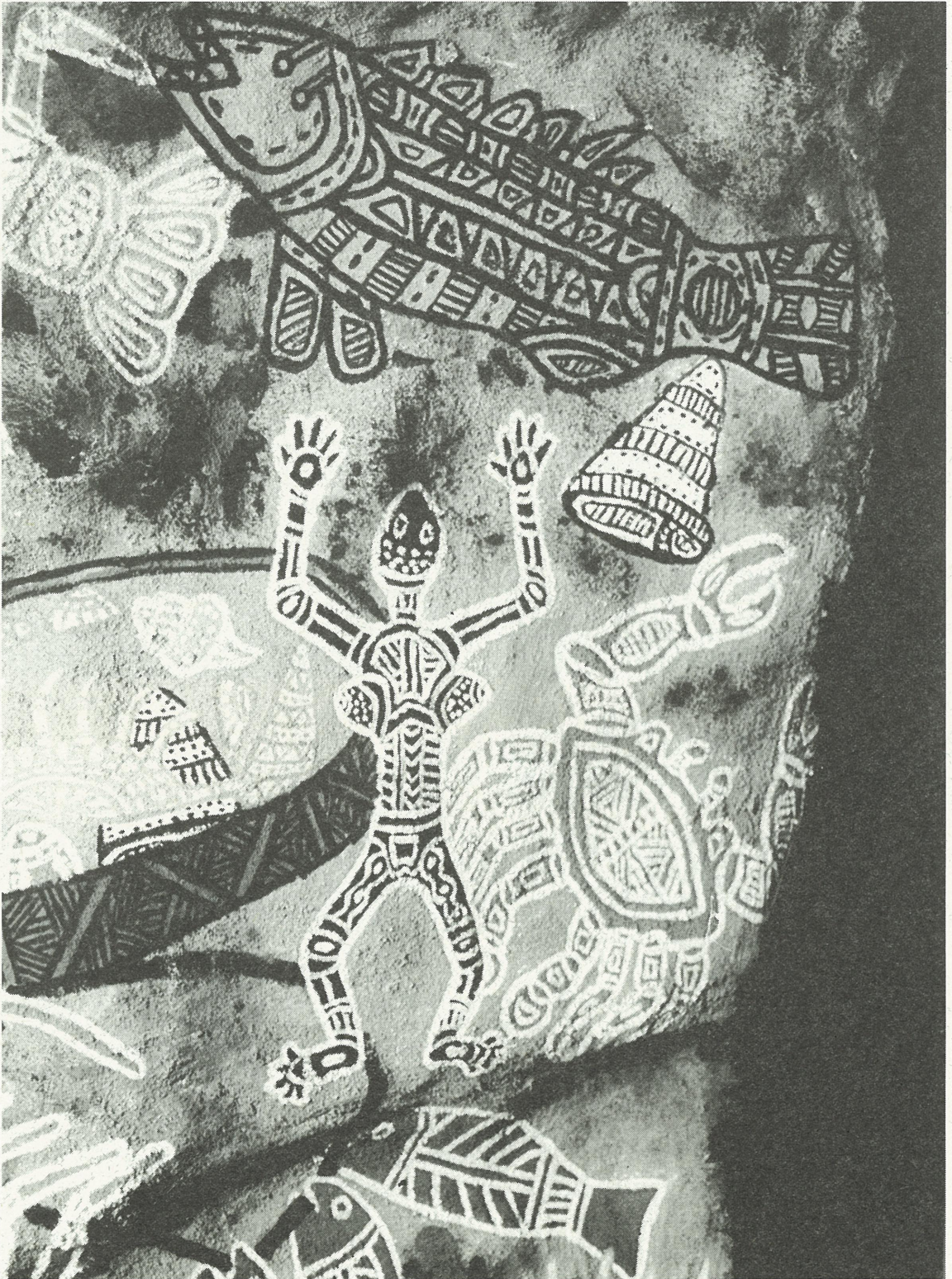


Volume 4 No 1 March 1994

Coralines

MAGAZINE OF
THE GREAT BARRIER REEF AQUARIUM



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Coralines

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Great Barrier Reef Marine Park Authority

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EDITORIAL

There are many fascinating aspects to the Great Barrier Reef Aquarium. As a casual observer it is easy to take for granted the care and attention required by the animals which live in the various exhibit aquaria, but a quick look behind the scenes allows one to see a little more of what is involved.

In this issue Curatorial Notes has an interesting tale of the finding and rearing of an octopus. The little knowledge we had of this fascinating animal has been enhanced by the experience of caring for her.

At the Aquarium one comes into contact with people whose experience and talents are far ranging. In the last issue, Volunteer News told of the 'Volunteers in Step' conference held in September 1993 and this time Alison Ferry completes the story of the conference.

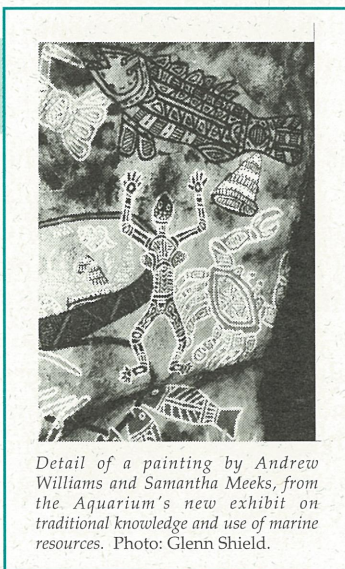
A major new exhibit for the Aquarium is the Aboriginal and Torres Strait Island exhibit (more information is contained in Exhibits News) and our major story is about traditional and cultural use of the marine environment. It covers areas such as reasons for hunting and gathering, types of ceremonies and hunting methods. Our cultural heritage is one which many of us are only just beginning to discover.

Aquarium Research Officer, Paul Hough, and Assistant Curator, Dr Janice Morrissey have been conducting experiments on the captive breeding of hard coral with funding from Earthwatch. One of our major stories in this issue concerns Earthwatch and this project. Earthwatch is a world-wide organisation. You'll find out a little more about it in this article.

The behind the scenes tours have been quite a hit with members. So much that there are two tours in this program.

Enjoy Coralines and the programs offered by the Aquarium. I look forward to seeing you in the Aquarium soon.

Grace
Grace Brice
Editor.



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DIRECTOR'S MESSAGE

By the time you read this edition of *Coralines* we will be well into a new year and it's shaping up to be a big one for the Aquarium. In this, our seventh year of operation, we will be opening at least two major new exhibits, undertaking a number of new research programs and strengthening our schools and community programs. You'll read all about it in future editions of *Coralines*.

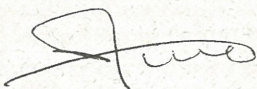
To ensure that the Aquarium achieves these and other goals during 1994 we will be embarking on some exciting new marketing initiatives aimed at generating support for the Aquarium from far and wide.

Australia is extraordinarily fortunate in still having extensive and varied natural wilderness assets. The Great Barrier Reef is one of the most valuable. The economic value of the activities which depend on the Reef is more than \$1 billion per annum.

The Aquarium's mission is to take a leading role in promoting the protection and wise use of the Reef and we do it not only through our exhibits, but also through our public and schools-based education programs, volunteer schemes, research effort, community events and business activities. But we don't do it alone. To realise our mission we need the support of people like you.

If you're not already an Aquarium Supporter, why not consider becoming one? If you are, you could help by recruiting another supporter or you might consider upgrading your support by becoming a Patron or Sponsor. To find out how, simply contact Grace Brice here at the Aquarium.

By lending your support you can be a part of the Great Barrier Reef Aquarium into 1994 and beyond and you'll not only help the Aquarium achieve its goals but you'll also play a role in protecting and managing one of Australia's greatest natural assets - the Great Barrier Reef.



Martin Jones
Director



reamtime only Yesterday

Ross Williams

To understand and to appreciate Aboriginal and Torres Strait Islander tradition and culture we must look at the continued relationship that they have with the environment, and why they do the things they do.

