November/December 1998

THE SYDNEY SHELLER

Newsletter of the Shell Club of Sydney
NSW Branch, The Malacological Society of Australasia Limited ACN 067 894 848

Shell Club of Sydney Mission Statement:

To appreciate, understand and preserve shells and their environment and to share this with others.

Next Meeting:

Date: **Xmas party 1998**
Probably not 4th Sat.
Location: **Venue and time decided at Nov. meeting.**

Time: **2.00pm**
Seminar: **Michael Keats**

Contributions:

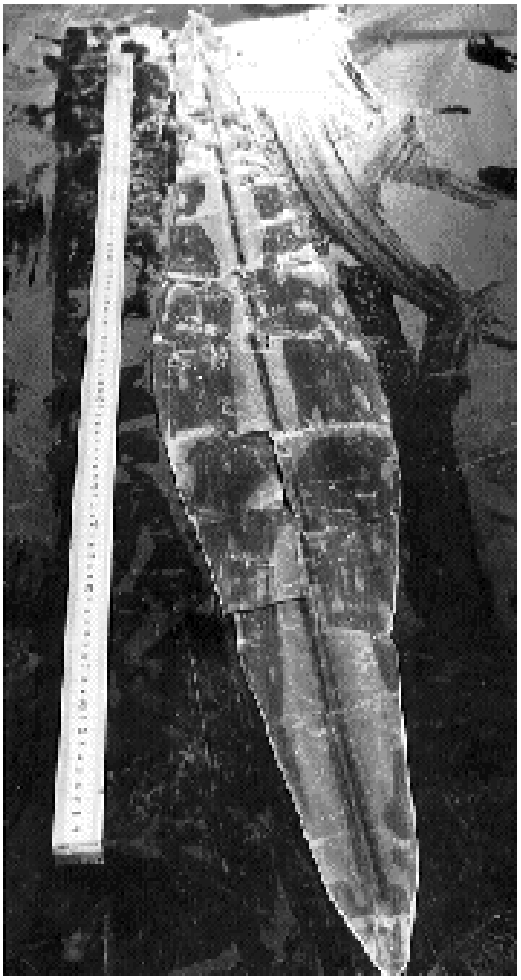
Please send contributions to:
Steve Dean
166 Narrabeen Park Parade,
Mona Vale NSW 2103
Photos, and disc files of articles by mail, or preferably by email to
steve@easy.com.au

If you cannot get your text onto disc, then **Karen Wadwell** may be prepared to type it for you - send material to:
1/7-9 Severn St
Maroubra NSW 2035

Office - Bearers:

President:	Des Beechey
Vice Pres:	Patty Jansen
Secretary:	Chris Barnes
Treasurer:	John Dunkerley
Field Trips:	Ashley Miskelly
Sheller Editor:	Steve Dean

Executive Management Committee: Des Beechey, Chris Barnes, Steve Dean and Ashley Miskelly



Do you collect all types of mollusc 'shells'?
This specimen of a *Gladius* is well over 1M long

From the Giant Squid *Architeuthis dux*

Photo Frederick Aldrich/Memorial University of Newfoundland

Some of the topics inside:

Giant Squid The Myths:

1500s: When several large, unfamiliar sea creatures were stranded in Norway, people decided they were mermen.

1854: Professor Japetus Steenstrup of Denmark, the leading cephalopod specialist of his time, concluded that the mythical mermen were very large squid.

1861: An alleged encounter between a giant squid and French naval ship fuelled the imagination of author Jules Verne, who used it as the basis for Captain Nemo's encounter with a "squid of colossal dimensions" in “Twenty thousand leagues under the sea”

1900s: Hollywood embellished the monster myth in its film version of Verne’s novel..

Curiosity Kills the Myth:

1874: Rev. Moses Harvey of Newfoundland bought a dead giant squid caught by fishermen and displayed it as a local curiosity. The first whole specimen available for study, it was an important turning point.

1880: Using Rev. Harvey's specimen, Professor A.E. Verrill of Yale University carried out the first scientific study

Not the normal Mollusc:

The Giant Squid
Architeuthis dux

By Steve Dean

I prepared these articles using information and pictures from the Smithsonian web pages and the Museum of Unnatural Mystery web pages. You may wish to view them for additional information and links.

At least 10 species of large squid, 2 m or longer, patrol the world's oceans, but none comes close to the Giant Squid in size.

