

Executive summary

This report reviews the Taranaki Regional Council's performance and achievement on its pest plant management functions for the 2008/2009 year. The report also fulfils the Council's statutory obligation under section 85 of the Biosecurity Act 1993 to review and report back on its performance as management agency with respect to activities undertaken under the *Pest Management Strategy for Taranaki: Plants, 2007*.

Set out below is a summary of the main activities carried out by the Council in 2008/2009:

- The 2008/2009 year was a particularly productive year for the Council in relation to pest plant management functions as more staff resources were deployed. The previous year the Okato oil spill had resulted in staff being redeployed to the oil spill response resulting in less work on plant pests. A combination of increased use of technology and the availability of staff resources led to a concerted focus this year on environmental weeds such as pampas and *Gunnera*.
- In 2008/2009, the number of properties identified as having significant infestations of 'containment pest plants' (i.e. Category C properties) slightly decreased with Council officers undertaking 389 inspections of Category C properties. However, due to the increased focus on property inspections by the Council, there was a significant increase in the number of inspections of Category B properties (2,161 up from 937 the previous year), and Category A properties (5,934 up from 4,267 the previous year).
- The increased level of monitoring of properties led to an increase in the number of notices directing land owners to comply with strategy rules. In total, 436 (up from 274) Notices of Direction to control pest plants were issued. All the Notices (which expired before 30 June 2009) were complied with and there was no subsequent need for further enforcement action.
- For example, 213 notices of direction were issued to landowners to either require that they comply with the Strategy and either destroy pampas plants not part of hedgerows, or to take measures to prevent the flowering or seeding of pampas plants in hedgerows or shelterbelts.
- The Council continued its programme of monitoring the effectiveness of the release of biological control agents in the region.
- The Council inspected 36 plant nurseries and retail outlets in Taranaki to ensure they are not selling, propagating or distributing pest plants. In conjunction with these inspections the Council looked for, enforced and provided information on pest plants banned from sale, propagation and distribution under the National Pest Plant Accord.
- The Council received and responded to 395 requests for information from the public about weeds and other plants this financial year (up from 285 the previous year).
- In relation to 'eradication pest plants' the Council treated 75 properties and directed land occupiers to treat a further 13 infestations.
- Through its pest plant management activities, the Council in conjunction with the community, has restricted the spread of invasive pest plants and protected agricultural production values and environmental values in the region.

Table of contents

1.	Introduction	1
1.1	Purpose	1
1.2	Background	1
1.2.1	Objective	1
1.2.2	Performance measures	1
2.	Report on progress	2
2.1	Providing information on pest plants	2
2.1.1	Didymo social marketing campaign	2
2.2	Inspection and monitoring programme	3
2.2.1	Property inspections	3
2.2.2	Monitoring	4
2.2.3	Notices and enforcement	5
2.3	Biological control programmes	6
2.4	Response to public complaints	8
2.5	Plant nursery and retail outlet inspections	8
2.6	Direct control of 'eradication pest plants'	9
2.7	Monitor, provide advice and, if necessary, implement small-scale control of unwanted plant organisms	10
3.	Conclusion	13
	Appendix I: Pest plants of the Taranaki region	15

1. Introduction

1.1 Purpose

This report reviews the Taranaki Regional Council's performance and achievement on its pest plant management functions for the 2008/2009 year.

1.2 Background

The Taranaki Regional Council ('the Council') has accepted responsibility for pest plant management in the Taranaki region, a responsibility enabled by the Biosecurity Act 1993.

Under the Biosecurity Act, the Council prepared and adopted the *Pest Management Strategy for Taranaki: Plants* (2007). The Strategy provides a strategic and statutory framework for the control and eradication of plants identified as pests in the Taranaki region. Through the Strategy, the Council is also empowered to exercise the relevant advisory, enforcement and funding provisions available under the Biosecurity Act.

1.2.1 Objective

The overall objective for pest plant management activities for 2008/2009, as set out in the Council's *2008/2009 Annual Plan* is to:

"Control or eradicate pest plants to minimise their adverse effects on biodiversity, primary production and the regional economy and environment."

