



For further information on this newsletter please contact the GCRMN SW Pacific Node Coordinator, Dr Kenneth Mackay, at [mackay\\_k@usp.ac.fj](mailto:mackay_k@usp.ac.fj) or Shital Swarup at [swarup\\_s@usp.ac.fj](mailto:swarup_s@usp.ac.fj)

This newsletter is a response to the increasing need for coordinated approach to coral reef issues in the Southwest Pacific. The Director Institute of Marine Resources at the University of the South Pacific in Suva is the coordinator of the Global Coral Reef Monitoring Network Southwest Pacific Node (GCRMN SW Pacific Node) which, comprises of seven member countries. These are Fiji, Nauru, New Caledonia, Samoa, Solomon Islands, Tuvalu and Vanuatu. Institute of Marine Resources (IMR) has administered the Node activities since 2001 and has trained and provided assistance to the seven country coordinators to establish permanent reef monitoring sites. The GCRMN SW Pacific Node Newsletter is a means of informing the region and other interested parties of the Node's activities and pressing issues that need to be addressed.

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## **Greetings to all GCRMN Coordinators and others in the South West Pacific GCRMN Node**

We are sorry for our silence for the past year. The Canadian funding through C-SPOD officially ended 31 December, 2004 and we have been trying since then to put in place future funding. It looks like we have been successful. The French funded CRISP (Coral Reef Initiative for the South Pacific) will be funding continuation of the networking and also through WorldFish IMR will be part of the Pacific node for the ReefBase data base. We are still working out details so will be in touch with you shortly to give you more details.

CRISP has also funded the Polynesian Mana node and we hear that the coordinator Caroline Vieux has been very active. We intend to be in close contact with her.

There has also been lots of other news around IMR.

**Reuben Sulu** left IMR in early February to return to the Solomon Islands to become an Assistant Lecturer at the USP Centre in Honiara.

**Shital Swarup** IMR's scientific officer continued to follow up GCRMN issues but hampered by the absence of funding for networking.

**Dr Kenneth MacKay** joined IMR in September as the new Director. Many of you have met him previously as he was the coordinator of the C-SPOD project and attended our last workshop in September 2004. He will be traveling shortly and talking with the GCRMN coordinators in Vanuatu and Solomon Islands.

**Ed Lovell** the Fiji GCRMN co-coordinator is now a Lecturer in Coral Reef Ecology in USP's Marine Studies Programme (MSP) and thus able to pass his wisdom to an even larger audience.

There is also some exciting news about reorganization at USP. A new faculty is being created called Islands and Oceans it will include MSP, Geography, Land Management, the School of Agriculture, Tourism and Hospitality and the Oceania Centre for Arts and Culture. It is expected that IMR will be closely affiliated with this faculty and thus able to draw on an even broader range of experts. The new Dean is Samoan Dr. Pa'olelei H. Luteru.

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## GCRMN SW Pacific Country Coordinators

The seven GCRMN country coordinators can be contacted via e-mail at the following address:

Country	Contact
← Fiji	<b>Ed Lovell</b> <a href="mailto:lovell-e@usp.c.fj">lovell-e@usp.c.fj</a> <b>Helen Sykes:</b> <a href="mailto:resortsupport@connect.com.fj">resortsupport@connect.com.fj</a>
← Nauru	<b>Margo Deyie</b> <a href="mailto:cfdo@naurufisheries.com">cfdo@naurufisheries.com</a>
← New Caledonia	<b>Laurent Wantiez</b> <a href="mailto:wantiez@univ-nc.nc">wantiez@univ-nc.nc</a>
← Samoa	<b>Joyce Samuelu</b> <a href="mailto:joylarkam10s@yahoo.com">joylarkam10s@yahoo.com</a>
← Solomon Islands	<b>Nelly Kere</b> <a href="mailto:wwfgizo@solomon.com.sb">wwfgizo@solomon.com.sb</a>
← Tuvalu	<b>Tupulaga Poulasi</b> <a href="mailto:tpoulasi@yahoo.com">tpoulasi@yahoo.com</a>
← Vanuatu	<b>Jason Raubani</b> <a href="mailto:3jraudinbani@gmail.com">3jraudinbani@gmail.com</a>

IMR is starting to be involved in turtle conservation efforts particularly to assist countries to document the important resting and feeding areas. Many of you involved in GCRMN activities may also be able to supply information on marine turtles. We will be in touch with you to seek more information.

