

## **Investigation of the host finding behavior of *Phytobius vestitus* for the biological control of the invasive weed *Myriophyllum aquaticum***

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Native to South America, parrot's feather (*Myriophyllum aquaticum*) is a macrophyte that has rapidly invaded other regions, including Europe. Outside its native range and in the absence of natural enemies, this plant forms dense mats in aquatic ecosystems, negatively impacting the environment and human activities. Given the invasion into sensitive habitats, biological control may offer a safer and more suitable solution for its management. The weevil *Phytobius vestitus* is reported to use parrot's feather as its main host in North America, and therefore this weevil could be used as biocontrol agent in the invaded range, if it does not spill over to other native species. To this end, using custom-made olfactometers, we studied the attraction of *P. vestitus* toward *M. aquaticum* and related plant species. Using both no-choice and choice tests, we show that suggest *P. vestitus* is indeed more attracted to parrot's feather over the other, non-target, plant species, and that this weevil can discriminate odor blends emitted by the host and non-target plant. Therefore, this first evidence indicates that *P. vestitus* is host specific, however, further studies testing for performance on different plant species are required before releasing this weevil into new regions for parrot's feather management.