

An introduction to Psyllids (of Bedfordshire)

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Cacopsylla fulguralis

asics

- A group of Stenorrhyncha, most closely related to aphids
- Small to very small (1-5 mm)
- Worldwide ~3000 species, ~85 in UK (increasing due to introductions)
- Poorly recorded in UK – no prior recording scheme, and status of many species unclear
- Strongly host-specific
- Some commercial pests, particularly of fruit trees (*Cacopsylla mali*, *C. pyricola*)
- Often regarded as “difficult” – which may be unfair. But probably isn't.

Finding psyllids

Easily found by sweeping or beating selected plants:

In **summer**, herbaceous or arborescent dicots (almost exclusively) – especially native deciduous

In **winter**, evergreen shelter plants – especially conifers or yew. Some species on evergreen h

Most species are host-specific, so you need to know which plants to target. Once you find th



Spanioneura fonscolombii (on box, all year)

Identification

- Two major families: Psyllidae & Triozidae (other families represented by introductions)
- Many species superficially similar, and need microscopic examination
- Dissection rarely needed, so high-resolution macrophotographs are quite often sufficient
- Some species very difficult to confirm from single specimens; male and female often critical



Chamaepsylla hartigi

Colouring

Body Colouring

Varies seasonally: usually palest (green/yellow/orange) when teneral, then darkens steadily



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Trioza alacris

Usually very distinctive for species with patterned or coloured wings, although some are still

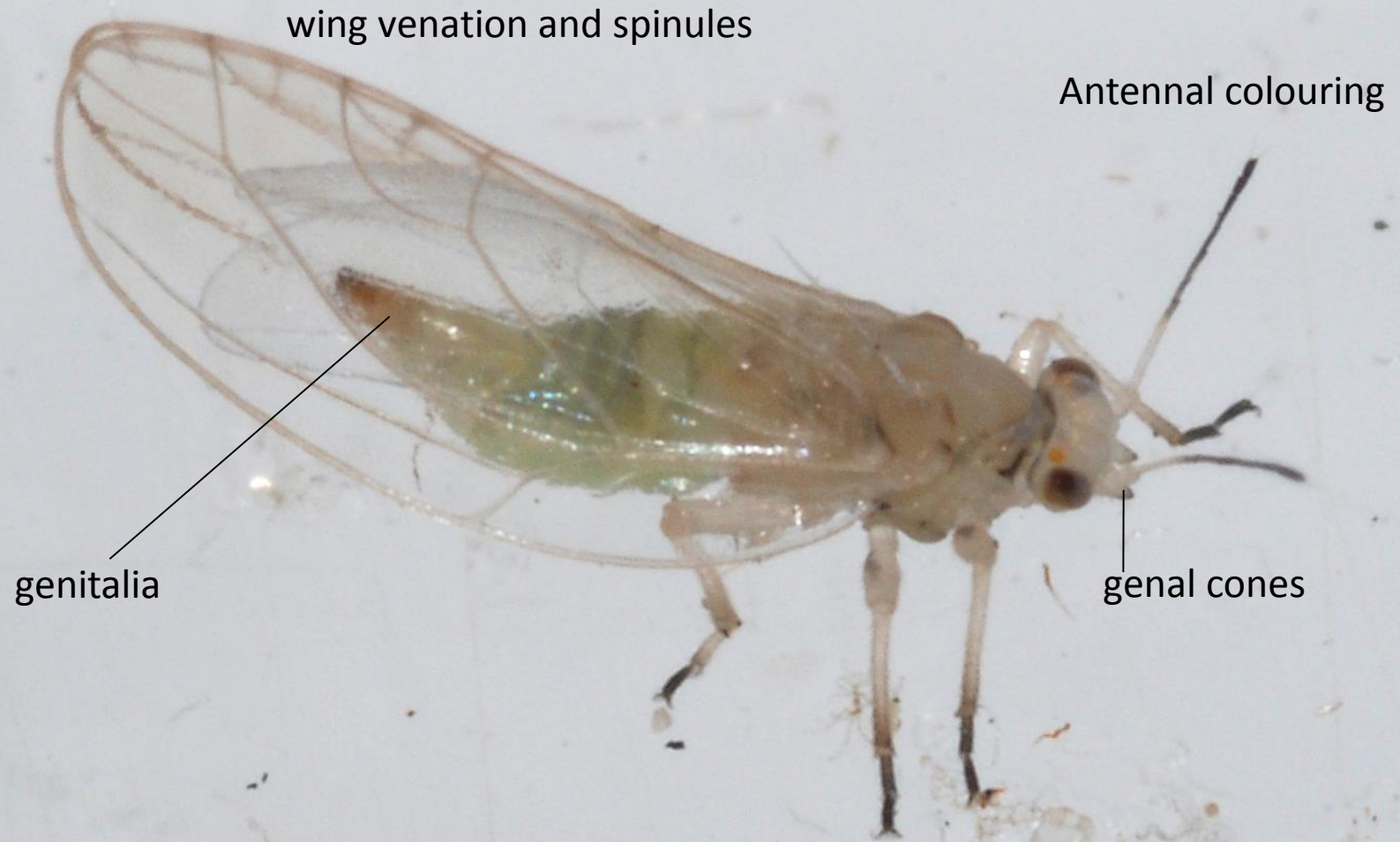


Aphalara ulicis



Craspedolepta nebulosa

Critical morphological features



Trioza urticae (female)

