

Queensland *news* Seagrass-Watch

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April 2002



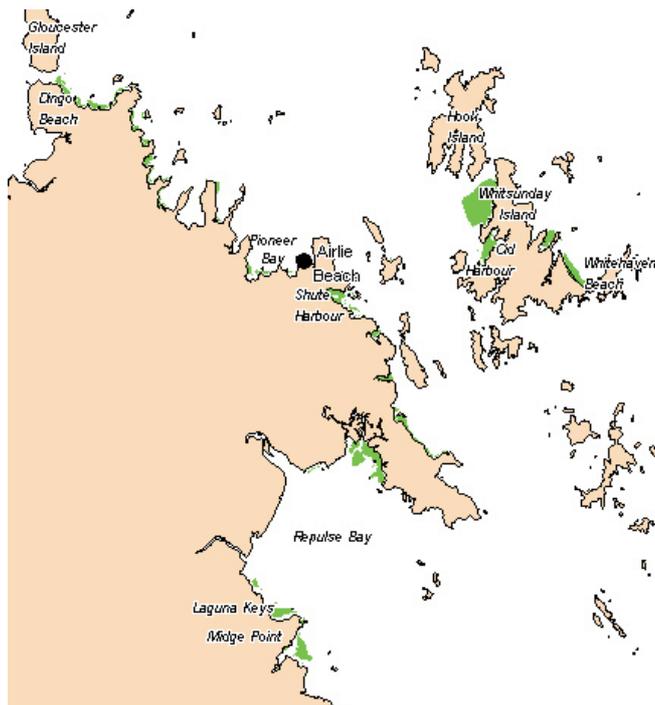
Welcome to the second Newsletter for 2002. A lot has been happening over the last 3 months with new groups joining the program and several new monitoring sites being established. Reports from across the regions are coming in and most long-term sites were monitored in the last quarter, which was a great effort by all involved. Contributions to articles from volunteers are most welcome, so please keep them coming. This newsletter also updates the current status of seagrass resources in Whitsunday and Hervey Bay regions.

Whitsundays Seagrass

5,554 ha of coastal and island seagrass habitat was mapped in the Whitsunday region from surveys conducted in January 1999 and 2000 between Cape Gloucester and Midgeton. These surveys were undertaken using the expertise of free-divers from DPI and Seagrass-Watch volunteers helping to map the intertidal reaches in Pioneer Bay, Muddy Bay and Shute Harbour.

Since the first seagrass surveys in 1987, seagrass meadows have either remained stable or increased in most regions of the Whitsundays. These include Repulse Bay, Whitehaven Beach and the coast between Gloucester Island and Pioneer Bay. Higher immigration of dugong into the region has occurred over the past 8 years. Not so good news in Pioneer Bay where the seaward meadow edge has contracted by more than 1km and seagrass meadows have reduced in area by 80% since 1987.

Copies of the report will be available in July this year and available online at the end of the year.



Great Sandy Strait & Hervey Bay Seagrass



In late February 2002, approximately 6,750 ha of seagrass was mapped in the Great Sandy Strait by MPEG and QPWS by aerial survey (*helicopter*). This represents a significant recovery since the Mary River flood of February 1999 decimated the intertidal and shallow subtidal seagrasses in the Great Sandy Strait and Hervey Bay that were in the path of the flood plume.

After the Mary River flood, approximately 50% of intertidal seagrass in the Great Sandy Strait disappeared. These losses were predominantly in the northern section of the Strait (including Urangan, Moon Point, down to Ungowa). In February 2002 most of these areas had recovered to distributions similar or greater than recorded in December 1998.

Shallow sub-tidal (<10m depth below MSL) seagrass resources of Hervey Bay (adjacent to the City of Hervey Bay) which declined dramatically in abundance and distribution after the flood, have been slow to recover and more information is needed to adequately assess the current state of recovery.

Deepwater seagrass resources in Hervey Bay within the path of the flood plume declined significantly in abundance after the impact and remained significantly lower than outside the impact area for some time. These meadows were also examined in early March 2002 and appear to have similarly recovered to pre-flood (December 1998) distributions and abundances.

This is good news for the Great Sandy Strait and Hervey Bay dugong, turtle and fish populations which depend on seagrass.