For thousands of years Aboriginal and Torres Strait Island people have lived on this continent and surrounding islands that are known as Australia. Before European contact there were around 2 500 different clans with over 650 different languages. The survival of this oldest known culture has been directly attributed to the indigenous people's relationship with the environment, a network of spiritual and cultural values in harmony.

The Torres Strait Island group lies in the passage between the Cape York Peninsula in the north-east of Australia and the south coast of Papua New Guinea. The strait is 150km wide and contains approximately 150 islands, with an estimated population of 6 254 islanders living on 16 islands. Furthermore there are an estimated 15 000 islanders living on the mainland of Australia including Bamaga and Sasia in the Cape York.

During the period of European settlement, Aboriginal people have been removed from their traditional lands and seas to Aboriginal missions or reserves.

This process not only had a major effect on people's traditions and

culture, but also increased pressure on those marine environments where people were moved to. Further increasing pressures on animals come from the effects of urban development, pollution, farming practices, commercial fisheries, recreation, tourism and population movement. However people, including Aboriginal and Torres Strait Islander people, are now looking at the way they do things that impact on the environment.

Today modern technology has changed the way indigenous people hunt, gather and fish. However, indigenous people have evolved with the introduction of things like aluminium boats, outboard motors, fibre glass fishing rods and 4 wheel drives. Although this technology has changed the way indigenous people hunt and gather by helping them be more efficient it hasn't changed the reasons why they hunt and gather. Hunting and gathering for food and for important ceremonies hasn't changed in thousands of years.

Ceremonies can be for births, deaths, initiation (a time when children become adults) or just a gathering of family and friends. At a feast there may be a number of native animals, nuts and berries that are available in that season.

Indigenous people use the total coastal environment, not only the land but the sea, beaches, reefs, estuaries, mangroves and islands. They hunt and collect varieties of shellfish, crustaceans, eggs, fish, turtles, dugong, birds and reptiles associated with the marine environment.

With all living things there is a spiritual and cultural value attached. With animals there are laws that should be obeyed when hunting them. Take turtle and dugong for instance. Under some laws and traditions there are people who can and can't touch or eat these animals, also there are certain ways of dividing up the animal, what portion would go to what person and even the disposal of the remains. Should these traditions not be respected it could bring bad luck to yourself, your family or community, including bad storms and cyclones.

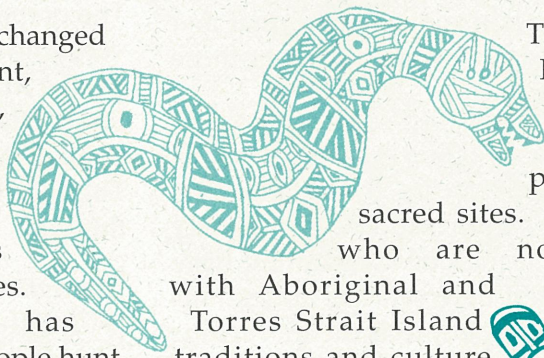
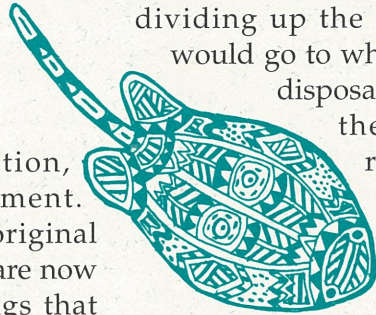
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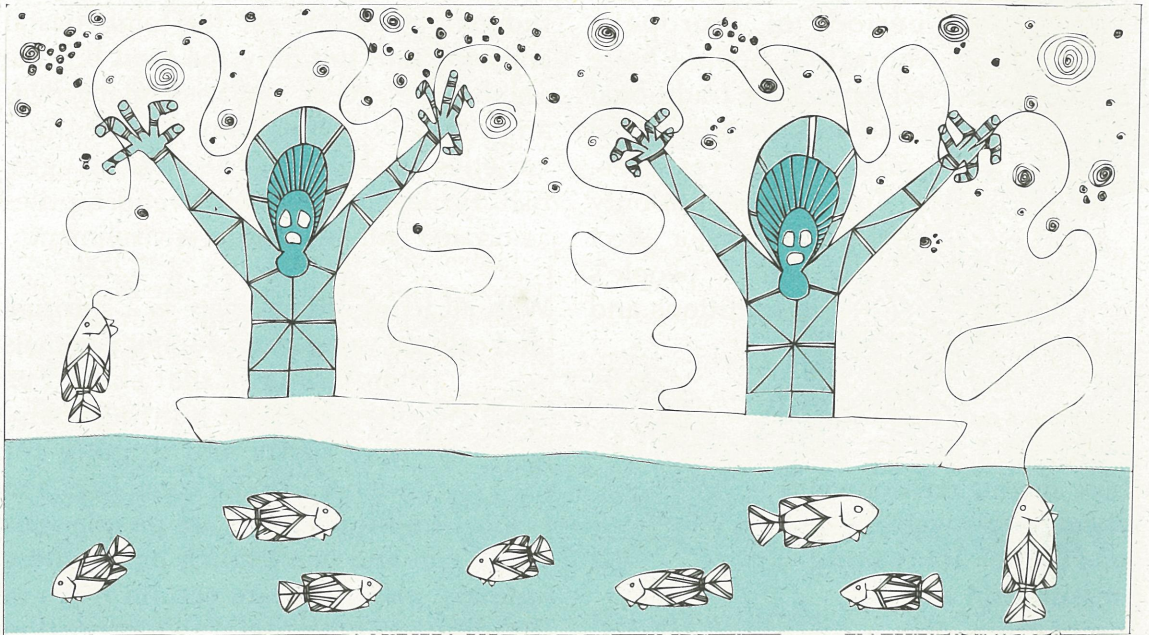
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Ceremonies can be for births, deaths, initiation (a time when children become adults) or just a gathering of family and friends. At a feast there may be a number of native animals, nuts and berries that are available in that season.

The Marine Park also has special places, story places and sacred sites. Most people who are not familiar

with Aboriginal and Torres Strait Island traditions and culture only see the physical aspects like rock art, tools and weapons. There are a lot of sites or special places which are a part of the natural environment that we live in. Areas of reefs or cays may have stories attached to them, from a 'wind place' (where the wind comes from) to a place where an animal may have been created. People weren't allowed to go to some of these areas.





"Line fishing at night"

Carol Gira 94

A lot of Aboriginal and Torres Strait Islander people continue to practise and maintain some of their traditional skills and culture in today's society. Some skills and weapons have been adopted by the Aboriginal and Torres Strait Island people from each other and from Europeans. However, hunting and gathering is just one of the ways in which Aboriginal and Torres Strait Island people maintain those traditions and culture.

The hunting methods used haven't changed much from the old ways, however as mentioned previously methods and techniques of hunting have been exchanged between the indigenous cultures. Today people hunt in various ways by still using pronged spears, wops (harpoons), lassoes and nets. The techniques of hunting from platforms made by the hunter is no longer used.

Traditional knowledge of the marine environment and seasonal change is very strong and is being passed on to the children. Looking at these changes (eg. flowers blossoming) and knowing what they mean can help predict the times for harvesting of certain species. Rain can be predicted by simply understanding the formation and movements of the clouds

and the behaviour pattern of animals. This knowledge extends to species like turtle and dugong. Aboriginal and Torres Strait Islander knowledge of breeding areas and calving places can help management agencies protect the dugong from too much human interference.

The preparation and cooking of animals is very important. Although electric and gas stoves are used, Aboriginal and Torres Strait Island people still like to cook on open fires and in under ground ovens. The food tastes better if it is prepared in this way.

Aboriginal and Torres Strait Islanders are two different indigenous groups. For Aboriginal people there are different traditions and different cultures for different tribes or clans. The same can be said for Torres Strait Islanders. We are all the richer for such cultural diversity. When looking to the future, in particular the future of the Great Barrier Reef, this knowledge and experience is invaluable.

