Broadleaf Seagrass Restoration Project

Over recent years the Broadleaf Seagrass (*Posidonia australis*) meadows in the Corner Inlet waterways have been devoured by the Purple Sea Urchin (Heliocidaris erythrogramma). This has resulted in the loss of feeding and shelter habitat for fish in the region which is an important fishing ground for Victoria's commercial and recreational fishermen.

This project is undertaking several trial plantings using different methods with the final aim of replenishing 100 hectares of seagrass.

Video Links

https://www.facebook.com/ABCGippsland/videos/saving-corner-inlets-seagrass/981675222178453/
https://vimeo.com/340355697

Initial Report (February 2019)

Stage one of this program has been funded by DELWP as part of the Biodiversity on the Ground Action program.

On the 9th of March, Mick Green from Drift Media and Jason were able to visit our Seagrass planting site for the first time since the deployment of the Broadleaf Seagrass sandbags in January. The primary aim for the day was to venture to pinpoint and geotag the location of the sandbags via drone imagery. The drone very effectively flew a grid pattern over our site, recording around 340 images in total. These images were successfully locked to location, but unfortunately the conditions faced on the day restricted them from getting much more than that.

A quickly rising tide meant they were getting some refraction from the increasing depth of water. The low tide that day was around 1.0m when ideally, from a flight perspective a 0.4-0.6m low tide is needed to effectively "see through" the water without too much distortion. Reduced visibility was exacerbated by a freshening wind, which created just enough surface disturbance to catch the reflection of the sun and add glare to the images.

This experience posed management questions regarding further drone flights for this project. Although it was now getting late in the day and we were facing a fast running incoming tide, they decided to get in the water for a look around one of the marking pegs. It was pleasing to see that in the limited available time, 8 out of 9 bags deployed at that individual marker were located and, except one, had actively growing Broadleaf Seagrass plants. The growth rate ranged from 50-100 mm in length and around 10mm in width. This was a far cry from the hair like seedlings that we had gently planted into hessian sand bags only 3 months earlier.

One unexpected finding from the monitoring session was the apparent explosion of Fineleaf Seagrass (*Zostera nigracaulis*) at our planting site. This was not present at deployment but had now populated our site and was growing to a length of around 20-30cm. The Fineleaf species is like a runner grass and grows quickly, enabling it to colonise new areas. Halted by time and deepening water, the team headed back to Port Albert. The voyage home became a brainstorming session about how we best proceed with the monitoring of this and

future Seagrass planting sites. The conclusion was that volunteers on the ground (or in this case in the water!) with waterproof GPS enabled cameras will be required to monitor our seedlings.

A big thank you must go Wynne Hobson who offered both his time and services to supply and pilot the vessel we used to get to location. We have a wonderful community of volunteers who continue to support our Network and whose contributions are very much valued.

Volunteers Planting seedlings into sandbags

Phase 2 Report (October 2019)

The Corner Inlet Broadleaf Seagrass Restoration Project continues to gather steam as YYLN prepares for the busy summer planting season. With the assistance of our new academic contingent from the University of Western Australia, we have refined our techniques and timing based on their input and lessons learnt from last year.

UWA's Dr John Statton is currently engaged on Broadleaf Seagrass restoration projects in Port Stephens, NSW and Shark Bay Western Australia. His team also comprises geospatial information expert Renae Hovey and the godfather of seagrass restoration globally, Professor Gary Kendrick. Their expertise in nurturing *Posidonia australis* seedlings means that this year we will grow them in aquaculture tanks for a maximum of one week, rather than 3 weeks, before they are broadcast into custom-made sandbag planting areas in Corner Inlet. The deployment sites were chosen based on fieldwork undertaken by University of Melbourne marine biologist Dr John Ford, accompanied by John Statton and Jason Pickering during early September.

In spite of the cold conditions in the water, the team was able to assess around ten sites located in Corner Inlet for restoration suitability. Importantly, these sites were shortlisted based on feedback from the 19 commercial fishers that ply their trade on Corner Inlet taken during a meeting back in July.

The fishers are invaluable partners as they contribute knowledge, skills, equipment and boats to make the project a reality. In late November we will be welcoming members of Gippsland Intrepid Landcare to assist us with deploying sandbags at the bottom of Corner Inlet for future restoration around Christmas time. We are particularly lucky to have the support of this young, vibrant group of passionate Landcarers and we will be hosting Gippsland Intrepid in Port Albert over the weekend. The event will be documented by WildArk, a wilderness advocacy organisation that specialises in getting heavy hitting ambassadors to put their time and

money behind conservation efforts. During our recent stint of onwater investigations we also had an opportunity to assess the survivorship of our previous sandbag deployment site.

While the areas continue to be overrun by large swathes of Narrowleaf Seagrass (Zostera), there is still around 5% of the seedlings deployed south of Sunday Island last year. Our main let-down was the with the quality of hessian that we used in the sandbags during last summer. To overcome this we will deploy heavy jute sandbags into Corner Inlet to ensure they do not break down as quickly in the salt water. As interest grows in our Seagrass project, summer 2019/20 promises to be an exciting time for YYLN. The project is being delivered in two phases. Phase one is funded by the Victorian Government (DELWP) via a Biodiversity On- Ground Action Grant. Phase Two is funded by the Federal Government's Department of Agriculture as part of the National Landcare Program's Smart Farms Grants.

Sandbag snakes being delivered to site

Sandbag snakes in position on the sea floor