Genitalia



Female

proctiger
ventral valve

Cacopsylla cf. melanoneura

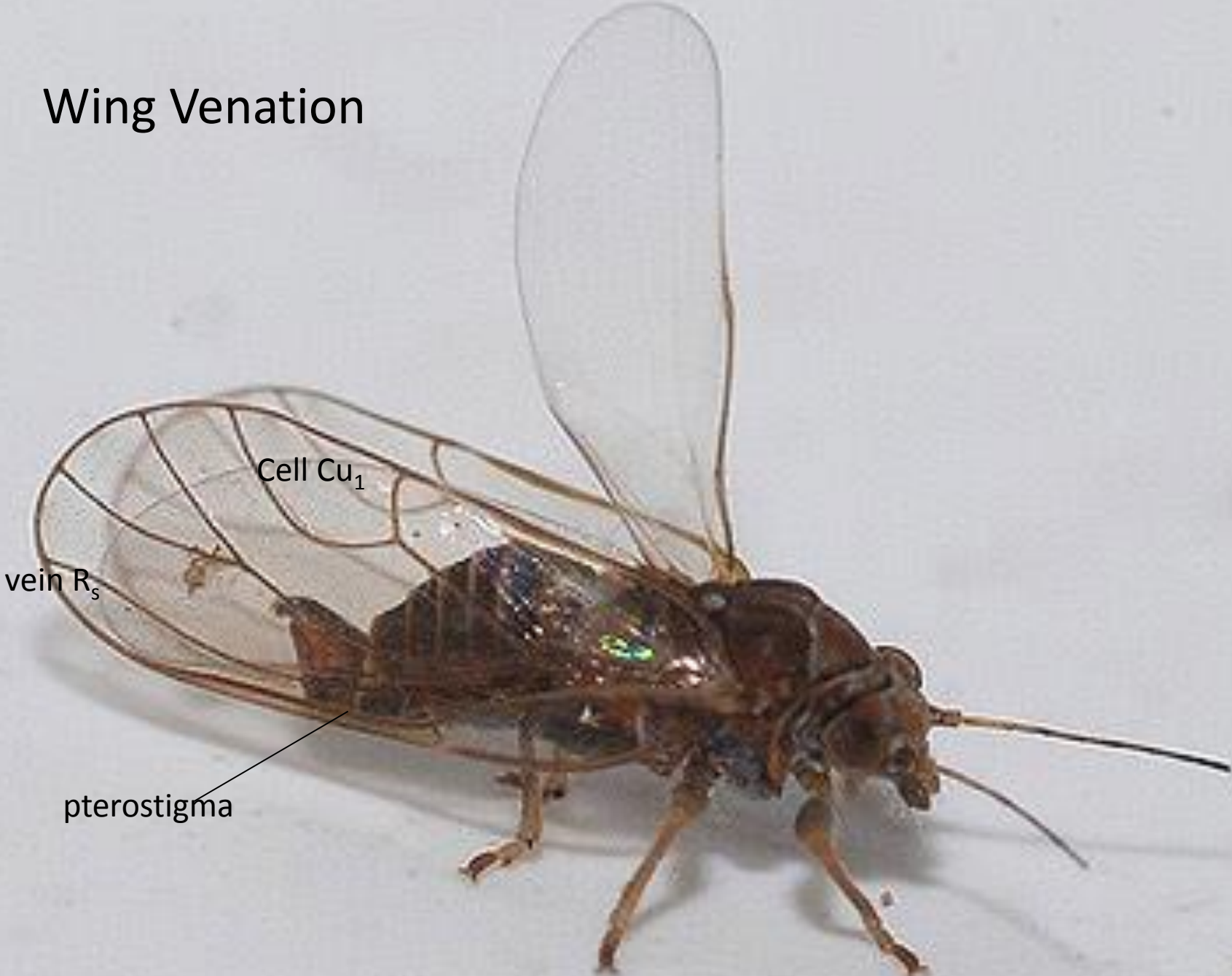


Male

paramere

Cacopsylla peregrina

Wing Venation



vein R_s

Cell Cu₁

pterostigma

Cacopsylla melanoneura

Life History

- Nymphs flattened, and quite distinct from adults
- Most species overwinter as eggs or adults
- From one generation in two years (*Strophingia ericae* at high altitude) up to



Trioza urticae

Galls

Several psyllid species form galls, and these have been widely used for recording species – so

Three significant gall types:

Pit galls. Small depressions on underside of leaves.