Seagrass recovery at Moon Pt



Dugong feeding trails at Browns Gutter

Visit the Seagrass-Watch website at
www.seagrasswatch.com

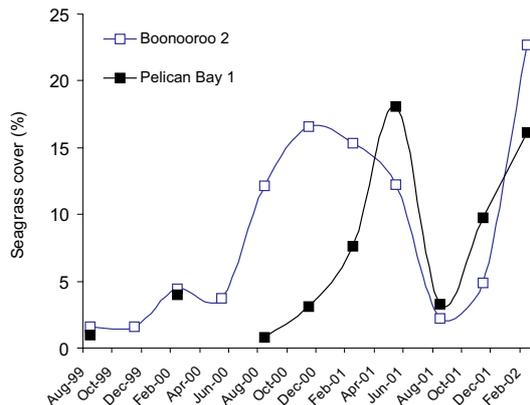
Have you got an interesting snippet about seagrass to put in this space?

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Hervey Bay Happenings!

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

Monitoring continued at Poona, Boonooroo and Inskip Point during February. Seagrass cover generally showed little change from previous surveys but at Boonooroo (site BN2) and Pelican Bay (PB1), dramatic seasonal increases in seagrass cover were recorded. Previously (Aug-99 to Jun-00) both sites had very low seagrass cover (<5%) following the flood in Feb 99.



In Hervey Bay the seagrass meadows at Burrum Heads continue to recover but no such luck at Toogoom and Dundowran where recovery has failed to occur. At Booral wetlands, one site has remained stable while the other has declined since high cover of seagrass during spring 2001. This trend is also apparent at Urangan. A reduction in cover compared to November 2001 is typical of a seasonal downturn in growth with the winter months approaching.

Great Sandy Strait Fauna and Flora Watch



Gary Nielson has been very busy spreading the seagrass message throughout the Sandy Strait. The Great Sandy Strait Fauna and Flora Watch was formed as the environment section of the Poona Sports and Social Club Inc., and are endorsed by the Qld Parks and Wildlife service and CoastCare. Their objectives are 1) to monitor and protect turtle and dugong and the seagrass on which they feed (also migratory wading birds etc) and 2) to promote awareness in the public arena of the importance of caring for our environment. The group have established 3 new sites at Tinnanbar, south of Poona, with the help of local citizens. The seagrass at these sites is in a relatively healthy condition following the recovery over the past year. To become involved, contact: Gary Nielsen 4129 8117.

Cooloola Coastcare come on board

A workshop was held in Tin Can Bay with representatives from the local Cooloola CoastCare Association Inc., local residents, QPWS staff and QDPI Seagrass-Watch co-ordinators in February. A site was established where



seagrass has started to recover. Over the past few years there has been very little seagrass in Tin Can Bay and the ongoing surveys will determine whether recovery rates are similar to other parts of the Sandy Strait. Visit the Cooloola CoastCare Ass. Inc website and find out more about the group www.tcbcoastcare.org.au



Tin Can Bay Seagrass-Watch Workshop in Tin Can Shed Students Monitoring Seagrass as a Bioindicator

In February, year 12 students from Urangan High School and students representing the Butchulla tribe participated in training workshops to establish monitoring "transects" in the Urangan area. The monitoring is being coordinated by Queensland Transport as part of their responsibility to monitor the effects of the construction of a dredge material disposal area for Urangan boat harbour. The students all showed remarkable enthusiasm and dedication to the task despite the poor weather conditions. Six monitoring transects were established which will be monitored every 2 months.



Urangan High students monitor the effects of construction on local seagrasses for a dredge material disposal extension.

Next Surveys in Hervey Bay & Great Sandy Strait

The next monitoring of long term sites will be from 24th to the 27th May 2002

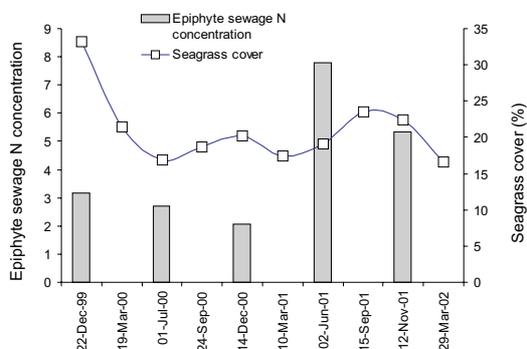
Best tides are:

Hervey Bay (Urangan): Lowest tide (0.4m) on Saturday 25th May at 1:49pm and Sunday 26th May at 2:29pm
Sandy Strait (Elbow Point): Lowest tide (0.3m) on Saturday 25th May at 1:32pm

Whitsunday Wanderings!

