Maryborough City Council

To contact us:
Maryborough City Council
431-433 Kent Street
Maryborough Qld 4650

T: 07 4190 5800
F: 07 4123 1470
E: council@maryborough.qld.gov.au

www.maryborough.qld.gov.au

Produced as a community service by the
Fraser Island Defenders Organisation
and the Maryborough City Council
in cooperation with
Queensland Parks and Wildlife Service.

Acknowledgement:

The photographs in this publication were kindly supplied to the Maryborough City Council by Sheldon Navie.
More information can be obtained from the "Declared Plants of Australia" CD-ROM, published by The Centre for Biological Information Technology. See their website at www.cbit.uq.edu.au.

Weed Control on Fraser Island







Guidelines for Eurong Residents of Fraser Island

MARYBOROUGH
City Council

Welcome...

This booklet sets out guidelines for the control of weeds in and around Eurong. It has been prepared to provide you with an easy reference guide both to help you identify the seven most easily recognised and most troublesome weeds which may occur on your property or in areas in or around the township and to advise you of the most effective method of eradication.

As you may already have observed, plants introduced to the gardens of the properties in the township are spreading throughout the town area and out into the National Park. As residents and lovers of this natural wonderland, you will be able to help stop the degradation of the natural vegetation by helping to eradicate those plants innocently introduced into residents' gardens in the past.

By removing them wherever you see them and planting the recommended plants native to Fraser Island, you can help to give your township a natural, Fraser Island look that will appeal to all and help to stop the spread of weeds into the National Park.

The Environmental Protection Agency and the Queensland Parks and Wildlife Service have identified 126 plants that are pests on Fraser Island, but if residents were to eradicate the seven most easily recognized plant pests in and around the town a great step will have been made.

For further information and assistance with weed identification and control, contact the Queensland Parks and Wildlife Service Eurong Office which has produced a very helpful document on the weeds and other pests of Fraser Island.

Please remember that any plants brought from outside Fraser Island to the island can easily become weeds and can introduce seeds. They can also unwittingly carry alien ants, worms, cane toads and other pests detrimental to the ecology of Fraser Island.

Soil introduced with pots and plants may also carry very serious micro-organisms which could impact heavily on Fraser Island such as *Phytophthera cinnammomi* which is common in many home gardens but can be devastating in the natural environment.

It is also illegal to take any plant, soil, etc on to Fraser Island - (Recreation Areas management By-law 1991)

Contents

Prevent the Introduction of New Pest Species *(flora and fauna)*

Every weed on Fraser Island was taken there and most escaped from people's gardens. Once established in the wild they are much more difficult to find and eradicate and they can spread easily. That is why the weeds need to be attacked at the centres of infestation which are in the villages and mainly close to buildings.

Certain weeds found at Eurong but not included in this booklet, such as Mother of Millions, Mother-in-Law's Tongue and Fishbone Fern can be easily spread if not disposed of correctly. They should be placed in garbage bags and placed in the rubbish bins so that they cannot spread further on Fraser Island.

Don't plant anything in your garden unless it is certified as safe by the QPWS. You may be spreading plants which have the potential to be major weeds if they escape into the forest by being spread by birds and animals.

If you have existing pot plants, do not remove the soil on the island but have them removed to the mainland for disposal. Don't dump garden waste in the bushland, this will cause weed spread. Place all garden waste in bags and deposit in the bins provided at the Eurong Refuse Site.

Inspect your property and surrounding areas to see and identify the weeds that might be there.