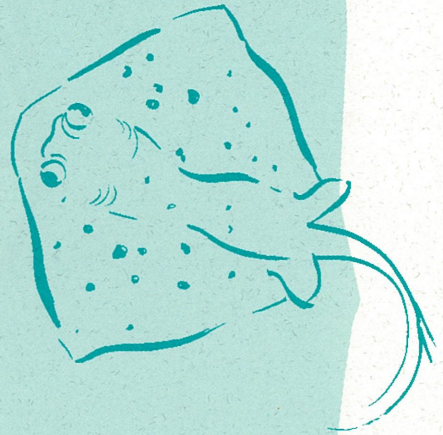
INTIMESEA

by Carolyn Papke

based on an adventure in the Great Barrier Reef, Australia November, 1993.

Floating in the waters
Of the bright coral sea
Viewing shapes and colours
Of the reef jamboree

Stripes, dots and neons
On a searching spree
Among the gorgeous coral
In pastel filigree



I floating topside
It floating down
Flapping in the sand
But circling round and round

Sting ray, sting ray
Looking up at me
I turn . . . it turns
What could this be?
A...sting ray ... looking up ...
Just watching me ... ??

Several more positions
... it and me
Could we be communing
In intimesea?

I swim on ... in awe
Of possible melee
With this flying winged
Creature of the changing sea

Snorkeling thru the waters
Inspecting giant clams,
Brilliances, and reef sharks
Like sparkling holograms

Here comes the sting ray
Settling round and round
It looking up ...
... I looking down

Sting ray, sting ray
What's our legacy?
Am I part of you ... and
Are you part of me?



Carolyn was a participant on the Earthwatch program - story follows.



DR JANE GILMOUR
Director, Earthwatch Australia

A new partnership has been established between the Great Barrier Reef Marine Park Authority and Earthwatch. The result? A number of people who have had a unique experience helping with some pretty important research into coral breeding. Last October and November, Paul Hough of the Great Barrier Reef Aquarium worked with two teams of Earthwatch volunteers on a research project involving captive breeding of several species of hard coral.

Earthwatch is a unique organisation. It's not easy to describe in one sentence. It has been called a merchant bank for scientists; a global laboratory for the environment; dream fulfilment for problem solvers; an Outward Bound for the mind; an organisation for people who would rather move the piano themselves; participatory philanthropy; and an organisation for people who want to help fix the planet.

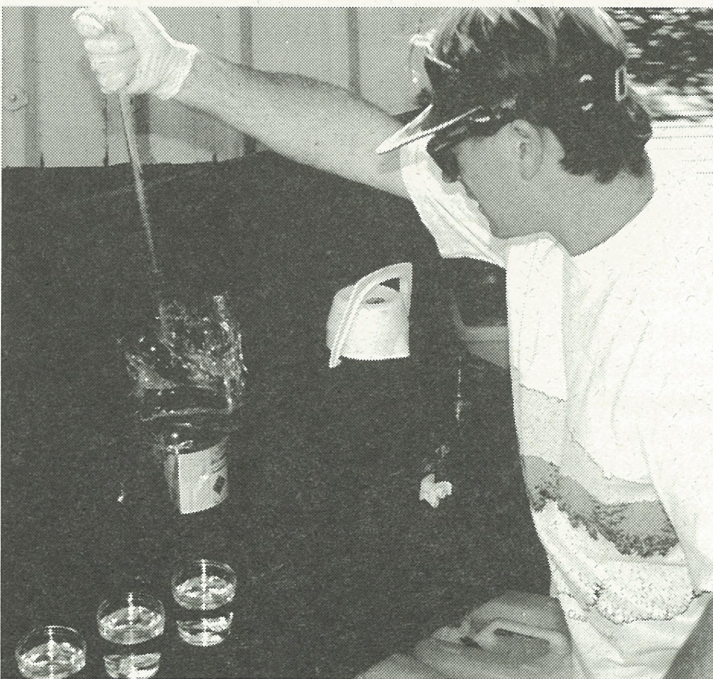
It is in fact all of these things. It is an international organisation with offices in Boston, Los Angeles, Melbourne, Oxford and Tokyo. Its mission is to improve human understanding of the planet, the diversity of its inhabitants and the processes that affect the quality of life on earth. It is a company of citizens and scientists working to sustain the world's environment, monitor global change, conserve endangered species and habitats, explore the vast heritage of peoples and foster world health and international cooperation.

How does it do this? Through a unique system of paying volunteers. Earthwatch has an international membership of over 75 000 people and every year some 3 - 4 000 of these people offer to spend two or more weeks of their time working with a scientist on a research project that might involve tracking echidna on Kangaroo Island, studying dolphin societies in Sarasota Bay, recording rainforest

species, or documenting maternal health programs in Bolivia. The volunteers pay a share of costs which covers their food and accommodation and also makes a contribution to the research costs.

Since it was established twenty years ago, Earthwatch has placed over 35 000 volunteers in the field and contributed some \$30m in funds and equipment to solve problems on the frontiers of knowledge. It is in fact one of the largest private funders of scientific research in the world.

Earthwatch is really in the ground truth business. Scientists need willing eyes, ears, hands and minds to collect data, record information, interview people, test hypotheses. The people don't need to have particular skills; they don't need to have a degree in science or be able to identify birds by their calls. But they do need to be curious, willing to learn and have a sense of humour. After all, sometimes they find themselves doing some very unusual things in the name of science.

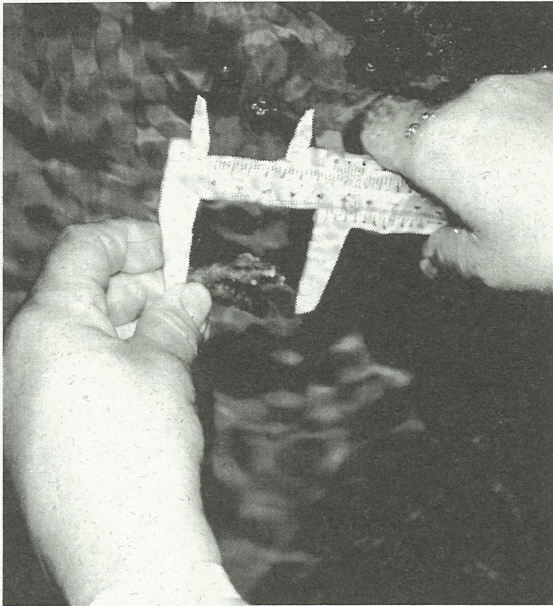


Coral tips were taken from each colony and allowed to spawn before preserving in formalin for later examination. Photo: M Ross.

To witness a coral spawning is something quite unique - an underwater snowstorm is how it has been described. The Earthwatch volunteers working with Paul Hough were right there when it happened. They dived or snorkelled to collect eggs and sperm and then, in a makeshift shore-based lab, monitored their incubation and embryonic development. They followed the progress of this new life form from free swimming larvae to its sedentary life as a juvenile coral. Finally, the spawned colonies will be returned to their reef home. A lot of the work was at night, because that is when most of the action takes place.

Why is the Great Barrier Reef Aquarium doing this research? They are trying to determine the most successful technique to culture corals so that this technique can then be applied for various purposes including research, biotechnology, education and, most importantly, the rehabilitation of denuded reefs.