Usually seen on oak (*Trioza remota*) and nettles (*Trioza urticae*, where it can lead to leaf distortion and discoloration); also *Crithmum maritimum* (*Bactericera crithmi*) and perhaps also others.

Larvae visible within pits.



photo: Jerry Clough

Tassel-galls. Brush-like growths of multiple shoots from flowering stems of *Juncus* spp., caused

Sometimes absent..?



photo: Jerry Clough

Leaf-roll galls. Inflated, discoloured margin leaf-rolls with multiple nymphs inside the gall, on *Psyllopsis fraxini* and *discrepans* (Ash), *Trioza centranthi* (Valerian) and *Trichoermes walkeri*



Trioza alacris (on Bay)



Psyllopsis fraxinicola nymphs



Cauliflower gall on Box: *Psylla buxi*, *Spanioneura fonscolombii*, or “*Spanioneura buxi*”?



S. fonscolombii



P. buxi



P. buxi nymphs... but no trace of a gall

Distribution patterns and rarity

- Of the 85-ish species, 77 are in the RES key by Hodkinson & White (1979)
- Of these 77, I have so far failed to find 35!
- 19 of these were regarded as rare, and known from only a few localities at most... (Extreme cases: *Trioza proxima*, known from a single nymph in Durham, and *Calophya rhois*, from a single specimen on Scalpay, Hebrides.)
- Of the 42 that I've personally found, many are abundant and widespread, but others have coastal, upland or southern distributions – often limited by host plant distribution.

And the rest..? Many seem to have declined badly, but have low population densities, restrictive host plants, and few people looking for them.



