Seagrass-Watch news

ISSUE 17,
June 2003

Seagrass-Watch news now includes regular updates from participants not only in Queensland, but in other countries of the Pacific. It's great to read so many contributions from volunteers, so please keep them coming. Included is an article of how Seagrass-Watch volunteers provided an early alert to the impacts of a coastal development and a questionnaire for volunteers to complete which will contribute to a study on community monitoring programs in Queensland.

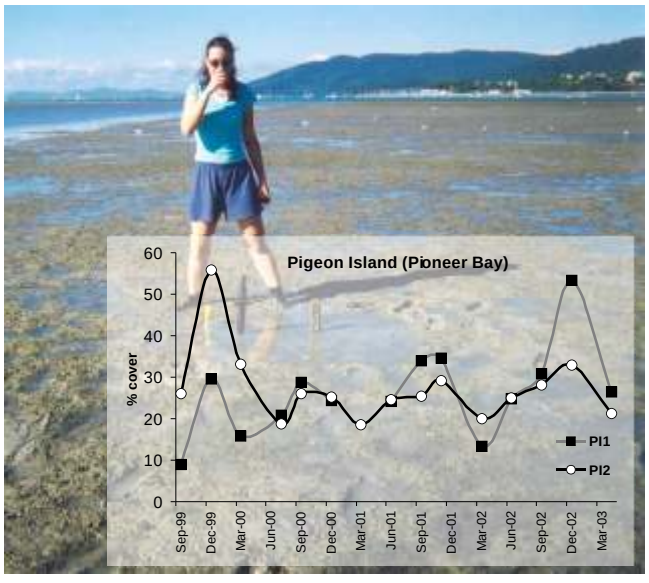
Seagrass-Watch in Action

By Rob Coles (DPI)

In June this year the Seagrass-Watch group of the Whitsunday Volunteers demonstrated the effectiveness of the program in alerting government agencies to an environment problem. Data from one of their Pioneer Bay monitoring sites shows some decline in seagrasses and there was evidence of a persistent layer of mud that had not been previously seen.

The monitoring sites are close to the development of a new marina basin at Abel Point, which has included extensive dredging, and the construction of rock walls. The local Seagrass-Watch team were rightly concerned that the development work was responsible and that the damage to the intertidal area was unacceptable.

After some false starts to find a suitable low tide and a time when all were available DPI Fisheries arranged an on-site meeting for the 11th June. Stuart Campbell and I came down from Cairns and two EPA officers, Phil Jeston from Mackay and Anthony Walsh from Rockhampton attended along with Margaret Parr, Bruce Parr, Geoff Bunn and Valerie Bunn from Seagrass-Watch. The project manager from the marina development also attended.



Fiona Parr monitoring sites in Pioneer Bay in April 2003 with Abel Point marina in the background.

It was an interesting day. The tide was very low and the extent of the seagrasses meadows in the area, a green carpet stretching as far as the eye could see, a reminder of the beauty of these habitats and their importance to local fisheries productivity.

There was certainly some mud present. It looks as if a "wave" of sediment of a light grey colour different from the normal sediment has passed across the seagrass meadow and is starting to be colonised by new *Halophila ovalis* plants. As you walk across the meadow the new sediment is ankle deep and sticky in nature. It would almost certainly have damaged the fisheries values of the meadow as it moved.

Seagrass-Watch volunteers now ankle deep in mud at their monitoring sites in Pioneer Bay in April 2003.

Is the marina development to blame? We cannot be certain. The project manager made some interesting comments to the group and we have some interesting photographs. The Government agencies involved are discussing what if any action can or should be taken. I will keep you posted if any decisions are made.

The Seagrass-Watch group played a vital role. Without their monitoring the problem would never have been noticed. Why was no monitoring required as part of the development approval? I guess we all learn from experience.

ISSN 1441-4236

Visit the World Seagrass Association website at
www.worldseagrass.org

An adult green turtle eats about two kilograms of seagrass a day

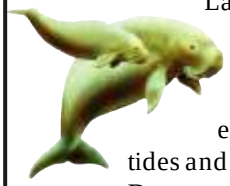
Great Sandy Region

Great Sandy Strait Fauna & Flora Watch

Gordon Cottle reports

Seagrass monitoring during February was very difficult due to lack of suitable tides and inclement weather conditions. Nevertheless, it was a pleasure to have Stuart (DPI) and Juanita (JCU) here in February to bring us into line and we hope they can visit again with better conditions and tides.

The most encouraging news to report is that we have only received three reports of dead turtles this year to end June (two of these during the busy Christmas holiday period). Last year during the same time it was over a dozen, dead and injured.



We are also pleased to report that the current June monitoring has gone extremely well, with low mid -afternoon tides and perfect weather, sunny and no wind.

Dugong activity continues to be reported throughout the southern end of the Great Sandy Strait from Boonooroo to Kauri Creek (including Tinnanbar), and at Brown's Gutter sites the area was covered in extensive feeding trails.

Dugong feeding trails at Tinnanbar (17 Feb 2003).