Last year there were two full moons in October. When this occurs coincident with the seasonal rise in surface seawater temperatures then two periods of coral spawning may occur - and they did! And so volunteers were needed for two teams who spent ten days each on Magnetic Island, working pretty hard, but doing their bit for science and the future of the planet. There are a number of other Earthwatch projects around the world which may be of interest to readers of *Coralines*. Assessing the impact of pollution from coastal development on the sea-life

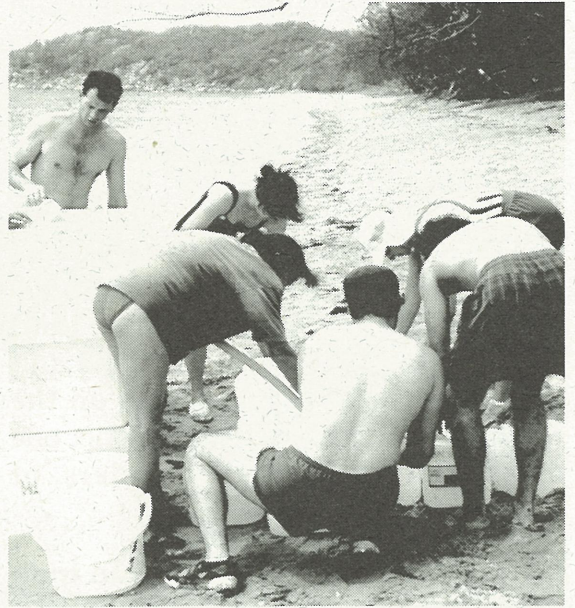


Tips from whole coral colonies were removed and measured and the volume and surface area of each tip calculated.

Photo: M Ross

off the Canary Islands, studying the effect of hurricanes on the reefs of Fiji, observing the reproductive behaviour of mosquito fish in the Bahamas 'blue holes', helping the Tongans ensure the survival of their coral reefs. All these projects invite the assistance of people who are curious to know more about underwater environments. Or there are projects researching the larger inhabitants of the sea world - dolphins and their behaviour, the movement and populations of whales and sea-turtles in Costa Rica.

Earthwatch is currently supporting 160 scientific projects in 47 countries. In the words of an American Earthwatch volunteer who came to Australia earlier this year to assist with research into platypus: 'If I can sponsor a program that helps nature then that's great. Nature has been good to me. Anyway if you stay in a motel, you don't meet the people, you don't meet the country.' What better way to meet the country and the people than through an Earthwatch research project.



Seawater was collected daily and filtered to 0.001 mm (1 micron) for use in culturing coral larvae. Photo: M Ross

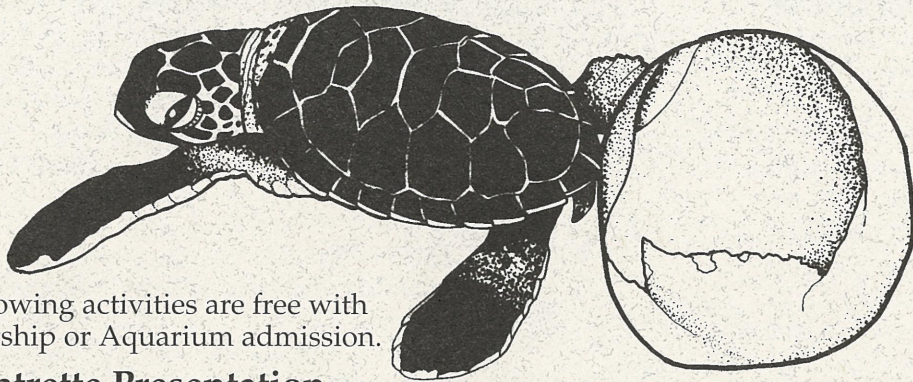
If you would like to know more about Earthwatch and the projects it is supporting in Australia and elsewhere in the world, write to 457 Elizabeth St, Melbourne Vic 3000 or ring on (03) 600 9100. It costs just \$45 to become a subscriber to Earthwatch magazine and that is the first step on your adventure. Through the magazine you will learn of the many expeditions requiring your help. The dates, locations, research aims, requirements and costs are all shown. You can choose whether you will help Chilean archaeologists survey, map and excavate Inca sites, Russian geologists trace volcanic sites, or Chinese ornithologists record the migratory passage of endangered birds. The planet needs people who are prepared to give back a little; people who agree with Albert Einstein when he said:

'The important thing is not to stop questioning. Curiosity has its own reward.'



ACTIVITIES

MARCH 1994 - SEPTEMBER 1994



The following activities are free with membership or Aquarium admission.

* **Theatrette Presentation on the Great Barrier Reef:**

10.00 & 11.00 am & 12.00 noon,
1.00, 2.00, 3.00 & 4.00 pm (Daily)

* **Diver Talkback:**

10.30 am (Daily)

Talk to the diver in the water of the Coral Reef Exhibit. Amazing stories and answers to your questions.

* **Guided Tour:**

11.20 am & 2.20 pm (Daily)

* **Turtle Feeding:**

12:20 pm (Daily)

* **Marine Cuisine:**

Either Tuesday or Wednesday and either Saturday or Sunday at 3:20 pm. See how and what some of the Aquarium animals eat.

* **Shark feeding:**

Sunday, Tuesday and Thursday 3:30 pm
The feeding is often preceded or followed by a talk on sharks.

* **Kid's Corner**

(a craft session for children):

Saturdays and Sundays

11.00 - 12.00 am & 2.00 - 3.00 pm

School Holidays: 11.00 am - 12.00 noon
(Daily)

* **Discovery Sessions:**

2nd and 4th Sunday of the month,
1.30 - 2.30 pm Discovery sessions are an opportunity to have an in depth look at various marine topics. The aim is to help members gain a greater appreciation of the marine environment and its inhabitants.

Topics will be:

March - Molluscs

April - Sex on the Reef

May - Coral Cays

June - Your Reef

July - Reef Fish

August - Spineless Sorts

Other activities may be scheduled during the day, please phone to confirm times.

* *The Aquarium reserves the right to cancel or change program times. To confirm daily events please telephone the Aquarium on (077) 818886 Monday to Friday and (077) 818891 weekends only.*



**GREAT BARRIER REEF
AQUARIUM**

Courses available at the Aquarium offered by the GBR Aquarium Volunteers in conjunction with Reefwatch, Marine Environmental Consultants.

Coral Reef Biology

An introductory course looking at life on the Great Barrier Reef.

The Coral Reef Biology course is your chance to find out about the fascinating creatures that inhabit one of the richest and most diverse ecosystems on earth - the Great Barrier Reef.

Anyone with an interest in the Reef will thoroughly enjoy the informative and entertaining lectures and workshops which are conducted by qualified marine biologists. *No prior knowledge of reef biology is required.*

Two Coral Reef Biology courses will be held in 1994.

Dates:

Course 1 commences Monday, 14 March and continues every Monday and Wednesday night for three weeks.

Course 2 (repeat of Course 1) commences Tuesday, 10 May and continues every Tuesday and Thursday night for three weeks.

Time: 7.00 - 9.00 pm

Cost: Members \$60.00

Students and Pensioners \$70.00

Non-members \$80.00

Minimum 10. Maximum 60

Coral Reef Ecology

An advanced level course which gives participants a detailed insight into the fascinating interactions and every day events that shape the Great Barrier Reef. Find out about the effects of the natural environment on the creatures that live on the Reef. How do events like El Nino, global warming and human impacts affect the reef ecosystem. Case studies from around the world will give you an appreciation of the threats that are facing reefs.

Dates: Monday 6 June. Continues every Monday and Wednesday for three weeks.

Time: 7.00 - 9.00 pm.

Cost: Members \$60.00

Students and Pensioners \$70.00

Non-members \$80.00

Minimum 10. Maximum 60.

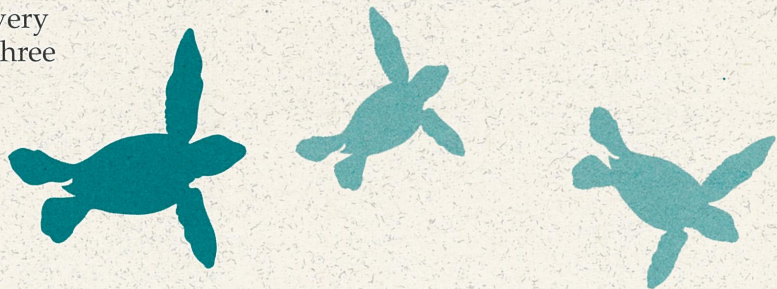
The Ecology of Coral

A two night speciality course to be offered in August.

