horsetail tree  
kasuarisboom & perdestertboom

Family Casuarinaceae

Photo 48



**Description:** Evergreen trees 20–38 m high with gracefully arching, slender, jointed branchlets (A) and greyish-green pyramidal crowns becoming cylindrical. **Leaves:** Minute scales, in whorls. *C. cunninghamiana*: scales with a transverse brown band, internodes with rounded ribbing; *C. equisetifolia* (illustr.): scales uniformly pale, internodes sharply ribbed (B). **Flowers (D):** Male flowers (C) in yellowish spikes up to 20 mm long; female flowers (D) in reddish, globose heads 3–5 mm long, September–April. **Fruits:** Brown, ± woody conelets (E), 20 mm long; seeds flattened, winged. **Cultivated for:** Ornament, dune stabilisation, shelter. **Invasive:** Coastal dunes & sandy sea-shores (*C. equisetifolia*), riverbeds (*C. cunninghamiana*). **Origin:** Australia & Pantropical respect. **Invasive status:** Potential transformers. **Declared invaders (category 2).** **Herbicide registration:** *C. equisetifolia*. **Irritant:** Respiratory tract (flowers).



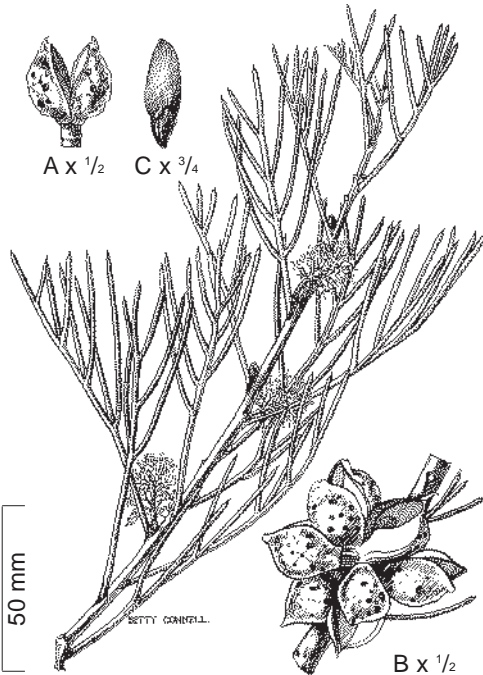
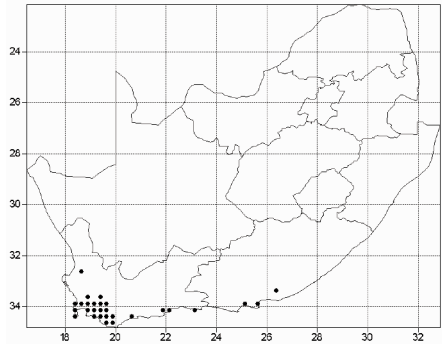
***Hakea drupacea*** (C.F.Gaertn.) Roem. & Schult.

(= *H. suaveolens* R.Br.)

sweet hakea

soethakea

Family Proteaceae



**Description:** Much-branched, rounded shrub or tree up to 6 m high; young growth sparsely hairy, otherwise glabrous. **Leaves:** Dark green to grey-green, glabrous, up to 100 mm long, divided into upright, sharp-pointed needles 30–50 mm long. **Flowers:** Cream, fragrant, in elongated, axillary clusters up to 20 mm long, June–September. **Fruits:** Woody capsules (A), ± 25 mm long x 20 mm wide, with two apical horns, surface smooth, shiny yellowish-brown with dark warts, turning grey with age, in clusters (B) of 3–6 or more; splitting into two equal valves, each containing one winged seed (C), ± 15 mm long. **Cultivated for:** Shelter, dune reclamation, ornament. **Invades:** Mountain and lowland fynbos. **Origin:** SW Australia. **Invasive status:** Transformer. **Declared weed.**

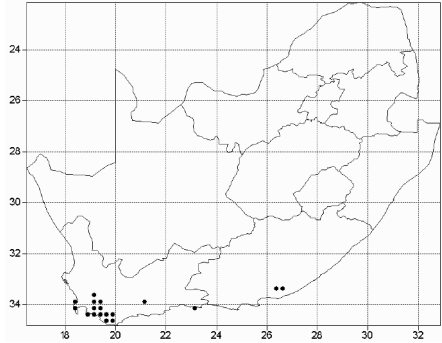
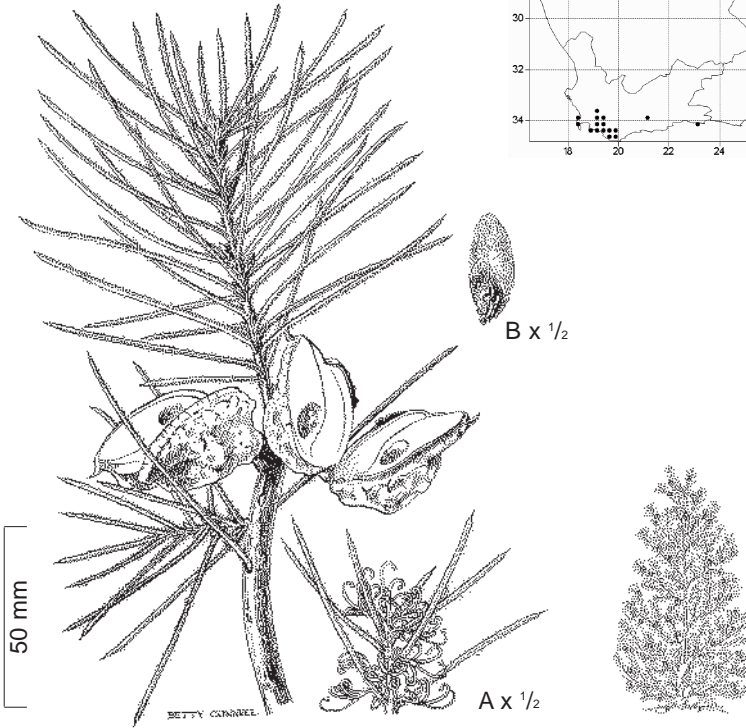




# *Hakea gibbosa* (Sm.) Cav.

rock hakea  
harige hakea

Family Proteaceae



**Description:** Much-branched, prickly and hairy shrub or tree up to 4 m high; young twigs and branches markedly hairy. **Leaves:** Greyish-green, at first densely hairy becoming ± glabrous, needle-shaped, up to 80 mm long, sharp-pointed.

**Flowers:** Deep cream, small, in leaf axils (A), June–September. **Fruits:** Grey, woody capsules, 35 mm long x 30 mm wide, with two sharp apical horns, surface rough and thick; solitary or two together, splitting into two equal valves, each containing one winged seed (B). **Cultivated for:** Hedging; provides firewood. **Invades:** Mountain fynbos. **Origin:** SE Australia. **Invasive status:** Transformer. **Declared weed. Herbicide registration. Biocontrol:** Natural enemies released.

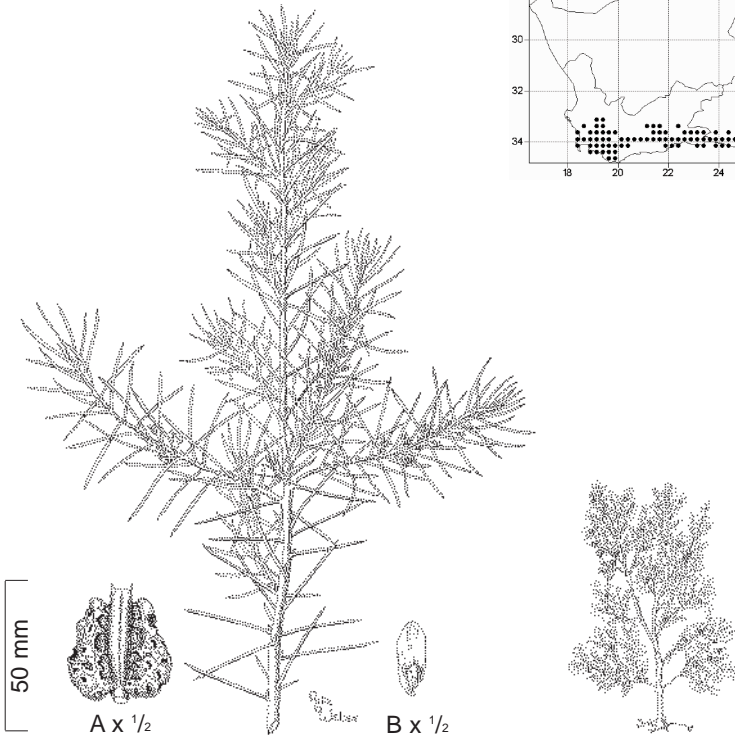
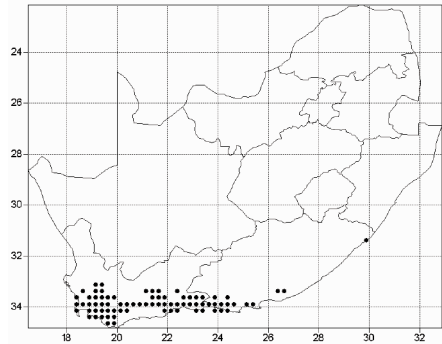


# *Hakea sericea* Schrad. & J.C.Wendl.

silky hakea  
syrige hakea

Family Proteaceae

Photo 49



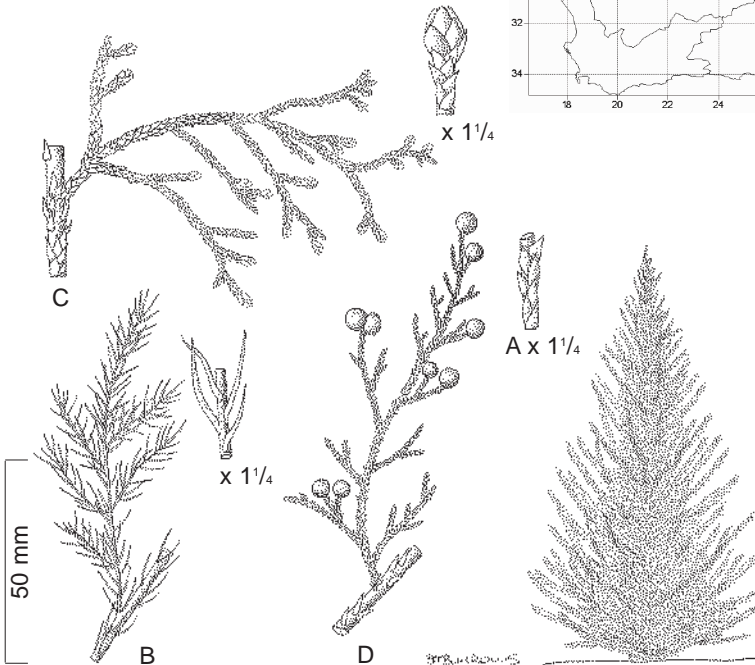
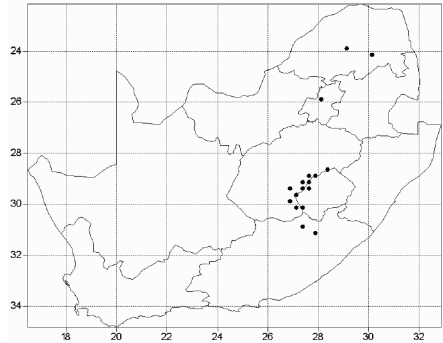
**Description:** Much-branched, very prickly shrub or tree up to 5 m high; young twigs covered in short, fine hairs, older stems glabrous. **Leaves:** Dark green to grey-green, glabrous, needle-shaped, up to 40 mm long, sharp-pointed. **Flowers:** Cream, small, in leaf axils, June–September. **Fruits:** Wooden capsules (**A**), 25–30 mm long x 20–25 mm wide, with two apical horns, purplish-brown with paler markings, turning grey, surface thick and wrinkled; splitting into two equal valves, each containing one winged seed (**B**). **Cultivated for:** Hedging, dune reclamation, ornament. **Invades:** Mountain fynbos. **Origin:** SE Australia. **Invasive status:** Transformer. **Declared weed. Herbicide registration. Biocontrol:** Effective agents and mycoherbicide available.



## *Juniperus virginiana* L.

red or pencil cedar  
rooi- of potloodseder

Family Cupressaceae



**Description:** Evergreen, coniferous tree 10–18 m high; crown greyish-green, initially conical, later with horizontal, spreading branches; bark grey to reddish-brown, peeling off in long strips. **Leaves:** Of two kinds; adult leaves (A) scale-like, overlapping, acute, 1.5 mm long; juvenile leaves (B) needle-like to 10 mm long, usually in opposite pairs. **Cones:** Male and female cones usually on separate trees (**C**: twig with male cones, **D**: twig with female cones); female cones berry-like, indehiscent, dark blue with bluish-grey bloom, to 6 mm across.

**Cultivated for:** Shelter, shade, ornament. **Invades:** Grassland, riverbanks, rocky outcrops. **Origin:** NE North America. **Invasive status:** Potential transformer.

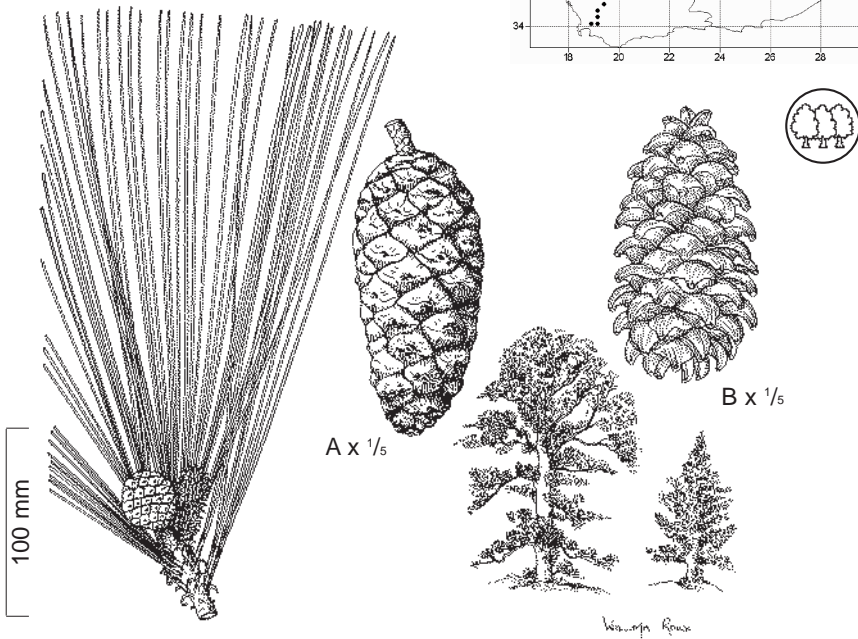
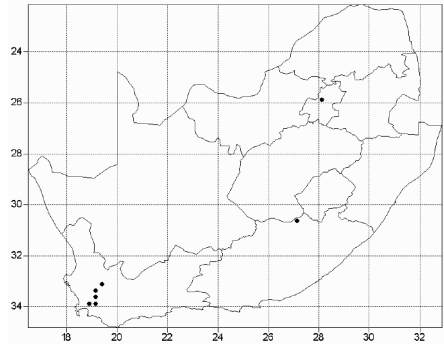
**Proposed declared invader. Poisonous:** Leaves toxic to livestock. **Irritant:** Skin (leaves).



***Pinus canariensis*** C.Sm. &  
***P. roxburghii*** Sarg.  
 (= *P. longifolia* Roxb.)

Canary pine & chir or longifolia pine  
 Kanariese den & tjirden

Family Pinaceae



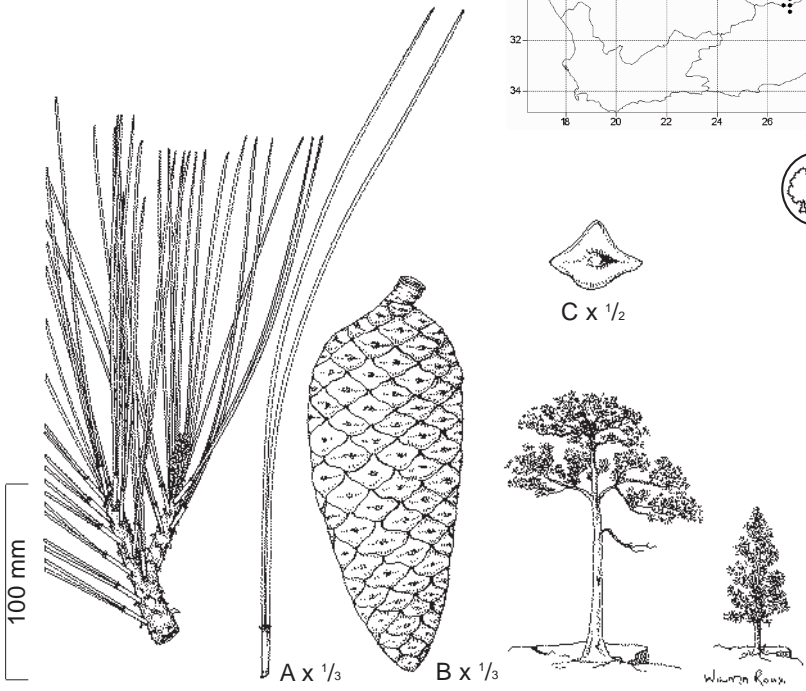
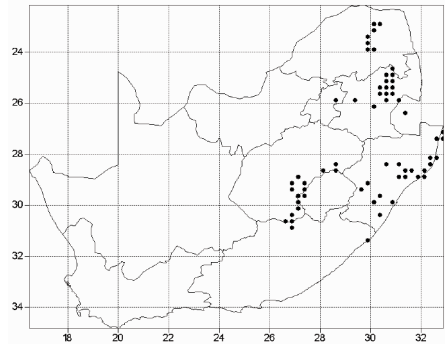
**Description:** Coniferous trees up to 20 m high or more; with conical or oval crowns; *P. canariensis* (main illustration): branches horizontal, branchlets yellow, secondary shoots often on lower trunk; *P. roxburghii*: branches larger, distinctly ascending, secondary shoots absent from trunk; bark very thick and fissured.  
**Leaves:** Needles, light to bright green, in bundles of three, 150–300 mm long.  
**Cones:** Light brown, woody, cylindrical-ovoid, large, 150–220 mm long; cone scales sharply cross-keeled in *P. canariensis* (A); cone scales elongated and reflexed in *P. roxburghii* (B). **Cultivated for:** Timber, shelter, shade, ornament. **Invasive:** Fynbos (*P. canariensis*) and grassland, usually on dry mountain slopes. **Origin:** Canary Isles and subtropical Himalayas respectively. **Invasive status:** Potential transformers. **Declared invaders (category 2).**



***Pinus elliottii* Engelm. &  
*P. taeda* L.**

slash pine & loblolly pine  
basden & loblollyden

Family Pinaceae



**Description:** Coniferous trees 15–30 m high with dark green crowns; *P.elliottii* (illustrated) with an open crown of modest spread, free of branches to a considerable height; *P.taeda* with a denser crown and retaining its lower branches when adequately lit from the side. **Leaves:** Needles, dark green; *P.elliottii*: in bundles of two or three (A), coarse and stiff and crowded at ends of branchlets; *P.taeda*: in bundles of three and characteristically twisted. **Cones:** Yellowish- or pale brown (B), 60–140 mm long; cone scales of *P.elliottii* (C) end in a blunt, grey prickle 1–2 mm long as opposed to *P.taeda* with a sharp, recurved thorn 6–7 mm long. **Cultivated for:** Timber. **Invasive:** Forest margins, grassland. **Origin:** N America (SE USA). **Invasive status:** Transformers. **Declared invaders (category 2).**

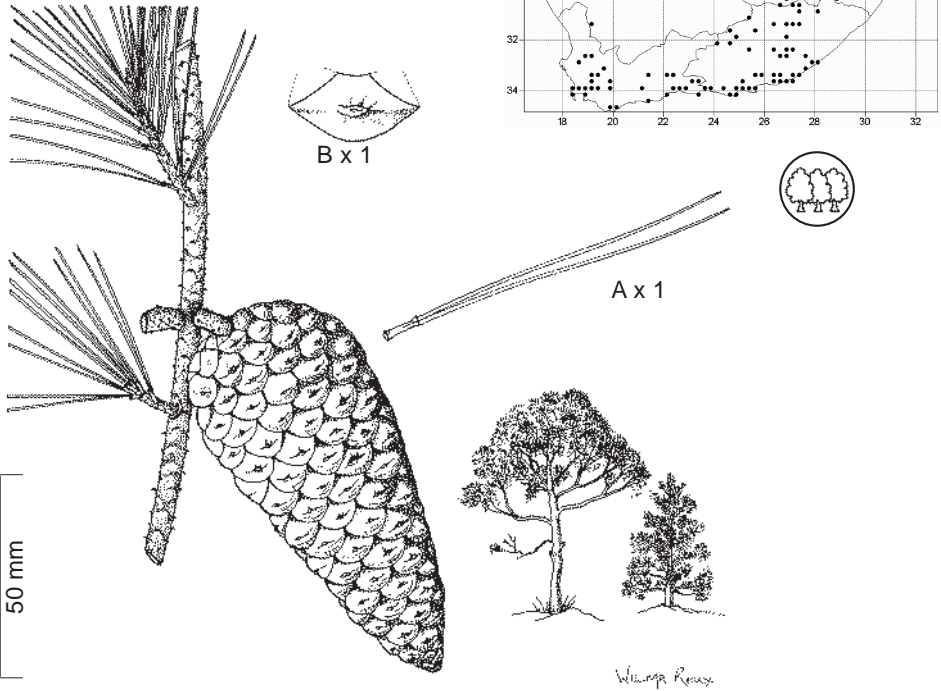


# *Pinus halepensis* Mill.

Aleppo pine  
Aleppoden

Family Pinaceae

Photo 50



**Description:** Coniferous tree 5–15(–20) m high; conical with a short trunk when young, rounded to oblong with a crooked trunk when older; crown open and “see-through”, branches numerous and slender; bark silvery-grey becoming darker. **Leaves:** Needles, grey-green to yellow-green, in bundles of two (**A**), short, 40–80 mm long, slender and stiff. **Cones:** Reddish-brown, glossy, woody, conic-ovoid, 80–100 mm long, clustered on stout, reflexed stalks; cone scales (**B**) flat or slightly raised along a transverse ridge. **Cultivated for:** Shelter, poles, firewood. **Invasives:** Grassland, fynbos, particularly on dry soils. **Origin:** Mediterranean. **Invasive status:** Transformer. **Declared invader (category 2).** **Biocontrol:** Under investigation.

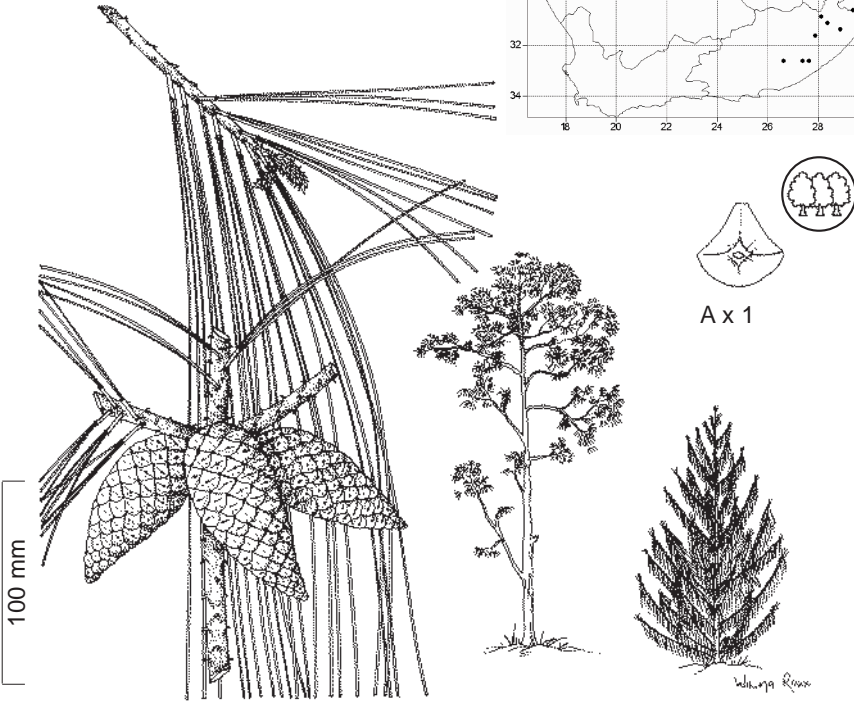
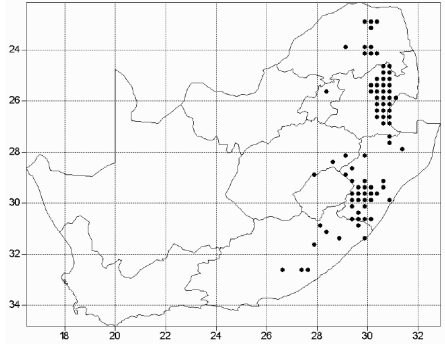


# *Pinus patula* Schltdl. & Cham.

patula pine  
treurden

Family Pinaceae

Photo 51



**Description:** Coniferous tree with drooping foliage, 12–20(–40) m high; conical when young, developing a dense, rounded canopy at maturity; often forking low down with long, spreading branches. **Leaves:** Needles, bright green, in bundles of three, long (120–300 mm), slender and drooping. **Cones:** Pale brown, woody, conic-ovoid, in clusters of 2–5, 70–100 mm long, strongly reflexed on very short stalks; cone scales (**A**) with sunken centres and minute, deciduous prickles. **Cultivated for:** Timber. **Invades:** Moist grassland, forest margins and gaps, road cuttings. **Origin:** C America (Mexico to Nicaragua). **Invasive status:** Transformer. **Declared invader (category 2).**

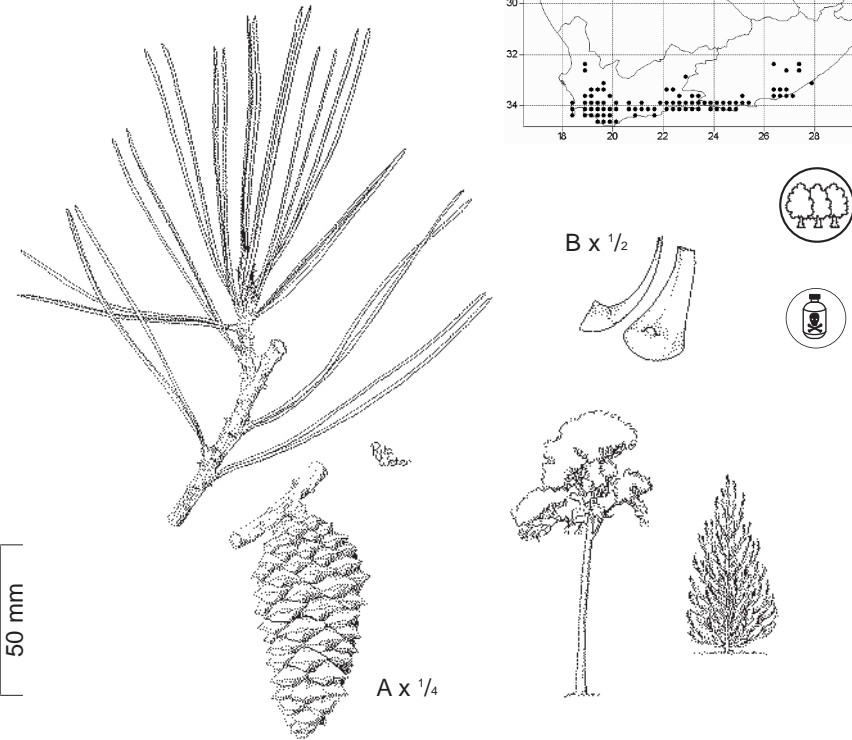
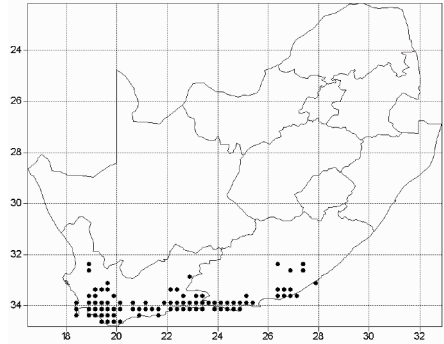


# *Pinus pinaster* Aiton

cluster pine  
trosden

Family Pinaceae

Photo 52



**Description:** Coniferous tree 8–15(–30) m high; conical when young, becoming cylindrical with a tall, bare trunk when older; bark reddish-brown, deeply cracked into plates. **Leaves:** Needles, dull grey-green, in bundles of two, long (80–240 mm), thick and rigid. **Cones:** Initially purple (A), turning light brown, woody, conic-ovoid, 90–180 mm long, shortly stalked, often clustered and persistent; cone scales (B) have a distinct ridge with a short, hard, curved point. **Cultivated for:** Timber. **Invades:** Mountain and lowland fynbos. **Origin:** Mediterranean. **Invasive status:** Transformer. **Declared invader (category 2).** **Herbicide registration. Biocontrol:** Under investigation.

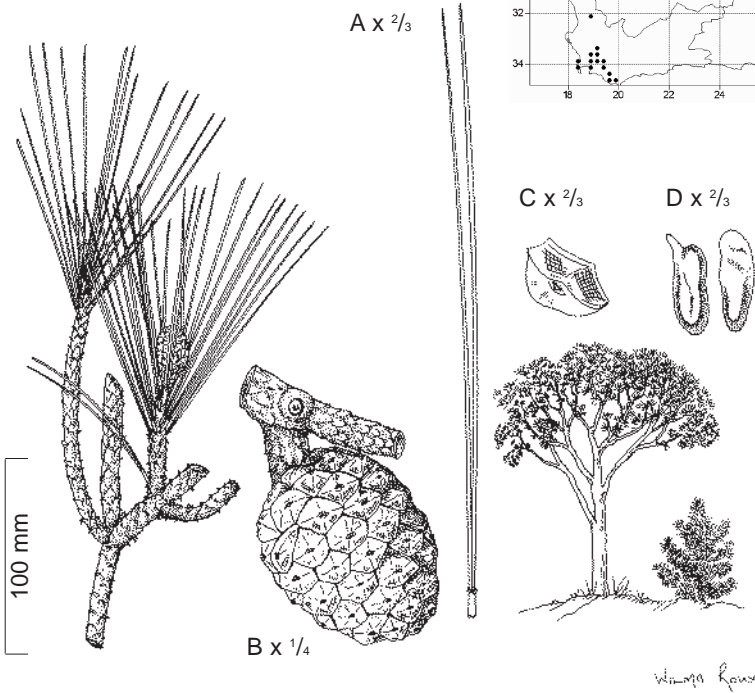
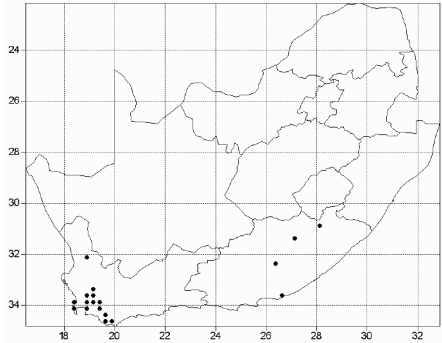




# *Pinus pinea* L.

umbrella or stone pine  
sambreelden

Family Pinaceae



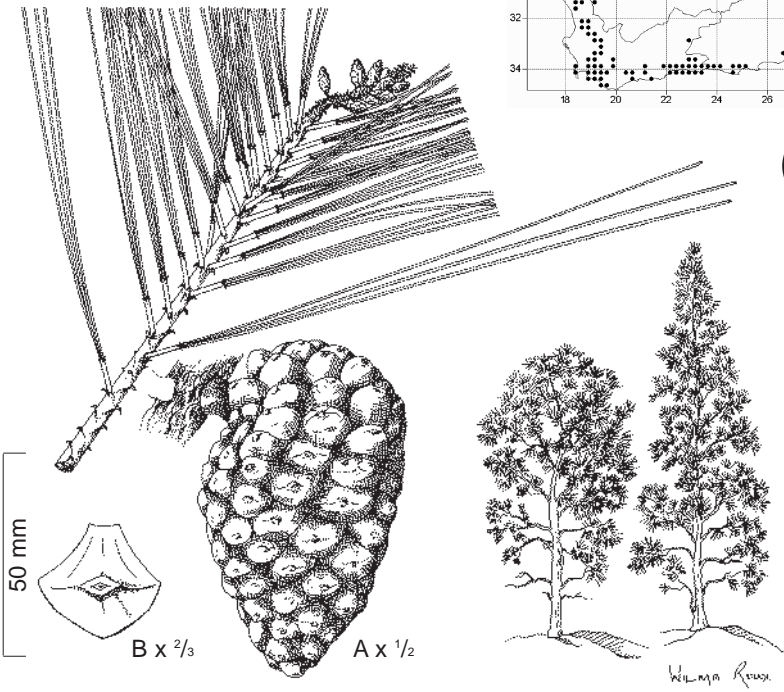
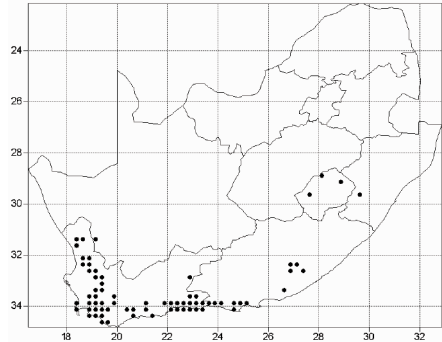
**Description:** Coniferous tree 12–30 m high forming an umbrella-shaped crown with dense foliage at maturity; trunk straight though often forking, bark reddish-brown and deeply cracked into plates. **Leaves:** Needles, light green, in bundles of two (A), 50–150 mm long, thick and rigid. **Cones:** Nut-brown (B), woody, ovoid-globose, heavy, 100–150 mm long, symmetrical, usually solitary; cone scales (C) thick with 5–6 radially arranged ridges and a blunt tip; seeds (D) oval, large, up to 10 x 20 mm, with 3–20 mm long wings, edible (“pine nuts”). **Cultivated for:** Ornament, shade. **Invades:** Grassland, mountain fynbos. **Origin:** Northern Mediterranean. **Invasive status:** Special effect weed (high visual impact).



# *Pinus radiata* D. Don

radiata pine  
radiataden

Family Pinaceae



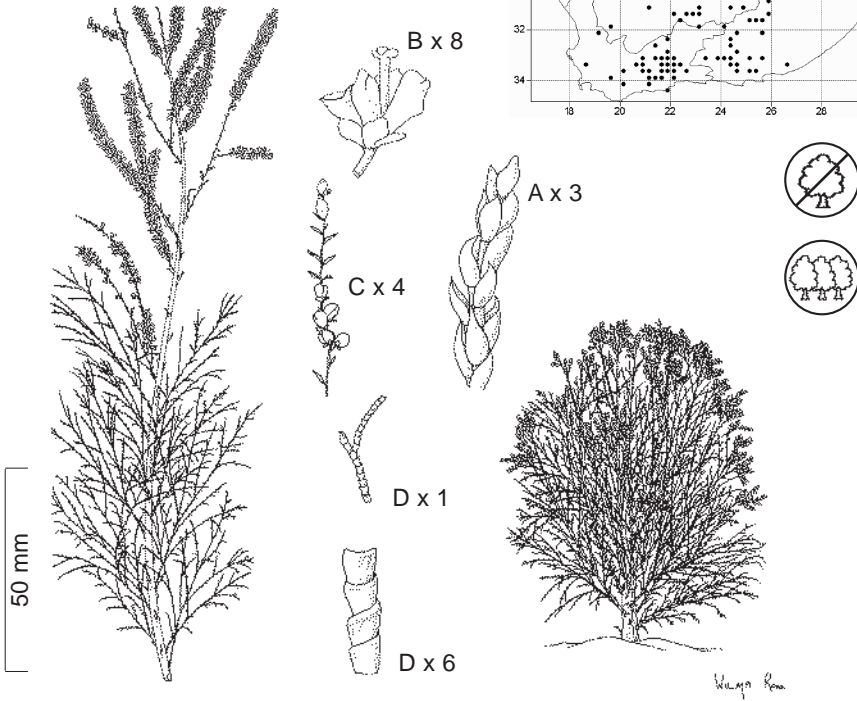
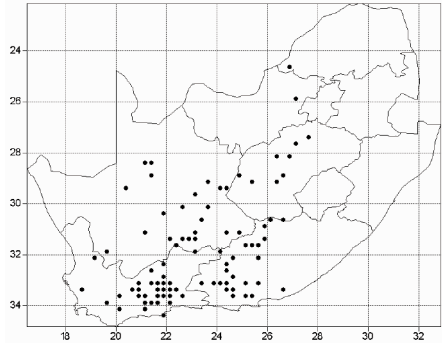
**Description:** Coniferous tree 12-25(-30)m high with a sharply conical canopy in plantations, but a broad, rounded canopy when open-grown. **Leaves:** Needles, dark green, in bundles of two or usually three, very densely arranged, 60-150 mm long, slender. **Cones:** Yellowish-brown, woody, obliquely ovoid, large, 70-140 mm long, strongly asymmetrical and reflexed, persistent (**A**: immature cone); cone scales (**B**) on outer side very large and thick, ending in a fine thorn, inner scales small and flat. **Cultivated for:** Timber, shelter. **Invades:** Fynbos, forest gaps, grassland, usually on moist mountain slopes. **Origin:** SW North America. **Invasive status:** Transformer. **Declared invader (category 2).**

***Tamarix chinensis*** Lour. &  
***T. ramosissima*** Ledeb.

Chinese & pink tamarisks  
Chinese & perstamarisks

Family Tamaricaceae

Photo 53



**Description:** Evergreen shrubs or trees 3–6 m high; bark reddish-brown (*T. ramosissima*), black or dark brown (*T. chinensis*); branches feathery. **Leaves:** Minute, scale-like (A), deep green, greyish or bluish-green. **Flowers:** Pale to purplish-pink (B & C), in racemes 15–70 mm long, at the ends of long, thin twigs. *T. ramosissima* has unevenly toothed sepals and obovate petals, while *T. chinensis* has entire sepals and ovate petals. **Fruits:** Papery capsules, 3–4 mm long. **NB** Indigenous *T. usneoides* (D): overlapping, pale grey-green leaves; whitish flowers; short, congested, terminal twigs. **Cultivated for:** Shade, ornament, erosion control; honey source. **Invade:** Sandy riverbanks & riverbeds. **Origin:** E Europe to C & E Asia (*T. ramosissima*.); China (*T. chinensis*). **Invasive status:** Potential transformers. **Declared weeds in W, N & E Cape & invaders (category 3) elsewhere in South Africa.**

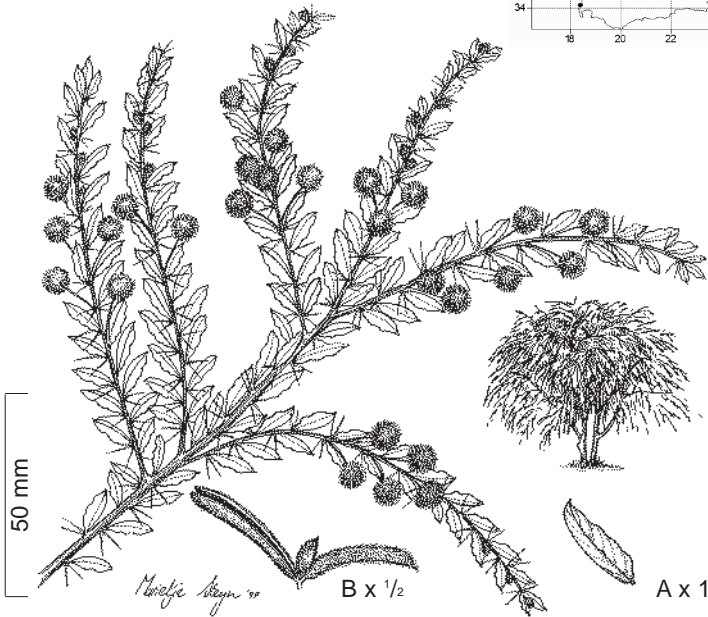
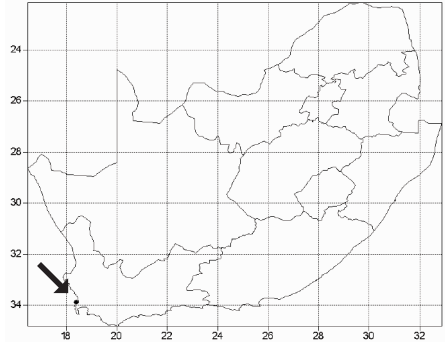


## ***Acacia paradoxa*** DC.

(= *A. armata* R.Br.)

kangaroo thorn, hedge wattle

Family Fabaceae



**Description:** Shrub up to 3.5 m high, branchlets often down-arched, angular, usually hairy; spines in pairs, slender, 4–12 mm long. **Leaves:** Phyllodes, dark green, erect, asymmetric, up to 15 mm long and about 6 mm wide, hairy or glabrous, abaxial margin often wavy (A). **Flowers:** Golden-yellow, globose flowerheads to 12 mm across, arising singly from axillary stalks as long as the phyllodes, forming dense terminal sprays, August–October. **Fruits:** Small brown pods (B), covered in white-woolly hairs, up to 60 mm long, 3–5 mm wide.

**Cultivated for:** Ornament, hedging. **Invades:** Mountain fynbos; to date only known from Devil's Peak, Table Mountain; potentially invasive in E Cape thicket and savanna. **Origin:** Temperate W, E & S Australia. **Invasive status:** Potential transformer. **Declared weed.**

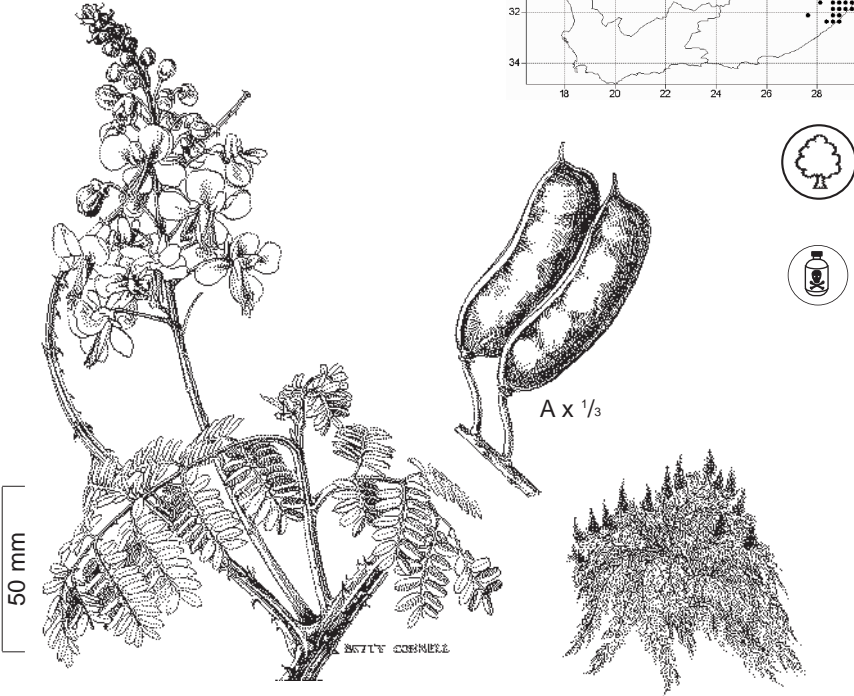
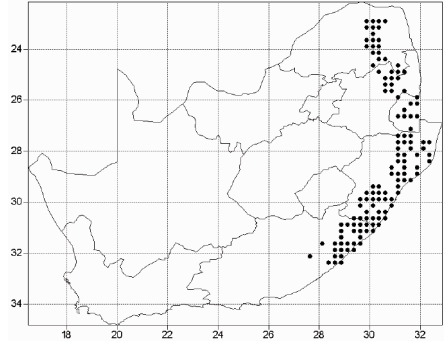
# *Caesalpinia decapetala* (Roth) Alston

(= *C. sepiaria* Roxb.)

Mauritius or Mysore thorn  
kraaldoring

Family Fabaceae

Photo 28



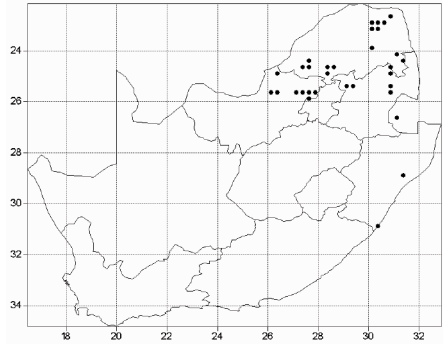
**Description:** Robust, thorny, evergreen shrub 2–4 m high or climber up to 10 m or higher; often forming dense thickets; stems minutely golden-hairy; stem thorns ± straight to hooked, numerous, not in regular rows or confined to nodes. **Leaves:** Dark green, paler beneath, not glossy, up to 300 mm long; leaflets up to 8 mm wide. **Flowers:** Pale yellow, in elongated, erect clusters 100–400 mm long, May–November. **Fruits:** Brown, woody pods (**A**), flattened, unsegmented, smooth, sharply beaked at apex, ± 80 mm long. **Cultivated for:** Security hedging, ornament. **Invades:** Forest margins and gaps, plantations, roadsides, watercourses. **Origin:** Asia (India, Sri Lanka, China, Japan & Malaysia). **Invasive status:** Transformer. **Declared weed.** **Herbicide registration.** **Biocontrol:** Seed feeders released.

## ***Duranta erecta* L.**

(= *D. repens* L., *D. plumieri* Jacq.)

forget-me-not-tree, pigeon berry  
vergeet-my-nie-boom

Family Verbenaceae



**Description:** Multistemmed shrub or small tree 2–4(–7) m high; sometimes scrambling; usually evergreen; sometimes with spines in the leaf axils; branches ± four-angled. **Leaves:** Dark green, sparsely hairy to glabrous, ovate to obovate, entire or margins coarsely toothed above the middle, to 60 x 90 mm. **Flowers:** Lilac, light blue or white (A), fragrant, in recurved spikes up to 150 mm long, Nov–Dec(–March). **Fruits:** Orange-yellow, shiny, fleshy drupes (B), 5–10 mm wide, covered by the calyx which is closed with a curved beak; in pendent spikes.

**Cultivated for:** Ornament, hedging. **Invades:** Tropical and subtropical savanna, woodland, forest edges, riverbanks, other moist sites, ravines, hillsides. **Origin:** Tropical America (Florida & W Indies, Mexico to Brazil). **Invasive status:** Special effect weed (competitive, poisonous). **Proposed declared invader.**

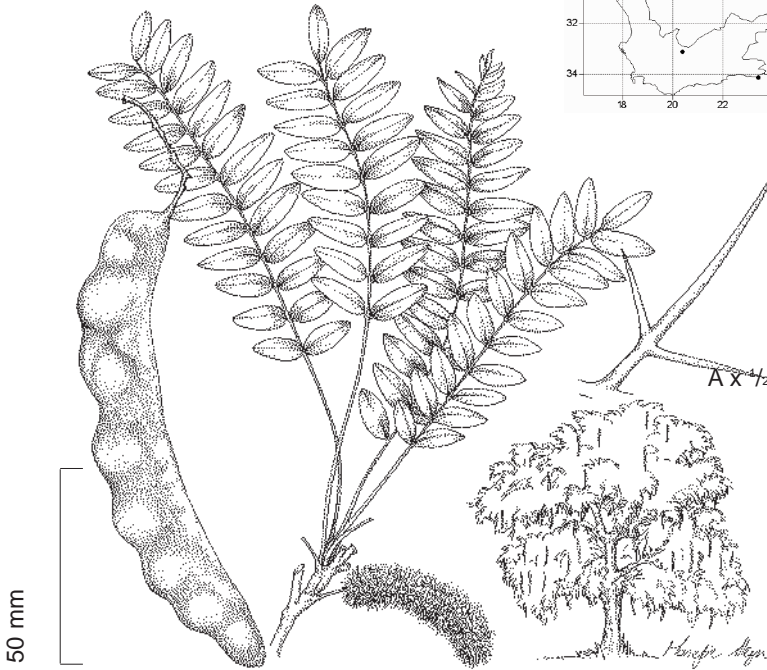
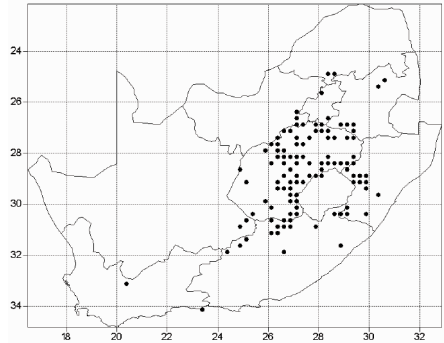
**Poisonous:** Leaves, fruits, bark.

## ***Gleditsia triacanthos* L.**

honey locust  
soetpeulboom

Family Fabaceae

Photo 28



**Description:** Spreading tree 15 to 20 m tall; deciduous with yellow autumn tints; trunk and branches armed with formidable, simple to three-branched spines (**A**) 50–100 mm long (except in variety *inermis*); suckers from the roots. **Leaves:** Bright green, pinnate or bipinnate, 120–200 mm long; leaflets oblong to broadly lance-shaped, minutely toothed, 10–20 mm long. **Flowers:** Yellowish-green, small, male and female flowers born separately in long, narrow sprays 30–60 mm long, October–November. **Fruits:** Pods, dark reddish-brown, shiny, twisted, flattened, up to 400 mm long and 30 mm wide; seeds embedded in a sweetish pulp.

**Cultivated for:** Fodder, honey production, shade, donga reclamation.

**Invades:** Grassland, savanna, roadsides, riverbanks. **Origin:** N America (E USA).

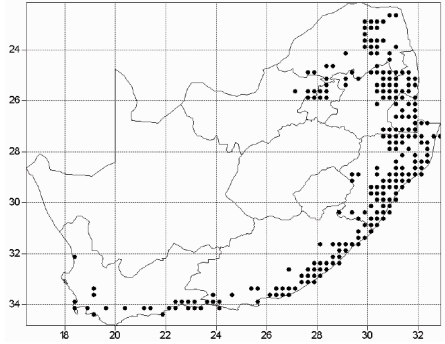
**Invasive status:** Potential transformer. **Declared invader (category 2) excluding sterile cultivars.**

# *Lantana camara* L.

lantana

Family Verbenaceae

Photo 54



**Description:** Compact, floriferous shrub or untidy scrambler up to 2 m or higher; stems often four-angled, usually covered with short, stiff hairs and recurved prickles, but sometimes unarmed. **Leaves:** Dark green, paler below, rough, hairy, becoming  $\pm$  glabrous, smelling strongly when crushed. **Flowers:** Pink, red, crimson, orange, yellow or white in compact flat-topped heads, often with several colours in one head, (A: individual flower), September–April (–all year).

**Fruits:** Glossy green turning purplish-black, one-seeded, fleshy drupes. **Cultivated for:** Ornament, hedging. **Invades:** Forest and plantation margins, savanna, watercourses, roadsides, degraded land. **Origin:** C & S America. **Invasive status:** Transformer. **Declared weed. Herbicide registration. Biocontrol:** Natural enemies released. **Poisonous:** Whole plant, unripe fruit. **Irritant:** Skin (leaves).



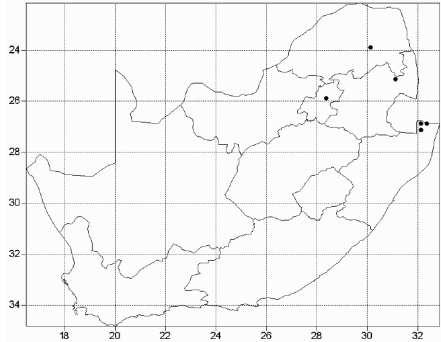
## *Mimosa pigra* L.

