

# Queensland *news* Seagrass-Watch

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**Welcome** to the first edition of the *Seagrass-Watch* Newsletter for 2001, the International Year of Volunteers.

## ***Lyngbya* (fire weed)**

As part of the recent surveys in the Whitsundays, OUCH divers noted excessive amounts of filamentous algae growing over the seagrass meadows at Whitehaven



*Tony Fontes and Juanita Bité discover the potentially toxic blue-green alga Lyngbya majuscula at Whitehaven Beach for the first time.*

Beach sites. Samples were collected and sent for analysis to the University of Queensland and identified as the blue-green algae *Lyngbya majuscula*. Similar samples of algae collected from Pioneer Bay in September 2000 were also identified as *Lyngbya*.

The persistence and frequent abundance of filamentous algae in the Whitsundays region is cause for concern as these algae place at risk important seagrass meadows that provide food for dugong and turtle populations. The excessive abundance of filamentous algae appears to be detrimentally impacting seagrasses in Pioneer Bay.



*Care must be taken when handling Lyngbya as it can be toxic to humans causing severe contact dermatitis, skin blistering and peeling.* The algae can be highly toxic when dry. *Lyngbya* can smother seagrasses and cause localised seagrass die-off. No specific cause of the algal blooms in the Whitsundays has been identified but factors such as nutrient (iron, nitrogen and phosphorus) enrichment, organic enrichment and favourable light and temperature conditions have been implicated in recent blooms in Moreton Bay.

March 2001 was dedicated "Seagrass Awareness month" in Florida U.S.A.



## ***Local eyes: Global wise***

Planning for the 1<sup>st</sup> International Seagrass-Watch Volunteers Forum is now in full swing. The forum is to be held at the University of Southern Queensland, Wide Bay Campus, Hervey Bay, from the 12-15 October 2001. Due to the size of the venue, the size of the forum is limited to 110 participants. Approximately 80 places are reserved for registered Seagrass-Watch volunteers, invited guests and organisers. Registration for these 80 delegates is free. Unfortunately, only 30 places are available for external participants. Registration for external participants is \$80.

Invited participants will receive their invitations in the mail in early April. Other interested persons can complete the registration form on the forum website or email their expression of interest direct to [isvf@dpi.qld.gov.au](mailto:isvf@dpi.qld.gov.au). You can also register your interest with either the local co-ordinator in your area or the Seagrass-Watch Coordinator.

It is recommended that you RSVP or register your interest early. You only have until 30th April 2001 to confirm your interest in participating. Only 25 places are reserved for volunteers in Hervey Bay and the Whitsundays regions, respectively. Invitees have been selected based on their level of contribution to the program.

Participants offered a place to attend will be notified by 31st May 2001. At this time, the cost of accommodation and side trips will be posted. You will then have 30 days to verify your acceptance of a place, after which time the place will be offered to the next applicant.

*Check out the website*

[www.seagrassforum.bayconnect.com.au](http://www.seagrassforum.bayconnect.com.au)  
*and turn up the volume on your PC!*

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Some intertidal species of seagrasses can lose up to 50% per cent of their water content and still survive.

# Hervey Bay Happenings!

## Hervey Bay and the Great Sandy Strait Refresher Workshops

Refresher Workshops held in Hervey Bay and at Maryborough in early February provided an opportunity for volunteers to refresh their knowledge and discuss results of monitoring with Len and Stuart from DPI. A total of 28 people attended the workshops where volunteers insights on the causes for seagrass meadow changes over the past 18 months were discussed. The information will be used in the development of the final report to Coasts and Clean Seas in November, 2001.

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

Twenty six sites were surveyed across the region in February 2001.

In the Sandy Strait seagrasses at Poona continue to improve. Gary Nielson's observations in the field that seagrasses at this locality have

continued to improve have been verified after analysis of the data which showed a doubling in seagrass abundance over the past year. Reef Island and Boonooroo sites (BN 1, BN 3) are also in fairly good shape.

Sites at Browns Gutter closer to Fraser Island have not recently been surveyed and the upcoming May 2001 survey will be an opportunity to examine these sites 1 year after they were initially monitored in April 2000.



Gary Nielson and his "box of tricks" walking out to his boat to survey Poona sites.



Wendy Jones and students surveying sites at Toogoom

Monitoring continued along the Hervey Bay intertidal flats with volunteers monitoring sites at Burrum Heads, Toogoom and Dundowan. Seagrasses at these sites have been

impacted by a high amount of sediment movement and do appear to be recovering at this stage.

Seagrasses on Fraser Island (Wanggoolba Creek) continue to recover with a 2 fold increase in the abundance of *Zostera capricorni* and *Halophila ovalis* in February 2001 (average of 20-25% cover) compared with November 2000 (average of 10-15% cover). *Seagrass-Watch* data will provide an ongoing record on the rate of this recovery.

Unfortunately seagrasses at Urangan have not recovered to the extent that what was expected given last years good news. The reasons for this are not entirely clear but the results suggest that current environmental conditions are not favouring seagrass growth at this locality.



To better understand the recovery of seagrasses in this region two more sites have been established south of Urangan by Lynne Robertson and local residents as part of the Hervey Bay City Council's Booral wetland project.

The first signs of *Halophila ovalis* at Urangan in August 2000. No seagrass was found in February 2001.



## Next Trip To Hervey Bay

The Marine Plant Ecology Group will be joining the volunteers to monitor the permanent sites in Hervey Bay and Great Sandy Strait from 3 - 11<sup>th</sup> May 2001.

## Good tides for Seagrass-Watch

May 3-11

Hervey Bay (Burnett Heads)

Lowest tide (0.39) on Sunday 6 May at 1.50 pm.

