

Queensland *news* Seagrass-Watch

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The *Seagrass-Watch* program was honoured on Sunday June 4th with one of the Prime Minister's Environment Awards (*Natural Heritage Trust Award for Rural and Regional Leadership*). Such an award recognises the efforts put into the program by local community groups in Hervey Bay and the Whitsundays. As well as recognition it provides the momentum to continue beyond NHT funding and expand to other regions. Congratulations to all involved and all the hard work. This Newsletter will attempt to further recognise these efforts and inform all those involved in the program. This is an award for everyone involved, and gives us inspiration to continue into the future.



A few of the *Seagrass-Watch* team members and a couple of "new recruits" from left: Chantal Roder (DPI), Jerry Comans (HBDMP), Rob Coles (DPI), Senator Robert Hill, Artie Jacobsen (QPWS) and Prime Minister John Howard.

What's Been Happening in the past couple of months?

Seagrass-Watch volunteers and the Marine Plant Ecology Group have again surveyed sites in the Hervey Bay and Whitsundays regions. All data has been entered onto the *Seagrass-Watch* database and is presently undergoing analysis. Some of the findings are presented in this Newsletter and a preliminary report will be available by the end of 2000.

40,000 seeds of *Halodule uninerivs* have been found in 1 square metre of mudflat.



Post flood Monitoring

The final report on the effects of the Mary River flood of February 1999 on the seagrasses of Hervey Bay and the Great Sandy Strait found that intertidal and shallow subtidal seagrasses in the path of the flood plume were impacted most. Approximately 50% of intertidal seagrasses in the Great Sandy Strait disappeared after the February flooding. The report concludes that due to the decreases in seagrasses in the region, dugong populations may be restricted to the central and southern sections of the Great Sandy Strait, the deepwaters of Hervey Bay and the intertidal/shallow subtidal localities in the south-east corner of Hervey Bay. Existing seagrasses should be sufficient to support the current dugong population, although some individuals may experience stress due to limited food availability. Effects on fisheries are not considered to be severe as the main recruitment areas in the Great Sandy Strait were not severely impacted. Chronic water quality impacts in the adjacent watersheds are however, cause for concern.

Coasts and Clean Seas visit Hervey Bay

Jason Ferris and Ellie Austin from Coast and Clean Seas visited Hervey Bay in April to gain first-hand experience of the techniques being employed by *Seagrass-Watch* groups. Community volunteers appreciated their visit, giving them time to discuss elements of the program.



From left: John Roberts, Ellie Austin, Vanessa Jamieson, Jason Ferris and Wendy Jones.

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In Alaska, seagrasses remain frozen and in a dormant state over winter and do not start to grow again until the thaw.

Hervey Bay Happenings!

Long-term monitoring in Hervey Bay and the Great Sandy Strait

Twenty six sites were surveyed across the region in April-May 2000. Community workshops were held at Boonooroo (6 May 2000) and Burrum Heads (7 May 2000) to train new volunteers and introduce some new methodologies to the groups.

The "Great Sandy Strait Safari" established 8 new sites in the Sandy Strait region. Members of the HBDSMP surveyed the localities and established permanent monitoring sites. The new Reef Island sites contained high abundance (30-60% cover) of *Zostera capricorni*, some of the densest seagrass in the region. Two dugongs and more than thirty green turtles were sighted during the monitoring day in May. There was very low seagrass coverage at the 3 Tootawwah Creek sites and no seagrass was recorded at 2 sites at Browns Gutter.



Who's the skipper?

Burrum Heads Case Study

Burrum Heads is located in the south-west of Hervey Bay and has extensive seagrass meadows in proximity to one of the major riverine systems in the



region, the Burrum River. John Lindberg has surveyed the 3 permanent sites at this locality over the past 9 months. Sediment and nutrient run-off from the catchment and mudflat sediment movement pose the greatest threats to seagrass survival.

Results from *Seagrass-Watch* monitoring show that the seagrass abundance at the 3 sites has declined at all Burrum Heads sites since August 1999. This may be a typical seasonal response rather than an impact. Shading of light from extensive "blooms" of the red algae *Jania adhaerens* however, may have contributed to lower seagrass productivity in the area. Results from the next monitoring survey (August 2000) should give us an idea of whether the seagrasses are continuing to decline at this locality.