The Ecology of Reef Fishes

A two night speciality course to be offered in September.

Contact the Aquarium on 818886 for details or come to the Aquarium enquiries desk.



1994 STUDENT VOLUNTEER INTAKE

Student volunteers contribute their time and effort to help the Aquarium expand and improve its services to the public. The students also gain experience in a wide range of areas, such as helping Aquarium visitors understand about the reef, assisting with Friends programs, craft activities, clerical work and some animal husbandry.

The program is open to students in Year 10. Application forms will be available from 1 August, 1994.

An Open Day for prospective student volunteers will be held on Sunday 28 August 1994. Applications close 28 August 1994. Training will be held from 19 September to 23 September, during the school holidays.

NIGHT STALKERS

Which Aquarium animals come out after dark? Does the parrotfish really make a sleeping bag at night? Why do the sharks keep swimming long after we have gone to sleep?

A sleepover in the Aquarium will tell you all this and more.

Bring your own sleeping bag and torch. A light supper and breakfast will be provided.

Kids only sleepover.

Ages: 6 - 12 years

Date: Friday 27 May 1994

Time: 7.00 pm - 8.00 am

Cost: Members

1st child \$22.00

2nd child \$18.00

3rd child \$16.00

Non-members

1st child \$27.00

2nd child \$23.00

3rd child \$21.00

Bookings close: Friday 20 May 1994

Minimum: 20 **Maximum:** 30

NOTE: NO PARENTS ALLOWED!

Family Sleepover

Date: Friday 26 August 1994

Time: 7.00 pm - 8.00 am

Cost: Members

Adults \$22.00

1st child \$12.00

2nd child \$10.00

3rd child \$8.00

Non-members

Adults \$30.00

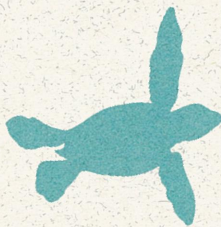
1st child \$17.00

2nd child \$15.00

3rd child \$13.00

Bookings close: Friday 19 August 1994

Minimum: 30 **Maximum:** 50



BEHIND THE SCENES

For members only

Behind the scenes at the Aquarium is a fascinating place. Join us on tour and see a side of the Aquarium not normally seen by our visitors.

All children must be accompanied by an adult.

Book early, its for members only and its free.

This popular activity is available twice on this program.

Dates: Sunday 24 July 1994

Sunday 28 August 1994

Time: 3.00 pm

Cost: Members only - free of charge

Bookings close: one week prior to each activity

Minimum: 10 **Maximum:** 20

UNDERWATER DREAMERS

A night for families, individuals - anyone interested in the Aquarium after dark.

Once again we give you the opportunity to experience the wonder of the Aquarium after dark. Members will use their torches to explore the Reef Exhibit and the Predator Tank and will see tanks which are very different from those usually seen by our day visitors. Bring a torch for each explorer.

Date: Friday 29 April 1994

Time: 7.30 pm - 9.30 pm

Cost: Members

\$15.00 - family of 2 adults and 2 children

(\$3.00 for each additional child)

\$7.50 Individual

Non-members

\$35.00 - family of 2 adults and 2 children

(\$8.00 for each additional child)

\$15.00 Individual

Bookings Close: Friday 22 April 1994

Minimum: 10 families

Book and pay early to avoid disappointment! Use the booking form when you book at the Aquarium Office or Shop. For further information or additional booking forms, please contact GBR Aquarium Office, P.O. Box 1379, Townsville OR Phone (077) 81 8886 Mon-Fri 9 am - 4 pm.



Review

Coral Sea Dreaming

A video review by Dr Dowgoon

When you next drift off to sleep, imagine you're on a most amazing journey. Following in the frantic wake of a school of eel tailed catfish, cruising silently with some sharks or setting adrift with the frenzy of coral spawning. On the other hand, don't wait til bed time! Grab a copy of *Coral Sea Dreaming*, wack it in the video and feast your eyes on a most amazing undersea extravaganza.

Unlike the plethora of natural history documentaries around which just about send you to sleep with a droning voice of fact and fiction, *Coral Sea Dreaming* is set to a beautifully composed soundtrack by Tania Rose and is an absolute visual delight. The cinematography by David Hannan is simply stunning and takes the viewer on a journey unimagined. So much of the reef's complexities and intricacies are revealed to whet the appetite for more. With every subsequent viewing there are new discoveries to be made. It's as if you were there yourself, gliding along the maze of a steep coral

reef wall. Added to all of this is a 20 page full colour booklet by Russell Kelly and Paul Carter which provides some of the answers to the questions this video can't help but stimulate.

The film is the work of two unique companies, Coral Sea Imagery (based in Townsville) and Natural Symphonies. It seems there's a lot of agreement about the film's success. It has sold over 14 000 copies and taken out some major national and international awards. The latest of these was the 'Gold Camera Award' at 1993 International Film and Video Festival held in Chicago and the Gold Award, Qld ACS (Australian Cinematography Society).

You can pick up a copy of *Coral Sea Dreaming* for just \$39.95 (less 15% if you're an Aquarium Member) from the Great Barrier Reef Aquarium Shop. The soundtrack is also available on CD and cassette.

FRIENDS NEWS

Grace Brice

This really is a special place to be. There is always something wild happening. Who attended our *Underwater Dreamers* in October? If you were one of the lucky ones you will remember seeing the shark egg on display. It hatched in early December and the little cutie was put on display for all to see. Visitors watched the embryo growing inside the egg case until all the available space was filled. There was much excitement when it emerged to face the world. Another egg case is being exhibited. Keep an eye on its progress when you visit.

Membership Numbers

In the last issue of *Coralines* I asked you to 'spread the word' about the benefits of being a member of the Aquarium. Thanks for doing that. Since September 1993 we have had 166 new memberships registered on our database. Welcome to those new members. I hope that you enjoy being a part of the Aquarium.

After Hours tours

The Aquarium is always willing to try new ideas. A recent one was a mailout to members making a special offer of night-time tours. As you know, the Aquarium is a special place after dark and we offered our members the chance to show it to members of other groups with which they are involved. The offer was restricted to between the months of October 1993 and March 1994.

Our members appear to be equally enthusiastic and have taken up the offer. We are considering making the offer again during the summer months of 94/95.

GBR Aquarium to the Rescue.

Recent local television news detailed the rescue of a baby dolphin found in a bay near Ayr just south of Townsville. What wasn't mentioned was the role played by the Great Barrier Reef Aquarium in its rescue.



What love can do! Shannon Kruchow who found 'Dudley' near Ayr, NQ, showed great reluctance to part with him when it was time for him to leave for Seaworld. Photo: John Lister Courtesy: Townsville Bulletin

When Seaworld staff were advised that the animal had been found they quickly swung into action to bring the animal back to the Gold Coast for rehabilitation. However they needed a 'resting place' for the animal before putting it on the plane to travel south. What better place for it than an Aquarium!

The animal was placed in a tank in the Curatorial area where it was kept calm by staff from Seaworld and a Qld Boating and Fisheries officer with Aquarium staff providing formula which Dudley drank after some coaxing.

Last reports indicate that the dolphin has been accepted by an adult female at Seaworld and is doing well.

A Venue with a Difference

The Aquarium is certainly that and more. To show our thanks for the support given by our Sponsors and Patrons the Aquarium hosted a Gala Night in November. Approximately 200 people filled the Aquarium to meet with the Chairman of GBRMPA and Aquarium staff.

It was a very special evening and a great opportunity to show our guests all that the Aquarium has to offer.

Suncorp held their Christmas party here and the Queensland Water Resources

Commission held a function as part of their recent conference.

Many organisations are finding out what a special place this is for night-time functions.

Members Activities

You asked for it - you've got it! This program offers two sleepovers. One for children only and the other for families. Phone early so you can choose your favourite part of the Aquarium to curl up in your sleeping bag. On the night we've designated 'Kids Only', everyone will sleep as a group in the theatrette.

