

The effect of *Azolla* cultivation on zooplankton and macrofauna biodiversity

Azolla filiculoides is a floating plant which can grow very fast due to symbiosis with nitrogen fixing cyanobacteria. Due to this fast growth, *Azolla* is usually seen as an invasive nuisance species, as it can rapidly cover surface waters and take away the light from the water column below. When growing unhampered, *Azolla* can cause low oxygen concentrations in surface waters, leading to low biodiversity.

However, the fast growth of *Azolla* also brings opportunities for the remediation of eutrophic waters and soils. When harvesting of *Azolla* occurs regularly, nutrients such as phosphate can be extracted from the water. The harvested *Azolla* can then be used for numerous applications such as biofertilizer, feed, or even human food.

Although unhampered *Azolla* growth has negative effects on biodiversity, the effect of *Azolla* cultivation remains largely unknown. Frequent harvest leads to lower levels of organic matter in the system, and a thinner mat may allow more intrusion of light and oxygen. We have already observed that oxygen levels remain high, and zooplankton as well as macrofauna communities can be sustained.

I am looking for two motivated BSc students who would be interested at assessing the biodiversity of zooplankton (1 student) and macrofauna (1 student) in mesocosms containing *Azolla* or no vegetation. You will be collecting and determining organisms, and link your findings to the treatments used. Furthermore, you will get the chance to learn more about assessing carbon and nutrient cycling in a mesocosm experiment. Preferred period for the internship is spring (April-June) 2022. Please send an email with your motivation to: renske.vroom@ru.nl.