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## NIWA, IMR, Fiji Fisheries Bath Sponge Project

Institute of Marine Resources (IMR) in collaboration with Dr Michelle Kelly Shanks of the National Institute of Water & Atmospheric Research (NIWA) - Auckland, and the Fiji Fisheries Department organized a one week workshop on marine sponge farming for bath sponges as a sustainable livelihood cottage industry in Kiuva Village, Tailevu. Mr Batibasaga, the Principal Fisheries Officer, together with his staff, had set up a farm in Kiuva village and welcomed Dr Kelly's expertise to improve on their method.



Sponges collected during the survey were used to demonstrate sponge cutting and deploying techniques.

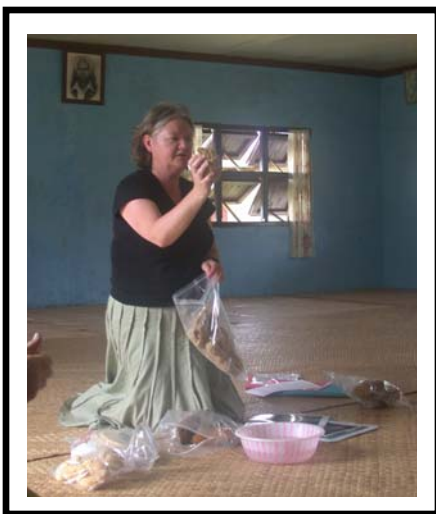
cutting and deploying sponges on long lines for culture.



Participants of the workshop discuss the practicalities of setting up a sponge farm.

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## Status of the 'Coral Reefs in the Southwest Pacific: 2004' publication

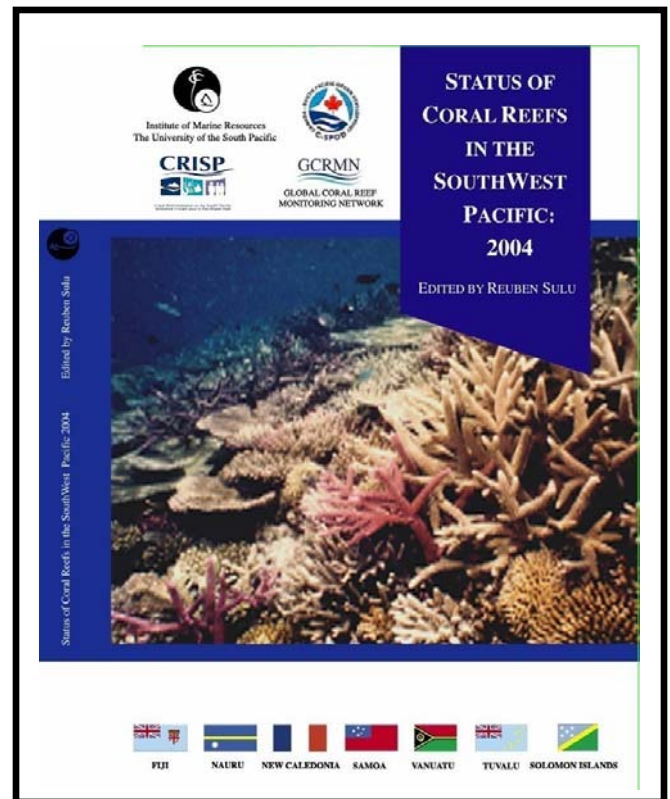


Dr Kelly explains the various uses of sponges and the benefits of sponge farming.

The objectives of this project are to:

1. Establish a sustainable cottage industry to increase the self-sufficiency of Kiuva Village men and women.
2. Conservation of the economically and culturally valuable marine resources, and
3. Provision of a simple model for bath sponge farming for other coastal communities in Fiji and the Pacific.