Great Sandy Strait - Regional Roundup

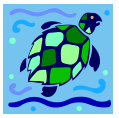
At Browns Gutter in February, Gary Neilson and Steve Winderlich reported several dugong feeding trails on site BG1. They also noted a slight build up of silt over the entire site. When they monitored BG2 in March, Gary reported good seagrass (*Zostera* and *H. ovalis*) around the site with dugong feeding trails over entire area. He also noted that a large amount of flathead had been feeding/laying over site, as marks were clearly visible.

At Tinnanbar in mid February, Rex Coleman and Steve Winderlich reported a fine granular brown silt like substance covering the site. Despite this, there were lots of dugong feedings trails present.

At Poona in mid March, Gary and Desley Neislen also reported dugong feeding trails throughout the area, although there appeared a significant epiphyte bloom.

At Bennetts and Wanggoolba Creek sites in mid May, Bill Alston and Michael Ford (QPWS) noticed lots of dugong feeding trails and fresh poo present.

Hervey Bay Dugong & Seagrass Monitoring Program



Nah leah Judd reports

A meeting on March 26th farewelled Troy Crittle (CoastCare Maryborough) so the group is now working to finalise the CoastCare projects as well as take new directions in monitoring and community involvement.

Notably, monthly meetings are now "group get togethers" post quarterly monitoring events, visiting each of the four locations. Special meetings will be held for special interests and projects, and pending application to Envirofund the groups initiation of new projects.

Work on the macro-invertebrates has been finalised with Karen Kirk after a slight reformat the ID logs, but the work is exciting and ID sheets should be available soon.

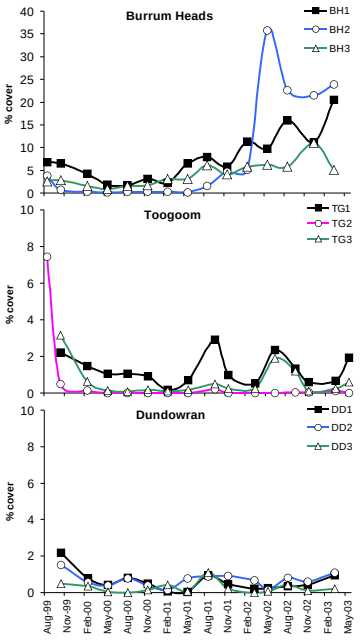
As part of the Yagubi Festival- May 7-9 hosted annually in Hervey Bay, the group had a display and was able to answer queries and interest in Seagrass-Watch. The event provided an opportunity to invite new interest and offered a means of presenting the groups work to the community.

Work on the Education kits is going well. The kits include: Seagrass habitat posters, a CD Rom with PowerPoint presentations, an Explanatory notes booklet for teachers, simple awareness questions, S.E.A. badges [Seagrass Ecology Agent] and S.E.A. certificates.

We plan to launch the school education kits with the Regional Education Directors as well as Totally Wild, at the University grounds in Hervey Bay in August, awaiting dates from Totally Wild!!

Hervey Bay - Regional Roundup

At Dundowran in early February, David Kohler, Sinead and Rhys Grower completed monitoring despite the 35-40knots winds which made placing the tape measures near impossible. They also noticed quite a lot of *Halodule uninervis* west of the site. Generally seagrass abundance at Dundowran has remained low since monitoring began in mid-1999. With very little or no evidence of seeds, it may be some time before abundances significantly increase. Fortunately, abundances has increased significantly at Burrum Heads sites, however Toogoom sites are also struggling to recover to mid-1999 abundances.



Whitsunday Wanderings!

Monitoring News

Margaret Parr Reports

Pioneer Bay

In April the Whitsunday Volunteers Seagrass-Watch team completed another monitoring of its 4 sites in Pioneer Bay. Stalwarts - Valerie, Geoff, Aileen and Robin were ably helped by new volunteers Eileen, Betty and Lisa. To our horror, a layer of slimy, silty mud covered all areas of the Bay that we walked on or monitored. We measured depths of 3-15cms. In some areas it was difficult to extract our feet from it after standing still! The seed corer was difficult to use as the extra weight of mud had compacted the sediment.

The eastern side of the Bay was partly covered with algae. The seagrass in this area therefore was covered with a mat of algae and mud. What a mess the whole Bay is in!

Members of local community have expressed concern about plumes of silt seen in the Bay, (and now partly deposited on the seagrass), since the development of the extension of the Abel Point Marina began late last year.

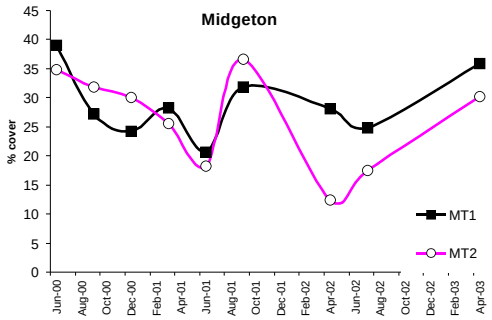
Seagrass-Watch members met with the development engineer and the relevant government agencies to discuss the on going problem (see cover story).

We hope that this has started an awareness of the damage being done and measures to be put in place to prevent further damage.

Meanwhile we will be monitoring the Bay again in early July fulfilling Seagrass-Watch's role of providing an early warning to changes in the seagrass meadows!

