

Introduction

Many plant pests in the Bay of Plenty are climbing types which are very destructive to native plants and regenerating native forest. Some of these species are described below, along with suitable control methods.

Banana Passionfruit

Banana passionfruit (*Passiflora mollissima*, *Passiflora mixta*) is a vigorous, high-climbing vine often overtopping and smothering trees in native forest and scrub. It is a native to tropical South America, and was introduced to New Zealand for its edible fruit and as an ornamental. *P.mollissima* was first recorded as naturalised in New Zealand in 1958 and *P.mixta* in 1970.



Banana
passionfruit

Description

Banana passionfruit is an evergreen climber that can grow to a height of 10 metres. The dark green leaves are three lobed, serrated with soft, downy undersides. It has large, pink, hanging, star-shaped flowers, each with a purplish blue crown. The fruit is golden yellow when ripe. Inside is a sweet, orange pulp, filled with black seeds which are readily dispersed by rats, possums and birds.

Control

Pull seedlings. Dig or grub out established plants. Contact an Environment B·O·P Plant Pest Officer for herbicide control advice.

Blue Morning Glory

Blue morning glory (*Ipomea indica*) is widespread in the tropical Pacific and the Americas. It was introduced as an ornamental in New Zealand and was first recorded as naturalised in 1950. Although attractive, Blue morning glory has a rampant habit and regenerates vigorously from fragments when dumped in waste areas. Plants have occasionally been found to produce viable seed.



Blue morning glory

Description

Blue morning glory is a high-climbing, fibrous-rooted, hairy perennial with twining and running stems. Leaves are heart-shaped and usually three-lobed. The flowers are up to 10cm across and are an intense purple or blue colour. They are funnel-shaped, typical of the *Convolvulus* family to which Blue morning glory belongs.

Control

Dig out established plants. Alternatively, remove trailing stems in early summer, allow 60 cm growth from root crowns then spray with glyphosate herbicide (e.g. Round Up®) at a rate of 10ml per litre of water, plus a penetrant or surfactant, such as Pulse® or Boost®.

Cathedral Bells

This native of Central and South America was introduced to New Zealand as an ornamental garden plant and was first recorded as naturalised in 1946. Although frost tender, it flourishes in the Bay of Plenty.



Cathedral bells

Description

Cathedral bells (*Cobaea scandens*) has purplish stems and light, oval green leaves. Large purple lantern-like flowers appear from spring to autumn, followed by oval fruit 6-10 cm long, which explode during summer to release winged seeds. Seeds spread only a short distance by wind and further by soil or water movement. Spread from vine fragments is also possible.

Control

Small infestations can be dug out by the roots. Mature plants can be cut off 60cm above ground level and be coated with a solution of 1 part glyphosate to 5 parts water, applied to the top and sides of the remaining stem.

Climbing Asparagus

Climbing asparagus is a native of South Africa and was introduced to New Zealand as an ornamental garden plant. It was first recorded as naturalised in 1959.



Climbing Asparagus

Description

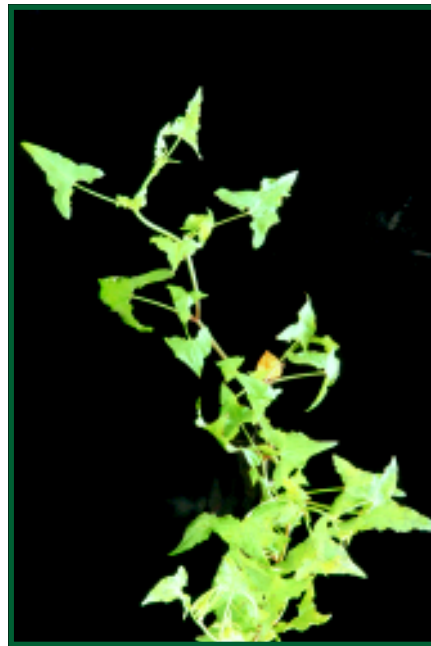
Climbing asparagus (*Asparagus scandens*) is a scrambling vine which invades forest areas. Stems twine around and strangle host shrubs or trees.

Control

Climbing asparagus can be physically controlled by cutting it back then digging out all roots and tubers. Tubers must be destroyed to prevent re-sprouting, or otherwise be taken to an authorised refuse collection site. Control with herbicide is achieved by cutting stems 60cm above ground level in spring-summer then spraying the stem and remaining foliage. Use a glyphosate herbicide mixed at 20ml per litre of water, plus a penetrant or surfactant.

Climbing Dock

Climbing dock (*Rumex sagittatus*) is a common and widespread plant pest of the Bay of Plenty, typically establishing along road edges and infesting coastal areas, shelter belts or waste areas. Climbing dock is native to South Africa and was introduced to New Zealand as an ornamental garden plant. It was first recorded as naturalised in 1935.



