

Queensland *news* Seagrass-Watch

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

Local eyes: Global wise

The International Seagrass-Watch Volunteers Forum will soon be underway in Hervey Bay at the University of Southern Queensland Wide Bay Campus, on the 12th - 15th October 2001.

Due to recent unfortunate events in the USA, it is with regret that both key speakers Fred Short and Evamaria Koch have reluctantly declined attending the forum. They send their apologies to all the delegates and hope that everyone understands that these are difficult times to leave their families and fly overseas.

Some changes to the original forum programme have been made. The organising committee has introduced an additional session on the Saturday, where delegates are given a chance to participate in directing the future of the Seagrass-Watch program. Another significant change is the cancellation of the restoration & sediment field activities. It is hoped that delegates will chose to use this time as an opportunity to explore Hervey Bay.

The organising committee would like to thank everyone for their support and looks forward to the delegates coming together to promote and direct the future of community based monitoring of marine habitats.



Len McKenzie from the DPI Marine Plant Ecology Group demonstrates the Seagrass-Watch technique to marine scientists in Fiji.

June/July, as part of a Global Network (including Australia) to monitor change in seagrass meadows. Sampling sites were established in each country and training was provided to local scientists in seagrass monitoring methods. The project is a collaborative effort led by scientists in the USA, Philippines and Australia and working with local Fisheries Organisations, Government Agencies and Universities. Information gathered includes seagrass species, seagrass biomass, proportion of the plants above and below the sediment surface, canopy height, shoot density and sediment type. Depth and location of seagrass meadows was also measured and temperature and light data loggers deployed.

The training provided was designed to enable local staff to resample the site every three months. A further training course will be run in the Philippines in January 2002 to iron out any problems with the techniques. A training manual written for the trip will be finalised in the Philippines.

This is the first part of a project that is ultimately designed to extend CRC/DPI "Seagrass-Watch" style community monitoring to the Western Pacific.

Cairns students construct interactive Seagrass Web-Site!

The launch of the interactive Seagrass WebPages and Webgames will take place at the International Seagrass Watch Volunteers Forum. The website has been produced by Bentley Park College students (based in Cairns), QDPs Marine Plant Ecology Group (MPEG) and the Cooperative Research Centre (CRC) Reef. You can visit the students WebPages on the CRC Reef WebSite at www.reef.crc.org.au and find out more about seagrasses.

Seagrass-Watch in the Western Pacific

A team from MPEG (Rob Coles, Stuart Campbell, Len McKenzie) visited Kosrae, Pohnpei, Palau, The Philippines, Sabah, Papua New Guinea and Fiji in



Stuart Campbell from the DPI Marine Plant Ecology Group teaching Fisheries scientists from Sabah in Malaysia underwater Seagrass-Watch techniques.

Did you know that Australia has the highest number of seagrass species of any continent in the world?



The commercial use of eelgrass for insulation stopped after the 1930s wasting disease epidemic in the Atlantic.

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Hervey Bay Happenings!

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

Monitoring continued in August 2001 along the Hervey Bay intertidal flats at Burrum Heads, Toogoom and Dundowran. A workshop held at Burrum Heads by Wendy Jones and Eileen Finglas from the Hervey Bay Dugong Seagrass Monitoring Program proved to be very successful with a number of new volunteers involved.

There was a marked increase in seagrass and many dugong feeding trails at the Burrum Heads sites. There hasn't been any evidence of dugongs at Burrum Heads for 18 months, which makes this find a real delight. For the first time in more than 12 months, growth of seagrass has been recorded at some sites at Toogoom and Dundowran. There has also been an increase of seagrass at Booral Wetlands. The sites here are near the mouth of Mary River where seagrass recovery has been slow. There has also been an increase of seagrass at some sites in Poona, Boonooroo and Pelican Bay. Overall there has been a general increase in seagrass cover across Hervey Bay and the Sandy Strait area.



QPWS Seagrass-Watch rangers Larry, Carly (Dan Osborne) and Moe (Richard Whitney) from Rainbow Beach in the southern region of the Great Sandy Strait. The guys were keen to see an increase in seagrass at Inskip Point.