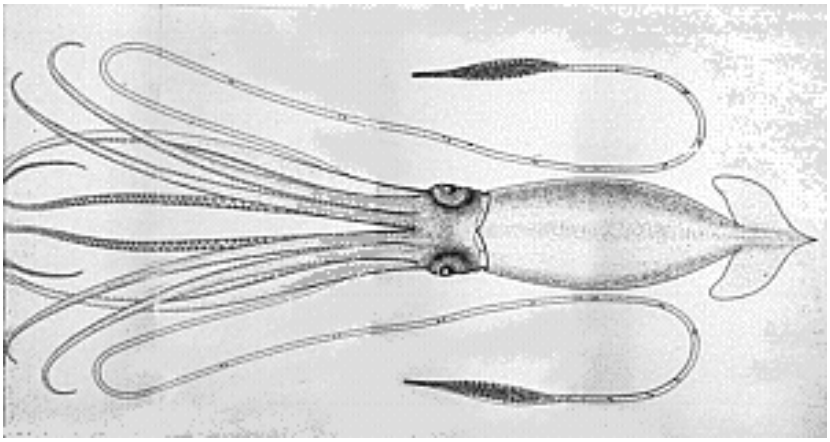
The Giant Squid lives in most of the world's oceans and is among the biggest animals in the sea . . .

BUT
. . . it is rarely seen. It usually hunts smaller sea creatures . . .

BUT
. . . larger animals feed on it and it has inspired fantastic tales . . .

The Giant Squid

Head: houses a complex brain.
Eyes: largest in the animal kingdom. They can grow to 25 cm (10 in.) in diameter--about the size of a volleyball.
Fins: relatively small in this species. They help balance and manoeuvre the huge animal as it swims.
Mantle: the main body, long torpedo shape. This muscular sac contains most of the organ systems.
Arms (8): studded with two rows of suckers.
Feeding tentacles: two used to catch food and bring it to the mouth
Funnel: a multipurpose tube used in breathing, jetting, squirting ink, laying eggs, and expelling waste.
Food: carnivorous molluscs that mainly eat fishes and other squids and even whales



The legend of the *Kraken*, a many armed sea monster that could pull a whole ship under, may have been based on the giant squid.

The largest giant squid ever measured was discovered at Timble Tickle on November 2, 1878. Three fisherman were working not far off shore when they noticed a mass floating on the ocean. They investigated and found a giant squid had run aground. Using their anchor as a grappling hook they snagged the still living body and made it fast to a tree. When the tide went out the creature was left high and dry. The body of the squid was 20 feet from tail to beak. The longer tentacles measured 35 feet and were tipped with four inch suckers.

The Smithsonian web pages suggest lengths up to 18 m (59 ft) weight up to 900 kg (1,980 lb, nearly 1 ton) However scientists feel they probably haven't found the largest specimens.

In October 1966, two lighthouse keepers at Danger Point, South Africa, observed a baby southern right whale under attack from a giant squid. For an hour and a half the squid clung to the whale finally drowning it.

In 1965, a Soviet whaler watched a battle between a squid and a 40 ton sperm whale. In this case neither were victorious. The strangled whale was found floating in the sea with the squid's tentacles wrapped around the whale's throat. The squid's severed head was found in the whale's stomach.

A 15,000 ton auxiliary tanker owned by the Royal Norwegian Navy, in the 1930's was attacked at least three times by giant squid. In each case the attack was deliberate as the squid would pull along side of the ship, pace

it, then suddenly turn, run into the ship and wrap it's tentacles around the hull. The final encounter was fatal for the squid. It was unable to get a good grip on the ship's steel surface, so it slid off into the propellers.

This suggests that the sperm whales are not always the aggressor in the battles. In fact, though many sperm whales have been captured, few of their stomachs contain parts of giant squids.

Unfortunately for resarchers, but good for the general population, humans do not meet up with giant squids very often. (There is a report from World War II of survivors of a sunken ship being attacked by a giant squid that 'ate' one of them)

It is still not certain exactly where in the sea giant squid live so they have not been able to be studied alive. They are thought to be open water, cold sea creatures normally living at depths of 300 -1200m, maximum depth 1500m.

Work by Dr. Ole Brix, of the University of Bergen, indicates the blood of squids does not carry oxygen very well at high temperatures. Squid may suffocate if the water is too warm. Temperature also seems to affect the squid's buoyancy mechanism. Warm water could conceivably cause a giant squid to rise to the surface and not be able to get back down. The higher water temperatures at the surface would exacerbate the problem. Most giant squid groundings occur near where two ocean streams, one cold and one warm, meet.