Midgeton

Dell and John Williams and myself spent an enjoyable afternoon monitoring Midgeton sites. No mud there! The sites, although a long walk from the car park, are beautifully situated with stunning views of surrounding hills and Islands. The meadows looked quite healthy with the same three species as Pioneer Bay *Halodule uninervis*, *Zostera capricorni* and *Halophila ovalis*. The tide goes out a long way, so monitoring is a bit more relaxed since we didn't have to keep one eye on the incoming tide.



New Pioneer Vols

Betty Wilson reports

On Monday April 14, four new Whitsunday Vols set off with Margaret to learn about monitoring seagrass in Pioneer Bay. It was an interesting experience both positive and negative. We saw quite a few dugong feeding trails, but sadly not a lot of seagrass was visible because of the grey sludge that is covering the area this presumably from the work being done in the Abel Point Marina.

After a couple of hours we were prepared for the monitoring proper on the Wednesday. I accompanied an experienced Vol, Valerie. We became quite accomplished at "reading" our grids; the sludge still in evidence, but some good readings of seagrass and crustaceans.

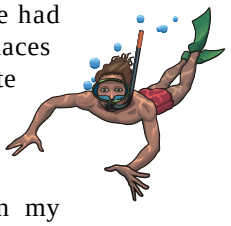
Looking forward to the next monitoring in three months time.

Cid Harbour subtidal monitoring - Update

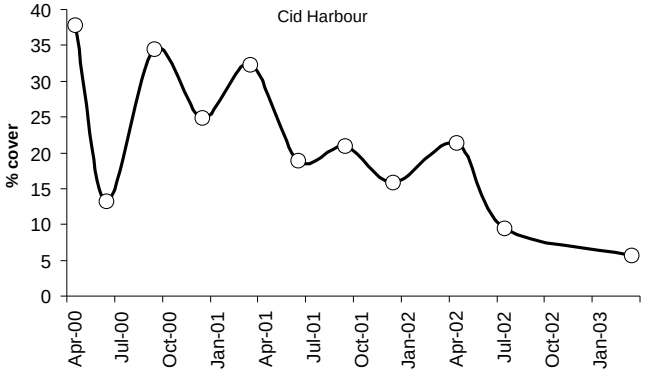
Elmer ten Haken reports

Unfortunately, we have had considerable difficulty in organising monitoring at Cid Harbour. The usual problems are; boats, people who can snorkel, time and weather. Nevertheless, on Sunday 16th March Jacquie Shiles and I said "bugger it - lets see how much we can do by ourselves" and set off for the site. Unfortunately we didn't get away as early as we would have liked due to it being Sunday morning at the sailing dub too.

Jacquie now has a coxswains ticket so she drove and recorded while I dived all the sites - 3 dives at each site. When we had completed this we had some time left so we swapped places and made an attempt to complete as many sites with her diving as we could. Jacquie repeated dives at 5 of my spots in attempt to provide a check on my estimates (we know that there have been discrepancies in the past). She then did a couple of others until the dGPS battery went flat - Murphy's law!



What we have learned from this exercise is that given good conditions, an early start and a little luck we can do the job and complete 6 dives at each site.



Okinawa Jangusa Watch

By Masahito Yoshida
Nature Conservation Society of Japan

Okinawa (The Ryukyu islands) is located on the southwestern-most tip of Japan and consists of 160 islands which enjoy the only subtropical oceanic climate in Japan. In Okinawa (Japan), seagrass on which dugongs feed is called *Jangusa* (literally means dugong-grass) and seagrass meadows are called *Jangusa-numi* (sea of *Jangusa*). Unfortunately, Okinawa's seagrass meadows are currently facing the greatest threats by the proposed construction of a U.S. military airport and/or reclamation. The Nature Conservation Society of Japan has therefore decided to launch a community-based Seagrass-Watch monitoring program by conducting "Okinawa Jangusa-Watch".

Seagrass-Watch in Okinawa began in May 2002 by first mapping the seagrass distribution. With guidance and advice from Len McKenzie (Queensland Fisheries Service), we conducted our 1st Seagrass-Watch monitoring in Kayo in July 2002. In mid-August 2002, I visited Queensland with my family and took the opportunity to join Mr Jerry Comans and Ms Karen Kirk (Hervey Bay Dugong and Seagrass Monitoring Program) on Seagrass-Watch activities in Hervey Bay area. Further Seagrass-Watch monitoring in Kayo & Henoko was conducted in September 2002 and February 2003.

In Kayo, monitoring of the seagrass meadows is conducted along line transects (five, each 200m long perpendicular to shore each 50m apart) using standard Seagrass-Watch quadrat measures. In the Henoko area, monitoring is conducted by free diving using a grid survey technique instead of line transects.

Study area at Kayo.

Results from the mapping in showed that the largest seagrass meadow was located along the coast of Henoko and relatively unfragmented seagrass meadows were found around Kayo. Seven seagrass species grow in this region and feeding trails of the dugong and sea turtle were found.

In Kayo, the highest percentage cover was observed closer to shore, but at 200m and beyond cover percentage decreased. *Thalassia hemprichii* had a broad distribution and was found throughout the entire survey range, whereas *Syringodium isoetifolium* was restricted to shallow water. *Halophilia ovalis* was abundant in deep depths and on intertidal sandbanks. The fact that dugong feeding trails were sited in Kayo during all of the surveys, taught us this seagrass meadow plays an significant role in the survival of the dugongs.