(= *M. pellita* sensu Brenan)

giant sensitive plant  
raak-my-nie

Family Fabaceae

Photo 55

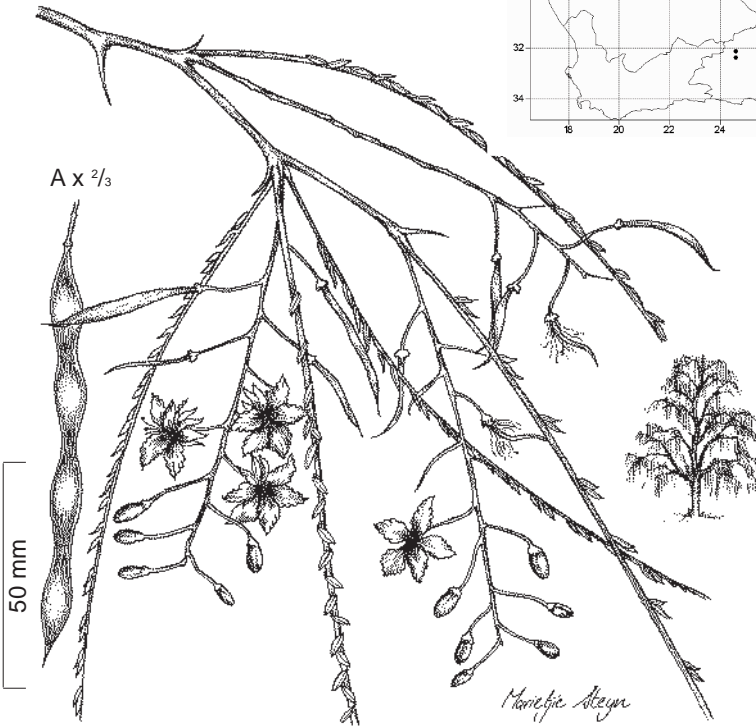
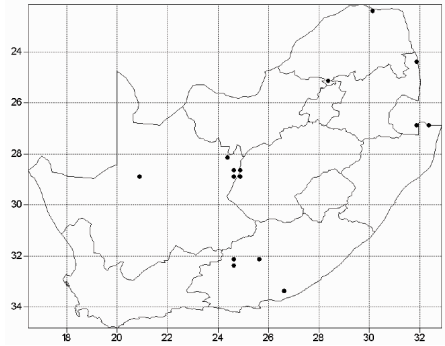


**Description:** Shrub or tree to 6 m high; stems and leaves hairy, armed with thorns; stem thorns broad-based, up to 7 mm long. **Leaves:** Yellowish-green, 40–80 mm long, with a straight thorn at the junction of each of the 6–16 pinnae pairs; sometimes with thorns between the pairs; sensitive to touch. **Flowers:** Pink or mauve, in ± globose heads, borne singly or in groups of two or three, in upper leaf axils, October–May(–all year). **Fruits:** Brown, densely bristly pods, clustered, 30–80 mm long, breaking transversely into 12–26 segments, each containing a seed (A); the pod sutures remaining as an empty frame. **Cultivated for:** Ornament. **Invades:** Floodplains, shallow dams, pans, riverbanks in subtropical regions. **Origin:** Tropical America (Mexico & Cuba to N Peru & NE Argentina); now pantropical. **Invasive status:** Potential transformer. **Declared invader (category 3).**

# *Parkinsonia aculeata* L.

Jerusalem thorn  
Mexikaanse groenhaarboom

Family Fabaceae



**Description:** Evergreen tree 6–9 m tall; stem smooth, greenish-yellow, eventually brownish, branches slender, zigzag, armed with stout spines 10–20 mm long.

**Leaves:** Light green; with 1–2(–3) pairs of very long, slender, pendulous, flattened pinnae, 200–400 mm long arising from a short, spiny rachis; leaflets numerous, widely spaced, oval or oblong, typically less than 10 mm long; deciduous. **NB** The indigenous *P. africana* has shorter pinnae (40–150 mm) and leaflets usually absent. **Flowers:** Yellow, fragrant, about 10 mm long, in slender pendulous sprays, from the leaf axils, October–November(–April). **Fruits:** Brown, narrow, slightly flattened pods (A) 50–100 mm long, greatly constricted between the seeds.

**Cultivated for:** Ornament, shade. **Invades:** Watercourses, floodplains, roadsides.

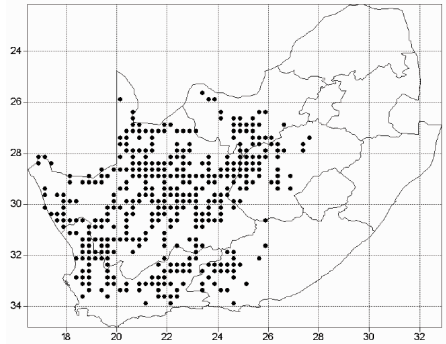
**Origin:** Tropical America (S USA to Argentina). **Invasive status:** Potential transformer.

***Prosopis glandulosa* Torr. var. *torreyana* (Benson) Johnst.**

honey mesquite  
heuningprosopis

Family Fabaceae

Photo 56

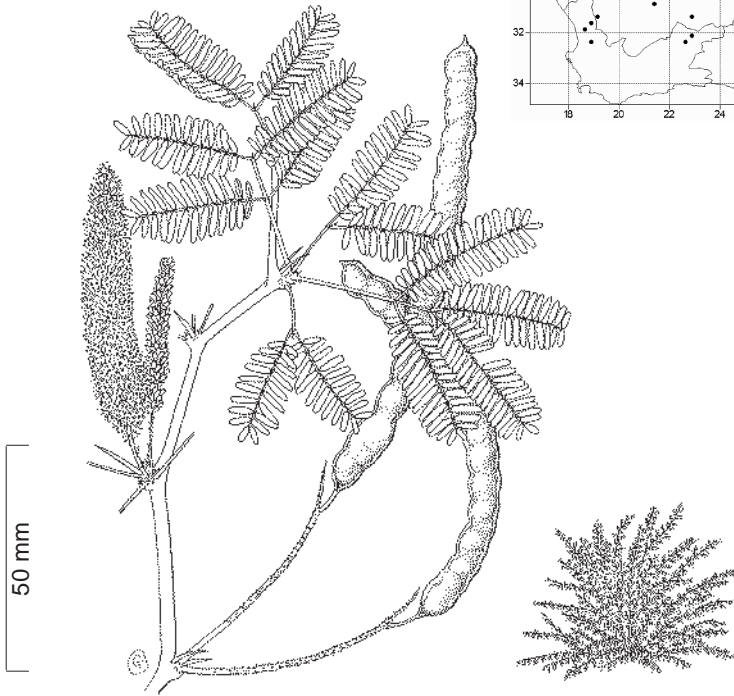
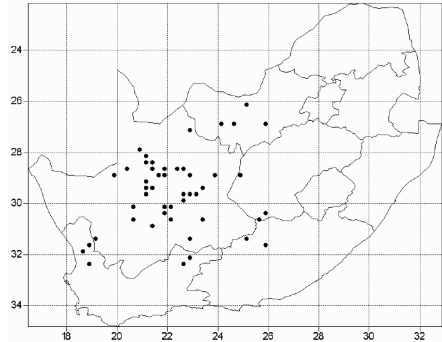


**Description:** Multistemmed, glabrous, *Acacia*-like shrub or small tree 2–4(–10) m high; armed with paired, straight spines, branchlets reddish-brown. **Leaves:** Dark green, leaflets 10–25 mm long, oblong, widely spaced. **Flowers:** Yellow, in axillary spikes, June–November. **Fruits:** Slender, woody pods (A), yellowish to purplish, nondehiscent,  $\pm$  straight, constricted between seeds. **NB** Hybridises with *P. velutina* (velvet mesquite) and *P. chilensis* (algarroba), making identification difficult. **Cultivated for:** Fodder, shade, fuel; honey source. **Invades:** Riverbeds, riverbanks, drainage lines, in semi-arid to arid regions. **Origin:** N & C America (SW USA & N Mexico). **Invasive status:** Transformer. **Declared invader (category 2). Herbicide registration. Biocontrol:** Seed feeders available. **Poisonous:** Pods in quantity. **Irritant:** Respiratory tract (pollen).

# *Prosopis velutina* Wooton

velvet mesquite  
fluweelprosopis

Family Fabaceae



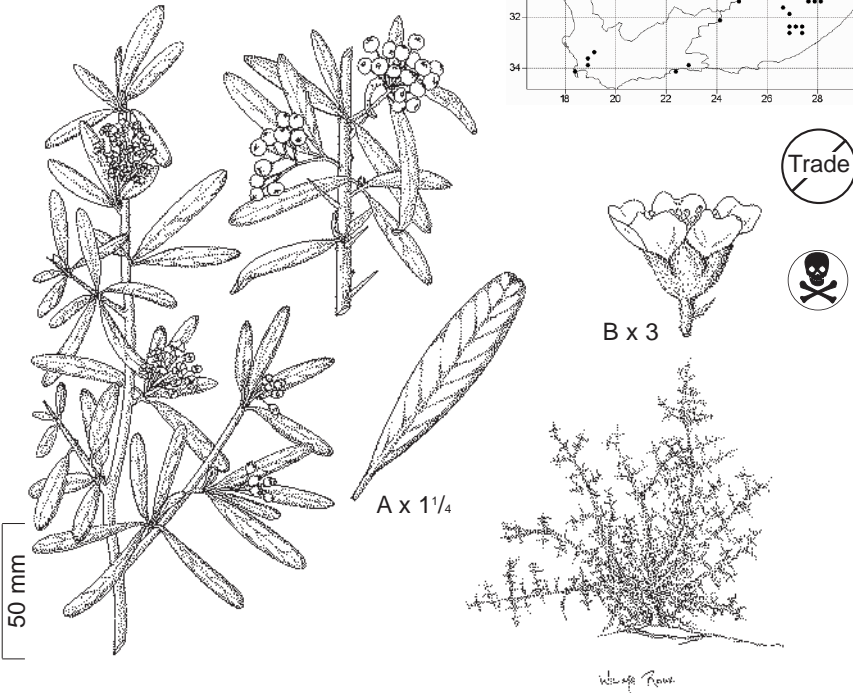
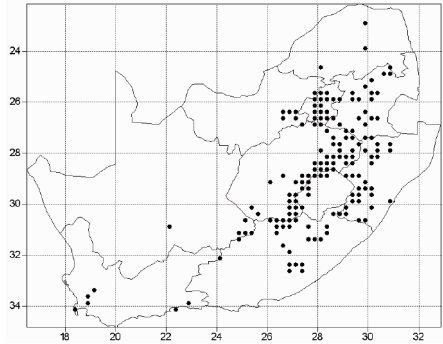
**Description:** Multistemmed, *Acacia*-like shrub or small tree up to 4 m high, armed with paired, straight spines; all parts at least initially covered with short, velvety hairs; branchlets reddish-brown. **Leaves:** Greyish-green to dark green; leaflets small (6–13 mm long), oblong, closely spaced. **Flowers:** Yellow in axillary spikes, June–November. **Fruits:** Slender woody pods, yellowish, ± straight to markedly curved, constricted between the seeds, nondehiscent. **NB** Hybridises, see *P. glandulosa* var. *torreyana*. **Cultivated for:** Fodder, shade, fuel; honey source. **Invades:** Riverbeds, riverbanks, drainage lines, dry stony soils, in semi-arid to arid regions. **Origin:** N & C America (SW USA & N Mexico). **Invasive status:** Transformer. **Declared invader (category 2)**. **Biocontrol:** Seed feeders available. **?Poisonous & ?Irritant** (see comments for *P. glandulosa* var. *torreyana*).

## *Pyracantha angustifolia* (Franch.) C.K.Schneid.

yellow firethorn  
geelbranddoring

Family Rosaceae

Photo 57



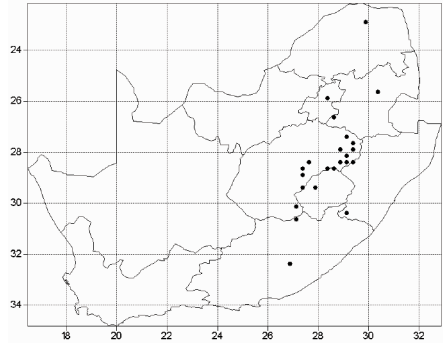
**Description:** Evergreen shrub 2–4 m high with stiff, spiny branches; young shoots covered in thick, yellowish down; spines woody, sharp-pointed and bear leaves.

**Leaves:** Dull dark-green above, grey-downy beneath, narrowly elongate, margins entire and rolled under and leaf tip with a small notch (**A**), permanently downy beneath. **Flowers:** White, calyx downy (**B**),  $\pm 5$  mm long, October–December. **Fruits:** Orange-red or orange-yellow berries, 5–8 mm across; immature fruits are greyish downy. **Cultivated for:** Ornament, security hedging, screens on highways. **Invades:** High altitude grassland, erosion channels, rocky ridges. **Origin:** Asia (SW China). **Invasive status:** Transformer. **Declared invader (category 3) excluding cultivars.** **Poisonous:** Fruits, in quantity.

# *Pyracantha crenulata* (D.Don) M.Roem.

Himalayan firethorn  
rooivuurddoring

Family Rosaceae



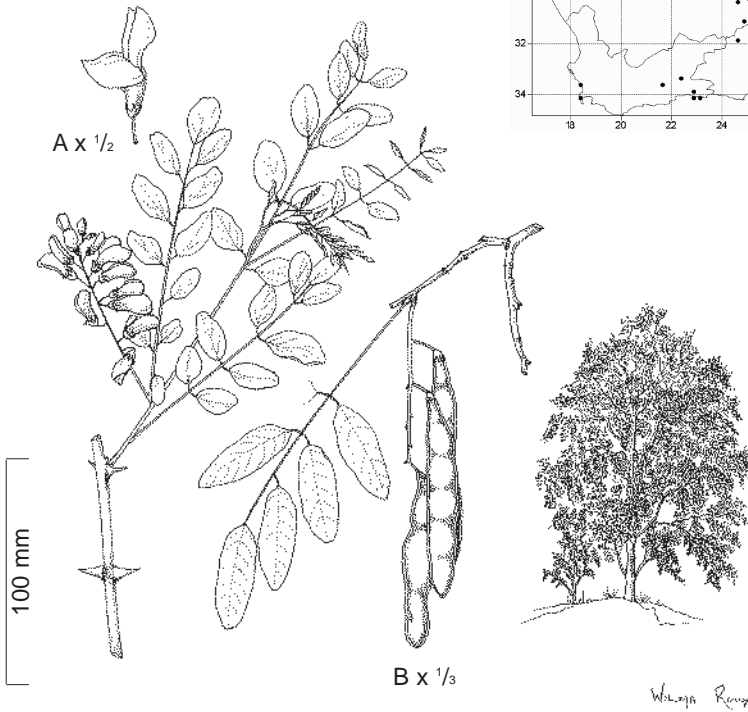
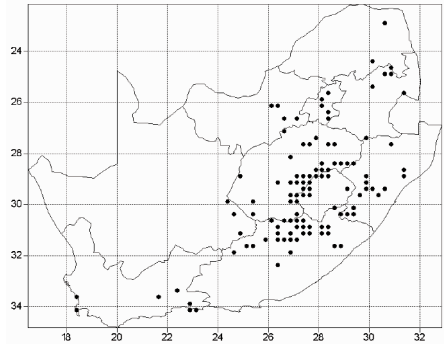
**Description:** Evergreen shrub 2–3 m high with stiff, spiny branches; young shoots covered in a rusty down; spines woody, sharp-pointed and bear leaves. **Leaves:** Bright, glossy green above, duller beneath, glabrous, margins shallowly toothed (A). **Flowers:** White, calyx glabrous (B),  $\pm$  4 mm long, on long, slender, glabrous stalks, October–December. **Fruits:** Orange-red berries, 5–8 mm across, glabrous, on long, slender, glabrous stalks. **NB** *P. coccinea*, a closely related species, has pubescent flowering and fruiting stalks, larger flowers and fruits, and leaf tips that are pointed as opposed to rounded or blunt in *P. crenulata*. **Cultivated for:** Ornament, hedging. **Invades:** High altitude grassland, rocky ridges. **Origin:** Asia (Himalayas). **Invasive status:** Potential transformer. **Declared invader (category 3).** **Poisonous:** Fruits, in quantity.

## *Robinia pseudoacacia* L.

black locust  
witakasia

Family Fabaceae

Photo 58

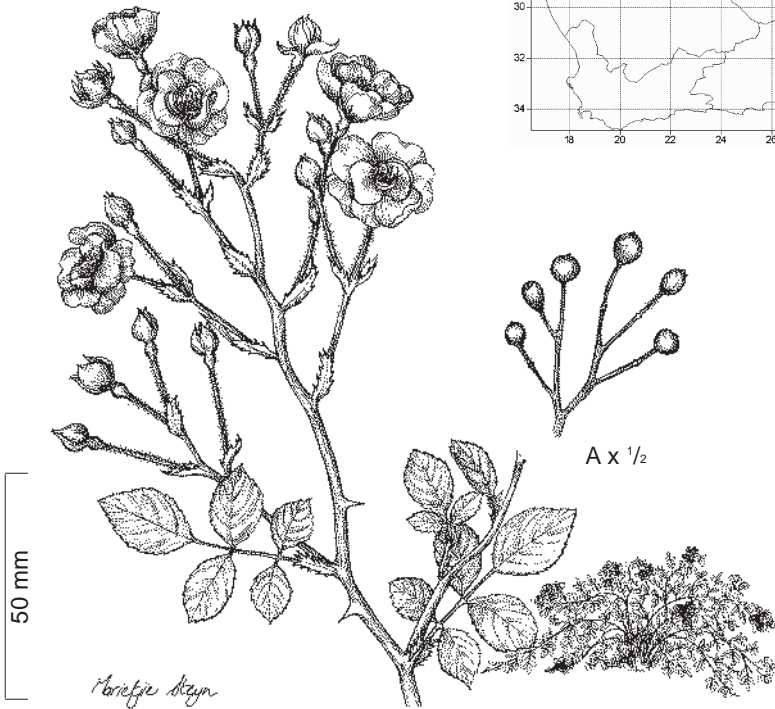
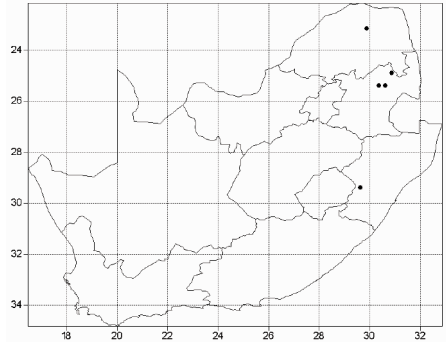


**Description:** Deciduous tree 3–12(–25) m high with an oval or rounded crown; bark dark brown, deeply furrowed; suckers freely and often forms thickets; young stems and branchlets armed with short, paired spines. **Leaves:** Bright green above, paler beneath, glabrous, pinnate, with yellow autumn tints. **Flowers:** White (A), fragrant, in pendulous sprays 100–200 mm long, September–November. **Fruits:** Reddish-brown pods (B), thin, remaining on tree over winter. **Cultivated for:** Timber, fuel, fodder, ornament, shade, donga reclamation; honey source. **Invades:** Riverbanks, dongas, roadsides. **Origin:** N America (C & E USA). **Invasive status:** Transformer. **Declared invader (category 2).** **Poisonous:** Seed, leaves, inner bark.

**Rosa multiflora** Thunb. ex Murray  
(= *R. polyantha* Siebold & Zucc.)

multiflora rose

Family Rosaceae



**Description:** A wide-spreading bush up to 3 m high, with long arching stems; branches glabrous, armed with stout, scattered thorns; thorns sometimes in pairs below the stipules; can form impenetrable thickets. **Leaves:** Bright green; leaflets 5–10, oval or obovate, toothed, slightly downy above and more so beneath when young; stipules distinctive, deeply fringed, ie. slashed, cut into narrow lobes. **Flowers:** White, pale pink or deep pink; double- or single-flowered; small, up to 25 mm wide, in many-flowered branching clusters at the tips of stems; calyx-tube and flower-stalk hairy, sepals reflexed, white-woolly and glandular; October–November. **Fruits:** Red, oval to round “hips” (A), 6 mm long. **Cultivated for:** Ornament, hedging. **Invades:** Roadsides, scrub, in cool, moist areas. **Origin:** Asia (Japan, Korea & N China). **Invasive status:** Potential transformer.



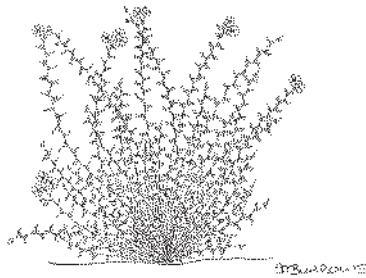
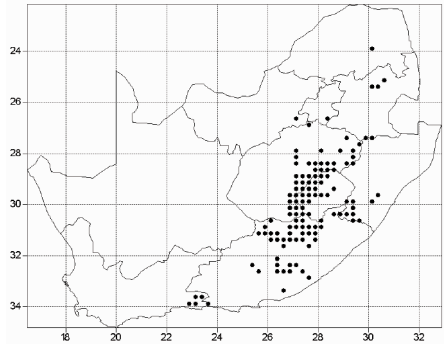
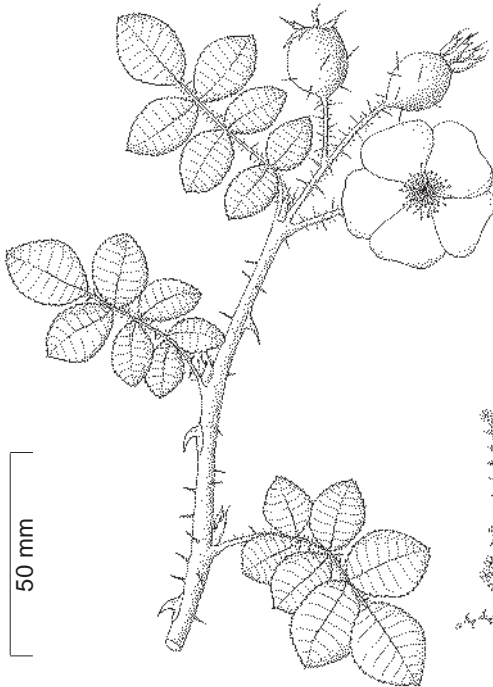
## *Rosa rubiginosa* L.

(= *R. eglanteria* L.)

eglantine, sweetbriar  
wilderoos

Family Rosaceae

Photo 59



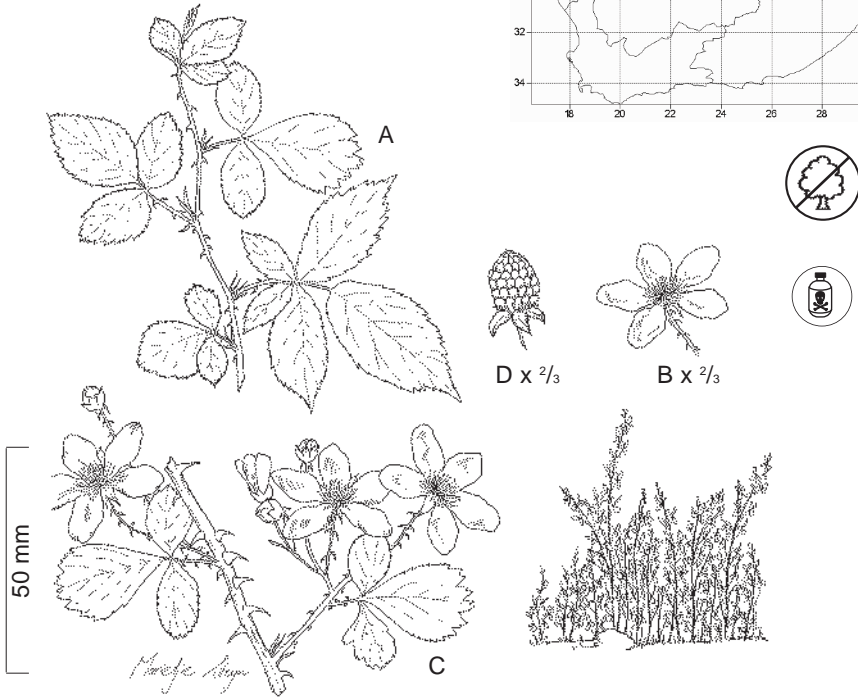
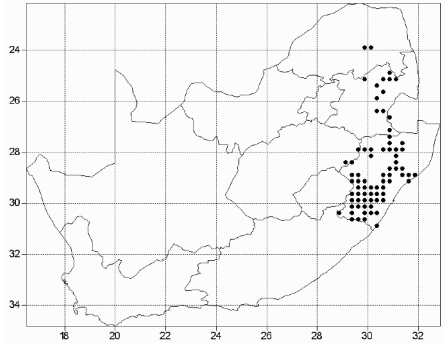
**Description:** Compact, deciduous shrub 1–2 m high with slightly arching branches; armed with stout, hooked thorns interspersed with rusty, glandular hairs and bristles. **Leaves:** Shiny green above, rusty-hairy beneath, pinnate; leaflets 5–7(–9), doubly serrate and densely glandular-hairy and resinous beneath, very aromatic. **Flowers:** Pink varying to white, in groups of one to three, October–December. **Fruits:** Orange-red to scarlet, fleshy achenes (“hips”) (A), ± 20 mm long. **Cultivated for:** Ornament, hedging; fruits harvested for extraction of juice. **Invades:** High altitude grassland, especially moist valleys, watercourses, rocky outcrops, roadsides, overgrazed land around human habitation. **Origin:** Europe incl. Mediterranean & Asia. **Invasive status:** Transformer. **Declared weed.**

# *Rubus cuneifolius* Pursh

American bramble  
Amerikaanse sandbraam

Family Rosaceae

Photo 60

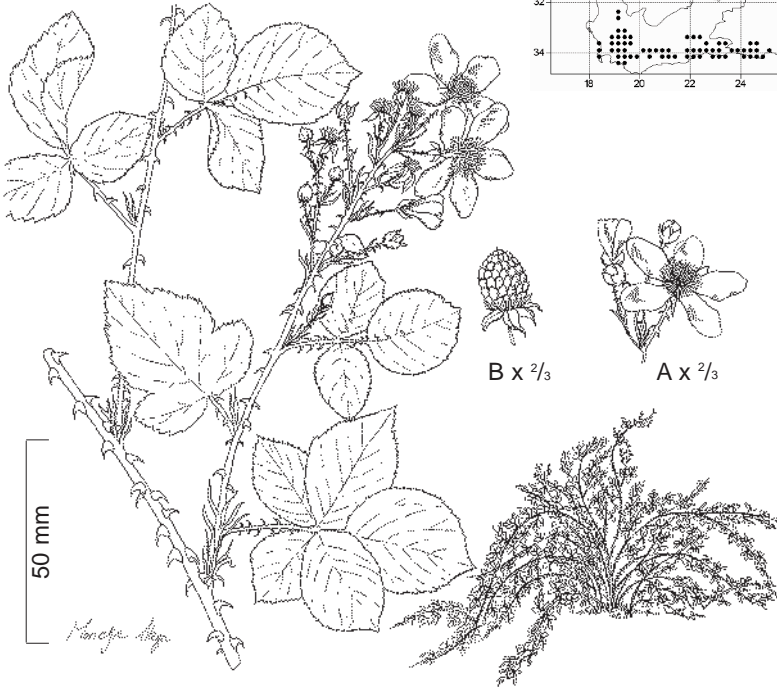
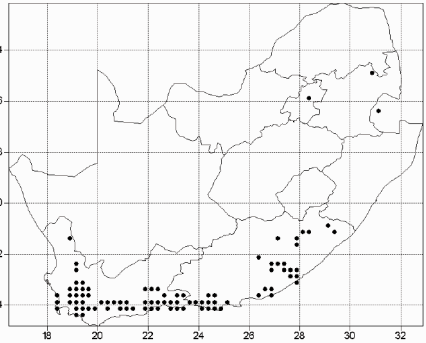


**Description:** Erect to sprawling, thorny shrub 0.5–1.5(–2.0) m high; stems deeply ridged. **Leaves:** Green, sometimes densely grey-downy beneath; usually three-foliate, sometimes also five-foliate (lateral leaflets redivided) on new season's growth (A); terminal leaflet usually wedge-shaped at the base. **Flowers:** White (B), rarely pink, petals much longer than sepals; few (2–5) at the ends of short, leafy shoots (C), September–January. **Fruits:** Red turning black, fleshy, shiny, glomerules of one-seeded drupes (D). **NB** Mpumalanga plants atypical (possibly *R. pascuus*); sprawling form in KwaZulu-Natal possibly another species. **Cultivated for:** Edible fruit. **Invades:** Grasslands, forest edges, plantations, roadsides, riverbanks. **Origin:** N America (E USA). **Invasive status:** Transformer. **Declared weed. Herbicide registration. Biocontrol:** Under investigation.

# **Rubus fruticosus** L. agg.

European blackberry  
braam

Family Rosaceae

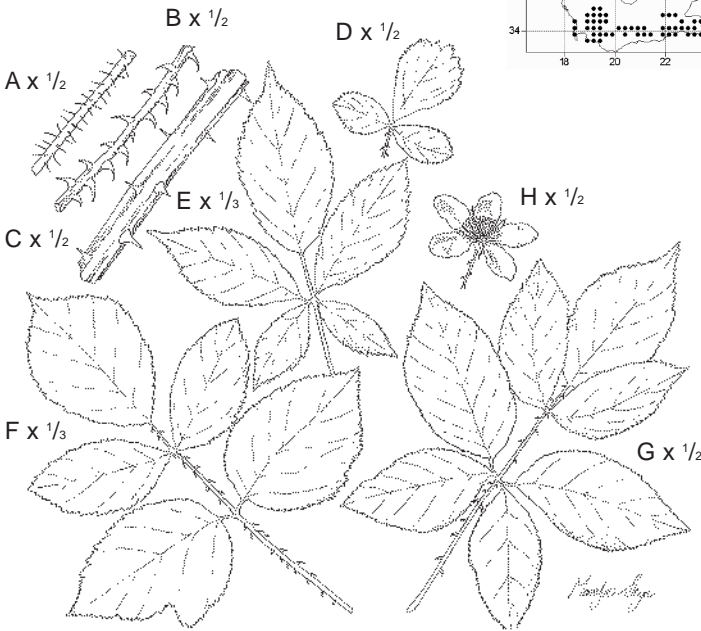
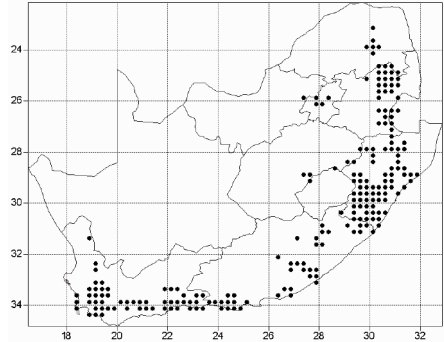


**Description:** Thorny shrub 1–2 m high with strongly arching stems that root at the apex; stems rounded or angled. **Leaves:** Green, sometimes grey-downy beneath; three-foliolate and five-foliolate (lateral leaflets redivided), the latter on both flowering stems (floricanes) (illustrated) and vegetative stems (primocanes). **Flowers:** White or pink (A), petals much longer than sepals; in much-branched, very prickly, flowerheads up to 150 mm long, September–January. **Fruits:** Red turning black, fleshy, shiny, glomerules of one-seeded drupes (B). **Cultivated for:** Edible fruits. **Invades:** Grassland, fynbos, forest edges, plantations, roadsides, riverbanks. **Origin:** Europe incl. Mediterranean. **Invasive status:** Transformer. **Declared invader (category 2). Herbicide registration. Biocontrol:** Under investigation.

***Rubus* spp. (*R. cuneifolius* Pursh, *R. flagellaris* Willd., *R. fruticosus* L., *R. X proteus* C.H.Stirt.)**

brambles, blackberries  
brame

Family Rosaceae



*R. cuneifolius*  
*R. X proteus*



*R. fruticosus*



**Description:** Thorny shrubs 0.5–3.0 m high, thicket-forming; armed with slender prickles, or stout, recurved to straight thorns (**A–C**). **Leaves:** Variable, green, sometimes grey- or white-downy beneath; three- to five- to seven-foliolate (**D–G**), usually with lateral or terminal leaflets redivided. **Flowers:** White or pink (**H**), usually with petals longer than sepals, September–January. **Fruits:** Red turning black, shiny, fleshy, glomerules of one-seeded drupes, usually juicy and edible.

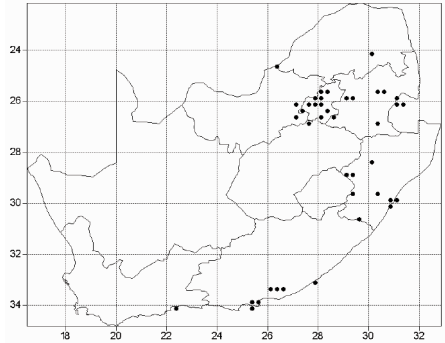
**Cultivated for:** Edible fruits. **Invasive:** Grassland, fynbos, forest margins, plantations, roadsides, riverbanks. **Origin:** N America, Europe & S Africa (*R. X proteus*) (= *R. cuneifolius* (Mpumalanga form) X *R. longepedicellatus* (native)).

**Invasive status:** Transformers. **Declared weeds** (*R. cuneifolius* & *R. X proteus*) & **declared invader (category 2)** (*R. fruticosus*). **Herbicide registration.** **Biocontrol:** Under investigation.

# *Solanum sisymbriifolium* Lam.

dense-thorned bitter apple  
wildetamatie

Family Solanaceae



**Description:** Much-branched, very spiny, low shrub 0.5–1.5 m high, with extensive root system; all parts covered with sticky, glandular hairs and bright orange-red to brown-yellow spines up to 20 mm long. **Leaves:** Dull green, spiny, glandular-hairy, deeply pinnately lobed and toothed, up to 200 mm long; spines mainly on midrib and veins. **Flowers:** White, cream or bluish, all year. **Fruits:** Shiny berries, green turning bright red, about 15 mm across. **Invades:** Wasteland, roadsides, disturbed grassland, tramped-out veld, agricultural lands, forestry plantations. **Origin:** S America (Brazil, Argentina, Uruguay & Paraguay).

**Invasive status:** Minor weed, agrestal and ruderal. **Declared weed.**

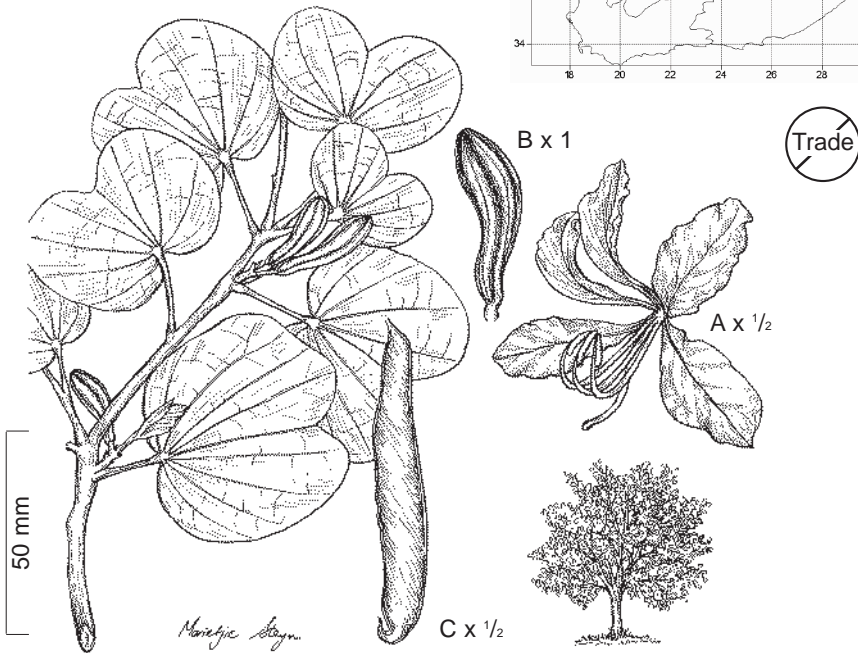
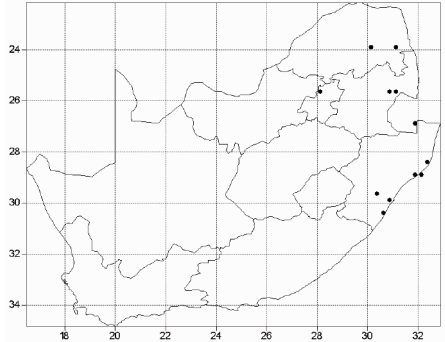
**Herbicide registration. Biocontrol:** Natural enemies released. **Poisonous:** Unripe fruit.

***Bauhinia purpurea* L. &  
*B. variegata* L.**

butterfly orchid tree & orchid tree  
skoenlapperorgideëboom & orgideëboom

Family Fabaceae

Photo 61



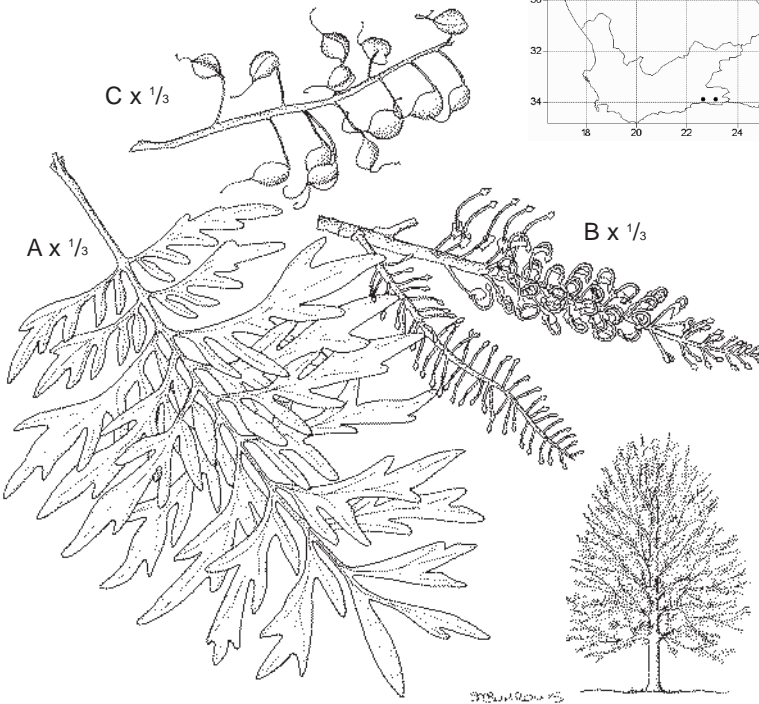
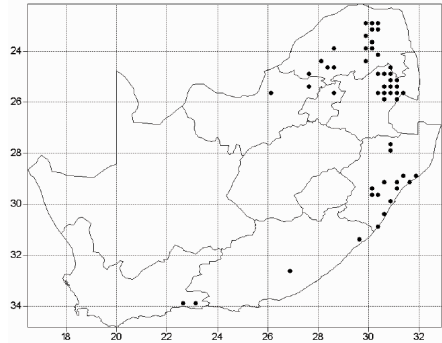
**Description:** Trees 6–10 m high; deciduous or semi-evergreen (*B. variegata*), ± evergreen (*B. purpurea*) (illustrated). **Leaves:** Thick, deeply divided into two lobes, to 100 mm long. **Flowers:** Pink blotched or striped with red, cream or purple (*B. variegata* var. *variegata* & *B. purpurea*), or pure white (*B. variegata* var. *candida*), 80–100 mm wide; *B. variegata*: petals to 30 mm wide, overlapping, 5 fertile stamens, buds not ribbed; flowering with or after leaf fall, Aug–October; *B. purpurea* (A): petals narrow, to 18 mm wide, and not overlapping, 3 fertile stamens, bud (B) deeply ribbed; flowers with the leaves, April–May (–all year). **Fruits:** Dark brown pods 100–300 mm long (C). **Cultivated for:** Ornament. **Invasive:** Savanna, coastal bush, riverbanks, urban open space. **Origin:** Asia (India, China to Malay peninsula). **Invasive status:** Special effect weeds (competitive). **Declared invaders (category 3).**



## *Grevillea robusta* A.Cunn. ex R.Br.

Australian silky oak  
Australiese silwereik

Family Proteaceae



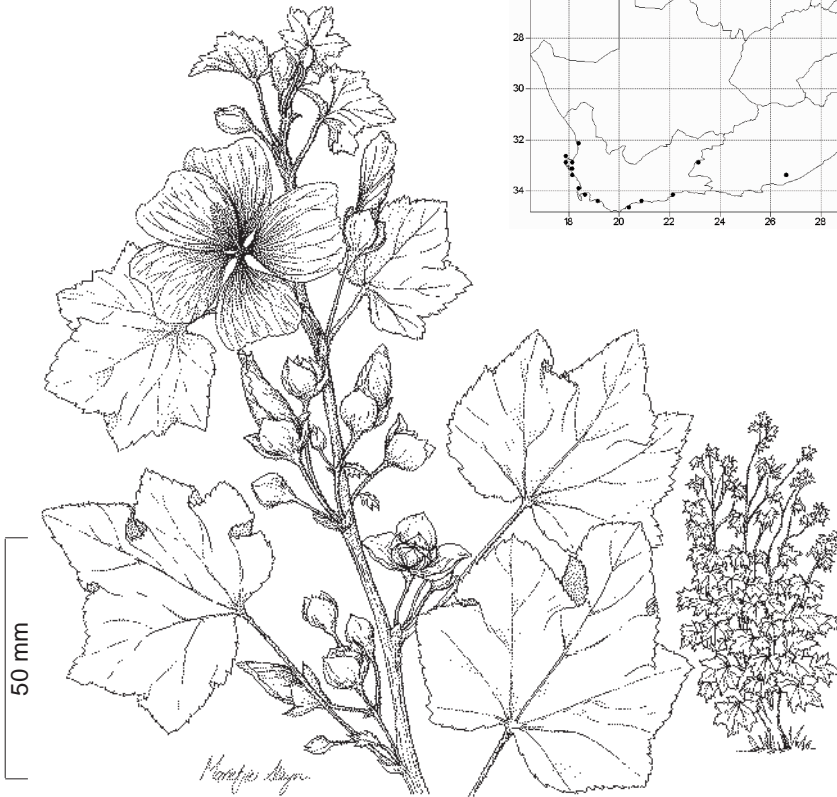
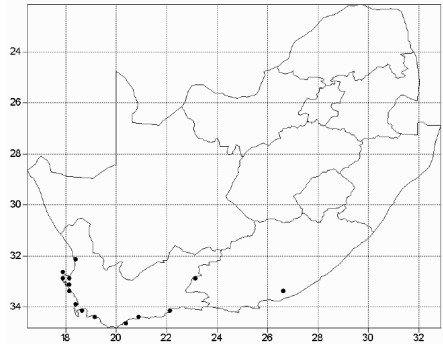
**Description:** Large, evergreen tree 18–30 m high with a straight trunk and moderately spreading crown. **Leaves:** Dark green above, greyish-white or rusty-silky beneath, two-pinnatifid (A), deeply incised, fern-like, 150–300 mm long, leaflet margins recurved. **Flowers:** Golden-orange, stalked, 20–30 mm long, in terminal, bottlebrush-like sprays (B) 80–150 mm long, September–November. **Fruits:** Brownish-black, leathery follicles (C) about 20 mm long, containing one or two flat, winged seeds. **Cultivated for:** Ornament, shade, timber, shelter. **Invades:** Forest margins, moist savanna, riverbanks. **Origin:** E Australia. **Invasive status:** Potential transformer. **Declared invader (category 3)**. **Irritant:** Skin, eyelids (sap).



## *Lavatera arborea* L.

tree mallow  
mak kiesieblaar

Family Malvaceae



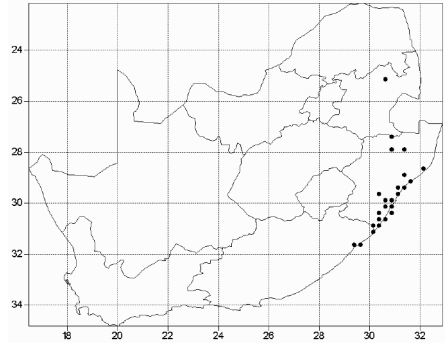
**Description:** A branched, biennial shrub up to 3 m high; stem greyish-white and woody at the base; younger parts softly tomentose (velvety hairy). **NB** The similar but smaller *L. cretica* has herbaceous stems. **Leaves:** Light green, tomentose, 5–7 lobed, up to 200 mm long; stipules narrow. **Flowers:** Bright pink or lilac, with dark veins and throat; 30–40 mm across; in clusters of 2–7 in the leaf axils; three bracts, longer than the sepals (shorter in *L. cretica*), are united at the base of the calyx; September–December (–all year). **Fruits:** Small brown, dry, dehiscent into 6–8 one-seeded segments. **Cultivated for:** Ornament, fodder; honey source. **Invades:** Roadsides, waste places, sand dunes, rocky places, in coastal areas. **Origin:** Europe (Mediterranean, France) and Britain. **Invasive status:** Ruderal and special effect weed (competitive).



# *Montanoa hibiscifolia* Benth.

tree daisy  
montanoa

Family Asteraceae



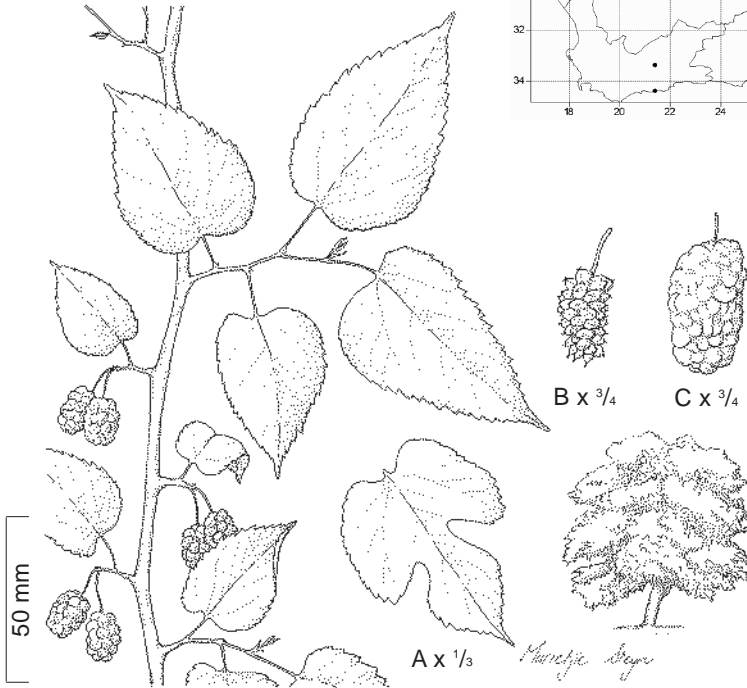
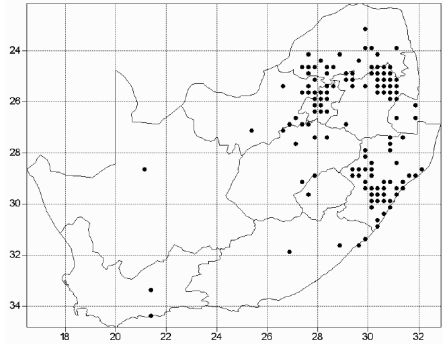
**Description:** Perennial, scarcely branching half-shrub up to 6 m high. **Leaves:** Dark green above, paler below, softly hairy on both surfaces, up to 250 mm long x 250 mm wide, broadly ovate in outline, deeply palmately lobed (A), with a pair of auricles ("ear lobes") at the base of the blade. **Flowerheads:** Ray petals white, disc yellow; about 40 mm across; many in terminal, branched inflorescences, May–October. **Fruits:** Reddish-brown achenes, 3.5 mm long, borne in the rounded, papery, old flowerheads (B). **Cultivated for:** Ornament. **Invades:** Forest, woodland, bush clumps, roadsides, riverbanks, disturbed sites. **Origin:** C America (S Mexico & Guatemala to Costa Rica). **Invasive status:** Special effect weed (competitive). **Declared weed.**



## *Morus alba* L.

white or common mulberry  
wit- of gewone moerbe

Family Moraceae

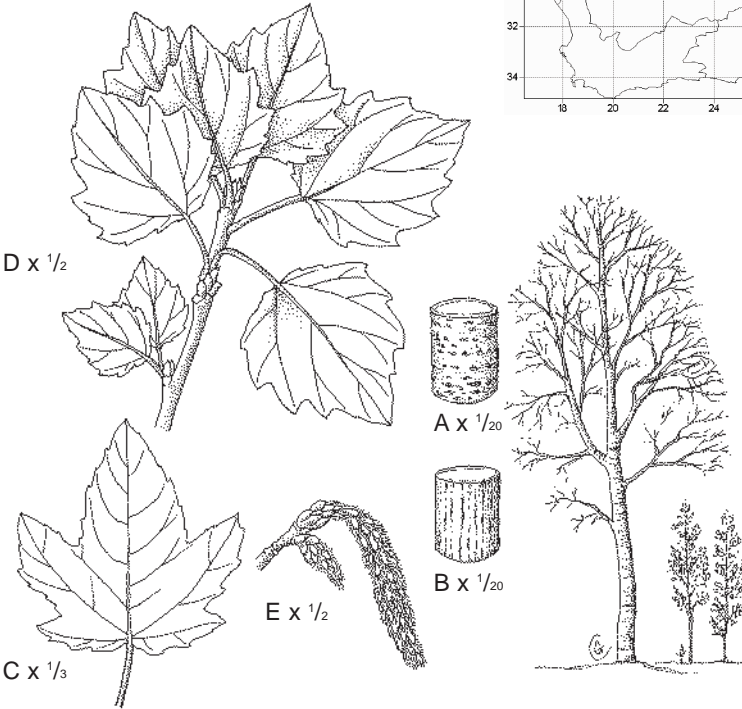
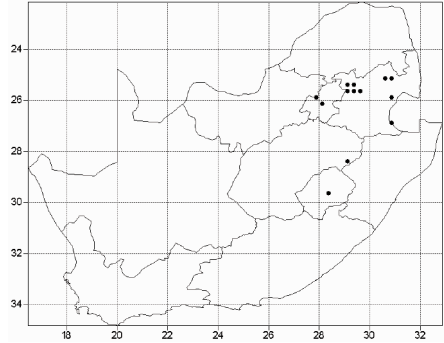


**Description:** Deciduous tree with a dense, rounded canopy up to 15 m high; branches grey or greyish-yellow. **Leaves:** Light green turning yellow in autumn, thin, mostly glossy above, glabrous or slightly hairy only on the veins beneath, margins scalloped and often irregularly lobed (A); silkworm variety has very large, dull green leaves which are ± rough above; leaf bases not deeply cordate as in the black mulberry (*M. nigra*). **Flowers:** Greenish, in small, cylindrical spikes (B), September–October. **Fruits:** White, purple or black, juicy syncarps (C) ± 20 mm long. **Cultivated for:** Edible fruit. **Invades:** Savanna, grassland, roadsides, riverbanks, urban open space. **Origin:** Asia (C & E China). **Invasive status:** Transformer. **Declared invader (category 3) excluding cultivar 'Pendula'.**

# *Populus alba* L.

white poplar  
witpopulier

Family Salicaceae



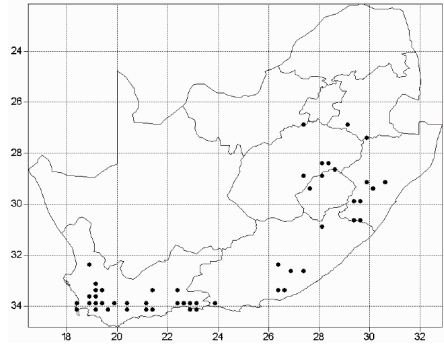
**Description:** Deciduous tree 6–16(–25) m high, suckering freely; bark white or grey with horizontal lines (**A**), becoming rough and darker with age (**B**); buds and young twigs thickly, white woolly. **Leaves:** Dark green and shiny above, white- or grey-woolly beneath; leaves of sucker shoots and ends of long shoots (**C**): large, to 100 mm long,  $\pm$  triangular, three- to five-lobed or unevenly toothed, woolly beneath; leaves of short shoots (**D**): smaller, 30–50 mm long, ovate, more evenly toothed, persistently woolly beneath. **Flowers:** Greenish-yellow catkins (female only) (**E**),  $\pm$  50 mm long, spring. **Fruits:** None. **Cultivated for:** Timber, shelter, ornament. **Invades:** Riverbanks, vleis, dongas. **Origin:** Europe, Asia & N Africa. **Invasive status:** Transformer. **Declared invader (category 2).**



# Quercus robur L.

English oak  
steeleik

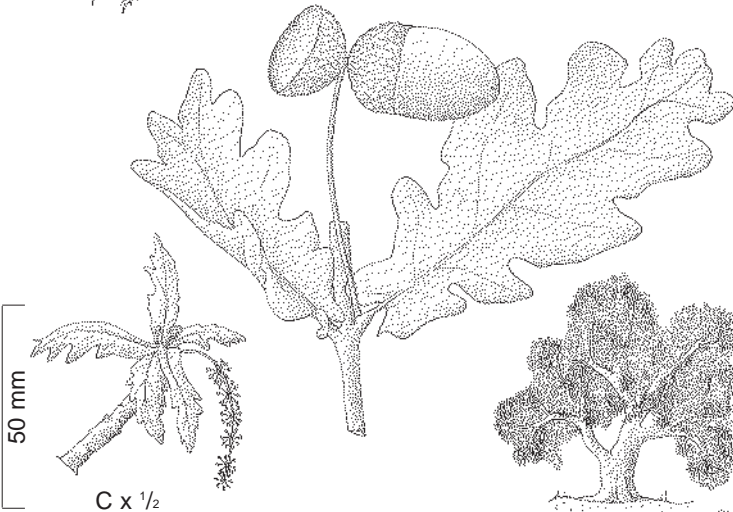
Family Fagaceae



A x 3



B x 5

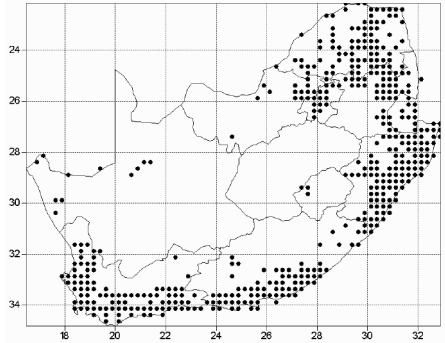


**Description:** Deciduous, glabrous, wide-spreading and rugged tree 15–30 m high. **Leaves:** Bright green turning dark green, paler below, obovate to oblong, margins wavy, three- to six-lobed on each side with two small lobes or auricles at the base, very shortly stalked. **Flowers:** Male (A), 5 mm across, female (B), 2.5 mm across; male catkins greenish-yellow (C), female catkins brownish-purple, August–September. **Fruits:** Acorns, brownish, ovoid 18–30 mm long, one to several on long, slender stalks 50–100 mm long. **Cultivated for:** Ornament, shade; provides fodder (fruits). **Invades:** Forest margins, woodland; roadsides and river-banks in grassland and fynbos. **Origin:** Britain, Europe incl. Mediterranean & W Asia. **Invasive status:** Potential transformer. **Herbicide registration.** **Poisonous:** Fruits, young shoots.