Snail Pack 1998

Vita Marina magazine have advised that there were some problems with their Fax machine in October. Some people have send faxes for Snail Pack advertisements that did not come out of the machine while no error message was displayed. The Fax-machine has been serviced now so there should be no problem any more. If you think you may have had a problem, eg you did not get a notification on a Snail Pack fax you sent, please send a new fax. (+31.70.3551245)
or Email to spirula@wxs.nl
Details can be found on:
http://home.wxs.nl/~spirula/snailcdn.htm

Cleaning Shells Part 1 - Bleach

By Steve Dean

I have asked various collectors from around Australia about their methods of cleaning and preparing specimens. The answers vary so greatly that I think a comparison of notes may help us all. In a series of articles I plan to open the discussion on each aspect of cleaning, then encourage your input for inclusion in future sheller issues. The follow up articles only work if you send me your input.

Part 1 deals with soaking in bleach to remove materials from the outside of specimens.

Some collectors use Industrial bleach purchased from commercial cleaning suppliers. They soak shells for short times up to one hour (they claim prolonged soaking does not hurt)

Others use domestic bleach, have their favourite brands, and soak specimens for longer periods. Still other collectors dilute houshold bleach further and soak for several weeks.

I have investigated bleach products and found the following interim information:

- Bleach and pool chlorine are the same thing (Hypochlorite solution) in different concentrations. Household bleach contains 1-3% chlorine, Industrial bleach 5-6% chlorine and liquid pool chlorine has 12-13% chlorine.
- Some household bleaches contain other chemicals such as fungicides that may be detrimental to specimens.
- Most powdered chlorines and bleaches, and some liquids contain stabilisers. (usually cyanuic acid) These are to be avoided because the effect of the stabiliser on the specimen may be less well known.
- 13% liquid pool chlorine, without stabilisers, seems to be the best and cheapest way to buy bleach. It can readily be diluted to the concentration you feel comfortable with. In Sydney, swimming pool stores sell it in exchangeable plastic containers. At my local pool store the cost is,$10 deposit on a container, plus $2.75 to purchase a reusable cap with a tap built into it, then $12.50 each time you need a 15litre refill of 13% chlorine. (this then works out at about 12cents per litre of household strength bleach and is guaranteed to contain contain no unwanted additives)

Various bleaching questions you could contribute to:

What problems have you had with highly polished shells?

My local chemist tells me that vaseline would not be attacked by chlorine. It could therefore potentially be applied to parts of a shell that may be sensitive to chlorine, such as a polished interior. Subsequent removal is with soapy water or methylated spirits (methanol). **Has any reader tried this?**

What strength do you use, for what types of shell, and for how long?

Does the chlorine actually bleach the colour out of certain types of specimens?

It would seem to me there may be several arguments for processing shells in either diluted or concentrated solution. What are your thoughts?

The diluted longer duration argument:

- There may be a concentration below which the shell is not attacked at all but external plant and animal tissue is still absorbed over time. **Is this true, or is it a simple matter of time verses concentration will attack the shell at any pH value other than 7? Where are the chemists amongst us?**
- The absolute time in solution becomes less critical.
- less critical to remove all solution from every crevice of the specimen
- Highly concentrated solutions may pass another threshold where bleaching of the specimen pigmentation occurs, that does not happen at low concentrations?

The concentrated argument:

- Cleaning is quicker
- For a given amount of external cleaning, there will be less time for a wicking or soaking effect so less chlorine will penetrate to the inner pigmented layers of the shell.

Which of these arguments stand scrutiny? Please contribute your thoughts, practical experience or technical knowledge. Does more concentrated solution, and shorter time damage shells less?

Minutes of the NSW Branch MSA

ACN 067 894 848
Held at Taronga Zoo on 26/09/98.

The meeting was opened by C. Barnes at 2.00pm. Apologies were received from S. Dean, D. Beechey, S. Clark, D. & E. Woodhouse, I. Myers, E. Uhle, P. Pienaar and standing apologies.
Field Trip Reports M. Keats reported on a short trip to Woolgoolga, (northern NSW) and displayed many species beach collected from the south side of the headland. Michael described a two metre high shell dump, which he had found after some discussion with fellow sheller and near local David Tarrant.

