

pruning to effectively remove any early infection from the plants.



Fuchsia gall mite damaged shoot with early infected areas arrowed

To be able to do this effectively you need to be able to recognise the early stages of infection. You need to be able to see the early signs which include some slight thickening, distortion and increased hairiness. The technique is to examine the plants every 3-4 days and remove any growing tips or side-growths which are showing any signs of damage. The cut back shoots which are becoming re-infected will look slightly fuzzy or out of



Growing tip showing signs of early fuchsia gall mite damage



Growing tip with early fuchsia gall mite damage on the variety "Mrs Popple"

focus at the end of the stem. Any infected material removed from the plant should be destroyed by burning if possible. If not it is better to bag and put it into the domestic waste rather than green waste for recycling. A severe autumn pruning of permanently planted fuchsias in the garden should also help – particularly in areas

where the pest is known. Cutting back the plants to ground level and destroying the old growth will mean less places for the pest to overwinter.

The original advice issued by Defra, (now fera) was that plants that show the damage should be dug up and the plants destroyed either by burning or placing in sealable plastic bags and leaving in the sun until they are crisp. However, we now feel the pest is too established especially in the southern half of the UK for this method to be valid and it is better to try to control the damage.

Be careful about where you get your fuchsias from and be on the lookout for plants bearing the symptoms previously described.

- Don't take cuttings of fuchsias from the wild or in public areas. If offered a cutting, think twice, and have a look around at all their plants for any signs of damage.
- Only buy from sources that you can be sure of.
- If buying from a nursery - look around and check for GALL MITE damage before purchasing any plants.
- Only buy from mail order sources you can be sure of.
- Check your plants weekly during the growing season.
- Without intruding, keep an eye on fuchsias in neighbouring gardens and hedgerows and wherever else you go. If this seems wrong, just remember, if a neighbour gets it and you do nothing, then you will get it too and so will all your friends.

Some Quick Facts

Common name: Fuchsia gall mite.

Scientific name: *Aculops Fuchsiae* Keifer.

Plants affected: Garden and greenhouse fuchsias. The fuchsia *magellanica* variants seem to be particularly sensitive to the mite.

Early symptoms: Thickening, distortion, hairiness and possible colour changes.

Main symptoms: Growth at the shoot tips is swollen and grossly distorted. Flowers are also deformed or fail to develop.

Most active: May to September.

Origin: Brazil

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THE BRITISH FUCHSIA SOCIETY

FUCHSIA GALL MITE INFORMATION LEAFLET

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In early September 2007, *Aculops fuchsiae*, The Fuchsia Gall Mite (FGM) was found for the first time on the mainland of the UK. In the last ten years, it has spread throughout the south, especially along coastal areas and alongside estuaries and other areas of water and is well established below a line from Bristol to the Wash. In the summer of 2017, it had been reported widely around London, throughout Essex and up to the top of Norfolk. We have also had single reports in mid Wales and as far north as Stockport.

What are Fuchsia Gall Mites?

The fuchsia gall mite belongs to the superfamily Eriophyoidea within the Subclass Acari and is a microscopic sap-sucking pest that is specific to fuchsias. Fuchsia gall mites are small, between 200-250µm(0.2-0.25mm) long and 60-65µm(0.06-0.65mm) wide,



Fuchsia Gall Mite on a fuchsia stem under magnification. Reproduced with the kind permission of fera science ltd © Crown copyright

with a worm like body and two pairs of anterior legs near the head. Because of their small size you cannot see them without good magnification, such as a good magnifying glass or microscope. The mites feed by puncturing individual plant cells with their needle-like

mouthparts and sucking out the cell contents. The feeding activities of the mites cause the plants cells to grow abnormally, multiply thus causing swelling (galling) and disfigurement of the growing tips, leaves and flowers. The mite has four lifecycle stages, egg; larva; nymph and adult. Female mites lay up to 50 eggs at a time and these take 4 - 7 days to hatch. The life-cycle takes 21 days to complete and so populations build-up very rapidly. The adults and eggs are able to over winter within the bud scales of the host.

Why are Fuchsia Gall Mites such a concern?

