Beautiful But Dangerous

Invasive Alien Plants of Durban

and the Eastern, Sub-tropical Region of South Africa

with some Indigenous Alternatives

Key

Category 1

Category 2

Category 3

No Category

Note: category numbers are shown on each panel

Herbicide

Biocontrol

Poisonous

Note:
HERBICIDES may be used to control most plants, but this is only shown for those species for which chemicals have been registered.
BIOCONTROL options are shown only for species where biocontrol is effective.

New Weed & Invader Plant Legislation

By the year 2000, 10 million hectares of land in South Africa had been invaded by alien plants. Alien plants have numerous impacts:

- They can increase flood damage.
- They compete with agricultural crops.
- They displace indigenous plants and animals.
- They increase the loss of water from catchments.
- They increase the severity of fires.
- They expand the range of disease-causing organisms.

Despite raising almost R 1 billion to date through national government programmes and working at unprecedented levels, we are not reducing the extent of the invasion. In recognising the threats posed by invasive plants, the national Department of Agriculture has drafted regulations and listed weeds and alien invader plants under the Conservation of Agricultural Resources Act.

The list contains about 200 plants grouped into three categories:

Category 1 Weeds which may not be grown and must be controlled.

Category 2 Invader plants with commercial or utility value, which may only be grown with a permit under controlled circumstances.

Category 3 Invader plants, which have amenity value and which may be grown, but not planted, propagated, imported or traded. You may not grow Category 3 plants within 30 metres of watercourses and the Department may instruct you to control Category 3 plants in other areas.

This Poster's Objective

Prevention of alien plant invasions is far cheaper than control or eradication.

This poster profiles some of the most aggressive weed and invader plants in the Durban Unicity area. Another poster in the series covers problem plants that are often used in horticulture.

The plants on this poster were selected using these criteria:

- **They have or are expected to invade large parts of Durban and are likely to do so in other sub-tropical parts of South Africa.**
- **They are potential transformers of natural habitats.**

Control and Eradication

In practice a combination of mechanical, chemical and biocontrol methods are used to combat alien plants. However, where infestations are light or cover relatively small areas, control is best achieved by mechanical means. Tackle light infestations first and then denser infestations.

Small plants may be pulled out at the roots especially when the soil is moist. Larger plants may need to be dug out at the roots. The secret to success is to tackle the job in a planned way and to diligently follow-up to remove seedlings and regrowth.

For more serious problems herbicides and/or biological control, using natural predators or pests, may be used. It is recommended that professional advice is sought before using these methods.

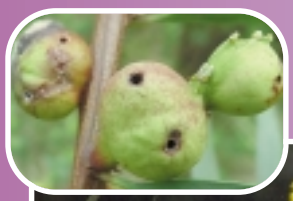
Extent of the Problem

Pearl Acacia (grey) and Triffid Weed (pale green) stand out on a slope dominated by weeds. Each Triffid Weed plant produces over a million seeds a year and the species is coastal KZN's worst weed.

Water Hyacinth covers the water at Clairwood Quarry. Water Hyacinth can double its mass every 18 days as well as produce over 5 000 long-lived seeds from each flower spike.

Yellow Bells tree with saplings escaping cultivation. A global survey of 1060 plant invasions found that in 59 % of the cases horticulture was the source.

South Africa has spent more than R 1 billion on national alien plant control and eradication programmes and is still not reducing the extent of the problem.



