

## 5.8. PEST MANAGEMENT STRATEGY FOR MOTH PLANT



### Description of the Pest

Moth plant (*Araujia sericifera*), sometimes called kapok vine or cruel plant, is a vigorous climbing, perennial vine, with pinkish white bell-shaped flowers and large choko-like seedpods. Each pod contains a large number of seeds, about the size of apple pips, each of which is carried on the wind by a thistle down-like pappus. Broken parts of the leaves, stem and seedpods exude a milky white latex which can cause skin irritations. Moth plant flowers from December through to May.

### Distribution of the Pest

Moth plant is found throughout Northland, but is widely distributed around Whangarei and the coast and around Kerikeri. It is commonly found within the commercial and industrial areas of Whangarei, sprouting out of cracks in the pavement and climbing over security fences, and even out over shoreline mangroves. Unless urban landholders carefully monitor their gardens, the first that they know that they have a moth plant is when a vine emerges at the top of a hedge or a specimen tree. In Kerikeri, it can be found sprawling over shelterbelts and abandoned orchards. In both areas it can be found invading reserves and wilderness areas.

### Problems Caused

Moth plant is a very vigorous climbing plant, able to take root in cracks in concrete and hard pavement areas. It very quickly climbs over fences, buildings and trees, shutting out the light from the trees and breaking their branches with its shear weight. Each vine produces a large number of seedpods and each pod produces a large number of wind-borne seed, ensuring a rapid spread of the plant over considerable distances. Within commercial and industrial areas, vines climb over fences and vacant land, proving both unsightly and difficult to control. Within natural areas, moth plant is a serious threat to biodiversity values. Its greatest threat is that seeds can germinate and the plant remain hidden within the canopy of another plant, becoming well established before emerging out of the top of the shadowing plant. It then will spread very quickly over the forest canopy. The latex within the plant can cause serious skin irritations and dermatitis on people with sensitive skin.

### Parties Affected

Home gardeners, occupiers of small and large rural properties, owners of industrial land, owners of properties such as horticultural units which are reliant on shelterbelts, roading authorities and managers of parks and reserves all are forced to fight an ongoing battle with this invasive species. It places control costs on landholders who depend on their land for primary production and for industrial and commercial uses, for people who own land for pleasure, and it threatens both Regional and national indigenous biodiversity values.

### Impact Evaluation

<u>Impact</u>	<u>Current</u>	<u>Potential</u>
Cultural	Low	High
Ecological	Low	High
Human Health	Low	Low
Soil & Water	Low	Low

Production	Low	Medium
Public Infrastructure	Low	Medium
Public Safety	-	-
Recreation	Low	Medium
Trade (International)	-	-
Overall	Low	High

### **Regional Effects**

Moth plant is becoming an increasingly more significant weed of indigenous forest and coastal areas in Northland. It is also becoming a nuisance in horticultural, lifestyle and farming areas, establishing in and climbing over shelterbelts. It can establish under the canopy of orchard trees and quickly climb up and spread over citrus trees, blocking out the light and reducing fruit production. The costs of maintaining roadsides, railway corridors, industrial and commercial lots and urban parks are increasing as the density and distribution of sources of moth plant seed increases.

### **Need to Intervene**

To prevent the rapid spread and increasing environmental and economic impact of moth plant, there is a need to implement a Regionally coordinated control programme. Unless every landholder prevents moth plant from producing mature seedpods and dispersing seed on the wind, this weed cannot be controlled. While ideally each landholder would eradicate plants on their land, for various reasons some landholders are unwilling or unable to do so. If a community wishes to eradicate moth plant from their district and to protect community resources, either reticent landholders will need to be compelled to undertake control work or control measures will need to be implemented by or for the community. The objective must be to prevent the production and dispersal of seed. Small vines may be dug out. Larger vines may be cut before pods have formed and the stumps painted with herbicide. Foliar spraying with herbicides is effective in waste areas where there is no risk of overspraying desirable species.

### **Goal (Long Term)**

- To eradicate moth plant from or prevent moth plant from becoming established in high value biodiversity areas, horticultural areas, and from areas where communities wish to eradicate it, and to create a controlled buffer zone around these areas.

### **Objectives (Five Year)**

- To increase public awareness of the threat that moth plant poses to the indigenous biodiversity of Northland and to horticultural areas.
- To encourage the establishment of community control areas which will be cleared of and kept clear of moth plant.