# *Ricinus communis* L.

castor-oil plant  
kasterolieboom

Family Euphorbiaceae



**Description:** Annual herb, softly woody shrub or small tree up to 4 m high; sap not milky (as in *Jatropha* spp.), leaf and flowering stalks often with a grey bloom.

**Leaves:** Shiny, dark green or reddish, paler below, large, up to 300 mm wide, palmately five- to nine-lobed, margins closely serrated, petioles up to 300 mm long. **Flowers:** Reddish (upper), cream (lower), on stalks up to 150 mm long, August–April(–all year). **Fruits:** Green, brown or reddish, three-lobed capsules (A), 10–15 mm long, covered with soft spines; seeds silvery mottled-brown “beans”.

**Cultivated for:** Ornament, castor-oil. **Invades:** Riverbanks, riverbeds, roadsides, wasteland. **Origin:** Tropical E & NE Africa. **Invasive status:** Special effect weed (competitive in watercourses, poisonous). **Declared invader (category 2).**

**Herbicide registration. Poisonous:** Whole plant; seed is highly toxic and lethal.

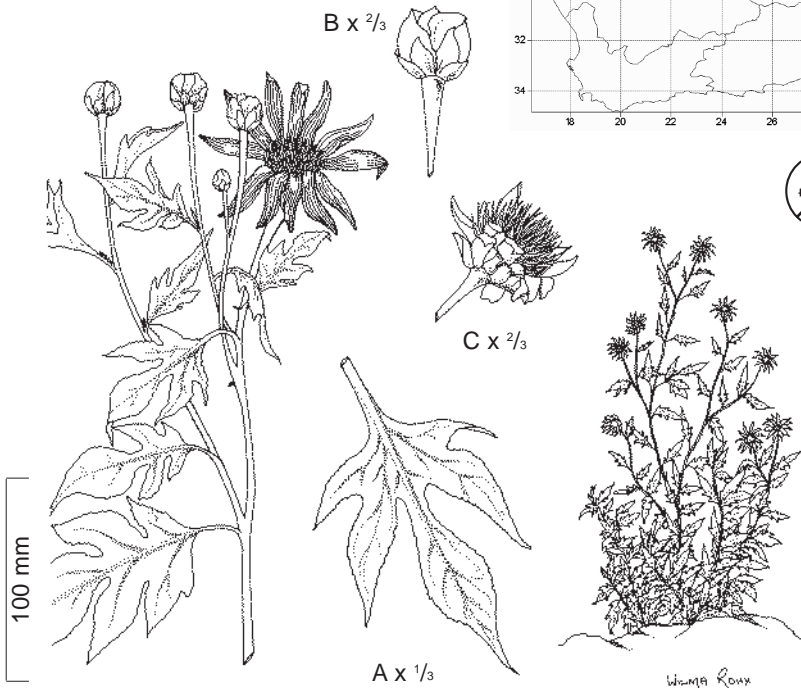
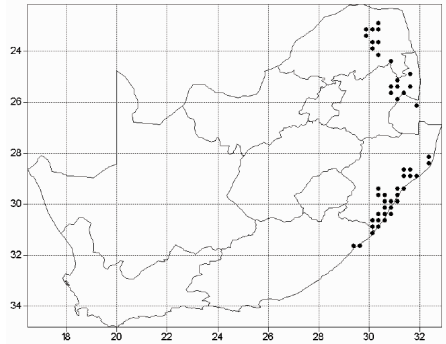


## *Tithonia diversifolia* (Hemsl.) A.Gray

Mexican sunflower  
Mexikaanse sonneblom

Family Asteraceae

Photo 62



**Description:** Bushy annual or perennial, woody at the base, 1.5–3.5 m high.

**Leaves:** Dark green, hairy, often pale-velvety below, up to 150 mm long x 120 mm wide,  $\pm$  ovate, usually deeply three- to five-lobed (A), petioles winged.

**Flowerheads:** Bright yellow, to 100 mm across, solitary on long stalks much swollen and velvety below the heads, several together in branched clusters; buds (B) rounded; bracts below petals in about four series, inner with rounded, papery tips, April–June. **Fruits:** Brown achenes, in a rounded, spiky mass (C).

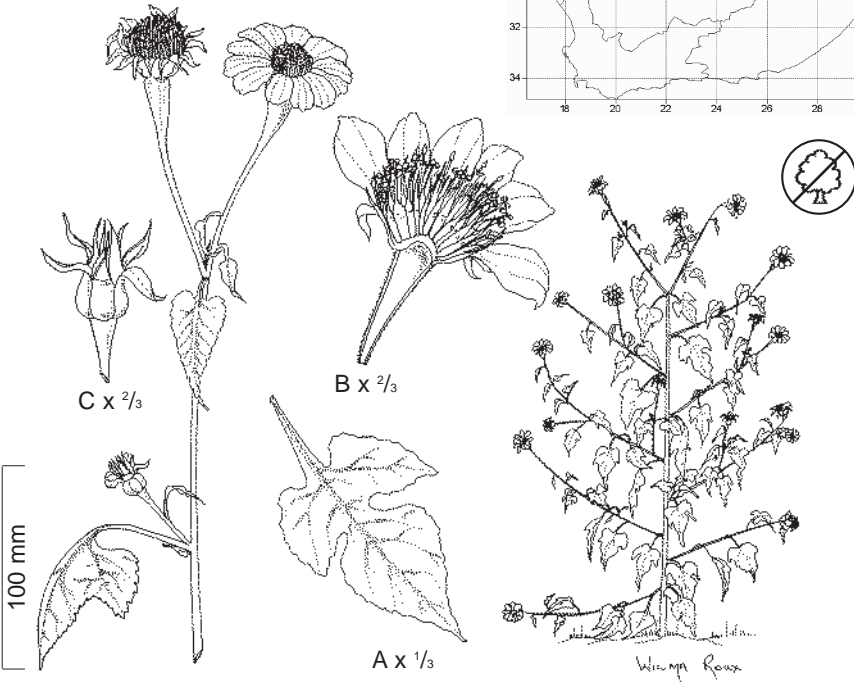
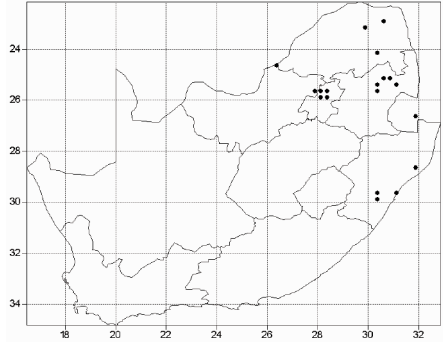
**Cultivated for:** Ornament. **Invades:** Savanna, grassland, roadsides, riverbanks, mainly at low altitudes ( $\pm$  0–600 m). **Origin:** C America incl. Mexico. **Invasive status:** Special effect weed (competitive, high visual impact). **Declared weed.**

***Tithonia rotundifolia*** (Mill.) S.F.Blake

red sunflower  
rooisonneblom

Family Asteraceae

Photo 63



**Description:** Bushy annual, slightly woody at the base, 1.5–2.0(–3.0) m tall.

**Leaves:** Dark green, rough hairy, up to 150 mm long x 100 mm wide, triangular-ovate, sometimes deeply three-lobed (A), petioles winged.

**Flowerheads:** Bright orange-red (B), large and showy, to 90 mm across, solitary on long stalks much swollen and velvety below the heads, terminating the main and side branches; buds pointed (C), bracts below petals in two series, narrow, pointed, February–July. **Fruits:** Brown achenes, in a rounded, spiky mass.

**Cultivated for:** Ornament; source of honey. **Invades:** Roadsides, wasteland, riverbanks, at moderate altitudes ( $\pm$  600–1400 m). **Origin:** C America incl. Mexico. **Invasive status:** Special effect weed (competitive, high visual impact). **Declared weed.**

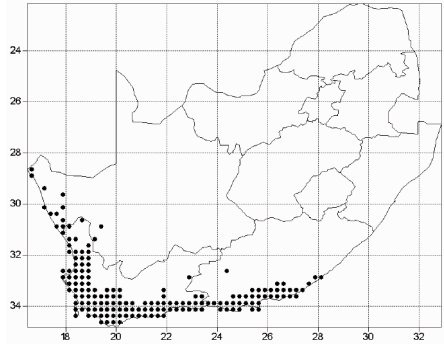


# **Acacia cyclops** A.Cunn. ex G.Don

red eye  
rooikrans

Family Fabaceae

Photo 64



A x 1



**Description:** Unarmed, evergreen, rounded shrub or small tree 1.5–4.0(–6.0) m high; sometimes very low and wind-clipped at the coast. **Leaves:** Phyllodes, bright green, ± straight. **Flowers:** Bright yellow, globular flowerheads, sporadic, October–February(–all year). **Fruits:** Brown pods, as broad as leaves, 8–12 mm wide, not constricted, curved and finally twisted, persisting after seeds shed; seeds (**A**) encircled by a double row of bright red or orange, fleshy stalks.

**Cultivated for:** Dune reclamation, shelter; provides firewood. **Invades:** Fynbos, forest gaps, dunes, roadsides, watercourses. **Origin:** SW Australia. **Invasive status:** Transformer. **Declared invader (category 2).** **Herbicide registration.** **Biocontrol:** Seed feeders available.

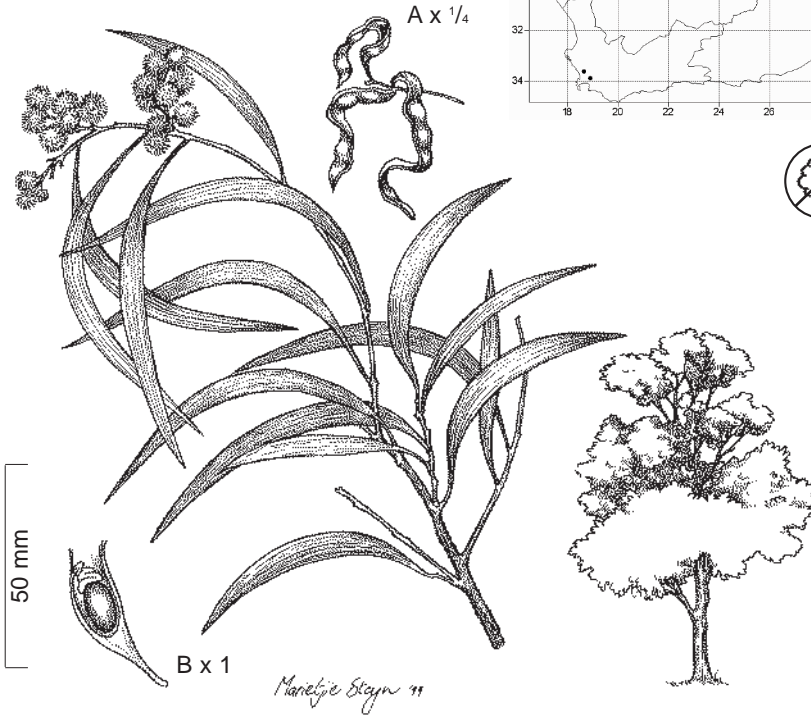
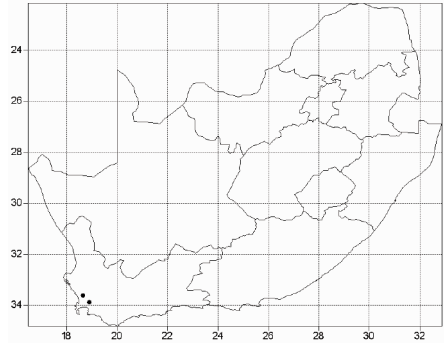


## *Acacia implexa* Benth.

hickory or screw-pod wattle

Family Fabaceae

Photo 65



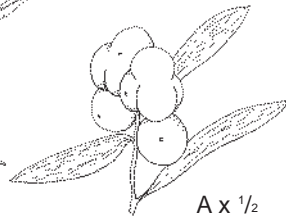
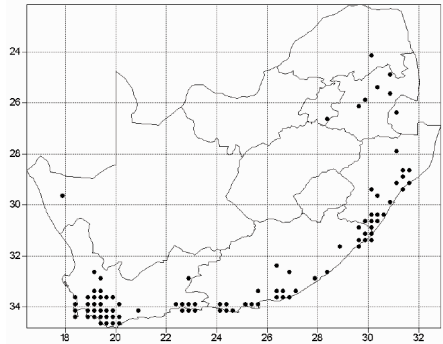
**Description:** Small tree 3–15 m high, often suckering; resembles *A. melanoxylon* (compare leaves, flowering time, pods and seeds). **Leaves:** Phyllodes, greyish-green, descending, usually sickle-shaped, (more drooping, narrowed at the base and thinner than in *A. melanoxylon*), with several prominent longitudinal veins and fine net-veins between. **Flowers:** Pale yellow globular flowerheads in short racemes, December–March. **Fruits:** Pale brown pods (**A**), long and narrow (up to 250 mm long and 4–7 mm wide),  $\pm$  straight when young, becoming strongly curved and twisted after dehiscence, constricted between seeds; seed (**B**) with a fleshy white seed stalk folded at one end but not encircling it. **Cultivated for:** Ornament, shade. **Invades:** Fynbos, watercourses. **Origin:** E Australia. **Invasive status:** Potential transformer. **Declared weed.**

## *Acacia longifolia* (Andr.) Willd.

long-leaved wattle  
langblaarwattel

Family Fabaceae

Photo 66

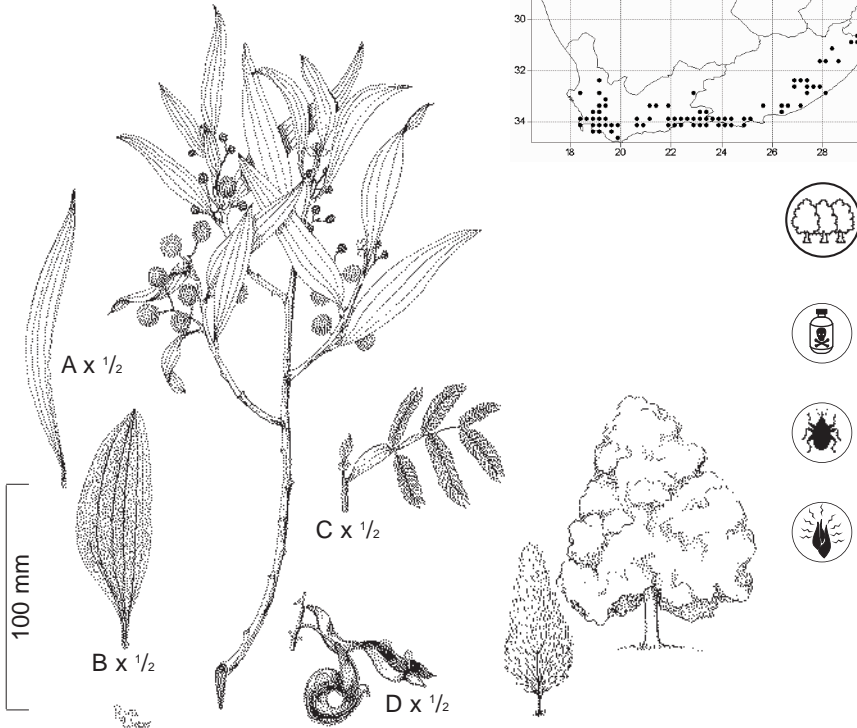
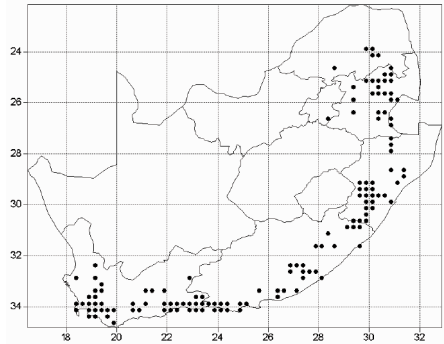


**Description:** Unarmed, evergreen shrub or spreading tree 2–6(–10) m; stems usually have spherical outgrowths or galls (A) (caused by an introduced wasp); the galls are green turning brown, replacing flower and leaf buds. **NB Galls are smooth** as opposed to knobly in *Acacia pycnantha*. **Leaves:** Phyllodes, bright green, up to 180 mm long, with 2–5 prominent longitudinal veins. **Flowers:** Bright yellow, cylindrical flowerheads up to 50 mm long and 7 mm wide, in the axils of the leaves, July–September. **Fruits:** Pale brown pods (B), beaked apically, constricted between the seeds. **Cultivated for:** Dune reclamation, shade, ornament. **Invades:** Fynbos, woodland, watercourses. **Origin:** SE Australia & Tasmania. **Invasive status:** Transformer. **Declared weed. Herbicide registration. Biocontrol:** Effective agents available.

## *Acacia melanoxylon* R.Br.

Australian blackwood  
Australiese swarhout

Family Fabaceae



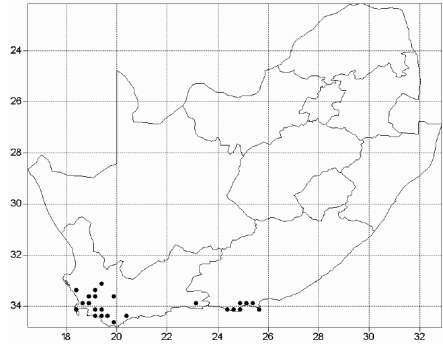
**Description:** Unarmed evergreen tree 8–15(–20) m high; trunk straight, crow dense, pyramidal to cylindrical; similar to *A. implexa*. **Leaves:** Phyllodes (**A**: mature; **B**: immature), greyish turning dark dull-green, ± erect, straight to slightly curved, with 3–7 prominent longitudinal veins and fine net-veins between; often bipinnate (C) on young plants and coppice shoots. **Flowers:** Pale yellow, globular flowerheads, August–September. **Fruits:** Reddish-brown pods (**D**), narrower than leaves, slightly constricted, twisted; seeds almost encircled by pinkish-red seed stalks. **Cultivated for:** Timber, shelter, ornament. **Invades:** Forest edges & gaps; watercourses & roadsides in grassland & fynbos. **Origin:** S & E Australia, Tasmania. **Invasive status:** Transformer. **Declared invader (category 2)**. **Herbicide registration.** **Biocontrol:** Seed feeders available. **Irritant:** Skin (wood/sawdust).

## *Acacia pycnantha* Benth.

golden wattle  
gouewattel

Family Fabaceae

Photo 67



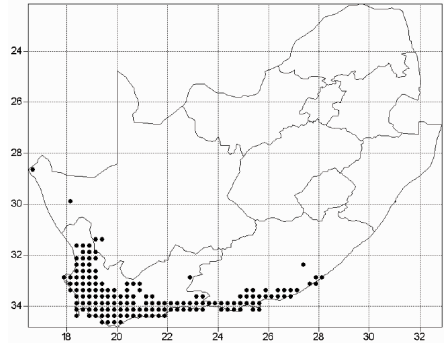
**Description:** Unarmed, slender, evergreen tree 4–8 m high with pendulous branchlets, resembling some *Eucalyptus* (gum) species; stems may have spherical knobbly outgrowths or galls caused by an introduced wasp. **NB** The “knobbly-ball” galls distinguish *A. pycnantha* from *A. longifolia*. **Leaves:** Phyllodes, dull green, leathery, up to 200 mm long, distinctly curved with a single prominent midvein and raised margins; leaf tips blunt or rounded; a fairly large gland is situated at the base of each leaf. **Flowers:** Bright yellow, globular flowerheads in large sprays, August–September. **Fruits:** Brown pods (**A**), almost straight, slightly constricted. **Cultivated for:** Dune reclamation, ornament, tanbark. **Invades:** Coastal and mountain fynbos, rivers, roadsides. **Origin:** S & SE Australia. **Invasive status:** Transformer. **Declared weed.** **Herbicide registration.** **Biocontrol:** Effective agents available.

**Acacia saligna** (Labill.) H.L.Wendl.  
(= *A. cyanophylla* Lindl.)

Port Jackson willow  
Port Jackson of goudwilger

Family Fabaceae

Photo 68



**Description:** Unarmed, evergreen shrub or tree 3–7(–10) m high with a willow-like appearance; stems usually deformed by large, brown, irregularly shaped swellings or galls (caused by an introduced rust fungus). **Leaves:** Phyllodes, blue-green turning bright green, up to 200 mm long, and 10–50 mm wide, slightly erect to pendulous, with a single midvein, wider and wavy on young plants (**A**). **Flowers:** Bright yellow, globular flowerheads, August–November. **Fruits:** Brown pods (**B**), with hardened, whitish margins. **Cultivated for:** Dune reclamation, shelter, tanbark; provides fodder. **Invades:** Fynbos, woodland, coastal dunes, roadsides, watercourses. **Origin:** SW Australia. **Invasive status:** Transformer. **Declared invader (category 2). Herbicide registration. Biocontrol:** Effective agents available.

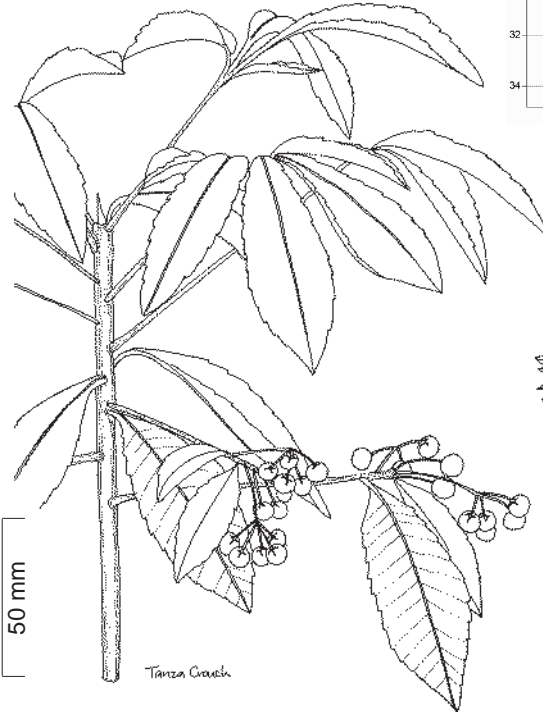
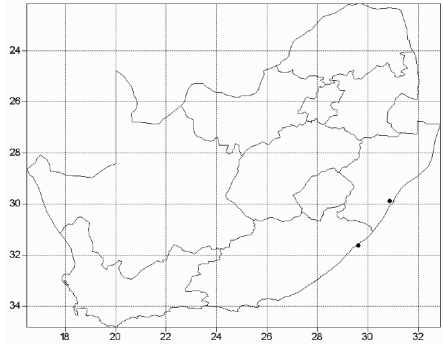
## ***Ardisia crenata*** Sims

(*A. crispa* (Thunb.) A.DC. misapplied)

coralberry tree, coral bush  
koraalbessieboom

Family Myrsinaceae

Photo 69

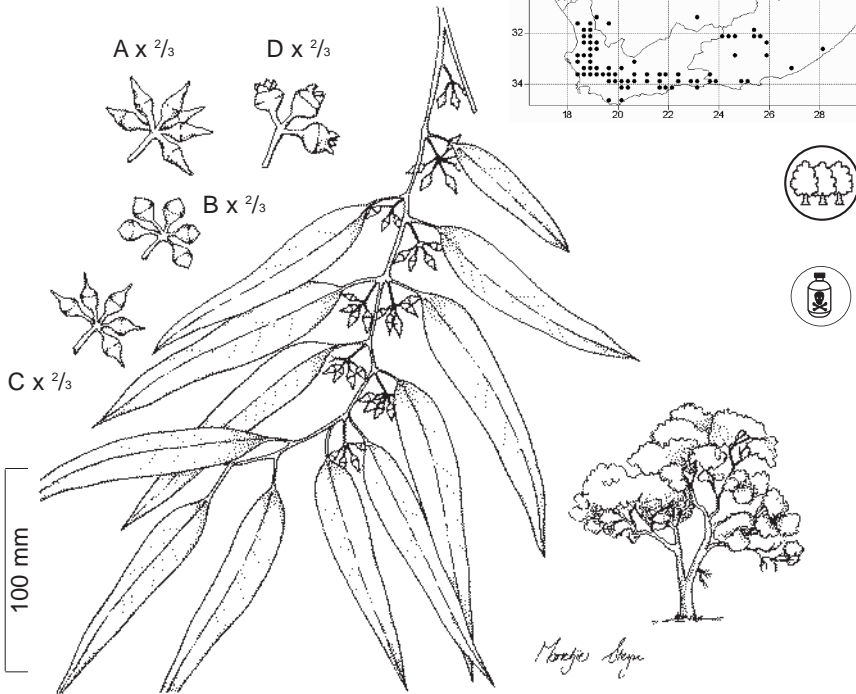


**Description:** Compact, evergreen, glabrous shrub up to 2 m high; stems continue to grow beyond the lateral flowering branches. **Leaves:** Bright green, elliptic-lanceolate or oblanceolate, with 12–18 pairs of indistinct lateral veins, margins crisped (minutely wavy) and toothed, 70–200 x 20–40 mm. **Flowers:** White or pink,  $\pm$  6 mm long, in clusters at the tips of axillary branches, June–November. **Fruits:** Coral-red, one-seeded drupes,  $\pm$  6 mm across, long-lasting, in drooping clusters. **Cultivated for:** Ornament. **Invades:** Forest margins and understories, riverbanks in swamp forest. **Origin:** Asia (NE India to Japan). **Invasive status:** Potential transformer. **Declared weed in KwaZulu-Natal, N Province & Mpumalanga.** **NB** *A. crispa*: leaves with up to 8 pairs of lateral veins, margins wavy and toothed but not crisped, stems cease growth after lateral flowering branches.

## *Eucalyptus camaldulensis* Dehnh.

red river gum  
rooibloekom

Family Myrtaceae

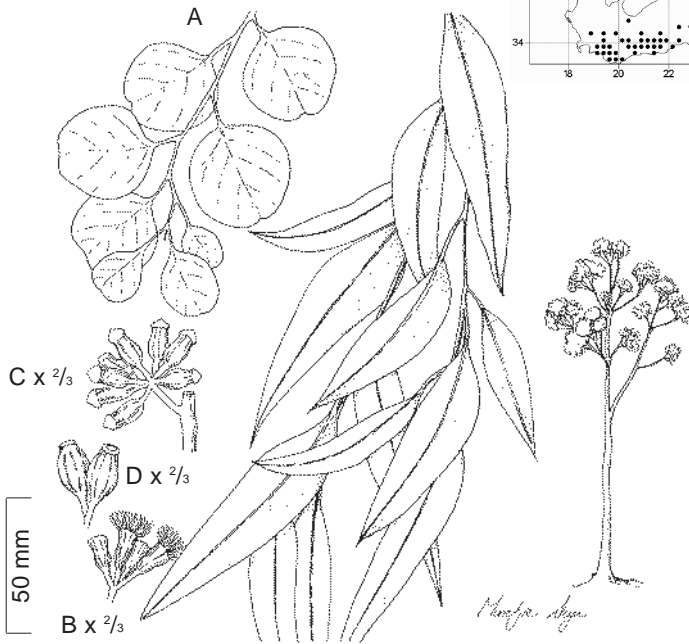
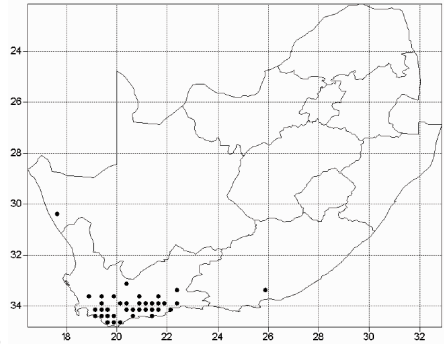


**Description:** Evergreen tree 18–40 m high with a spreading crown and smooth, mottled, white or grey bark, often tinged red in very cold localities. **Leaves:** Pale, dull green; adult leaves 120–220 mm long, narrow, pendulous; juvenile leaves smaller and broader; twigs and petioles red. **Flowers:** Cream with long-exserted stamens, buds conical (A), egg-shaped (B), or beaked (C), to 10 mm long, September–January (–all year). **Fruits:** Brown to reddish-brown capsules (D), 7–8 mm long, with prominent rims and protruding triangular valves. **Cultivated for:** Shelter, timber, firewood, ornament; honey source. **Invades:** Perennial, seasonal and intermittent watercourses. **Origin:** Australia (all states except Tasmania). **Invasive status:** Transformer. **Declared invader (category 2).** **Herbicide registration.**

# *Eucalyptus cladocalyx* F.Muell.

sugar gum  
suikerbloekom

Family Myrtaceae



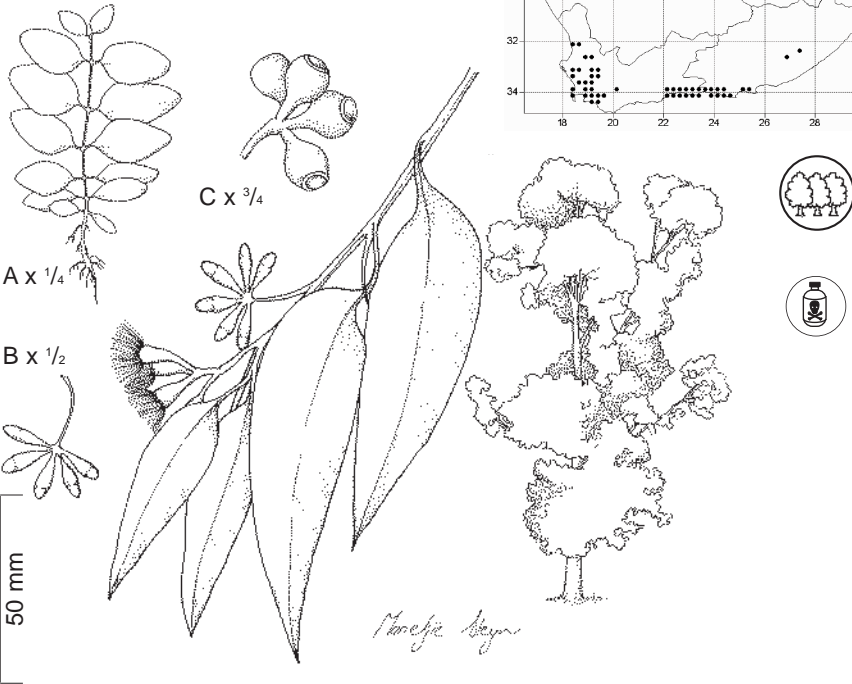
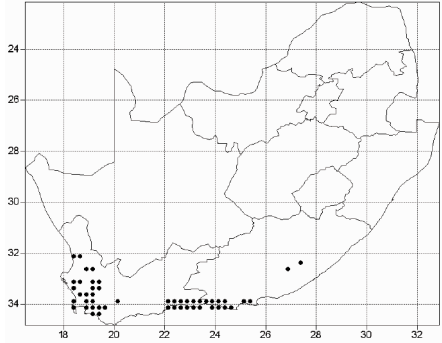
**Description:** Slender, evergreen tree 15–40 m high with smooth, flaky, tan-coloured bark; foliage concentrated at the ends of branches. **Leaves:** Dark green and glossy above, pale below; adult leaves pendulous, 80–140 mm long, sweet-tasting; juvenile leaves (A) elliptic or circular with reddish stalks. **Flowers:** Cream with long-exserted stamens (B), buds (C) ribbed with rounded caps, to 11 mm long, October–February(–May). **Fruits:** Brown capsules (D) to 16 mm long, ovoid, ribbed, valves deeply enclosed. **Cultivated for:** Shelter, shade, timber, firewood; honey source and indispensable for the bee-keeping industry. **Invades:** Fynbos, forest gaps, plantations, watercourses, roadsides. **Origin:** S Australia. **Invasive status:** Potential transformer. **Declared invader (category 2).** **Herbicide registration.** **Poisonous:** Leaves: prussic acid



# *Eucalyptus diversicolor* F.Muell.

karri  
karie

Family Myrtaceae



**Description:** Tall, dense, massively branched, evergreen tree 25–58 m high; bark smooth (except at butt), grey to blue and orange-yellow in blotches. **Leaves:** Dark green and glossy above, distinctly paler beneath; adult leaves lanceolate, 100–140 mm long; juvenile leaves (A) broader or ovate, 40–80 mm long. **Flowers:** Cream with long-exserted stamens, buds (B) with conical lids, to 14 mm long, May–December(–all year). **Fruits:** Brown capsules (C), globose, to 12 mm long, with enclosed valves. **Cultivated for:** Timber, shelter, ornament; honey source. **Invades:** Forest gaps, fynbos, roadsides, watercourses. **Origin:** SW Australia. **Invasive status:** Potential transformer. **Declared invader (category 2). Herbicide registration.**

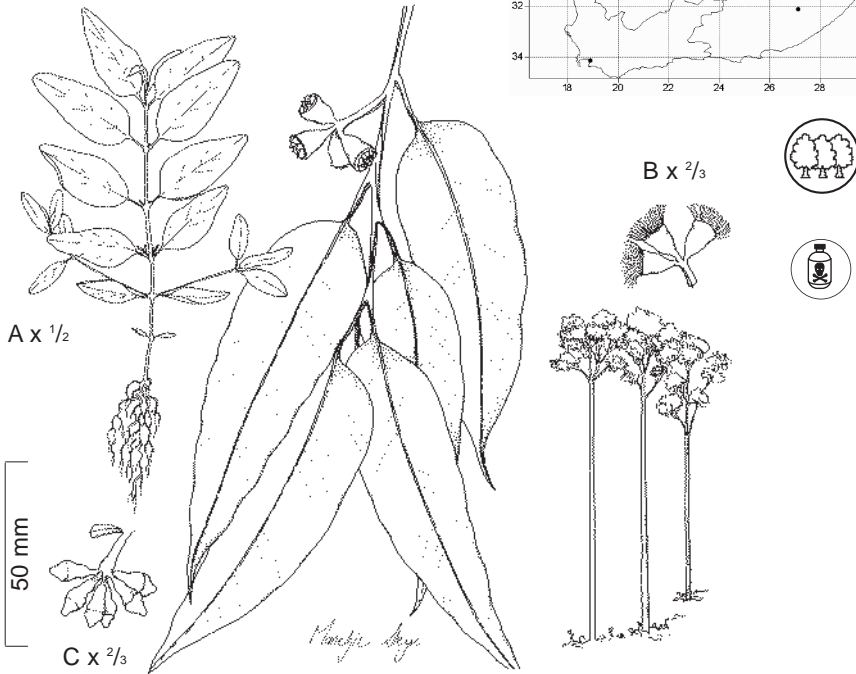
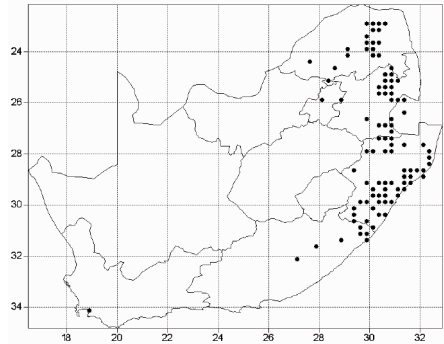


## *Eucalyptus grandis* W. Hill ex Maiden

(*E. saligna* misapplied in S.A.)

saligna gum  
salignabloekom

Family Myrtaceae



**Description:** Tall, evergreen tree with shaft-like trunk, 25–55(–72) m high; bark smooth, except butt up to 4 m, peeling in long, thin strips to expose a powdery, white, grey-white or blue-grey surface. **Leaves:** Dark green and glossy above, paler below; adult leaves 130–200 mm long, similar to juvenile leaves (**A**).

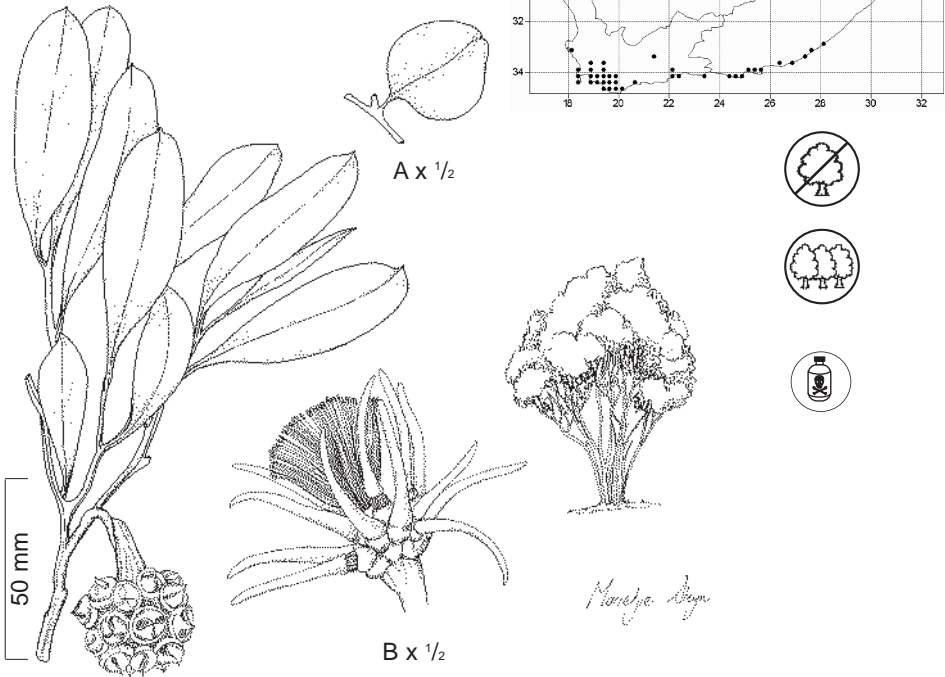
**Flowers:** Cream with long-exserted stamens (**B**), buds (**C**), to 8 mm long, pear-shaped with conical lids, peduncles flattened, April–August. **Fruits:** Capsules, brown with bluish-grey bloom, pear-shaped, 7–10 mm long, with protruding valves that arch inwards. **Cultivated for:** Timber, shelter, shade, firewood; honey source. **Invades:** Forest gaps, plantations, watercourses, roadsides. **Origin:** E & NE Australia. **Invasive status:** Transformer. **Declared invader (category 2).** **Herbicide registration.**

## *Eucalyptus lehmannii* (Schauer) Benth.

spider gum  
spinnekopbloekom

Family Myrtaceae

Photo 70

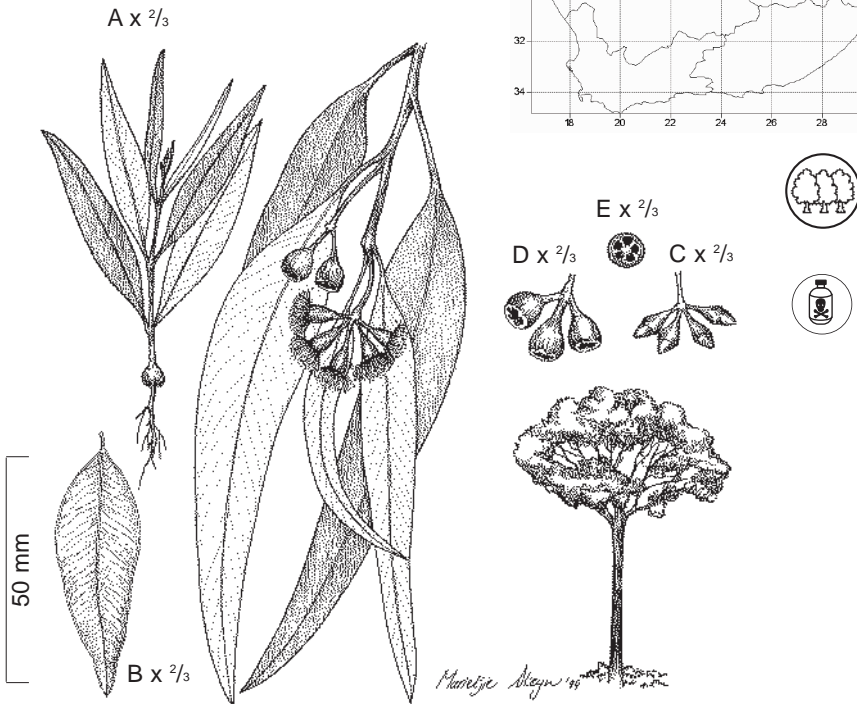


**Description:** Dense, rounded, bushy, evergreen tree 6–10(–19) m high, branching near ground level, bark smooth grey-brown. **Leaves:** Light green; adult leaves 70–90 mm long, more tapering than juvenile leaves (A). **Flowers:** Greenish-yellow with long-exserted stamens, in large, fused clusters (B), buds capped with elongated, curved, finger-like lids,  $\pm$  50 mm long, June–January. **Fruits:** Greyish-brown capsules, fused into a wooden mass up to 50 mm long and 80 mm wide. **Cultivated for:** Shelter, sandbinding, timber; honey source. **Invades:** Coastal fynbos, coastal dunes. **Origin:** SW Australia. **Invasive status:** Transformer. **Declared weed in W Cape and declared invader (category 2) elsewhere in South Africa. Herbicide registration.**

## *Eucalyptus paniculata* Sm.

grey ironbark  
gryssysterbasbloekom

Family Myrtaceae



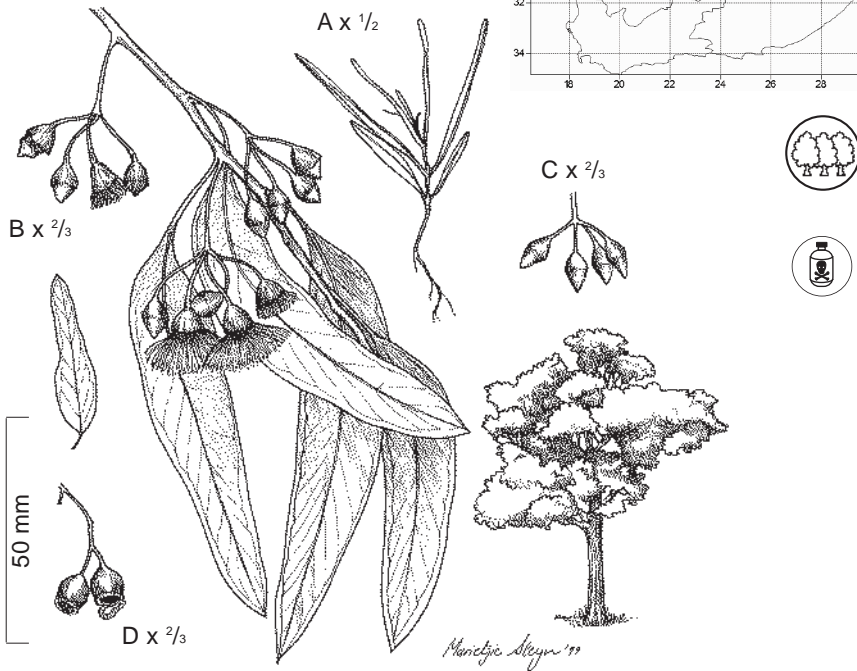
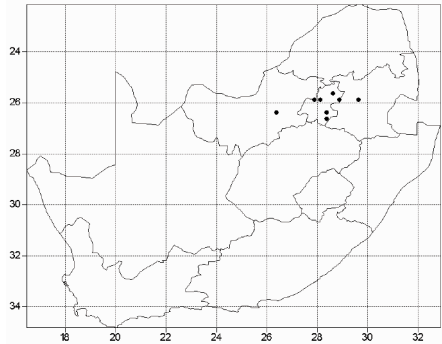
**Description:** Tall evergreen tree 20–50 m high with a dark green crown; bark grey, persistent to the small branches, hard, deeply furrowed and ridged. **Leaves:** Dark green, discolorous at all stages (including seedling stage (A)); adult leaves 95–150 mm long, narrow, pendulous; juvenile leaves (B) shorter and broader. **Flowers:** Cream with long-exserted stamens, buds (C) with conical lids, to 11 mm long, May–January(–all year). **Fruits:** Capsules (D), hemispherical, 6–10 mm long, tapering to a short stalk; with enclosed or slightly protruding valves; frequently with five valves (E). **Cultivated for:** Timber, firewood, shelter, ornament; honey source. **Invades:** Watercourses. **Origin:** E Australia. **Invasive status:** Potential transformer. **Declared invader (category 2)**. **Herbicide registration.** **NB** Distribution map is incomplete; should probably coincide with the warm, humid, summer rainfall zone.

## *Eucalyptus sideroxylon* A.Cunn. ex Woolls

black or red ironbark  
swartysterbasbloekom

Family Myrtaceae

Photo 71

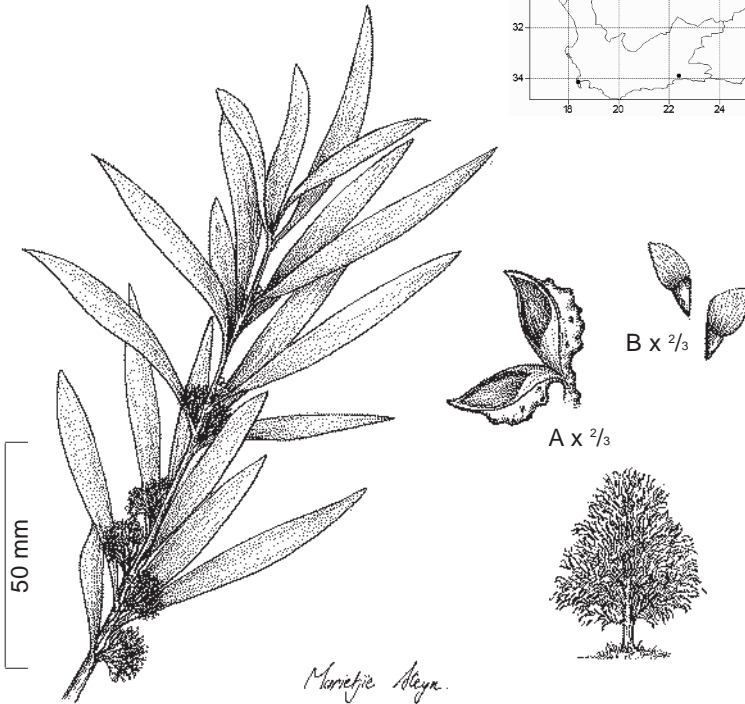
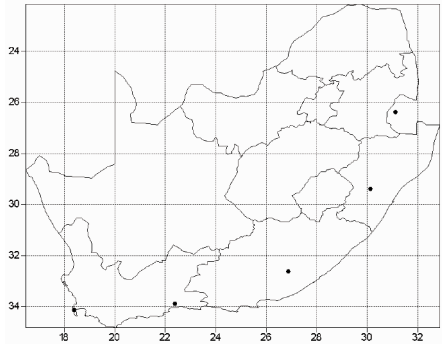


**Description:** Evergreen tree 15–26 m high with a moderately spreading crown; bark persistent to the small branches, hard, ridged and deeply furrowed; the blackest bark of all eucalypts. **Leaves:** Dark greyish-green; adult leaves 60–110 mm long, lance-shaped, pendulous; juvenile leaves vary from very narrow and long (linear)(**A**) to broadly ovate or oblong (**B**). **Flowers:** Cream, pink or deep rose-red with exserted stamens; buds (C) pendulous, with conical or beaked lids, to 12 mm long; (February–)May–October. **Fruits:** Brown pendulous capsules (D), round to oval, 8–10 mm long; with deeply enclosed valves, often covered by the sub-persistent staminal ring. **Cultivated for:** Timber, firewood, shelter, ornament; honey source. **Invades:** Watercourses. **Origin:** SE Australia. **Invasive status:** Potential transformer. **Declared invader (category 2)**. **Herbicide registration.**

***Hakea salicifolia*** (Vent.) B.L.Burtt  
 (= *H. saligna* (Andr.) Knight)

willow hakea  
 wilgerhakea

Family Proteaceae



**Description:** Evergreen shrub or bushy tree 2.5–5.5(–8.0) m high, glabrous except for the young shoots which are silky. **Leaves:** Pale or greyish-green to dark green; new foliage reddish; leathery, flat, linear to lanceolate, 50–100 mm long x 6–17 mm wide; obscurely veined. **Flowers:** White, small, in dense axillary clusters, scented, September(–January). **Fruits:** Woody capsules (**A**), 20–23 mm long x 15–20 mm wide, grey with dark warts; usually one or two together, splitting into two equal valves, each containing one winged seed (**B**). **Cultivated for:** Hedging, shelter, ornament. **Invades:** ?Fynbos, grassland, wooded kloofs, roadsides, urban open space. **Origin:** E Australia. **Invasive status:** Potential transformer. **Proposed declared invader.**

## *Hypericum perforatum* L.

St. John's wort  
Johanneskruid

Family Clusiaceae

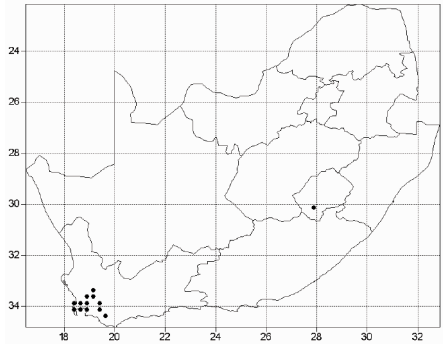
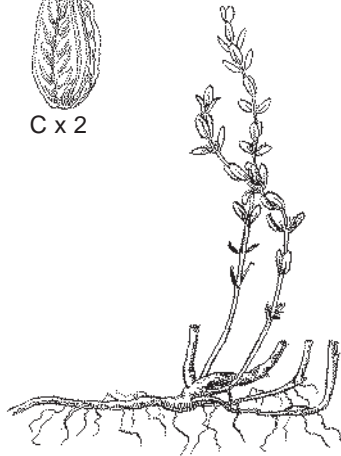


B x 2



C x 2

A



**Description:** Erect, softly woody perennial distinguished from indigenous *Hypericum* spp. by its creeping underground stems (A); it produces many, slender, erect stems up to 1 m high in summer and spreading, prostrate stems in winter. **Leaves:** Light green, up to 25 mm long x 5 mm wide with translucent oil glands. **Flowers:** Bright yellow with black oil glands on the margins of the petals (B), up to 20 mm across, October-January. **Fruits:** Brown, three-valved capsules (C) up to 10 mm long. **Cultivated for:** Medicinal purposes. **Invasives:** Mountain and lowland fynbos, grassland, watercourses, wetlands, old lands, orchards. **Origin:** Europe incl. Mediterranean to Asia (C China). **Invasive status:** Special effect weed (poisonous, irritant). **Declared invader (category 2).** **Biocontrol:** Effective agents available. **Poisonous:** Whole plant, causing photosensitivity. **Irritant:** Skin (sap).

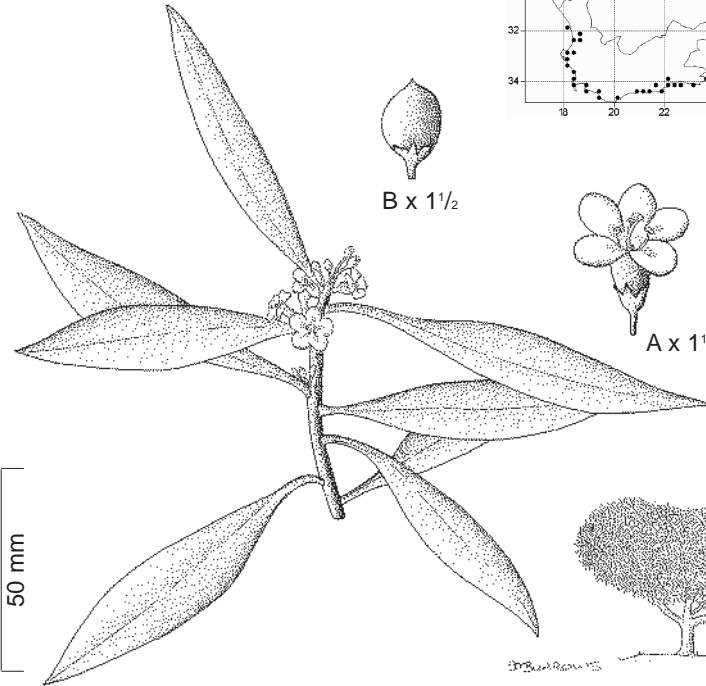
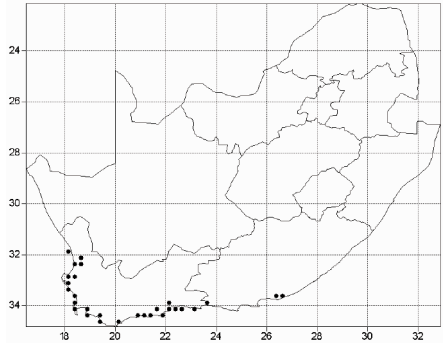
***Myoporum tenuifolium*** G.Forst. **subsp. *montanum*** (R.Br.) Chinnock

(= *M. montanum* R.Br.)