Acacia longifolia
Long-leaved Wattle

Category 1

Origin: Australia
Shrub/Tree

Indigenous alternatives:
Euclea racemosa
Bush Guarri
Podocarpus latifolius
Real Yellowwood
Sapium integerrimum
Duiker-berry

Achyranthes aspera
Burweed

Category 1

Origin: Africa? now Pantropical
Herb

Indigenous alternatives:
Asystasia gangetica
Creeping Foxglove
Hypoestes forskaolii
White Ribbon Bush
Justicia betonica
Paper Plume

Above left:
A. conyzoides
Above right:
A. houstonianum

Ageratum conyzoides and *houstonianum*
Invading Ageratum and Mexican Ageratum

Category 1

Origin: South and Central America respectively
Herb

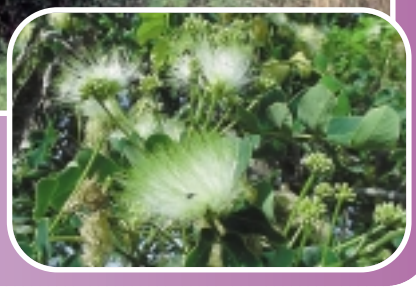
Indigenous alternatives:
Tetraselago natalensis Natal Blue Haze
Vernonia capensis
Narrow-leaved Vernonia
Vernonia natalensis Silver Vernonia

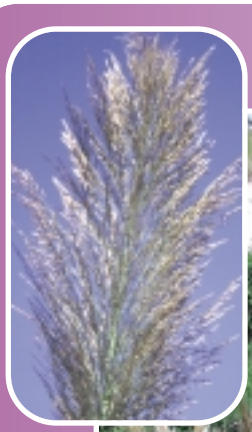
Albizia lebbeck
Lebbeck Tree

Category 1

Origin: Tropical Asia
Tree

Indigenous alternatives:
Acacia sieberiana
Paperbark Thorn
Albizia adianthifolia
Flat-crown
Albizia versicolor
Large-leaved False-thorn





Category 1

Arundo donax
Giant or Spanish Reed

Origin: Mediterranean
Reed

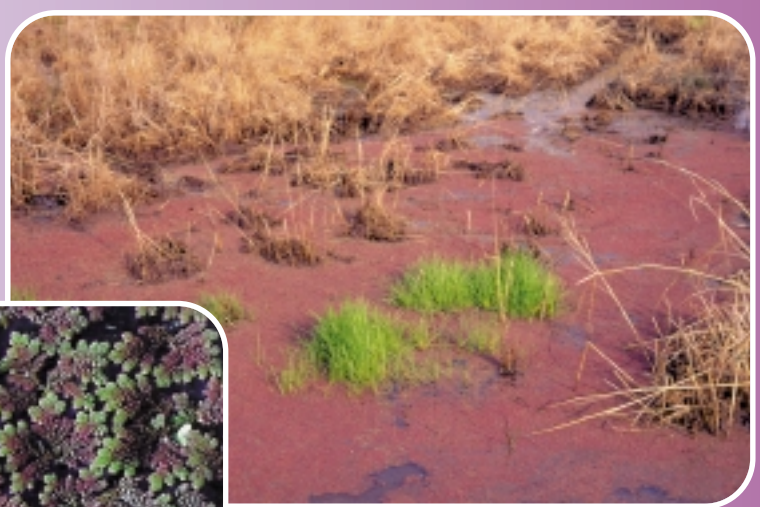
Indigenous alternatives:
Miscanthus capensis
East-coast Broom Grass
Phragmites australis
Common Reed
Typha capensis
Bulrush

Azolla filiculoides
Red Water Fern

Category 1

Origin: North, Central and South America
Floating Fern

Indigenous alternatives:
Ludwigia stolonifera
Creeping Ludwigia
Trapa natans
Water Chestnut
Utricularia inflexa
Bladderwort



Caesalpinia decapetala
Mauritius Thorn

Origin: Europe and Asia
Shrub/Scrambler

Indigenous alternatives:
Acacia kraussiana
Coast Climbing Thorn
Adenopodia spicata
Spiny Splinter Bean
Caesalpinia bonduc
Grey Nickernut Creeper

Category 1

Cardiospermum grandiflorum
Balloon Vine

Origin: Tropical America
Climber

Indigenous alternatives:
Clematis brachiata
Traveller's Joy
Jasminum angulare
Wild Jasmine
Rhoicissus rhomboidea
Glossy Forest Grape

