

***Hishimonus* leafhoppers on *Jasminum polyanthum* houseplant in Redditch, Worcestershire.**

Gary Farmer

In May 2021 Nicki Farmer noticed that one of our house plants, a *Jasminum polyanthum* was hosting a few small leafhoppers. On closer investigation both nymphs (01&02) and adults (03&04) were seen.



01. *Hishimonus* leafhopper nymph on Jasmine 08.05.2021. Gary Farmer.



02. *Hishimonus* leafhopper nymph on Jasmine 08.05.2021. Gary Farmer



03. *Hishimonus* leafhopper adult on Jasmine 08.05.2021. Gary Farmer.



04. *Hishimonus* leafhopper adult on Jasmine 08.05.2021. Gary Farmer.

There were also many shed skins attached to the plant (05), suggesting that the bugs had been present for a while but had gone undetected.

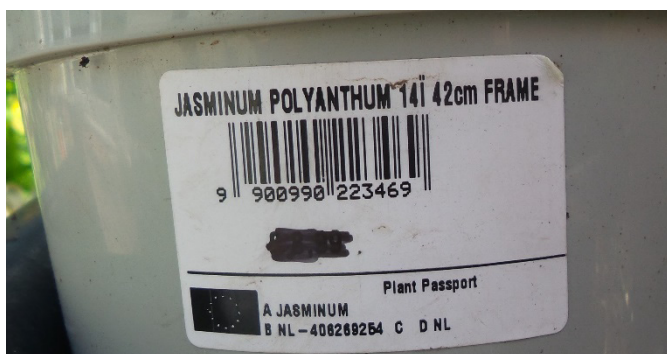


05. *Hishimonus* leafhopper skins on Jasmine 08.05.2021. Gary Farmer.

This was a very distinctive looking insect but a look through our books and a search through British Bugs website failed to show any corresponding images. Further internet searches, getting more and more creative with the search criteria finally brought up almost identical images from two papers; one published by the Slovenian Entomological Society (Seljak 2013) and one from an Austrian paper (Holzinger et.al. 2020). The species shown in both papers was the leafhopper *Hishimonus hamatus*. This allowed further, more targeted internet searching and a realisation that this was not going to be straightforward. I contacted the authors of the two papers and received a response from Werner Holzinger who was not aware of previous *Hishimonus* records from the British Isles, so he forwarded my email to Dr Mike Wilson (Principal Curator of Entomology) from National Museum of Wales who was only aware of a single British *Hishimonus* record. This was from a colleague of his who found a *Hishimonus* female in his house and assumed it had come in with a plant. As the specimen was female it was not possible to determine the species.

Hishimonus is a large genus of leafhoppers widely distributed in Africa, Australia and Asia (particularly China) with many species still to be documented (Du and Dai 2019). The first specimens of *H. hamatus* to be recorded in Europe were caught accidentally in an insect light trap in September 2012 in Slovenia (Seljak 2013). “At least two species *H. hamatus* and *H. diffractus* are known to be spreading across Europe in plants, I have this recollection that they were noticed on a Jasmine in southern France - but I don't know who might have the specimens.” (Mike Wilson pers. comm.).

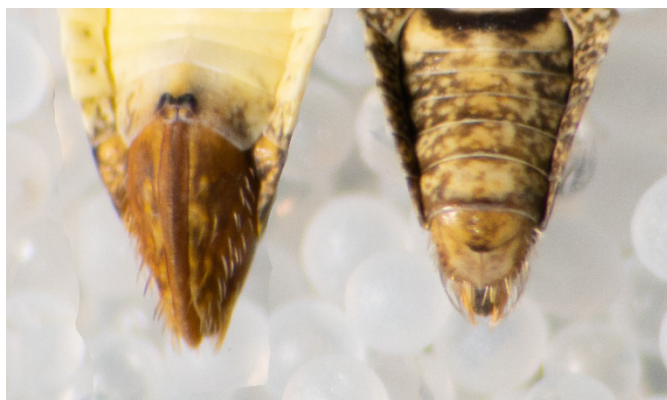
We had purchased our Jasmine from a local garden centre in Redditch and the plant had remained on our windowsill for about a month before the bugs were noticed. There were several dead bugs on the windowsill as well as the few living ones on the plant. Fortunately, we still had the original plant-pot complete with the plant-passport number and its country of export, which was the Netherlands (06). No bugs were found on any of our other house plants so we can be confident that the bugs were present in some form on the Jasmine when it was purchased.



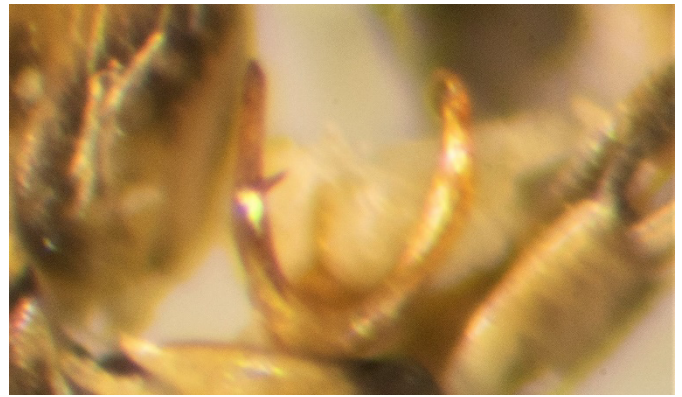
06. Original pot with plant-passport. Gary Farmer

In an attempt to determine the identification of the species of bug on our plant I established the sex of the specimens (07) and then dissected a male. I photographed the aedeagus (08) and forwarded the image to Werner Holzinger who commented “Concerning identification, it might be *H. hamatus*, but is there a kind of tip in the central part of the left arm of the aedeagus? If so, you might also check *H. kuohi*.”

I also emailed the image to Dr Mike Wilson and then sent him my remaining specimens for confirmation. He prepared one of the specimens and compared it directly with one from Gibraltar “where it had been very common in a light trap”. And he commented that “I think it is *H. Diffractus* - certainly not *hamatus*. *H. diffractus* has been spreading in Spain for some years - when I was first sent a sample it was undescribed! I will also ask my contact in Gibraltar (in the Botanic Garden) if they can check jasmine there for me! I wonder where jasmine plants are being grown for export?”



07. *Hishimonus* leafhoppers, ventral view of abdomen tips. Female left and Male right. Gary Farmer.



08. *Hishimonus* leafhopper aedeagus. Gary Farmer.

Acknowledgements

My thanks to Werner Holzinger and Dr Mike Wilson for assisting with identification and supplying additional information.

References

- Du, L. & Dai, W. 2019. High Species Diversity of the Leafhopper Genus *Hishimonus* Ishihara (Hemiptera: Cicadellidae: Deltocephalinae) from China, with Description of Ten New Species. *Insects*. 2019; 10(5):120. Available at: <https://doi.org/10.3390/insects10050120> [Accessed 09.04.22]
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- Holzinger, W.E., Huber, E., Schlosser, L. & Kunz, G. 2020. *Acanalonia conica* (Say, 1830) and three other true hopper species new for Austria (Hemiptera: Auchenorrhyncha). *Cicadina* 19 (2020): 9-19 9

Images

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