(*M. acuminatum* misapplied in S.A.)

manatoka

Family Myoporaceae



**Description:** Evergreen, somewhat succulent, wide-spreading shrub or small tree 2–6 m high. **Leaves:** Dull green, thinly fleshy but firm, linear-lanceolate, tapering, margins entire, glabrous, up to 100 mm long. **Flowers:** White (**A**), frequently purple-spotted, bell-shaped, 5–8 mm long, in small axillary clusters, July–October. **Fruits:** Purple, globose, ± succulent drupes (**B**), 6–8 mm long. **Cultivated for:** Ornament, shade, shelter. **Invades:** Coastal fynbos, riverbanks, valleys, coastal dunes. **Origin:** Australia. **Invasive status:** Potential transformer. **Declared invader (category 3).** **Poisonous:** Whole plant. **NB** *M. acuminatum*, strictly speaking, has coarse bark and very distinct wrinkled or ridged fruits; *M. insulare* (*M. serratum*) and *M. laetum* have thicker, fleshier leaves that are not long tapering, and not yet reported as naturalised.



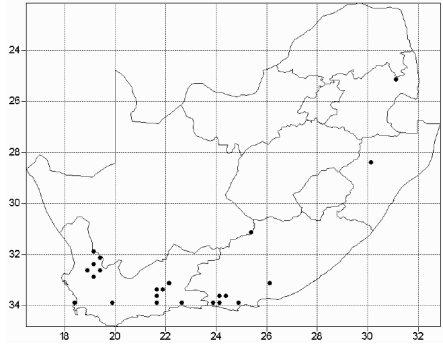


## *Nerium oleander* L.

oleander  
selonsroos

Family Apocynaceae

Photo 72



**Description:** Multistemmed, evergreen shrub or small tree up to 6 m high.

**Leaves:** Dark dull-green, paler below, held erect, distinctively veined having a prominent midrib and numerous, parallel cross-veins. **Flowers:** Pink, red or white; invasive forms usually have pink, scantily aromatic flowers with a single row of petals, September–March. **Fruits:** Reddish-brown follicles, finger-like, 100–200 mm long, ridged, splitting longitudinally into two halves; seeds have tufts of hairs.

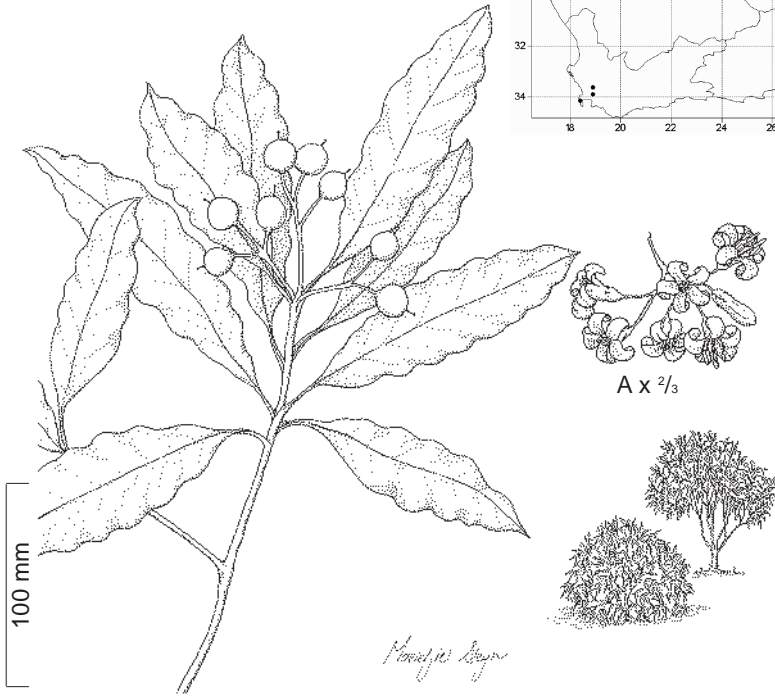
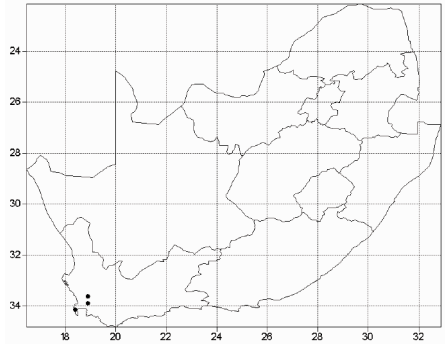
**Cultivated for:** Ornament, screening. **Invades:** Watercourses; particularly rocky and gravelly watercourses in semi-arid mountain valleys. **Origin:** Mediterranean. **Invasive status:** Special effect weed (competitive, poisonous). **Declared weed excluding sterile, double-flowered cultivars.** **Poisonous:** Whole plant highly toxic and lethal. **Irritant:** Skin (sap).

## *Pittosporum undulatum* Vent.

Australian cheesewood, sweet pittosporum  
Australiese kasuur, soet pittosporum

Family Pittosporaceae

Photo 73



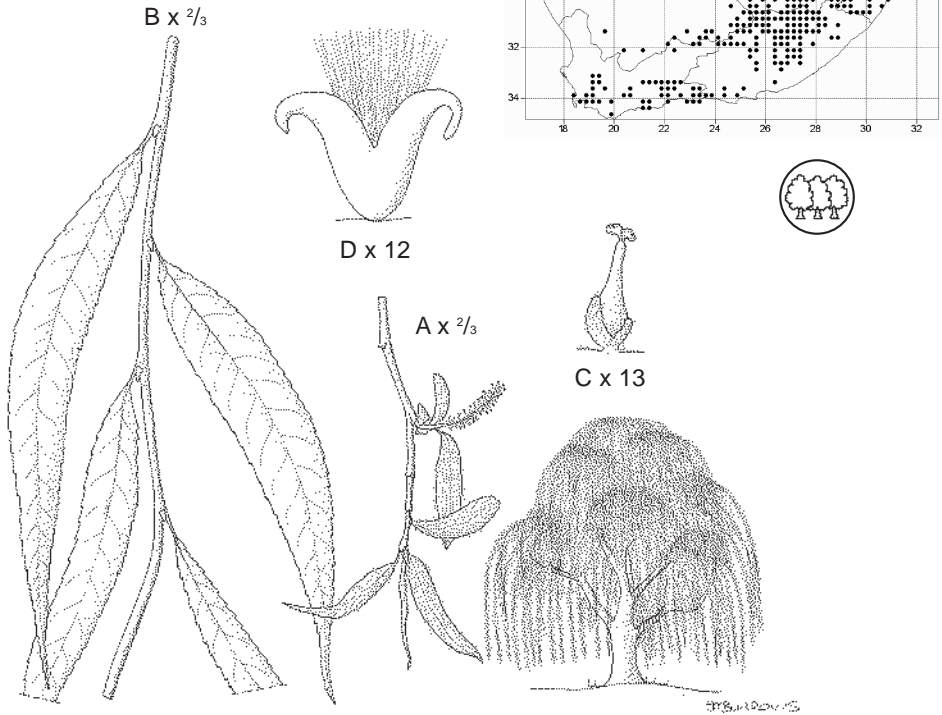
**Description:** Glabrous, evergreen shrub or broadly conical tree to 12 m high.  
**Leaves:** Dark green and shiny, oblong-lanceolate, tapering at both ends, rather thin, margins entire, usually wavy, to 150 mm long, often crowded at the ends of branchlets. **Flowers (A):** White, to 13 mm long, fragrant, in terminal, few-flowered clusters (A), August–September. **Fruits:** Showy, two-valved capsules, ± globose, orange turning brown, to 13 mm across; seeds embedded in a sticky, resinous pulp. **Cultivated for:** Ornament, hedging, shelter. **Invades:** Woodland, disturbed forest, riverbanks, plantations. **Origin:** E Australia. **Invasive status:** Potential transformer. **Declared weed.**

## *Salix babylonica* L.

weeping willow  
treurwilger

Family Salicaceae

Photo 74



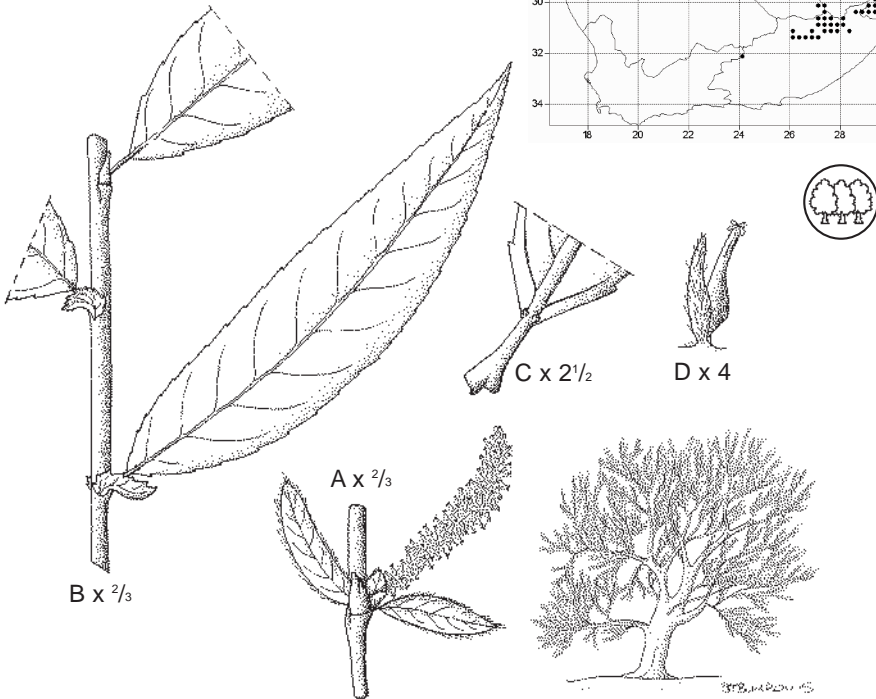
**Description:** Deciduous tree 5–15(–18) m high, branchlets slender, hanging vertically, almost to the ground. **Leaves:** Bright green above, pale or ± grey beneath, spring leaves ± silky (**A**), summer leaves (**B**) glabrous, up to 160 mm x 15 mm, finely toothed, ending in a long, tapering point (whip-tip). **Flowers:** Greenish (**C**), 1 mm long, almost without exception female only, sessile, in catkins (**A**), ± 20 mm long, August–October. **Fruits:** Greenish, sessile capsules (**D**) in catkins, shedding sterile white hairs; reproduces from detached branches. **Cultivated for:** Shade, ornament, fodder, erosion control; honey source. **Invades:** Watercourses. **Origin:** Asia (?China). **Invasive status:** Transformer. **Declared invader (category 2)**. **NB** Indigenous *S. mucronata*: branches may droop but not vertically; flowers & fruits stalked; leaves pale whitish-green beneath, without a whip-tip; branchlets often reddish.

## *Salix fragilis* L.

crack or brittle willow

Family Salicaceae

Photo 75



**Description:** Deciduous tree 3–10(–15) m high, branchlets smooth, polished, ascending, brittle at the base, readily snapping off. **Leaves:** Bright green and shiny above, paler beneath with blue or grey bloom; spring leaves **(A)** fringed with long, silky hairs, summer leaves **(B)** glabrous, up to 150 mm x 40 mm; margins coarsely serrated, two glands at base of blade (C); stipules fairly large, half-heart-shaped, deciduous. **Flowers:** Greenish **(D)**, 4 mm long, female only, shortly stalked, in dense, cylindrical catkins **(A)** 30–70 mm long, September–October. **Fruits:** Greenish capsules, shortly stalked, shedding sterile white hairs; reproduces from detached branches. **Cultivated for:** Shade, ornament. **Invades:** Watercourses. **Origin:** W Europe & Asia. **Invasive status:** Transformer. **Declared invader (category 2).** **NB** Brittle branchlets distinctive.

## *Syzygium cumini* (L.) Skeels

jambolan

Family Myrtaceae

Photo 76



**Description:** Glabrous, evergreen tree 5–10(–15) m high, branchlets white or grey.

**Leaves:** Pale- or yellowish-green, glossy, thick, broadly oblong or oval, apex abruptly tapering, lateral veins very close together, blade 80–150 mm long, petiole 15–30 mm long. **Flowers:** White or yellowish-green (A), about 8 mm across; petals united into a cap, falling away in one piece; in much-branched, many-flowered panicles, usually below the leaves, arising from old leaf scars (as opposed to terminally in the indigenous *S. guineense*), October–April. **Fruits:**

Purplish-red, one-seeded berries (B), oval to ± pear-shaped, 15–25 mm long.

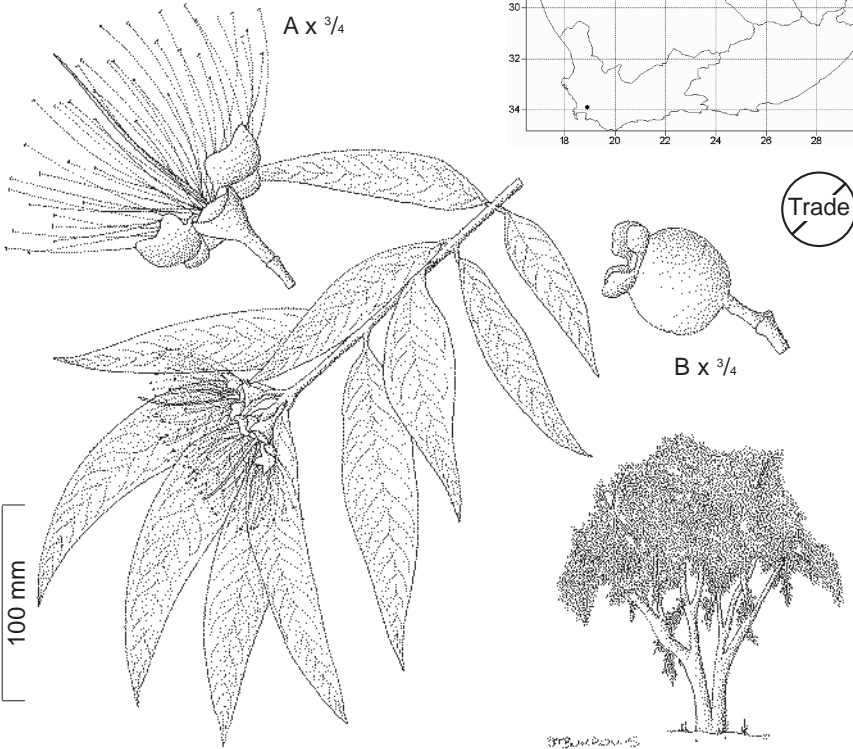
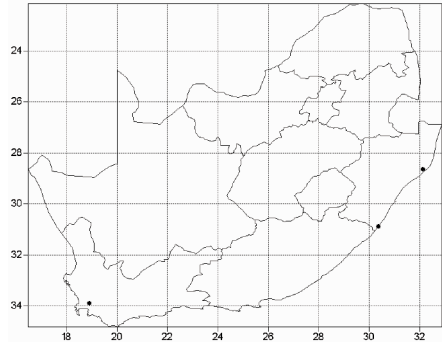
**Cultivated for:** Ornament, edible fruits. **Invades:** Coastal bush. **Origin:** Asia (Indomalaysia). **Invasive status:** Potential transformer. **Declared invader (category 3).**



# *Syzygium jambos* (L.) Alston

rose apple  
jamboes

Family Myrtaceae



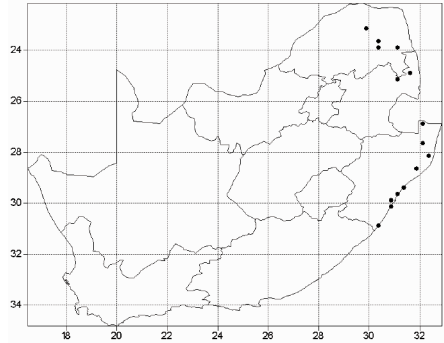
**Description:** Glabrous, evergreen tree 5–10 m high. **Leaves:** Dark green, glossy, thick, lanceolate, tapering, 130–200 mm long, petiole  $\pm$  5–8 mm long. **Flowers:** Greenish-white (A), large, 50–80 mm across, stamens long and showy, petals free, in few-flowered, broad clusters, August–March. **Fruits:** Cream-yellow, tinged pink, few-seeded berries (B), round or oval, 25–50 mm long, rose fragrant. **Cultivated for:** Ornament, edible fruits. **Invades:** Coastal bush. **Origin:** SE Asia. **Invasive status:** Potential transformer. **Declared invader (category 3).**

***Thevetia peruviana*** (Pers.) K.Schum.  
(= *T. nerifolia* A.Juss. ex Steud.)

yellow oleander  
geel-oleander

Family Apocynaceae

Photo 77

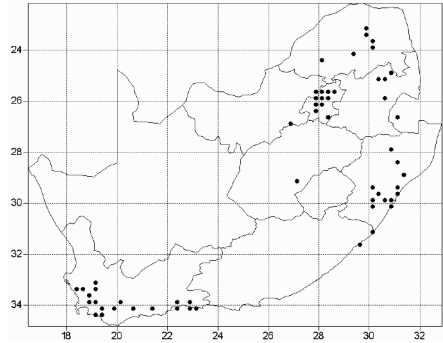
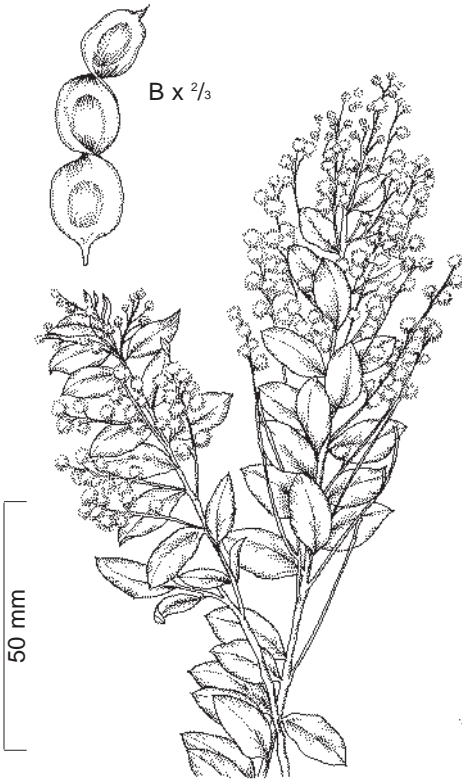


**Description:** Densely leafy, evergreen shrub or small tree 2–6(–10) m high with milky sap. **Leaves:** Bright green and glossy above, paler below, narrow, lance-shaped, to 150 mm long; midrib prominent, secondary veins obscure. **Flowers:** Yellow or orange, sometimes fragrant, trumpet-shaped, twisted in the bud, opening with five spreading and overlapping lobes, 50–75 mm long and up to 50 mm across, all year. **Fruits:** Drupelike, slightly fleshy, green turning yellow and finally hard and black;  $\pm$  25 mm across, broadly triangular in outline, with a raised ridge across the middle; containing 2–4 flat seeds. **Cultivated for:** Ornament. **Invades:** Savanna, watercourses, coastal bush. **Origin:** Tropical America (Mexico & W Indies). **Invasive status:** Special effect weed (competitive, poisonous). **Declared weed. Poisonous:** Whole plant, especially seed, highly toxic and lethal.

# *Acacia podalyriifolia* A.Cunn. ex G.Don

pearl acacia  
vaalmimosa

Family Fabaceae



*Manlyia Steyer*

**Description:** Unarmed, evergreen shrub or small tree 3–6(–10) m high; branchlets and all new growth covered in a greyish, powdery bloom and densely velvety hairs. **Leaves:** Phyllodes (**A**), silvery-grey to dull green, velvety, oval or elliptic, short, 20–40 mm long with a single midrib. **Flowers:** Bright yellow, globular flowerheads in long, showy sprays, June–August. **Fruits:** Greyish-brown, velvety pods (**B**), 30–80 mm long, rather broad, 15–20 mm wide, margins often wavy. **Cultivated for:** Ornament, shade; honey source. **Invasives:** Roadsides, urban open spaces, watercourses. **Origin:** E & SE Australia. **Invasive status:** Potential transformer. **Declared invader (category 3).**

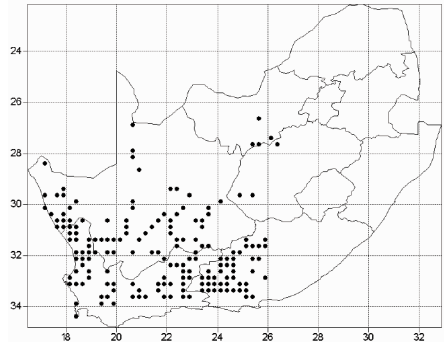


***Atriplex nummularia* Lindl. subsp. *nummularia***

old man saltbush  
oumansoutbos

Family Chenopodiaceae

Photo 78



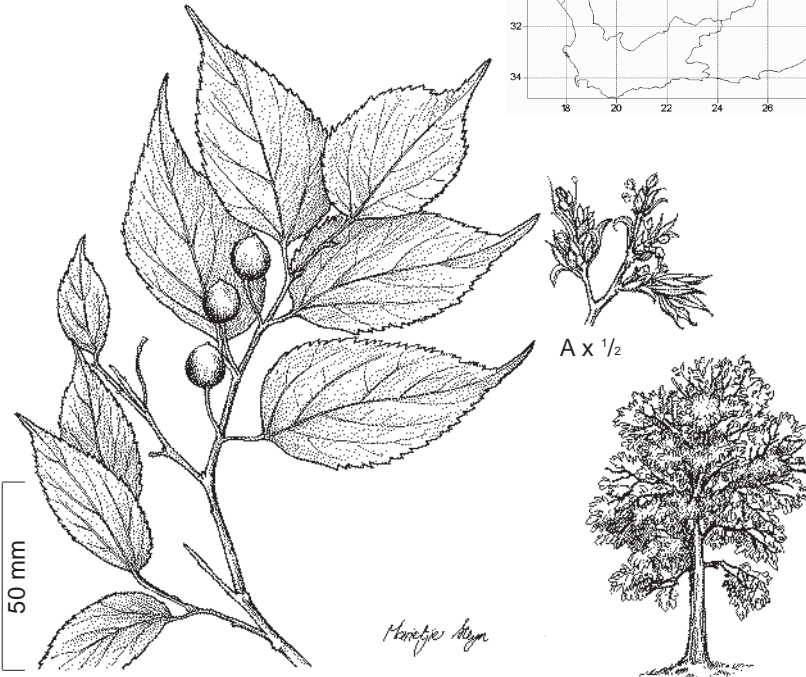
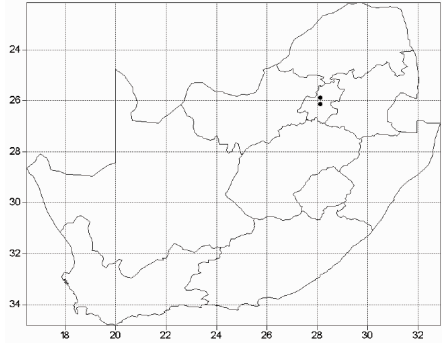
**Description:** Erect shrub 1–2(–3) m high with many creamy-white stems from the base. **Leaves:** Greyish or bluish-green, scaly, blade about as long as broad, margin entire or serrated. **Flowers:** Greyish to yellowish, minute, in compact, terminal, drooping clusters, September–January(–all year). **Fruits:** Utricles (A), 5 mm across, grey-green turning pink or straw-coloured, papery or corky, one-seeded. **Cultivated for:** Fodder. **Invasives:** Sandy riverbeds, coastal dunes, edges of pans, roadsides, in semi-arid regions. **Origin:** C & SE Australia. **Invasive status:** Potential transformer. **Declared invader (category 2).**



***Cellis australis* L., *C. occidentalis* L. & *C. sinensis* Pers.**

nettle or hackberry trees  
netelbome

Family Ulmaceae



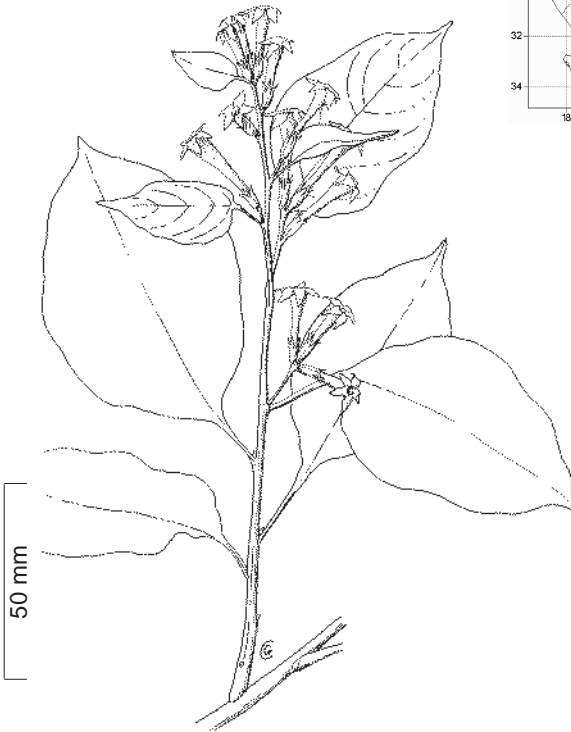
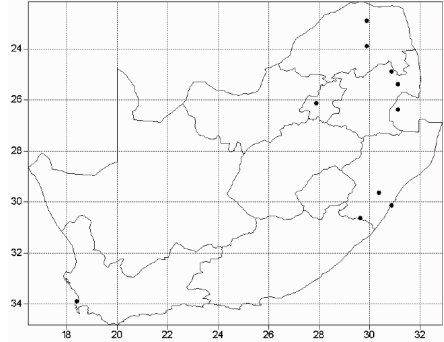
**Description:** Deciduous trees 10-30 m high with yellow autumn tints and smooth or warty (*C. occidentalis*) pale grey trunks; hybridising with *C. africana*, white stinkwood. **Leaves:** Bright to dark green, glossy above (& rough in *C. australis*), margins toothed, hairless or softly hairy only on the undersurface (*C. africana*: young leaves bright green & very hairy on both surfaces, becoming less so; adult leaves dull green). **Flowers:** Yellowish, small, axillary (A), spring. **Fruits (mature):** *C. sinensis*: dark orange,  $\pm 6$  mm wide, on short, stout stalks; *C. australis* (illustrated) & *C. occidentalis*: purple or black,  $\pm 10$  mm wide; *C. africana*: yellow or brown,  $\pm 4$  mm wide, on long, thin stalks. **Cultivated for:** Shade, ornament. **Invade:** Urban open space, riverbanks. **Origin:** Mediterranean, Canada, Asia (China, Korea, Japan) respect. **Invasive status:** Special effect weeds (competitive). **Proposed declared invaders.**



***Cestrum aurantiacum*** Lindl. &  
***C. elegans*** (Brongn.) Shtdl.  
(= *C. purpureum* (Lindl.) Standl.)

yellow cestrum & crimson cestrum  
oranjesestrum & karmosynsestrum

Family Solanaceae



**Description:** Much-branched, evergreen, half-climbing shrubs 1–2(–6) m high; ± glabrous (*C. aurantiacum* illustrated), hairy-pubescent stems and leaves (*C. elegans*); stems and leaves bruise easily, emitting an unpleasant smell.

**Leaves:** Light green, *C. aurantiacum*: ovate, up to 130 mm x 70 mm; *C. elegans*: ovate to ovate-lanceolate, up to 120 mm x 40 mm. **Flowers:** Tubular, in axillary and terminal clusters; *C. aurantiacum*: orange-yellow, 20–25 mm long;

*C. elegans*: crimson, reddish-purple or pink, 20–25 mm long, ± nodding clusters;

October–May. **Fruits:** Small, globose, spongy berries; *C. aurantiacum*: white, *C. elegans*: red. **Cultivated for:** Ornament, hedging. **Invasive:** Forest margins, savanna, plantations, wooded kloofs. **Origin:** C America (Guatemala) & Mexico respectively. **Invasive status:** Special effect weeds (competitive, poisonous).

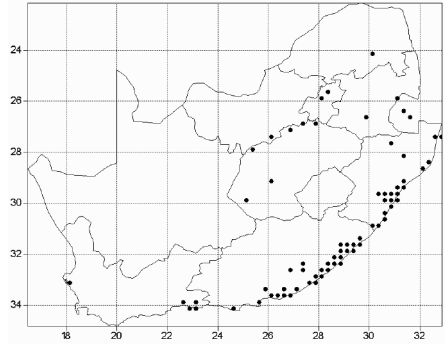
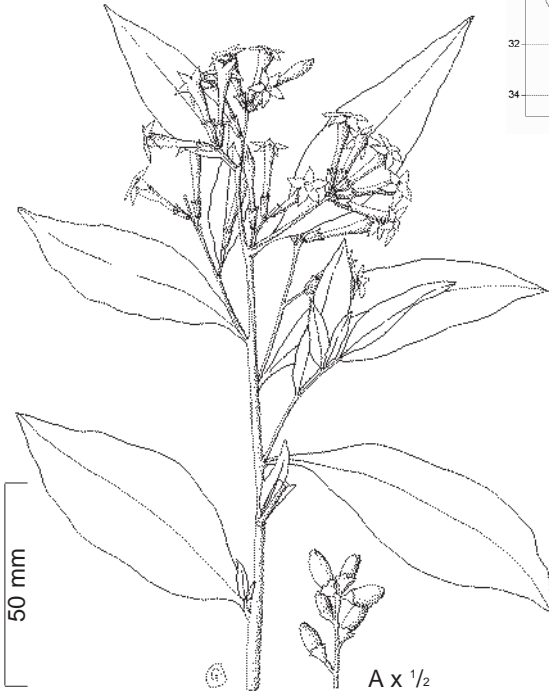
**Declared weeds. Poisonous:** Whole plant.

***Cestrum laevigatum*** Schlttdl. &  
***C. parqui*** L'Hér.

inkberry & Chilean cestrum  
inkbessie & Chileense inkbessie

Family Solanaceae

Photo 79



**Description:** Sparsely hairy, evergreen shrubs 1–2 m high or trees (*C. laevigatum*) up to 15 m on the coast; leaves and stems bruise easily, emitting an unpleasant smell. **Leaves:** Light or dark green, mainly along the distal ends of branches; *C. laevigatum* (illustrated): elliptic-lanceolate, up to 150 mm long x 50 mm wide, *C. parqui*: narrowly lanceolate, up to 15–25 mm wide. **Flowers:** Greenish-yellow in axillary clusters (*C. laevigatum*); axillary and terminal clusters (*C. parqui*), October–May. **Fruits:** Berries (A), 10 mm long, green turning purple-black. **Cultivated for:** Ornament, hedging. **Invade:** Forest, savanna, grassland, rivers, plantations, coastal dunes; *C. parqui* to date only recorded on the Vaal River and highveld. **Origin:** S America (Brazil & Chile resp.) **Invasive status:** Transformers. **Declared weeds. Herbicide registration** (*C. laevigatum*). **Poisonous:** Whole plant.



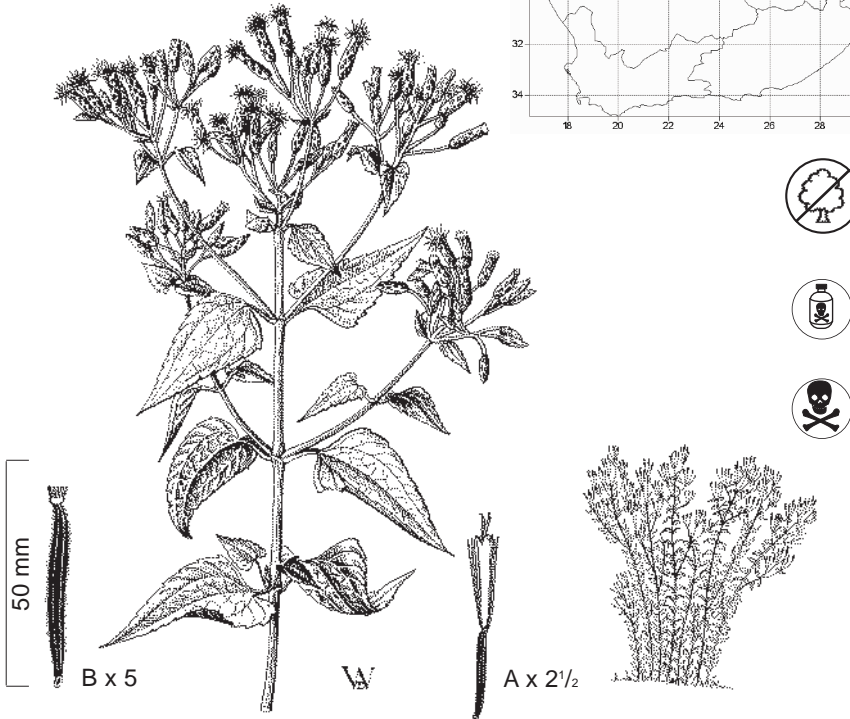
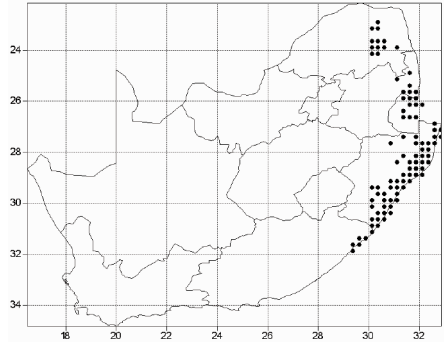
**Chromolaena odorata** (L.) R.M.King & H.Rob.

(= *Eupatorium odoratum* L.)

triffid weed  
paraffienbos

Family Asteraceae

Photo 80



**Description:** Scrambling, sparsely hairy shrub up to 4 m or higher; often forming dense thickets; stems with opposite, wide-spreading branches. **Leaves:** Light green, often yellowish, ovate to triangular, three-nerved from the base, glandular-dotted below; smell strongly of turpentine or paraffin when crushed.

**Flowers:** White or pale blue (**A**: one flower) in terminal, cylindrical heads 10 mm long x 3 mm wide, surrounded by speckled bracts, June–July(–December). **Fruits:** Straw-coloured, bristly achenes (**B**) ± 5 mm long. **Cultivated for:** Ornament.

**Invades:** Forest margins, savanna, plantations, wooded kloofs, watercourses, roadsides. **Origin:** N, C & S America (SE USA to N Argentina) & West Indies.

**Invasive status:** Transformer. **Declared weed. Herbicide registration. Biocontrol:** Natural enemies released. **Poisonous.**

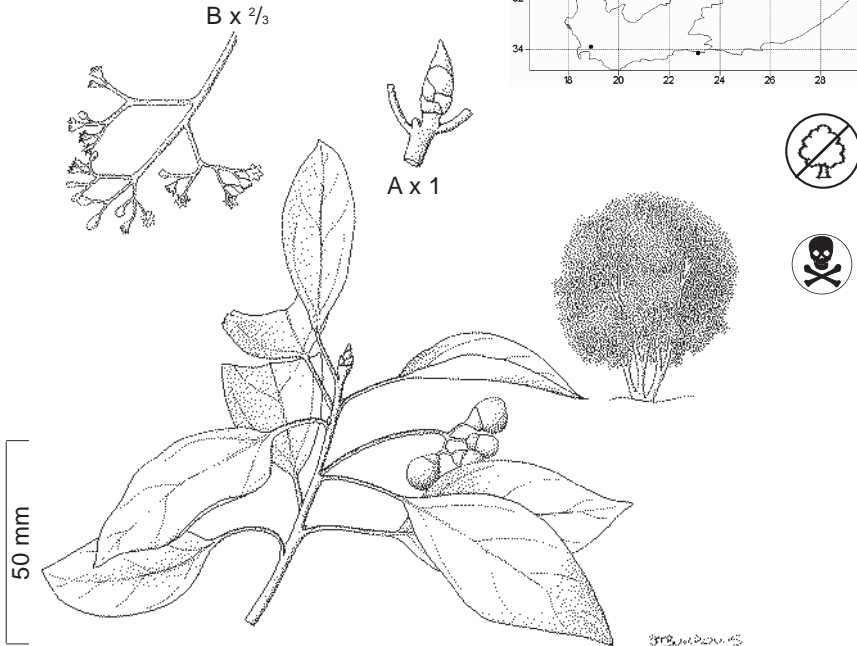
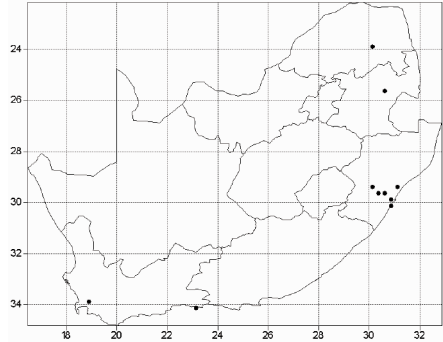


# *Cinnamomum camphora* (L.) J.Presl

camphor tree  
kanferboom

Family Lauraceae

Photo 81

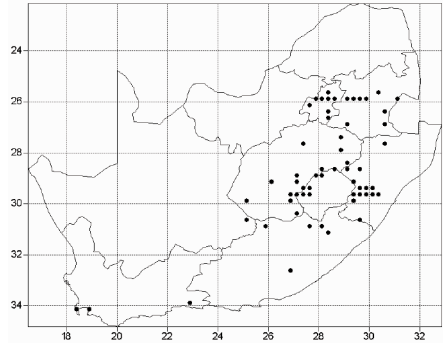


**Description:** Glabrous, evergreen tree 10–26 m high, canopy dense, rounded to spreading; bark smooth, green becoming rough, scaly and brownish-grey; trunk becomes massive and spreading at the base. **Leaves:** Bright green, glossy, blue-grey beneath, reddish or coppery when young, camphor-scented when crushed, distinctly three-veined from the base, apex tapering, buds enclosed by large, overlapping scales (A). **Flowers:** Yellowish or greenish-white, minute, in delicate, axillary panicles (B), September–November. **Fruits:** Bluish-black berries. **Cultivated for:** Ornament, shade, timber; honey source. **Invades:** Forest margins, coastal bush, riverbanks. **Origin:** Asia (China, Taiwan & Japan). **Invasive status:** Transformer. **Declared weed in KwaZulu-Natal, Northern Province and Mpumalanga. ?Poisonous.**

***Cotoneaster franchetii*** Boiss. &  
***C. pannosus*** Franch.

orange & silver-leaf cotoneasters  
oranje cotoneaster & silwerdwergmispel

Family Rosaceae



A x 1/2



**Description:** Unarmed, gracefully arching shrubs up to 3 m high with showy, berry-like fruits; branchlets, lower surfaces of leaves, pedicels and calyces densely white- or yellowish-felty. **Leaves:** *C. franchetii*: grey-green, hairy, becoming glabrous and shiny above, 20–30 mm long, petioles 1–3 mm long; *C. pannosus* (illustrated): dull green, glabrous above, 10–30 mm long, petioles 2–7 mm long. **Flowers:** About 10 mm across, August–January; *C. franchetii*: pinkish; *C. pannosus*: white (A). **Fruits:** Pomes. *C. franchetii*: orange-red, with three nutlets; *C. pannosus*: dull deep red, with two nutlets. **Cultivated for:** Ornament, hedging; honey source. **Invade:** Grassland, forest margins, kloofs, riverbanks, rocky outcrops. **Origin:** Asia (W & SW China respectively). **Invasive status:** Potential transformers. **Declared invaders (category 3).** **Poisonous:** Fruits, in quantity.

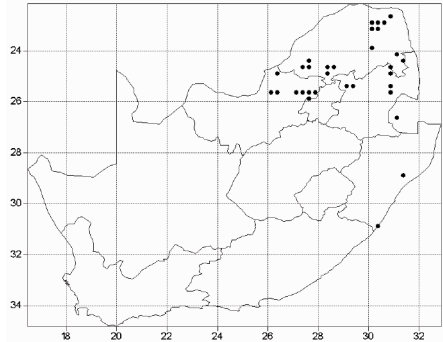


## ***Duranta erecta*** L.

(= *D. repens* L., *D. plumieri* Jacq.)

forget-me-not-tree, pigeon berry  
vergeet-my-nie-boom

Family Verbenaceae



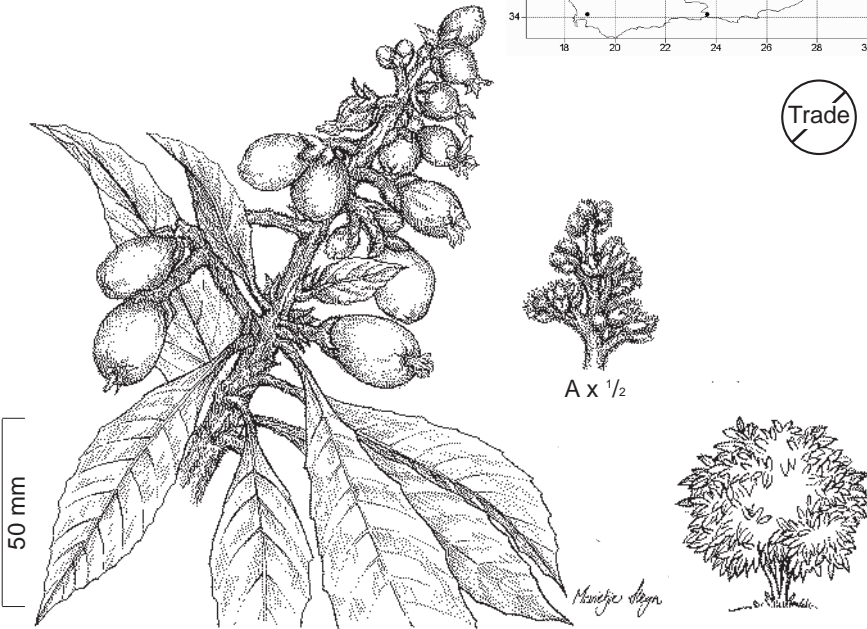
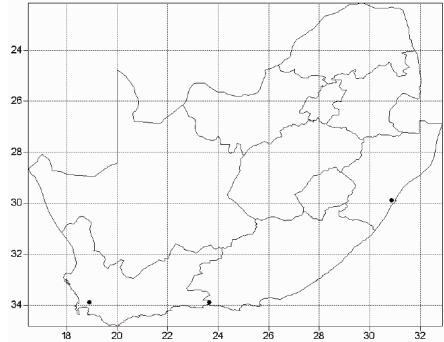
**Description:** Multistemmed shrub or small tree 2–4(–7) m high; sometimes scrambling; usually evergreen; sometimes with spines in the leaf axils; branches ± four-angled. **Leaves:** Dark green, sparsely hairy to glabrous, ovate to obovate, entire or margins coarsely toothed above the middle, to 60 x 90 mm. **Flowers:** Lilac, light blue or white (A), fragrant, in recurved spikes up to 150 mm long, Nov–Dec(–March). **Fruits:** Orange-yellow, shiny, fleshy drupes (B), 5–10 mm wide, covered by the calyx which is closed with a curved beak; in pendent spikes. **Cultivated for:** Ornament, hedging. **Invades:** Tropical & subtropical savanna, woodland, forest edges, riverbanks, other moist sites, ravines, hillsides. **Origin:** Tropical America (Florida & W Indies, Mexico to Brazil). **Invasive status:** Special effect weed (competitive, poisonous). **Proposed declared invader.** **Poisonous:** Leaves, fruits, bark.



***Eriobotrya japonica*** (Thunb.) Lindl.  
 (= *Photinia japonica* (Thunb.) Franch. & Sav.)

loquat  
 lukwart

Family Rosaceae



**Description:** Evergreen, rounded tree up to 8 m high, with stout branches and rusty woolly-pubescent branchlets. **Leaves:** Dark green and glossy above, rusty-pubescent beneath, stiff, leathery, obovate to elliptic-oblong, 120–250 mm long, prominently veined, with main veins ending in sharp teeth. **Flowers:** White, five-petalled, 10–20 mm across, almost hidden in the woolly terminal panicles (**A**) measuring 100–160 mm in length, May–June. **Fruit:** Orange-yellow, pear-shaped, fleshy pome, 35–50 mm long, with a few large seeds. **Cultivated for:** Ornament, edible fruit. **Invades:** Forest, roadsides. **Origin:** Asia (China & Japan). **Invasive status:** Special effect weed (competitive). **Declared invader (category 3).** **NB** This species is an alternative host for the fruit fly which causes problems with the cultivation of apples, pears, peaches and plums particularly in the W Cape.

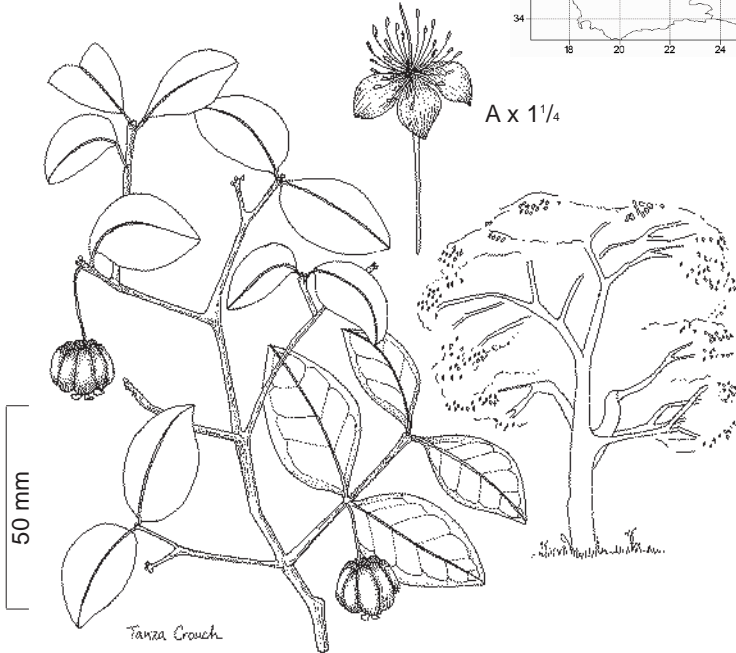
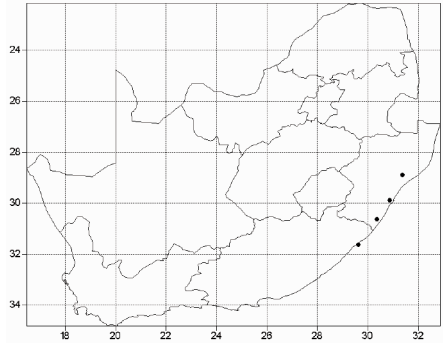


## *Eugenia uniflora* L.

pitanga or Surinam cherry  
pitanga

Family Myrtaceae

Photo 82



**Description:** Glabrous, evergreen, broad, compact shrub or small tree 1–2(–7) m high. **Leaves:** Dark green and shiny above, pale beneath, veins impressed above, raised beneath, petioles short, nearly sessile, ovate to elliptic, pointed (acuminate), to 50 mm long. **Flowers:** White, slightly fragrant, solitary on the ends of long, slender peduncles, about 12 mm across, June–July. **Fruits:** Yellow turning deep crimson when ripe, conspicuously 8-ribbed, to 30 mm across, edible, having a spicy flavour. **Cultivated for:** Ornament, hedges, edible fruit. **Invades:** Coastal bush, forest edges and understorey, riverbanks, urban open space. **Origin:** Tropical America (Brazil). **Invasive status:** Potential transformer. **Declared weed in KwaZulu-Natal, Mpumalanga & N Province & declared invader (category 3) elsewhere in South Africa.**

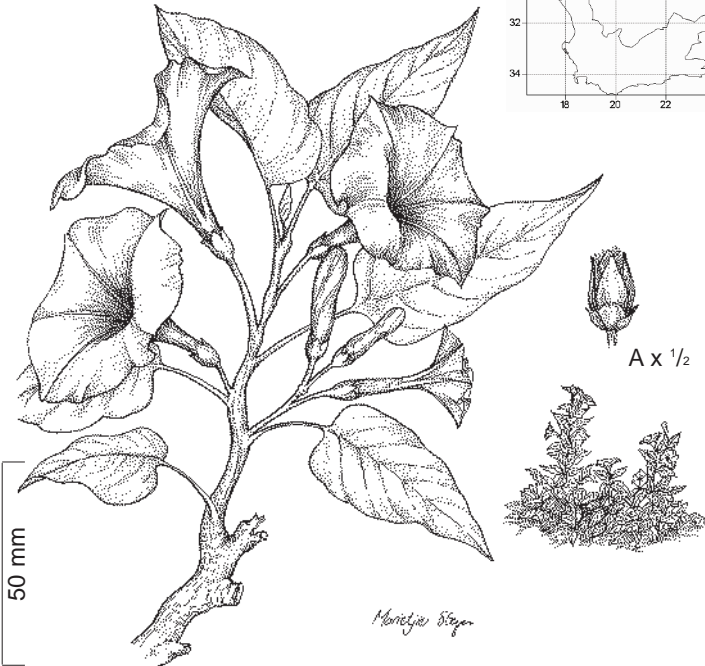
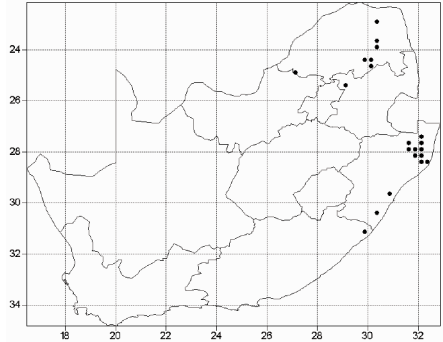
***Ipomoea carnea* Jacq. subsp. *fistulosa* (Mart. ex Choisy) D. Austin**

(= *I. fistulosa* Mart. ex Choisy)

(= *I. crassicaulis* (Benth.) Robinson)

morning glory-bush, potato bush

Family Convolvulaceae



**Description:** Erect to scrambling shrub to 3 m high; stems woody at the base, hollow, and herbaceous at the tips. **Leaves:** Dull green, pubescent on both sides, but sometimes becoming glabrous, lanceolate to ovate, 100–250 mm long.

**Flowers:** Deep pink to rose-purple, 50–90 mm long, in clusters at the branch tips; flowering all year. **Fruits:** Brown, dehiscent capsules (A), 20 mm long x 10–15 mm wide, glabrous; seeds, usually four, covered with long brown hairs. **Cultivated for:** Ornament, hedges, screens. **Invades:** Roadsides, riverbanks, ditches and edges of dams in savanna. **Origin:** Tropical America (Argentina to Florida and Texas).

**Invasive status:** Special effect weed (poisonous).

**Poisonous:** Whole plant.

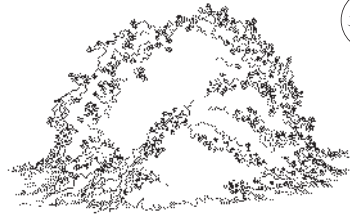
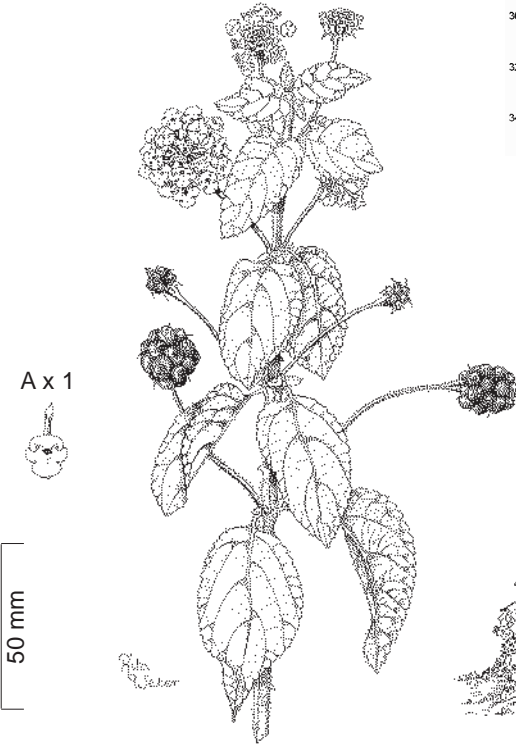
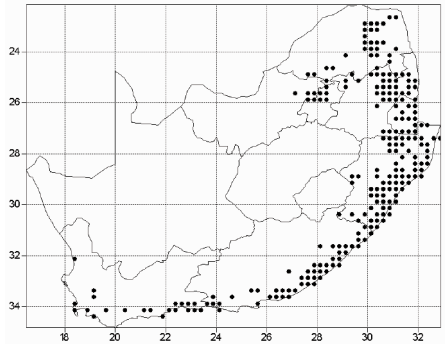


# *Lantana camara* L.

lantana

Family Verbenaceae

Photo 54



**Description:** Compact, floriferous shrub or untidy scrambler up to 2 m or higher; stems often four-angled, usually covered with short, stiff hairs and recurved prickles, but sometimes unarmed. **Leaves:** Dark green, paler below, rough, hairy, becoming  $\pm$  glabrous, smelling strongly when crushed. **Flowers:** Pink, red, crimson, orange, yellow or white in compact flat-topped heads, often with several colours in one head, (A: individual flower), September–April(–all year).