Cacopsylla pruni



Trioza galii

The Bedfordshire List

Arytaina genistae

Cacopsylla melanoneura

Cacopsylla peregrina

Chamaepsylla hartigii

Ctenarytaina eucalypti

Livia junci

Psylla alni

Psylla buxi

Psylloopsis fraxini

Psylloopsis fraxinicola

Spanioneura fonscolombii

Trichoermes walkeri

Lauritrioza alacris

Trioza remota

Trioza urticae

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Arytaina genistae

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Livia junci

Psylla alni

Psylla buxi

Psyllopsiis fraxini

Psyllopsiis fraxinicola

Spanioneura fonscolombii

Trichoermes walkeri

Lauritrioza alacris

Trioza remota

Trioza urticae

Ubiquitous

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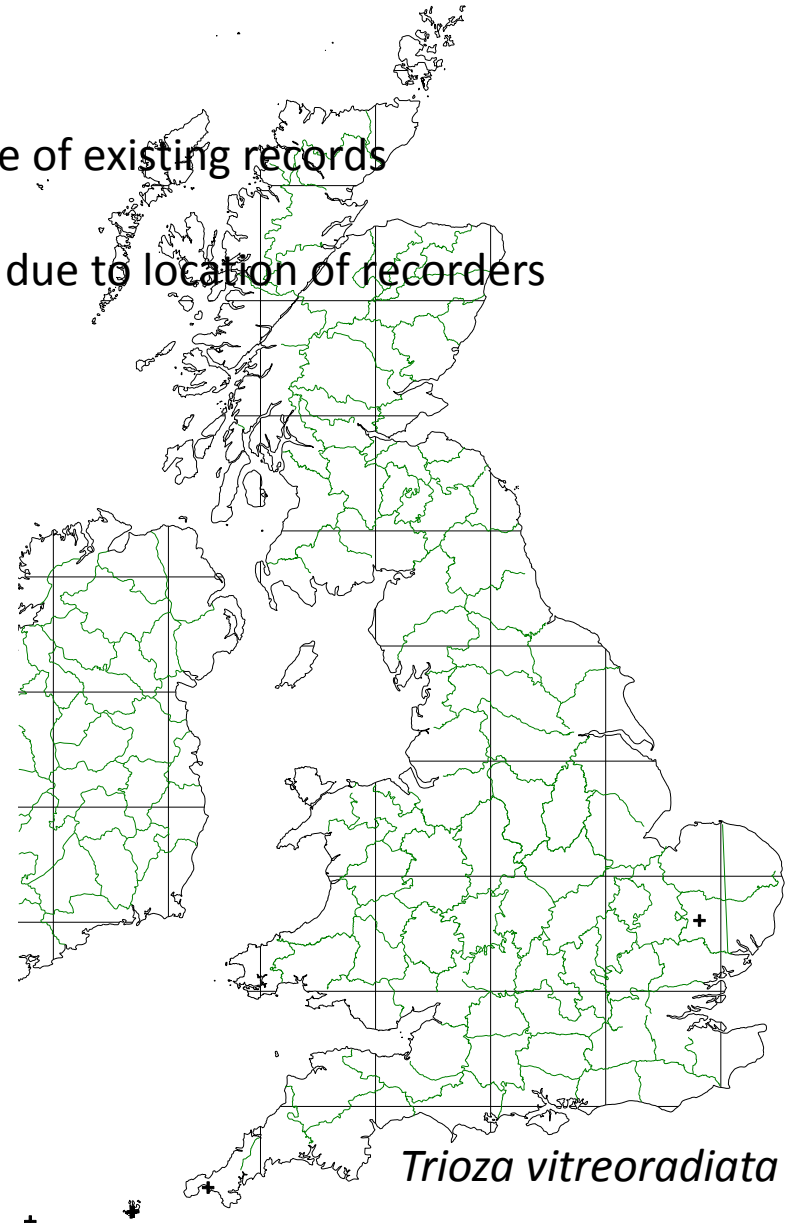
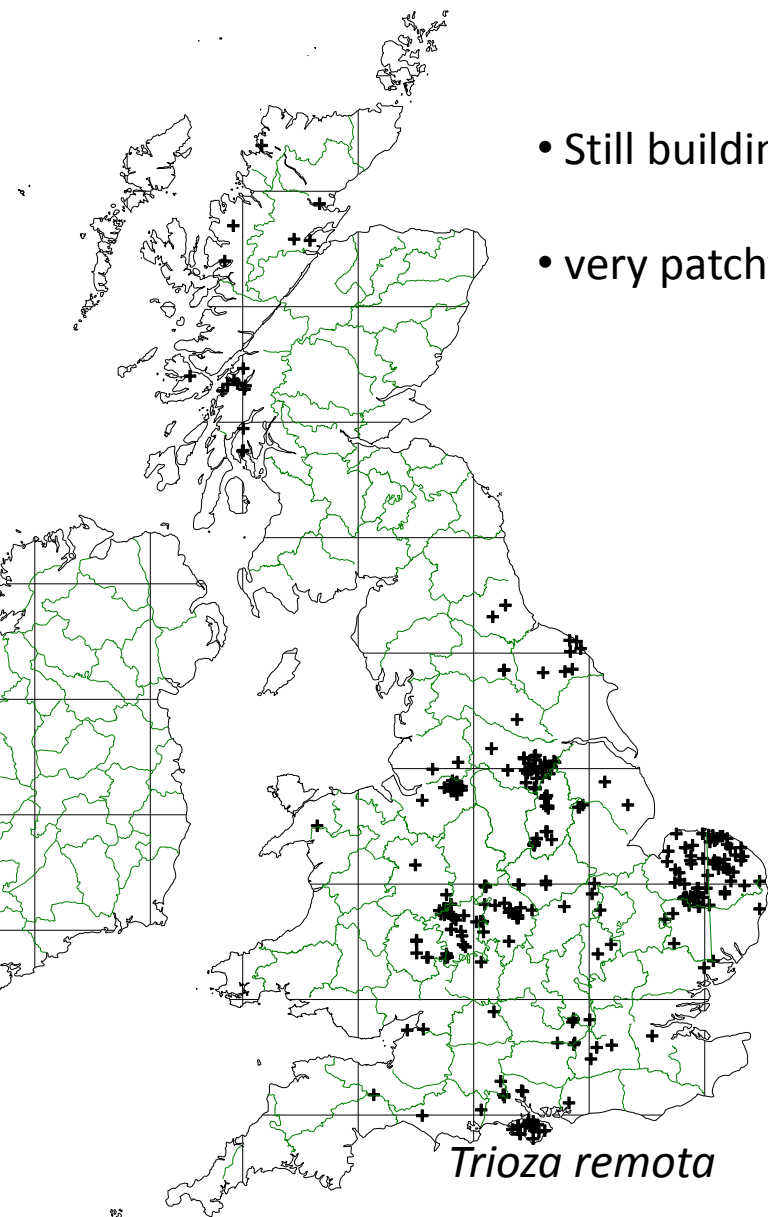
Southern

Introduced

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Current state of recording

- Still building up database of existing records
- very patchy distribution due to location of recorders



Psyllids in the news!



Aphalara itadori – the doom of Japanese Knotweed! (we hope)

Present trends and uncertainties

A few native species seem to be ubiquitous and largely stable, but others remain very p

- Increasing establishment and spread of invasive species (including deliberate introdu
- Many species very poorly known, with uncertain status – are they even still present?
- Sensitivity of even common species to aberrant weather (especially *Cacopsylla mel*

Good to meet you!

