



Canadian Food
Inspection Agency

Agence canadienne
d'inspection des aliments

Pest categorization

Clastoptera saintcyri Provancher (Hemiptera:
Auchenorrhyncha)

Blueberry spittlebug



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Background

The purpose of this categorization is to determine whether *Clasoptera saintcyri* (blueberry spittlebug) has the potential to satisfy the criteria in the definition for a quarantine pest. The method used by the CFIA to initiate and conduct this categorization is consistent with international guidelines set by the International Plant Protection Convention (IPPC). Definitions follow those listed in the IPPC's *Glossary of phytosanitary terms*.

Initiation point: This categorization was identified via a Commodity Risk Assessment on blueberry plants from Canada to the UK for the Jens-Georg Unger Plant Health Fellowship project, funded by the European and Mediterranean Plant Protection Organisation (EPPO). This project was led by a visiting scientist from the UK Department for the Environment, Food and Rural Affairs, utilising the tools and templates of the Canadian Food Inspection Agency and coordinating with experienced Canadian risk assessors.

Identification of the PRA area: The PRA area is all of the UK.

Current regulatory status: *Clasoptera saintcyri* is not currently regulated as a pest in the UK or in other EPPO member countries (EPPO 2022).

Identity of organism

Name: *Clastoptera saintcyri* Provancher (Hemiptera: Cercopidae)

Synonyms: *Clastoptera proteus* var. *vittata* Ball

Clastoptera proteus var. *anceps* McAtee

Clastoptera vittata Ball

Clastoptera proteus Fitch

English common names: Blueberry spittlebug, heath spittlebug

French common names: Le cercope du bleuet

1. Is the organism clearly a single taxonomic entity and can it be adequately distinguished from other entities of the same rank?

Yes

If no

Go to 2

Go to 11

Clastoptera saintcyri is a member of the *proteus* group of *Clastoptera*. Members of this group feed on ericaceous plants and possess a face that has a yellow lower half and a contrastingly black upper half. *C. saintcyri* distinguishes itself from other members of this group by either having (1) dark forewings without yellow or orange markings, and crown of head entirely black, or (2) each forewing marked with 2-3 yellow or orange bands (Hamilton 1982).

Presence in the PRA area

2. Does the organism occur in the PRA area?

If yes

No

Go to 3

Go to 5

3. Is the organism widely distributed in the PRA area?

If yes

Go to 11

If no

Go to 4

Regulatory status

4. Is the organism under official control in the PRA area or is it a potential candidate for official control?

If yes

Go to 5

If no

Go to 11

Potential for establishment and spread in the PRA area

5. Does the PRA area have climatic conditions suitable for establishment and spread of the organism?

Yes

Go to 6

If no

Go to 11

The blueberry spittlebug is present in eastern Canada and eastern US, as shown in Figure 1 (GBIF 2022; Hamilton 1982; Maw *et al.* 2000). This is believed to be its native range (ITIS 2022). They do not appear to have spread to other countries, perhaps unsurprising given any long-distance dispersal of this pest has not been reported. *Clastoptera saintcyri* is not very agile at walking although it is noted that it will spring into the air when disturbed (Franklin 1919; SPBQ 2022). No information could be found on the climate preferences of this spittlebug, yet its geographical range suggests that it could tolerate the mild UK climate.