**Fruits:** Glossy green turning purplish-black, one-seeded, fleshy drupes. **Cultivated for:** Ornament, hedging. **Invades:** Forest and plantation margins, savanna, water-courses, roadsides, degraded land. **Origin:** C & S America. **Invasive status:** Transformer. **Declared weed. Herbicide registration. Biocontrol:** Natural enemies released. **Poisonous:** Whole plant, unripe fruit. **Irritant:** Skin (leaves).

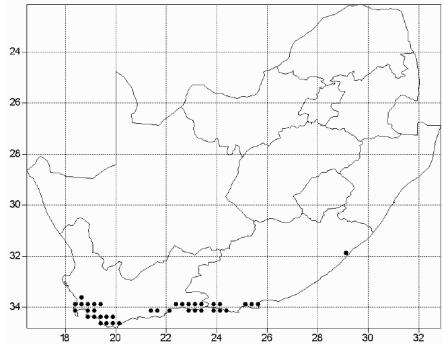


## *Leptospermum laevigatum* (Gaertn.) F.Muell.

Australian myrtle  
Australiese mirt

Family Myrtaceae

Photo 83



A x 1/3

50 mm



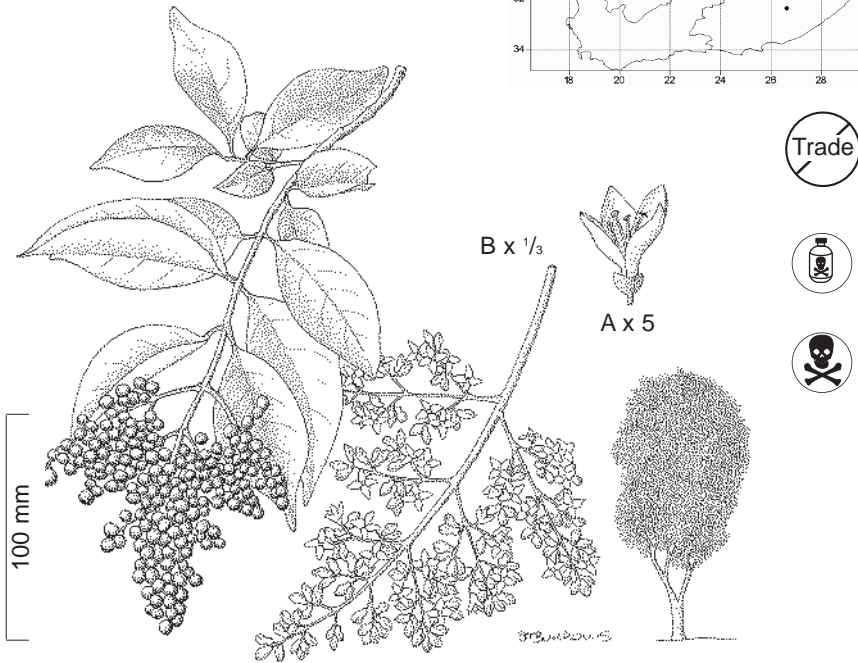
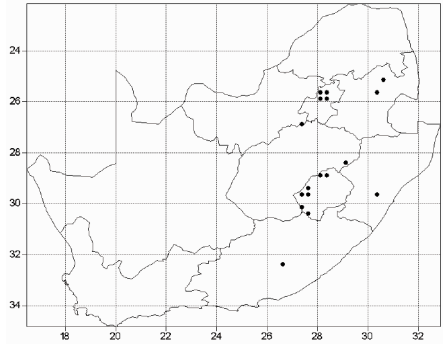
**Description:** Large, densely branching, spreading shrub or tree up to 8 m high; bark grey, old stems twisted and furrowed with bark flaking in thin strips. **Leaves:** Dull greyish-green, leathery, 15–30 mm long, sessile, tips rounded with a tiny point. **Flowers:** White, solitary, axillary, up to 20 mm across, August–October. **Fruits:** Green turning yellow and finally grey, flat-topped, cup-shaped capsules (A), 7 mm long x 8 mm wide, opening by 6–11 valves at the top; seeds small, winged and wingless. **Cultivated for:** Shelter, hedging, ornament. **Invades:** Forest clearings, mountain and lowland fynbos, on sandy soils. **Origin:** SE Australia & Tasmania. **Invasive status:** Transformer. **Declared weed.** **Herbicide registration.** **Biocontrol:** Effective agents available.

**Ligustrum japonicum** Thunb. &  
**L. lucidum** Aiton

Japanese & Chinese wax-leaved privets  
Japanese & Chinese ligusters

Family Oleaceae

Photo 84

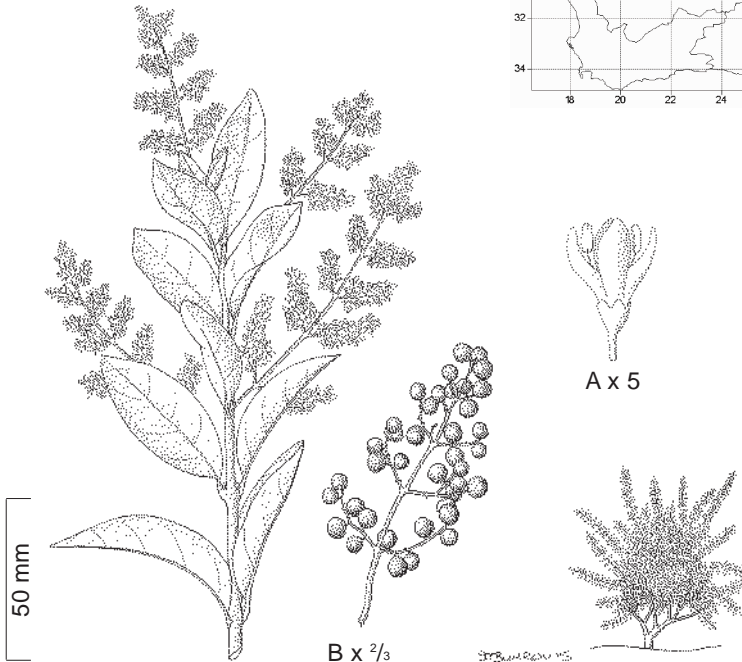
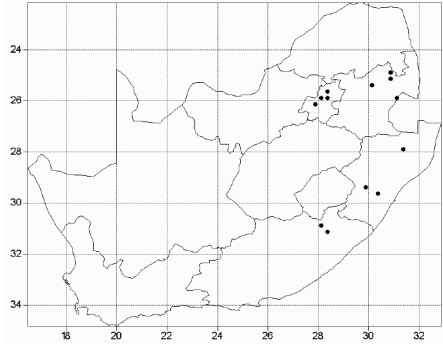


**Description:** Evergreen shrubs or small trees 3–10 m high with thick, leathery leaves. **Leaves:** Dark green, glossy, ovate to oblong, 40–150 mm long, sometimes variegated in green and yellow. **Flowers:** White (**A**), 3–5 mm long, in large, terminal panicles (B) 100–200 mm wide and long, heavily scented, October–February. **Fruits:** Shiny, black berries up to 10 mm long. **NB** *L. japonicum* is smaller (3–6 m high) than *L. lucidum* (illustrated), leaves are shorter, 40–100 mm long, usually rounded at the base, shortly tapering to obtuse, darker almost black-green, shoots minutely downy, panicles looser. **Cultivated for:** Ornament, hedging. **Invasive:** Forest, woodland, riverbanks. **Origin:** Asia (Korea & Japan (*L. japonicum*), Korea & China (*L. lucidum*)). **Invasive status:** Potential transformers. **Declared invaders (category 3).** **Herbicide registration.** **Poisonous:** Fruits, leaves.

**Ligustrum ovalifolium** Hassk., **L. sinense** Lour. & **L. vulgare** L.

Californian, Chinese & common privets  
Kaliforniese, Chinese & gewone ligusters

Family Oleaceae



**Description:** Deciduous or semi-evergreen shrubs 3–6 m high. **Leaves:** Mild to dark green, sometimes variegated, or yellow, ovate-elliptic to lanceolate, 25–80 mm long. **Flowers:** White (A), in terminal panicles 50–100 mm long, heavily scented, October–February. **Fruits:** Shiny, black berries (B). **NB** *L. ovalifolium*: shoots & leaves (lvs) glabrous, lvs ovate-elliptic, flowers nearly sessile, corolla tube long; *L. sinense* (illustrated): shoots densely downy, lvs hairy on midrib beneath, lvs ovate-elliptic, flowers stalked; *L. vulgare*: shoots minutely downy, lvs glabrous, narrowly oval to lanceolate, flowers stalked. **Cultivated for:** Ornament, hedging. **Invasive:** Forest, woodland, riverbanks. **Origin:** Asia (Japan), Asia (China) & Europe incl. Mediterranean respectively. **Invasive status:** Potential transformers. **Declared invaders (category 3). Herbicide registration. Poisonous:** Fruits, leaves.



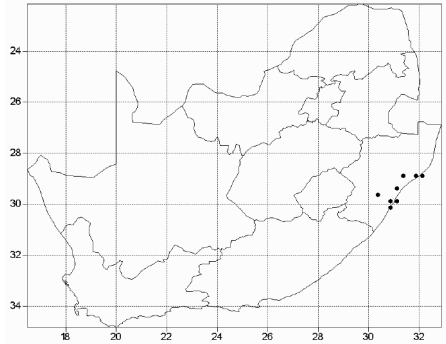
***Litsea glutinosa*** (Lour.) C.B.Rob.

(= *L. sebifera* Pers.)

Indian laurel  
Indiese lourier

Family Lauraceae

Photo 85



**Description:** Evergreen shrub or tree 6–10 m high resembling avocado pear (*Persea americana*); young shoots and petioles velvety-hairy. **Leaves:** Green, glabrous above, sparingly to velvety-hairy beneath, leathery, oblong with rounded or slightly pointed tips, 70–150 mm long, petioles 10–50 mm long. **Flowers:** Yellow-orange, in small axillary umbels (as opposed to panicles in *Persea americana*), stamens exserted, 9–20 or more, October–May. **Fruits:** Black, shiny, one-seeded berries (A), pea-sized, seated on a disc. **Cultivated for:** Ornament. **Invades:** Disturbed forest and forest margins. **Origin:** Tropical Asia (Himalayas and SE Asia). **Invasive status:** Transformer. **Declared weed.** **?Poisonous.**



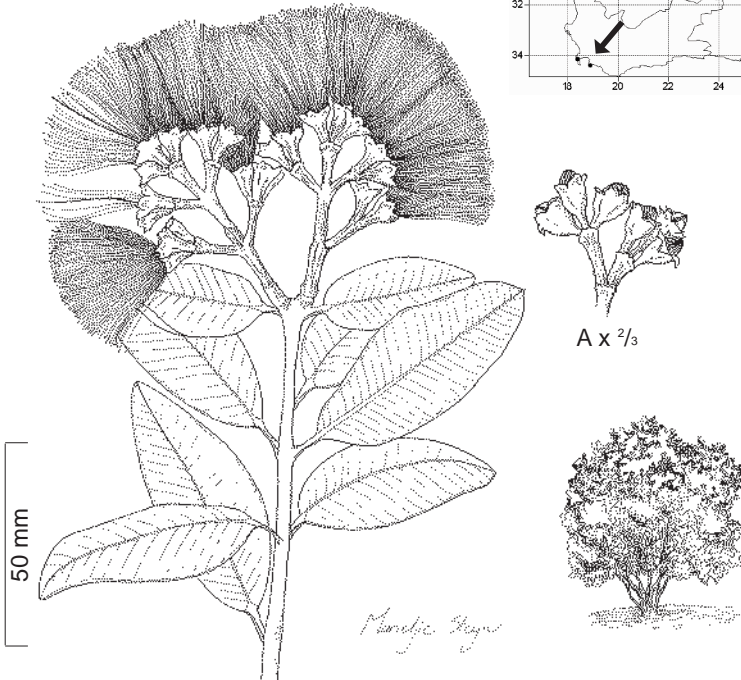
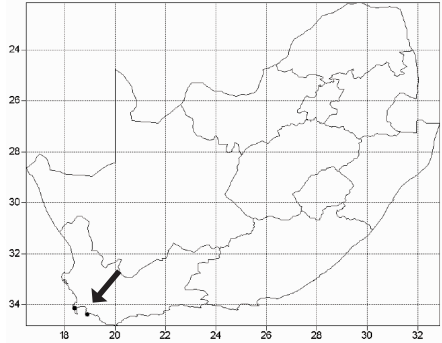
***Metrosideros excelsa*** Sol. ex Gaertn.

(= *M. tomentosa* A.Rich.)

New Zealand bottlebrush or Christmas tree  
Nieu-Seelandse perdestert

Family Myrtaceae

Photo 86



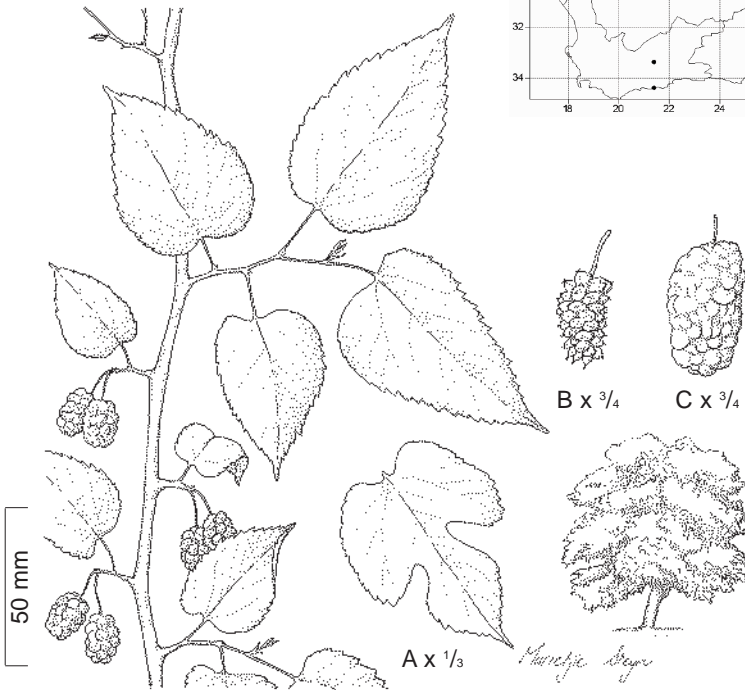
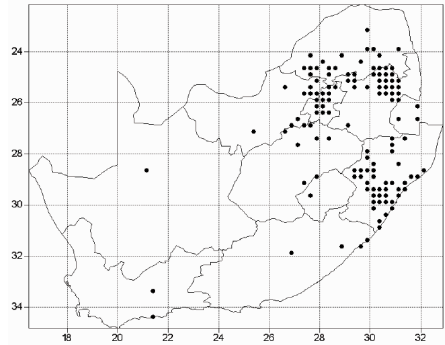
**Description:** Evergreen, wide-spreading tree branching close to the ground, usually 5–6(–20) m high but stunted 1.0–1.5 m in windy sites. **Leaves:** Young foliage bright green, glabrous, with coppery-red tips and reddish petioles, turning glossy dark green above, white- or grey-felty beneath, thick and leathery, margins curled under, elliptic, oblong or oval, occurring in opposite pairs. **Flowers:** Crimson with long-exserted stamens, in terminal, bottlebrush-like clusters, December–January. **Fruits:** White- or grey-velvety capsules  $\pm$  10 mm long (A). **Cultivated for:** Ornament, shade, shelter; honey source. **Invades:** Coastal fynbos on moist, peaty soils. **Origin:** New Zealand. **Invasive status:** Potential transformer. **Declared invader (category 3).**



## *Morus alba* L.

white or common mulberry  
wit- of gewone moerbe

Family Moraceae



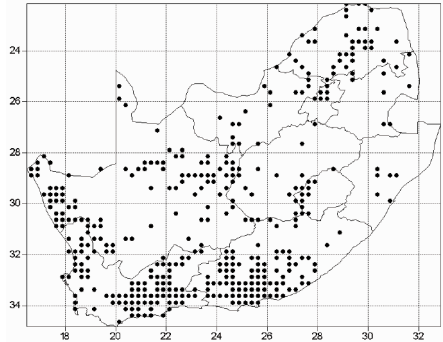
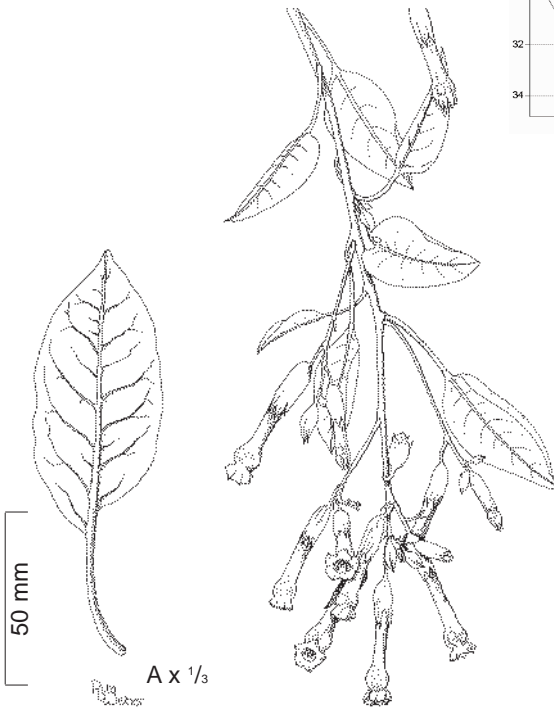
**Description:** Deciduous tree with a dense, rounded canopy up to 15 m high; branches grey or greyish-yellow. **Leaves:** Light green turning yellow in autumn, thin, mostly glossy above, glabrous or slightly hairy only on the veins beneath, margins scalloped and often irregularly lobed (A); silkworm variety has very large, dull green leaves which are  $\pm$  rough above; leaf bases not deeply cordate as in the black mulberry (*M. nigra*). **Flowers:** Greenish, in small, cylindrical spikes (B), September–October. **Fruits:** White, purple or black, juicy sycarps (C)  $\pm$  20 mm long. **Cultivated for:** Edible fruit. **Invades:** Savanna, grassland, roadsides, riverbanks, urban open space. **Origin:** Asia (C & E China). **Invasive status:** Transformer. **Declared invader (category 3) excluding cultivar 'Pendula'.**

## *Nicotiana glauca* Graham

wild tobacco  
wildetabak

Family Solanaceae

Photo 87

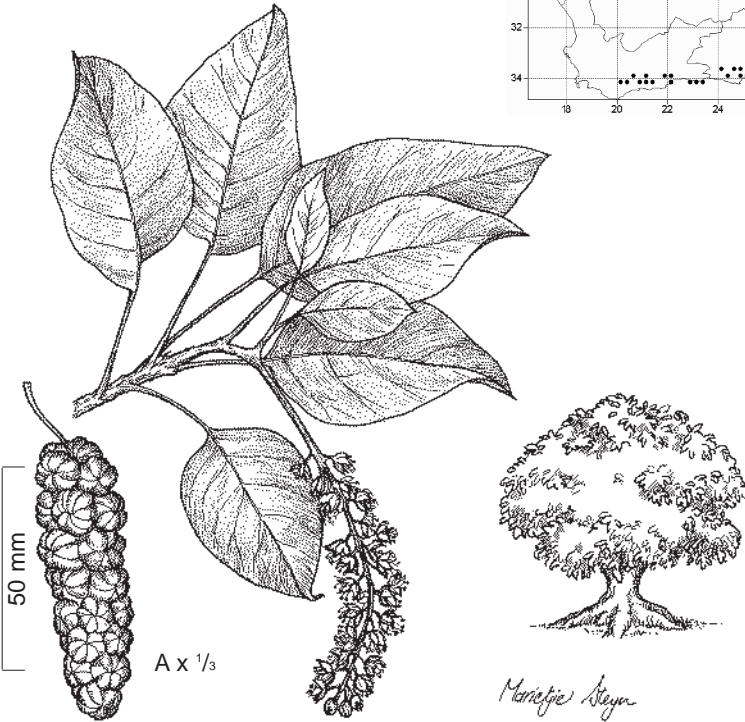
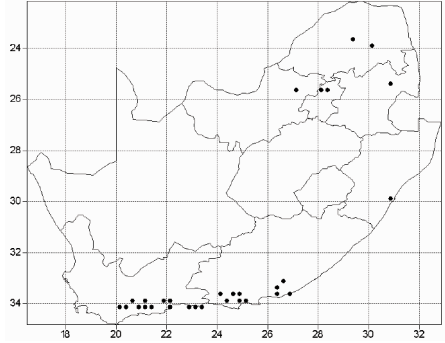


**Description:** Slender, evergreen shrub or small tree up to 6 m high; blue-green all over and sometimes with purplish tints; can form dense stands along riverbeds after floods. **Leaves:** Blue-green, leathery, on long petioles (A), blades up to 200 mm long x 120 mm wide on young growth. **Flowers:** Yellow, tubular, 30–50 mm long, in terminal drooping clusters, all year. **Fruits:** Brown, four-valved capsules (B) ± 15 mm long; seeds minute. **Cultivated for:** Ornament. **Invades:** Roadsides, road cuttings, wasteland, riverbanks, riverbeds. **Origin:** S America (S Bolivia to N Argentina). **Invasive status:** Ruderal and special effect weed in conservation areas (competitive, high visual impact, poisonous). **Declared weed. Poisonous:** Whole plant.

# *Phytolacca dioica* L.

belhambra  
bobbejaandruifboom

Family Phytolaccaceae



**Description:** Large, soft-wooded, semi-evergreen tree 12–20 m high, with a short, buttressed trunk and massively branched, rounded crown; root system massive and shallow; leaves and stems succulent. **Leaves:** Bright green, glabrous to 120 x 60 mm, on pinkish stalks to 70 mm long. **Flowers:** Creamy-yellow, small, in racemes about 100 mm long; male and female flowers on separate trees; September– December. **Fruits:** Green turning black, succulent, berry-like, about 10 mm across, pendent (A). **Cultivated for:** Shade, ornament; provides fodder; honey source. **Invades:** Savanna, fynbos, coastal bush, riverbanks, roadsides, urban open space. **Origin:** S America (N Argentina, S Brazil, Paraguay, Uruguay). **Invasive status:** Special effect weed (high visual impact, competitive, poisonous). **Declared invader (category 3).** **Poisonous:** Root, fruit (sometimes).

## *Plectranthus comosus* Sims

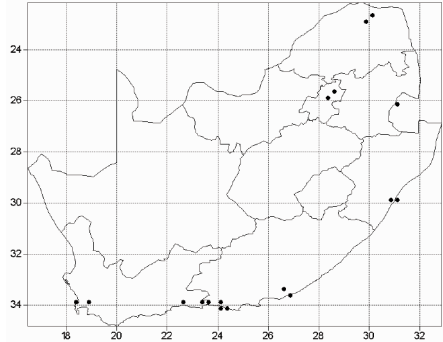
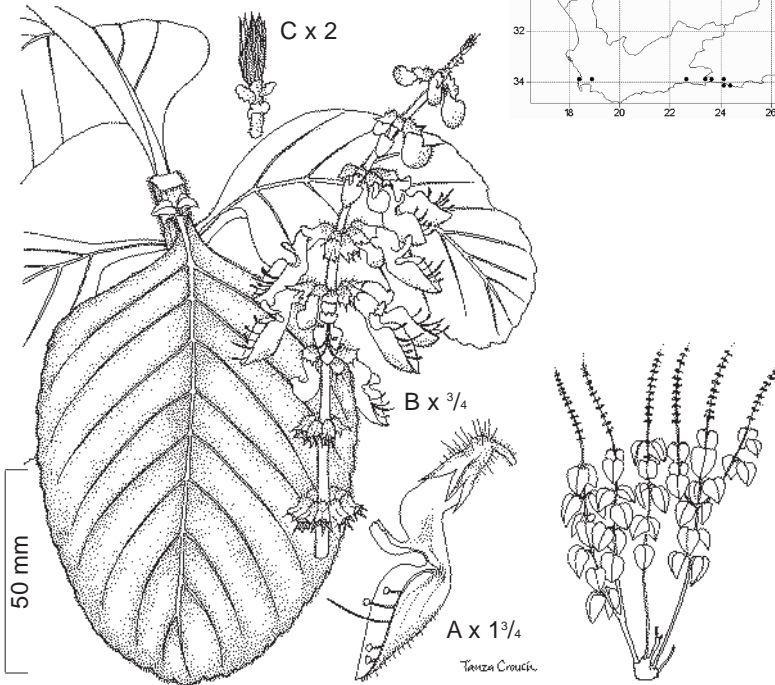
(= *Coleus grandis* Cramer)

(*P. barbatus* Andr. misapplied)

'Abyssinian' coleus, woolly plectranthus

'Abessiniese' coleus

Family Lamiaceae



**Description:** Erect, soft shrub up to 3 m high from a woody base; stems and leaves densely woolly. **Leaves:** Light green, paler below, ovate to broadly elliptical, large, usually more than 100 mm long and 47 mm wide. **Flowers:** Blue or mauve (**A**), to 20 mm long, in a terminal spike-like raceme 200–300 mm long (**B**), enclosed in large, overlapping bracts in the bud stage (**C**), elongating and drooping with age, March–September. **Fruits:** Small, black, shiny nutlets.

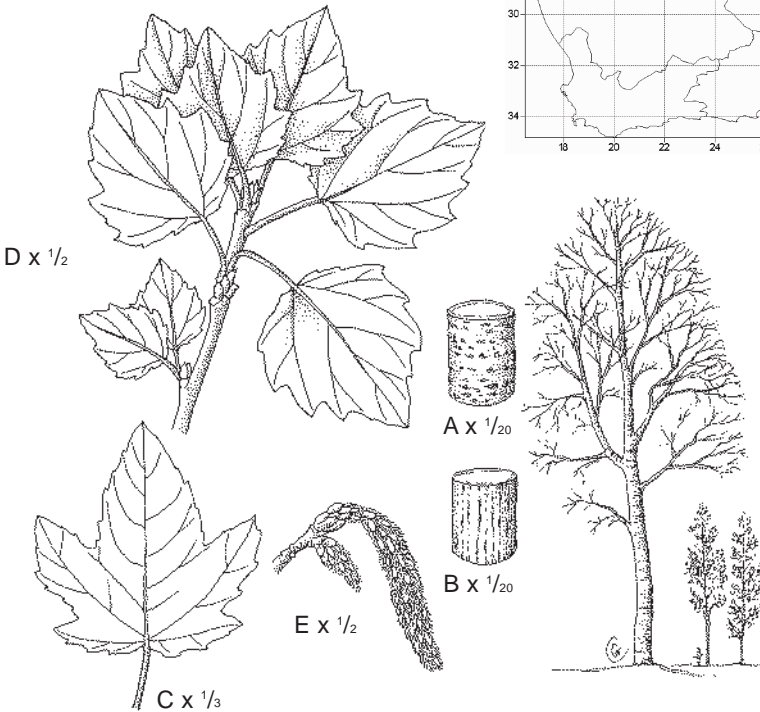
**Cultivated for:** Ornament, hedging. **Invades:** Moist sites, watercourses, roadsides, rocky sites, forest margins. **Origin:** ?India; cultivated hedge plant and naturalised in E Africa & Sri Lanka. **Invasive status:** Special effect weed (competitive). **Declared invader (category 3).** **NB** *P. barbatus* Andr. is a trailing or shortly erect plant first introduced into cultivation in England from Abyssinia (Ethiopia).



## *Populus alba* L.

white poplar  
witpopulier

Family Salicaceae



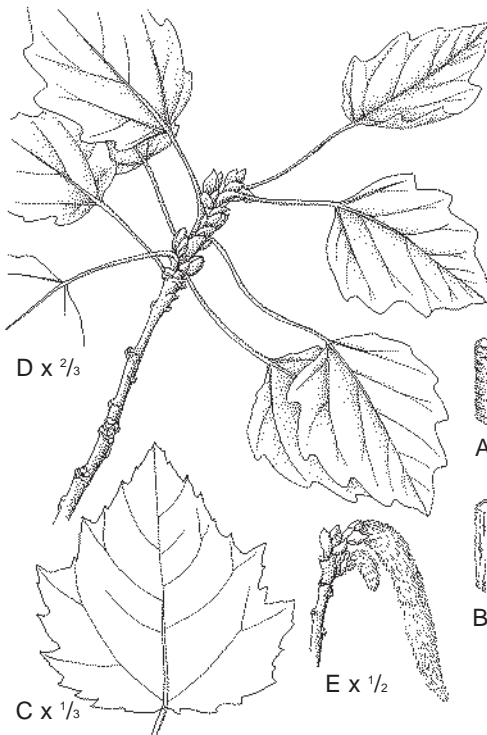
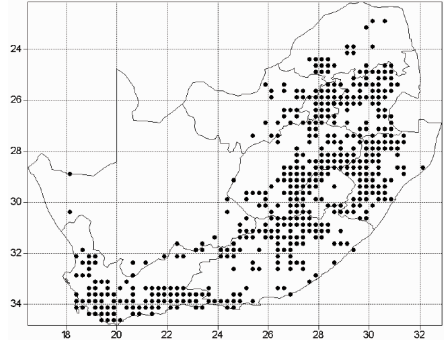
**Description:** Deciduous tree 6–16(–25) m high, suckering freely; bark white or grey with horizontal lines (A), becoming rough and darker with age (B); buds and young twigs thickly, white woolly. **Leaves:** Dark green and shiny above, white- or grey-woolly beneath; leaves of sucker shoots and ends of long shoots (C): large, to 100 mm long, ± triangular, three- to five-lobed or unevenly toothed, woolly beneath; leaves of short shoots (D): smaller, 30–50 mm long, ovate, more evenly toothed, persistently woolly beneath. **Flowers:** Greenish-yellow catkins (female only) (E), ± 50 mm long, spring. **Fruits:** None. **Cultivated for:** Timber, shelter, ornament. **Invades:** Riverbanks, vleis, dongas. **Origin:** Europe, Asia & N Africa. **Invasive status:** Transformer. **Declared invader (category 2).**

## *Populus X canescens* (Aiton) Sm.

grey poplar  
vaalpopulier

Family Salicaceae

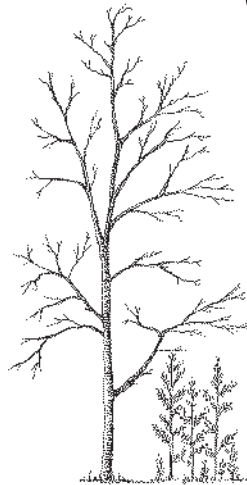
Photo 88



A x 1/20



B x 1/20



G

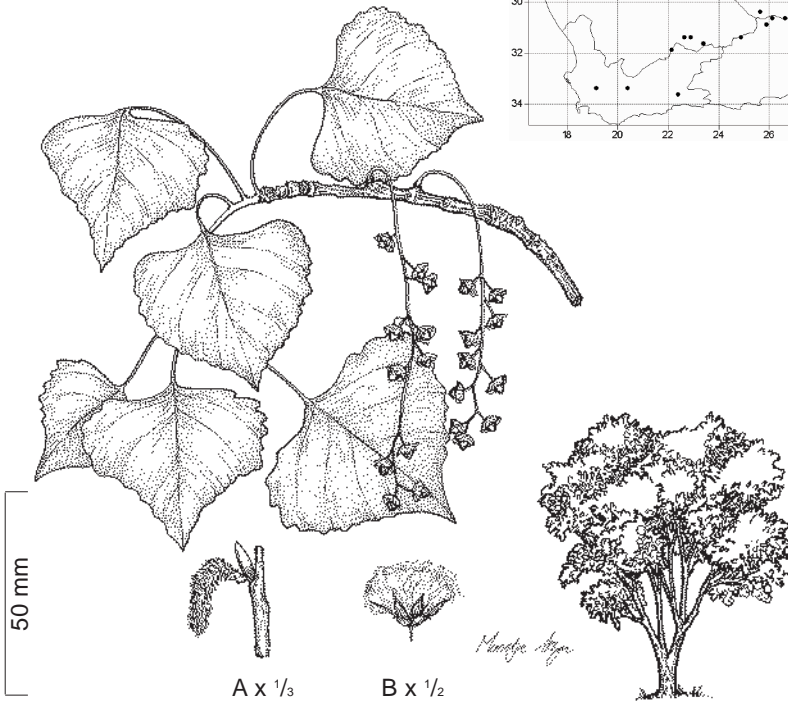
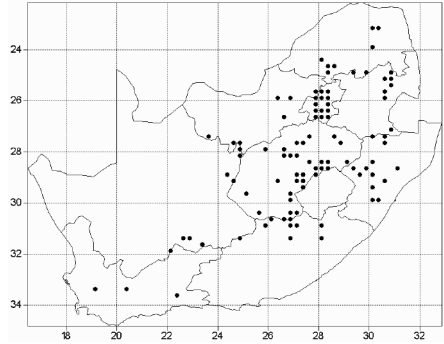


**Description:** Deciduous or semi-evergreen tree 10–20(–35) m high, suckering freely; bark white or grey with horizontal dark lines (**A**) becoming rough and darker with age (**B**); buds and twigs thinly downy. **Leaves:** Dark green and shiny above, grey- or white-woolly to green and smooth beneath; leaves of sucker shoots and ends of long shoots (C): large, to 120 mm long, ± triangular, ± evenly toothed, not or shallowly lobed, woolly beneath; leaves of short shoots (D): smaller, 30–60 mm long, ovate, bluntly toothed, becoming almost glabrous beneath. **Flowers:** Reddish catkins (male only) (**E**), ± 60 mm long, spring. **Fruits:** None. **Cultivated for:** Timber, shelter, ornament, donga reclamation. **Invades:** Riverbanks, vleis, dongas. **Origin:** Europe & Asia. **Invasive status:** Transformer. **Declared invader (category 2).** **Herbicide registration.**

# *Populus deltoides* Bartram ex Marshall

match poplar, cottonwood  
vuurhoutjje populier

Family Salicaceae



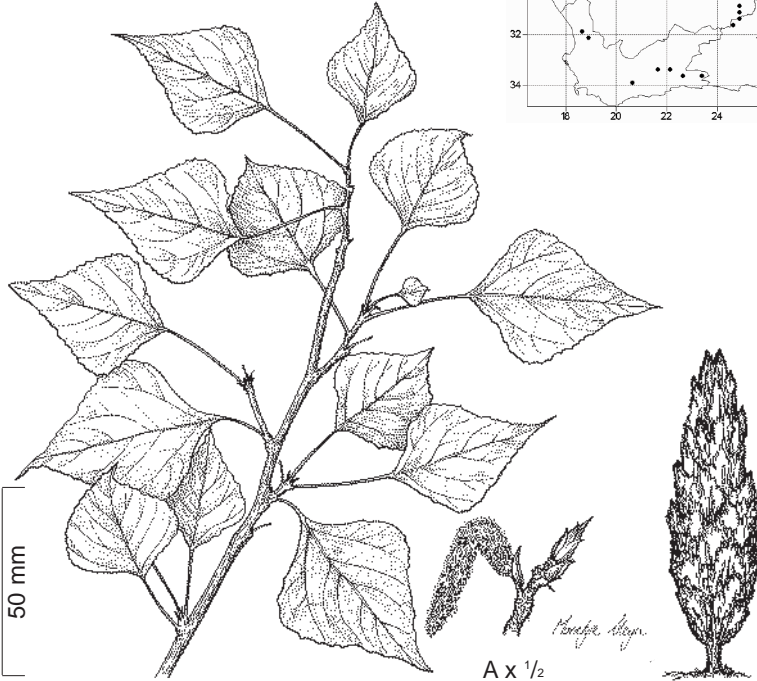
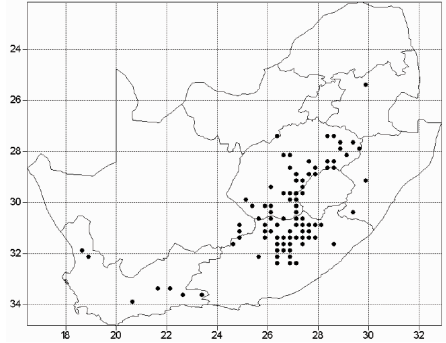
**Description:** Deciduous, wide-spreading tree 15–35 m high; bark pale grey, slightly furrowed; shoots and petioles glabrous. **Leaves:** Bright green, paler beneath, glabrous, broadly ovate-triangular, pendulous, 80–200 mm long; margins coarsely toothed and fringed with hairs (*P. X canadensis* (*P. deltoides* X *P. nigra*) has leaf-margins hairless); glands always at junction of petiole and blade (only sometimes in *P. X canadensis*); yellow autumn tints. **Flowers:** Catkins, mostly male in subsp. *deltoides* (A) and female in subsp. *wislizenii* (main drawing); spring. **Fruits:** Capsules (B) born in catkins; seeds held in white, woolly or cotton-like hairs. **Cultivated for:** Timber especially for matches and matchboxes, firewood, shade, ornament; honey source. **Invasives:** Riverbanks, marshes. **Origin:** N America (SE USA). **Invasive status:** Potential transformer. **Proposed declared invader.**



**Populus nigra** L. var. **italica** Münchh.

Lombardy poplar  
Italiaanse populier

Family Salicaceae



**Description:** Deciduous or semi-evergreen (cv. *sempervirens*) trees 18–32 m high; habit narrowly columnar with erect branches; bark at first grey, smooth, becoming dark, rough and fissured; trunk buttressed; shoots and petioles glabrous. **Leaves:** Bright green, paler beneath, 40–80 mm long, triangular (deltoid) to broadly diamond-shaped; petioles flattened, margins bluntly and often obscurely toothed; without glands at junction of blade and petiole; golden-yellow autumn tints. **Flowers:** Catkins (**A**) (male only), spring. **Fruits:** None. **Cultivated for:** Shelter, donga reclamation, ornament; honey source. **Invades:** Riverbanks. **Origin:** Europe & Asia. **Invasive status:** Potential transformer. **Proposed declared invader.**

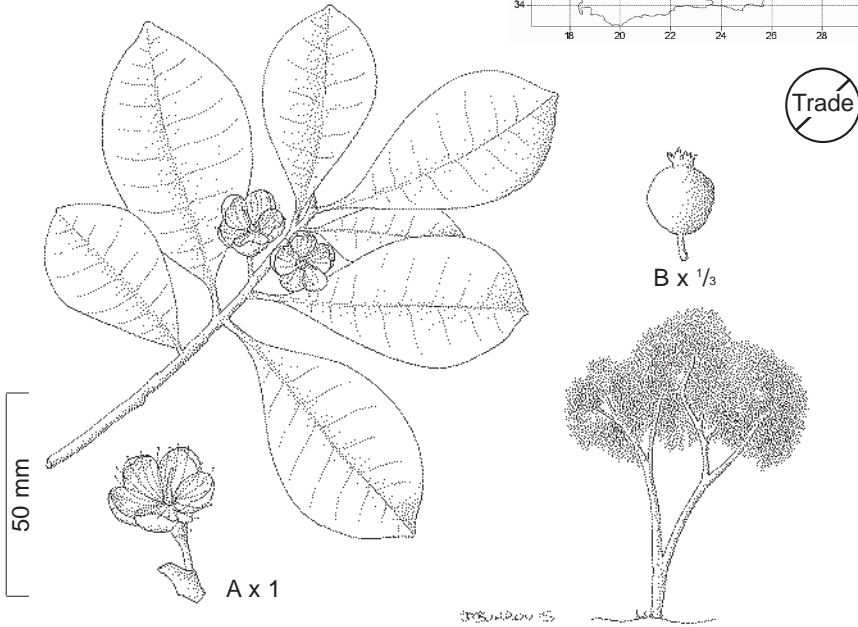
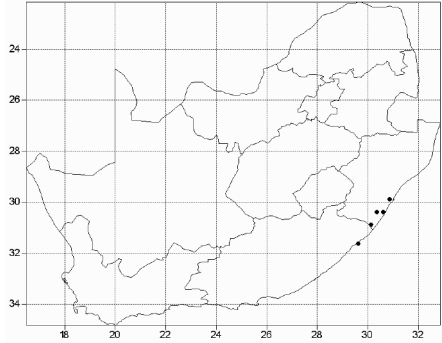


***Psidium cattleianum*** Sabine  
 (= *P. littorale* Raddi var. *longipes* (O.Berg) Fosb.)

strawberry or cherry guava  
 aarbeikoejawel

Family Myrtaceae

Photo 89



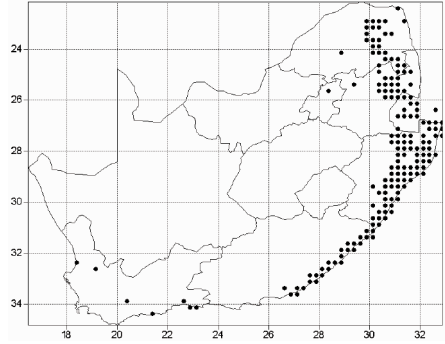
**Description:** Evergreen shrub or slender tree 1–3(–8) m high; branchlets cylindrical, smooth. **Leaves:** Dark green, glabrous, shiny, thick and leathery, veins not conspicuously impressed, long-tapering at the base. **Flowers:** White (A), ± 15 mm across, solitary, October–December. **Fruits:** Purplish-red berries (B), globose, cherry-sized, 20–30 mm long, flesh white, sweet. **Cultivated for:** Edible fruits, ornament. **Invades:** Subtropical savanna, forest margins. **Origin:** S America (Brazil). **Invasive status:** Potential transformer. **Declared invader (category 3).**



# *Psidium guajava* L.

guava  
koejawel

Family Myrtaceae



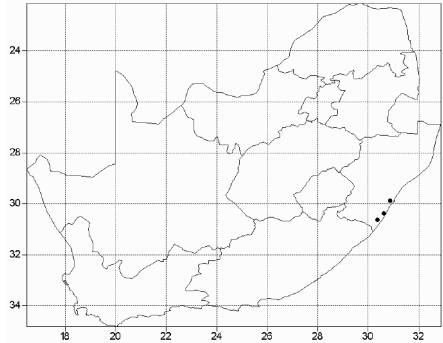
**Description:** Evergreen shrub or small tree 2-5(-10) m high; branchlets four-angled and hairy. **Leaves:** Bronze turning light green, ovate to oblong-elliptic; often broad and rounded at both ends, with a small, pointed apex; thick, stiff, hairy below, veins conspicuously impressed above and raised below. **Flowers:** White (**A**), in groups of 1-3, October-December. **Fruits:** Many-seeded berries, green turning yellow, 25-100 mm long, with white, yellow or pink flesh, sweet, with a musky, penetrating odour. **Cultivated for:** Edible fruit, shade. **Invades:** Forest margins, savanna, roadsides, watercourses. **Origin:** Tropical America (? Mexico & C America to Peru); now pantropical. **Invasive status:** Transformer. **Declared invader (category 2). Herbicide registration.**



***Psidium guineense* Sw. &  
*P. X durbanensis* Baijnath ined.**

Brazilian & Durban guavas  
Brasiliaanse & Durbanse koejawels

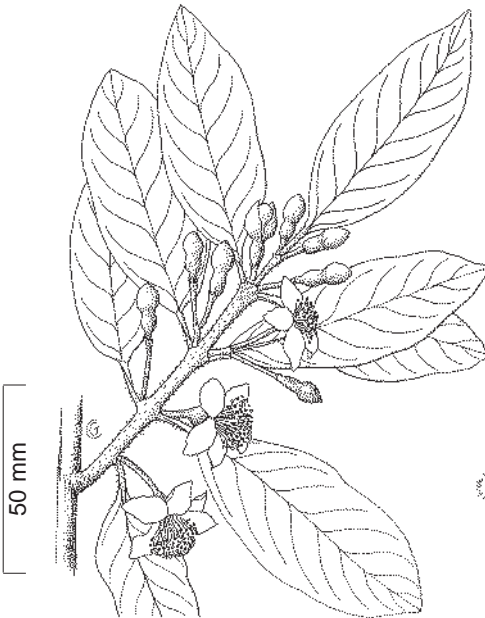
Family Myrtaceae



*P. X durbanensis*



*P. guineense*



**Description:** Evergreen shrubs or small trees up to 10 m high; branchlets compressed-cylindrical (*P. guineense*) to slightly angular (*P. X durbanensis*) (illustrated) and hairy. **Leaves:** Light green, thick, hairy below, ovate to oblong-elliptic, veins fewer and not as deeply impressed as *P. guajava*. **Flowers:** White, in groups of 1–3, October–December. **Fruits:** *P. guineense*: green turning pale yellow, ± globose berries, 25–30 mm long, smaller than *P. guajava*, bitter and resinous; *P. X durbanensis* is a sterile hybrid (*P. guajava* X *P. guineense*), spreading by suckering. **Cultivated for:** Ornament. **Invade:** Roadsides, wasteland, in the vicinity of Durban and the KwaZulu-Natal south coast. **Origin:** Tropical America (Brazil) & S Africa respectively. **Invasive status:** Special effect weeds (competitive). **Declared weed (*P. X durbanensis*) and invader (category 3) (*P. guineense*).**

## ***Solanum mauritianum*** Scop.

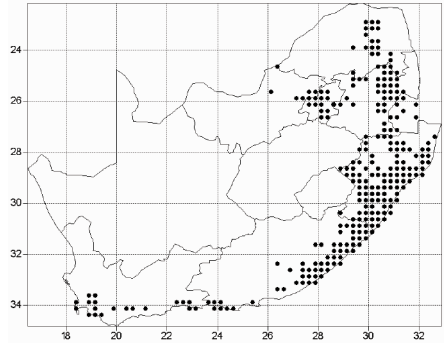
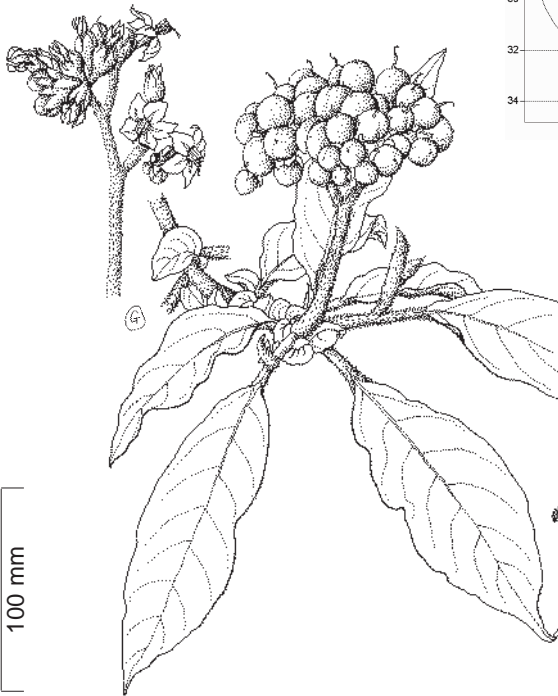
(= *S. auriculatum* Aiton)

bugweed

luisboom

Family Solanaceae

Photo 90



**Description:** Unarmed, branched shrub or small tree 2–4(–10) m high; all parts except older stems covered with whitish-felty hairs. **Leaves:** Dull green and velvety above, white-felty beneath, up to 250 mm long x 100 mm wide, emit a strong smell when bruised; stipules ovate, 20 mm long. **Flowers:** Purple, in compact terminal clusters, on densely felty stalks up to 100 mm long, all year. **Fruits:** Globose berries 10 mm across, green turning yellow, in compact terminal clusters. **Cultivated for:** Ornament. **Invades:** Forest margins, plantations, savanna, roadsides, watercourses, urban open space. **Origin:** S America (NE Argentina, S Brazil, Paraguay & Uruguay). **Invasive status:** Transformer. **Declared weed.** **Herbicide registration.** **Biocontrol:** Natural enemies released. **Poisonous:** Unripe fruits. **Irritant:** Respiratory tract & skin (hairy stems & leaves).

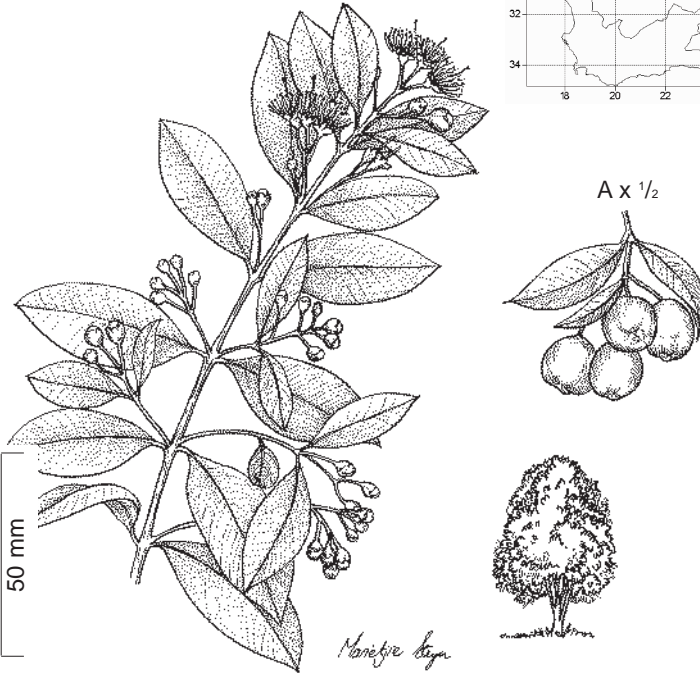
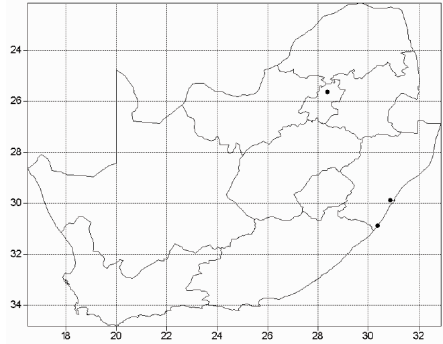
## *Syzygium paniculatum* Gaertn.

(= *Eugenia myrtifolia* Sims, *E. paniculata* Banks, *E. australis* J.C.Wendl.)

Australian water pear, brush-cherry

Australiese waterpeer

Family Myrtaceae



**Description:** Glabrous, evergreen shrub or tree 3–6(–10) m high, initially columnar but developing a spreading, rounded crown with age; bark dark greyish-brown. **Leaves:** Dark green, glossy, tinged with red when young, thick, oval to obovate, rounded to shortly pointed at the apex, 30–80 mm long, short-petioled. **Flowers:** Creamy-white, 15–25 mm across, stamens long and showy, in short terminal or sub-terminal sprays, September–March(–June).

