

# Galls on *Tilia tomentosa* 'Petiolaris'

Wanstead Park  
August 2018

# Introduction and background

All three common species of Lime can be found locally to Wanstead Park, with many Limes planted in tree avenues radiating out from the old Wanstead House.

Common Lime (*Tilia x europaea*) is the most commonly found, followed by Small-leaved Lime (*Tilia cordata*) and then Large-leaved Lime (*Tilia platyphyllos*).

Some of the Limes planted in the 'Glade' are clearly a different species.



'The Glade' showing white undersides of one of the 'Petiolaris' limes.

# *Tilia tomentosa* ‘Petiolaris’?

It does not seem clear whether ‘Pendent Silver Lime’ is a distinct species or a sub-species of *Tilia tomentosa*.

Stace (3rd ed) states that of planted limes, ‘Petiolaris’ is “easily the commonest, has ... whitish-tomentose lowerside to leaves and petioles > ½ as long as leaves”. These features are clear on the trees in the Glade. The long twisted petioles allow these trees to be distinguished as *Tilia petiolaris*, rather than *Tilia tomentosa*, whether it is a full species or not.

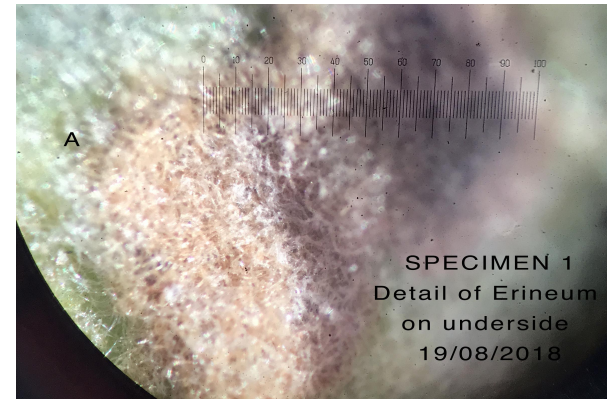
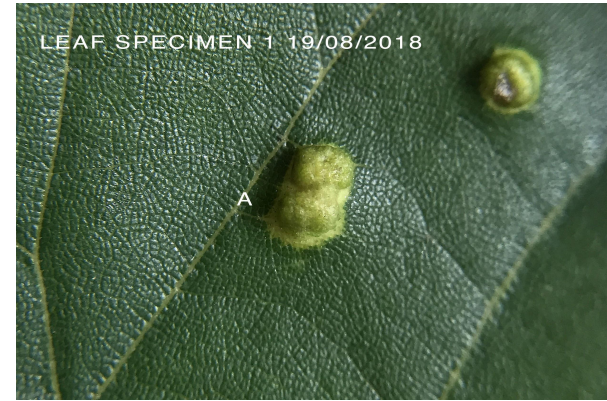
The following pages deal with 3 galls found on *Tilia petiolaris*.



# Galls found on *Tilia petiolaris*: 1

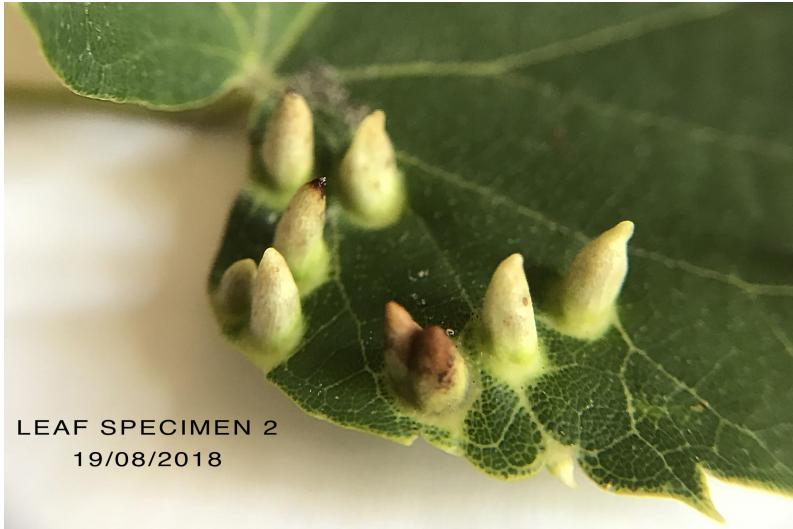
A distinct upward bulge or blister on upper side set apart or between veins. Some of the bulges are around 5mm across.