Seagrass-Watch data contributing to GBR MPA management

Information from Pioneer Bay on the poor condition of some seagrass meadows and the large amounts of algae smothering seagrass is now being used by the Great Barrier Reef Marine Park Authority in their assessment of sewage outfalls. Recent Council monitoring of the sewage outfall in Pioneer Bay has shown an increase in the concentration of sewage nitrogen in epiphytes. Effluent from the outfall appears to be causing the excessive growth of epiphytes. Seagrass-Watch monitoring has found an overall decline in % cover and area of seagrasses at Pioneer Bay. The Council's monitoring has concluded that sewage is impacting seagrass ecosystems of Pioneer Bay and Boat Haven Bay - nothing new but disappointing that the situation has not improved since Council agreed to discharge effluent on the outgoing tide.



Information on seagrass meadows at Laguna Quays, Shute Harbour and Boat Haven Bay are also being used to assess proposed developments.

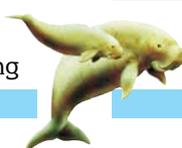
Seagrass hammered & corals bleached

Jean and Joyce noticed that the Dingo Beach seagrass meadow was disturbed by sand banks covering the sites, strong south easterlies (up to 35 knots) and high algal abundance. They also found a noticeable increase in *H. ovalis* compared with *H. uninervis*. Mareen, Sunnee and Brett from Hydeaway Bay were helped out by the Whitsundays Volunteers and also noticed reduced seagrass cover and coral bleaching. Very high temperatures over summer are the possible cause. The Wenzler family also successfully completed monitoring at Midge Point, noticing a reduced seagrass cover and increasing mangrove colonisation. Carolyn (QPWS) monitored the site at Laguna Quays as John and Tracy have hung up their booties, thanks guys for your great contribution.

Smorgasbord on offer in Pioneer Bay

Margaret Parr reports

Whitsunday Volunteers again successfully completed the sampling of four sites in Pioneer Bay. An area near one of our sites looked as if it had been the scene of an "all you can eat" smorgasbord for the local Dugong population! There were trails going



every which way. This is the most concentrated patch of trails we have observed. At the other side of the Bay, working conditions were not so pleasant. The large amounts of mud, algae and sludge which we have been finding on the seagrass meadows for the past two years continued to make monitoring challenging. Estimating or measuring anything in some quadrats involved clearing a covering of mud/algae first! However we got the job done - although only just - before darkness closed in.

Teams unite at Midgeton

Heather Hyde reports



On Friday afternoon 26 April 2002, I had the wonderful pleasure of receiving help to do the Seagrass-Watch, from 3 ladies from Whitsunday Volunteers. They were Margaret (our co ordinator), Helen (seed woman extraordinaire) and Aileen (bird woman and seed woman extraordinaire). Our adventure begun with a 4 wheel drive trek down a really wrecked road to arrive at our site. The weather was wonderful. It was interesting to hear about the difference that the Midgeton sites have as opposed to those at Pioneer Bay and other areas to our north. We don't have any Mud which must be a bonus. The 3 ladies were extremely happy about that!!!!!! The readings this quarter were below average in overall coverage due to frequent southeasters that have occurred and also I feel due to the extremely hot summer that we had. The winds cause the sites to become covered in sand, but from previous experience, the grass is healthy underneath and will reappear with the right tides.

Sailing Club Saves Seagrass-Watch Monitoring

Elmer Ten Harken reports



Unfortunately OUCH Volunteers were unsuccessful in obtaining much needed CoastCare funding. This was needed to charter a boat to survey sites at Whitsunday Island. The Whitsunday Sailing Club came to the rescue with an offer to loan its "Rescue 1" boat to the OUCH Volunteers, which allowed the monitoring to be done on time on Sunday 21st April. Four volunteers made the trip to monitor the health of the Cid Harbour seagrass meadow. Visibility at the seagrass bed was poor - probably due to recent rains. The general impression of the seagrass was that it was less verdant than on the last visit, but this is to be expected at this time of year as the water temperature falls. Species distribution was similar to the summer status. Epiphyte levels at some sites were also quite high. Some dugong feeding trails were seen and turtles were around the boat all day

Next surveys in the Whitsundays

The next monitoring event will be from 21st June 2002 onwards.