R. Moylan reported the possibility of a field trip to the Solomon Islands in 1999, and will continue to investigate and report any progress made.
New Items P. Jansen gave a review on a paper by Dr Daniel Geiger discussing "Recent Genera and species of the family Haliotidae". Patty described Dr Geiger as the acknowledged world authority on Haliotidae. The paper describes fifty-five valid species and ten subspecies of Haliotidae, though there are about two hundred species names available in the Haliotidae.
Committee Report A letter from Dr Chris Dickman, President, RZS of NSW , was read to the meeting, detailing the termination of the NSW Branch of the MSA use of the RZS rooms by the end of December 1998.
General Business After some discussion, it was decided that a suitable alternate meeting venue for the NSW Branch MSA would be investigated by all present.
MSA national newsletter, Australasian Shell News, has a new editor, Dr Peter Duncan.
A. Miskelly announced that the display of Urchins he had been involved with earlier in the year was now on show in The Australian Museum. It was mentioned that Jules Leroi had left Townsville and was staying at Dingo Beach.
Presentations Chris Barnes gave a talk on his Tasmanian trip of last November. Chris displayed slides and handed around some specimens and answered questions from the group.
Meeting closed at 3.40pm.
C. Barnes, Secretary

Minutes of the NSW Branch MSA

ACN 067 894 848
Held at Taronga Zoo on 24/10/98.

The meeting was opened by D. Beechey at 2.38pm. Apologies were received from M. Keats, I. Myers and standing apologies.
New Items P. Jansen gave a short book review of ***Marine Shells of South Africa***. It was mentioned that the work contained approximately one thousand species and cost $95.00.

Field Trip Reports S. Dean reported on a trip to South Africa with his family last Christmas. Steve described a large unusual oyster collected in the breakers.
R. Moylan reported on a trip to a secret location north of Rockhampton (see news section, last page).
New Shell Acquisitions C. Barnes reported finding a ***Cypraea asellus*** Linnaeus, 1758 at Little Bay NSW. (see news section, last page).
B. Reed reported the purchase of a specimen of ***Pleioptygma helenae*** (see news section, last page).
General Business A number of members had investigated alternate meeting places for the branch and these were discussed. Criteria for a meeting place were also mentioned, size of venue, continuity, parking, day/night, facilities and location were just a few. After some discussion it was decided the committee would deal with this issue.
A phone and address list of members is to be made available at meetings to facilitate communications between the group. After some discussion it was decided not to publish a list for security reasons.
S. Dean tabled a letter and articles from Thora Whitehead. Thora congratulated Steve on his efforts with the "Sheller", and sent some copies of original print articles. These clippings were associated with the death of that man by cone shell poisoning in 1935. Thora thought they could be of interest, following the story in the August 1998 edition of the "Sheller". Thora added the "killer" shell is still in the Queensland Museums ***Conus*** collection.
Presentations The Annual Shell Show organised by Ron and Marina Moylan. Ron mentioned that this years sections were not as well attended as previous years and asked for any input regarding categories for next years show.
Meeting closed at 3.38pm.
C. Barnes, Secretary

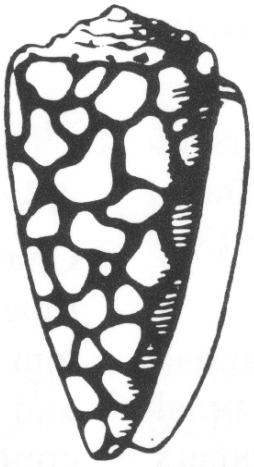
How is a Squid like a Snail?

They're both molluscs

All Molluscs (about 200,000 species) have soft, fleshy bodies, a tongue-like organ called a radula, and usually a hard external shell.

Cephalopods (about 1,000 species) have well developed brains, a circulatory system with three hearts, veins, and arteries , usually ink sacs, mostly no external shell, use jet propulsion, most can rapidly change skin colour and texture using pigment cells called chromatophores.

Squids (about 500 species) have: long, cylindrical bodies, normally 8 arms and 2 tentacles, an internal, blade-shaped gladius, fins



Local Giant Squid observations:

1997 Rare giant squid found off coast of Tasmania Three rare 50-foot-long giant squid were caught by fishermen off the coast of Tasmania recently.

Scientists are excited at the opportunity to learn more about the elusive giant squid and express concern for its survival as commercial fishermen trawl deeper and deeper in the ocean.

Only 50 giant squid have been sighted in the last century.

There was a similar find by scientists in New Zealand Radio interviews available on the Net.