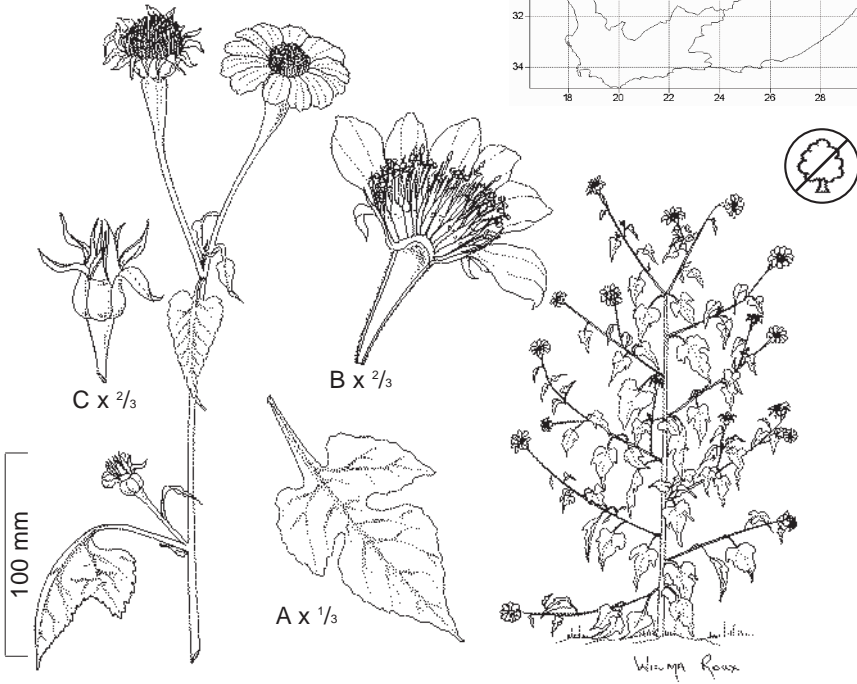
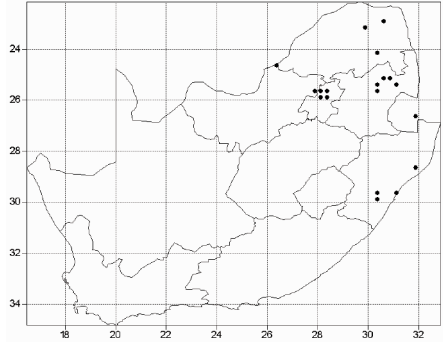
**Fruits:** Pinkish-red berries (A), oval to nearly globular, about 20 mm long, succulent, edible but insipid. **Cultivated for:** Ornament, edible fruit, hedges, screens. **Invades:** Savanna, forest edges, coastal bush, urban open space, riverbanks. **Origin:** E Australia. **Invasive status:** Potential transformer. **Proposed declared invader.**

***Tithonia rotundifolia*** (Mill.) S.F.Blake

red sunflower  
rooisonneblom

Family Asteraceace

Photo 63



**Description:** Bushy annual, slightly woody at the base, 1.5–2.0(–3.0) m tall.  
**Leaves:** Dark green, rough hairy, up to 150 mm long x 100 mm wide, triangular-ovate, sometimes deeply three-lobed (**A**), petioles winged. **Flowerheads:** Bright orange-red (**B**), large and showy, to 90 mm across, solitary on long stalks much swollen and velvety below the heads, terminating the main and side branches; buds pointed (**C**), bracts below petals in two series, narrow, pointed, February–July. **Fruits:** Brown achenes, in a rounded, spiky mass. **Cultivated for:** Ornament; honey source. **Invades:** Roadsides, wasteland, riverbanks, at moderate altitudes ( $\pm$  600–1400 m). **Origin:** C America incl. Mexico. **Invasive status:** Special effect weed (competitive, high visual impact). **Declared weed.**

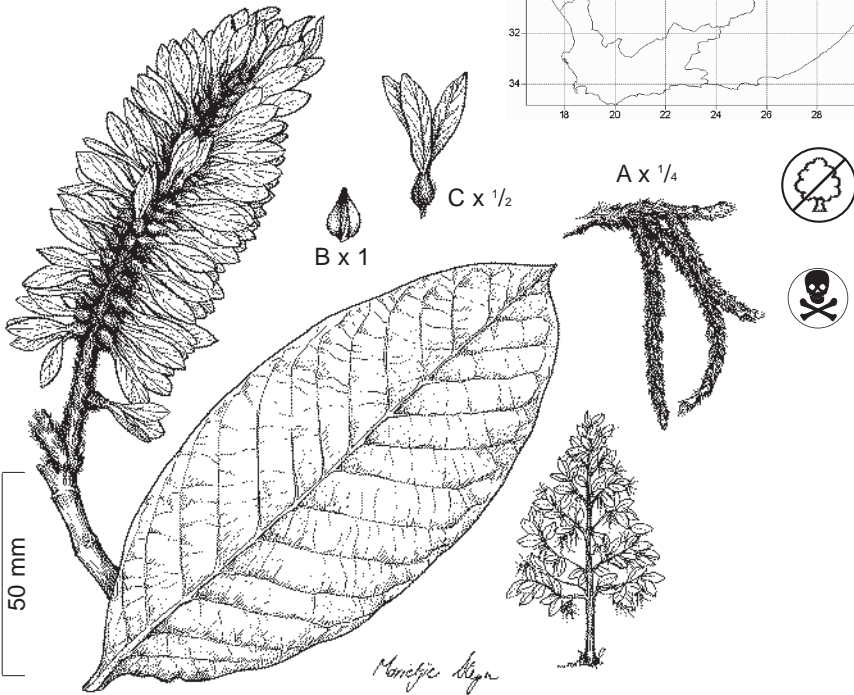
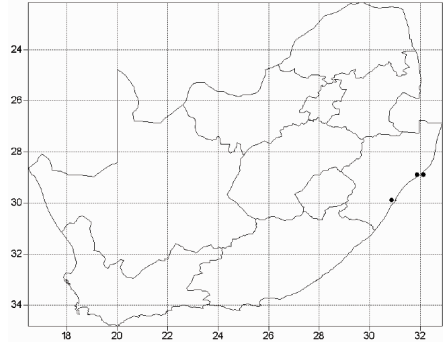


# *Triplaris americana* L.

triplaris, ant tree  
triplaris

Family Polygonaceae

Photo 91



**Description:** Tree 8–10(–20)m with a straight, smooth, grey trunk and pyramidal crown; twigs light brown, striate; stems hollow and may be inhabited by ants.

**Leaves:** Bright green, ovate to oblong, large, 150–400 mm long, glabrous, or brownish-velvety beneath along midrib and veins. **Flowers:** Male and female on separate trees; small, borne in large panicles, along densely greyish-yellow to light brown hairy axes up to 350 mm long; female flowers red, male flowers inconspicuous along the hairy axes (A). April–May. **Fruits:** Shiny brown, sharply three-angled achenes (B), held inside the fruiting perianth (C), 30–50 mm long, with brown hairy base and three pinkish-red wings. **Cultivated for:** Ornament.

**Invades:** Forest, riverbanks. **Origin:** C America (S Panama) to S America (SE Brazil).

**Invasive status:** Potential transformer. **Declared weed. Poisonous:** Leaves.





## ***Cytisus monspessulanus* L.**

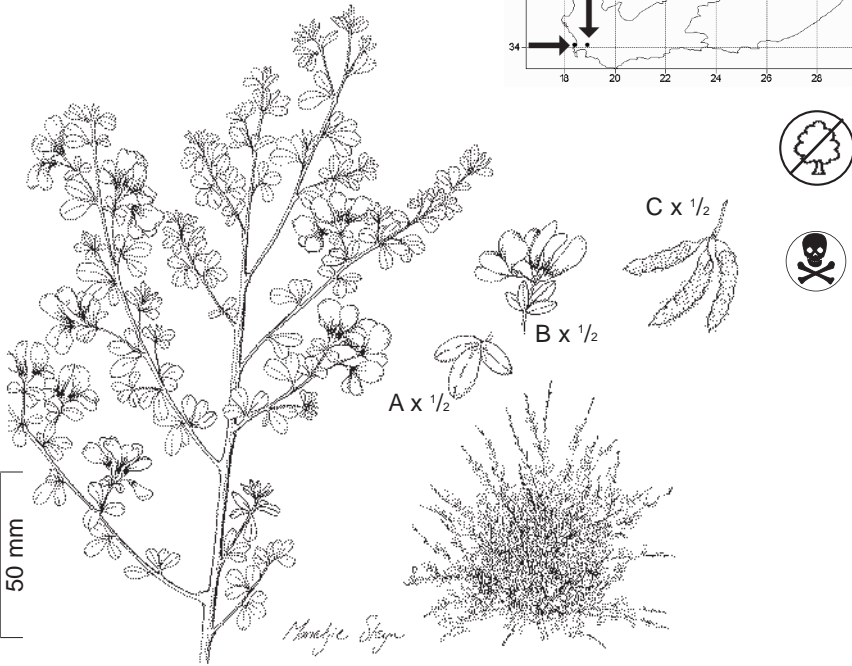
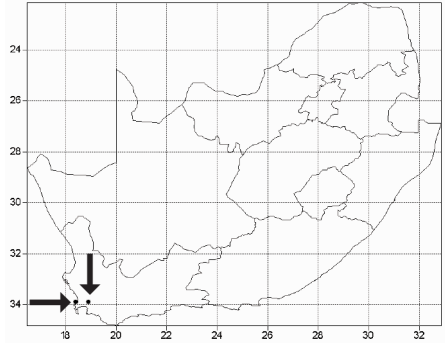
(= *C. candicans* (L.) DC.)

(= *Genista monspessulana* (L.) L. Johnson)

Montpellier broom

Montpellierbrem

Family Fabaceae



**Description:** Unarmed shrub 1–3 m high with slender, erect, very leafy green branches, evergreen in mild winters, branchlets ridged and hairy when young.

**Leaves:** Dull greyish-green, hairy beneath, three-foliolate (A), shortly stalked, to 20 mm long. **Flowers:** Bright yellow, 13 mm long, in short racemes (B) of 3–9 flowers, at tips of lateral branchlets, August–January. **Fruits:** Rusty brown Pods (C), 13–20 mm long, covered with silky hairs. **Cultivated for:** Ornament.

**Invades:** Fynbos, grassland. **Origin:** Mediterranean. **Invasive status:** Potential transformer. **Declared weed. Poisonous.**



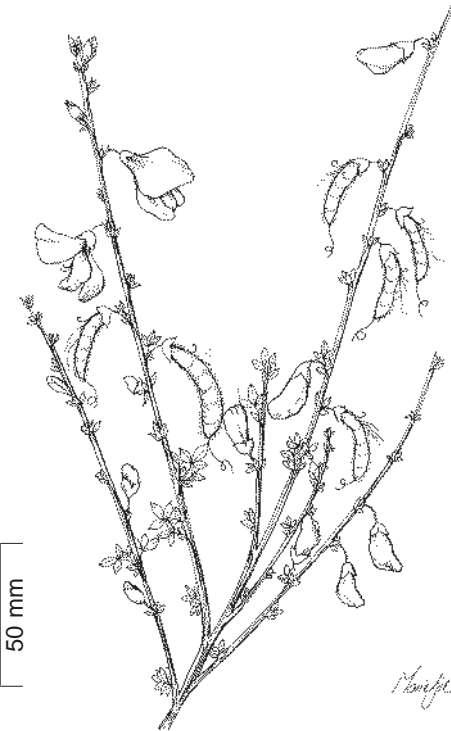
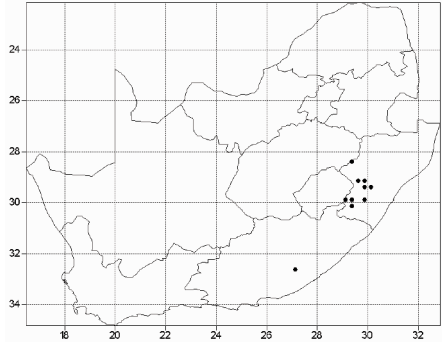
# ***Cytisus scoparius*** (L.) Link

(= *Genista scoparia* (L.) Lam.)

Scotch broom

Skotse brem

Family Fabaceae



B x 1/2



A x 1/2



M. J. S. 1971

**Description:** Unarmed shrub to 4 m high with many, slender, erect, prominently ridged or grooved, green branches, becoming almost leafless and rush-like.

**Leaves:** Dark green, 8–15 mm long, three-foliolate (**A**), but upper leaves often reduced to one leaflet, deciduous. **Flowers:** Bright yellow, 25 mm long, mostly solitary or paired, axillary, September–March. **Fruits:** Brownish-black pods (**B**), 35–50 mm long, glabrous except for silky hairs at the margin. **Cultivated for:** Ornament, shelter. **Invades:** Grassland, forest margins, roadsides. **Origin:** Europe & Britain. **Invasive status:** Potential transformer. **Declared weed. Poisonous:** Fruit.

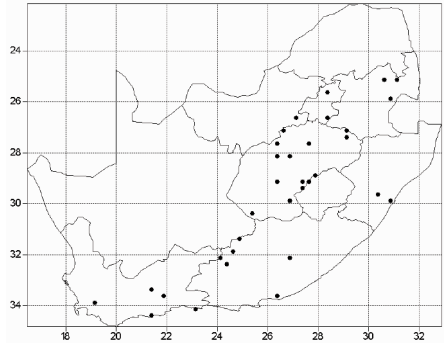
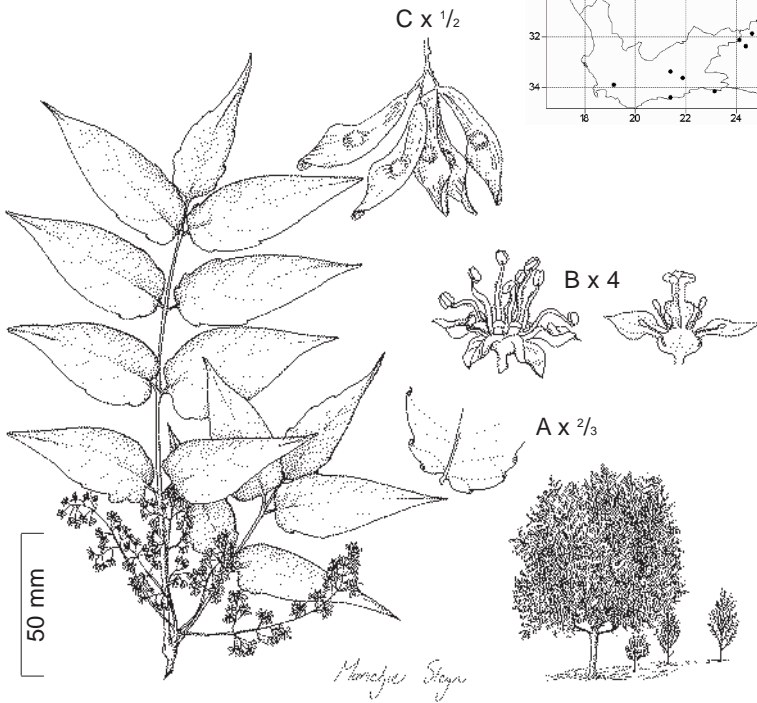


## *Ailanthus altissima* (Mill.) Swingle

tree-of-heaven  
hemelboom

Family Simaroubaceae

Photo 92



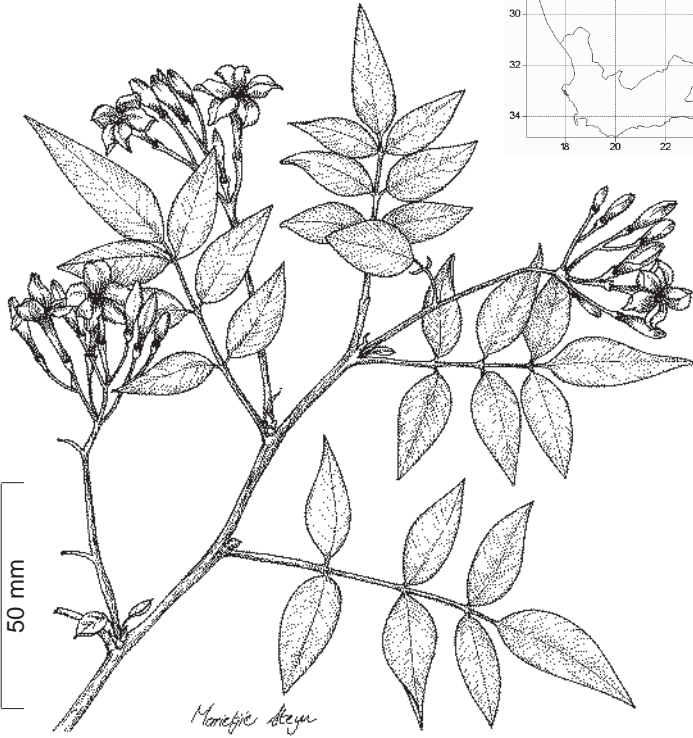
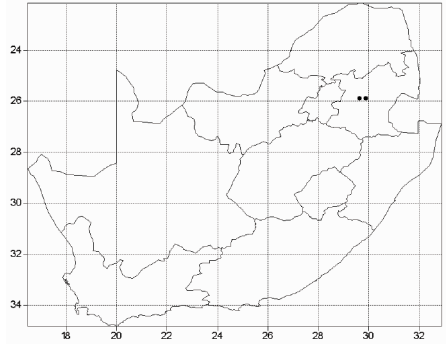
**Description:** Deciduous tree 8–10(–25) m high with  $\pm$  rounded crown; branchlets robust, reddish-brown, ascending; leaf rachis held erect but leaflets tend to droop; suckers profusely. **Leaves:** Dark green with yellowish autumn tints, 300–600(–1 000) mm long; leaflets with 1–4 large, basal, gland-bearing teeth (**A**); bad-smelling when bruised. **Flowers:** Greenish-yellow (**B**),  $\pm$  3 mm long, male flowers bad-smelling; in large terminal sprays, Oct–November. **Fruits:** Samaras (**C**),  $\pm$  45 mm long, green turning reddish-orange, twisted, in large bunches up to 300 mm across. **Cultivated for:** Ornament, shelter; source of honey (unpleasant flavour). **Invades:** Forest margins, roadsides, rivers, in cool, moist regions. **Origin:** Asia (China). **Invasive status:** Potential transformer. **Declared invader (category 3).** **Poisonous:** Leaves, flowers. **Irritant:** Skin (leaves, bark, flowers).



## *Jasminum humile* L.

yellow bush jasmine  
geelbosjasmyn

Family Oleaceae



**Description:** Evergreen, glabrous, multistemmed shrub 2–4 m high with arching branches; stems slightly angular. **Leaves:** Dark green, paler beneath, alternately arranged, with 3–7 leaflets, ovate to lanceolate. **Flowers:** Bright yellow, fragrant, tubular with five spreading lobes, in  $\pm$  umbellate clusters of six or more flowers, at the ends of long slender shoots; calyx teeth very short; September–March. **Fruits:** Fleshy berries, black when ripe; none seen but apparently spreading from seed. **Cultivated for:** Ornament, screens on highways. **Invades:** Grassland, roadsides. **Origin:** Asia (Afghanistan and Himalayas to W China). **Invasive status:** Special effect weed (competitive).

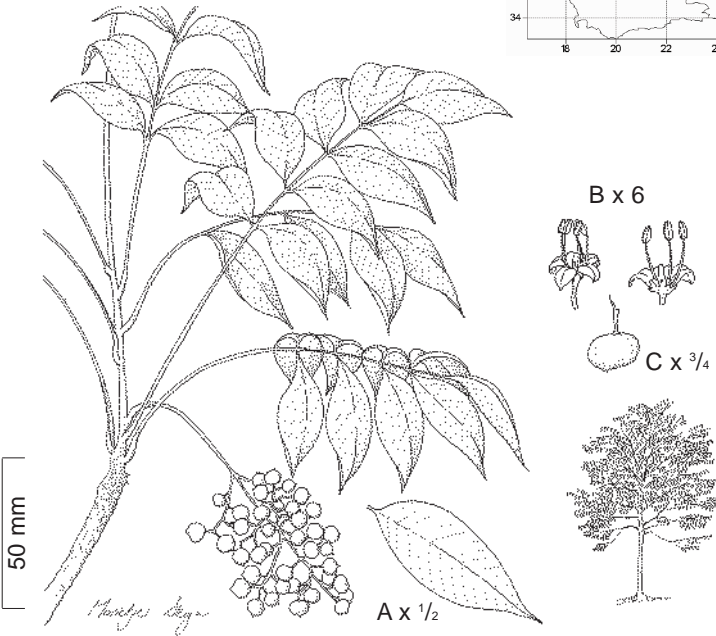
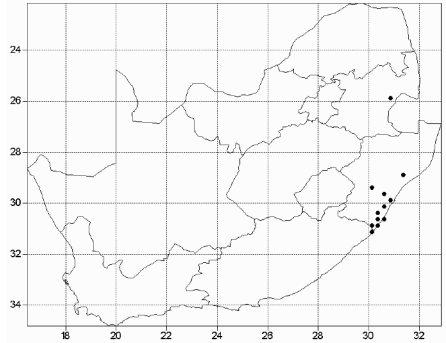


# *Rhus succedanea* L.

(= *Toxicodendron succedaneum* (L.) Kuntze)

wax tree  
wasboom

Family Anacardiaceae



**Description:** Deciduous, spreading tree up to 10 m high; branches rather thick, hanging downwards and tips upturned; stems with resinous latex; poisonous.

**Leaves:** Glossy dark green, sometimes bluish-green beneath, turning soft red in autumn, pinnate with 9–15 leaflets (**A**) which are ovate-oblong, long-pointed, entire, 50–90 mm long. **Flowers:** Yellowish-green (**B**), 1–2 mm long, in axillary panicles 100–200 mm long, August–September. **Fruits:** White or pale yellowish-brown, shiny, slightly flattened, one-seeded drupes (**C**) 8–10 mm across.

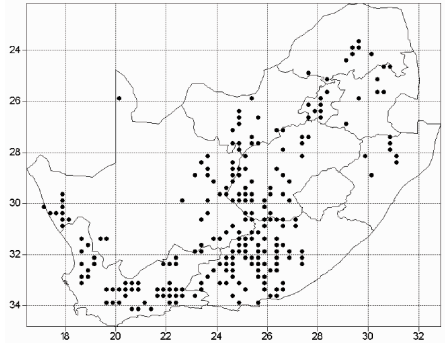
**Cultivated for:** Ornament, wax from its berries, resin from its stems. **Invades:** Moist forest and plantation margins, woodland, roadsides. **Origin:** E Asia (S Japan to India). **Invasive status:** Special effect weed (competitive, poisonous). **Declared weed. Poisonous:** Whole plant. **Irritant:** Skin (sap).



# *Schinus molle* L.

pepper tree  
peperboom

Family Anacardiaceae



A x 6



*Schinus molle* L.



**Description:** Evergreen tree 8–15(–20) m high with graceful, hanging branches and foliage; leaves and fruits emit a peppery scent when crushed. **Leaves:** Downy when young, greyish or light green, with up to 37 narrowly lanceolate leaflets, margins almost entire to markedly serrated, rachis slightly winged.

**Flowers:** Creamy-white, about 2 mm long, male and female (**A**) flowers on separate trees; in terminal and axillary clusters, September–March. **Fruits:** Rosy-pink, slightly fleshy, one-seeded globose drupes.

**Cultivated for:** Ornament, shade; provides honey. **Invades:** Grassland, savanna, karoo, roadsides, wasteland, riverbanks, rocky outcrops. **Origin:** S America (Andes of Peru).

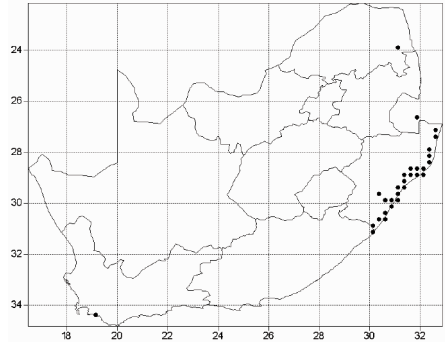
**Invasive status:** Special effect weed (competitive, poisonous, irritant). **Proposed declared invader. Poisonous:** Fruit, in quantity. **Irritant:** Skin & respiratory tract (sap).



# *Schinus terebinthifolius* Raddi

Brazilian pepper tree  
Brasiliaanse peperboom

Family Anacardiaceae



**Description:** Evergreen shrub or tree 3–6(–15) m high, with wide-spreading, horizontal branches. **Leaves:** Dark green with prominent pale veins above, paler below, glabrous; leaflets (5)–7(–13), oblong, rounded or bluntly pointed, sometimes serrated; rhachis distinctly winged. **Flowers:** Creamy-white, very small, male and female flowers on separate trees, in tightly branched, terminal and axillary clusters, September–March. **Fruits:** Bright red, slightly fleshy, one-seeded, globose drupes. **Cultivated for:** Ornament, shade, shelter, hedging; provides honey. **Invades:** Woodland, coastal bush, roadsides, riverbanks. **Origin:** S America (Brazil). **Invasive status:** Potential transformer. **Declared weed in KwaZulu-Natal & declared invader (category 3) elsewhere in South Africa.** **Herbicide registration.** **Poisonous:** Fruit, in quantity. **Irritant:** Skin & respiratory tract (sap).



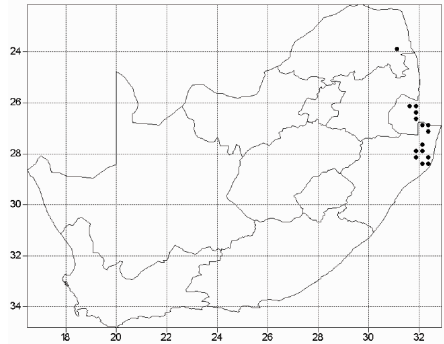
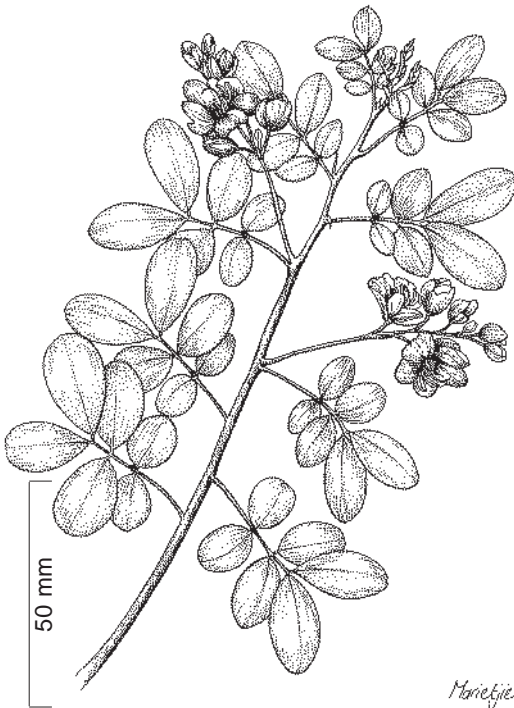
***Senna bicapsularis*** (L.) Roxb.

(= *Cassia bicapsularis* L.)

rambling cassia

Family Fabaceae

Photo 31



A x 1/2



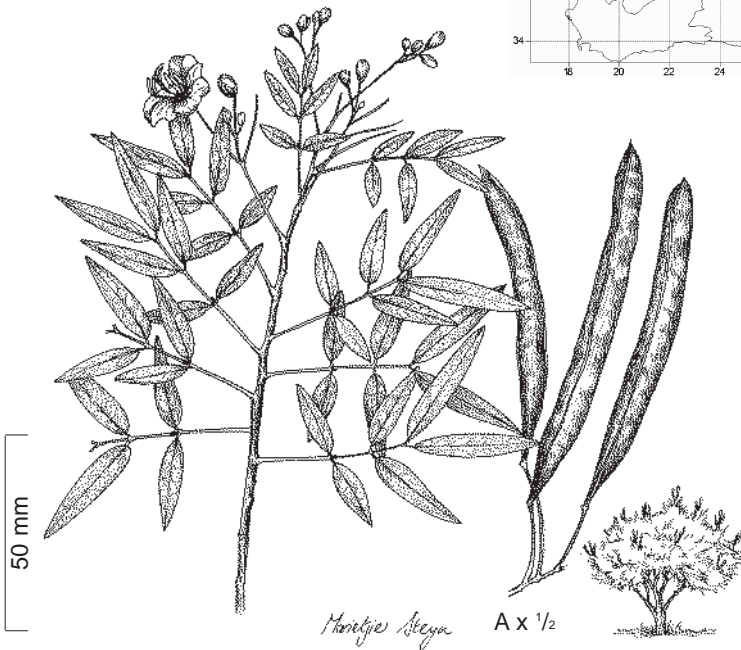
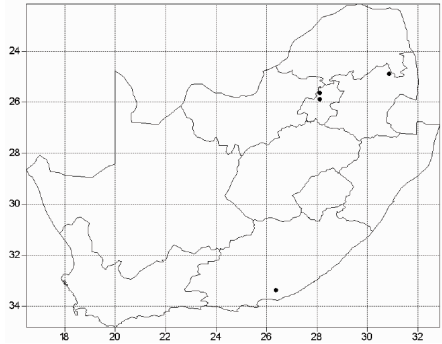
**Description:** Glabrous shrub, often scrambling or climbing, 1.5–3.0(–9.0) m high. **Leaves:** Green, margins yellow; leaflets in (2–)3 pairs (compare with *S. pendula*), obovate, elliptic or oblong-elliptic, 9–32 mm long, tips rounded; petiolar gland absent; rachis with a gland between lowest pair of leaflets only. **Flowers:** Yellow (smaller, and with brown veins more clearly marked than in *S. pendula*); pedicels of open flowers less than 10 mm long (compare *S. pendula*); axillary racemes 60–120 mm long, numerous towards ends of branches; May–October. **Fruits:** Pods (**A**), brown, ± straight, cylindrical, ± inflated, rounded at apex, septate, 50–60(–150)mm long. **Cultivated for:** Ornament, hedging. **Invades:** Savanna, coastal bush, riverbanks. **Origin:** S America & West Indies. **Invasive status:** Potential transformer. **Declared invader (category 3).** **Poisonous:** To birds & bees (?nectar).





***Senna corymbosa*** (Lam.) Irwin & Barneby  
 (= *Cassia corymbosa* Lam.)

Family Fabaceae



**Description:** Glabrous, softly-woody shrub 2–3 m high. **Leaves:** Light green, leaflets in 2–3 pairs, lanceolate (compare with *S. septemtrionalis*), up to 60 mm long, long-tapering, with pointed tips and slightly asymmetric bases; petiole without glands; rachis with a stalked gland between the lowest pair of leaflets only. **Flowers:** Bright yellow, brown-veined with age in axillary racemes 45–60 mm long, February–March(–July). **Fruits:** Pods (A), green turning brown, cylindric, inflated, internally septate, slightly upwardly curved,  $\pm$  100 mm long, not or slowly dehiscent, usually exerted above the foliage. **Cultivated for:** Ornament. **Invades:** Savanna, riverbanks, urban open space. **Origin:** South America (N Argentina, Uruguay & S Brazil). **Invasive status:** Special effect weed (?poisonous). **?Poisonous.**

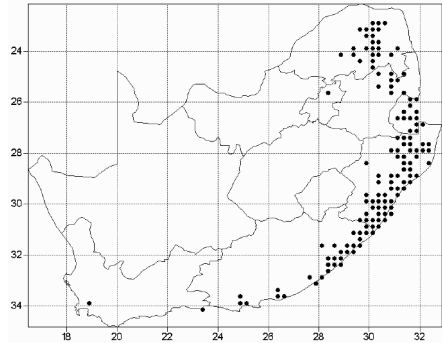


***Senna didymobotrya*** (Fresen.) Irwin & Barneby

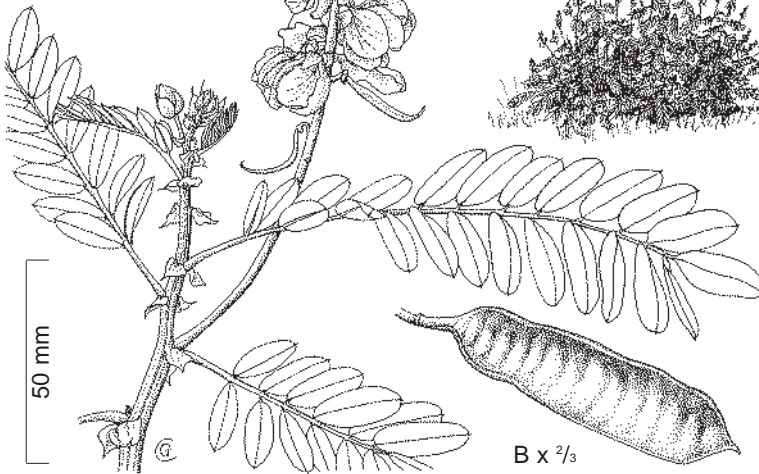
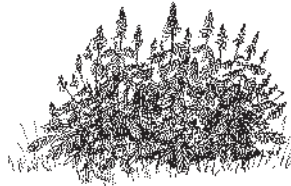
(= *Cassia didymobotrya* Fresen.)

peanut butter cassia  
grondboontjebotterkassia

Family Fabaceae



A x 2/3



**Description:** Evergreen, rounded shrub or small tree 1–3(–6) m high; young shoots softly downy; flowers and cut stems smell of peanut butter. **Leaves:**

Dark green, with 8–21 pairs of ovate-oblong leaflets 20–50 mm long, bases asymmetric, tips shortly pointed; stipules ovate, with a tapering point, persistent.

**Flowers:** Bright yellow (**A**), buds dark brown, in narrow, erect racemes up to 450 mm long, all year. **Fruits:** Pods (**B**), green turning dark brown, softly downy,

flattened, ± 100 mm long x 20 mm wide, long-beaked. **Cultivated for:**

Ornament, hedging. **Invades:** Grassland, coastal scrub, woodland, roadsides,

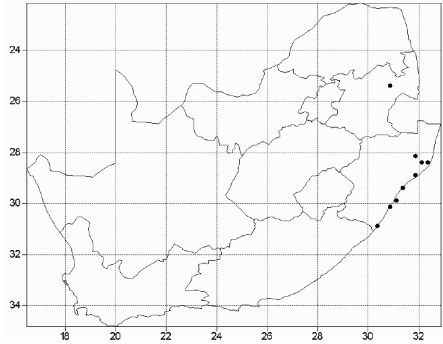
riverbanks, wasteland. **Origin:** Tropical Africa. **Invasive status:** Special effect weed (competitive, poisonous). **Declared invader (category 3).** **Poisonous:**

Leaves.



***Senna hirsuta*** (L.) Irwin & Barneby  
 (= *C. hirsuta* L.)

Family Fabaceae



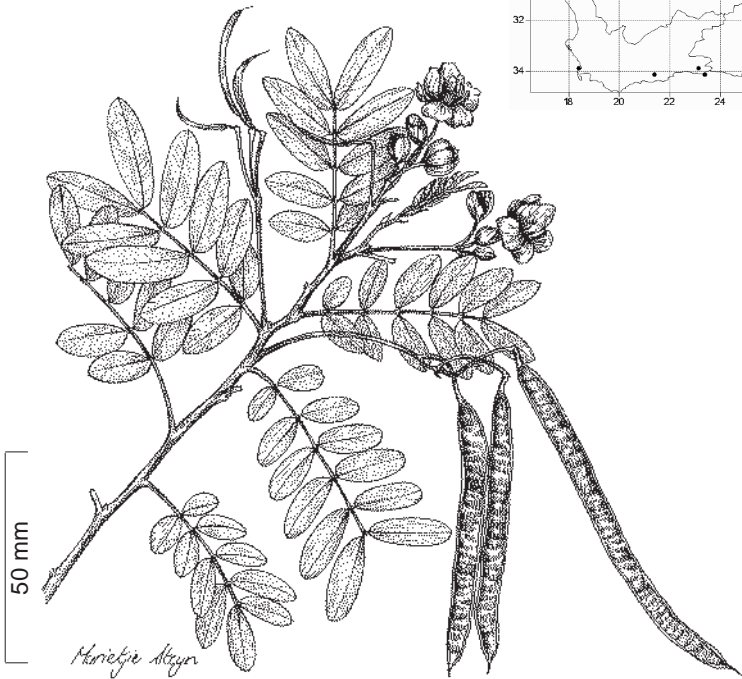
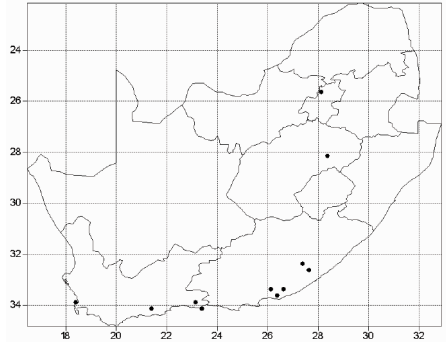
**Description:** Pubescent, short-lived shrub 1.0–2.7 m high; stems ridged; stems, leaves and pods covered with long, dense, greyish-white hairs. **Leaves:** Greyish-white hairy; leaflets in 3–5 pairs, elliptic, 50–75 mm long, tips pointed; petiole with a sessile finger-like gland; rachis without glands. **Flowers:** Deep orange-yellow, becoming conspicuously brown-veined with age; in axillary racemes  $\pm$  30 mm long, (April–)May(–July). **Fruits:** Pods (**A**), brown, covered with long whitish hairs; flattened, mostly curving downwards, 100–150 mm long, faintly septate; dehiscent. **Cultivated for:** Ornament. **Invades:** Savanna, coastal bush, disturbed grassland, forest margins, roadsides, riverbanks. **Origin:** S America. **Invasive status:** Special effect weed (competitive, ?poisonous). **?Poisonous.**



***Senna multiglandulosa*** (Jacq.) Irwin & Barneby

(= *C. tomentosa* L.f.)

Family Fabaceae



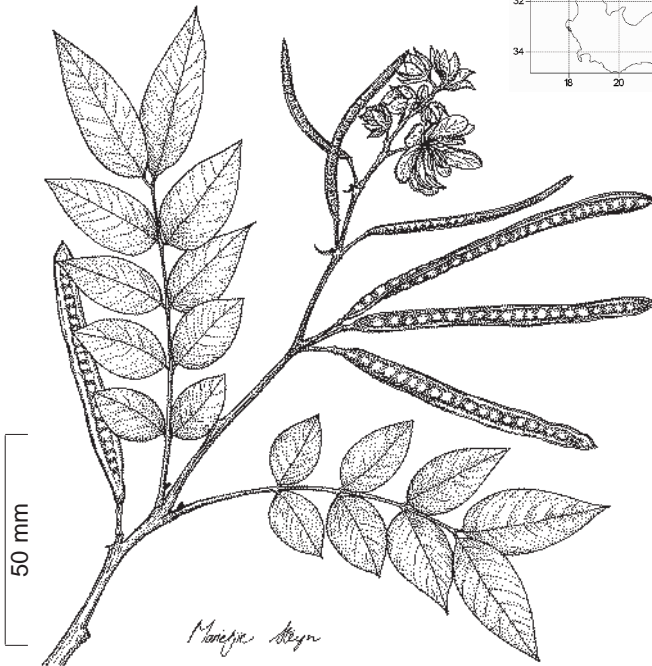
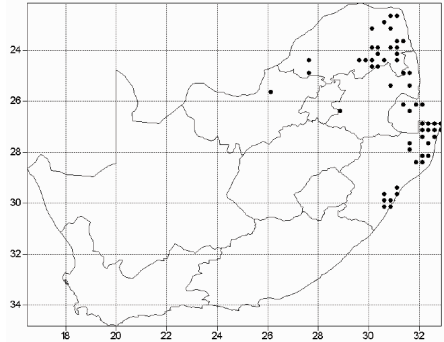
**Description:** Pubescent, rounded shrub or small tree 3–4 m high, young stems, petioles and rachis golden-hairy; undersurfaces of leaflets grey or golden-hairy. **Leaves:** Dull- or yellowish-green, leaflets in (3–)6–8 pairs, oblong or elliptic, 14–50 mm long; tips pointed or occasionally rounded; petiolar gland absent; rachis glandular between each pair of leaflets. **Flowers:** Deep yellow, brown-veined with age; in axillary racemes 37–70 mm long, all year. **Fruits:** Pods, green turning yellowish-brown, straight or slightly curved, 70–110 mm long, ± flattened, faintly septate, sutures slightly thickened, corrugated over the seeds, indehiscent, pendulous. **Cultivated for:** Ornament. **Invades:** Savanna, forest clearings, riverbanks. **Origin:** C & S America (Mexico & Guatemala to S America). **Invasive status:** Special effect weed (competitive, ?poisonous). **?Poisonous.**

## ***Senna occidentalis*** (L.) Link

(= *C. occidentalis* L.)

stinking weed, wild coffee

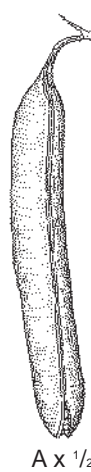
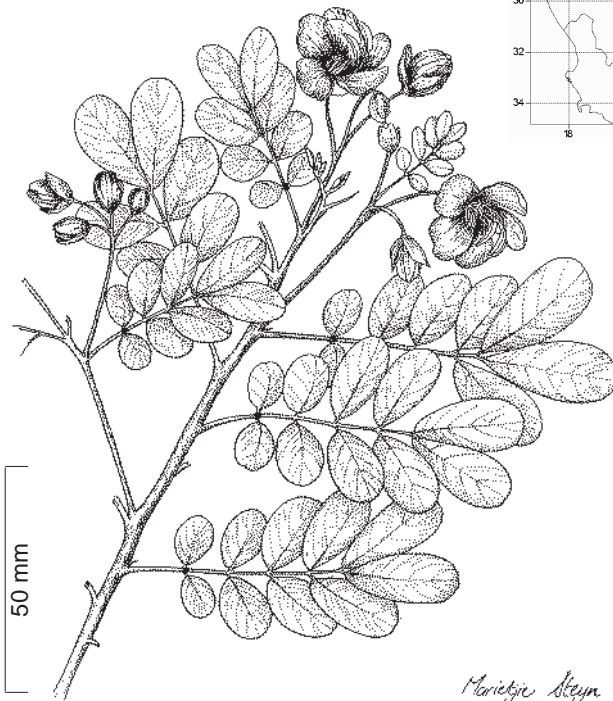
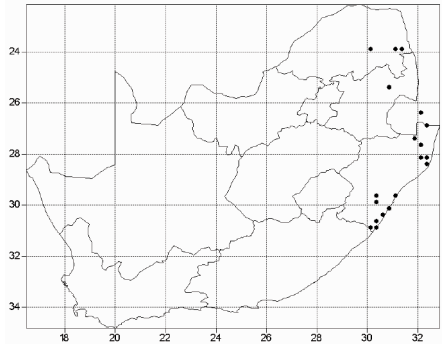
Family Fabaceae



**Description:** Erect herb or slightly woody shrub 0.5–2.0 m high,  $\pm$  glabrous to sparsely pubescent (with short hairs), at times emits an unpleasant smell. **Leaves:** Green, leaflets in 4–5(–6) pairs, ovate to lanceolate-elliptic, (25–)40–100 mm long, tips pointed; petiole with a conspicuous gland; rhachis without glands. **Flowers:** Pale yellow, in short, 2–4 flowered, axillary racemes, February–March(–all year). **Fruits:** Pods, brown with paler, thickened margins (sutures), 80–130 mm long, flattened with one row of seeds, septate, not or slowly dehiscent. **Cultivated for:** Ornament, coffee substitute, medicinal purposes. **Invades:** Savanna, grassland, riverbanks, coastal sandflats, roadsides, old lands, waste land. **Origin:** Uncertain, possibly tropical America. **Invasive status:** Ruderal and special effect weed (competitive, poisonous). **Poisonous sometimes.**

***Senna pendula*** (Willd.) Irwin & Barneby **var. *glabrata*** (Vogel)  
 Irwin & Barneby  
 (= *Cassia coluteoides* Collad.)

Family Fabaceae



*Harrietje Steyn*

**Description:** Glabrous or softly pubescent, scandent shrub or small tree 2–4 m high, with ± rounded, densely leafy crown and arching branches. **Leaves:** Green, margins yellow, leaflets in 4–5 pairs, obovate or elliptic, 13–40 mm long, tips rounded; petiolar gland absent; rhachis with a gland between the lowest pair of leaflets only. **Flowers:** Bright yellow, in axillary racemes 40–100 mm long, numerous towards ends of branches; pedicels of open flowers 20–30 mm long; April–May(–all year). **Fruits:** Pods (**A**), brown, ± straight to slightly curved, pendulous, cylindrical, ± inflated, rounded apically, septate within, 180–200 mm long, not or slowly dehiscent. **Cultivated for:** Ornament. **Invades:** Savanna, watercourses, roadsides. **Origin:** S America. **Invasive status:** Potential transformer. **Declared invader (category 3). ?Poisonous.**

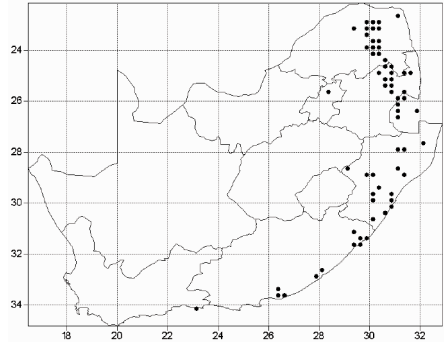


***Senna septentrionalis*** (Viv.) Irwin & Barneby

(= *Cassia floribunda* sensu Brenan non Cav.)

(= *C. laevigata* Willd.)

Family Fabaceae



**Description:** Glabrous, softly-woody shrub or small tree 1-2(-4) m high. **Leaves:** Bright green, paler beneath; leaflets usually in 3-4 pairs, broadly ovate or elliptic up to 100 mm long, long-tapering, with pointed tips; petiole without glands; rachis glandular between all, or all but the topmost pair of leaflets. **Flowers:** Bright yellow, sometimes brown-veined, in axillary racemes 60-100 mm long, October-March(-all year). **Fruits:** Pods (**A**), green turning brown, cylindric, inflated, internally septate, apex rounded, very shortly or not beaked, 70-100 mm long, slowly dehiscent, usually immersed in the foliage. **Cultivated for:** Ornament. **Invades:** Forest margins, savanna, riverbanks, roadsides, plantations, waste ground. **Origin:** C America incl. Mexico. **Invasive status:** Special effect weed (competitive, ?poisonous). **Proposed declared invader. ?Poisonous.**

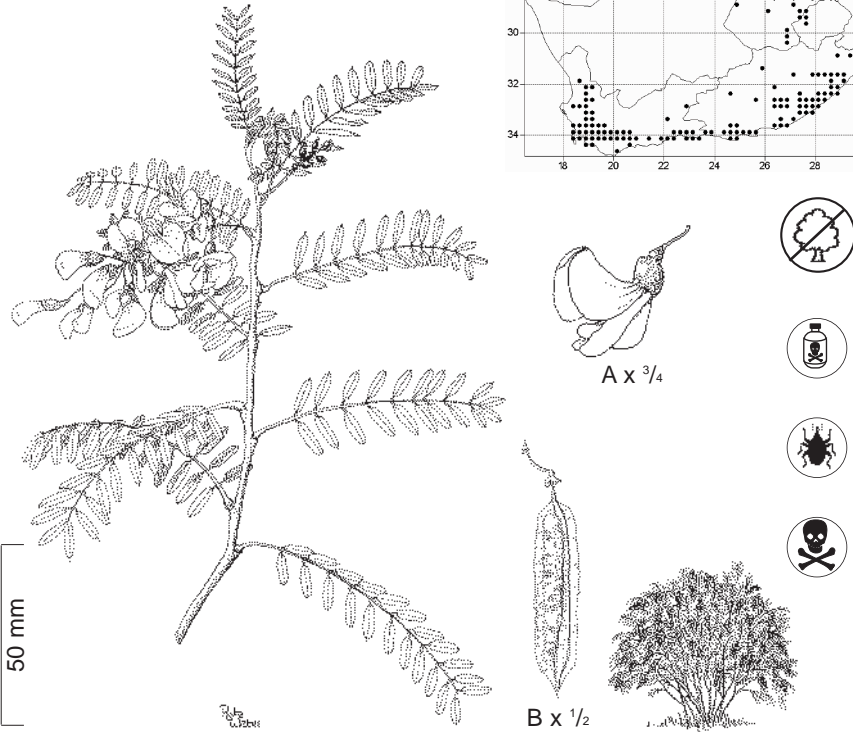
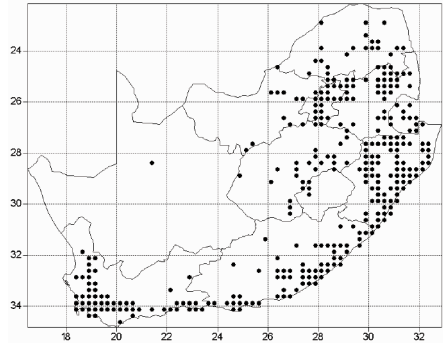


# *Sesbania punicea* (Cav.) Benth.

red sesbania  
roosesbania

Family Fabaceae

Photo 93



**Description:** Deciduous shrub or small tree up to 4 m high with many slender branches. **Leaves:** Dark green, drooping, 100–200 mm long, pinnate; leaflets oblong, ending in tiny, pointed tips. **Flowers:** Red or orange (A), ± 20 mm long, showy, in dense sprays up to 250 mm long that droop or project outwards, September–March. **Fruits:** Characteristic brown pods (B), longitudinally four-winged, oblong, 60–80 mm long x 10 mm wide, tip sharply pointed, containing 4–10 seeds separated by cross-partitions. **Cultivated for:** Ornament. **Invades:** Riverbanks, riverbeds, wetlands; wasteland, roadsides and ditches in high rainfall areas. **Origin:** S America (S Brazil, Uruguay & NE Argentina). **Invasive status:** Transformer. **Declared weed.** **Herbicide registration.** **Biocontrol:** Effective agents available. **Poisonous:** Seeds, leaves, flowers.



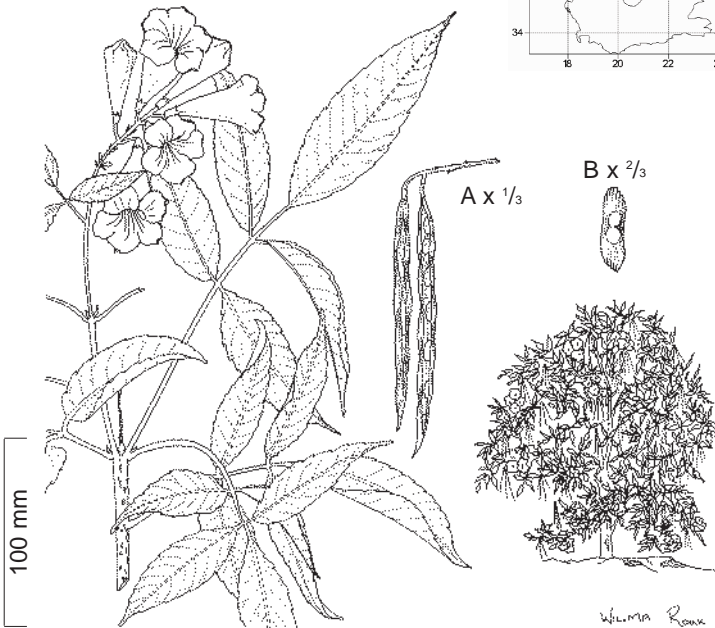
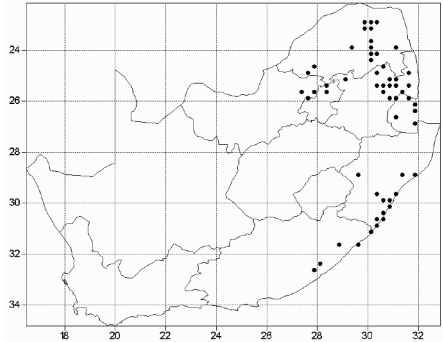


# **Tecoma stans** (L.) Kunth

yellow bells  
geelklokkies

Family Bignoniaceae

Photo 94



**Description:** Ornamental, densely leafy, evergreen shrub or small tree 2–4(–6) m tall. **Leaves:** Bright green above, paler below, 100–200 mm long, pinnate, leaflets 5–13, margins sharply toothed. **Flowers:** Bright yellow, showy, faintly striated, trumpet-shaped, about 50 mm long, in terminal sprays, October–May.