Category 1

Cestrum laevigatum
Inkberry

Origin: South America
Shrub/Tree

Indigenous alternatives:
Kraussia floribunda
Rhino-coffee
Peddiea africana
Poison Olive
Psychotria capensis
Black Bird-berry

Category 1

Above: Young plants

Chromolaena odorata
Triffid Weed

Origin: Central and South America

Shrub/Scrambler

Indigenous alternatives:

Chrysanthemoides monilifera
Bush-tick Berry

Peristrophe cernua
False Buckwheat

Tecoma capensis
Cape Honeysuckle

Category 1

Eichhornia crassipes
Water Hyacinth

Origin: South and Central America

Floating Plant

Indigenous alternatives:

Nymphaea lotus
White Waterlily

Nymphaea nouchali
Blue Waterlily

Nymphoides thunbergiana
Small Yellow Waterlily

Category 1

Above: examples of three colour forms

Lantana camara
Tickberry/Lantana

Origin: Central and South America

Shrub/Scrambler

Indigenous alternatives:

Chrysanthemoides monilifera
Bush-tick Berry

Peristrophe cernua
False Buckwheat

Plumbago auriculata
Plumbago

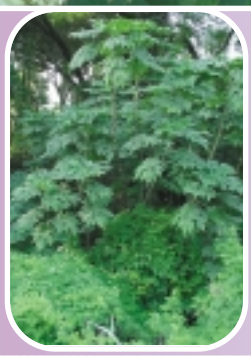
Category 1

Litsea glutinosa
Indian Laurel

Origin: Tropical Asia
Tree

Indigenous alternatives:
Bridelia micrantha
Mitzeeri
Protorhus longifolia
Red Beech
Trichilia dregeana
Forest Mahogany

Category 1



Montanoa hibiscifolia
Tree Daisy/Montanoa

Origin: Central America
Shrub/Tree

Indigenous alternatives:
Dombeya burgessiae
Pink Wild Pear
Rothmannia globosa
September Bells
Xylotheca kraussiana
African Dog-rose

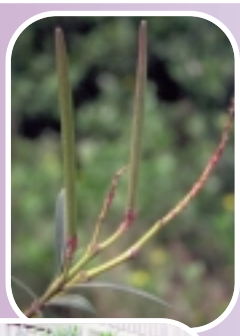
Category 1

Myriophyllum aquaticum
Parrot's Feather

Origin: South America
Aquatic Plant

Category 1

Indigenous alternatives:
Ludwigia stolonifera
Creeping Ludwigia
Sium repandum
Water Parsnip
Trapa natans
Water Chestnut



Nerium oleander
Oleander

Category 1

Origin: Mediterranean
Shrub/Tree

Indigenous alternatives:
Acokanthera oblongifolia
Dune Poison-bush
Bauhinia galpinii
Pride-of-De Kaap
Brachylaena discolor
Coast Silver Oak

Opuntia monacantha
Drooping Prickly Pear

Origin: South America
Succulent Shrub

Indigenous alternatives:
Aloe arborescens
Krantz Aloe
Crassula ovata
Kerky-bush
Portulacaria afra
Porkbush

Category 1

Pereskia aculeata
Barbados Gooseberry/Pereskia

Origin: South and Central America
Climber

Indigenous alternatives:
Acacia kraussiana
Coast Climbing thorn
Combretum bracteosum
Hiccup Nut
Podranea ricasoliana
Port St John's Creeper

Category 1

Young plants

Pistia stratiotes
Water Lettuce

Origin: South America
Floating Plant

Indigenous alternatives:
Nymphaea nouchali
Blue Waterlily
Nymphoides thunbergiana
Small Yellow Waterlily
Trapa natans
Water Chestnut