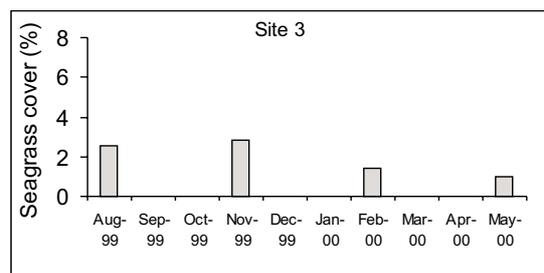
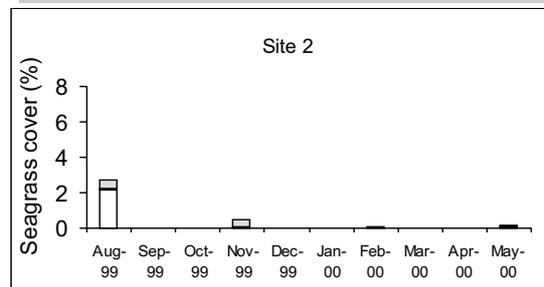
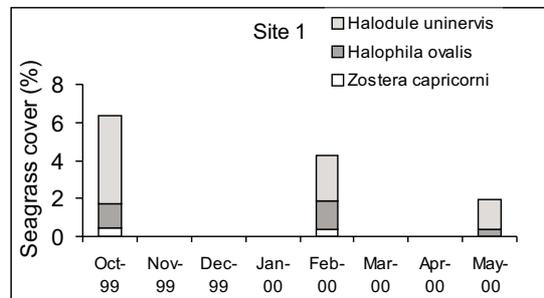
Next Trip To Hervey Bay

The next monitoring event will occur from 28 July to 5 August. Please contact HBDSMP Project Officer Jerry Comans on 07 - 4124 2393 for details.

Good tides for Seagrass-Watch Hervey Bay (Burnett Heads)

Low tide (0.30m) on Friday June 30 at 1.06 pm.

Low tide (0.18m) on Tuesday 1 August at 3.26 pm.



Whitsunday Wanderings!

Intertidal Monitoring

Seagrass-Watch groups with the aid of the Marine Plant Ecology Group established 3 sites north of

Volunteers John Thornley and Juanita Bité examine *Halodule uninervis* at Laguna Quays.



Airlie Beach, 1 at Dingo Beach and 2 sites at Shoal Bay in April. Sites have also been established at Laguna Quays

and Midge Point. 3 more sites are to be established at Midgeton south of Airlie Beach lead by local resident Mr Norm Porter.

Shoal Bay resident Noel "Moffy" Moffatt sets up a transect. Here 6 species of seagrasses were recorded.



Subtidal monitoring

The Order of Underwater Coral Heroes (OUCH) volunteer group again successfully carried out subtidal monitoring of Whitehaven Beach seagrass meadows on Wednesday the 26th of April. Preliminary results indicate that boat anchors are having an impact on the abundance and species composition of the seagrass meadows. This information is being made available to Queensland Parks and Wildlife Service.

OUCH members also monitored seagrasses north of Cid Harbour by "free diving". The site is a relatively pristine location on the north-western side of Whitsunday Island favoured by dugong, turtles and Irawaddy dolphins. The site will serve as a reference location for the region.

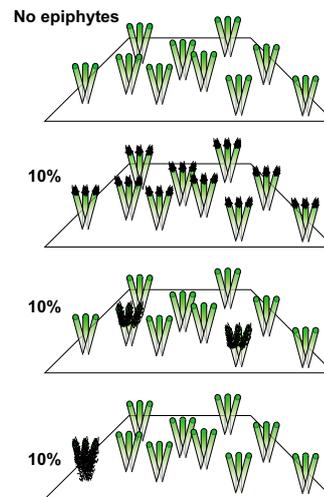
New Techniques

Technique 1. Epiphyte cover

A high abundance of epiphytes (attached algae) grow on seagrasses at some of the *Seagrass-Watch* sites. Shading by epiphytes may limit seagrass growth and indicate high nutrients in the water column. The percentage cover of epiphytic algae is measured by estimating "the percentage of total surface area of leaves covered by algal growth".