1.2.2 Performance measures

In response to the above objective, the Council adopted the following performance measures for 2008/2009, as set out in the Council's *2008/2009 Annual Plan*:

- *Implement and regularly review the Council's Pest Management Strategy for Taranaki: Plants 2007 which, in brief, comprises:*
 - *undertaking the direct control and eradicating all known infestations of Senegal tea, climbing spindleberry, mignonette vine, giant reed and Darwin's barberry in the region*
 - *confining the spread of and, where appropriate, reducing the extent of 'eradication' and 'containment' pest plants through a programme of inspections and, where necessary, enforcement on all Category C properties at least three times per year, on all Category B properties at least once per year, and on Category A properties as time permits*
 - *developing and implementing biological control programmes for old man's beard, giant buttercup, ragwort, gorse, nodding and plumeless thistles*
 - *responding to and taking necessary actions on all pest plant complaints within five days of receipt*
 - *undertaking a publicity and education programme in relation to the control of mignonette vine, Darwin's barberry and Gunnera.*
- *Monitor, provide advice on and, if necessary, implement small-scale control of unwanted plant organisms.*
- *Implement the National Pest Plant Accord, inspecting all plant nurseries and retail outlets to promote and, where necessary, enforcing the prohibition from propagation, sale or distribution of specified unwanted plant organisms.*

2. Report on progress

2.1 Providing information on pest plants

Each year, the Council receives numerous requests from the public for information on pest plant management. In 2008/2009, the Council received and responded to 395 public enquiries relating to pest and other harmful plants, including poisonous plants (Table 1).

Table 1 Number of public enquiries

Number of public enquiries				
2004/05	2005/06	2006/07	2007/08	2008/09
239	232	586	285	395

The Council continued to undertake an advice and education campaign informing land occupiers and contractors of obligations to control pest plants – particularly *Gunnera* and common and purple pampas.



Pampas

Educating landowners on the rules in the *Pest Management Strategy for Taranaki: Plants* is particularly important given the transition regime in the Plan whereby landowners are required to destroy all pampas plants that are not part of hedgerows, control the flowering of pampas used as a hedgerow or shelterbelt up until 2012 and after that, destroy all pampas plants. Educating landowners about these provisions of the Strategy is the Council's first approach in preparing landowners for the requirements in 2012 to eradicate all pampas.

The Council also continued to provide advice and education in the form of pamphlets addressing land occupier obligations.

Council officers, as part of the Council's inspection programme, also provide the land occupier with information on the control of any infestations of 'regional surveillance' pest plants, National Accord pest plants and other harmful plants.

2.1.1 Didymo social marketing campaign

On behalf of Biosecurity New Zealand, the Council ran another social marketing programme to raise awareness of the importance to users of waterways of following the 'check, clean, dry' behaviour when moving between waterways. Didymo is a highly invasive freshwater algae that is currently only found in the South Island. Human activity has been identified as the biggest risk of spreading this microscopic diatom from one waterway to another.

The Council employed a summer student to carry out the project for the Taranaki region. The target audiences were anglers, 'boaties, four wheel drivers, trampers, kayakers and recreational swimmers'. Following the success of the previous summer's programme, the Council distributed publicity material prepared by Biosecurity New Zealand to a range of stores. Council staff were provided with a refresher presentation to remind them of the importance of carrying out the 'check, clean, dry procedures' to ensure Council was demonstrating good water behaviour. A determined effort was made to erect didymo signs along key waterways and recreational points.

Media were used to promote the didymo message, as were school groups doing river studies with the Council. Finally, the student visited popular recreation sites to talk with public and distribute didymo publicity material.



Check, clean, dry.

2.2 Inspection and monitoring programme

2.2.1 Property inspections

The Council implements a programme of property inspections to ensure occupiers are complying with any strategy rules requiring them to control pest plants on their land. The inspection programme is based on the following categories:

Category A refers to an inspection category assigned to rural or urban properties that have no recent problems relating to the management of eradication pest plants or containment pest plants.

Category B refers to an inspection category assigned to rural or urban properties that have had a problem relating to the management of eradication pest plants or containment pest plants, within the last three years, but which are now being managed to the satisfaction of the Taranaki Regional Council.

Category C refers to an inspection category assigned to a rural or urban property that, in the opinion of an Authorised Person of the Taranaki Regional Council, has had a problem relating to the management of eradication pest plants or containment pest plants.