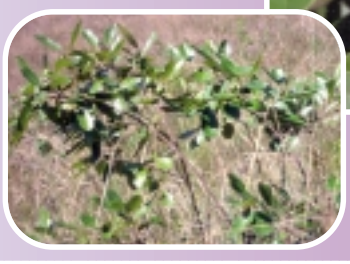
Category 1

Psidium guineense and *Psidium X durbanensis*
Brazilian and Durban Guavas

Category 3
Category 1

Origin: Tropical America and South Africa respectively
Shrub/Tree

Indigenous alternatives:
Eugenia natalitia
Common Forest Myrtle
Lagynias lasiantha
Natal Medlar
Vangueria infausta
Wild Medlar



Above: *P. guineense*
Left: *P. guineense*
Right: *P. X durbanensis*

Category 1

Salvinia molesta
Kariba Weed

Origin: South America
Floating Fern

Indigenous alternatives:
Ludwigia stolonifera
Creeping Ludwigia
Ludwigia palustris
Marsh Ludwigia
Nymphoides thunbergiana
Small Yellow Waterlily

Schinus terebinthifolius
Brazilian Pepper Tree

Origin: South America
Tree

Indigenous alternatives:
Apodytes dimidiata
White Pear
Allophylus natalensis
Dune False Currant
Brachylaena discolor
Coast Silver Oak

Category 1

Sesbania punicea
Brazilian Glory Pea/ Red Sesbania

Origin: South America
Shrub

Indigenous alternatives:
Erythrina humeana
Dwarf Coral Tree
Mundulea sericea
Cork Bush
Tephrosia grandiflora
Large Pink Tephrosia

Category 1

Category 1

Solanum mauritianum
Bugweed

Origin: South America
Shrub/Tree

Indigenous alternatives:
Buddleja saligna
False Olive
Buddleja salviifolia
Sagewood
Solanum giganteum
Healing-leaf Tree

Tecoma stans
Yellow Bells

Category 1

Origin: Tropical America
Tree

Indigenous alternatives:
Ochna natalitia
Natal Plane
Peltophorum africanum
Weeping Wattle
Thespesia acutiloba
Wild Tulip Tree

Tithonia diversifolia
Mexican Sunflower

Category 1

Origin: Central America
Shrub

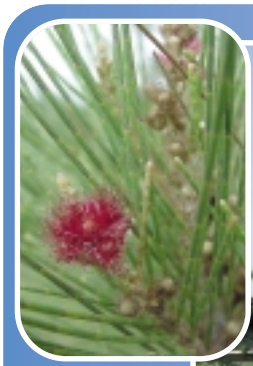
Indigenous alternatives:
Berkheya speciosa
Showy Thistle
Euryops tysonii
Tyson's Resin Bush
Chrysanthemoides monilifera
Bush-tick Berry

Acacia mearnsii
Black Wattle

Origin: Australia
Tree

Indigenous alternatives:
Acacia robusta
Brack Thorn
Acacia karroo
Sweet Thorn
Acacia caffra
Common Hook Thorn

Category 2



Casuarina cunninghamiana
Beefwood

Origin: Australia
Tree

Indigenous alternatives:
Brachylaena discolor
Coast Silver Oak
Dodonaea viscosa
Sand Olive
Psydrax obovata
Quar

Category 2

Casuarina equisetifolia
Horsetail Tree

Origin: Pantropical
Tree

Indigenous alternatives:
Brachylaena discolor
Coast Silver Oak
Dodonaea viscosa
Sand Olive
Psydrax obovata
Quar

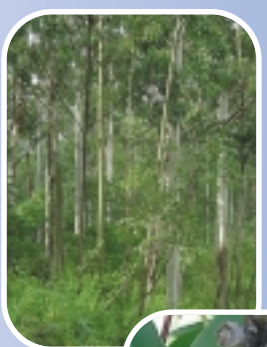
Category 2

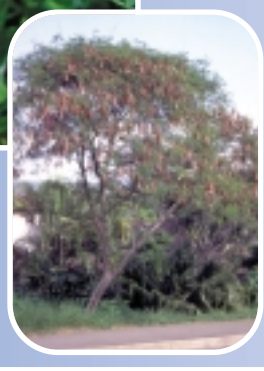
Eucalyptus grandis
Saligna Gum

Origin: Australia
Tree

Indigenous alternatives:
Olea woodiana
Forest Olive
Syzygium cordatum
Umdoni
Syzygium guineense
Water Pear