Members celebrated Christmas with a party in the Aquarium in December. Carols were lead by the volunteer choir; student volunteers performed their Christmas play; Santa splashed down into the Reef Tank and then came to the Theatrette to hand out presents to the children; and a feast fit for a king was enjoyed by all.

Activities such as the Christmas party, Underwater Dreamers and Night Stalkers are a great way for us to meet new members but it is also great to see 'older' members who are now on a first name basis with staff and volunteers.

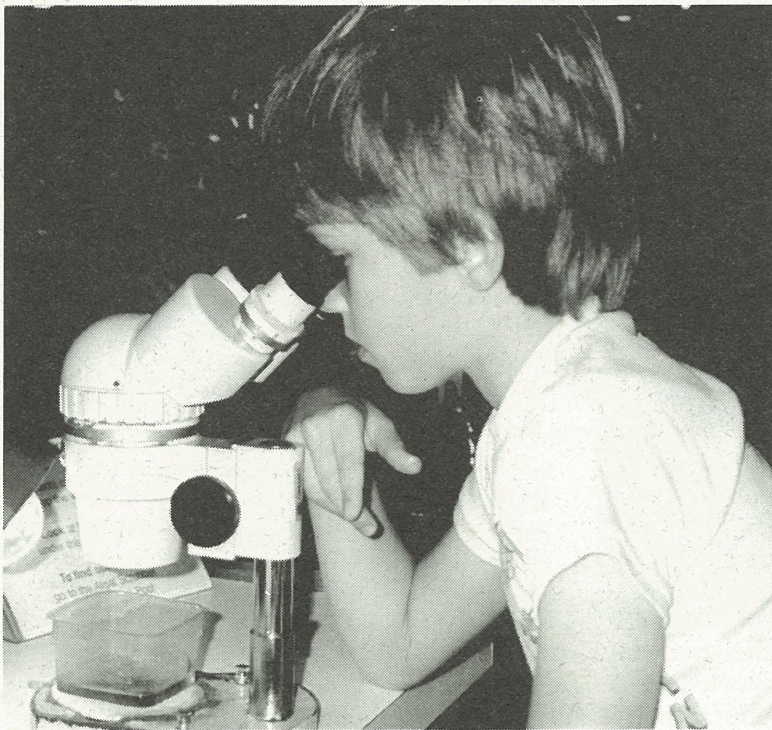
Read the Activities Program and phone us to book for the activities offered.



Daniel Walsh showed his creative talents with this Fishy Hat at the Members' Christmas Party in December. Photo: GBRMPA

E D U C A T I O N N E W S

Dianne Vella



Microscopes in the Quicksilver Discovery Room always capture the attention of students who visit with their school. Photo: Susan Hutchinson

The ever-changing nature of the Aquarium and our emphasis on education provides a host of non-stop challenges. Education does not simply mean school children visiting this reef-on-land, but it is also about providing professional development opportunities for teachers in a variety of subject areas. Our commitment to education is reflected in the vast range of activities on offer to our reef users of today and, just as importantly our reef users of tomorrow.

Our second intake of Student Volunteers, year 10 students from various high schools in Townsville, proved to be highly successful. The Student Volunteer Scheme stemmed from an increased interest in the marine environment by younger members of our community who, until recently, have not had the opportunity become volunteers. Their appreciation of the Great Barrier Reef and all its mysteries, prompted many to take the initiative and become volunteers.

Training sessions have been held monthly and a Christmas sleepover was held to coincide with their December meeting. The next Student Volunteer intake is expected to occur during the September School holidays.

The Rotary Student Research Scheme provided Kristina Gilson, a student from the Townsville region, the opportunity to gain valuable experience at the Aquarium during the recent summer vacation period. Kristina undertook a research project under the guidance of Aquarium staff, investigating hard corals in our Coral Reef Exhibit. The continuing support of community groups such as

the Rotary Clubs of Townsville, gives the Aquarium the ability to nurture scientific talent in the community and foster links with the scientists of the future.

Have you ever slept with a shark? A new program available to school groups and other groups, such as scouts, is our Sleepover program. This program gives students the ability to enjoy the Aquarium after dark and be witness to the vast array of activities that can only be seen at night. Students stare in amazement as they watch a parrotfish sleeping inside a mucous cocoon, which it produces each night to insulate its scent from predators. Students take part in activities including feeding the animals in the Touch Pool and a night trail before bedding down in the Theatrette for the evening. Then it's breakfast time as the Reef Exhibit changes over from the night shift to the day shift. Any interested groups should contact the Aquarium for further details.



Student volunteers right in the thick of it! Duncan Forster shows the strain of his load while his co-workers seem a little more relaxed. Photo: GBRMPA

A number of teacher inservice activities are planned throughout 1994. Ocean Edcamp '94, run in conjunction with the Department of Tourism, Sport and Racing, will be held again on Magnetic Island on 26 and 27 May. This two day professional development workshop is designed to introduce teachers to the range of environments found on Magnetic Island and to learn about the variety of activities that can be carried out in this area. Environmental education is a genuine concern of teachers, students and

parents, and good techniques for teaching such issues can sometimes be quite difficult to find. This workshop addresses these issues and provides a whole range of ideas for teachers to utilise with their classes.

Those of you with a strong commitment to marine education may be interested to know that the Marine Education Society of Australasia is holding its 8th Annual National Conference in Cairns during September of this year. This Conference will address a number of marine-related issues. Presenters in the past have included primary-aged students, concerned citizens and researchers.

Have your children visited the Aquarium as part of a school excursion? If not, perhaps it is time to encourage their teachers to take advantage of the many of benefits of being able to experience the reef right on our own doorstep. For Aquarium Members your children's school visit is free of charge if they present their card on the day.

We can easily tailor a program to suit your group. For information about any of the programs outlined above, please contact the Education Officer here at the Aquarium for additional information. Who knows, you may even find out a few new things yourself!



Gisela Wagner obviously relaxed and enjoying showing students on a sleepover how the algal turf farm works. Photo: Deb Postle

CURATORIAL NOTES

Octopus Babies

While on a field trip in June last year I collected a small octopus for the Aquarium's octopus exhibit. On our return to the Aquarium the specimen, which was small enough to fit into the palm of my hand, was housed in a quarantine tank where she was eventually coaxed into feeding. Later she was transferred to a display tank which was specially designed to hold such a small octopus and lavished with TLC. I say 'she' because, by August, to our surprise, she was found to be carefully tending a large clutch of eggs.

At first, I doubted that they were fertile but since octopuses can store sperm for some months after mating, there was a chance. Over the following month the eggs changed colour and shape suggesting that they might be fertile after all.

Two months passed before the eggs hatched. The babies were quickly removed from the display tank and transferred to the Aquarium's quarantine room for more attentive care.

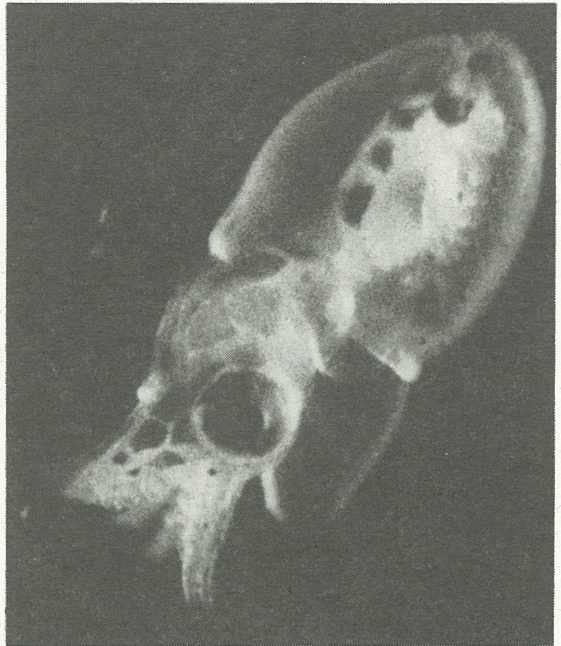
Very little is known about the early life history of octopuses and although none of our babies survived for more than three days, the data we obtained during this period will advance our understanding of octopus biology and assist greatly our future work with octopuses.

