

All-you-can-eat: the biology and control of *Azolla*-devouring pests in the Netherlands

The water fern (*Azolla*) is a floating aquatic plant which is commonly found in eutrophic water bodies throughout Europe. *Azolla* has a very high potential growth rate and can form dense floating mats on top of water bodies. Through symbiosis with N₂-fixating cyanobacteria, it can thrive even in nitrogen limited conditions, where it can take up large quantities of other nutrients, such as phosphate. Because of these factors, *Azolla* is a very attractive plant for paludiculture – the cultivation of crops on rewetted peatlands. *Azolla* biomass is rich in protein and its uses include food production, protein extraction and application as green manure.

Its high protein content also makes *Azolla* a very tasty meal for a legion of pests. Common pests include the water fern weevil (*Stenopelmus rufinusus*), which was introduced specifically to eliminate *Azolla*, but also aphids, fungi, and caterpillars of the small china-mark (*Cataclysta lemnata*). Before large-scale cultivation in the field will be possible, it is essential to investigate which pests will feed on *Azolla* in The Netherlands and how to prevent infestation. However, an extensive overview of *Azolla* pests occurring in the Netherlands and possibilities for biological pest control is still lacking.

In your thesis, you will investigate which *Azolla*-feeding species occur in The Netherlands. Through diving into their biology, you will provide insights in timing, mechanisms and severity of different pest invasions. Your review will form an essential basis for *Azolla* paludiculture in the Netherlands, which can very well result in a (Dutch) publication. Interested? Introduce yourself by sending an email to r.vroom@science.ru.nl.



Finding the tasty leftovers: spot the customers in the restaurant