The seagrass meadow at Kayo is easily accessed by foot from the beach. Additionally, seven species of seagrasses as well as dugong feeding trails can be observed here. From these, we concuded that this area posses characteristics suitable for the training of new participants of our Seagrass-Watch program.

In Henoko Cape-Camp Schwab area, the seagrass meadow is considered to be the largest in Okinawa. From aerial photographs, the seagrass meadow seemed to reach only 500m from shore; however, our survey revealed that it actually went out up to 1000m from shore. Dense colonies of S. isoetifolium and C. serrulata were found in shallow waters, while T. hemprichii and H. ovalis occurred in patchy colonies 400-1000m from shore.

Study area off Camp Schwab, Henoko, Nago City.

These findings are important, as a report published by the Defense Facilities Administration Agency of Japan included a seagrass distribution map around the Henoko area for only percentage cover greater than 25%. In contrast, the seagrass meadow actually extends outside of the distribution range indicated by the agency.

As dugongs prefer less dense patches such as of H. ovalis rather than dense patches, we think that an environmental impact assessment of the proposed airport construction plan, which will begin soon, must incorporate the studies and predictions of changes in the distribution of seagrass patches with percentage cover less than 25% that reflect the effects of the construction on ocean current pattern and sea floor.

Ichariba choodee."

Once we meet and talk, we are brothers and sisters.

» Okinawan Proverb

Fiji

Rotuma

Rotuma, a volcanic island of approximately 43 sq. km, is located 465 km north of Fiji. Although the island has been politically part of Fiji since 1881, Rotuman culture more closely resembles that of the Polynesian islands to the east, most noticeably Tonga, Samoa, Futuna and Uvea. Because of their Polynesian appearance and distinctive language, Rotumans now constitute a recognizable minority group within Fiji.

LäjeRotuma

Alfred Ralifo reports (Nadroga Navosa Provincial High School)

The LäjeRotuma Initiative established in late 2001,consists of young Rotumans residing in Fiji who wanted to give something back to their community and Rotuma. The name LäjeRotuma literally translates to "coral reefs Rotuma". Due to the island's isolation and small size, its marine and terrestrial resources are susceptible to over exploitation.

The main aim of LäjeRotuma Initiative is to create awareness amongst Rotumans on the island about their natural surroundings, heritage, limited resources and how to protect and use these resources sustainably. This is accomplished through awareness programs in school (both Primary and Secondary) as well as at village level. Scientific research is being conducted by LäjeRotuma Initiative to try and assess how much damage is being done to the marine ecosystem in terms of pollution and over exploitation and it is for this reason that the LäjeRotuma Initiative joined Seagrass-Watch, to monitor the island's one and only seagrass meadow located in Motusa or Maka Bay. This seagrass meadow provides a lot of shellfish, fish and seaweed to the villages close by.

Matusa Bay, Rotuma.

In the last week of May 2003 , five volunteers from the island together with members of LäjeRotuma Initiative joined Nadroga Navosa Provincial High School students and myself to learn how to monitor and sample seagrass meadows. However due to water turbidity and an unusual "high" low tide we had to abandon the sampling session and move on to Cuvu Beach to spend the rest of the day in discussion. My students and I showed the visitors Seagrass-Watch monitoring techniques and discussed with them the importance of seagrass meadows to the marine ecosystem. The visitors explained to the students the aims and objectives of LäjeRotuma Initiative and its future plans as well as the importance of volunteer work. Teaching the LäjeRotuma Initiative how to sample seagrass meadows was not so difficult as a similar technique is also used in our coral reef survey.

Personally I think the day was well spent. LäjeRotuma Initiative inspired my students to look after and protect their natural surroundings and protect their own natural resources in their own communities.

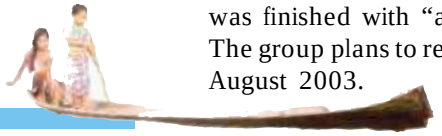
LäjeRotuma Initiative plans to go out for their first sampling session of the seagrass meadows in Motusa/ Maka Bay in the month of December this year. At the same time we will also conduct our first coral reef survey. The reason why the first sampling session will be on December is that most of us are working in Fiji and the only free time available to us to conduct this research is during our holidays. In addition, transport to the island is a bit difficult and expensive.

LäjeRotuma Initiative is proud of what they have achieved so far and is looking forward to working together with Seagrass-Watch to help protect and conserve our marine environment for our future generations.

Seagrass-Watch Cawaci - Ovalau

In April 2003 the student team led by teachers Evan Naqiolevu and Josephine Qalo with help from fellow teacher Kathey Foi conducted their first Seagrass-Watch survey of their 2 sites since Len and Stuart's (MPEG) initial visit in July 2002.

A group of 13 students turned up for the Saturday sampling but this dwindled to an enthusiastic group of 5 students, 3 teachers and youngest member Clapton (5yrs) for the second day of sampling. Though weather conditions were not prefect, the group managed to complete the sampling in good time and the day was finished with "afternoon tea". The group plans to revisit the sites in August 2003.