Best tides are:

Airlie Beach: Lowest tide (0.19m) on Saturday 22nd June at 2:47pm and Sunday 23rd June 3:27 pm (0.2m).

Queensland Seagrass-Watch *news* continued ..

Townsville Tales

Jane Mellors reports

The Townsville Seagrass-Watch decided to adopt the beach adjacent to our SB1 and SB2 monitoring sites for Clean Up Australia Day. We collected eight bags of rubbish! The most common rubbish found were pieces of polystyrene foam, followed by broken glass. The most unusual item was a Chinese marked light bulb. Several items of clothing and mismatched thongs were also found. We've been involved in Seaweed activities and are planning out stall for the Townsville EcoFiesta June 2 - see you there!

At our Sandfly Creek site, the substrate had changed dramatically since our last survey. There appeared to have been an influx of sediment, which may have been the result of recent flooding. Seagrass-Watchers certainly got more mud than they had bargained for. General consensus though, was that the trip was certainly an adventure!!



Sallie Peut, Jason Jeffrey, Kerry Gorman and David Reid, monitoring at Sandfly Creek.

At Shelley Beach, the last survey was done under a full moon at 01:00hrs. There was quite a turn up, despite the late/early hour depending on your perspective. Equipped with head torches, SB2 was monitored and it was gratifying to see that this site is still increasing in cover within quadrat and between transects, showing us that this meadow is well and truly on its way to recovery. The highlight of the evening however, must have been the number of starfish (*Astropecten hardwicki*) actively moving around the seagrass meadow in search of their favorite prey - sand dollars.

Seagrass-Watch in the Far North

A new Seagrass-Watch site, "Ellie Point" near Cairns airport was established with diploma students from Cairns TAFE in March this year. This site has been adopted by the students in addition to the Yule Point site they regularly monitor. The students will be using a new technique for monitoring the small dynamic meadow near the mouth of the Barron River, mapping the boundary and taking estimates from randomly chosen quadrats within the meadow. Monitoring of Yule Point and Ellie Point meadows will occur on 14-16 May.

Quadrat Photograph Refresher



- Photographs are taken at the 5m, 25m and 45m quadrats along each transect. You can also take additional photos of other quadrats of particular interest (eg. dugong feeding trail, high algal abundance, lots of gastropods).
- Photos are taken before any other quadrat measures, to avoid resuspending sediments by walking in the area which would affect the photo quality.
- First place the photo quadrat labeller beside the quadrat with the correct code on it. The photo code has 6 characters. The first 3 are the site, the next is the transect and the last 2 are the quadrat distance. For example, if you are at Pioneer Bay site **PI2**, on transect **2** and at **5** metres, the code is **PI2205**.
- Next, take the photograph from an angle as **vertical** as possible, which includes the entire quadrat frame, quadrat label and tape measure. Try to avoid having any shadows or patches of reflection off any water in the field of view. Check the photo taken box on the datasheet for that quadrat.
- In some instances (if site subtidal), you may also need to take another photograph from an **oblique** angle (eg. 45 degrees), which includes the entire quadrat frame and the quadrat label.



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

Great Sandy Strait:

Steve Winderlich (QPWS Maryborough) Ph. (07) 4121 1933

Whitsundays:

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

Tony Fontes (O.U.C.H) Airlie Beach Ph. (07) 4946 7435

Townsville:

Dez Wells (Townsville Seagrass & Mangrove Volunteers) Ph. (07) 4789 0239

Moreton Bay:

Nicola Udy (QPWS Cleveland) Ph. (07) 3821 9024

Save some trees?

If you would like to receive the Seagrass-Watch newsletter via email (as a .pdf file) send a request to Seagrass@dpi.qld.gov.au



Any comments or suggestions about the Seagrass-Watch program or contributions to the newsletters would be greatly appreciated.

Contact: Seagrass-Watch Coordinator
Northern Fisheries Centre
PO Box 5396, Cairns. Qld. 4870
Email: Stuart.Campbell@dpi.qld.gov.au
Phone(07) 4035 0100

NEXT ISSUE OUT JULY 2002