On the underside there are brown erineum patches.



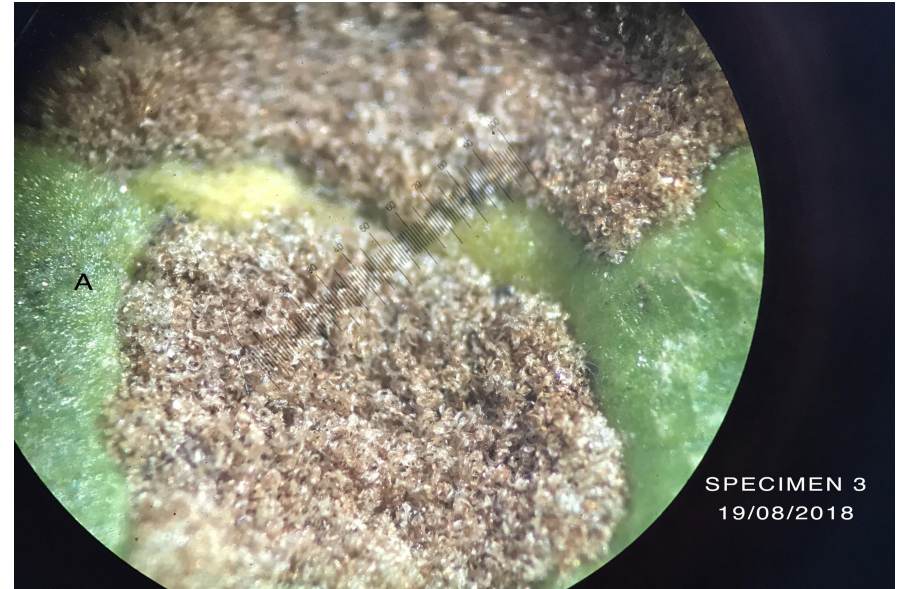
# Galls found on *Tilia petiolaris*: 2

Pale nail galls with relatively pointy tips. There is significant bulging on the underside rather than just hairy openings. The undersides appear to have become dark.



# Galls found on *Tilia petiolaris*: 3

Brown erineum patches on the upperside of the leaf with bulges below. Aside from being the reverse of gall 1, under the microscope the erineum hairs appear curlier and somewhat darker.



# Possibilities...gall 1

Gall 1: *Phytoptus erinotes* or *Phytoptus abnormis* or *Phytoptus tetratrichus*.

Redfern & Shirley (2nd Ed) state: *P. abnormis* is not known in Britain.

Bladmineerders.nl states that such galls are attributed to *P. abnormis* by Garman and *Ph. erinotes* by the British, but that these should be *P. tetratrichus*. It is not entirely clear whether these are synonyms or have different gall causers

Note how similar the magnified erineum look to my photo on slide 4.



*Tilia tomentosa*, Hollandsche Rading: upper side



# Possibilities... gall 2

According to Redfern & Shirley, the galls appear closer in form to *Eriophyes tiliae*, but Bladmineerders.nl treats *E. tiliae* and *E. lateannulatus* as synonyms with variation in form, seemingly partly due to different hosts.

However, I cannot seem to find examples showing the dark bulges on the underside instead of tufts of hairs (compare image right with image on slide 5).



underside



underside of a very fresh gall



# Possibilities...gall 3

In Redfern & Shirley, gall 3 would key to either *Phytoptus erinotes* again or *Eriophyes leiosoma*.

Bladmineerders.nl seems to lump *E.leiosoma* with *E. exilis* and shows a picture of *T.tomentosa* with erineia on the top of the leaf (although not looking much like my photo).



*Tilia tomentosa*, UK, London, Kensington  
Gardens © Paul Fontaine

# Summary

Redfern & Shirley states that the keys relating to these galls are “tentative only; the identity of mites needs to be verified”.

It seems that with less common hosts, i.e., *Tilia petiolaris* or *T. tomentosa*, the variation is more pronounced than when considering *T. cordata*, *T. platyphyllos*, and *T. x europaea*.

Perhaps without detailed study of the mites themselves, further verification is not possible. I would be keen to help provide samples for anyone wishing to study the galls found on *T. petiolaris* further.

If you believe you can help, or would like to offer thoughts, comments or critique of these observations, please contact me at [jwfheal@gmail.com](mailto:jwfheal@gmail.com)

Thanks for reading. James Heal, August 2018