

Insects on Laburnum *Laburnum anagyroides*

Gary Farmer



01. Laburnum *Laburnum anagyroides* naturalised in North Littleton 05.05.22. Gary Farmer.

Laburnum *Laburnum anagyroides* is found throughout the county and is frequent as a self-sown sapling (01) and naturalised in woodland and scrub in a few places (Maskew 2014). For most of the year this small tree is lost amongst the other species of hedgerow, roadside and scrub, but in May the showy, bright yellow flowers (02) make Laburnum stand out from everything else. The flowers are followed by an abundance of seed pods (03) that hang from the tree through the summer into autumn, often persisting into the following year.



02. Laburnum flowers. North Littleton 05.09.22. Gary Farmer.



03. Laburnum seed pods. North Littleton 20.05.22. Gary Farmer.

Laburnum is native to France, Switzerland and parts of Germany and northern Italy, and has been known in Britain since late 1500s; one early record exists from 1597 (Brimble 1948). It is well known that every part of the tree is poisonous. It is a member of the pea family Fabaceae with many of its relatives being native to the UK and it has been part of the British flora for some time. So, is this toxic alien just a troublesome invasive or does it offer valuable habitat for native (and non-native) insects and other invertebrates?

This report is mostly the result of several brief visits to Laburnum trees growing amongst roadside scrub in North Littleton during 2022 with just a few earlier observations from 2021. There is also a reference to a single (self-sown?) tree in Sherriff's Lench, and a planted tree in a garden in Worcester. I have presumed that all of the Laburnum trees are *L. anagyroides* as the only other species noted in the *Flora of Worcestershire* is *L. alpinum* but at the time of the flora there was "no unequivocal evidence of natural regeneration" [of the latter species] (Maskew 2014). My records are from a combination of visual observations and the use of an entomologist's sweep net to extract invertebrates hidden in the flowers and foliage. This was by no means a thorough, structured survey but is merely an attempt to find out if anything does actually interact with Laburnum in the wild as internet searches just highlight the nuisance of various leaf miners and aphids to Laburnums in gardens.

The first two insects I found turned out to be common and the most frequently encountered on Laburnum; a small seed beetle *Bruchidius villosus* and a psyllid *Floria variegata* (04), both on 02.06.21. *B. villosus* is noted as occurring mostly on Broom *Cystus scoparius* in Britain (Duff 2016), but in Germany its hosts do include Laburnum (Rheinheimer & Hassler 2018). The psyllid *F. variegata* arrived in Britain from southern Europe by 1978 (British Bugs website) and appears to be restricted to Laburnum. Two large Hemiptera turned up on numerous occasions; Gorse Shieldbug *Piezodorus lituratus* (05) and the extraordinary Horned Treehopper *Centrotus cornutus* (06). My earliest records of Gorse Shieldbug, were of an adult on 05.05.22 followed by nymphs on 15.07.22. This species is usually associated with gorse and broom, neither of which grow nearby (the closest gorse thickets are near Broadway Tower 7.5 miles/12 kms to the south). This bug is also known to feed on Laburnum, but not until late summer (Hawkins 2003), when gorse flowers are over. So

the population at North Littleton is obviously using Laburnum early in the year in the absence of gorse. The other large bug is the Horned Treehopper, a species that I often find along woodland rides, particularly on rose stems. Various sources just refer to this species being found on “various trees and shrubs” but its closest relative in the UK, *Gargara genistae*, is a scarce species found in southern Britain, feeds on broom (British Bugs website).



04. Laburnum Psyllid *Floria variegata* 13.05.22. Gary Farmer.



05. Gorse Shieldbug *Piezodorus lituratus*. 05.05.22. Gary Farmer.



06. Horned Treehopper *Centrotus cornutus* 05.05.22. Gary Farmer.

Other Hemiptera recorded include the lace hopper *Tachycixius pilosus*, a common species found across the county on various trees and shrubs. The Common Froghopper *Philaenus spumarius* more

usually associated with grasses and herbs, and its larger relative *Aphrophora alni* a tree-dwelling bug, were both found to be present. A first instar Tree Damsel Bug *Himacerus apterus* was swept from flowers on 22.05.22 (07). A mirid bug *Megaloceroea relicticornis* a common species of grasslands, uncut meadows and woodland edges was swept on one occasion, and a small orange/brown *Anthocoridae* flower bug was present but remained unidentified.



07. First instar Tree Damsel Bug *Himacerus apterus* swept from Laburnum flowers at North Littleton on 22.05.22. Gary Farmer.

I found aphids massed on newly formed seed pods in late June through July. The Influential Points website shows five different species of aphid associated with *Laburnum anagyroides* (these are *Acyrtosiphon caraganae* ssp. *occidentale*, *A. pisium*, *Aphis craccivora*, *A. cytisorum* and *Myzus persicae*) but none were identified to species level during my study. The only Hymenopterans noted were the bumblebee *Bombus hortorum* which was seen nectaring on a couple of occasions, and two species of ants: *Lasius niger* which were observed tending aphids (08) on several trees in June/July and *Formica fusca* which were abundant and very active on just one tree on 08.08.22.



