

NEWSLETTER

Issue 14

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Recent Events

The installation of fine scale water quality monitoring sites has been ongoing since the end of last year in both the Lower Burdekin and Lower Herbert regions. The project is funded by the Queensland Government's Water Quality Investigations team, and delivered in partnership with BBIFMAC.

Just this month, BBIFMAC staff Luke Buono, and DES staff completed the site installations in the Lower Herbert, taking the total to 17 monitoring sites for the region. The Burdekin installations are progressing well, with 15 complete and an additional 5 to be installed in the coming months.

The micro sites are recording nitrate-nitrogen (in mg/L) and stream level (in metres) which is uploaded in real time to the CSIRO 1622™ portal. This information is available for public viewing. To access the data, visit: <https://wq.1622.farm/> If you need help interpreting the data or have further questions about the project, then please reach out to BBIFMAC on (07) 4783 4344.

Meet the BBIFMAC Committee



Now that we have introduced the BBIFMAC staff, we would like to take this opportunity to introduce one of the BBIFMAC Committee members with each newsletter. In this issue we introduce Don Salter.

Don is the Vice Chair on the BBIFMAC management committee. Originally from Victoria where he ran a dairy farm with his wife, Don took up the opportunity to move to the Burdekin in 1991. He began farming rice in the BRIA area, and not long after Don expanded his property size to farm cane. Don's hobby is farm engineering, building his own equipment and undertaking all the repairs and maintenance.

Don has been involved with BBIFMAC for several years including participating in various farm trials. As a committee member, his input was influential in starting the BBIFMAC Newsletter. Don had a special request to include a thank you to the BBIFMAC team who work hard in behind the scenes efforts.



BBIFMAC

Managing Natural Resources to ensure Social Wellbeing, Primary Production and Ecological Sustainability.

Weevils for Aquatic Weed Control

Salvinia weed, *Salvinia molesta*, is regarded as one of the most invasive aquatic weeds in Australia, and has considerable environmental and economic impact.

Salvinia is a Class 2 Declared Pest under Queensland legislation, and is also a Weed of National Significance. It floats on still or slow-moving water, growing rapidly to cover the surface like a thick mat which blocks out submerged plant life and limits the transfer of oxygen, making the water uninhabitable for fish and other animals.



Salvinia molesta has many branching horizontal stems and oval-shaped hairy leaves (left). Salvinia weevil, *Cytobagous salviniae* (right).

Salvinia thrives in nutrient rich water bodies such as agricultural runoff, wetlands, dams, wastewater, and even irrigation channels. A salvinia infestation can cause economic implications by blocking irrigation, causing flooding, polluting drinking water, and preventing recreational activities.

Weevils, *Cytobagous salviniae*, are a small (approx. 2mm) beetle which can be introduced as a cost-effective, chemical-free, biological control method to manage salvinia infestations in warm temperate, tropical and sub-tropical climates. They attack the salvinia by eating the leaves and stems, destroying the roots and causing the weed to sink.

The prevention of salvinia spread is a key management objective, as it is far easier to prevent the introduction of the weed than to try and control an established infestation.

One way to achieve this is through public education, as salvinia is most commonly spread (both deliberately and unintentionally) by people. Other management strategies include reducing the amount of nutrients entering a water body from agricultural runoff, sewage, and storm water.

BBIFMAC have established grow-out tubs for Salvinia weevil reproduction at our premises. The aim is to make the weevil control method more accessible to landholders so together we can restore the health and biodiversity of waterways across the region. The appropriate permits to breed and release weevils have been obtained.



Just recently BBIFMAC staff transported weevils to Ingham to assist with managing Salvinia in the local area.

Case Study: Austin property, Ayr

When Bill and Yvonne Austin returned from a six week holiday they discovered that Salvinia had completely smothered their wetland. "It was awful, we could not see any open water and we saw far less birds" said Yvonne Austin. Before the Salvinia, fish and wetland birds could be seen using the pond from our back porch, she explained.

The Austin's contacted BBIFMAC who visited the site and determined that a weevil release would be an appropriate method to manage the infestation. Four months after the release, the Salvinia began to die off. Seven months after the initial release, significant areas of open water had returned.

"It was wonderful, we are very happy with the work that was done and the result," said Yvonne. Turtles, fish and birdlife have since been observed with the return of open water.

Whilst continued monitoring will be necessary, this is an example of the success of weevils in controlling Salvinia.



Salvinia infestation before weevil release in June 2015.



7 months after weevil introduction, the return of open water in January 2016.

If you are a landowner with Salvinia (or suspect you have Salvinia) and are interested in trialling weevils, visit BBIFMAC at 154 Graham Street, Ayr or phone: (07) 4783 4344.

Weevils are best used as a part of a comprehensive pest management plan and may not be appropriate for all sites. BBIFMAC can provide advice to landowners.

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