### **Tactics and Technical Methods to be Used**

Education	Advice to landholders, community groups and other interested parties. Community meetings and field days. Media releases and publicity brochures. Research (investigate biological control options). Create a database showing distribution.
Regulation	Rule 6.4.2.9 Prohibition on Distribution and Sale of Pest Plants Rule 6.4.2.11 Total Clearance of Wild Ginger, Privet and Moth Plant Within Areas Under Community Schemes

Failure to comply with these rules creates an offence under section 154(r) of the Biosecurity Act 1993.

Services Organisation of and support for community eradication programmes.  
See Procedures for Establishing Community Pest Control Areas

### **Tactics and Technical Methods Rejected**

Economic Subsidies on herbicides (not effective as difficult to control where herbicide used).

Regulation Rule requiring total clearance ineffective unless community commitment.

Services Regional Council funded eradication service (avoids landholder/community "ownership" of the problem).

### **Effects of the Strategy**

Beneficial Protection of native forest ecosystems.  
Reduced weed control costs in orchards and around shelterbelts.  
Reduced risk of human health problems (skin irritation).

Detrimental Possible herbicide damage to non-target species.  
Removal of alternative monarch butterfly fodder.

### **Cost of Strategy**

The cost to the Regional Council in implementing this Strategy, including staff time, publicity and promotion and support in establishing community control areas is estimated to be in the order of \$20,000 annually. Landholders, including private land occupiers, the Department of Conservation and managers of reserve land, will incur costs in controlling moth plant on their land.

### **Funding**

The Regional Council will fund its share of the implementation of this Strategy from a Land Management Rate, which is struck on a Land Value-basis across all rateable land in Northland. The landholder share of the cost of controlling moth plant will be funded by the respective landholders.

### **Management Agency**

The Northland Regional Council is responsible for managing the Strategy.

### **Relationship of Strategy**

Where landholders within a defined area are managing other pest plants and pest animals under Pest Management Strategies, particularly those which target areas of high biodiversity value, the landholders will be encouraged to establish a community control area for moth plant. That is, the Council will encourage integrated pest management within areas of high biodiversity value, covering a range of pest plants and pest animals.

**NB.** Under the Northland Regional Pest Management Strategy for Moth Plant, "land" includes all adjoining roads, road reserves, esplanade reserves, streamside and foreshore areas adjoining a property. That is, within an area in which moth plant is being controlled under a community scheme, a landholder is required to control the weed on all roadsides and road reserves

adjoining his or her land. Similarly, the landholder is required to control moth plant on all streamside and foreshore areas adjoining their land, even when these areas are esplanade or river reserves.

### **Monitoring and Reporting**

Progress on meeting the Strategy objectives and the effectiveness of the tactics and technical methods used will be reported to the Regional Council in the Annual Review of Operational Plans in July each year. Officers will maintain a database to record the distribution of moth plant and will undertake surveys to gauge the success of publicity campaigns.

**Term of Strategy    5 Years**

### **Rules**

#### 6.4.2.9            Prohibition on Distribution and Sale of Pest Plants

- (i) No person shall distribute to other persons or offer for sale, or hold in a premises where plants are offered for sale, any pest plant which is subject to a Northland Regional Council Pest Management Strategy or included in the National Accord List of Plants Banned from Sale & Distribution.
- (ii) No person shall distribute or offer for sale to other persons any agricultural lime, roading aggregate, sand or fill material which contains the seeds or any other vegetative material capable of propagation from a pest plant subject of a Northland Regional Council Pest Management Strategy or included in the National Accord List of Plants Banned from Sale & Distribution.
- (iii) No person shall transport or use any equipment, machinery or product which contains the seeds or any other vegetative material capable of propagation from a pest plant subject of a Pest Management Strategy or included in the National Accord List of Plants Banned from Sale & Distribution.
- (iv) No person shall plant, transplant or re-distribute any pest plant subject of a Pest Management Strategy or included in the National Accord List of Plants Banned from Sale & Distribution.

#### 6.4.2.11            Total Clearance of Wild Ginger, Privet and Moth Plant Within Areas Under Community Schemes

Where a community group is undertaking control of wild ginger moth plant and/or privet according to a community or area-wide control programme approved by the Regional Council, the occupier or owner of a property on which the pest plants are growing shall prepare and implement a programme aimed at achieving eradication of that plant on that property.