Climbing dock

Description

Climbing dock is a climbing or scrambling perennial. It has kumara-like tubers up to 10cm long and extensive rhizomes. The leaves are arrowhead shaped. The spikes or clusters of small, papery, pink-yellow flowers occur from November-March. Climbing dock spreads via wind-dispersed seed, or by tubers and root fragments spreading through water and soil movement. Dumped garden refuse is a common means of dispersal.

Control

If only a few plants are present, dig out tubers and roots. Tubers must be destroyed or disposed of at an authorised refuse site. For control using herbicides use a low pressure sprayer or knapsack and apply to foliage of actively

growing plants. Where possible cut the vines to a height of 30 to 60cm above ground level then spray the stem and remaining foliage until it is wet but not dripping. Use glyphosate at a rate of 10ml per litre of water or Escort® at a rate of 5g per 10 litres of water, and include a penetrant. Follow up applications may be required.

Climbing Spindle Berry

Climbing spindle berry (*Celastrus orbiculatus*) is a serious threat to native plant communities and forestry plantations. It is highly invasive because of its high reproductive rate, long range dispersal, ability to root sucker and rapid growth rate. Also known as Oriental Bittersweet, Climbing spindle berry is a native to Japan, Korea and northern China. It was first recorded as naturalised in New Zealand in 1981.



Climbing spindle berry

Description

Climbing spindle berry is a deciduous woody climber, which grows to 12m high with stems 10cm in diameter. Leaves are alternate, variable in shape and are 5-10 cm long. Flowers of Climbing spindle berry have five petals and are greenish-yellow in colour. Fruit is green, changing to bright yellow/orange upon maturity.

Control

Seedlings or scrambling dense infestations may be overall sprayed with Grazon® herbicide at a rate of 400 mls/per 100 litres water plus penetrant. Isolated vines may be stump-treated with 1 part Grazon® to 4 parts water, plus penetrant. The herbicide solution must cover the top and sides of freshly cut stumps. Ongoing control of plants establishing from root portions or dormant seed may be necessary at regular intervals.

Japanese Honeysuckle

Japanese honeysuckle (*Lonicera japonica*) occurs primarily in disturbed habitats such as roadsides, shrublands, secondary forest, wastelands and farm hedges. The sheer weight of accumulated vines can topple host trees or shrubs. It is a native to East Asia and was first recorded as naturalised in New Zealand in 1926.



Japanese honeysuckle

Description

Japanese honeysuckle is a trailing or twining woody vine that can grow to more than 10 metres in length. Young stems are often hairy while older stems are hollow with brownish bark. Leaves are oval to oblong in shape. Flowers are tube-like and fragrant and white to yellow in colour. Fruit is small and black.

Control

Small populations can be controlled by careful hand pulling, grubbing with a hoe or shovel and by the removal of trailing vines. Ongoing inspection to treat missed or new plants will be required. Alternatively, trace trailing stems to root crowns, cut and treat the exposed crown with 1 part glyphosate to 5 parts water. Scrambling infestations may be overall sprayed with Versatill® herbicide at a rate of 10ml per litre of water plus penetrant. **Caution:** Versatill® herbicide is selective to many ornamental trees and hedge species so check the label before applying Versatill® near other plants.

Jasmine

Jasmine (*Jasminum polyanthum*) is a dense-growing climbing plant, now common throughout the Bay of Plenty. The plant climbs vigorously through other vegetation, forming roots where it touches the ground. Spread is mainly from vine fragments or from dumped garden refuse. Occasionally Jasmine is spread via bird-borne seed.



Jasmine

Description

Jasmine has small pointed shiny leaves arranged in a very regular pattern. In summer the vine smothers itself in small, starry white flowers. Globular, glossy black fruits are occasionally produced.

Control

Small infestations can be pulled or dug out. Careful disposal is required. Herbicides can give good results but may damage surrounding vegetation. Tordon Gold® at 10ml per litre of water plus penetrant, and Escort® at 5 grams per 10 litres of water are effective. Grazon® is effective in summer months but follow-up applications may be necessary. Glyphosate has proven to be unreliable in controlling Jasmine.

Mignonette Vine

Mignonette vine (*Anredera cordifolia*) smothers other plants and is difficult to control. Also known as Madeira Vine, it is native to tropical South America and is widespread throughout urban and coastal areas of the Bay of Plenty. It was first recorded as naturalised in New Zealand in 1940.



Description

Mignonette vine is an evergreen climber growing from a fleshy rhizome. It has bright green, heart-shaped, shiny leaves. Wart-like tubers are produced on aerial stems and are a key to identifying the plant. It has masses of fragrant, cream flowers from March to May. The plant spreads via the tubers which detach very easily.

Control

Smaller plants can be grubbed out ensuring that all of the tubers are removed. Larger infestations can be controlled by cutting back top growth and spraying remaining 2 metre stems with Escort® 5 grams per 10 litres of water plus penetrant, or Grazon® at 60mls per 10 litres of water plus penetrant.