Alternative Fraser Island Plants for the Garden

Native Alternative:	***Instead of*:**
Cabbage tree palm *(Liverstonia australis)* *(Liverstonia decipiens)*	**Coconut palms**
Midyim *(Austromyrtus dulcis)*	**Fox-tail asparagus fern** *(Asparagus aethiopicus)*
Wedding bush *(Ricinocarpus pinifolius)*	**Lantana or Easter cassia** *(Lantana camara or Senna pendula)*
Woombye *(Pheblium woombye)*	**Lantana or Easter cassia** *(Lantana camara or Senna pendula)*
Hop bushes *(Dodonaea triquetra)*	**Lantana or Easter cassia** *(Lantana camara or Senna pendula)*
Tea trees *(Leptospermum semibaccatum)* *(Leptospermum petersoni)*	**Lantana or Easter cassia** *(Lantana camara or Senna pendula)*
Banksias *(Banksia errata)* *(Banksia aemula)* *(Banksia integrifolia)*	**Broad-leafed pepper tree** *(Schinus terebinthifolia)*
Cotton tree *(Hibiscus tiliaceus)*	**Broad-leafed pepper tree** *(Schinus terebinthifolia)*
Pandanus *(Pandanus tectorius stradbrokensis)* *(Pandanus tectorius pedunculatus)*	**Broad-leafed pepper tree** *(Schinus terebinthifolia)*
Moreton Bay ash *(Corymbia (Eucalyptus) tessillaris)*	**Broad-leafed pepper tree** *(Schinus terebinthifolia)*

Green panic or Guinea grass

(Panicum maximum)

Green panic seed heads

Origin:
South Africa.

Use:
Pasture.

Reproduction & Spread:
Large, hardy seeds are produced in spring, summer and autumn and are spread by vehicles.

Distribution on Fraser Island:
This species occurs beside the roads in Eurong.

Biological Control:
None.

Physical Control:
Tussocks may be dug up and bagged. Regular mowing will prevent it seeding and gradually eliminate it permanently.

Chemical Control:
The plants may be sprayed with 1% Glyphosate in water when vigorously growing.

More than Weeds

It is not only weed invaders which threaten to change the natural character of Fraser Island. Fraser Island is free of many larger pest species such as feral pigs, foxes, goat and rabbits which have so badly impacted on other parts of Australia. However, Cane toads have devastated the fauna population and there are other smaller less obvious pests which could be even more devastating.

Imported soil may carry some serious pathogens such *as Phytophthera cinnamomi* (Cinnamon fungus) which attack the root systems of native plants causing them to die. Worse, once on Fraser Island, the spores of such pathogens can be spread far and wide and would have a devastating impact on the natural vegetation.

Fire Ants have demonstrated the potential dangers of introduced ants. Many ant species hitch-hike to establish new territories in pot plants and nursery stock. Fraser Island has over 300 species of native ants, many of which could be threatened by introductions.

Alien ants could easily be transported to Fraser Island with almost any building material but they would be most likely to hitch-hike (as did the Fire Ants in Brisbane) on potted plants.

These potential threats could be introduced to Fraser Island with any pot plants or soil or spread with the movements of such material.

List of Seven Weeds Common In and Around Eurong

How to Eradicate Them
Follow the instructions which accompany the description and photograph of each plant as given on the following pages.

When Using Herbicides
Always follow the manufacturer's directions.
Avoid spraying on windy days to prevent spraying yourself, others and non-target species.
Always wear protective clothing (gloves, face mask, eye protection and overalls).
Take care when cleaning equipment to avoid unwanted poisoning of non-target plants.

You can find lists of what to plant instead of these weeds towards the end of the booklet (P9).

PLEASE NOTE:
Digging up plants from the wild is not a successful way to grow native plants and will not help to conserve the vegetation on Fraser Island which is the goal of this endeavour.

Easter cassia
(Senna pendula)

Origin:
Tropical South America.

Use:
Ornamental.

Description:
Easter cassia forms a rounded bush up to 1.5 m high, with distinctive round leaves. It is covered in yellow 5-petal flowers from Easter through winter.

Reproduction & Spread:
Flowering in April to June, this plant produces hard-coated seeds in brown bean-like pods.

Management:
The species is intolerant of frequent fires. Fire can be used to suppress stands of Easter cassia in asset protection zones.

Biological Control:
None.

Physical Control:
Small plants can be hand pulled, but medium to large plants have too tough a root system for pulling. Beans on plants to be killed should be hand pulled and bagged before treatment.