Western Pacific

Kosrae (Micronesia) - update

By Bruno, Roland & Max (Seagrass Team Kosrae)

Unfortunately, Seagrass-Watch monitoring did not occur throughout the school year (2002-2003) as the science specialist was off-island and the fisheries staff had been very busy with other projects.

Because of the enormous seagrass meadows in Tafunsak village marine ecosystem, we decided to conduct the monitoring with the Tafunsak Elementary School. After talking with the school Principal and the Mayor of that community, we had agreed to do the survey with the 8th graders so that the selected students would continue doing the monitoring next school year. Also, we had to establish a new site because that site at Kisacs was not exposed during the lowest low tide of that day. We assumed it was an effect from the small tidal waves striking the island during the week. The selected site was Wiya Quarry where the Black Construction Company has been doing some works. The participants of the monitoring area included ten year 8 students, their teachers and two Municipal Staff (Mr. Julian Ned and Mr. Kenson Nena).

The Mayor of Tafunsak village has also requested that we establish a site in Walung because they are going to construct a seawall along the shoreline of that exotic area.

We are hoping to do the monitoring with the Tafunsak School next school year on a quarterly basis. Also, we plan to include at least two other elementary schools.

Sabah (Malaysian Borneo)

Leela Rajamani reports

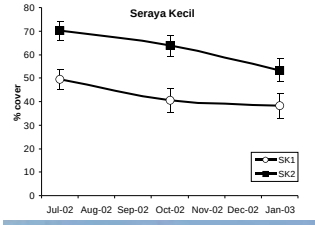
Sabah (population 2.52 million) is the second largest state in Malaysia and is bordered by *Sarawak* on its southwestern side, and *Kalimantan* (Indonesian Borneo) to the south. The capital is Kota Kinabalu (a.k.a. KK) (population 209,175).

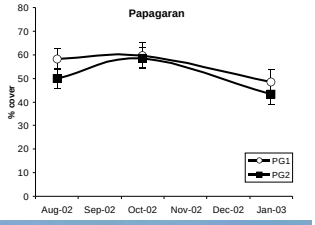
The Marine Club at University Malaysia Sabah (Kota Kinabalu) is now actively involved in Seagrass-Watch. Since our first meeting in August, 2002 we have gone to Teluk Sepanggar a site very close to university to conduct Seagrass-Watch activities. We could not go down in Nov, 2002 but we went on a week end in March this year. Seven members of the Marine Club made down to Teluk Sepanggar. We got up bright and early at 6 a.m. as the tide was already coming in by 7. Monitoring went on as usual and we finished by about 10 and went back to uni and settled with a traditional Malaysian breakfast of 'Nasi Lemak'. For those of you not familiar with Malay food it is coconut rice usually accompanied with egg, cucumber, peanuts and sambal belacan (spicy prawn paste with onions and anchovies).

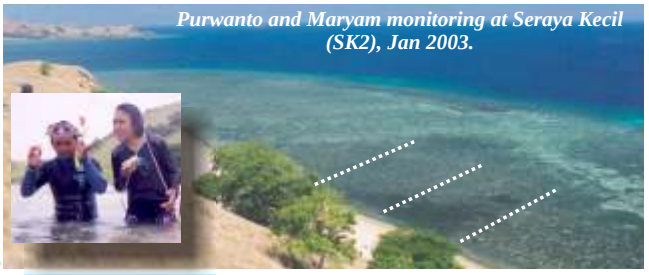
The seagrasses did not appear to show any differences from the last survey although more sedimentation was noted this time round. The dominant species seemed to be *Halodule sp*. and *Cymodocea rotundata.* We are just about to start the next monitoring visit next week. We will keep you informed in the next newsletter.

Komodo National Park (Indonesia)

Monitoring at the 4 sites established in Komodo National Park has continued with th assistance of WWF and the Nature Conservancy. Seraya Kecil sites are dominated by *Enhalus acoroides* and *Thalassia hemprichii* with varying amounts of *Halophila ovalis*, *Syringodium*, *Halodule* and *Cymodocea* species. Sites at Papagaran are dominated by *Enhalus* with some *Thalassia.* Abundances appeared to have changed little between monitoring events.







Purwanto and Maryam monitoring at Seraya Kecil (SK2), Jan 2003.

2003 SEAGRASS-WATCH VOLUNTEER SURVEY

Deb Bass, a Masters student in Tropical Environmental Management, would like Seagrass -Watch volunteers to participate in a study looking at volunteers in community monitoring programs in Queensland. The involvement of local communities in natural resource management is increasingly being recognised by Government agencies. Not only does monitoring provide a wealth of information about the local environment, but also helps create awareness within the community. By ident ifying volunteer's interests and background, Deb aims to provide a profile to the Seagrass -Watch Coordinator which will ultimately help to direct communications and training to existing volunteers and recruit future volunteers.

After completing this questionnaire, please either return it to your local coordinator or fold and post to the Seagrass-Watch Coordinator by mid July 2003.