08. Unidentified aphids on Laburnum pods and (inset) being tended by *Lasius niger* ants. North Littleton 28.06.22. Gary Farmer.

I easily located leaf-mines on most of the trees I looked at. Two species of fly *Agromyza demejerei* (09) and *Phytomyza cytisi* (10) were particularly common. These two species are restricted to Laburnum in the UK, but in Europe *A. demejerei* is also reported on *Wisteria sinensis* and *Thermopsis lupinoides* and possibly *Lupinus* spp. in gardens. Meanwhile *P. cytisi* is very occasionally reported from *Cytisus ratisbonensis*, *C. supinus*, and *Petteria ramentacea* (Plant Parasites of Europe).



09. Diptera *Agromyza demejerei* North Littleton 28.06.22. Gary Farmer



10. Diptera *Phytomyza cytisi* Windmill. Hill 28.06.22. Gary Farmer.

I found only one location for the leaf-mining micro moth *Leucoptera laburnella* (11). Their mines were present in a single tree in a garden in the centre of Worcester. This species will also feed in the leaves of Dyer's Greenweed *Genista tinctoria* and garden lupins. There are usually two generations during the summer, with caterpillars feeding in late June-July and in September, but I did not find any adult moths. UK Fly-mines website mentions one other micro moth with larvae that feed in Laburnum leaves, the Firethorn Leaf Miner *Phyllonorycter leucographella*, which was first recorded in Britain in Essex in 1989 (UK Moths). The only other Lepidopteran I encountered was a caterpillar of the Yellow-tail Moth *Euproctis similis* known to feed on a range of deciduous trees and shrubs.



11. Lepidoptera *Leucoptera laburnella* Worcester 13.08.22. Gary Farmer.

Other than the leaf-mining Diptera mentioned earlier, I only recorded three other flies. The hoverfly *Episyrphus balteatus* was common around the trees while the aphids were abundant, presumably egg laying as its larvae are predators of aphids. I also swept a single picture-winged fly *Herina lugubris* from a tree

adjacent to Windmill Hill Nature Reserve. This fly is usually found on dry calcareous sites with short turf or sparse vegetation, though the fly's biology is unknown (Steven Falk Flickr site), so does Laburnum form part of the fly's life cycle? The only other fly I identified was the common horsefly *Haematopota pluvialis* which was more interested in me than the Laburnum trees.

A variety of beetles (Coleoptera) were encountered during the survey (12). These were mostly present during flowering time and included many pollen-feeders including the longhorn beetle *Grammoptera ruficornis* and a very hairy flower beetle *Dasytes aeratus* as well as a shining flower beetle *Olibrus corticalis* and various false flower beetles such as *Anaspis maculata*. The ubiquitous brassica flower beetle *Brassicogethes aeneus* was also present in the flowers. Several flea beetles remained mostly unidentified but *Aphthona euphorbiae* was present and is a pest of Flax *Linum usitatissimum*. A small predatory ground beetle *Paradromius linearis* was also swept from the flowers as was a soldier beetle *Cantharis pallida*, found in just one tree in Sherriff's Lench. Its relative, the seasonally common *Rhagonycha fulva* was present a little later on in several trees. Two species of weevil were found, the ubiquitous *Sitona lineatus* and more interestingly *Sitona striatellus* a weevil of gorse and broom was swept from flowers. Despite the abundance of aphids, the mildew-feeding Orange Ladybird *Halysia sedecimguttata* was the only species of ladybird found.



12. Examples of beetle species found on Laburnum, North Littleton 22.05.22. Clockwise from top right *Grammoptera ruficornis*. *Dasytes aeratus*. *Aphthona euphorbiae*. *Paradromius linearis*. Gary Farmer.

Of the Orthoptera and allies, Speckled Bush-cricket *Leptophyes punctatissima* and Oak Bush-cricket *Meconema thalassinum* were present as were both Common Earwig *Forficula auricularia* and the Nationally Scarce Lesnes Earwig *F. lesnei*. I found just one species of lacewing *Dichochrysa ventralis* (13), swept from the flowers during May.



13. Lacewing *Dichochrysa ventralis* swept from Laburnum flowers North Littleton 22.05.22. Gary Farmer.

Some non-insect invertebrates were noted, especially arachnids. The green Cucumber Spiders *Araniella* spp. were regularly seen. The crab spider *Misumena vatia* was present and having adopted its yellow uniform, was beautifully camouflaged amongst the bright yellow flowers of the Laburnum on 5th May 2022 (14). In contrast to *M. vatia*, a crab spider *Philodromus dispar* (15) is very fast moving and several were swept from foliage 22.05.22. The male's pale bordered, metallic body and swift movement make this a distinctive and spectacular species to find.