Chemical Control:
Cut stump with 50% Glyphosate (e.g. Roundup).
Foliar spraying with 1.5% Glyphosate is not as effective as cut stumping.
Basal bark or cut stump treatment with Triclophyr (Garlon) with or without Picloram.
Basal bark spraying with Triclophyr (Garlon) and diesel does not work.

Groundsel bush
(Baccharis halimifoli)

Groundsel in flower

Origin:
North America.

Use:
Ornamental.

Reproduction & Spread:
In Autumn, groundsel bushes produce massive numbers of tiny seeds, each with a “parachute” of white hairs. These seeds are blown very large distances by the wind. Groundsel bush seeds blow across the Strait from the mainland. Seeds have no dormancy, germinating as soon as there is sufficient soil moisture (Parsons & Cuthbertson 1992).

Management:
Maintain dense ground cover of shrub and tree layers. Fires result in coppicing from the base of plants. Burning is thus not an effective aid to control.

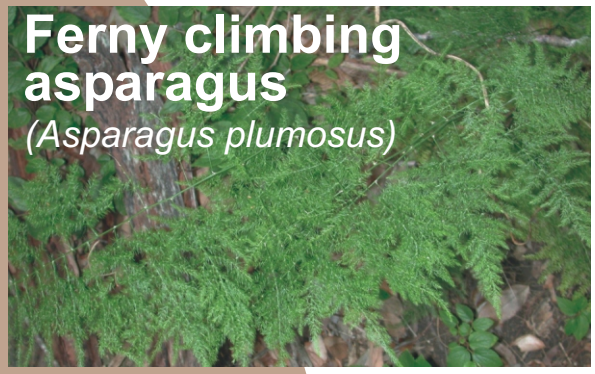
Biological Control:
Some control with the gall midge Rhopalomyia californica, the stem-boring beetle Megacyllene mellyi and the larvae of Oidaematophorus balanotes. Two type of rust fungus have also been released. The most recent was released by QPWS and NRME in 1999, for which a monitoring project has been set up. In the first three years of this trial, the rust had spread considerably and was affecting the vigour of the adult plants, but it remains to be seen if control of the plant will occur. Rust infected plants should be spread into uninfected populations.

Physical Control:
Hand pull seedlings. Small plants usually develop a large root system rapidly, so that hand pulling is no longer effective.

Chemical Control:
1.5% Glyphosate foliage spray will usually kill most plants, but avoid spraying during cold or dry spells. Do not use a higher concentration as burning off of foliage without systemic absorption occurs. Brands containing wetting agents non-toxic to frogs (e.g. Roundup Bioactive) are recommended in swampy areas.
Cut stump or basal bark with 11:120 Triclopyr 600g/L (Garlon): diesel.
Cut stumping with Glyphosate 0.7 to 1L/100L (use higher rate in winter) will also usually work.

Ferny climbing asparagus

(Asparagus plumosus)



Ferny climbing asparagus seeding

Origin:
South Africa.

Use:
Ornamental.

Description:
The dark green spiny stems (2-3 mm in diameter) of ferny climbing asparagus can climb up other vegetation for metres. Up to 10-needle like leaves (5 mm long) emerge from points along the branching stems.

Reproduction & Spread:
Flowering in summer, this plant produces small black berries, 5-6 mm across, which are eaten by birds. The above ground branches originate at an underground crown with lots of thick roots radiating out from it. The plants can regrow from these crowns.

Management:
All moist forested areas should be surveyed for this weed. Ferny asparagus readily replaces shoots from resources stored in the crown, so plants soon replace shoots lost during fires.

Biological Control:
None.

Physical Control:
The crown of the root system must be dug out with a spade.
The crowns should then be burnt.

Chemical Control:
Foliar spraying is not effective because of the fine nature of the foliage.
In trials at Sandy Cape Lighthouse, Triclophyr (Garlon) and diesel caused dieback but not death and Fluroxypyr 200g/L (Starane 200) and diesel (35 ml to the litre) resulted in about 60% mortality of crowns.
Native plants were greatly affected by the drift and high mortality resulted.