Dominic Eggins

Snakes Alive

The Aquarium's quarantine room recently has become home for seven sea snakes that are being slowly introduced to life in captivity under the watchful eyes of aquarium aquarists.

The snakes, six specimens of Hardwick's sea snake and one of Dubois's sea snake, were caught by a prawn trawler off Rattlesnake Island, north of Townsville and are destined for the Aquarium's sea snake exhibit.



Just hours old and smaller than the size of a pin head, this baby octopus was born in the Aquarium September 1993. Photo: Peter Kinchington

One of the first tasks facing aquarium staff is to encourage their new charges to feed. In the wild, both species feed on a variety of fishes but the trick is to persuade them to take dead food. This can be a time-consuming and frustrating procedure. In the strange surroundings of a quarantine tank snakes are often reluctant to feed. When they do, they often do so 'after hours', a tell-tale bulge being the only indication that they have taken their first meal.

Once they have begun to feed and staff are satisfied with their condition, some will be transferred to the exhibit tank where visitors to the Aquarium can experience a little of the lifestyles of these true sea serpents.

John Hoey

'Did you Know...?'

There are no rattlesnakes on Rattlesnake Island. The Island was named after the survey ship HMS Rattlesnake which surveyed the eastern coastline of Queensland in the mid 1800's.

E X H I B I T N E W S

Paul Hough and Glenn Shield

Invisibly Finished

All the "stand alone" tanks just inside the Aquarium entrance have now had the new invisible filtration system installed (refer to the last edition of Coralines). The new system significantly improves these exhibits both visibly and practically. The earlier versions had the filter box situated above the tanks, causing interference with tank lighting and some access problems for staff. The new system also skims floating material from the surface of the water.

Bigger is not Better

The two large eels that used to be a popular sight in one of the above mentioned tanks may seem to have shrunk markedly of late. This however, is not the case. The large eels were removed because of a series of personality clashes resulting in very nasty looking but relatively harmless gashes on the Reticulated Moray. The smaller Reticulated and Snowflake morays are quite happy in the newly renovated home along with a sand eel which spends most of its time buried. This is yet another case where bigger is not better.

They're back

It may not be good for swimmers but having stingers back in our waters this year is a boon for the Aquarium. The first of these were picked up by our staff off The Strand, near the Tobruk pool early last November. These first specimens were approximately 20 millimetres across the bell and quickly found a home in the new kreisel tank constructed especially for them as well as other planktonic creatures. An exhibit incorporating a number of these special tanks and highlighting the little understood and seldom viewed world of plankton is at present being planned.

Idle arms

If idle minds and hands can cause mischief, how do you keep an octopus occupied? Another tank renovation is in progress to make our octopus tank more visitor friendly. The large occupant delights in spending the mornings rearranging the landscape so that for the rest of the day it is completely hidden in the back corner of the tank. This is particularly frustrating as it chooses to ignore the ready made hole that allows it to be seen in its confined habitat.



Which way to the sea? These baby turtles show some confusion as to which direction they should take!
Photo: B Legg

Wild Horses

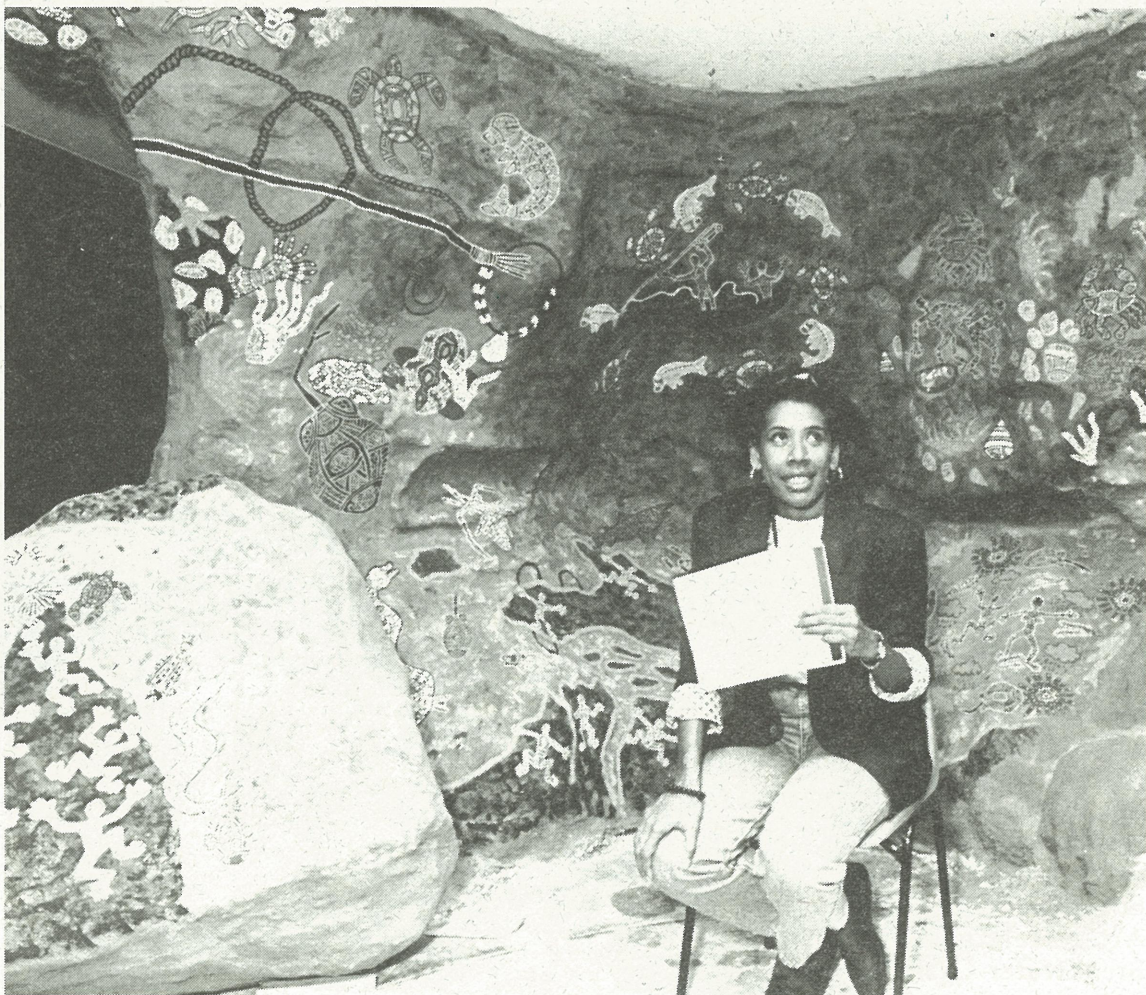
If the happiness of an animal can be judged by how well it breeds, our Seahorses seem to be ecstatic. They continue to breed successfully and several populations of their offspring are maturing in the quarantine room. This is a testament to both the seahorses' and the curatorial staff's hard work.

The Changing of the Guard

Last year's baby Flatback Turtles have now been released to fend for themselves and we wish them all good luck. In their place are this year's hatchlings some of whom came to life on show thanks to a new incubator built by our staff. This device maintains the temperature and moisture levels needed by eggs that would normally incubate under 40 centimetres of moist sand on a beach.

A Cultural Perspective

Thousands of years before Captain James Cook discovered the Great Barrier Reef, the Aboriginal people and Torres Strait Islanders were utilising the positive aspects of the reef as an integral part of their everyday existence. A new exhibit at the Aquarium looks at how this great natural resource was used in a sustainable way by the numerous tribes who lived on the mainland foreshores and continental islands of the north east coast of Australia. The centrepiece of this exhibit is a small replica of an ingenious labour-saving fishing device made with piled rocks. Remnants of these stone fishtraps have been found dotted along the coast and islands and are still in use in the eastern Torres Strait Islands.