In 2008/2009, Council undertook 389 inspections of Category C properties, undertaking three inspections on each property. On the first visit, Council officers inspect the property and, if need be, provide information to the occupier on the best timing and treatment methods for effective pest plant control. On a second visit, officers check progress with respect to the implementation of advice and, if necessary, serve a Notice of Direction (the first step towards possible enforcement action). On the third visit, officers confirm whether the occupier has undertaken effective pest plant

control. In the event that the occupier has not, enforcement action would generally follow.

More properties have been classified as Category C over the last few years (Figure 1) because of the Council's shift in focus from agriculture pest plants, where compliance is now generally high, to the environmental pest plants such as old man's beard, *Gunnera*, pampas grass and wild ginger. It is anticipated that as compliance with the Strategy improves, the number of Category C properties will decrease.



Figure 1: Number of Category C properties

In 2008/2009, Council undertook 2,161 inspections of Category B properties (up from 937 properties the previous year). Inspections were undertaken at least once on each property, to confirm that pest plants were being managed effectively on these properties. Where appropriate, Council officers provided advice on pest plant control or, if necessary, issued notices of direction as described above.

Council officers also visited 5,934 Category A properties, an increase from the previous year from 4,267 properties. These inspections were carried out in association with education about environmental weeds such as pampas and *Gunnera*, urban surveys covering several townships in the region, responses to public complaints about pest plant infestations or in response to requests for information from land occupiers.

2.2.2 Monitoring

In addition to inspecting private properties, Council also undertakes other survey work. This year the focus was to determine extent of pampas and *Gunnera* infestations. An aerial survey being carried out in relation to an unauthorised incident was used to also survey land occupier compliance with the Strategy and identify any properties not yet included in the inspection programme. Surveying from the air for species such as ragwort provides a good indication of the impact biological control agents are having.



Gunnera

Council staff also annually inspect road and railway corridors when they are out and about in the region. All state highways and rural roads are inspected and advice provided to the controlling agency (Transit and the District Councils respectively) directing them to undertake the necessary pest plant control work.

2.2.3 Notices and enforcement

This year the Council undertook intensive monitoring and inspection of pest plants, particularly focusing on pampas and *Gunnera*. This is reflected in the huge increase in the number of notices issued.

During 2008/2009 the Council issued 436 Notices of Direction directing land occupiers to control pest plants (an increase from 274 the previous year). The Notices of Direction primarily related to the control of pampas, *Gunnera*, gorse and ragwort (Table 2).

Table 2: Number of Notices of Direction

Pest plants	Number of Notices		
	2006/07	2007/08	2008/09
Wild Ginger	21	69	11
Gorse	93	85	107
Old Mans Beard	21	12	11
Ragwort	55	37	37
Broom	1	9	9
Common & Purple Pampas	46	54	213
Giant Gunnera	7	5	43
Giant Buttercup	0	3	3
Darwin's Barberry	20	0	1
Nodding Thistle	2	0	1
Total	266	274	436

The rules relating to pampas in the Council's '*Pest Management Strategy for Taranaki: Plants, 2007*' require landowners to destroy all pampas plants that are not part of hedgerows, take measures to prevent the flowering and seeding of pampas in hedgerows and then in 2012, ensure that all pampas, including pampas hedgerows and shelterbelts is destroyed. During the 2008/09 year, 213 notices of direction were issued to landowners to either require that they destroy pampas plants not part of hedgerows, or to take measures to prevent the flowering or seeding of pampas plants in hedgerows or shelterbelts.



Pampas hedge, Waverley



Pampas hedge that has been trimmed

The increased focus on enforcement of the Strategy rules relating to pampas served also to raise increased awareness of the need for landowners to think ahead to 2012 when they will need to destroy their pampas hedgerows or shelterbelts and replace them with more appropriate shelterbelt species.

Despite the increase in the number of Notices of Direction served in 2008/2009, overall land occupier compliance with the strategy rules in the *Pest Management Strategy for Taranaki: Plants* has been satisfactory. Most of the increase is attributed to the Council's increased focus on environmental pest plants such as pampas grass and *Gunnera*. Of note, all Notices were complied with and no further enforcement action was necessary.

2.3 Biological control programmes

The Council has a programme for releasing biological control agents in the region as a means of promoting sustainable and effective long-term pest plant control. Such agents include beetles that 'dine' on ragwort, flies that infest nodding thistle and a fungus and leaf miners that damage old man's beard (summarised in Table 3).

One recovery and three releases of biological control agents for pest plants were made in Taranaki during the 2008-2009 monitoring period.