Sandy Strait (Elbow Point)

Lowest tide (0.30) on Saturday 5 May at 1.05 pm.



# Whitsunday Wanderings!

## Whitsunday's monitoring

Monitoring across 13 intertidal and 3 subtidal sites was again successful. Over 30 volunteers dedicated their time to make the great scientific contribution to our knowledge of seagrass habitats in the region.

## Intertidal monitoring

At Pioneer Bay, the Whitsundays Volunteers, led by Robin Salmon, were joined by experienced (Sandra, Helen, Lynda) and new (Wayne and Brenda) volunteers. Concern by volunteers over the persistence of filamentous algae in Pioneer Bay continues. It has now been established that the algae witnessed by the mayor last year and monitored by the volunteers is *Lyngbya majuscula*, a blue-green algae potentially toxic to humans (see cover story on page 1).

The data collected by the volunteers has been produced into a technical report on the status of seagrasses and algae in the region. Whitsundays volunteers, OUCH, the EPA and QPWS have received copies of the report.

Local residents Joyce Pitello and Jean Wells were out yet again at the Dingo Beach sites.



On the trail, Joyce and Jean were happy to spot dugong feeding trails at Dingo Beach for the first time.

The seagrass was in very good condition, cover was 2 times higher compared with seagrass cover recorded in April 2000. For the first time since monitoring began at Dingo Beach dugong feeding trails were spotted by Jean and Joyce. The find highlights the importance of the seagrasses at Dingo Beach to local dugong populations.



Dugong feeding trails at Dingo Beach recorded for the first time.

Sunnee Goudy, Maren Gail and Dawn Watter monitored Hydeaway Bay sites. The tide was not favourable and it was a difficult survey but local residents succeeded in their efforts. At Midge Point Heather and Graeme Hyde and the Wenzler family continued the monitoring of southern and northern sites respectively. Heather and Graeme have noted large scale movement of the sediment in the area but seagrasses continue to be abundant and evidence of dugong feeding is high. John & Tracey Thornley's survey of the Laguna Quays site has shown an increased growth in seagrass outside the study area, but little no evidence of dugong feeding this time.



Graeme and Heather Hyde at Midgeton sites noting extensive changes to sediment composition.

## Subtidal monitoring sites

OUCH divers Elmer ten Haken and Jacquie Sheils monitored the 15 subtidal spots at Cid Harbour. At Whitehaven Beach, Tony and Bev Fontes were joined by 4 other divers. Excessive growth of the blue-green alga *Lyngbya majuscula* may in part be responsible for the low coverage of seagrass found along transects where impact from boat anchors are low. Seagrass cover at the high impact anchor site remain low.



Bev Fontes about to begin surveys at Whitehaven Beach.



## Next trip to the Whitsundays

The Marine Plant Ecology Group will be joining the volunteers in the Whitsundays from 16-24<sup>th</sup> June, 2001.

## Good tides for Seagrass-Watch

Lowest tide (Shute Harbour)  
Thursday June 21 (4.11pm),  
Friday June 22 (4.58pm).



# Queensland Seagrass-Watch *news* continued ..

## Seagrass-Watch in the far north

Seagrass-Watch continued with the Caring for country program (Cairns TAFE) at Yule Point, north of Cairns on March 9. In addition to 20 indigenous students who will monitor the site over the following year, 5 indigenous rangers participated to learn more about seagrass habitats and ways they can help with

on-ground monitoring. Students are learning techniques used to collect scientific data on seagrass meadows and interpret the information the context of natural resource management.



Stuart Campbell with Tom Collis the co-ordinator of the Caring for Country program at Cairns TAFE.

## Townsville Tales : Workshop

A big THANK YOU to all those who contributed to the bid for funding in the Townsville and Weipa regions. Despite our failure to attract NHT funding, the community interest remains high. A Townsville Workshop will be held on 7 April to discuss opportunities and prioritise potential areas for Seagrass-Watch monitoring. The workshop is held in co-operation with Nature Search (QPWS).

## Community perceptions

Leigh Bulkley from Vermont, USA, completed her report on Seagrass-Watch. Some of her recommendations include:

1. Additional personal approaches to welcoming new volunteers
2. Increase Information Sessions

A summary of the report will be included in the final report to Coasts and Clean Seas this year.

## <sup>15</sup>N samples

Preliminary analysis of results found low nitrogen isotope values ( $^{15}\text{N} < 3\%$ ) of the seagrass tissue samples taken for analysis from both Hervey Bay and

the Whitsundays region. Results show that sewage derived nitrogen is unlikely to be affecting the seagrass collected at these sites.

However nitrogen isotope values found in seagrass tissue at Boonooroo BN2, Burrum Heads BH1, Laguna Quays MP1 are similar to those of fertilizer nitrogen. Interestingly all these sites are in close proximity to sources of nitrogen fertilizer inputs.



## Farewell Wozza

In a tribute to a great seagrass scientist over the past 2 decades and one of the main forces behind Seagrass-Watch we say goodbye to Warren Lee-Long. "Wozza" has left the Marine Plant Ecology Group to pursue his own business and creative interests and our sincere best wishes for the future..



Wozza and Margaret Parr examine the filamentous algae at Pioneer Bay on his final field trip in December 2000.

## Seagrass Artwork

An exhibition of seagrass artwork by Ruth Berry will be held at the Cairns Regional Art Gallery from 22 May. The artwork depicts the diversity of Queensland's seagrasses. The artwork will also be on display at the International Seagrass-Watch Volunteers Forum at Hervey Bay in October 2001. Limited edition prints signed by Ruth will be available (price to be announced).

## 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



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



NEXT ISSUE OUT JUNE 2001

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