So close to completion! Velna Gara enjoys the rock wall paintings in the new Aquarium exhibit, which is close to completion after months of painstaking work. Photo: John Lister. Courtesy: Townsville Bulletin.

VOLUNTEER NEWS

Alison Ferry

One of the most difficult messages to get across to the public is that the Aquarium is an ever-changing attraction. Many people, especially locals, have the opinion that if they have visited the facility once there is no need to go again. However, new exhibits are constantly being planned, and set up. Different animals such as the box jellyfish are on display according to the season. School programs are constantly updated, daily activities vary and exciting and unusual forms of interpretation are designed with the visitor in mind.

Community involvement is most important and Aquarium volunteers assist in this area in a variety of ways. The distinctive green shirt has become a recognised symbol at community events such as Eco Fiesta, Leisurama, school fetes, Under 8's week, The Festival of Townsville and the Cotters Market. Spreading the word is all part and parcel of the volunteers' mission.

Another form of community involvement initiated by the volunteers is that of offering courses in Coral Reef Biology and Coral Reef Ecology to the general public. This year three courses were run in conjunction with Udo Engelhardt from Reefwatch. They have become extremely popular with members of the diving fraternity, those interested in ecology, science students and people who just want to increase their knowledge of the Reef and the area they live in.

As well, Aquarium volunteers have gained a reputation for leading the way in several areas of volunteering over the past six years. An example of this is the first ever national conference for volunteers who work in the areas of Tourism, Environment, Heritage and the Arts. Held at the Sheraton Breakwater Casino Hotel in September, the conference was a outstanding success and as a

result will be held every two years with a different organisation hosting each event.

The project raised the profile of the Aquarium nationally and brought to Townsville many delegates who had never been to North Queensland before. A very satisfying outcome was the amount of money raised for the Aquarium. Both Aquarium and Volunteer management have agreed to spend the money for the development and construction of a new display around the Touch Pool plus the development of Kid's Corner on the Observation Deck.

The aim of the Touch Pool display is to introduce to visitors the important and often overlooked invertebrates. Volunteers will play a key role in determining the design, content and construction of the exhibit. Keeping children happy and stimulated is an integral part of aquarium activities and the Kid's Corner will further develop this area.

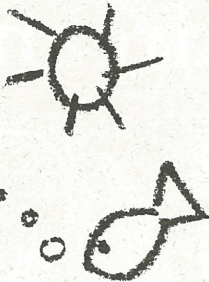
Whilst fund raising is not a goal of the volunteer scheme, it is always pleasing to be able to donate any funds gained during the course of our volunteer effort.

Our Conference was titled 'Volunteers in Step' and Aquarium Volunteers would like to think that we are also 'in step' towards an even better and brighter future for the Aquarium.



Aquarium volunteers Lee Langley and Lyn Jones show their pleasure in registering a conference delegate. Photo: Glenn Shield.

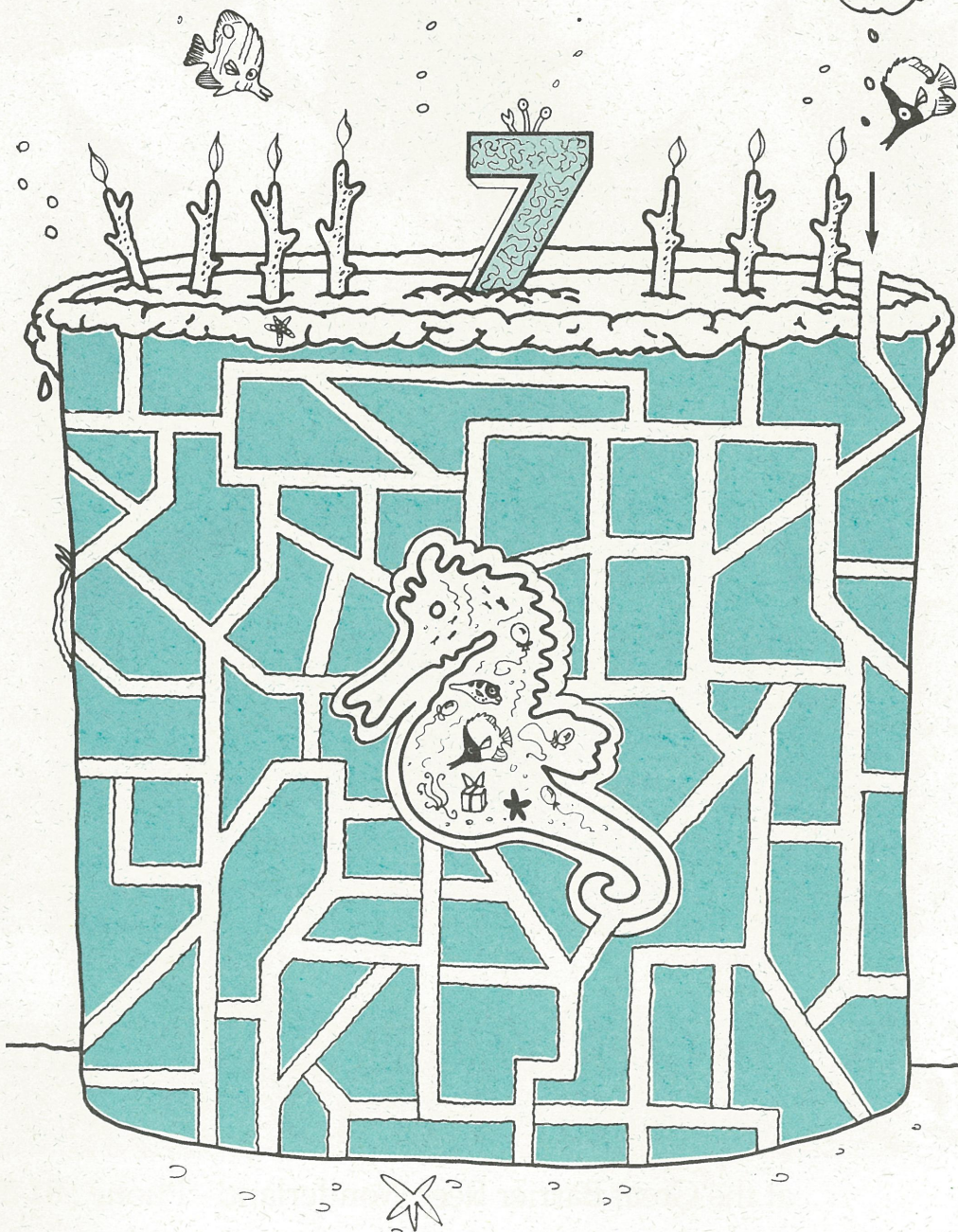
Kids Corner



Hi Kids, June 24th is the Aquarium's 7th Birthday and because birthdays are so much fun, I have a Birthday Cake maze for you to solve. See if you can reach me and the party in progress, in the middle of the cake. I hope that all my Friends will be able to join me for a morning of festivities! See you soon.

Sidney

START
HERE



Put yourself into the dream



SPECIAL OFFER

Until 30 April we would like to offer a 15% discount on personal shopping and telephone orders.



Examples of goods to which the discount applies -

Dabu - the baby dugong - written in both English and Kala Lagaw Ya language. Author Selena Solomon. \$19.95 plus p.p.

The Last Islands; Author John Bates. Price \$29.95 plus p.p.

Corals of Australia and the Indo-Pacific Author J.E.N. Veron. \$125.00 plus p.p.

Coral Sea Dreaming - P.A.L. \$40.00; N.T.S.C. \$45.00; CD \$20.95; Cassette \$29.95



THE GREAT BARRIER REEF AQUARIUM S H O P

at the Great Barrier Reef Wonderland - Phone : 81 8875