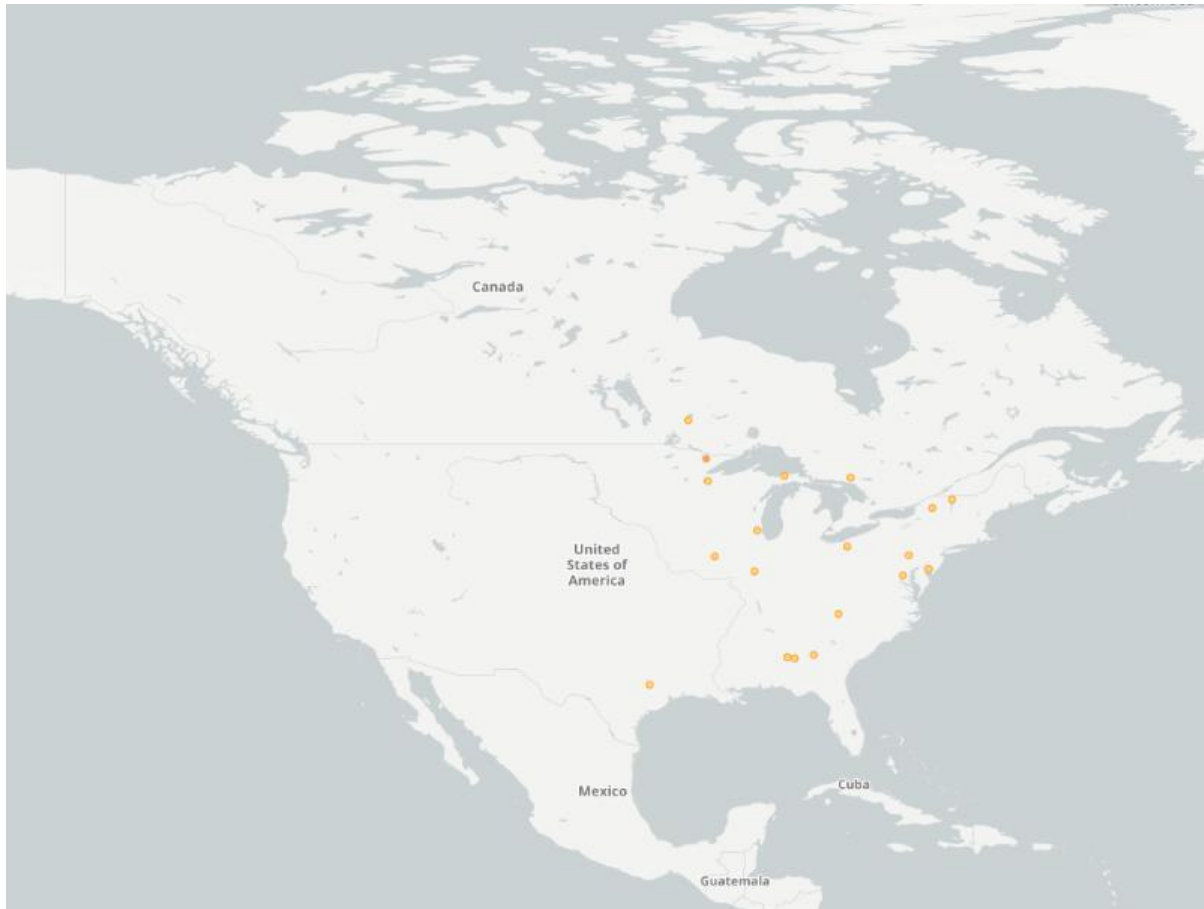


Figure 1: Distribution of *Clastoptera saintcyri* (GBIF 2022)

6. Does the PRA area have ecological conditions suitable for establishment and spread of the organism?

Yes

If no

Go to 7

Go to 11

Clastoptera saintcyri is encountered frequently in blueberry fields (SPBQ 2022). In the wild, it is found in heath environments in mixed pine-maple woods and attacks a wide range of hosts from the Ericaceae (heather) family, as well as *Myrica gale* (sweet gale) and *Pteridium aquilinum* (eagle fern). The presence of these mixed coniferous-deciduous forests appears to be a limiting factor of its native distribution (Hamilton 1982). The recorded Ericaceous host range is as follows (Doering 1942; Franklin 1919; Hamilton 1982):

- *Arctostaphylos uva-ursi* (bearberry)
- *Chamaedaphne calyculata* (leatherleaf)

- *Eubotrys racemosa* (fetter bush)
- *Gaylussacia baccata* (black huckleberry)
- *Gaylussacia frondosa* (blue huckleberry)
- *Leucothoe* sp. (genus of evergreen shrubs)
- *Lyonia ligustrina* var. *ligustrina* (northern maleberry)
- *Vaccinium angustifolium* (lowbush blueberry)
- *Vaccinium corymbosum* (highbush blueberry)
- *Vaccinium macrocarpon* (large cranberry)
- *Vaccinium pallidum* (pale blueberry)