During the workshop, participants with assistance from Dr Kelly located the suitable sponges for culture, decide on aquaculture designs and got trained in techniques in



The "Status of the Coral Reefs in the Southwest Pacific: 2004" is a compilation of comprehensive reports prepared by the GCRMN country coordinators with contribution from members of various

NGOs. It has been edited by Mr Reuben Sulu from the Solomon Islands. Currently, the Institute of Pacific Studies is copy editing the manuscript and it is anticipated that the publication will be available in early 2006.

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## Coming Soon

Andrew Finlay, who trained the GCRMN SW Pacific Coordinators, has co-authored 'Education as a tool for coral reef conservation: Lessons from marine protected areas'. This will soon be published in the book 'Coral Reef Conservation' edited by I.M. Côté and J.D. Reynolds. The chapter highlights the crucial role of education as a tool in the sustainable management of coral reef conservation and includes the GCRMN SW Pacific training as an example of success in coral reef conservation in the region through education. It examines the increase in knowledge levels of trainees at the end of the training and the need for continued allocation of resources for education. For a copy of this please contact [IMR@usp.ac.fj](mailto:IMR@usp.ac.fj)

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## Current Issues from the Coral List

The Coral list is NOAA's listserv that provides a forum where coral health and monitoring programs and various coral reef related information and news is exchanged. The information includes funding opportunities and news on bleaching events amongst others. To subscribe to the list please visit the website at:

<http://coral.aoml.noaa.gov/mailman/listinfo/coral-list>

Excerpts of discussions on issues relevant to the region are highlighted here.

## 10 ICRS Proceedings publication schedule

*Tue Nov 8 09:26:49 EST 2005*

I am pleased to announce that we are going to publish "Proceedings of the 10th International Coral Reef Symposium, Okinawa", at around mid December. The proceedings will be published in a CD and will be sent to all the participants.

We, however, still have a few manuscripts under revision and/or formatting, which must be finished by late November. Authors who have not received the news of acceptance and would like to know the status of the paper, please contact directly to the secretariat office ([icrs at plando.co.jp](mailto:icrs@plando.co.jp)).

Best wishes,

Hiroya Yamano

Chief for public relations and co-editor for 10 ICRS Proceedings

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## Annual staghorn bleaching in American Samoa pools

*Mon Nov 7 21:25:58 EST 2005*

Staghorn corals (*Acropora formosa* = *A. muricata*) have begun bleaching in the fringing reef pools of Tutuila, American Samoa. As of 10/29/05, over 95% of *A. formosa* in Nuuli pool, Tutuila, American Samoa are partly bleached. Mike King reports similar bleaching in Alofau pool, Tutuila. They recovered from the previous summer's bleaching just 5 months ago.

Some have suggested that due to rising temperatures from global warming, in the future coral reefs may bleach every summer. This is already happening in the pools of American Samoa. Because it is a regular, annual event, and there are several possible controls, this offers an opportunity for scientists to plan studies of bleaching instead of having to take advantage of unpredictable opportunities.

For the past two Austral summers, I have recorded the bleaching of three species of staghorn *Acropora* (*A. formosa*, *A. pulchra*, and *A. nobilis*) in the fringing reef pools of Tutuila, American Samoa. *Acropora formosa* and *Porites cylindrica* dominate the pools of Tutuila, but *P. cylindrica* was not observed to bleach. Bleaching of the three staghorns has reached as high as 100 percent of the colonies in some of the pools, with colonies nearly entirely white. At the same time, very few corals on the outer reef slopes were observed bleaching. *Acropora nobilis* is present on the outer slopes (though not common), and did not bleach there when the same species strongly bleached in the pools. The pools reach higher temperatures than on the outer slopes. Most of the pools had peak temperatures of 32-33 °C in the last summer, but one hit a peak of 34.9 °C (for a half hour). The highest temperatures occur on sunny summer days when low tide is midday, reducing circulation. High temperatures are well known in the pools of nearby Ofu Island, American Samoa (Craig, Birkeland, and Belliveau, 2001). Those pools have a higher diversity of corals and less bleaching.