Category 2





Category 2

Leucaena leucocephala
Leucaena

Origin: Tropical America
Shrub/Tree

Indigenous alternatives:
Acacia karroo
Sweet Thorn
Sesbania sesban
River Bean
Trema orientalis
Pigeonwood

Pinus elliottii
Slash Pine

Origin: North America
Tree

Indigenous alternatives:
Podocarpus falcatus
Common Yellowwood
Podocarpus latifolius
Real Yellowwood

Category 2

Populus X canescens
Grey Poplar

Origin: Europe and Asia
Tree

Indigenous alternatives:
Brachylaena discolor
Coast Silver Oak
Terminalia sericea
Silver Cluster-leaf
Tarchonanthus camphoratus
Wild Camphor Bush

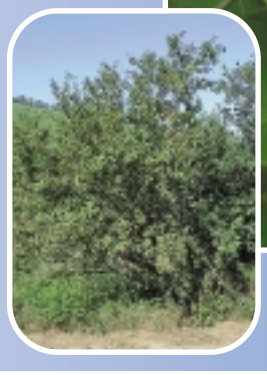
Category 2

Psidium guajava
Guava

Origin: Tropical America
Shrub/Tree

Indigenous alternatives:
Eugenia natalitia
Common Forest Myrtle
Lagynias lasiantha
Natal Medlar
Vangueria infausta
Wild Medlar

Category 2

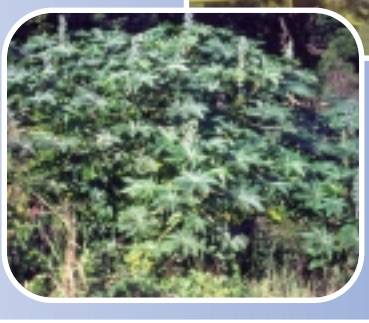


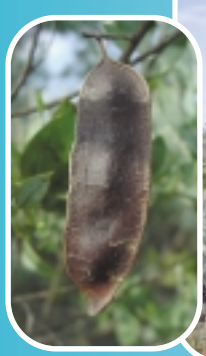
Ricinus communis
Castor-oil Bush

Origin: Tropical Africa
Shrub/Tree

Indigenous alternatives:
Cussonia nicholsonii
Natal Coast Cabbage Tree
Dombeya burgessiae
Pink Wild Pear
Dombeya tiliacea
Forest Wild Pear

Category 2





Acacia podalyriifolia
Pearl Acacia

Origin: Australia
Shrub/Tree

Indigenous alternatives:
Brachylaena discolor
Coast Silver Oak
Tarchonanthus camphoratus
Wild Camphor Bush
Terminalia sericea
Silver Cluster-leaf

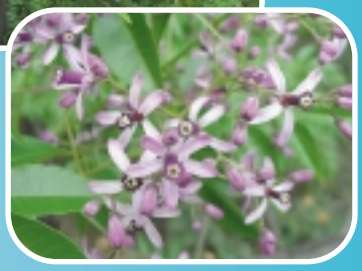
Category 3

Melia azedarach
Syringa

Origin: Asia
Tree

Category 3

Indigenous alternatives:
Bersama lucens
Glossy White Ash
Ekebergia capensis
Cape Ash
Trichilia dregeana
Forest Mahogany



Morus alba
White or Common Mulberry

Category 3

Origin: Asia
Tree

Indigenous alternatives:
Croton sylvaticus
Forest Fever-berry
Ficus sur
Broom Cluster Fig
Trimeria grandifolia
Wild Mulberry