**Fruits:** Brown, shiny capsules (**A**), 120–200 mm long, splitting open to release many papery-winged seeds (**B**). **Cultivated for:** Ornament. **Invades:** Roadsides, urban open spaces, watercourses, rocky sites in subtropical and tropical savanna. **Origin:** Possibly Mexico and S USA (southern Texas, Arizona & New Mexico); now occurring from S Florida southwards through C America to the Caribbean and N Argentina; invasive in Argentina and Brazil. **Invasive status:** Potential transformer. **Declared weed.**

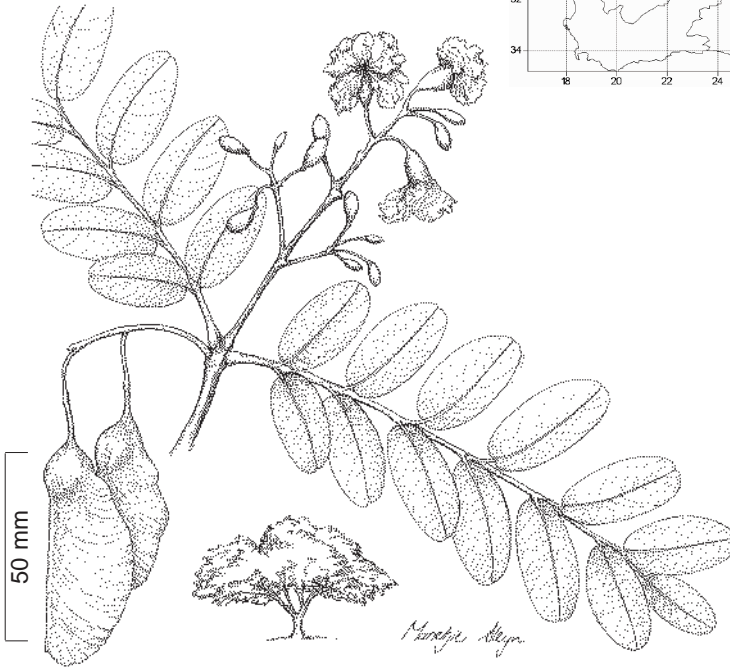
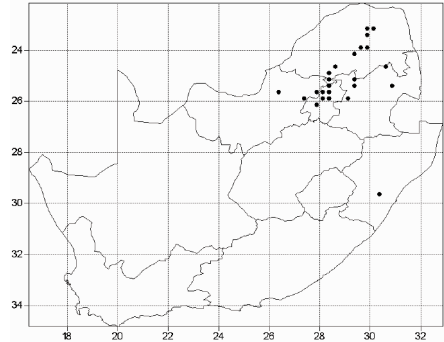


**Tipuana tipu** (Benth.) Kuntze

(= *T. speciosa* Benth.)

tipu tree  
tipoeboom

Family Fabaceae



**Description:** Large, massively branched, wide-spreading, deciduous tree up to 23 m high. **Leaves:** Bright green, glabrous, unevenly pinnate, 100–250 mm long, with 11–23 leaflets. **Flowers:** Deep yellow, reddish centrally, edges of petals wavy, ± 20 mm long, in short terminal or axillary sprays, September–January. **Fruits:** Yellowish-brown, 1–3 seeded, winged pods 50–60 mm long. **Cultivated for:** Ornament, shade; provides honey, fodder, timber. **Invasives:** Roadsides, riverbanks, urban open space in subtropical and tropical savanna regions. **Origin:** S America (Brazil, Bolivia & Argentina). **Invasive status:** Potential transformer. **Declared invader (category 3).**

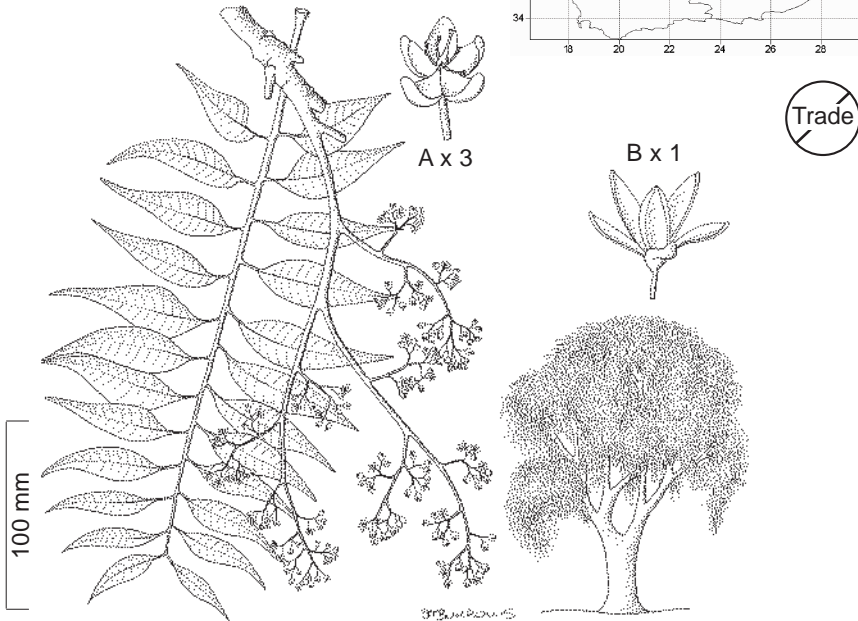
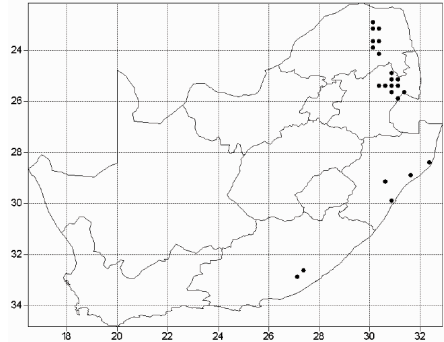


***Toona ciliata*** M.Roem.

(= *Cedrela toona* Rottler)

toon tree  
toonboom

Family Meliaceae



**Description:** Semi-deciduous tree 10–35 m high, forming a wide, rounded crown with drooping foliage. **Leaves:** Bright green, glabrous, even-pinnate, leaflets entire (except in young plants), odourless when crushed, proximal lateral veins on lower surface without axillary pockets (as opposed to *Cedrela odorata*).

**Flowers:** White or yellowish (A), 5 mm long, fragrant, in pendulous sprays, September–March. **Fruits:** Green turning brown, delicate, five-valved, woody capsules (B) ± 20 mm long, splitting open and the valves breaking off; seeds winged at both ends (winged only below in *C. odorata*). **Cultivated for:** Timber, ornament, shade. **Invades:** Forest gaps, plantations, riverbanks, roadsides.

**Origin:** Asia (Indomalaysia to Australia). **Invasive status:** Potential transformer.

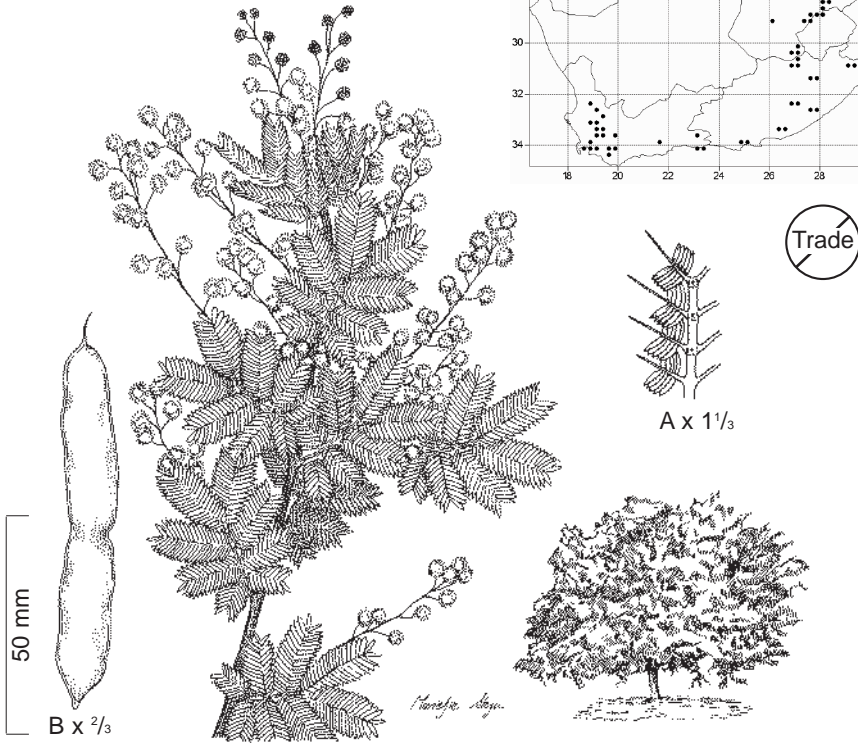
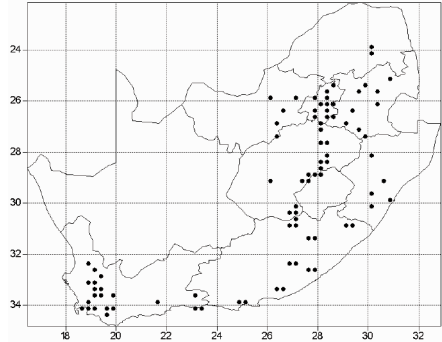
**Declared invader (category 3).**



# *Acacia baileyana* F.Muell.

Bailey's wattle  
Bailey-se-wattel

Family Fabaceae



**Description:** Small, unarmed, evergreen tree 3–6(–9) m high; branchlets and foliage covered with a greyish or bluish powdery bloom. **Leaves:** Greyish or silvery-blue, sometimes tinged purple; spirally arranged around the branchlets, bipinnate, small, 20–50 mm long, with 2–3(–4) pairs of pinnae; a gland occurs at the junction of each pinnae pair or only the top few pinnae pairs (**A**).

**Flowers:** Bright yellow, globular flowerheads in large, showy sprays, July–September. **Fruits:** Greyish-brown pods (**B**). **Cultivated for:** Ornament, shade; honey source. **Invades:** Grassland, fynbos, roadsides, urban open spaces, watercourses. **Origin:** SE Australia. **Invasive status:** Potential transformer.

**Declared invader (category 3).**

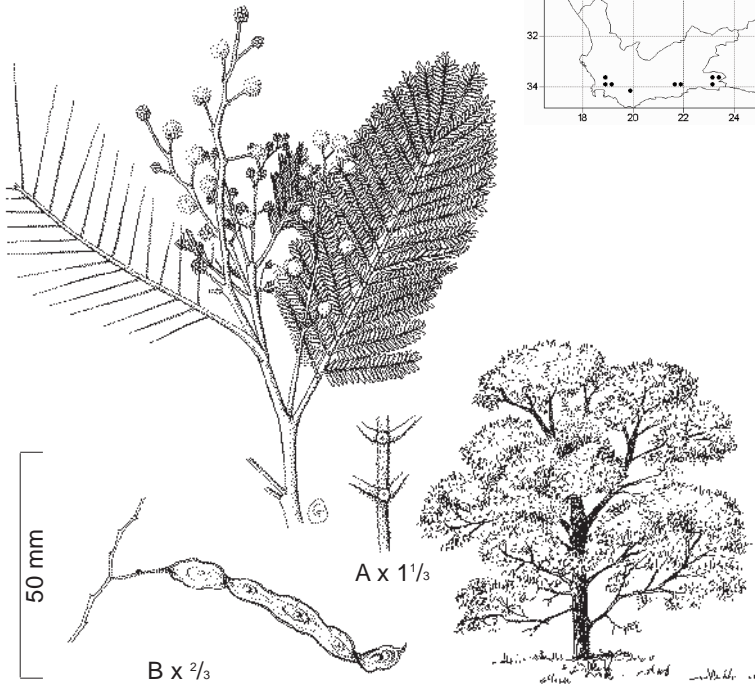


## *Acacia dealbata* Link

silver wattle  
silwerwattel

Family Fabaceae

Photo 95



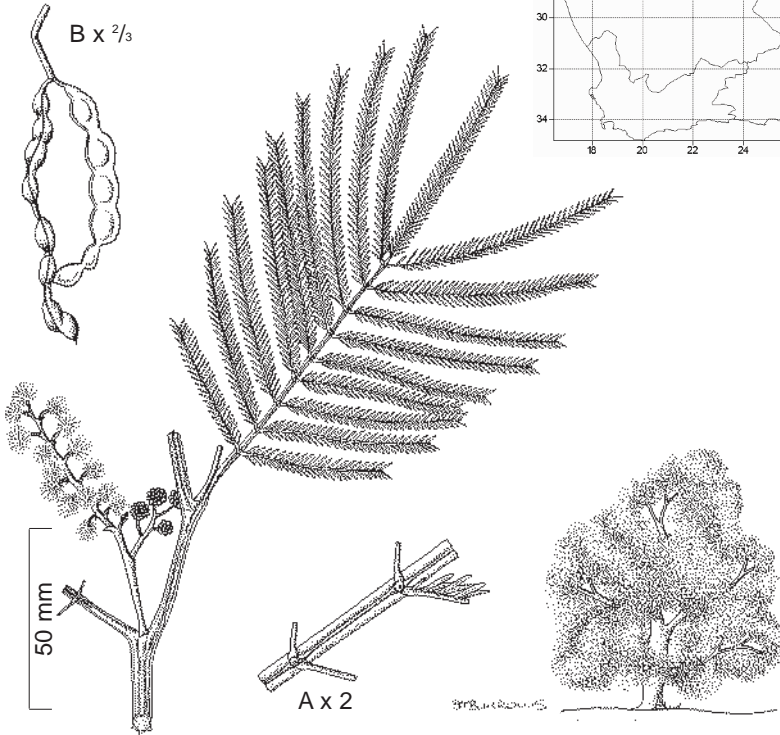
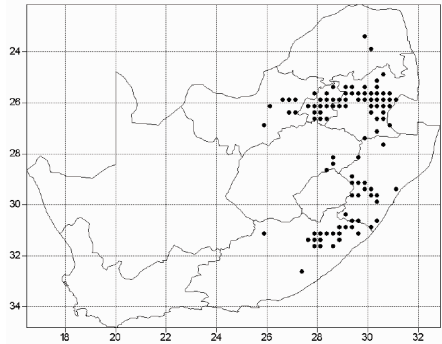
**Description:** Unarmed, evergreen tree 5–10(–15) m high; branchlets shallowly ridged, often tinged grey or purple; growth tips velvety-hairy, initially yellow turning greyish or white. **Leaves:** Silvery-grey to light green, finely hairy, bipinnate; leaflets short (2.0–5.5 mm) and crowded; a raised gland occurs at each junction of pinnae pairs (A). **Flowers:** Pale to bright yellow, globular flowerheads in large, fragrant sprays, July–August. **Fruits:** Greyish or purplish-brown pods (B), not or only slightly constricted. **Cultivated for:** Shelter, shade; provides firewood and construction poles. **Invades:** Grassland, roadsides, watercourses. **Origin:** E & SE Australia & Tasmania. **Invasive status:** Transformer. **Declared weed in W Cape & declared invader (category 2) elsewhere in South Africa. Herbicide registration. Biocontrol:** Seed feeders under investigation.



## *Acacia decurrens* (Wendl.) Willd.

green wattle  
groenwattel

Family Fabaceae



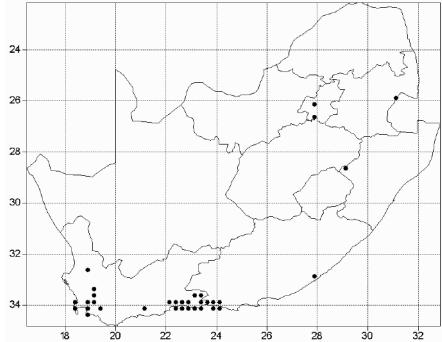
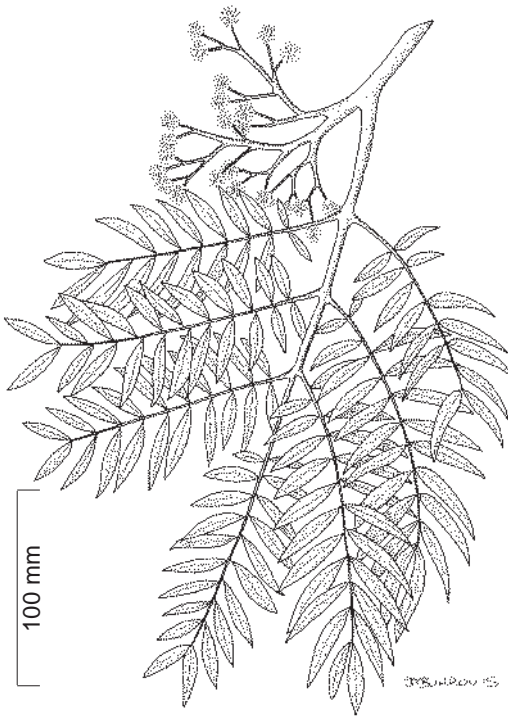
**Description:** Unarmed, evergreen tree 5–10(–15) m high; devoid of hairs or powdery bloom; branchlets prominently angled with wing-like ridges. **Leaves:** Bright green, glabrous, bipinnate, feathery; leaflets long (6–15 mm) and slender; a single raised gland occurs at each junction of pinnae pairs (A). **Flowers:** Bright yellow, globular flowerheads in large, showy, fragrant sprays, July–August. **Fruits:** Dark brown pods, glabrous, slightly constricted (B). **Cultivated for:** Shade, shelter, ornament; provides firewood and construction poles. **Invasives:** Grassland, roadsides, watercourses. **Origin:** SE Australia. **Invasive status:** Transformer. **Declared invader (category 2).** **Herbicide registration.** **Biocontrol:** Seed feeders under investigation.

**Acacia elata** A.Cunn. ex Benth.

(*A. terminalis* misapplied in S.A.)

peppertree wattle  
peperboomwattel

Family Fabaceae



A x 2/3



**Description:** Unarmed, large, evergreen tree up to 20 m high with an oval crown; trunk often with heavy, low, side limbs; young shoots golden-hairy. **Leaves:** Dark green and glossy above, large, 300–400 mm long, bipinnate; leaflets large, 20–50 mm long and 4–10 mm wide, lance-shaped. **Flowers:** Pale yellow, globular flowerheads in large sprays, October–December. **Fruits:** Brown pods (A), finely golden-hairy, 100–160 mm long. **Cultivated for:** Ornament, shade, shelter. **Invades:** Forest clearings, fynbos, moist sites, roadsides, urban open spaces. **Origin:** SE Australia. **Invasive status:** Potential transformer. **Declared invader (category 3).**

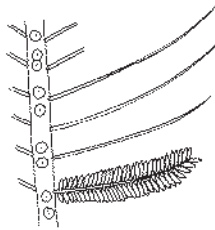
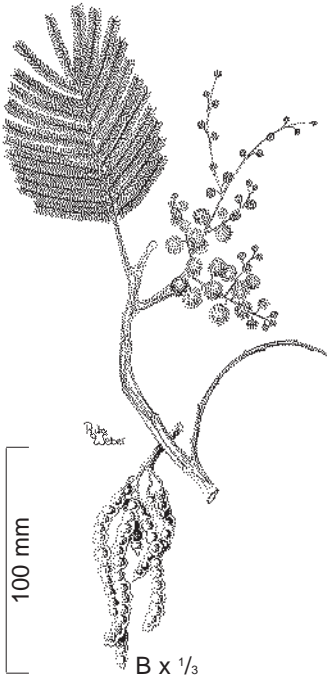
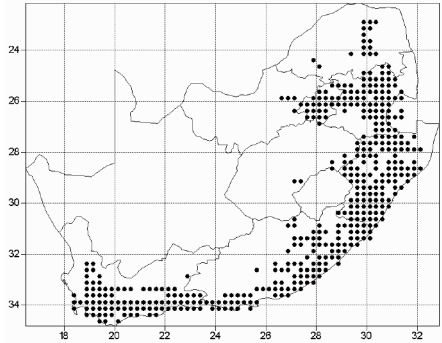


# *Acacia mearnsii* De Wild.

black wattle  
swartwattel

Family Fabaceae

Photo 96



**Description:** Unarmed, evergreen tree 5–10(–15) m high; branchlets shallowly ridged; all parts finely hairy; growth tips golden-hairy. **Leaves:** Dark olive-green, finely hairy, bipinnate; leaflets short (1.5–4.0 mm) and crowded; raised glands occur at and between the junctions of pinnae pairs (A). **Flowers:** Pale yellow or cream, globular flowerheads in large, fragrant sprays, August–September. **Fruits:** Dark brown pods (B), finely hairy, usually markedly constricted. **Cultivated for:** Shelter, tanbark, woodchips, shade; provides firewood and construction poles. **Invades:** Grassland, forest gaps, roadsides, and watercourses throughout its range. **Origin:** SE Australia & Tasmania. **Invasive status:** Transformer. **Declared invader (category 2)**. **Herbicide registration.** **Biocontrol:** Seed feeders and mycoherbicide available.

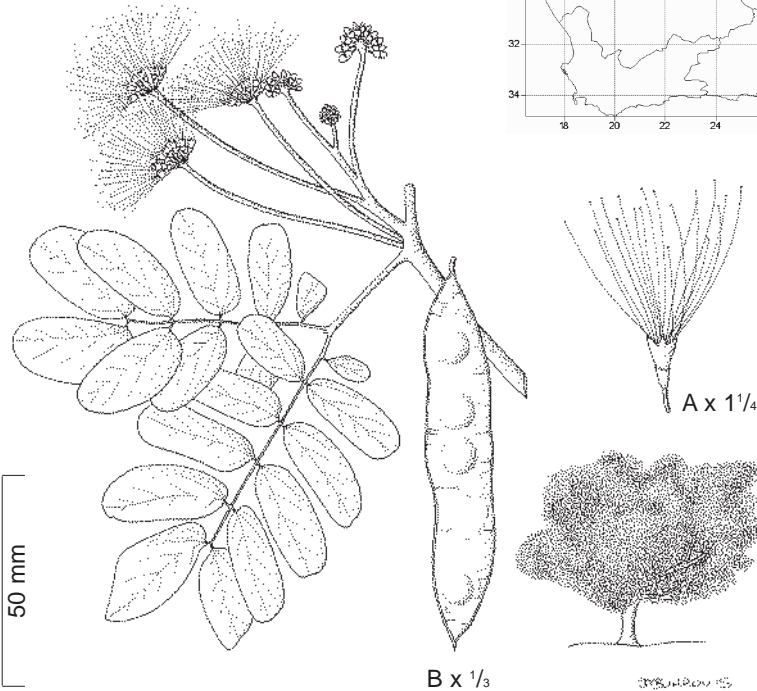
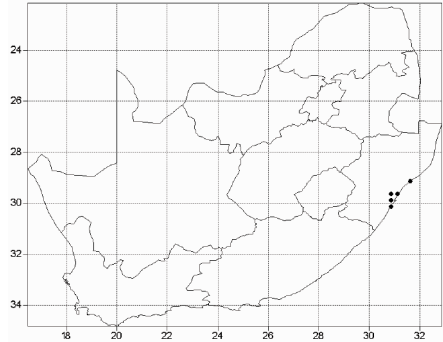




***Albizia lebbbeck* (L.) Benth. &  
*A. procera* (Roxb.) Benth.**

lebbeck tree & false lebbeck  
lebbeckboom & basterlebbeck

Family Fabaceae



**Description:** Unarmed, spreading trees to 15 m high; *A. lebbbeck* (illustrated): bark rough, not peeling; *A. procera*: bark smooth. **Leaves:** Green, margins not crisped; *A. lebbbeck*: leaflets with 3–4 basal veinlets, not discolorous, *A. procera*: leaflets with two basal veinlets, markedly discolorous. **Flowers:** Whitish or yellow with long, exerted stamens; *A. lebbbeck* (A): on pedicels 1.5–4.5 mm long, in axillary close clusters, *A. procera*: sessile, in axillary or terminal panicles, November–March. **Fruits:** *A. lebbbeck*: straw-coloured pods (B), glabrous, shiny, rattling, with raised bumps over the seeds, 30–45 mm x 150–300 mm; *A. procera*: light to dark brown, 15–20 mm x 80–160 mm. **Cultivated for:** Ornament, shade. **Invasive:** Subtropical coastal bush, riverbanks. **Origin:** Tropical Asia. **Invasive status:** Transformers. **Declared weeds.** **Poisonous** (*A. procera*): Whole plant.

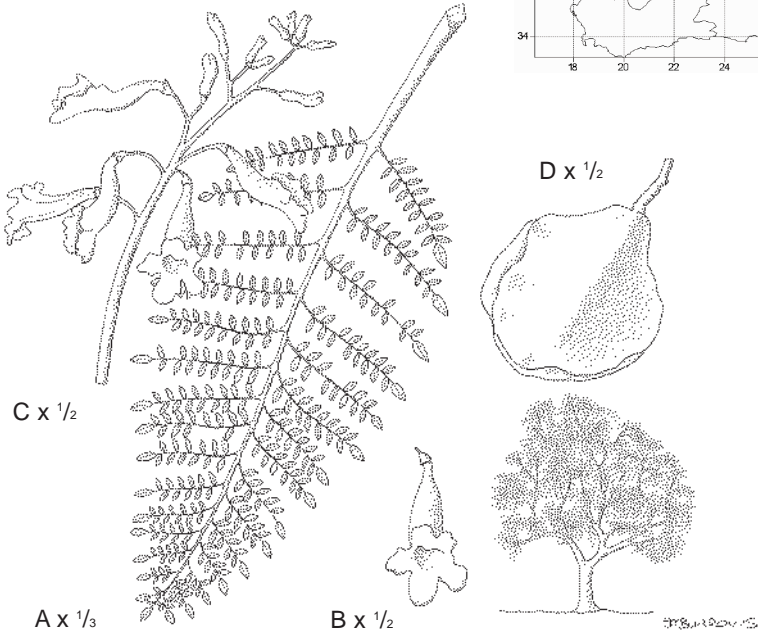
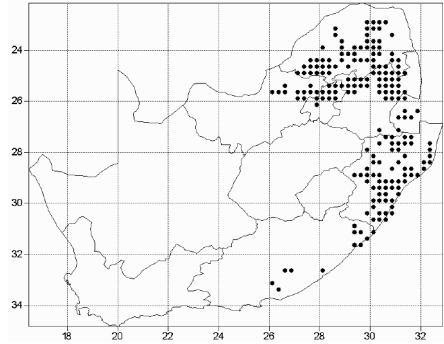


# *Jacaranda mimosifolia* D. Don

jacaranda  
jakaranda

Family Bignoniaceae

Photo 97



**Description:** Deciduous or semi-deciduous tree up to 22 m high with a rounded, spreading crown. **Leaves:** Dark green, turning yellow in late autumn or winter, hairy, finely divided and fern-like (A), 200–400 mm long. **Flowers:** Mauvish-blue, lilac or rarely white, tubular, about 30–50 mm long (B), produced in loose, pyramidal sprays (C) at the ends of usually leafless branchlets, September–November. **Fruits:** Broadly oval, flattish, woody capsules (D), ± 60 mm long, green turning brown, splitting open after about a year to release numerous flat, winged seeds. **Cultivated for:** Ornament, shade, timber. **Invades:** Savanna, wooded kloofs, rocky ridges, riverbanks. **Origin:** S America (NW Argentina). **Invasive status:** Transformer. **Declared invader (category 3) excluding sterile cultivar 'Alba'. Herbicide registration.**

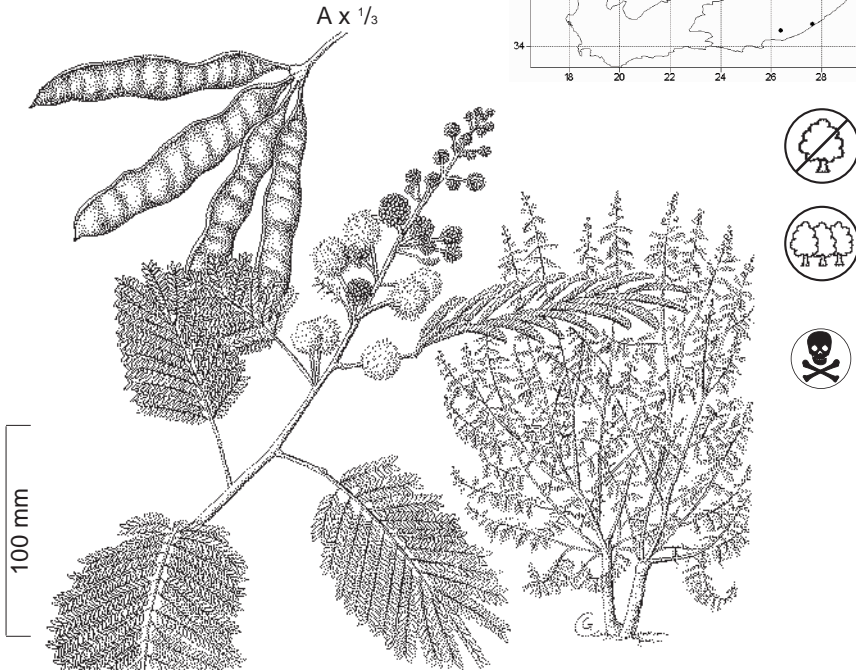
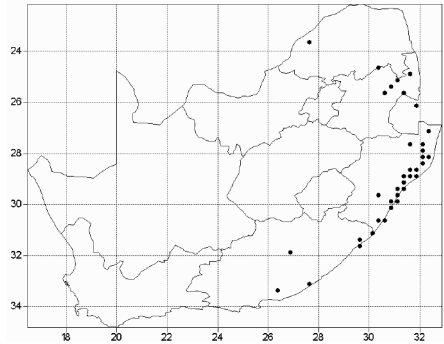
# *Leucaena leucocephala* (Lam.) de Wit

(= *L. glauca* Benth.)

leucaena  
reusewattel

Family Fabaceae

Photo 98



**Description:** Unarmed shrub or small tree up to 4 m high; branchlets densely grey-hairy. **Leaves:** Dark green, often grey-hairy, 70–150 mm long, drooping. **Flowers:** White or pale yellow, in globose heads, borne singly or in groups of two or three in the leaf axils, July–March. **Fruits:** Brown pods (**A**), 110–180 mm long, ± straight, flattened but raised over the seeds, in distinctive clusters, splitting into two non-recurving halves. **Cultivated for:** Fodder, firewood, construction poles, ornament, sand-binding. **Invades:** Forest margins, roadsides, wasteland, riverbanks. **Origin:** Tropical America (?arising in Mexico). **Invasive status:** Potential transformer. **Declared weed in W Cape & declared invader (category 2) elsewhere in South Africa.** **Biocontrol:** Seed feeders released. **Poisonous:** Whole plant toxic to livestock in quantity (more than 25% of diet).

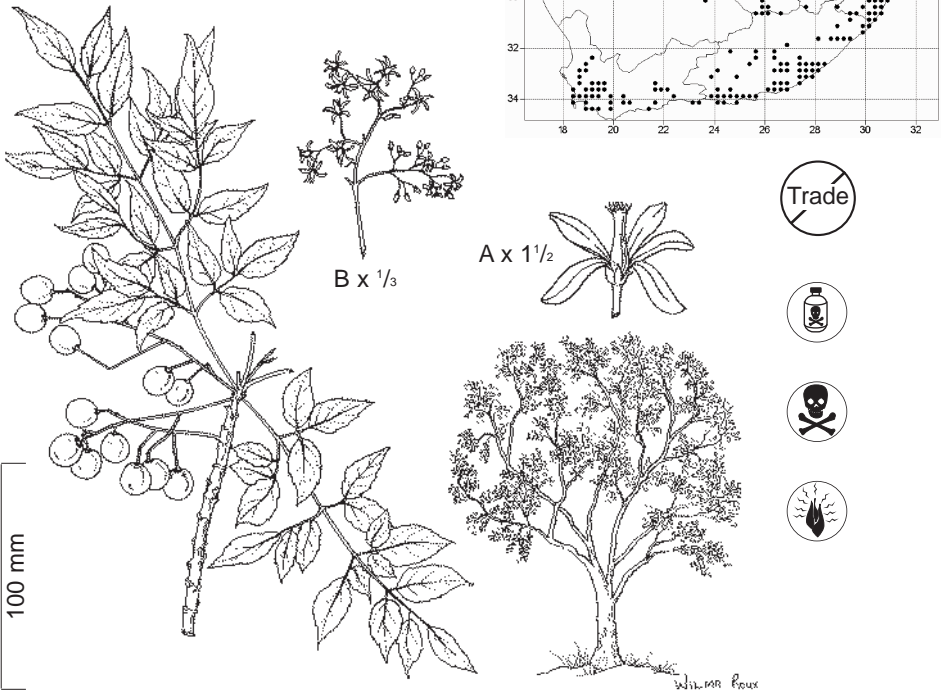


## *Melia azedarach* L.

seringa, 'syringa', Persian lilac  
maksering, sering

Family Meliaceae

Photo 99



**Description:** Deciduous, spreading tree up to 23 m high; bark on young stems reddish-brown and smooth. **Leaves:** Deep green, glossy above, turning yellow in autumn; odd-pinnate, leaflets serrated and sometimes lobed. **Flowers:** Lilac (A),  $\pm 10$  mm long, with purplish central column, in large, terminal, heavily perfumed sprays (B), September–November. **Fruits:** Berries, green turning yellow, thinly fleshy, becoming wrinkled and persisting after the leaves fall. **Cultivated for:** Ornament, shade. **Invades:** Savanna, roadsides, urban open space, wasteland, riverbanks. **Origin:** Asia to Australia; the form in southern Africa is an Indian cultivar. **Invasive status:** Transformer. **Declared invader (category 3).** **Herbicide registration. Biocontrol:** Under investigation. **Poisonous:** Leaves, bark, flowers, especially ripe fruits. **Irritant:** Respiratory (flowers).



***Paraserianthes lophantha*** (Willd.) Nielsen

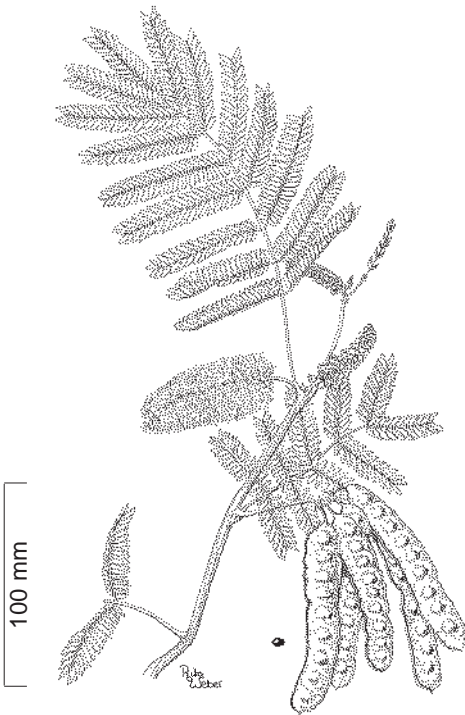
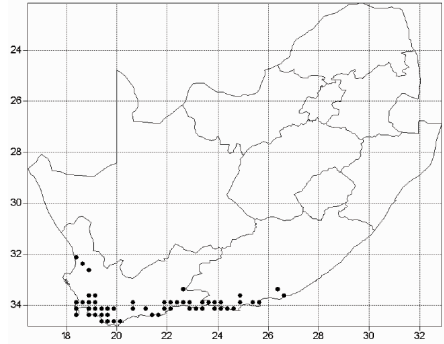
(= *Albizia lophantha* (Willd.) Benth.)

stink bean

stinkboon

Family Fabaceae

Photo 100



**Description:** Evergreen shrub or tree 4–6(–15) m high, resembling a large-leaved black wattle (*Acacia mearnsii*). **Leaves:** Dark green, paler below, up to 300 mm or longer, golden-hairy, becoming  $\pm$  glabrous; glands absent from rhachis, a single gland occurs towards the base of the petiole. **Flowers:** Cream, in dense, bottlebrush-like heads, June–August. **Fruits:** Brown pods, compressed with bulging seeds, edges raised and thickened; seeds emit a nauseating odour when crushed and moistened. **Cultivated for:** Ornament; honey source. **Invades:** Forest margins, riverbanks, moist slopes in fynbos, wooded kloofs. **Origin:** W & SW Australia. **Invasive status:** Transformer. **Declared weed.** **Biocontrol:** Seed feeders available. **Poisonous.**



L Henderson



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GR Nichols



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CJ Clifters

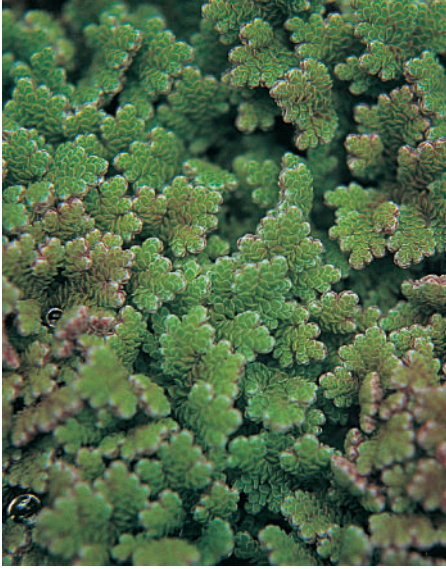


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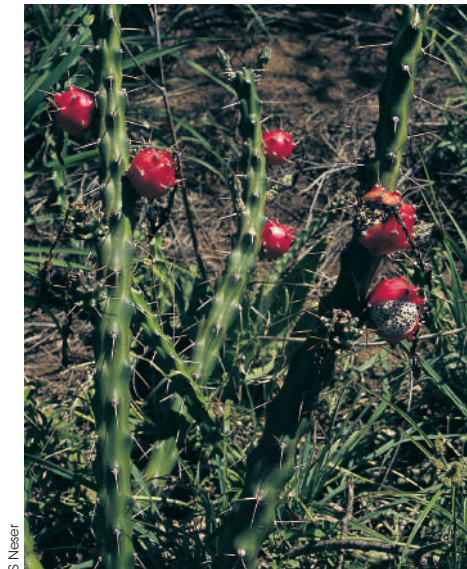


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## **INVASIVE STATUS**

Most of the plants in this book invade natural or semi-natural habitats and are environmental weeds. Some species invade mainly sites of severe human disturbance and are classed as ruderal and agrestal weeds. Invasive status refers to the current status or potential status if this should differ. The categories of environmental weeds that follow are after J.T. Swarbrick (Plant Protection Quarterly 6(4), 1991).

### **Environmental weeds**

#### **Transformers**

Plants which can as monospecies dominate or replace any canopy or subcanopy layer of a natural or semi-natural ecosystem, thereby altering its structure, integrity and functioning. The most serious environmental weeds are in this group, which includes trees, aggressive climbers, thicket-forming shrubs and dense herbs.

#### **Potential transformers**

Plants that are already invading natural or semi-natural habitats, and have the potential to dominate a vegetation layer but not yet having a marked effect. They are either transformers elsewhere in the world or showing signs of this ability in southern Africa.

#### **Special effect weeds**

Plants which can as monospecies significantly degrade the value or purpose for which a natural or semi-natural ecosystem is valued without necessarily dominating it or greatly altering its vegetational structure or functioning. These are also serious environmental weeds. Examples include weeds which compete with and replace similar native plants, are of high visual impact, poisonous, or chemically irritate users of the area through allergens or stings.

#### **Minor weeds**

Plants that invade and persist in any layer of a natural or semi-natural ecosystem but are not particularly aggressive and cannot or do not as monospecies dominate that layer or seriously alter the vegetation structure or its functioning although the accumulation of several to many species may do so.

### **Ruderal and agrestal weeds**

Mostly annual or biennial plants which are primarily weeds of waste places (ruderals) and cultivated lands (agrestals). They are only able to invade and persist in severely and recently disturbed areas. They scarcely invade or persist in established vegetation. Some species can invade natural or semi-natural habitats along watercourses which are subjected to periodic flooding (a natural disturbance).

# DECLARED WEEDS AND INVADERS

Most of the plants described in this field guide are declared weeds or invaders and their control is subject to "The Conservation of Agricultural Resources Act" (Act No. 43 of 1983). Amendments to this Act were published in Government Gazette Vol. 429, No. 22166, of 30 March 2001. The regulations concerning declared weeds and invaders is reproduced here in full. Table 3 lists all declared weeds and invaders. Table X lists species that were proposed as declared weeds or invaders but require further investigation before they can be added to Table 3.

## DEPARTMENT OF AGRICULTURE

No. R. 280

30 March 2001

CONSERVATION OF AGRICULTURAL RESOURCES ACT, 1983 (ACT No. 43 OF 1983)

REGULATIONS: AMENDMENT

The Minister of Agriculture has, under section 29 of the Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983), made the regulations in the Schedule.

### SCHEDULE

#### Definitions

1. In this Schedule "the regulations" means the regulations published by Government Notice No. R. 1048 of 25 May 1984, as amended by Government Notice No. R. 2687 of 6 December 1985.

#### Amendment of regulation 1 of the regulations

2. Regulation 1 of the regulations is hereby amended –

(a) by inserting the following definitions before the definition of "excessive soil loss":

" **'biological control'** means the use of natural enemies of category 1, 2 and 3 plants to control such plants;

**'biological control agent'** means a natural enemy of category 1, 2 or 3 plants that is used to control such plants;

**'biological control expert'** means an academic or research institute or an academic or research organisation established by legislation which, or a person associated with or in the employment of such an institute or organisation who, practises and researches biological control of category 1, 2 and 3 plants;

**'biological control reserve'** means an area designated by the executive officer in terms of regulation 15D of the regulations for the breeding of biological control agents;



**'bush encroachment'** means stands of plants of the kinds specified in column 1 of Table 4 where individual plants are closer to each other than three times the mean crown diameter;

**'category 1 plants'** means plants of the kinds specified as category 1 in column 3 of Table 3 opposite the names of the respective kinds of plants;

**'category 2 plants'** means plants of the kinds specified as category 2 in column 3 of Table 3 opposite the names of the respective kinds of plants;

**'category 3 plants'** means plants of the kinds specified as category 3 in column 3 of Table 3 opposite the names of the respective kinds of plants;

**'control'** means to combat category 1, 2 and 3 plants by means of the methods prescribed in regulation 15E to the extent necessary to prevent or to contain the occurrence, establishment, growth, multiplication, propagation, regeneration and spreading of such plants;

**'demarcated area'** means an area of land approved by the executive officer in terms of regulation 15B of the regulations for the occurrence, establishment and maintenance of category 2 plants;

**'environment conservation regulations'** means regulations in terms of the Environment Conservation Act, 1989 (Act No. 73 of 1989), as published by Government Notice No. R.1182 of 5 September 1997, as amended from time to time, or similar regulations promulgated under legislation administered by the Department of Environmental Affairs and Tourism;";

(b) by inserting the following definition after the definition of "flood area":

" **'propagating material'** means any material of a plant that can be used for the propagation of that plant;";

(c) by inserting the following definition after the definition of "secretary":

" **'sell'** includes agree to sell, or offer, advertise, keep, exhibit, send, consign, convey or deliver for sale, or exchange for anything or dispose of or deliver to any other person in any manner, whether for a consideration or otherwise; and 'sold' and 'sale' have corresponding meanings;";

(d) by deleting the word "and" after the definition of "veld";

(e) by adding the word "and" after the definition of "waterway"; and

(f) by adding the following definition:

" **'wetland'** means land which is transitional between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is periodically covered with shallow water, and which land in normal circumstances supports or would support vegetation typically adapted to life in saturated soil.".

## **Substitution of regulation 15 of the regulations**

3. Regulation 15 of the regulations is hereby substituted for the following regulation:

### **“Declaration of weeds and invader plants**

15. (1) Plants of the kinds specified in column 1 of Table 3 as category 1 plants are hereby declared weeds to the extent indicated in column 3 of the said Table opposite the names of the respective kinds of plants.
- (2) Plants of the kinds specified in column 1 of Table 3 as category 2 plants and as category 3 plants are hereby declared invader plants to the extent indicated in column 3 of the said Table opposite the names of the respective kinds of plants.”.

## **Insertion of regulations 15A to 15F**

4. The regulations are hereby amended by the insertion of the following regulations after regulation 15:

### **“Combating of category 1 plants**

- 15A. (1) Category 1 plants may not occur on any land or inland water surface other than in biological control reserves.
- (2) A land user shall control any category 1 plants that occur on any land or inland water surface in contravention of the provisions of sub-regulation (1) by means of the methods prescribed in regulation 15E.
- (3) No person shall, except in or for purposes of a biological control reserve –
- (a) establish, plant, maintain, multiply or propagate category 1 plants;
  - (b) import or sell propagating material of category 1 plants or any category 1 plants;
  - (c) acquire propagating material of category 1 plants or any category 1 plants.
- (4) The executive officer may, on good cause shown in writing by the land user, grant written exemption from compliance with the requirements of sub-regulation (1) on such conditions as the executive officer may determine in each case.

### **Combating of category 2 plants**

- 15B. (1) Category 2 plants may not occur on any land or inland water surface other than a demarcated area or a biological control reserve.
- (2) (a) The executive officer may on application in writing demarcate an area as an area where category 2 plants may occur, be established and be maintained.
- (b) An area in respect of which a water use license for stream flow reduction activities has been issued in terms of section 36 of the National Water Act, 1998 (Act No. 36 of 1998) shall be deemed to be a demarcated area.

- (3) The executive officer shall demarcate an area for the occurrence, establishment and maintenance of category 2 plants only if –
- (a) the category 2 plants in the area are cultivated under controlled circumstances; and
  - (b) the land user concerned has been authorised to use water in terms of the National Water Act, 1998 (Act No. 36 of 1998); and
  - (c) the category 2 plants or products of category 2 plants in the area are demonstrated to primarily serve a commercial purpose, use as a woodlot, shelter belt, building material, animal fodder, soil stabilisation, medicinal or other beneficial function that the executive officer may approve; and
  - (d) all reasonable steps are taken to curtail the spreading of propagating material of the category 2 plants outside the demarcated areas.
- (4) When an area is demarcated for the occurrence, establishment and maintenance of category 2 plants the executive officer may impose such additional conditions as may reasonably be deemed necessary to keep the category 2 plants in the area in check.
- (5) No person shall sell propagating material of category 2 plants or any category 2 plants to another person unless such other person is a land user of a demarcated area or of a biological control reserve.
- (6) No person shall acquire propagating material of category 2 plants or any category 2 plants unless such material or such plants are intended for use in a demarcated area or in a biological control reserve.
- (7) Propagating material of category 2 plants or category 2 plants shall only be imported or sold in accordance with the provisions of the Plant Improvement Act, 1976 (Act No. 53 of 1976), the Agricultural Pests Act, 1983 (Act No. 36 of 1983) and the environment conservation regulations.
- (8) A land user shall control any category 2 plants that occur on any land or inland water surface in contravention of the provisions of sub-regulation (1) by means of the methods prescribed in regulation 15E.
- (9) Unless authorised thereto in terms of the National Water Act, 1998 (Act No. 36 of 1998), no land user shall allow category 2 plants to occur within 30 meters of the 1:50 year flood line of a river, stream, spring, natural channel in which water flows regularly or intermittently, lake, dam or wetland.
- (10) The executive officer may, on good cause shown in writing by the land user, grant written exemption from compliance with one or more of the requirements of sub-regulations (1), (3), (5), (6), (8) and (9) on such conditions as the executive officer may determine in each case.

### **Combating of category 3 plants**

- 15C. (1) Category 3 plants shall not occur on any land or inland water surface other than in a biological control reserve.

- (2) Subject to the provisions of sub-regulation (3), the provisions of sub-regulation (1) shall not apply in respect of category 3 plants already in existence at the time of the commencement of these regulations.
- (3) (a) No land user shall allow category 3 plants to occur within 30 meters of the 1:50 year flood line of a river, stream, spring, natural channel in which water flows regularly or intermittently, lake, dam or wetland.
- (b) The executive officer may impose such additional conditions as may reasonably be deemed necessary with regard to category 3 plants already in existence at the time of the commencement of these regulations.
- (c) A land user must take all reasonable steps to curtail the spreading of propagating material of category 3 plants.
- (d) The executive officer may, after consultation with the land user, issue a direction in terms of section 7 of the Act that category 3 plants in existence at the time of the commencement of these regulations must be controlled by means of the measures prescribed in regulation 15F.
- (4) No person shall, except in or for purposes of a biological control reserve -
  - (a) plant, establish, maintain, multiply or propagate category 3 plants;
  - (b) import or sell propagating material of category 3 plants or any category 3 plants;
  - (c) acquire propagating material of category 3 plants or any category 3 plants.
- (5) The executive officer may, on good cause shown in writing by the land user, grant written exemption from compliance with one or more of the requirements of sub-regulations (1), (3) and (4) on such conditions as the executive officer may determine in each case.

### **Designation of biological control reserves**

- 15D. (1) The executive officer may on application in writing designate an area as a biological control reserve.
- (2) The executive officer shall designate an area as a biological control reserve only if -
- (a) the area concerned is used for the breeding of biological control agents by a biological control expert; and
  - (b) no other measures that may destroy or render the biological control ineffective are applied in that area; and
  - (c) the area concerned serves as a refuge from where biological control agents can move or be distributed to other infestations of category 1, 2 and 3 plants.

## Methods of control

- 15E. (1) Where category 1, 2 or 3 plants occur contrary to the provisions of these regulations, a land user shall control such plants by means of one or more of the following methods of control as is appropriate for the species concerned and the ecosystem in which it occurs:
- (a) Uprooting, felling, cutting or burning;
  - (b) Treatment with a weed killer that is registered for use in connection with such plants in accordance with the directions for the use of such a weed killer;
  - (c) Biological control carried out in accordance with the stipulations of the Agricultural Pests Act, 1983 (Act No. 36 of 1983), the Environment Conservation Act, 1989 (Act No. 73 of 1989) and any other applicable legislation;
  - (d) Any other method of treatment recognised by the executive officer that has as its object the control of the plants concerned, subject to the provisions of sub-regulation (4);
  - (e) A combination of one or more of the methods prescribed in paragraphs (a), (b), (c), and (d), save that biological control reserves and areas where biological control agents are effective shall not be disturbed by other control methods to the extent that the agents are destroyed or become ineffective.
- (2) The methods contemplated in sub-regulation (1) shall also be applied with regard to the propagating material and the re-growth of category 1, 2 and 3 plants in order to prevent such plants from forming seed or re-establishing in any manner.
- (3) The performance of an act of control is not in itself proof that the objects of the control methods have been achieved and follow-up operations are mandatory to achieve the appropriate level of combating.
- (4) Where uncertainty exists about the presence or efficacy of any biological control agent, a biological control expert shall be consulted.
- (5) Any action taken to control category 1, 2 and 3 plants shall be executed with caution and in a manner that will cause the least possible damage to the environment.

## Application of other laws

- 15F. Nothing contained in this regulation shall derogate in any way from any obligation imposed on any land user in terms of any other law.”.