Mass coral bleaching on outer reef slopes was observed by several people in American Samoa in 2002 and 2003, though the time and intensity were not recorded. At present, about half of all staghorn colonies in the pools are dead. Essentially none have died in the past two years, so it is likely they died in 2002 and/or 2003, when bleaching was more intense. Thus, along with the present bleaching, staghorns in the pools have bleached for five years in a row.

In 2004, staghorns in the pools began to bleach in March, peaked in April, and ended in August. Bleaching started again in November (04), peaked in the January to April (05) period, and ended at the end of May (05). Now bleaching has started again at the end of October (05). Pool staghorns are spending more of the year bleached than recovered, year after year.

- Douglas Fenner, Dept. of Marine & Wildlife Resources, American Samoa

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## Scholarship Announcement

We are looking for an MSc candidate (maybe 2) to study giant clam (*Tridacna squamosa*) ecology. Possible projects include morphological plasticity, function of colours/patterns, and defense mechanisms.

The Department of Biological Sciences at the National University of Singapore (NUS) awards Research Scholarships to strong candidates. Minimum requirements are a good Honours degree and good GRE or GATE scores. Please visit the graduate studies pages at the NUS website (<http://www.nus.edu.sg/>) for more details. For the August 2006 intake (our preferred starting date) the application form must reach the Department of Biological Sciences, NUS, by 15th December, 2005.

Please contact us directly if you have any further enquiries about the project. We will encourage the right candidate/s to apply for a NUS Research Scholarship. The Department of Biological Sciences, NUS, receives many scholarship applications each semester and we are not involved in the final decision making process. But, if you are successful, we will provide lab/aquarium space and funding (and clams!) for your research.

Best regards,  
Dr Peter Todd and Prof. Chou Loke Ming

Peter Todd PhD  
Marine Biology Laboratory, National University of Singapore

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## Community-based marine ecosystem management

Fri Jun 10 16:25:59 EDT 2005

Winifereti Nainoca asked about resources on community-based marine ecosystem management. Here's one I heard of today:

"Community-Based Watershed Management: Lessons from the National Estuary Program" U.S. EPA Office of Wetlands, Oceans, and Watersheds (February 2005; 98 pp.)

Publication number: 842-B-05-003

If interested, order this free item by publication number from EPA National Service Center for Environmental Publications (NSCEP):

[ncepimal at one.net](http://ncepimal.at one.net)

There are also several items on community-based MPAs listed in the MPA web site's MPA Virtual Library. Visit the Virtual library, scroll down to the search box, and type "community-based" in the title search field:

[http://www2.mpa.gov/mpa/mpaservices/virtual\\_library/virtual\\_library.lasso](http://www2.mpa.gov/mpa/mpaservices/virtual_library/virtual_library.lasso)

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Kathy Kelly  
Marine-Protected Areas (MPA) Librarian  
NOAA Central Library

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## Bleaching in the Yasawa Islands (FIJI)

Mon Feb 21 15:35:57 EST 2005

Hello all. I'm here to report on coral bleaching on rocky patches within a bay in the Yasawa Islands. This was part of a biological survey from the 17th-18<sup>th</sup> Feb 2005, have GPS positions BUT no temperature readings. Sorry about that. Bleaching was noticeable from exposed reef flats down to depths of around 10m. *Acropora digitifera*, *A. muricata*, *A. aspera*, *Goniastrea spp.*, *Symphillia spp.* with around 80-90% of each colony was severely bleached. *Pocillopora darmicornis*, *P. eydouxi*, *P. meandrina* and *P. verrucosa* were present and were not so badly affected by bleaching (less than 10% for each colony).

Thank you,  
Ron

## Help with bleaching in Fiji - CoralWatch coral health charts

Tue Feb 22 12:28:22 EST 2005

Kylie McPherson [k.mcpherson at uq.edu.au](mailto:k.mcpherson@uq.edu.au)

Hi Ron

We have something that may be able to help you - we've developed colour charts to monitor bleaching and they include a thermometer. The CoralWatch Coral Health Chart consists of a series of coloured areas representing the most common coral colours. Within each area, the brightness of the colours is varied systematically to represent different stages of bleaching and recovery. Within species, each colour corresponds to a concentration of symbiotic dinoflagellate. In the field, you simply compare the colour of a coral with the colours on the chart and record matching codes.