Arctostaphylos uva-ursi is a shrub native to the UK and found in upland heaths and moorlands (PlantAtlas 2022). The remaining hosts are not native to the UK, though the listed *Vaccinium* species are present in urban areas (e.g. gardens) in the UK and/or in cultivated areas such as fields, nurseries, and garden centres (RHS 2022c). *Arctostaphylos uva-ursi*, *Chamaedaphne calyculata* and *Leucothoe* sp. are also sold in UK nurseries (Larch Cottage 2022a; Larch Cottage 2022b). The presence of these hosts could enable the establishment and spread of the blueberry spittlebug.

Finally, no reports of natural controls could be found for *Clastoptera saintcyri* that could impact the spread and establishment of this pest in the UK. Spittlebugs are typically not impacted by predators, parasites or disease (Hamilton 1982).

Potential for economic and environmental consequences in the PRA area

7. Is the organism a known pest in its area of current distribution?

Yes	Go to 9
If no	Go to 8

Spittlebugs feed by sucking sap from the plant. This can deform leaves, form galls, destroy shoot tips, transfer pathogens, defoliate branches or interfere with fruit and seed formation (Hamilton 1982), all of which can impact yield or reduce plant vigour (Hamilton 1982; PMC 2020; SPBQ 2022). Finally, spittlebugs can cause twig dieback by laying their eggs in the plant stem (Hamilton 1982).

8. Does the organism have intrinsic attributes that indicate that it could cause significant harm to plants?

If yes	Go to 9
If no	Go to 11

9. With specific reference to the plants or habitats which occur in the PRA area, could the organism by itself, or acting as a vector, cause significant damage or loss to plants leading to negative economic, environmental, societal or export market impacts?

If yes

Go to 10

No

Go to 11

Blueberry species, such as *Vaccinium corymbosum*, are cultivated in the UK. The value of the GB blueberry-growing economy is currently valued at £32 million ex-farm (Jack Evans, British Summer Fruits, pers. comm., Jun. 10, 2022). Blueberry plants are also grown as ornamental plants in gardens (RHS 2022b). Cranberry plants are not cultivated commercially in the UK although, similar to blueberry plants, they are grown in allotments. Cranberry, *Arctostaphylos uva-ursi*, *Leucothoe* sp. and *Chamaedaphne calyculata* plants are also sold as ornamental plants for gardens (Larch Cottage 2022a; Larch Cottage 2022b; Latham *et al.* 2022; RHS 2022a). Finally, *A. uva-ursi* has a significant ecological role in coastal heath environments, particularly in Scotland, by facilitating local tree regeneration (Hesling and Taylor 2013).

Spittlebugs have the potential to cause economic, social and/or environmental losses. Therefore, it is possible that the presence of *Clastoptera saintcyri* would cause damage to hosts in the UK. In its current geographical range, *C. saintcyri* was reported to cause leaf drop and the reduction of bud formation in cranberry plants (Franklin 1919). However, its impact on crop yield has not been recorded, even though it is encountered frequently in blueberry fields. In addition, chemical controls for this pest are rarely needed (PMC 2020; SPBQ 2022). Altogether, the economic impact of this pest does not appear to be significant. This species has also not been attributed to causing any environmental or social impacts in its native range.

Conclusion

10. This organism has the potential to satisfy the definition of a quarantine pest.

11. This organism does not fulfill all of the criteria for a quarantine pest.

To conclude, *Clastoptera saintcyri* does not have the potential to satisfy the definition of a quarantine pest for the UK. This spittlebug is absent in the UK and does not appear to have a significant economic, environmental, or social impact in its native range. There is also no record of *C. saintcyri* expanding beyond its native range. A full risk assessment is not recommended though as a comprehensive literature search was already carried out for this categorisation.

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