**TABLE 3 DECLARED WEEDS AND INVADER PLANTS (REGULATION 15)**

COLUMN 1		COLUMN 2	COLUMN 3	COLUMN 4
Botanical name	Common name	Type	Category	Special conditions
<b><i>Acacia baileyana</i></b> F.Muell.	Bailey-se-wattel Bailey's wattle	Invader	3	
<b><i>Acacia cyclops</i></b> A.Cunn. ex G.Don	Rooikrans Red eye	Invader	2	
<b><i>Acacia dealbata</i></b> Link	Silwerwattel Silver wattle	Weed Invader	1: Western Cape 2: the rest of SA	
<b><i>Acacia decurrens</i></b> (Wendl.) Willd.	Groenwattel Green wattle	Invader	2	
<b><i>Acacia elata</i></b> A.Cunn. ex Benth. ( <i>A. terminalis</i> misapplied in South Africa)	Peperboomwattel Pepper tree wattle	Invader	3	
<b><i>Acacia implexa</i></b> Benth.	Screw-pod wattle	Weed	1	
<b><i>Acacia longifolia</i></b> (Andr.) Willd.	Langblaarwattel Long-leaved wattle	Weed	1	
<b><i>Acacia mearnsii</i></b> De Wild.	Swartwattel Black wattle	Invader	2	
<b><i>Acacia melanoxylon</i></b> R.Br.	Australiese swarhout Australian blackwood	Invader	2	
<b><i>Acacia paradoxa</i></b> DC. (= <i>A. armata</i> R.Br.)	Kangaroo wattle	Weed	1	
<b><i>Acacia podalyriifolia</i></b> A.Cunn. ex G.Don	Vaalimimosa Pearl acacia	Invader	3	
<b><i>Acacia pycnantha</i></b> Benth.	Gouewattel Golden wattle	Weed	1	
<b><i>Acacia saligna</i></b> (Labill.) H.L.Wendl.	Port Jackson Port Jackson willow	Invader	2	
<b><i>Achyranthes aspera</i></b> L.	Grootklits, Langklitskafblom Burweed	Weed	1	
<b><i>Agave sisalana</i></b> Perrine	Garingboom Sisal hemp, Sisal	Invader	2	
<b><i>Ageratina adenophora</i></b> (Spreng.) R.M.King & H.Rob. (= <i>Eupatorium adenophorum</i> Spreng.)	Crofton weed	Weed	1	
<b><i>Ageratina riparia</i></b> (Regel) R.M.King & H.Rob. (= <i>Eupatorium riparium</i> Regel)	Misblom Mistflower	Weed	1	
<b><i>Ageratum conyzoides</i></b> L.	Indringer ageratum Invading ageratum	Weed	1	
<b><i>Ageratum houstonianum</i></b> Mill. Excluding cultivars	Mexikaanse ageratum Mexican ageratum	Weed	1	
<b><i>Ailanthus altissima</i></b> (Mill.) Swingle	Hemelboom Tree-of-heaven	Invader	3	

**TABLE 3** CONTINUED

COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	
Botanical name	Common name	Type	Category	Special conditions
<b><i>Albizia lebbek</i></b> (L.) Benth.	Lebbeckboom Lebbeck tree	Weed	1	
<b><i>Albizia procera</i></b> (Roxb.) Benth.	Basterlebbeck False lebbeck	Weed	1	
<b><i>Alhagi maurorum</i></b> Medik. (= <i>A. camelorum</i> Fisch.)	Kameeldoringbos Camel thorn bush	Weed	1	
<b><i>Anredera cordifolia</i></b> (Ten.) Steenis ( <i>A. baselloides</i> (Kunth.) Baill. misapplied in South Africa)	Madeira ranker Madeira vine Bridal wreath	Weed	1	
<b><i>Araujia sericifera</i></b> Brot.	Motvanger Moth catcher	Weed	1	
<b><i>Ardisia crenata</i></b> Sims ( <i>Ardisia crispa</i> misapplied in South Africa)	Koraalbesieboom Coralberry tree Coral bush	Weed	1: N Province, KZN & Mpumalanga	
<b><i>Argemone mexicana</i></b> L.	Geelblom-bloudissel Yellow-flowered Mexican poppy	Weed	1	
<b><i>Argemone ochroleuca</i></b> <b>subsp. <i>ochroleuca</i></b> (= <i>A. subfusiformis</i> G.B.Ownbey)	Witblom-bloudissel White-flowered Mexican poppy	Weed	1	
<b><i>Aruno donax</i></b> L.	Spaanse riet Giant reed, Spanish reed	Weed	1	
<b><i>Atriplex lindleyi</i></b> Moq. <b>subsp. <i>inflata</i></b> (F.Müll.) P.G.Wilson	Blasiesoutbos Sponge-fruit saltbush	Invader	3	
<b><i>Atriplex nummularia</i></b> Lindl. <b>subsp. <i>nummularia</i></b>	Oumansoutbos Old man saltbush	Invader	2	
<b><i>Azolla filiculoides</i></b> Lam.	Rooiwatervaring Azolla, Red water fern	Weed	1	
<b><i>Bauhinia purpurea</i></b> L.	Skoenlapperorgideëboom Butterfly orchid tree	Invader	3	
<b><i>Bauhinia variegata</i></b> L.	Orgideëboom Orchid tree	Invader	3	
<b><i>Bryophyllum delagoense</i></b> (Eckl. & Zeyh.) Schinz (= <i>B. tubiflorum</i> Harv., <i>Kalanchoe tubiflora</i> Raym. – Hamet, <i>K. delagoensis</i> Eckl. & Zeyh.)	Kandelaarplant Chandelier plant	Weed	1	
<b><i>Caesalpinia decapetala</i></b> (Roth) Alston (= <i>C. sepiaria</i> Roxb.)	Kraaldoring Mauritius thorn	Weed	1	
<b><i>Campuloclinium</i></b> <b><i>macrocephalum</i></b> (Less.) DC. (= <i>Eupatorium</i> <i>macrocephalum</i> Less.)	Pom-pom bossie Pom pom weed	Weed	1	
<b><i>Canna indica</i></b> L. Excluding hybrid cultivars	Indiese kanna Indian shot	Weed	1	

**TABLE 3** CONTINUED

TABLE 3 CONTINUED				
COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	
Botanical name	Common name	Type	Category	Special conditions
<b><i>Cardiospermum grandiflorum</i></b> Sw.	Blaasklimop Balloon vine	Weed	1	
<b><i>Casuarina cunninghamiana</i></b> Miq.	Kasuarisboom Beefwood	Invader	2	Not for use in dune stabilisation
<b><i>Casuarina equisetifolia</i></b> L.	Perdesterboom Horsetail tree	Invader	2	Not for use in dune stabilisation
<b><i>Cereus jamacaru</i></b> DC. ( <i>C. peruvianus</i> misapplied in South Africa)	Nagblom Queen of the night	Weed	1	
<b><i>Cestrum aurantiacum</i></b> Lindl.	Oranjesestrum Yellow or Orange cestrum	Weed	1	
<b><i>Cestrum elegans</i></b> (Brongn.) Schtdl. (= <i>C. purpureum</i> (Lindl.) Standl.)	Karmosynsestrum Crimson cestrum	Weed	1	
<b><i>Cestrum laevigatum</i></b> Schtdl.	Inkbessie Inkberry	Weed	1	
<b><i>Cestrum parqui</i></b> L'Hér.	Chileense inkbessie Chilean cestrum	Weed	1	
<b><i>Chromolaena odorata</i></b> (L.) R.M.King & H.Rob. (= <i>Eupatorium odoratum</i> L.)	Paraffienbos, Triffid weed, Chromolaena	Weed	1	
<b><i>Cinnamomum camphora</i></b> (L.) J.Presl	Kanferboom Camphor tree	Weed	1: N Province, KZN & Mpumalanga	
<b><i>Cirsium vulgare</i></b> (Savi) Ten. (= <i>C. lanceolatum</i> Scop.)	Speerdissel, Skotse dissel Spear thistle, Scotch thistle	Weed	1	
<b><i>Convolvulus arvensis</i></b> L.	Akkerwinde, Klimop Field bindweed, Wild morning-glory	Weed	1	
<b><i>Cortaderia jubata</i></b> (Lem.) Stapf	Pampasgras Pampas grass	Weed	1	
<b><i>Cortaderia selloana</i></b> (Schult.) Asch. & Graebn. Excluding sterile cultivars	Pampasgras, Silvergras Pampas grass	Weed	1	
<b><i>Cotoneaster franchetii</i></b> Boiss.	Dwergmispel, Oranje cotoneaster Cotoneaster	Invader	3	
<b><i>Cotoneaster pannosus</i></b> Franch.	Silwerdwergmispel Silver-leaf cotoneaster	Invader	3	
<b><i>Cuscuta campestris</i></b> Yunck.	Gewone dodder Common dodder	Weed	1	
<b><i>Cuscuta suaveolens</i></b> Ser.	Luserndodder Lucerne dodder	Weed	1	
<b><i>Cytisus monspessulanus</i></b> L. (= <i>C. candicans</i> (L.) DC., <i>Genista monspessulana</i> (L.) L.Johnson)	Montpellierbrem Montpellier broom	Weed	1	



**TABLE 3** CONTINUED

COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	
Botanical name	Common name	Type	Category	Special conditions
<b><i>Cytisus scoparius</i></b> (L.) Link (= <i>Genista scoparia</i> (L.) Lam.)	Skotse brem Scotch broom	Weed	1	
<b><i>Datura ferox</i></b> L.	Grootstinkblaar Large thorn apple	Weed	1	
<b><i>Datura innoxia</i></b> Mill.	Harige stinkblaar Downy thorn apple	Weed	1	
<b><i>Datura stramonium</i></b> L.	Gewone stinkblaar Common thorn apple	Weed	1	
<b><i>Echinopsis spachiana</i></b> (Lem.) Friedrich & Rowley (= <i>Trichocereus spachianus</i> (Lem.) Riccob.)	Orrelkaktus Torch cactus	Weed	1	
<b><i>Echium plantagineum</i></b> L. (= <i>E. lycopsis</i> L.)	Pers-echium Patterson's curse	Weed	1	
<b><i>Echium vulgare</i></b> L.	Blou-echium Blue echium	Weed	1	
<b><i>Egeria densa</i></b> Planch. (= <i>Elodea densa</i> (Planch.) Casp.)	Waterpes Dense water weed	Weed	1	
<b><i>Eichhornia crassipes</i></b> (C.Mart.) Solms	Waterhiasint Water hyacinth	Weed	1	
<b><i>Elodea canadensis</i></b> Michx.	Kanadese waterpes Canadian water weed	Weed	1	
<b><i>Eriobotrya japonica</i></b> (Thunb.) Lindl.	Lukwart Loquat	Invader	3	
<b><i>Eucalyptus camaldulensis</i></b> Dehnh.	Rooibloekom Red river gum	Invader	2	
<b><i>Eucalyptus cladocalyx</i></b> F.Muell.	Suikerbloekom Sugar gum	Invader	2	
<b><i>Eucalyptus diversicolor</i></b> F.Muell.	Karie Karri	Invader	2	
<b><i>Eucalyptus grandis</i></b> W.Hill ex Maiden ( <i>E. saligna</i> Sm. (p.p.))	Salignabloekom Saligna gum, Rose gum	Invader	2	
<b><i>Eucalyptus lehmannii</i></b> (Schauer) Benth.	Spinnekopbloekom Spider gum	Weed Invader	1: Western Cape 2: the rest of SA	
<b><i>Eucalyptus paniculata</i></b> Sm.	Gryssterbasbloekom Grey ironbark	Invader	2	
<b><i>Eucalyptus sideroxylon</i></b> A.Cunn. ex Woolls	Swartysterbasbloekom Black ironbark, Red ironbark	Invader	2	
<b><i>Eugenia uniflora</i></b> L.	Pitanga Surinam cherry	Weed Invader	1: N Province, KZN & Mpumalanga 3: the rest of SA	
<b><i>Gleditsia triacanthos</i></b> L. Excluding sterile cultivars	Amerikaanse driedoring Soetpeulboom Honey locust, Sweet locust	Invader	2	

**TABLE 3** CONTINUED

COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	
Botanical name	Common name	Type	Category	Special conditions
<b><i>Grevillea robusta</i></b> A.Cunn. ex R.Br.	Australiese silwereik Australian silky oak	Invader	3	
<b><i>Hakea drupacea</i></b> (C.F.Gaertn.) Roem. & Schult. (= <i>H. suaveolens</i> R.Br.)	Soethakea Sweet hakea	Weed	1	
<b><i>Hakea gibbosa</i></b> (Sm.) Cav.	Harige hakea Rock hakea	Weed	1	
<b><i>Hakea sericea</i></b> Schrad. & J.C.Wendl.	Syerige hakea Silky hakea	Weed	1	
<b><i>Harrisia martinii</i></b> (Labour.) Britton & Rose (= <i>Eriocereus martinii</i> (Labour.) Riccob.)	Toukaktus, <i>Harrisia</i> kaktus Moon cactus, <i>Harrisia</i> cactus	Weed	1	
<b><i>Hedychium coccineum</i></b> Sm.	Rooigemmerlelie Red ginger lily	Weed	1	
<b><i>Hedychium coronarium</i></b> J.König.	Witgemmerlelie White ginger lily	Weed	1	
<b><i>Hedychium flavescens</i></b> Roscoe	Geelgemmerlelie Yellow ginger lily	Weed	1	
<b><i>Hedychium gardnerianum</i></b> Ker Gawl.	Kahilgemmerlelie Kahili ginger lily	Weed	1	
<b><i>Hypericum perforatum</i></b> L.	Johanneskruid St John's Wort, Tipton weed	Invader	2	
<b><i>Ipomoea alba</i></b> L.	Maanblom Moonflower	Weed  Invader	1: N Province, KZN & Mpumalanga 3: the rest of SA	
<b><i>Ipomoea indica</i></b> (Burm.f.) Merr. (= <i>I. congesta</i> R.Br.)	Purperwinde Morning glory	Weed  Invader	1: N Province, KZN & Mpumalanga 3: the rest of SA	
<b><i>Ipomoea purpurea</i></b> (L.) Roth	Purperwinde Morning glory	Invader	3	
<b><i>Jacaranda mimosifolia</i></b> D.Don Excluding sterile cultivar 'Alba'	Jakaranda Jacaranda	Invader	3	
All seed producing species or seed producing hybrids of <b><i>Lantana</i></b> that are non- indigenous to Africa	Lantana Tickberry Cherry pie	Weed	1	
<b><i>Lepidium draba</i></b> L. (= <i>Cardaria draba</i> (L.) Desv.)	Peperbos Pepper-cress Hoary cardaria White top	Weed	1	
<b><i>Leptospermum laevigatum</i></b> (Gaertn.) F.Muell.	Australiese mirt Australian myrtle	Weed	1	

**TABLE 3** CONTINUED

COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	
Botanical name	Common name	Type	Category	Special conditions
<b><i>Leucaena leucocephala</i></b> (Lam.) de Wit (= <i>L. glauca</i> Benth.)	Reuse wattel Leucaena	Weed Invader	1: Western Cape 2: the rest of SA	
<b><i>Ligustrum japonicum</i></b> Thunb.	Japannese liguster Japanese wax-leaved privet	Invader	3	
<b><i>Ligustrum lucidum</i></b> Aiton	Chinese liguster Chinese wax-leaved privet	Invader	3	Only for use as root-stock if authorised by the Executive Official in terms of regulation 15c(5)
<b><i>Ligustrum ovalifolium</i></b> Hassk.	Kaliforniese liguster Californian privet	Invader	3	
<b><i>Ligustrum sinense</i></b> Lour.	Chinese liguster Chinese privet	Invader	3	
<b><i>Ligustrum vulgare</i></b> L.	Gewone liguster Common privet	Invader	3	
<b><i>Lilium formosanum</i></b> A.Wallace (= <i>L. longiflorum</i> Thunb. var. <i>formosanum</i> Baker) ( <i>L. longiflorum</i> has sometimes been misapplied to this species in South Africa)	Sintjosefslelie, Trompetlelie St Joseph's lily Trumpet lily Formosa lily	Invader	3	
<b><i>Litsea glutinosa</i></b> (Lour.) C.B.Rob. (= <i>L. sebifera</i> Pers.)	Indiese lourier Indian laurel	Weed	1	
<b><i>Lythrum salicaria</i></b> L.	Purple loosestrife	Weed	1	
<b><i>Macfadyena unguis-cati</i></b> (L.) A.H.Gentry	Katteklouranker Cat's claw creeper	Weed	1	
<b><i>Melia azedarach</i></b> L.	Maksering, Bessieboom 'Syringa', Persian lilac	Invader	3	
<b><i>Metrosideros excelsa</i></b> Sol. ex Gaertn. (= <i>M. tomentosa</i> A.Rich.)	Nieu-Seelandse perdestert New Zealand Christmas tree	Invader	3	
<b><i>Mimosa pigra</i></b> L.	Raak-my-nie Giant sensitive plant	Invader	3	
<b><i>Montanoa hibiscifolia</i></b> Benth.	Montanoa Tree daisy	Weed	1	
<b><i>Morus alba</i></b> L. Excluding cultivar 'Pendula'	Witmoerbe Gewone moerbe White mulberry Common mulberry	Invader	3	Only for use as root-stock if authorised by the Executive Official in terms of regulation 15c(5)
<b><i>Myoporum tenuifolium</i></b> G.Forst. <b>subsp. montanum</b> (R.Br.) Chinnock (= <i>M. montanum</i> R.Br.) ( <i>M. acuminatum</i> misapplied in South Africa)	Manatoka	Invader	3	

**TABLE 3** CONTINUED

COLUMN 1		COLUMN 2	COLUMN 3	COLUMN 4
Botanical name	Common name	Type	Category	Special conditions
<b><i>Myriophyllum aquaticum</i></b> (Vell.) Verdc.	Waterduisendblaar Parrot's feather	Weed	1	
<b><i>Myriophyllum spicatum</i></b> L.	Spiked water-milfoil	Weed	1	
<b><i>Nassella tenuissima</i></b> (Trin.) Barkworth (= <i>Stipa tenuissima</i> Trin.)	Witpolgras White tussock	Weed	1	
<b><i>Nassella trichotoma</i></b> (Nees) Arech. (= <i>Stipa trichotoma</i> Nees)	Nassella polgras Nassella tussock	Weed	1	
<b><i>Nephrolepis exaltata</i></b> (L.) Schott (= <i>Polypodium exaltatum</i> L.) Excluding cultivars	Swaardvaring Sword fern	Invader	3	
<b><i>Nerium oleander</i></b> L. Excluding sterile double- flowered cultivars	Selonsroos Oleander	Weed	1	
<b><i>Nicotiana glauca</i></b> Graham	Wildetabak Wild tobacco	Weed	1	
<b><i>Opuntia aurantiaca</i></b> Lindl.	Litjieskaktus Jointed cactus	Weed	1	
<b><i>Opuntia exaltata</i></b> A.Berger (= <i>Austrocylindropuntia</i> <i>exaltata</i> (A.Berger) Backeb.)	Langdoringkaktus Long spine cactus	Weed	1	
<b><i>Opuntia ficus-indica</i></b> (L.) Mill. (= <i>O. megacantha</i> Salm- Dyck) Excluding all spineless cactus pear cultivars and selections	Boereturksvy Grootdoringturksvy Mission prickly pear Sweet prickly pear	Weed	1	
<b><i>Opuntia fulgida</i></b> Engelm. ( <i>O. rosea</i> misapplied in South Africa)	Roseakaktus Rosea cactus	Weed	1	
<b><i>Opuntia humifusa</i></b> (Raf.) Raf. ( <i>O. compressa</i> (Salisb.) J.Macbr. illegitimate)	Large flowered prickly pear Creeping prickly pear	Weed	1	
<b><i>Opuntia imbricata</i></b> (Haw.) DC. (= <i>Cylindropuntia imbricata</i> (Haw.) Knuth)	Imbrikaatkaktus Kabelturksvy Imbricate prickly pear	Weed	1	
<b><i>Opuntia lindheimeri</i></b> Engelm. (= <i>O. tardospina</i> Griffiths)	Klein rondblaarturksvy Small round-leaved prickly pear	Weed	1	
<b><i>Opuntia monacantha</i></b> Haw. ( <i>O. vulgaris</i> Mill. misapplied)	Suurturksvy, Luisiesturksvy Cochineal prickly pear Drooping prickly pear	Weed	1	
<b><i>Opuntia spinulifera</i></b> Salm-Dyck	Blouturksvy Groot rondblaarturksvy Saucepan cactus, Large round-leaved prickly pear	Weed	1	

**TABLE 3 CONTINUED**

COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	
Botanical name	Common name	Type	Category	Special conditions
<b><i>Opuntia stricta</i></b> (Haw.) Haw. (= <i>O. dillennii</i> (Ker Gawl.) Haw.)	Suurturksvy Pest pear of Australia	Weed	1	
<b><i>Orobanche minor</i></b> Sm.	Klawerbesemraap Bremraap Lesser broomrape Clover broomrape	Weed	1	
<b><i>Paraserianthes lophantha</i></b> (Willd.) Nielsen (= <i>Albizia lophantha</i> (Willd.) Benth.)	Australiese Albizia Stinkboon Australian Albizia Stink bean	Weed	1	
<b><i>Parthenium hysterophorus</i></b> L.	Parthenium	Weed	1	
<b><i>Passiflora caerulea</i></b> L.	Siergrenadella Blue passion flower	Weed	1	
<b><i>Passiflora mollissima</i></b> (Kunth.) L.H.Bailey	Piesangdilla Banana poka, Bananadilla	Weed	1	
<b><i>Passiflora suberosa</i></b> L.	Devil's pumpkin Indigo berry	Weed	1	
<b><i>Passiflora subpeltata</i></b> Ortega	Granadina	Weed	1	
<b><i>Pennisetum setaceum</i></b> (Forssk.) Chiov. Excluding sterile cultivar 'Rubrum'	Pronkgras Fountain grass	Weed	1	
<b><i>Pennisetum villosum</i></b> R.Br. ex Fresen.	Veergras Feathertop	Weed	1	
<b><i>Pereskia aculeata</i></b> Mill.	Pereskia Barbados gooseberry	Weed	1	
<b><i>Phytolacca dioica</i></b> L.	Bobbejaandruifboom Belhambra	Invader	3	
<b><i>Pinus canariensis</i></b> C.Sm.	Kanariese den Canary den	Invader	2	
<b><i>Pinus elliotii</i></b> Engelm.	Basden Slash pine	Invader	2	
<b><i>Pinus halepensis</i></b> Mill.	Aleppoden Aleppo pine	Invader	2	
<b><i>Pinus patula</i></b> Schltfd. & Cham.	Treurden Patula pine	Invader	2	
<b><i>Pinus pinaster</i></b> Aiton	Trosden Cluster pine	Invader	2	
<b><i>Pinus radiata</i></b> D.Don	Radiataden Radiata pine, Monterey pine	Invader	2	
<b><i>Pinus roxburghii</i></b> Sarg. (= <i>P. longifolia</i> Roxb.)	Tjirden Chir pine, Longifolia pine	Invader	2	
<b><i>Pinus taeda</i></b> L.	Loblollyden Loblolly pine	Invader	2	
<b><i>Pistia stratiotes</i></b> L.	Waterslaai Water lettuce	Weed	1	

**TABLE 3** CONTINUED

COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	
Botanical name	Common name	Type	Category	Special conditions
<b><i>Pitiosporum undulatum</i></b> Vent.	Australiese kasuur, Soet pitiosporum Australian cheesewood Sweet pitiosporum	Weed	1	
<b><i>Plectranthus comosus</i></b> Sims (= <i>Coleus grandis</i> Cramer) ( <i>Plectranthus barbatus</i> Andr. misapplied in South Africa)	'Abessiniese' coleus 'Abyssinian' coleus Woolly plectranthus	Invader	3	
<b><i>Pontederia cordata</i></b> L.	Jongsnoekkruid Pickerel weed	Invader	3	
<b><i>Populus alba</i></b> L.	Witpopulier White poplar	Invader	2	
<b><i>Populus X canescens</i></b> (Aiton) Sm.	Vaalpopulier Grey poplar Matchwood poplar	Invader	2	
<b><i>Prosopis glandulosa</i></b> Torr. <b>var. <i>torreyana</i></b> (Benson) Johnst. and hybrids	Heuningprosopis Honey mesquite	Invader	2	
<b><i>Prosopis velutina</i></b> Wooton and hybrids	Fluweelprosopis Velvet mesquite	Invader	2	
<b><i>Psidium cattleianum</i></b> Sabine (= <i>P. littorale</i> Raddi var. <i>longipes</i> (O.Berg.) Fosb.)	Aarbeï koejawel Strawberry guava	Invader	3	
<b><i>Psidium guajava</i></b> L. and hybrids	Koejawel Guava	Invader	2	
<b><i>Psidium guineense</i></b> Sw.	Brasiliaanse koejawel Brazilian guava	Invader	3	
<b><i>Psidium X durbanensis</i></b> Bajjnath ined.	Durbanse koejawel Durban guava	Weed	1	
<b><i>Pueraria lobata</i></b> (Willd.) Ohwi	Kudzuranker Kudzu vine	Weed	1	
<b><i>Pyracantha angustifolia</i></b> (Franch.) C.K.Schneid. Excluding cultivars	Geelbranddoring Yellow firethorn	Invader	3	
<b><i>Pyracantha crenulata</i></b> (D.Don) M.Roem.	Rooivuurdoring Himalayan Firethorn	Invader	3	
<b><i>Rhus succedanea</i></b> L. (= <i>Toxicodendron succedaneum</i> L.) Kuntze	Wasboom Wax tree	Weed	1	
<b><i>Ricinus communis</i></b> L.	Kasterolieboom Castor-oil plant	Invader	2	
<b><i>Rivina humilis</i></b> L.	Bloedbessie Rivina, Bloodberry	Weed	1	
<b><i>Robinia pseudoacacia</i></b> L.	Witakasia Black locust	Invader	2	Only for use as root-stock if authorised by the Executive Official in terms of regulation 15B(10)

**TABLE 3** CONTINUED

COLUMN 1		COLUMN 2	COLUMN 3	COLUMN 4
Botanical name	Common name	Type	Category	Special conditions
<b><i>Rorippa nasturtium-aquaticum</i></b> (L.) Hayek (= <i>Nasturtium officinale</i> R.Br.)	Bronkors Watercress	Invader	2	
<b><i>Rosa rubiginosa</i></b> L. (= <i>R. eglanteria</i> L.)	Wilderoos Eglantine, Sweetbriar	Weed	1	
<b><i>Rubus cuneifolius</i></b> Pursh and hybrid <b><i>R. X proteus</i></b> C.H.Stirt.	Amerikaanse braam American bramble	Weed	1	
<b><i>Rubus fruticosus</i></b> L. agg.	Braam European blackberry	Invader	2	
<b><i>Salix babylonica</i></b> L. Not to be confused with the indigenous <i>S. mucronata</i> Thunb. (= <i>S. capensis</i> , <i>S. subserrata</i> , <i>S. woodii</i> )	Treurwilger Weeping willow	Invader	2	
<b><i>Salix fragilis</i></b> L. Not to be confused with the indigenous <i>S. mucronata</i> Thunb. (= <i>S. capensis</i> , <i>S. subserrata</i> , <i>S. woodii</i> )	Crack or Brittle willow	Invader	2	
<b><i>Salvinia molesta</i></b> D.S.Mitch. and other species of the Family Salviniaceae	Watervaring Kariba weed	Weed	1	
<b><i>Schinus terebinthifolius</i></b> Raddi	Brasiliaanse peperboom Brazilian pepper tree	Weed Invader	1: Kwa Zulu-Natal 3: the rest of SA	
<b><i>Senna bicapsularis</i></b> (L.) Roxb. (= <i>Cassia bicapsularis</i> L.)	Rambling cassia	Invader	3	
<b><i>Senna didymobotrya</i></b> (Fresen.) Irwin & Barneby (= <i>Cassia didymobotrya</i> Fresen.)	Grondboontjiebotterkassia Peanut butter cassia	Invader	3	
<b><i>Senna pendula</i></b> (Willd) Irwin & Barneby <b>var.</b> <b><i>glabrata</i></b> (Vogel) Irwin & Barneby (= <i>Cassia coluteoides</i> Collad.)		Invader	3	
<b><i>Sesbania punicea</i></b> (Cav.) Benth.	Rooi sesbania Red sesbania	Weed	1	
<b><i>Solanum elaeagnifolium</i></b> Cav.	Satansbos Silver-leaf bitter apple	Weed	1	
<b><i>Solanum mauritianum</i></b> Scop.	Luisboom Bugweed	Weed	1	
<b><i>Solanum seafortianum</i></b> Andr.	Aartappelranker Potato creeper	Weed	1	

**TABLE 3** CONTINUED

COLUMN 1		COLUMN 2	COLUMN 3	COLUMN 4
Botanical name	Common name	Type	Category	Special conditions
<b><i>Solanum sisymbriifolium</i></b> Lam.	Wildetamatie Doringtamatie Wild tomatato Dense-thorned bitter apple	Weed	1	
<b><i>Sorghum halepense</i></b> (L.) Pers.	Johnsongras Johnson grass Aleppo grass	Invader	2	
<b><i>Spartium junceum</i></b> L.	Spaanse besem Spanish broom	Weed	1	
<b><i>Syzygium cumini</i></b> (L.) Skeels	Jambolan	Invader	3	
<b><i>Syzygium jambos</i></b> (L.) Alston	Jamboes Rose apple	Invader	3	
<b><i>Tamarix chinensis</i></b> Lour.	Chinese tamarisk	Weed Invader	1: North, West & Eastern Cape 3: the rest of SA	
<b><i>Tamarix ramosissima</i></b> Ledeb.	Perstamarisk Pink tamarisk	Weed Invader	1: North, West & Eastern Cape 3: the rest of SA	
<b><i>Tecoma stans</i></b> (L.) Kunth	Geelklokkies Yellow bells	Weed	1	
<b><i>Thelechitonia trilobata</i></b> (L.) H.Rob. & Cuatrec. (= <i>Wedelia trilobata</i> (L.) A.Hitchc.)	Singapoer-madeliefie Singapore daisy	Weed Invader	1: KwaZulu-Natal 3: the rest of SA	
<b><i>Thevetia peruviana</i></b> (Pers.) K.Schum. (= <i>T. nerifolia</i> A.Juss. ex Steud.)	Geel-oleander Yellow oleander	Weed	1	
<b><i>Tipuana tipu</i></b> (Benth.) Kuntze (= <i>T. speciosa</i> Benth.)	Tipoeboom Tipu tree	Invader	3	
<b><i>Tithonia diversifolia</i></b> (Hemsl.) A.Gray	Mexikaanse sonneblom Mexican sunflower	Weed	1	
<b><i>Tithonia rotundifolia</i></b> (Mill.) S.F.Blake	Rooisonneblom Red sunflower	Weed	1	
<b><i>Toona ciliata</i></b> M.Roem. (= <i>Cedrela toona</i> Rottler)	Toonboom Toon tree	Invader	3	
<b><i>Triplaris americana</i></b> L.	Triplaris Ant tree	Weed	1	
<b><i>Ulex europaeus</i></b> L.	Gaspeldoring European gorse	Weed	1	
<b><i>Xanthium spinosum</i></b> L.	Boetebos Spiny cocklebur	Weed	1	
<b><i>Xanthium strumarium</i></b> L.	Kankerroos Large cocklebur	Weed	1	



**TABLE X** PROPOSED WEEDS AND INVADER PLANTS

COLUMN 1		COLUMN 3
Botanical name	Common name	Category
<b><i>Acacia pendula</i></b> A.Cunn.	Treurwattel Weeping myall, Boree	3
<b><i>Acer buergerianum</i></b> Miq.	Chinese ahorn, Chinese esdoring Chinese maple, Trident maple	3
<b><i>Acer negundo</i></b> L.	Essenblaarahorn, Kalforniese esdoring Ash-leaved maple, Box elder	3
<b><i>Agave americana</i></b> L.	Garingboom American agave	2
<b><i>Agrimonia procera</i></b> L. ( <i>'A. repens'</i> , <i>'A. odorata'</i> )	Akkermonie, Geelklits Scented agrimony	3
<b><i>Albizia julibrissin</i></b> Durazz.	Syboom, Plenk siris Silk tree, Pink siris	3
<b><i>Alnus glutinosa</i></b> (L.) Gaertn.	Swartels Black alder	3
<b><i>Ammophila arenaria</i></b> (L.) Link	Marram grass	2
<b><i>Berberis thunbergii</i></b> DC.	Japannese berberis Japanese barberry	3
<b><i>Brachychiton populneus</i></b> (Schoff & Endl.) R.Br.	Koerajong, Bottelboom Kurrajong, Bottle tree	3
<b><i>Callistemon rigidus</i></b> R.Br.	Perdestert Stiff-leaved bottlebrush	3
<b><i>Cardiospermum halicacabum</i></b> L.	Blaasklimop Lesser balloon vine	3
<b><i>Celtis australis</i></b> L.	Netelboom Nettle tree, European hackberry	3
<b><i>Celtis occidentalis</i></b> L.	Vals witstinkhout Common hackberry	3
<b><i>Celtis sinensis</i></b> Pers.	Chinees netelboom Chinese nettle tree	3
<b><i>Coffea arabica</i></b> L.	Koffieboom Coffee tree	2
<b><i>Coreopsis lanceolata</i></b> L.	Coreopsis Tickseed	3
<b><i>Crataegus pubescens</i></b> (Kunth) Steud.	Mexikaanse meidoring Mexican hawthorn	3
<b><i>Crotalaria agatiflora</i></b> Schweinf.	Voëltjiebos Bird flower, Canarybird bush	3
<b><i>Cynodon dactylon</i></b> (L.) Pers.	Gewone kweek (gras) Bermuda grass, Common couch	2
<b><i>Cyphomandra betacea</i></b> Cav.	Boomtamatie Tree tomato	3
<b><i>Duranta erecta</i></b> L. (= <i>D. repens</i> L., <i>D. plumieri</i> Jacq.)	Vergeet-my-nie-boom Forget-me-not tree, Pigeon berry	3
<b><i>Fraxinus americana</i></b> L.	Amerikaanse esseboom American ash, White ash	3

**TABLE X** CONTINUED

COLUMN 1		COLUMN 3
Botanical name	Common name	Category
<b>Hakea salicifolia</b> (Vent.) B.L.Burtt (= <i>H. saligna</i> (Andr.) Knight)	Wilgerhakea Willow hakea	3
<b>Hedera helix</b> L.	Engelse hедера English ivy	3
<b>Juniperus virginiana</b> L.	Rooiseder, Potloodseder Red cedar, Pencil cedar	3
<b>Leptospermum scoparium</b> J.R.Forst. & G.Forst.	Manukamirt Manuka myrtle, New Zealand tea tree	3
<b>Lolium multiflorum</b> Lam.	Italiaanse raai gras Italian ryegrass	2
<b>Lolium perenne</b> L.	Meerjarige raai gras Perennial ryegrass	2
<b>Lonicera japonica</b> Thunb. 'Halliana'	Japannese kanferfoelie Japanese or Hall's honeysuckle	3
<b>Mirabilis jalapa</b> L.	Vieruurtjie Four-o'clock, Marvel-of-Peru	3
<b>Morus nigra</b> L.	Swartmoerbe Black mulberry	3
<b>Myoporum insulare</b> R.Br.	Manatoka Boobyalla	3
<b>Myoporum laetum</b> G.Forst.	Nieu-Seelandse manatoka New Zealand manatoka	3
<b>Oenothera indecora</b> Cambess.	Nagblom Evening primrose	3
<b>Oenothera rosea</b> L'Herit. ex Aiton	Pienknagblom Pink evening primrose	3
<b>Oenothera stricta</b> Ledeb. ex Link	Soetnagblom Sweet sundrop	3
<b>Oenothera tetraptera</b> Cav.	Witnagblom White evening primrose	3
<b>Passiflora edulis</b> Sims	Grenadella Purple granadilla, Passion fruit	2
<b>Pennisetum clandestinum</b> Hochst. ex Chiov.	Kikoejoegras Kikuyu grass	2
<b>Pennisetum purpureum</b> Schumach.	Olifantsgras Elephant grass, Napier grass	2
<b>Phytolacca octandra</b> L.	Bobbejaandruif, Inkbessie Forest inkberry	1
<b>Pittosporum crassifolium</b> Banks & Sol. ex A.Cunn.	Styweblaarkasuur Stiff-leaved cheesewood, Karo	3
<b>Polypodium aureum</b> L.	Haaspootvaring Rabbit's-foot fern, Blue fern	3
<b>Populus deltoides</b> Bartram ex Marshall (including subsp. <i>wislizenii</i> (= <i>P. wislizenii</i> Sarg.))	Vuurhoutjipopulier Match poplar	2

**TABLE X** CONTINUED

COLUMN 1		COLUMN 3
Botanical name	Common name	Category
<b><i>Populus nigra</i></b> L. var. <b><i>italica</i></b> Münchh.	Italiëanse populier Lombardy poplar	2
<b><i>Populus simonii</i></b> Carrière	Simon populier Simon poplar	3
<b><i>Prunus cerasifera</i></b> Ehrh.	Kersiepruim Cherry plum, Myrobalan plum	3
<b><i>Rhus glabra</i></b> L.	Gladde sumak Smooth sumach, Scarlet sumach, Vinegar bush	3
<b><i>Rosa canina</i></b> L.	Hondsroos Dog-rose	3
<b><i>Rubus flagellaris</i></b> Willd.	Braam Bramble	1
<b><i>Rumex crispus</i></b> L.	Kruifongblaar, Weeblaar Curly dock	3
<b><i>Sambucus canadensis</i></b> L.	Kanadese vlier Canadian elder	3
<b><i>Schefflera actinophylla</i></b> (Endl.) Harms	Australiese kiepersol Australian cabbage tree, Queensland umbrella tree	3
<b><i>Schinus molle</i></b> L.	Peperboom Pepper tree	3
<b><i>Senna septemtrionalis</i></b> (Viv.) Irwin & Barneby (= <i>Cassia floribunda</i> sensu Brenan non Cav., <i>C. laevigata</i> Willd.)	Arsenic bush	3
<b><i>Solanum pseudocapsicum</i></b> L.	Jerusalemkersie Jerusalem cherry	3
<b><i>Syzygium paniculatum</i></b> Gaertn. (= <i>Eugenia myrtifolia</i> Sims)	Australiese waterpeer Australian water pear Australian brush-cherry	3
<b><i>Tamarix aphylla</i></b> (L.) H.Karst.	Woestyntamarisk Athe tree, Desert tamarisk	3
<b><i>Ulmus parvifolia</i></b> Jacq. (= <i>U. chinensis</i> Pers.)	Fynblaarolm, Chinese iep Chinese elm	3

## OTHER SOURCES OF INFORMATION

### GENERAL BOTANICAL INFORMATION

#### Books

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#### Pamphlets

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#### Posters

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## CHEMICAL CONTROL

For the latest information on the application of herbicides and newly registered herbicides, consult the latest edition of the DEPARTMENT OF AGRICULTURE'S 'A guide to the use of herbicides'. Obtainable from the Directorate of Agricultural Information, Private Bag X 144, Pretoria 0001, or on the internet at [www.nda.agric.za](http://www.nda.agric.za) under publications.

For advice on chemical control consult the Agrochemical Companies listed in the aforementioned guide. Advice can also be obtained from the Plant Protection Research Institute, P. Bag X 6006, Hilton 3245. Tel. 033-355 9415/16 Fax. 033-355 9423

## BIOLOGICAL CONTROL

For information and advice on biological control contact:

### **ARC-PPRI, Rietondale**

Private Bag X 134, Pretoria 0001

Tel. 012-329 3269, Fax. 012-329 3278

E-mail [weeds@plant2.agric.za](mailto:weeds@plant2.agric.za) or [riethdb@plant2.agric.za](mailto:riethdb@plant2.agric.za)

### **ARC-PPRI, Cedara**

Private Bag X 6006, Hilton 3245

Tel. 033-355 9420/19/18, Fax. 033-355 9423

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**ARC-PPRI, Stellenbosch**

Private Bag X 5017, Stellenbosch 7600

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E-mail vredtg@plant3.agric.za or vredcl@plant3.agric.za

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**Department of Water Affairs and Forestry, Northern Province****Working for Water Programme**

P.O. Box 1648, Tzaneen 0850

Tel. 015 307 3600, Fax. 015 307 6868

**National Department of Agriculture, DLRM**

see addresses below.

**DECLARED WEEDS AND INVADERS**

For information and advice on "The Conservation of Agricultural Resources Act" (Act 43 of 1983) and law enforcement contact The National Department of Agriculture, Directorate: Agricultural Land Resource Management, DLRM:

**DLRM, Gauteng**

Private Bag X 120, Pretoria 0001. Tel. 012-319 7560, Fax. 012-329 5938

**DLRM, Northern Province**

P.O. Box 3620, Pietersburg 0700. Tel. 015 295 4175, Fax. 015 291 1936

**DLRM, Mpumalanga**

P.O. Box 1665, Nelspruit 1200. Tel. 013 755 1420, Fax. 013 755 1961

**DLRM, North-West**

P.O. Box 2557, Potchefstroom 2521. Tel. 018 294 3343, Fax. 018 297 4642

**DLRM, Northern Cape**

P.O. Box 2303, Kimberley 8300. Tel. 053 831 1793, Fax. 053 832 3101

**DLRM, Free State**

P.O. Box 34521, Faunasig, Bloemfontein 9325. Tel. 051 861 2171, Fax. 051 861 1024

**DLRM, Western Cape**

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**DLRM, Uitenhage**

P.O. Box 330, Uitenhage 6230. Tel. 041 966 1465

**DLRM, KwaZulu-Natal**

P.O. Box 345, Pietermaritzburg 3200. Tel. 033 345 3557, Fax. 033 394 6161

## **PLANT IDENTIFICATIONS**

Dried and pressed plant specimens can be sent to the National Botanical Institute for identification. Clearly print on the package 'Dried specimens for identification'. Address all correspondence to The Director, NBI, P.Bag X 101, Pretoria 0001. Tel. 012-804 3200, Fax. 012-804 3211.

## **SOUTHERN AFRICAN PLANT INVADERS ATLAS (SAPIA)**

SAPIA is a project of the Plant Protection Research Institute. It aims to collect information on the distribution, abundance and habitat types of alien plant invaders in all countries of the Southern African Development (SADC) region. If you would like to participate in this project send your name and address to: Lesley Henderson, SAPIA Co-ordinator, Private Bag X 101, Pretoria 0001. Tel: 012-804 3200, Fax: 012-804 3211; E-mail: lh@nbipre.nbi.ac.za or go to <http://www.agis.agric.za> and look for SAPIA on the 'Weeds and invasive plants' home page.

## **WORKING FOR WATER PROGRAMME**

A national programme, 'Working for Water' (WFW), under the auspices of the Department of Water Affairs and Forestry, is aimed at bringing the problem of plant invasions under control. By clearing invasive alien plants WFW aims to enhance water supply, promote land care, create secondary industries, empower people, conserve natural resources and reduce the intensity of fires and floods.

<http://www-dwaf.pwv.gov.za/Projects/wfw>

Toll free line for information or assistance on invasive plant control: 0800 005 376



# GLOSSARY

## A

- achene**, a dry, hard, indehiscent fruit, formed from a single carpel, as in the Asteraceae.
- acorn**, the fruit of the oak (*Quercus*), composed of a nut and its basal cup.
- alternate**, (of leaves), borne singly at each node, on either side of a stem.
- anther**, the part of a stamen that produces pollen.
- apex**, apical, the tip of an organ (plural: apices)
- areole**, a small pit or raised spot, often bearing a tuft of hairs or spines.
- aril**, an appendage, or an outer covering (or partial covering) of a seed, growing out of the hilum.
- auricle**, an ear-like lobe such as found at the base of a leaf.
- awn**, a hair-like or bristle-like appendage.
- axil**, the angle between a leaf and the stem to which it is attached.
- axillary**, growing in an axil.

## B

- berry**, a pulpy, indehiscent, few or many-seeded fruit.
- bipinnate**, in which the pinnate divisions of a leaf are again pinnately divided.
- biterminate**, (of a leaf), in threes, the primary divisions are again divided into three parts.
- blade**, the flattened and often broad part of a leaf.
- bract**, (1) a reduced leaf subtending or associated with a flower; (2) a scale between the flowers in Asteraceae.
- bur**, a prickly or spiny fruit, or aggregate of fruits.
- butt**, the trunk of a tree, especially the part just above the roots.

## C

- calyx, calyces**, the outer whorl at the base of a flower made up of free or united sepals, usually green.
- capsule**, a dry fruit which splits open.
- catkin**, a flower cluster, normally pendulous; flowers lack petals, are often stalkless, surrounded by scale-like bracts, and are usually unisexual.
- cladode**, a stem, often flattened, with the function and appearance of a leaf.
- compound**, (of a leaf), consisting of several or many leaflets.
- cone**, the clustered flowers or woody, seed-bearing structures of a conifer.
- corolla**, the inner whorl of a flower, composed of free or united petals, usually coloured.
- corona**, a crown, or circular, petaloid appendage between the corolla and the stamens as in the Passifloraceae.
- crisped**, minutely wavy-edged or curled.
- crown**, (canopy), the upper branched part of a tree.

## D

- dehiscent, -ence**, (of fruits), opening to allow the escape of the seeds.
- dioecious**, (of flowers), unisexual, bearing male and female flowers on different plants.
- disc**, receptacle, for example in the flowerhead of Asteraceae, on which the flowers are borne.

**distal**, at or toward the apex, away from the point of attachment.

**donga**, an eroded gully with steep sides.

**drupe**, a fleshy, one-seeded fruit, e.g. a peach.

## E

**ellipsoid**, an elliptic solid.

**elliptic**, (of leaves), broadening in the centre and narrowing towards each end.

**entire**, (of leaves) with even, untoothed or unlobed margins.

## F

**falcate**, sickle-shaped, strongly curved.

**follicle**, a fruit of one carpel, containing more than one seed, dehiscing on the ventral side, as in Asclepiadaceae.

**forest**, a natural vegetation formation type in which trees are dominant; canopies overlapping or touching.

**fynbos**, a natural vegetation formation type in which graminoids (grass-like plants belonging mainly to the Restionaceae), dwarf shrubs and shrubs or trees are dominant.

## G

**glabrous**, without hairs.

**gland**, a structure (hair, cavity etc.) secreting oil or resin; or gland-like body.

**glandular**, covered with glands or gland-tipped hairs.

**globose**, spherical.

**glochid**, a barbed hair or bristle.

**grassland**, a natural vegetation formation type in which grasses and herbs are dominant.

## H

**hilum**, in the seed, the scar or mark indicating the point of attachment.

## I

**impressed**, pressed into; marked with slight depressions.

**inflorescence**, a group or cluster of flowers.

**involucre**, a ring of bracts at the base of or surrounding a flowerhead.

## K

**karoo**, a natural vegetation formation type in which dwarf shrubs (often succulent) or dwarf shrubs and grasses are dominant.

**kloof**, ravine

## L

**lanceolate**, (of leaves), lance-shaped, several times longer than broad and widest below the middle.

**latex**, a colourless or coloured, usually white or yellowish, fluid; often referred to as milky sap.

**linear**, (of leaves), narrow, several times longer than broad.

## M

**membranous**, thin and transparent.

**midrib**, the main, central vein of a leaf.

## N

**node**, the point on a stem where a leaf or leaves arise.

**nutlet**, a hard fruit, with a single seed, which does not open.

## O

**oblong**, longer than broad, and with the sides nearly or quite parallel for most of their length.

**obovate**, inversely ovate, broader above rather than below the middle.

**obtuse**, blunt, rounded.

**opposite**, (of leaves), borne two to each node, one opposite the other.

**ovate**, egg-shaped (a flat surface).

**ovoid**, egg-shaped (a solid).

## P

**palmate**, with three or more parts arising from a single point and radiating outward like the fingers of an open hand.

**panicle**, a branched inflorescence in which the flowers are stalked; a panicle consists of several racemes.

**papillose**, covered with soft protuberances.

**pedicel**, the stalk of a single flower.

**peduncle**, the stalk of an inflorescence.

**petal**, a part of the corolla.

**petiole, -ate**, the stalk of the leaf.

**phyllode**, leaf-like petiole with no blade.

**pinna, -ae**, the ultimate leaflets of a compound leaf.

**pinnate**, a compound leaf in which the leaflets arise on opposite sides of the rachis.

**pinnatifid**, a leaf cut in a pinnate manner, but the incisions do not reach the midrib.

**pistil**, the female element in a flower, consisting of an ovary (containing ovules) bearing a style and stigma.

**pod**, a dehiscent, dry fruit such as in Fabaceae.

**pome**, the fleshy fruit typical of *Pyracantha* and related Rosaceae.

**prostrate**, lying flat on the ground.

**proximal**, at or towards the base, close to the point of attachment.

**pubescent**, covered with fine, short hairs.

## R

**raceme**, an inflorescence consisting of a number of stalked flowers on a central axis, the lower flowers opening first.

**ray-florets**, the strap-shaped florets of a flowerhead, as in Asteraceae.

**rachis**, the axis of a compound leaf (plural: rachises)

**rhizome, -atous**, a stem usually horizontal and below the ground, and which produces rootlets and aerial shoots.

**rhombic**, quadrangular, with the lateral angles obtuse.

**rosette**, a spreading and radiating basal cluster of leaves.

## S

**samara**, an indehiscent, winged fruit.

**savanna**, a natural vegetation formation type in which trees or shrubs and grasses are dominant.

**scalloped**, (of a leaf), with rounded notches on the margin.

**sepal**, a free segment of the calyx.

**septate**, divided by a partition.

**serrate**, with forward-directed teeth on the margin.

**serrulate**, minutely serrate.

**sessile**, without a stalk.

**sheath**, (of a leaf), basal part of a leaf that is wrapped around the stem.

**siliquae**, the two-carpelled fruit that is peculiar to the Brassicaceae, in which two valves fall away, leaving a longitudinal, central column.

**spike**, an inflorescence in which a single axis bears sessile flowers.

**spikelet**, the unit of the grass inflorescence.

**spore**, the minute reproductive structure of flowerless plants e.g. ferns.

**stamen**, the male element in a flower, consisting of the filament and anther.

**stigma**, the female part of the flower, borne at the tip of the style, that receives pollen.

**stipule**, a usually small outgrowth from the stem at either side of the petiole.

**stolon**, a horizontally spreading or arching stem, usually above ground, which roots at its tip to produce a new plant.

**striate**, with fine longitudinal lines or ridges.

**style**, the part of the flower on which the stigma is borne.

**sub-globose**, almost spherical.

**sucker**, a shoot that arises from below ground level, directly from the root or rootstock.

**suture**, a line of opening or dehiscence.

**syncarp**, a compound "fruit" composed of the massed, often more or less coalescent, fruits either of a single flower or of several flowers.

## T

**tendril**, a thread-like structure, used to provide support.

**tuber**, a thickened, usually subterranean, storage organ derived from a stem or root.

## U

**umbel**, usually flat-topped or rounded inflorescence in which the individual flower stalks arise from a central point.

**utricle**, a bladdery, one-seeded, usually indehiscent fruit.

## V

**vlei**, marsh.

## W

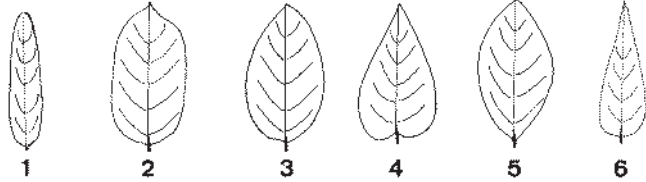
**whorl**, a circle of three or more leaves, flowers, or other organs at one node.

## KEY TO BOTANICAL TERMS

**Leaf shapes (1-6); Leaf parts (7-9); Compound leaves (8-10); Inflorescences (11-14); Flower parts (15-16); Grass spikelet (17).**

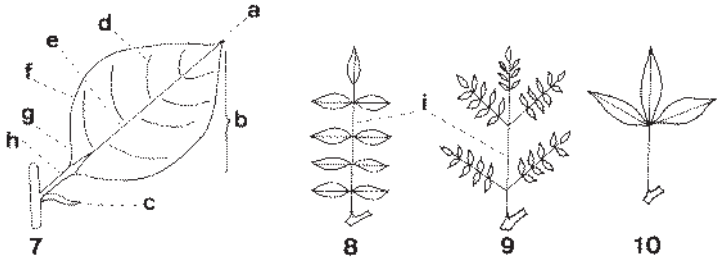
### 1-6: Leaf shapes

1. Linear
2. Oblong
3. Elliptic
4. Ovate
5. Obovate
6. Lanceolate



### 7-9: Leaf parts

- a. Apex
- b. Blade
- c. Stipule
- d. Vein
- e. Midrib
- f. Margin
- g. Base
- h. Petiole
- i. Rhachis

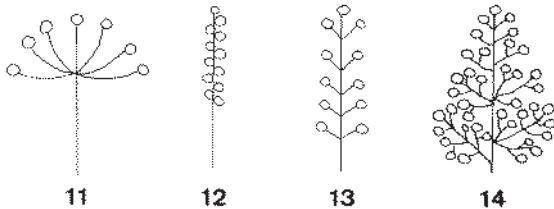


### 8-10: Compound leaves

8. Pinnate
9. Bipinnate
10. Trifoliate

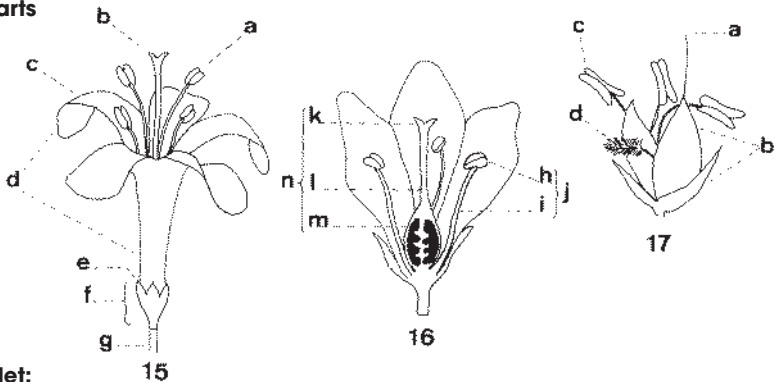
### 11-14: Inflorescences

11. Umbel
12. Spike
13. Raceme
14. Panicle



### 15-16: Flower parts

- a. Stamen
- b. Pistil
- c. Petal
- d. Corolla
- e. Sepal
- f. Calyx
- g. Pedicel
- h. Anther
- i. Filament
- j. Stamen
- k. Stigma
- l. Style
- m. Ovary
- n. Pistil



### 17: Grass spikelet:

- a. Awn
- b. Bracts
- c. Anther on slender filament
- d. Feathery stigma on style

# INDEX OF BOTANICAL AND COMMON NAMES

Family names appear in **CAPITAL LETTERS**.

scientific names in *italics*; **bold** page numbers denote full species accounts

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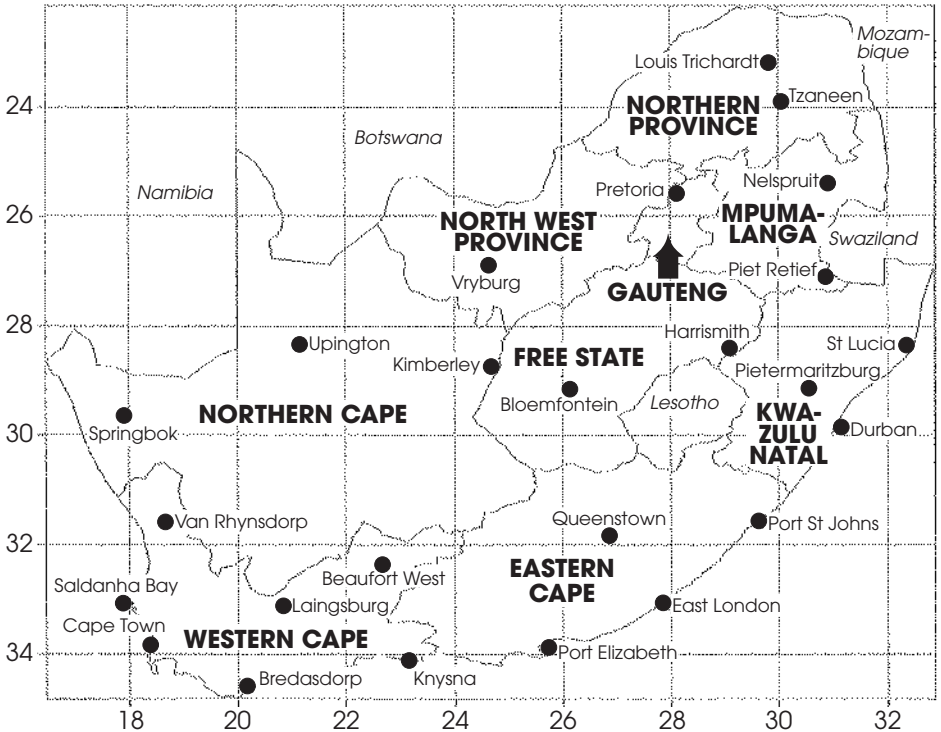
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**SOUTH AFRICA,  
ITS PROVINCES AND SELECTED LOCALITIES,  
IN RELATION TO NAMIBIA, BOTSWANA, MOZAMBIQUE,  
SWAZILAND AND LESOTHO.**



# QUICK GUIDE

## PAGE SYMBOL CLASSIFICATION

10



**GRASSES & REEDS**

19



**AQUATICS**

28



**TERRESTRIAL HERBS**

Spiny stems or fruits

38



Non-spiny

59



**CLIMBERS**

With tendrils

68



Without tendrils

82



**TREES & SHRUBS**

Succulent

agaves: leaves thick and heavy in a basal rosette

84



cacti: leaves usually absent, stems flattened, columnar or cylindrical

97



Woody

almost leafless

101



leaves needle or scale-like

114



leafy and spiny-stemmed

132



leafy and non-spiny, leaves simple  
lobed or deeply incised

142



not lobed, adult leaf blades at least 3x longer than wide

166



not as above

199



leafy and non-spiny, leaves divided  
trifoliate

201



pinnate

218



bipinnate

100 mm

90

80

70

60

50

40

30

20

10

0



DEPARTMENTS  
AGRICULTURE  
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