Once established this pest breeds rapidly, with one female mite giving rise to a potential population of over 125,000 mites in only three generations! It also spreads readily between plants and once present it is very difficult to control. The mites overwinter under bud scales but may remain active during the winter on glasshouse fuchsias. The mite seems able to survive outside in sheltered conditions, which seems to explain its proliferation in some areas.

How to identify Fuchsia Gall Mite Damage

The mites infest new growth at the shoot tips where they suck sap and secrete chemicals that prevent the normal development of



Red gall on a magellanica type

growing tips, leaves and flowers. As the infestation increases the foliage becomes increasingly distorted and there is often a swelling along with the distortion. Infected areas can look hairy, or more hairy than normal. This continues until the plants can no longer produce normal

leaves or flower buds. The growth at the shoot tips consists of a mass of distorted tissue instead of leaves or flower buds. Some

fuchsias, especially those closely related to the *magellanica* species, the galled areas will turn red, but in other varieties the galls can be green. Some fuchsias are more resistant than others so the severity of symptoms can vary. Fuchsia gall mite is no longer a notifiable pest in the UK, except where it occurs in a commercial enterprise such as a garden centre or plant nursery.



Green gall on a fuchsia

Be aware that damage from the common capsid bug can be mistaken for early stage fuchsia gall mite damage. This damage will often have small holes or tears in the leaves of the growing tip, which is not the case with fuchsia gall mite. No galls are formed with capsid bug damage.

How can Fuchsia Gall Mites be spread?

One of the main natural modes of dispersion for Eriophyoid mites is via wind dispersion. It is believed that the fuchsia gall mite can be dispersed in the same way. Often the first signs of new damage occurring can be on the side of the plant facing the prevailing wind. It is also possible they can hitch a ride on insects which travel from plant to plant such as bees, wasps, aphids, whitefly etc. In California, man accidentally introduced fuchsia gall mite in 1981 and it is believed to have been spread further by hummingbirds and bees. In 2003, it was found in France where it has become established in certain areas, especially around the coast of

Brittany. At present it has not been confirmed how it reached France in the first instance. It was confirmed in the UK on the south coast in 2007. There have also been limited cases in Belgium, the Netherlands and south-western Germany. Without question, the main culprit for transferring this pest is likely to be ourselves, this is because the mites are so small and hard to detect, especially when present at low levels that they are easily overlooked and can be inadvertently transferred between growers on plants and cuttings, and from plant to plant on hands, tools and clothing etc. If dealing with a plant that has fuchsia gall mite, then think carefully about your next move, clean any tools or implements after cutting back the plants. Contaminating more fuchsias should be avoidable if care is being taken.

So what can we do?

At present, there are **no chemicals available to the amateur** to control this pest, but there are **professional products, only available for use to those with a spraying licence**, such as Dynamec™ and Majestik™. The latter product works by a physical mechanism and the active ingredient is non-toxic and biodegradable. To that end, the British Fuchsia Society has asked the manufacturer if Majestik™ could be registered for amateur use.

Any pesticide with acaricidal properties, those that have some effect on members of the Arachnida family, i.e. pests such as *Tetranychus urticae* (red spider mite), may have some effect on FGM. Synthetic pyrethroids such as Permethrin fall into this class. Products based on this class of chemicals are still available to the amateur market but we don't know how effective they are on FGM. Anecdotal evidence suggests they work better from an aerosol than from a normal sprayer. This could be due to solvents in the aerosol formulation or that the spray from the aerosol is of a much finer droplet size. Another class of product which might be useful against FGM are insecticidal soap and oil based sprays.

These in combination with the micro-pruning technique described later in this section are the most suitable methods of control available to the amateur at present.

Please ensure all Health, Safety and Use information on any pesticide products used are read and followed.

There are no established biological controls but many species of predatory meostigmatid mites in the family Phytoseiidae are known to feed on eriophyoid mites but, because the mites are often hidden in areas inaccessible to these comparatively large predators, control potential is limited. *Amblyseius californicus*, a species commercially available within the UK, has been found in association with FGM in California and is believed to be responsible for some reduction in fuchsia gall mite populations.

In California, they have advocated a technique called micro