1. **How long have you been involved in Seagrass Watch**?_____

2. **What is your Seagrass-Watch region?**_____

3. **If you have adopted a site, what is the site code?**_____

4. **How did you become involved in Seagrass Watch?** *(Tick one or more boxes)*
   - ☐ Got involved through a friend or relative
   - ☐ With a school or community grp.
   - ☐ Heard about it through the media
   - ☐ Saw a display

5. **What is the most important thing to you about being involved in Seagrass -Watch? Please number in order of importance,** *No.1 being the most important, No.6 being the least important.*
   - ☐ Looking after your coastal area
   - ☐ Interaction with other volunteers
   - ☐ Helping to conserve seagrass
   - ☐ An opportunity to learn about seagrass
   - ☐ Knowing that you are helping to conserve the environment
   - ☐ Seeing the data being used to manage the coastal environment

6. **What other interest groups are you involved with in your community?**
   - ☐ School
   - ☐ University
   - ☐ Conservation grps
   - ☐ Local Government
   - ☐ Sporting clubs
   - ☐ None
   - ☐ Community groups *(e.g., Rotary, Lions, QCWA, Church)*
   - ☐ Other *(Please specify)*: _____

7. **What is your interest in the marine environment?**
   - ☐ Boating
   - ☐ Fishing
   - ☐ Conservation
   - ☐ Local resident
   - ☐ Diving/snorkelling

8. **How confident are you in performing the seagrass watch techni ques?**
   - ☐ Very
   - ☐ Ok
   - ☐ Unsure

9. **When was the last time you participated in training of the techniques?**_____

10. **Please indicate with a tick in each column, which box currently applies to you.**

Employment:	**Age:**	**Gender**	**Education**:
☐ studying	☐ <20	☐ M	☐ School
☐ retired	☐ 20-35		☐ Tertiary
☐ employed	☐ 36-50	☐ F	☐ Post graduate
☐	☐		☐
☐	☐		
☐			

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SEAGRASS WATCH CO-ORDINATOR
Northern Fisheries Centre
PO Box 5396
Cairns QLD 4870

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We would appreciate any feedback you may have on the newsletter e.g *more local content, more interpretation of data, more/less puzzles, quizzes etc*

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Regional roundup

Jane Mellors reports

As part of Ecofiesta, this year, local Magnetic Island artist, Karen Williams ran public workshops to create junk puppets from the flotsom and jetsam (in other words the rubbish) that gets washed up along our beaches. To assist Karen, members of the Twin Cities Seagrass-Watch group joined forces with another community group "Common Interest" to do a beach clean-up from Pallarenda to Shelley Cove and thereby providing Karen with junk to create the puppets. In an hour and a half we had collected two very large bags of rubbish, a milk crate and a pair of evening shoes!!!!!

From bags of rubbish (left) to this (above) Junk Puppet at Ecofiesta

Ecofiesta

Not only did we help out Karen and her workshops, the Twin Cities Seagrass-Watch's stall proved extremely popular again this year. Building on our theme from last year we created another sea of seagrass, with badge making a crowd pleaser for all ages. I would like to thank the people who came down and assisted with the stall Lux Foot (Bushland Beach Group), Sally Peut (Shelley Beach Group), Leanne Ezzie (Sandfly Creek Group) and Bryony Barnett (CRC Reef).

Shelley Beach

Well obviously the rain and the late hour of the last sampling trip did not deter the Mundingburra Rotary Club. The monitoring crew arrived in force to monitor SB1, despite the fact that it was raining. Maybe by sending out the Mundingburra Rotary club to monitor seagrass is Townville's answer to breaking the drought!!

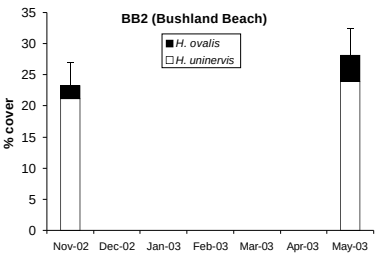
Even-though the data sheets got quite wet, the rain didn't dampen their spirits and the three transects and seed counts were done in record time. Our next monitoring trip will be the low tides in July and everyone know it never rains in Townsville in July maybe??.

Volunteers (from left) Ray, Dave and Dick monitoring at Shelley Beach, April 2003.

Bushland Beach

The Northern Beaches Rotary Club were very keen to get back out and monitor their site after missing out in February. We were a little apprehensive about finding the site, but Lux was able to direct us straight to it, even though the markers were no longer yellow due to being heavily encrusted with barnacles and algae.

There was heaps of filamentous algae, sea hares and seagrass about. After a quick refresher course on seagrass identification, the site was quickly assessed, despite the filamentous algae lying all over the seagrass making seagrass cover estimates in some quadrats quite difficult. Next monitoring trip will be the low tides in the early part of August.



Sandy and Rosie (left) and Gary and Sharon (right) monitoring the Bushland Beach site, May 2003.

Seagrass-Watch - Update

Paul Finn reports

The Seagrass-Watch program in Moreton Bay has been steadily building. To date, 33 sites have been established at 11 different locations (see map below). Since November 2002, 190 individuals have applied to volunteer for Seagrass-Watch in Moreton Bay, providing enough people to establish 95 monitoring sites, if each site has two volunteers. This number far exceeds our original expectations regarding the level of community interest and shows a keenness of the community to be involved in coastal management issues. In total, 73 people have been trained and 28 sites have been adopted by trained volunteers. Volunteers are being progressively trained as new sites are established and completion of training of all registered volunteers is expected to take a further six months.