If you would like me to send you a chart (free of charge) please let me know.

Cheers  
Kylie

Kylie McPherson  
Research Project Manager  
CoralWatch  
Vision Touch and Hearing Research Centre  
University of Queensland  
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## Kiribati Bleaching Event

Thu Feb 10 21:18:03 EST 2005

<http://www.osdpd.noaa.gov/PSB/EPS/SST/data2/dhwp.2.8.2005.gif>

The above link shows you NOAA's most recent thermal stress accumulations, Degree Heating Weeks (DHWs), that have zeroed in on Kiribati these past several months. Levels are excessive, > 10, as the maximum levels sit on the equator right over Kiribati, indicating potentially high levels of mortality. The good news is that

finally this feature is subsiding as it evolves into the South Pacific.

Let's hope this trend continues. This appears to be the most aggressive thermal anomaly east of the Date Line associated with yet another irregular but otherwise weak El Nino - also apparently on the wane.

Al Strong  
Satellite coordinator for NOAA's Coral Reef Watch

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## Minor bleaching in the Marshalls

Mon Feb 21 21:10:26 EST 2005

Greetings:

Majuro is currently suffering renewed minor bleaching (first noticed on Feb 13 2005) restricted to the reef flat (chiefly small *Acropora spp.*, such as *A. digitifera*). Perhaps this is related to the "hotspot "to the south. While this sort of shallow bleaching (upper half meter or less) is not unusual (we had similar bleaching in 2000, 2002 and 2004) what is novel is the season; previous bleachings were limited to the autumn (Sept-Nov) when maximal temperatures occur. A week later (Feb. 20) a dive computer gave a temp. reading of 84 F at the surface and 82 F 10 meters down. This bleaching is on the southern leeward shore, sheltered from the tradewinds, during a period of calm condition (i.e., minimal swell).

would also like to thank all the people who responded months ago to my coral area software request. ImageJ worked great; results will be submitted for publication soon.

For those who don't want to wait, here is a summary: I analyzed the area of over 800 colonies (those found within a transect 20m by 120m), and calculated that coral disease had killed 18% of tabulate *Acroporas* over 50 cm in size during the 2004 calendar year.

Previous coral mortality was far less, so I caught this outbreak in its early stages. However, additional area added by coral growth was

probably in the order of 20% or more. (Fast growing tables add 1 cm to their radius each month, on average!) One particularly "crowded" patch (having over 48% live tabulate coral cover, almost exclusively *A. cytherea*) experienced a whopping 30% mortality in only 7 months, with disease spreading to adjacent tables and shelves. There does not seem to be much seasonal variation in disease initiation (I monitored the site 3-4x a month, so I have pretty accurate data), perhaps a small spike in August.

Cheers,  
Dean Jacobson  
College of the Marshall Islands  
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## New free e-journal "Sustainability, Science, Practice and Policy"

Wed Nov 2 16:33:59 EST 2005

Hi All:

I'd like to bring to your attention to a new free, open access e journal: "Sustainability: Science, Practice, and Policy" published by NBII and Cambridge Science Abstracts. There may be some of you working on issues of coral reef management and conservation of coral reefs who may have reports to publish that would be ideal for this forum. You can access this journal by going to: <http://ejournal.nbii.org>  
<[http://tracker.ease.lsoft.com/trk/click?ref=znwrbbbs9\\_1-e9ex31fa6x3601](http://tracker.ease.lsoft.com/trk/click?ref=znwrbbbs9_1-e9ex31fa6x3601)>  
and the most current issue at:  
<http://ejournal.nbii.org/current.html>

Dr. Alina M. Szmant  
Coral Reef Research Group  
UNCW-Center for Marine Science  
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*The IMR team would like to wish everyone an enjoyable festive season. We look forward to working closely with you in 2006.*