Senna didymobotrya
Peanut Butter Cassia

Origin: Africa
Shrub

Category 3

Indigenous alternatives:
Bauhinia tomentosa
Bush Neat's Foot
Calpurnia aurea
Natal Laburnum
Crotalaria capensis
Cape Rattle-pod

Pennisetum purpureum
Elephant Grass/ Napier Fodder

Origin: Tropical Africa
Tall Grass

Indigenous alternatives:

***Cymbopogon* spp.**
Turpentine Grasses

Miscanthus capensis
East-coast Broom Grass

Phragmites australis
Phragmites Reed

Useful Contacts

For advice and planning of control work:

- Plant Protection Research Institute, Cedara, runs a short course on "Alien Plant Control for Land Managers". Tel: 033-355 9416 or 033-355 9413. E-mail: ntjg@natal1.agric.za
- Your local District Conservation Officer, KZN Wildlife. Tel: 031-764 3515. E-mail: pattrici@kznncs.org.za
- The Ecological Advice Division, KZN Wildlife, Pietermartizburg. Tel: 033-845 1999.
- Alien Buster Campaign, Toll-free line: 0800 005 376.

For information about the use of herbicides contact:

- The Plant Protection Research Institute, Cedara. See above for details. Also http://www.nda.agric.za

For information about the use of biocontrol contact:

- The Plant Protection Research Institute, Pretoria. Tel: 012-329 3269 or 012-329 3770. E-mail: riethdb@plant2.agric.za

To find indigenous plants and professional contractors who remove alien plants:

- The Botanical Society - KZN Coastal Branch. Fax: 031-201 9958. E-mail: plantnet@iafrica.com
- The Wildlife and Environment Society of South Africa (WESSA) - KZN Region. Tel: 031-201 3126. E-mail: wlskzn@saol.com
- Natural Areas Section, Durban Parks Department. Tel: 031-312 4466. E-mail: KateE@prscu.durban.gov.za
- or visit these web sites:
  http://www.wildlifesociety.org.za
  http://environment.durban.gov.za
  http://parks.durban.gov.za
  http://www.botanicalsociety.org.za

For Law Enforcement:

- National Department of Agriculture, Directorate: Agricultural Land and Resource Management, Box 345, Pietermaritzburg, 3200. Tel: 033-345 3515 or 033-345 3557.

Useful References

- Botha, C. and Botha, J. **Bring Nature Back to Your Garden.** A WESSA Handbook with a chapter on alien weeds and lots of suggestions for indigenous alternatives.
- **Conservation of Agricultural Resources Act, 1983** (Act No. 43 of 1983)
- **Guiding Principles for the Landscaping of the Durban Inner City and KwaZulu-Natal Coastal Belt.** A Durban Metro publication available from the cashier at the City Engineer's Building, 166 Old Fort Rd, Durban.
- Grobler, H *et al.* **A guide to the Use of Herbicides.** 17th edition. Available from the National Department of Agriculture, Directorate: Communication, Pvt Bag X144, Pretoria, 0001.
- Henderson, L. **Alien Weeds and Invasive Plants.** Published by the Plant Protection Research Institute of the Agricultural Research Council, Pretoria.
- Moore, J. **Eradicating Invading Alien Plants in KwaZulu-Natal.** This is a cheap and useful publication available from WESSA at 100 Brand Rd, Glenwood, Durban.
- Olckers, T. *et al.* **Biological Control of Weeds in South Africa (1990-1998).** African Entomology. Memoir No. 1. Entomological Society of Southern Africa.

Acknowledgments

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Copies of this poster are available from:

- Durban Unicity Environmental Management Branch, Development and Planning Building, 166 Old Fort Rd, Durban. Tel: 031-300 2517.
- Durban Botanic Gardens, Information Centre, 9A Sydenham Rd, Durban. Tel: 031-201 1303
- Wildlife and Environment Society of SA, 100 Brand Rd, Glenwood, Durban. Tel: 031-201 3126.
- Botanical Society of SA. Fax: 031-201 9958.

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