In October 2008 broom seed beetles and broom psyllids were collected from Ashhurst in Horizon MW's area with assistance from HMW staff. Broom seed beetle is considered common and widespread in many areas of New Zealand but had not been found in Taranaki before this. The broom seed beetles & broom psyllids were released to farms east of Stratford and west of Midhurst.

In May 2009 Chris Winks from Landcare Research assisted with assessment of the spread of gorse thrips and gorse seed weevils in the Waitotara area. The spread has been most impressive in the opinion of the Landcare Research scientist, with even individual gorse bushes, relatively remote from other gorse, being well-infested with both these gorse agents and with the agents being found to have spread good distances from original release sites. The scientist assisted with collection of gorse thrips and gorse seed weevils from properties in the Waitotara area and release of those to a farm in the Waitara area.



Collecting gorse thrips from Waitotara

Throughout the year ragwort was routinely checked for ragwort flea beetle which continues to have widespread distribution. Old man's beard continues to show good infestation of most agents released but none appears to conspicuously limit either the growth or the seeding capacity here.

In June 2009 TRC received a request from Northland Regional Council for them to gather gorse thrips from Waitotara in July 2009 as they are obviously having trouble getting thrips established in their area, having found only a single bush infested.

HMW staff are keen to collect mist flower fungus from Taranaki and this type of exchange between regional councils is encouraged as it can result in great savings.

Table 3: Progress with biological control agents

Pest Plant	Biological Control Agent	Date released	Control effects to date
Gorse	Gorse seed weevil, Gorse soft shot moth, Gorse spider mite, Gorse thrips-european and portuguese	1990-2004	Most of these agents can be found on gorse throughout Taranaki. The spread of some of these agents is naturally slow. The thrips have spread well in the release areas. Gorse seed weevils are widespread and a new release of gorse soft shoot moth was made in December 2006. These gorse control agents are considered effective over the long term.
Ragwort	Cinnabar moth, Ragwort flea beetle	1987-1995	Cinnabar moth and flea beetle are now widespread throughout Taranaki and have been effective. As with most gorse agents, the ragwort agents now need no hand in spreading.
Old Man's Beard	Leaf fungus, Leaf Miner and Sawfly	1996-2003	Old man's beard leaf miner and leaf fungus are wide spread through out Taranaki. Old Man's Beard Sawfly was released in 2004 but may not have established in the region.
Nodding Thistle	Crown Weevil, Gall Fly and Receptable Weevil	1994-1997	These three agents are now widespread throughout Taranaki and are self spreading. There has been good control of Nodding Thistle in the eastern area of the region.
Scotch Thistle	Thistle Gall Fly	2004 and 2006	The Gall Fly has spread beyond the initial release site.
Blackberry	Blackberry rust	1990 (self released – arrived by wind)	Widespread throughout Taranaki. Working well at suppressing blackberry growth.
Mist Flower	Mist flower fungus	2003 (self released – arrived by wind)	The fungus has spread to all mist flower in the New Plymouth area.
Giant Buttercup	Buttercup fungus (<i>Sclerotiniaia selerotiorum</i>)	2004	The buttercup fungus is still in development period.

Pest Plant	Biological Control Agent	Date released	Control effects to date
Wild Broom	Broom seed beetles Broom psyllids	October 2008	New release of broom seed beetles from Manawatu.

All the above agents come from Landcare Research, apart from buttercup fungus that came from AgResearch, and the blackberry and mist flower agents which were naturally blown here.

2.4 Response to public complaints

In addition to its inspection programme, the Council records and takes action in response to any public complaint received in relation to pest plants (both those identified in the Strategy and other pest plants). Responding to public complaints is an integral part of the Council’s inspectorial and enforcement activities.

