



# Wild Ginger

*Hedychium gardnerianum*,  
*Hedychium flavescens*

The *Wild Ginger* species are pest plants in Northland and cannot legally be propagated, sold or distributed in any way. In addition, the Northland Regional Council may also require control measures to be taken. The long term goal is to totally eradicate these species from Northland.

The name wild ginger is applied to two species. The most common and most invasive of the two is kahili ginger, *Hedychium gardnerianum*. Yellow ginger, *Hedychium flavescens*, is less common and also less invasive. Both form dense colonies in native bush, on roadsides and riverbanks, smothering and eventually replacing all other species.

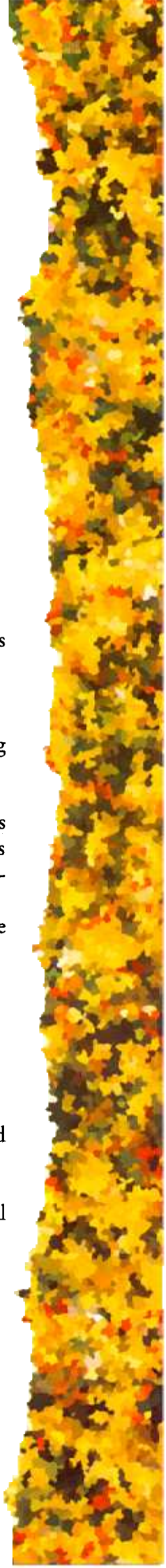
Distantly related to culinary ginger, wild ginger has a faint ginger smell and taste and has been used as a ginger substitute during wartime rationing. Non-poisonous and highly palatable to livestock, both species are not weeds of pasture; rather they invade all areas where stock do not go.

## ORIGINS

Both species were introduced into New Zealand around the 1860s as garden plants. Kahili ginger originates from the foothills of the Himalayas in India. Yellow ginger is from eastern India and Madagascar. By the 1940s both species had escaped or been dumped from gardens and established in the wild. Since its establishment in 1989, the Northland Regional Council has worked with local communities and landowners, including the Department of Conservation, to encourage them to eradicate these two species from their land.



*Kahili ginger flowers with red stamens.*







*Ginger rhizomes and roots.*

(even sprouting in tree forks above the ground). This means that wild ginger is capable of invading almost all of Northland's forests and parks. Wild ginger out-competes other species for light, space, nutrients and moisture. However it is its shade tolerance, above all, which makes wild ginger able to thrive in forests. Other invasive characteristics include rapid growth, long term persistence of plants and ability to recover from removal of stems, making slashing worthless as a control measure.

Because wild ginger rhizomes form deep impenetrable beds, seedlings of other plants cannot grow through them. The stems and leaves likewise form dense thickets, preventing other species from germinating below or growing amongst them. In time, entire forest areas are completely taken over by ginger.

### **THREAT TO NORTHLAND**

Our region is internationally famous for the beauty and diversity of its native plant ecosystems. These areas have scenic, recreational and tourism values and are important for scientific reasons. Ecological, conservation and cultural values cannot be measured in dollars, but are a vital part of our quality of life. As wild ginger is capable of destroying the forests, all of these values are threatened. Ginger is also increasingly a weed of plantation forests.

Although rhizome beds may become very deep, wild ginger roots are quite shallow and maintain poor purchase in the soil. In steep areas, prolonged rainfall causes these rhizome beds to become heavy

with absorbed water and the soil to become slip-prone. The combined effect of added weight, slip-prone soil and weak roots often leads to erosion, with entire hillsides of ginger disappearing at once. Erosion also downgrades water quality and causes siltation of rivers and harbours.

Kahili ginger is found in many parts of Northland, particularly in or near areas of human habitation. Major infestations occur at Whangaroa, Herekino, Kohukohu, Panguru, Rawene, Waimamaku-Waipoua, Kerikeri, Opuia-Paihia, Whangarei and McLeods Bay. Yellow ginger is found in abundance at Kaeo and around Whangarei.

### **CONTROL**

Probably the most effective and cost-efficient control method is stump treatment with herbicide. The stems are cut close to the ground, just above the pink-coloured swelling at the stem base, and concentrated herbicide is applied to the freshly cut stump.



*Yellow ginger.*





*Kahili ginger in forest.*

yellow with conspicuous red stamens. After the flowers fall, the prominent fruiting spike remains, producing 1.5-2cm long fleshy orange fruits in winter, each fruit containing small shiny red seeds.

The fruits are eaten by birds and seeds are spread in this way, often into forests.

Yellow ginger leaves are slightly narrower than those of kahili ginger and tend to point more skywards. The flower head is much smaller (15cm by 10cm) and appears in April-July. Yellow ginger is not particularly well named, as its fragrant flowers are not truly yellow, rather they are cream to pale yellow in colour. No fruit or seed is produced in New Zealand.

## DESCRIPTION

Both species are non-woody perennials, growing from thick branching rhizomes (swollen underground stems). These taro-like rhizomes have 4cm by 10cm segments, each producing vertical stems annually.

Rhizomes extend outwards and over each other, forming dense beds up to one metre deep. Both species produce stems up to two metres high, with large shiny alternate leaves 20-50cm by 10-15cm.

The kahili ginger flower head is 25-45cm long, shaped somewhat like a Chinese lantern and appears in January-March. Its flowers are scented, lemon

## DISTRIBUTION

All underground parts can resprout, no matter how small. Both species have established as weeds along roadsides, bush fringes and stream edges from rhizomes and root fragments dumped by gardeners. The ginger then spreads outwards by rhizome extension. Kahili ginger seeds are carried long distances by birds, frequently into bush, creating many new infestation sites. This makes kahili ginger a far greater threat to native plant ecosystems and exotic forests than yellow ginger.

Wild ginger is ecologically very versatile, thriving in bright light or dense shade, good or poor drainage, high or low fertility, thick humus or very little soil



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## PEST FACTS

This method uses much less chemical than spraying and avoids contamination of soil and desirable vegetation. Rhizomes can be safely left to rot where they are; likewise the cut stems and leaves will not resprout.

Spraying with an approved herbicide is also effective but is costly for large infestations and can have undesirable environmental effects if done incorrectly. Overspray can damage other plants and temporarily contaminate the soil. This soil residue can be taken up by the roots of nearby desirable plants.

Small stands may be dug out, however all underground parts must be removed or else remaining fragments will regrow. These roots and rhizomes must be disposed of at an authorised refuse point or buried beneath at least one metre of clay or rock. Stems and leaves can be safely composted or mulched.



*Yellow ginger flowers.*



*Kahili ginger fruits.*

For a full and up to date description of recommended control methods, herbicides currently available and land occupiers' responsibilities, please refer to **Northland Regional Council Pest Update 4A - Wild Ginger.**

### **WHAT CAN YOU DO?**

Take a look at local bush blocks and parks. If wild ginger is growing there, tell the owners. Perhaps you can help in killing the ginger, using one of the methods listed above. You could even dig out little seedlings where you find them and dispose of them safely.

If you have wild ginger growing on your land, destroy it. Remember that it may look pretty and harmless in your garden but birds can carry seeds from there far into the bush.

It will take everybody's help if Northland is ever to be free of wild ginger. It is your heritage you will be protecting.

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