

The dreaded alien eating your garden and home...but don't dare try to kill the Japanese knotweed

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- It tears through concrete and brickwork and is a nightmare to remove

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Britain is in the grip of an alien invasion, with the ground under our feet harbouring a race of female clones created in the fiery volcanic wastelands of Japan and unleashed upon an unsuspecting Britain. For decades, the usurpers have been chewing through buildings, destroying walls and ripping up transport links.

This fearsome interloper is Japanese knotweed (*Fallopia japonica*), a super weed from Asia whose name brings fear to homeowners, developers and gardeners, with gigantic root systems that burrow down nine feet and towering bamboo-like stems that grow four inches a day.

It tears through brickwork and concrete and, once established, is a nightmare to remove.

Like the dragon's teeth of classical mythology, the weed can grow back from just a fragment left in the soil.

Tom Conti, the actor, has compared the weed to a Triffid after it began spreading along a path linking celebrity homes in Hampstead, North London, including those owned by Esther Rantzen and Thierry Henry.

Last week, Ben Metcalfe had £20,000 wiped off the value of his house in Stockport,

Greater Manchester, after a surveyor found Japanese knotweed in his garden. Yet you can't help but have a grudging respect for this rapacious plant. It is truly one of nature's greatest survivors, with an arsenal of tricks that allows it to out-do almost every rival.

And while developers say it is a blight, botanists say its threat is exaggerated by companies with a financial interest in hyping up its dangers.

So who is right? And how did one plant from Japan become so extraordinarily successful?

Like so many invasive species (rhododendrons, for example) the knotweed was introduced by Victorians to spice up their gardens. Classed as a herb, it was brought to Europe by a Dutchman named Philippe von Siebold.

By the 1850s, it was being sold by nurseries around the UK to gardeners, and quickly spread from discarded cuttings and garden waste into the countryside.

Today it can be found everywhere. Its green stems appear in spring, growing to 7ft tall with green shovel-shaped leaves.

In the late summer and early autumn, it produces masses of small white flowers.

It then dies down each winter, leaving orange-brown stems and a network of underground woody roots or rhizomes.

As the weed grows, it disturbs soil beneath concrete and asphalt, causing cracks which it can then push through.



© Alamy
Taking on the Triffid: Japanese knotweed in Cornwall

Its root system can be enormous, stretching 23ft from the stems, making mature plants fearfully difficult to kill.

Even if you think you've got all the root out, within ten days it can grow back from a section of rhizome less than half an inch long.

Although root systems can be killed by herbicides, they are often so large that weed killers don't reach deep

enough into the plant to do their work properly. Even when the plant is dead, the soil around it may contain pieces of rhizome. To guarantee it doesn't return, specialist eradication companies say the soil must be excavated and carefully taken away. The Government estimates that it would cost £1.5 billion to remove Japanese knotweed entirely from the UK.

It is so tenacious that under the 1981 Wildlife and Countryside Act, it was made illegal to plant it in the wild — or to allow it to grow by carelessly disposing of unwanted cuttings or soil. Knotweed evolved on desolate sides of Japanese volcanoes where it had to cope with toxic soils and deluges of hot ash. The plants thus developed the ability to bury their resources deep underground and to grow back rapidly through 3ft of ash.

At altitude, the native plants are typically much smaller than those we see in Britain — often less than 18in high. But when the plant drifted to the edges of Japan's woodlands, it found itself competing with giant rival plants such as elephant grass, which grows to 10ft. In this environment, natural selection favoured tall plants and so the knotweed evolved into the towering weeds of today.

In Japan, they are kept in check by native insect predators which feed on them, fungi and other tall plants competing for



© Nigel Sulton
Actor Tom Conti has compared the weed to a Triffid after it began spreading along a path linking celebrity homes in Hampstead, north London

sunlight. 'But in Britain, these weeds are almost on holiday,' says Dr John Bailey of Leicester University, who has studied Japanese knotweed since the Eighties. 'There's an environmental niche for them here.'

One of the most extraordinary things about the plant is that every one growing in Britain, Europe and North America is a clone — a genetic copy of a female specimen brought from Asia in the 19th century — that has been propagated by cuttings and rhizomes again and again.

And that means every Japanese knotweed in the West is a female. Despite putting out flowers each autumn, it has been unable to find a mate.

That has offered a glimmer of hope to those keen to control its numbers. Without the mixing of genes from two parents involved in sexual reproduction, the plant cannot evolve. And that means it cannot develop resistance to

whatever chemical or biological weapons we chuck at it.

James Armitage of the Royal Horticultural Society says:

'This does give an advantage in trying to combat it. It has no ability to develop resistance.'

Of course, Japanese knotweed is not the only threat gardeners and homeowners face. There are dozens of alien plants species which menace native wildlife.

Some are giants, like the false acacia from America, which can grow to 170ft, blocking sunlight to smaller plants; or the tree of heaven, which poisons the soil around its trunk to stop other plants growing.

But none is as insidious as the Japanese knotweed.

Thankfully, there is a glimmer of hope. Three years ago, researchers at the Centre for Agricultural Bioscience International in Wallingford, Oxfordshire, began the controlled release of a plant-sap-sucking bug native to Japan called *Aphalara itadori*.

Extensive studies showed that this 2mm plant louse only attacks Japanese knotweed, and ignores native British plants.

Dr Richard Shaw, who is leading the programme, released another 150,000 bugs this spring.

'Bio-control is not a quick fix, I'm afraid,' he said. 'But signs are encouraging.'

The bug has been studied extensively, and its release carefully monitored, but it is still a gamble.

Mankind's track record of deliberately releasing alien species into one country to control pests isn't great.



© Alamy
The Government estimates that it would cost £1.5 billion to remove Japanese knotweed entirely from the UK

In the 1930s, the Australian sugar industry tried to control pest beetles by introducing cane toads from South America.

The amphibians moved on to other insects, and today they are a bigger pest than the beetles they were supposed to destroy.

While scientists wait to see if the *Aphalara itadori* is doing its job — and that could take several years yet — householders under attack from the Japanese clones can only grit their teeth and prepare for a long, expensive and frustrating battle to defend their homes against these fearsome Japanese Triffids.