In 2008/2009, officers responded to 123 complaints from the public pertaining to pest plants (compared with 116 complaints in 2007/2008). This represents a slight increase in the number of complaints relating to pest plants compared to the preceding year. All properties for which a complaint was received, were inspected within five days

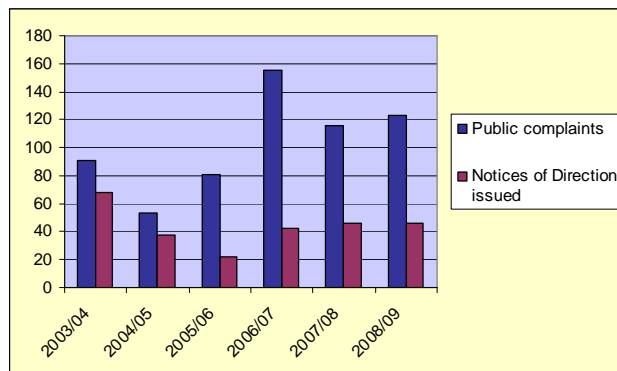


Figure 2: Public complaints provide an indication of levels of awareness of the Strategy rules.

and, where appropriate, advice was given or enforcement action taken.

Forty six Notices of Direction to control pest plants were issued following receipt of public complaints. The Council values the input from the public in notifying it of pest plant infestations in the region.

2.5 Plant nursery and retail outlet inspections

Many pest plants were initially introduced as garden plants. However, on a plant being declared a ‘pest’, the propagation, sale and distribution of that plant becomes prohibited under the Biosecurity Act.

In 2008/2009, Council officers inspected 36 plant nurseries and retail outlets known to be growing or selling plants. This was 10 fewer than last year as a number of nurseries have closed down, presumably due to the current economic climate.

Pursuant to its agreement to participate in the National Pest Plant Accord (in conjunction with other regional councils and relevant central government departments), the Council also inspected the plant nurseries for the National Accord pest plants that have been declared 'unwanted organisms' and which are also prohibited from propagation, sale and distribution.

Nurseries were also provided with information on the MAF Biosecurity New Zealand potting mix weeds campaign.

To assist nurseries and retail outlets to identify which plants are banned from propagation, sale or distribution, the Council distributed relevant information including copies of the recently revised National Pest Plant Accord, 2008 list. One nursery was required to remove a pest plant from their display gardens (although they did not have the plant for sale). The plant was then withdrawn from the display, and no further action was necessary.



Officers visit plant nurseries and retail outlets to ensure retailers are aware of their obligations and are not selling or displaying pest plants

2.6 Direct control of 'eradication pest plants'

Council has continued its direct control programmes for 'eradication pest plants' (eradication pest plants are identified in Appendix I). These are pest plants of limited distribution in the region for which the Council aims to prevent their establishment by destroying all known infestations in the region.

For 2008/2009, the eradication focus was on the control of mignonette vine, climbing spindleberry, Senegal tea, giant reed and Darwin's barberry. The Council treated 47 properties around the region for mignonette vine, 16 properties for climbing spindleberry, 2 properties for



Climbing spindleberry with its conspicuous autumn foliage.

Senegal tea and 6 properties for giant reed. Mignonette vine, giant reed, Darwin's Barberry and climbing spindleberry were treated on other properties by land occupiers.

All known infestations of giant reed were inspected. Some did not need re-treatment as the weed has been successfully suppressed for 24 months. Some property owners are now taking on the responsibility for monitoring and re-treating plants once they have been brought down to a manageable level.

All the direct control operations at 75 sites successfully controlled targeted infestations, although on-going surveillance and re-treatment of some of the plants will be required to ensure treated plants do not recover nor seedlings emerge.



Total amount of *Undaria* removed from the Port

A new eradication pest plant in the *Pest Management Strategy for Taranaki: Plants, 2007* is *undaria*. This seaweed is currently confined to Port Taranaki. Council is working with Department of Conservation to eradicate it from the Port. This financial year Council and Department of Conservation staff undertook an operation to remove *Undaria* from the Port in March 2009. A single small plant was found at the Public boat ramp/jetty where a previous operation in early December had removed a full fish bin of the seaweed. The plant did not appear to have re-established. Inspections were carried out of the private marina where only small amounts of *Undaria* were found. Further inspections of the fishing jetty and some other poles and structures in the Port revealed no *Undaria*. In total, less than a small bucket full of *Undaria* was removed in total (refer to photograph) and most of these were small plants (less than 300mm long). No large adults were found. In addition, it was noted that there appeared to be a healthy biodiversity of many other algae present.

In relation to 'eradication pest plants' the Council successfully met its Strategy targets of destroying all 'eradication pest plant' infestations that were known as of 2001 (when the current Strategy became operative). In addition, the Council has responded to the discovery of new infestations of 'eradication pest plants'.