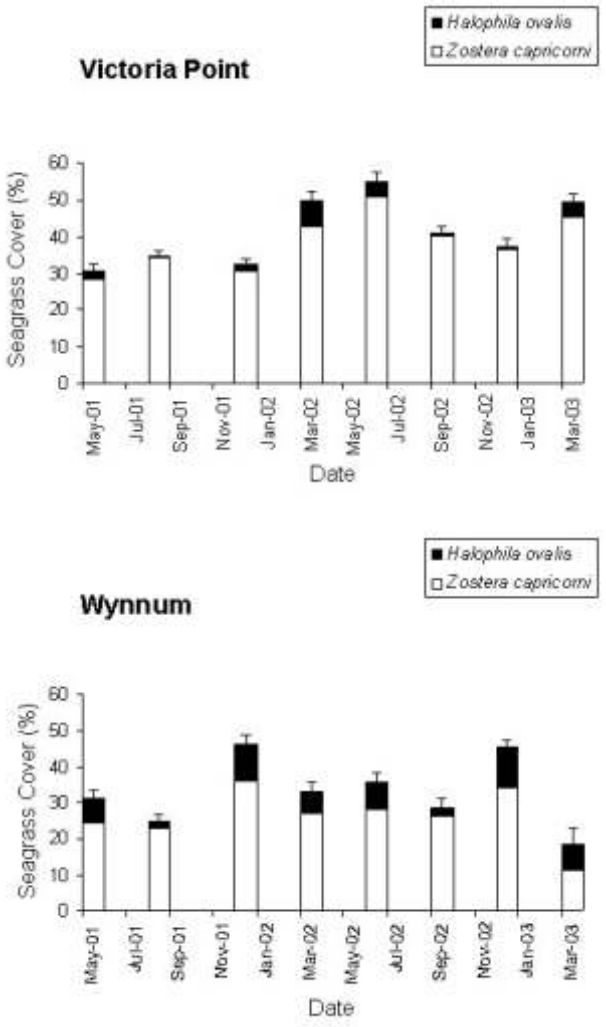
15 sites have been monitored within the last six months, with six of these monitored twice. Sampling frequency has been reduced to three times per year in March/April, July/August and November/December to minimise damage to the seagrass meadows, most of which grow in a muddy substrate. We are preparing to move into the second monitoring round for this year, July/Aug.

We are pleased to be able to announce that The Port of Brisbane Corporation is currently supporting the program with a recent injection of $10,000. The month of June 2003 will see the addition of subtidal sites at Peel Island, Moreton Island and the Eastern Banks. This will be good news for the growing list of keen snorklers amongst the volunteers.

As an example of the seagrass cover and composition in Moreton Bay, data for two locations, Victoria Point and Wynnum, where sites have been monitored for the longest time (i.e. since May 2001) are presented in the graphs below. The graphs show the average seagrass cover (pooled across three sites) for each of eight survey periods between May 2001 and March 2003 at Victoria Point and Wynnum. It also shows the percent cover contributed by both *Halophila ovalis* and *Zostera capricorni*. Wynnum fits the predicted pattern of seagrass cover peaking in summer. Victoria Point, on the other hand, is unusual in that seagrass cover appears to peak in autumn/winter.

It is also interesting that *H. ovalis* tends to make up a greater proportion of the total seagrass cover at the Wynnum sites compared with the Victoria Point sites.

For more information on the WPSQ Bayside Branch, visit http://www.users.bigpond.com/wildlifebb/



Total average percent seagrass cover (with standard error bars), made up of Halophila ovalis and Zostera capricorni, recorded from May 2001 to March 2003 (data are pooled across sites).

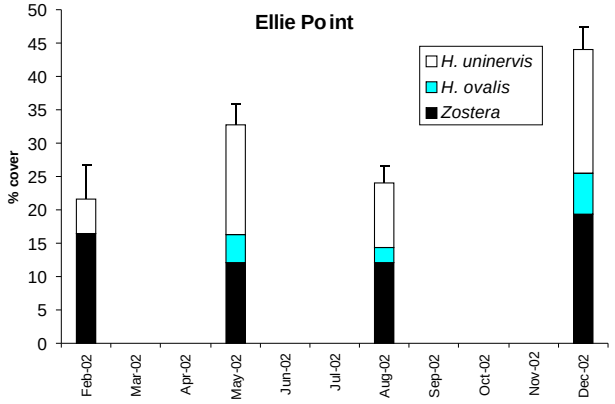
Northern Notes!

Far northern Seagrass-Watch

CRC Reef recently provided $5000 to assist with the establishment of Seagrass-Watch in the Cooktown region. The program is scheduled to start in mid- September when a training workshop is planned. Monitoring will be conducted by the Cooktown State High School Marine Studies class, with the assistance of Christina Howley. Possible monitoring sites have been identified in Walsh Bay, south of Cooktown.

Monitoring seagrass meadows at Ellie Point & in Cairns Harbour

Monitoring has continued at Ellie Point, Cairns, by Indigenous students from Tropical North Queensland TAFE. Access to the site is via Cairns Airport grounds, however as requirements for physical security tighten at airports across the country, there is a definite possibility that approval to access Ellie Point may be withdrawn. Nevertheless, in May Tom Collis and Sue Taylor (Tropical North Queensland TAFE) were granted permission to access the site with their students to conduct monitoring. May data is still pending, however abundances in December were the highest for 2002.