Moth Plant

Moth plant (*Araujia sericifera*) is very invasive in urban, coastal, scrubland communities and orchard shelterbelts. A poisonous plant, the milky white sap causes dermatitis to humans. Moth plant is a native to southern Brazil and Argentina and was first recorded as naturalised in New Zealand in 1888. It is also known as Cruel Plant as moths, bees and butterflies are often trapped by the sticky secretion within the flowers.



Moth plant

Insert Photo:
Moth plant fruit or seed pod

Description

Moth plant is a slender evergreen vine growing to 6 metres high. Leaves are arrowhead-like, opposite with a dark green upper side. Clusters of tubular creamy flowers are produced from December to May, producing occasional spongy, fist-sized fruit. These contain up to 500 seeds per fruit and are wind-borne after emerging from split, drying pods. Seeds have a high rate of viability.

Control

Hand-pull seedlings or spray with Versatill® herbicide at 10 ml per litre of water plus penetrant. From December to February dig out vines, before seed-pods are produced.

Alternatively, cut stems 30-60cm above ground level and coat liberally with a solution of 1 part glyphosate to 5 parts water. Any missed seed-pods must be gathered in autumn to prevent re-establishment from seed.

Smilax

Smilax (*Asparagus asparagoides*) is a common weed of the coastal Bay of Plenty. Its smothering effect is a threat to native plant communities. A native of South Africa, Smilax was introduced to New Zealand as an ornamental garden plant. It was recorded as naturalised in New Zealand in 1905.



Smilax

Description

Smilax is a scrambling, slightly woody winter perennial vine. This plant has slender stems which can climb to 3 metres high. The flowers are small, greenish-white and appear from July-August. Small berries appear in the summer which are red and sticky.

Smilax spreads either by birds, which eat the berries and distribute the seeds in their droppings, or by humans deliberately planting Smilax and dumping garden refuse on roadsides, waste ground or forest margins.

Control

Smilax can be grubbed out when controlling small scattered infestations. When disposing of the vegetation, make sure that the tubers are not composted as they will re-sprout. Dispose of at an authorised refuse collection site.

Smilax may be controlled with herbicide while actively growing from November to April. Cut the vines to within 1.5 metres of ground level and apply glyphosate at a rate of 20ml per litre of water, plus penetrant. Usually control can be seen within a month. Seedlings will have to be controlled until the soil seed-bank is exhausted.

Wild Kiwifruit

Wild kiwifruit (*Actinidia spp.*) are naturalised plants which have generally established via seed from fruits of the kiwifruit horticultural crop. A native of China and Northeast Asia, wild kiwifruit is typically establishing in native or exotic forest, in scrub communities or along stream banks in close proximity to kiwifruit orchards or where reject kiwifruit has been fed to stock.



Wild Kiwifruit

Description

Wild kiwifruit is a deciduous perennial climbing or straggling plant. It can form a "mound" of tangled stems to 3 metres high or grow to the tops of native or exotic trees, sometimes forming a heavy canopy. If uncontrolled, wild kiwifruit may strangle host trees, e.g. *Pinus radiata*, or cause host trees to topple or break.

Control

Wild kiwifruit is currently being controlled in the Bay of Plenty by a jointly-funded control programme.

Control methods vary depending on age and growth habit of vines and situation. Isolated vines may be cut as close to ground level as possible and Vigilant™ Gel applied to the top of the cut stump. Large isolated vines can be controlled by a frilling or stem-injection method i.e. downward cuts are made with a machete or tomahawk around the full circumference of the stem as close to ground level as possible. Vigilant™ Gel can then be applied into the downward cuts. N.B. Winter dormancy or sap flow in spring may inhibit absorption of the herbicide.

"Mounds" of wild kiwifruit may be controlled by overall herbicide application in spring, summer and early to mid autumn. Tordon® Brushkiller or Grazon® herbicides at 60 mls per 10 litres water plus penetrant are effective. Herbicide must be applied at low pressure and care taken to avoid off-target damage, e.g. by over-spray.

Further Information

For further information contact a local Environment B·O·P Plant Pest Officer on freephone 0800 ENVBOP (0800 368 267)

Environment B·O·P offices located at:

6 Rata Street	Mt Maunganui
1125 Arawa Street	Rotorua
5 Quay Street	Whakatane
25 Church Street	Opotiki

Email: info@envbop.govt.nz

Information in this fact sheet regarding herbicides does not necessarily appear on the labels of the products concerned. Environment B·O·P does not accept liability for any damages that may arise from use of chemicals at non-standard rates. Mention of product trade names implies neither endorsement of those products nor criticism of similar products not mentioned.

This fact sheet was prepared by John Mather and the Plant Pest team at Environment B·O·P

Photographs by Walter Stahel
Environment B·O·P
P O Box 364
WHAKATANE