Lantana

(Lantana camara)

Lantana flower

Origin:
Tropical South America.

Use:
Ornamental.

Description:
Lantana forms a rounded bush up to 3 m tall with prickly branches and has leaves with the distinct “lantana” smell. Flowers varying from pink to yellow, orange and red crowd into a head 2-3 cm across. Purple to black berries are 4-5 mm across.

Management:
Shade out Lantana by rehabilitation with dense forest. Keep disturbance to a minimum.

Reproduction & Spread:
Flowering all year round, Lantana produces fruit that is spread by birds. Branches often sag to the ground and grow roots where they contact the soil. These must be killed separately. Lantana spreads into dense forest along firebreaks and roads.

Biological Control:
Limited success with Lantana mealybug, Phenacoccus parvus and Lantana lacebug, Teleonemia scrupulosa in Queensland. Other insects include the Agromyzid fly, Ophiomyia lantanae which feeds on the fruit and the leaf mining beetles Octotoma scabripennis and Uroplata girardi, which have been successful in Queensland and northern NSW. Lantana rust Prospodium tuberculatum has also been introduced to Fraser Island, though it is too early to tell the effectiveness.

Physical Control:
Small to medium plants growing in sand are easy to hand pull. Burn area regularly.

Chemical Control:
Spot spray actively growing plants with 1% Glyphosate (360/Roundup) in water to cover all foliage.
Cut stump with 10 to 50% Glyphosate (e.g. Roundup). A brush hook and trigger spray works well.
Spot spray with Triclopyr (Garlon) at 0.35-0.5% or Fluroxypyr 200g/l (Starane) at 0.35-0.75%, or Metasulfuron methal (Brush-Off) 10g/100L + 2mL/L wetting agent; all in water.
Cut stump or basal bark with Triclopyr 600g/L (Garlon) at 1.6 % in diesel.
Spot spray with 0.5% Glyphosate (e.g. Roundup) plus wetting agent (e.g. 0.25% Spraymate Bondcrete) in water by gas gun (500L/ha).
Spot spray plants with Glyphosate (e.g. Roundup) and re-seed site soon after spraying, spray regrowth with a selective herbicide.

Singapore daisy

(Sphagneticola trilobata)

Singapore daisy flower

Origin
Tropical America.

Use:
Ornamental.

Description:
Singapore daisy grows to a height of 30 cm with yellow daisy-like flowers (11 petals). This runner spreads by suckering from nodes.

Reproduction & Spread:
Flowering through most of the year, this plant spreads mostly by underground stems.

Management:
Susceptible to fire. Infestations should be raked around to provide a firebreak. Fuel, such as dry branches, should be piled on the weed and set alight.

Biological Control:
None.

Physical Control:
Complete removal by hand is effective, but can prove difficult due to the brittleness of the stems and the persistence of the roots. Mowing close to the ground often provides effective control.

Chemical Control:
Metasulfuron methyl (Brushoff) 10g/100L of water is recommended but will require repeated treatments to kill regrowth.
Metasulfuron methyl (Brushoff) is better than Glyphosate because it is more selective. Glyphosate kills the tops but it will grow back.

Fox-tail asparagus

(Asparagus aethiopicus)

Fox-tail asparagus seeding

Origin:
South Africa.

Use:
Ornamental.

Description:
Fox-tail asparagus has spiny stems 30-60 cm long spreading from a central node. The root system with its distinctive oblong translucent tubers also grows from this point.

Reproduction & Spread:
Red berries are spread by birds. White translucent tubers are produced by the roots but do not produce new plants.

Management:
Infestations should be marked with star pickets and GPS coordinates taken so treated sites can be checked for regrowth.

Biological Control:
None.

Physical Control:
Dig out and burn or bag the crowns before flowering occurs. Care should be taken as this is a prickly species. Regrowth is highly likely.

Chemical Control:
Spray or spotspray regrowth with Dicamba (Kamba-nufarm).
Spray with Glyphosate (Roundup) 1:100 + Pulse 1:500.
Glyphosate without wetting agent does not work.
Spray with diesel.