Seagrass Recovery

There has been an amazing recovery of seagrass at Urangan. Seagrass shoots were first found in May 2000,



Vanessa Jamieson and Stuart Campbell (DPI) find that seagrass has recovered at Urangan and dugong have been feeding.

however it has not been until the last 3 months that an exponential increase in seagrass cover has suddenly occurred. Some areas are covered by up to 80% seagrass but mean cover estimates at the 2 sites ranged from 5 to 8%. This is an increase of 2 to 8 times greater than found

previously at sites in May 2001 (mean cover = 0.05-2.5 %) and represents very rapid growth over this period. The dominant species is *Zostera capricorni* although large patches of *Halophila ovalis* were found. The abundance of seagrasses was similar to that recorded 3 years ago prior to the February 1999 floods.

Green algae problem?

Cladophora, a filamentous green algae, has been found on seagrass meadows at Wanggoolba Creek, Poona, Boonooroo and Urangan. This algae occurs naturally under certain conditions, usually associated with calm conditions, good light availability and nutrients. At Fraser Island, Poona and Boonooroo relatively small amounts of *Cladophora* were found by Seagrass-Watch, but at Urangan an extensive bloom of *Cladophora* covered large areas (~2-3 ha) of mudflat. The bloom could be caused by a number of factors and investigations are being carried out by Wide Bay Water, EPA and QPWS.



Dredging operations for the Urangan marina at Pugul Creek (Urangan) were surrounded by a bloom of the green algae, *Cladophora* sp., on nearby mudbanks. The whole mudbank was covered by a "green slime". Cause unknown!!!

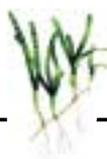


Next Surveys in Hervey Bay & Great Sandy Strait

The next Seagrass-Watch monitoring period will be:
November 13-18, 2001.

Best tides for Seagrass-Watch

Hervey Bay (Urangan)
Low tide (0.87) Saturday 17 November at 4.31 pm.



Whitsunday Wanderings!

Intertidal monitoring

Monitoring continued at 14 intertidal sites throughout the Whitsundays in September 2001. Seagrass cover at the new site at Laguna Quays showed an increase from a mean cover of 22% to 28%. Turtle grazing was once again evident at Laguna Quays, as were dugong feeding trails - not seen in July 2001. A fresh dugong poo was also found at Laguna Quays, further evidence of recent dugong feeding. At Midge point the Wenzler family monitored the



Heather and Graheme Hyde at Midgeton with Juanita from MPEG.

seagrass at both sites and found it to be healthy. At M i d g e t o n , Graheme and Heather found a big increase in seagrass cover at both sites, indicating good healthy spring growth. Whitsunday

volunteers at Pioneer Bay also detected a general increase across all sites. A different seagrass, *Halophila spinulosa* (Hs), was found for the first time at Pioneer Bay. It is quite unusual to find this seagrass growing in the intertidal zone. Fortunately there was no evidence of *Lyngbya* at Pioneer Bay and although other algae were present their abundance had decreased.



Margaret Parr and Maren Matthew at Hydeaway Bay.

In the north, Jean and Joyce found that the seagrass cover at Dingo Beach sites was low, as did Sunnee and Maren at Hydeaway Bay. It appears that spring growth occurs later here compared with central and southern localities. The reasons for this are unclear but climatic differences may be responsible and are being investigated.

JCU studies



In September, assistants from Dr Michelle Waycott's seagrass research team at James Cook University visited the Whitsundays region to collect information on seagrass seeds and genetics. They also have collections of dugong poo from *Seagrass-Watch*. The work is long-term and highly important to understanding the dynamics of seagrass populations throughout Queensland. Michelle will present some results at the Seagrass-Watch Volunteers Forum.

Seed monitoring

This September seed monitoring was undertaken at Pioneer Bay, Laguna Quays, Midgeton and Dingo Beach. Higher numbers of seeds were recorded this time compared to July. The small round black seeds, from *Halodule uninervis* (Hu), are found in the sediment of seagrass meadows using a kitchen sieve.