14. The beautifully camouflaged *Misumena vatia* waiting to ambush its prey. North Littleton 05.05.22. Gary Farmer.



15. *Philodromus dispar* North Littleton 22.05.22. Gary Farmer.

It would appear that Laburnum offers habitat to a wide range of invertebrate species, some of which would not occur if the plant was not present. Of particular interest are the species associated with gorse and broom for which it offers an alternative habitat in a landscape where these other larger Fabaceae are absent. Also the presence of species restricted to Laburnum shows how insects can move quite some distance across the landscape to find host species. A list of species identified from my *ad-hoc* survey follows, but I am sure this would greatly increase with more visits.

Species list

	1 st record	comment
Psyllid		
Laburnum Psyllid <i>Floria variegata</i>	02.06.21	Restricted to Laburnum in UK.
Hemiptera		
Gorse Shieldbugs <i>Piezodorus lituratus</i> adult	05.05.22	Obviously breeding in Laburnum in an area with no gorse or broom.
nymph	15.07.22	
Horned Tree Hopper <i>Centrotus cornutus</i>	05.05.22	Adults found on several occasions.
Lace hopper <i>Tachycixius pilosus</i>	05.05.22	Several individuals.

Common Froghopper <i>Philaenus spumarius</i>	15.07.22	One record.
Froghopper <i>Aphrophora alni</i>	28.06.22	One record.
Tree Damsel Bug <i>Himacerus apterus</i>	22.05.22	1 st instar.
Mirid bug <i>Megaloceroea relicticornis</i>	15.07.22	One record.
Anthocorid sp. Unidentified flower bug	05.05.22	One unidentified small orange/brown species.
Aphids Unidentified species.	15.07.22	Massed on young seed pods.
Coleoptera		
Seed beetle <i>Bruchidius villosus</i>	02.06.21	Regularly found.
Weevil <i>Sitona striatellus</i>	08.08.22	One record
Weevil <i>Sitona lineatus</i>	22.05.22	One record
Orange Ladybird <i>Halysia sedecimguttata</i>	15.07.22	One record.
False flower beetle <i>Anaspis rufilabris</i>	13.05.22	Sherriff's Lench & North Littleton.
False flower beetle <i>Anaspis maculata</i>	13.05.22	Several shaken from flowers.
Flea Beetle <i>Longitarsus ganglbauri</i>	05.05.22	One record. Specimen examined.
Flea beetle <i>Aphthona euphorbiae</i>	22.05.22	One record. Specimen examined.
Ground beetle <i>Paradromius linearis</i>	22.05.22	One record
Soldier beetle <i>Rhagonycha fulva</i>	15.07.22	Several individuals.
Soldier beetle <i>Cantharis pallida</i>	13.05.22	One record from flowers.
Flower beetle <i>Dasytes aeratus</i>	22.05.22	Several individuals.
Pollen beetle <i>Brassicogethes aeneus</i>	22.05.22	Common in flowers.
Longhorn beetle <i>Grammoptera ruficornis</i>	22.05.22	Common in flowers.
Shining flower beetle <i>Olibrus corticalis</i>	05.05.22	One record from flowers.
Orthoptera and allies		
Speckled Bush-cricket <i>Leptophyes punctatissima</i>	15.07.22	One record
Oak Bush-cricket. <i>Meconema thalassinum</i>	28.06.22	Nymph.
Common Earwig <i>Forficula auricularia</i>	28.06.22	Several nymphs in one tree.
Lesnes Earwig <i>Forficula lesnei</i>	08.08.22	One nymph
Hymenoptera		
Bumblebee <i>Bombus hortorum</i>	05.05.22	Several collecting pollen in one tree.
Ant <i>Lasius niger</i>	05.05.22	Tending aphids.
Ant <i>Formica fusca</i>	08.08.22	Many in one tree.
Lepidoptera		
Yellow-tail Moth caterpillar <i>Euproctis similis</i>	05.05.22	One record.
Micro moth leaf mine <i>Leucoptera laburnella</i>	13.08.22	One location in Worcester.
Diptera		
Fly leaf-mine <i>Agromyza demeijerei</i>	28.06.22	Very common.
Fly leaf-mine <i>Phytomyza cytisi</i>	28.06.22	Very common.
Hoverfly	15.07.22	Common around

Episyrphus balteatus		aphids.
Picture wing fly <i>Herina lugubris</i>	28.06.22	One record.
Lacewing <i>Dichochrysa ventralis</i>	22.05.22	One record.
Arachnida		
Spider <i>Philodromus dispar</i>	22.05.22	Several swept from leaves.
Cucumber spider <i>Araniella</i> sp.	05.05.22	Regular.
Crab spider <i>Misumena vatia</i>	05.05.22	One in flowers.
Harvestman <i>Dicranopalpus ramosus</i>	15.07.22	Common in late summer.

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Images

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