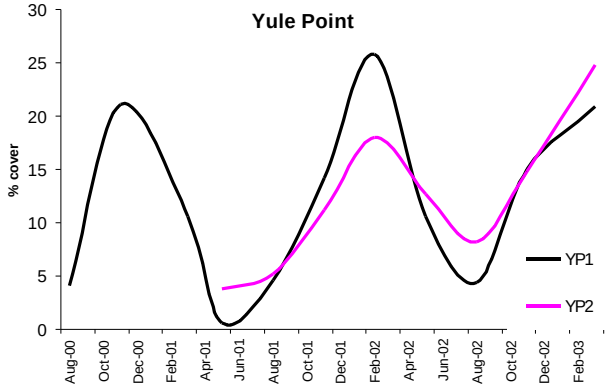


Sue Taylor & students monitoring at Ellie Pt.

The meadows at Ellie Point are also being monitored as part of a larger program by DPI, which is monitoring representative seagrass meadows in Cairns Harbour and Trinity Inlet. The monitoring program was developed following a baseline survey in 2001 and examines selected representative seagrass meadows in Cairns Harbour and Trinity Inlet. A report from the December 2002/ January 2003 monitoring is currently in draft. A key finding from the study was that the intertidal *Zostera capricorni* meadow at Ellie Point reduced in total area by 45% and had significantly declined (up to 50%) in biomass since December 2001. These changes were larger than had previously been recorded for Ellie Point with the most likely causes of change due to atypical climate conditions (low rainfall and high temperatures) in 2002.

Looking after the dugong's food supply at Yule Point!

Monitoring has continued at Yule Point, north of Cairns, by Indigenous students from Tropical North Queensland TAFE, with assistance from the MPEG Seagrass-Watch team. Both sites which are monitored are dominated by *Halophila ovalis* and *Halodule uninervis*. The data collected shows distinct seasonal patterns in abundance (high in summer, low in winter). Yule Point is relatively pristine so this pattern is probably natural. So in future, any changes to this pattern may indicate if the seagrass meadows are in trouble.



Seagrass abundance 30 August 2000 (left) and 18 March 2003 (right)

The area continues to be a favoured feeding spot for dugongs in the region, with extensive feeding trails regularly seen on site during monitoring visits. In April the Seagrass-Watch team, following the example set by the Australian Quarantine & Inspection Service, took along their latest recruit - Cheri, the beagle. Cheri's talents were used to track down dugong poo, as beagles can detect as few as 500 parts per trillion of a substance. Tracking down the poo was not a problem, but stopping her from rolling in it before it could be collected was. Training is continuing.

Seagrass-Watch's latest recruit - Cheri the beagle.

Answer to the puzzle: seagrass meadows

Queensland Seagrass-Watch *news* continued ..

Shoalwater Bay Seagrass Monitoring Update

Alice Kay (QPWS) reports.

The 5th survey for the Shoalwater Bay seagrass monitoring program was undertaken from the 12th to 18th of April 2003. This was the first quarterly survey for the second year of the project.

Four Queensland Parks & Wildlife staff teamed up with four (two new and two regulars) community volunteers to undertake the work. We surveyed all of the five intertidal monitoring sites established along the western side of the Bay. For most of the trip the weather was ideal with mirror flat seas this made sieving and cleaning core samples on the rising tide much easier than it has been on some trips!

Zostera capricorni, *Halodule uninervis* and *Halophila ovalis* were found at all sites in about the same proportions as observed in the first year of the survey. As before, three sites were dominated by *Zostera*, one by *Halodule* and the fifth by both. *Halophila* had remained a minor component of the meadows at all sites. We encountered *Cymodocea serrulata* at three sites but it was very rare.

At all sites, the number and dry weight of seagrass shoots were less than they had been 4 months earlier in December 2002. Interestingly, root biomass did not show exactly the same pattern - at two sites root biomass was slightly higher in April 2003 than December 2002, in the other three it was lower.

In the April survey mean percentage cover of seagrass at each site ranged from 14.9% to 19.6%. The average over all sites was 17.1%. In December, the average over all sites had been 21.6%.

Compared to about the same time last year, the overall (all sites together) abundance (all measures) of seagrass this year was lower.

QPWS Technical Officer Rebecca White sieves seagrass core samples at Sabina Point with volunteers David Baird and Doug Kerlin

Got time? Find the hidden words to reveal the name of the *areas of the sea bottom on which aquatic monocots are present*.

Answer on page 11

W T U R T L E H T D S E
A Y A G R I A A R R S H
T R S S Y N S L A E A A
E E H U R T S O N D R L
R S A B E E A P S G E O
Q R B T H R P H E I T D
U U I I S T M I C N S U
A N T D I I O L T G O L
L B A A F D C A M E Z E
I A T L A A D U G O N G
T R D V O L U N T E E R
Y C Q U A D R A T O W S

Hidden words

compass	crab	dredging	dugong
fishery	habitat	Halodule	Halophila
intertidal	nursery	quadrat	subtidal
transect	turtle	volunteer	water quality
Zostera			

Do you want to get Involved?

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

NEXT ISSUE OUT SEPTEMBER 2003

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