2.7 Monitor, provide advice and, if necessary, implement small-scale control of unwanted plant organisms

The Council, as part of the Council's inspection programme, records infestations of regional surveillance pest plants and National Accord pest plants. The Council will, in special circumstances, also undertake the control of pest plants and other harmful plants of limited distribution.

In 2008/2009 the Council treated boneseed, banana passionfruit, parrots feather, woolly nightshade, wild ginger, gorse and *Gunnera*. This occurred in situations where it was the most cost effective form of action and it was appropriate to do so, or where plants are of limited distribution in the region and potentially could have an extraordinary impact on indigenous biodiversity values if the plants become established in the region (such as bone seed and banana passionfruit).

The declaration of small-scale management programmes under section 100 of the Biosecurity Act was not considered necessary given that the Council obtained permission from affected land occupiers to undertake the aforementioned eradication actions.

3. Conclusion

In summary, the Council met all of the performance measures for pest plant management functions, as set out in the *2008/2009 Annual Plan*. The 2008/2009 financial year represents the third year in the Council's implementation of the *Pest Management Strategy for Taranaki: Plants, 2007*.

The 2008/2009 year was a particularly productive year for the Council in relation to pest plant management functions as more staff resources were deployed. There was no large scale emergency operations (such as oil spills) which in previous years have led to a reallocation of available resources away from plant pest work. A combination of increased use of technology and staff led to a concerted focus this year on environmental weeds such as pampas and *Gunnera*.

Overall occupier compliance with Strategy rules continues to be satisfactory and public providing information to the Council continues to rise, indicating general public awareness of the Strategy and land owner obligations is increasing.

Through its pest plant management activities, the Council, in conjunction with the community, have restricted the spread of invasive pest plants and protected agricultural production and environmental values in the region. Considerable progress has been made in preventing the establishment of pest plant species of limited distribution, while the impacts of more widespread pest plants are also significantly minimised.

With continued land occupier and public support for the *Pest Management Strategy for Taranaki: Plants* the Council believes it will continue to promote effective action against pest plants and meet Strategy objectives.

The activity contributed to sustainable and prosperous outcomes for Taranaki.

This report will be forwarded to key stakeholders in relation to pest plant management.

Appendix I: Pest plants of the Taranaki region

The Taranaki Regional Council has determined that different pest plant species warrant different types and levels of regional intervention according to the objective to be achieved. For the purposes of the *Pest Management Strategy for Taranaki: Plants*, the following terminology applies:

Eradication pest plants: pest plants that are of limited distribution or density in a region and for which the long-term goal is eradication. These are:

- Climbing spindleberry (*Celastrus orbiculatus*)
- Darwin's barberry (*Berberis darwinii*)
- Giant reed (*Arundo donax*)
- Mignonette vine (*Anredera cordifolia*)
- Pampas grass – common pampas (*Cortaderia selloana*) and purple pampas (*Cortaderia jubata*)
- Senegal tea (*Gymnocoronis spilanthoides*)
- Undaria (*Undaria pinnatifida*).

Containment pest plants: pest plants that are abundant in suitable habitats in a region or part of a region and for which the long-term goal is to prevent the spread of the plant to new areas or to neighbouring properties. These are:

- Australian sedge (*Carex longebrachiata*)
- Giant buttercup (*Ranunculus acris*)
- Giant gunnera (*Gunnera* species)
- Gorse (*Ulex europaeus*)
- Nodding (*Carduus nutans*) and plumeless (*Carduus acanthoides*) thistles
- Old man's beard (*Clematis vitalba*)
- Ragwort (*Senecio jacobaea*) and pink ragwort (*Senecio glastifolius*)
- Variegated thistle (*Silybum marianum*)
- Wild broom (*Cytisus scoparius*)
- Wild Ginger – Kahili ginger (*Hedychium gardnerianum*) and yellow ginger (*Hedychium flavescens*).

'Surveillance pest plants': pest plants are those for which there is no rule in the Strategy requiring the land occupier to control the species, although there are rules prohibiting the sale or distribution or propagation of the species. These are:

- Brush wattle (*Paraserianthes lophantha*)
- Egeria oxygen weed (*Egeria densa*)
- Japanese walnut (*Juglans ailantifolia*)
- Lagarosiphon oxygen weed (*Lagarosiphon major*)
- Spanish heath (*Erica lusitanica*)
- Woolly nightshade (*Solanum mauritianum*).