The diagram below shows how the distribution of epiphytes on seagrass leaves can vary throughout a

quadrat. In this example:



1. No epiphytes present
2. All of the leaves in a quadrat may be covered by 10% of epiphytes,
3. Some leaves may be covered by epiphytes, or
4. Only 1 shoot may be covered by epiphytes

Note that the last 3 examples would equate to 10% epiphyte cover.

Technique 2: Algae cover

The percentage cover of non-epiphytic algae can also be measured by simple cover estimates. Algal cover is recorded using the same visual technique used for seagrass cover. New columns (% Epiphyte cover and % Algae cover) have been included in the data recording sheets for volunteers to use.

Next trip to the Whitsundays

The next surveys in the Whitsundays will be from the 22 June to 5 July. Monitoring will occur at sites in Pioneer Bay, Repulse Bay and in the Dingo Beach/Shoal Bay area.

Lowest tide (0.03m) on Saturday July 1 at 4.21 pm.

Seagrass Information Night

An information night at the Queensland Parks and Wildlife Service in Airlie Beach (Shute Harbour Rd) is to be held at 7 pm on 26 June. The aim of the night is to introduce the program to new volunteers, enable community groups to get to know each other and inform the community about the seagrass monitoring that is being carried out in the Whitsundays. All are welcome to attend so come along!



Queensland Seagrass-Watch *news* continued ..

Seed bank studies

During the recent monitoring in Hervey Bay Dr Michelle Waycott from James Cook University joined the *Seagrass-Watch* team and volunteers to measure *Halodule uninervis* seed numbers at various seagrass meadows. Counts of seeds provides us with information on the capacity of a meadow to regenerate after it has been lost. Without an existing seed bank, the capacity of a meadow to regenerate is limited and thus restoration work may be required (e.g. transplanting/re-planting).



A young Seagrass-Watcher with kitchen sieve and PVC pipe in hand cores the mud for the tiny seeds of Halodule uninervis. The seeds are about 2 x the size of a poppy seed and look quite similar.

It is planned to incorporate these seed count methods into the *Seagrass-Watch* program later this year. Michelle is also studying the genetics of seagrass meadows with the aim of determining the role dugongs play in dispersing seagrass seeds from region to region.

School visit by Seagrass-Watch

During the recent May monitoring event Len and Stuart from the Marine Plant Ecology Group visited Yarrallee State School in Hervey Bay. Year 7 students and teacher Wendy Jones (a *Seagrass-Watch* volunteer) had designed logos for *Seagrass-Watch*. Students discussed the "meaning" behind each of the logos and the morning ended with numerous insightful questions about seagrasses. These and other entries will be judged by a group of

seagrass scientists at DPI in Cairns and the winner announced in late June.

Forum meeting at the Wide Bay Campus of the Southern Queensland University 29 March 2000

The meeting was opened by Mr Ted Sorrenson the new Hervey Bay Mayor: his first official function. The meeting expressed its appreciation to the Mayor for his and the Councils continuing interest in the project. The purpose and form of the forum were discussed. Members felt we needed to keep the prime focus on the assessment, evaluation and exchange of information. The need to involve families and school children was considered important for the conference success. Workshop sessions to include demonstrating cast netting, tying mudcrabs, fish filleting, releasing fish in good condition were suggestions. A formal opening with speaker(s) may be planned for the Saturday night. The next meeting is early July 2000.

Northern News

With the next round of Coast and Clean Seas funding, an application was submitted to establish a *Seagrass-Watch* Program in the Townsville and Weipa regions. This program however, will include other coastal habitats and be linked closely to coastal ports & harbours. The application will soon go before a Technical Assessment panel and a State Assessment Panel. We expect to hear how things have gone with the application later this year. *Keep your fingers crossed!*

Do you want to get Involved?

Contact your local *Seagrass-Watch* representatives:

Hervey Bay:

Jerry Comans (Hervey Bay Dugong and Seagrass Monitoring Program) Ph. (07) 4124 2393

Whitsundays:

Margaret Parr (Whitsunday Volunteers Association) Airlie Beach Ph. (07) 4946 4996

Tony Fontes (Order of Underwater Coral Heroes Volunteers) Airlie Beach Ph. (07) 4946 7435



*Any comments or suggestions
about the Seagrass-Watch program
would be greatly appreciated.*

NEXT ISSUE OUT SEPTEMBER 2000

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