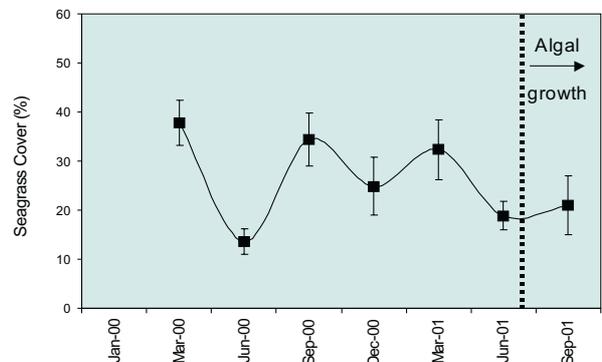


Subtidal monitoring sites

Spring was in the air as Jacquie and Elmer, from OUCH, were welcomed by humpback whales, breaching in the distance, as they approached Cid Harbour this September. The seagrass cover in the Cid Harbour region is graphed below and shows a clear seasonal pattern for the past 2 years, with high spring and low winter seagrass cover. Seagrass growth in September 2001 was lower than the previous September, coinciding with a 5-fold increase in algal cover.



Jacquie an OUCH volunteer is ready to go at Cid Harbour.



Next surveys in the Whitsundays

The next Whitsundays monitoring period will be from the 10th to the 15th of November.



Good tides for Seagrass-Watch

The best tides for monitoring in the Whitsundays are from 10th to 15th of November 2001.



Queensland Seagrass-Watch *news* continued ..

Seagrass-Watch in the far north

Seagrass-Watch continues to expand in Townsville with a new site set up at Sandfly Creek in addition to the two Shelley Beach sites. The Sandfly Creek site was very patchy with low seagrass cover. It will be interesting to see if these seagrass patches expand. At Shelley Beach Site 2 a lush cover of seagrass was found, showing an incredible increase from a mean of 8% cover in July to 35% in September. Townsville volunteers were treated to a display of dugong feeding trails, many of which were quite narrow indicative of calves feeding in this area.

There was a remarkable number of male and female *Halophila ovalis* (Ho) and *Halodule uninervis* (Hu) flowers found in the vicinity of Site 2. Seed abundance was also high with 202 whole seeds recorded at Site 2, the highest of all sites in Queensland. However Site 1 at Shelley Beach did not prove as fruitful where the seagrass appears to be struggling to recover. Monitoring in November will show whether Site 1 has improved over the spring period.

The two sites at Yule Point were again monitored by students from Cairns TAFE with their lecturers Chris Wegger and Tom Collis as part of the "caring for country" program. The germination of *Halodule uninervis* seeds which occurred in May, has culminated in an increase in seagrass cover in August this year.



Students from Cairns TAFE take canopy height measures of seagrass in the northern Yule Point site.

Seagrass-Watch in Moreton Bay

Seagrass-Watch in Moreton Bay has taken off with a successful turnout of volunteers and community groups for the second monitoring period during September. Permanent markers have now been deployed at the sites making the next survey period that little bit easier. This September the 6 sites at Wynnum and Victoria Point showed similar seagrass cover to that in May, where *Zostera capricorni* meadows are in fair to good condition. Propeller scars were found in a seagrass meadow at one of the sites. In addition to the concern of bait worming activities, urban development and runoff pose threats to seagrass meadows. The Moreton Bay Seagrass-watch sites are due to be monitored next in November.

Seagrass Artwork

The seagrass artwork exhibition by Ruth Berry held at the Cairns Regional Art Gallery on 22 August 2001, was a great success. The exhibition displayed a range of watercolor paintings of Queensland's seagrasses. The art work will be on display at the Seagrass-Watch volunteers Forum in Hervey Bay and colour prints are available. For purchasing information contact Northern Fisheries Centre 07 4035 0112



Thalassia hemprichii
(Male & female flowers)

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.



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