Squid anatomy:

How a squid eats: A sharp, horny beak cuts up food into bite-sized chunks. A file-like radula rams food down the throat and oesophagus, which passes directly **through** the brain to the stomach.

As an invertebrate, a squid has no bones. A feather-shaped blade, or gladius, helps support the body and serves as a site for muscle attachment. It is made of chitin.

Cartilage (tough, gristle-like tissue) surrounds a squid's brain.

What do these three things have in common?
Squid tentacle, Elephant trunk
Human tongue
None have bones. The muscles attach to and pull against each other.

NSW Branch Annual Shell Show
Saturday 24th October 1998

Shell Show Overview:

While the entries for the respective categories were not numerous, the quality of specimens exhibited were of an exceptional standard and it was apparent that a great deal of time had been spent preparing and presenting the exhibits.

The judges attention to selecting the award winning entries was not a task which many relish. Serious deliberation was obvious during the judging and in some cases, a single point only separating first to second to third.

In establishing the categories for the Shell Show the intention was to reaquaint our members with their available reference material and to cause them to handle specimens within their collections. Also to closely examine the material proposed for the exhibits, ensuring that the species conformed not only with the size constraints but indeed the date which the species were described, together with the quality and most importantly, the accuracy of the accompanying data.

A most enjoyable afternoon ensued with numerous questions to the respective exhibitors about the material in their exhibits, how acquired and some serious comparisons of size and quality were also observed.

For those members who were unable to attend the Shell Show a list of place winners for the respective categories appears on the following page. Certificates will be awarded during the November meeting.

The participation of all who attended is greatly appreciated and it was encouraging to see the utilisation of the exhibit boxes from the Second National Shell Show which provided a uniform and most aesthetically pleasing display.

Ron Moylan
Show Convener

Book Review

Marine Shells of South Africa Douw G. Steyn and Markus Lussi

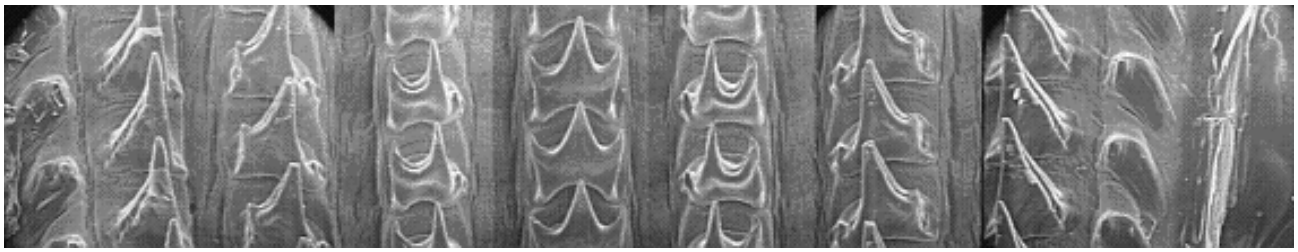
1998, 264 p., 214 x 304 mm, full colour, hard cover
ISBN 0 9583889 5 4

Published by: Ekogilde Publishers, P.O. Box 178, Hartebeespoort 0216, South Africa

We have spent years complaining that there really wasn't a very good book on the shells of South Africa, when Seashells of Southern Africa by Kilburn and Rippey was no longer available and a reprint not likely. And then, out of the blue comes this beauty!

I couldn't wait for this book to arrive in the mail. And then when I opened the box... wow! What a beautiful book to look at! The inside is equally beautiful and well-designed, with on one side a page-filling photograph with shells. the shells are set on a black background, and not just their numbers, but also their names are underneath the shell. The text is arranged opposite the plates, and includes a distribution map for each species. The text includes

Giant squid radula magnified 30 times by a Scanning Electron Microscope
Photo Clyde F.E. Roper/National Museum of Natural History



comments on habitat and abundance. The entire book gives a very easy and un-cluttered appearance.

There are more than 1000 species covered, which is about one fifth of the South African molluscan fauna, but most of the larger shallow water species from the region. Coverage ranges from chitons to bivalves, and includes some shelled opisthobranchs and cephalopods, and a selection of pelagic molluscs.

I do not have any serious criticism, but would like to make a few points that may have made it an even better publication.

I think it is a pity that most of the shells are slightly tilted in the photographs. I must admit, having done it many times myself, that photographing a shell dead-straight is not easy, but sure electronic technology these days makes it easy to correct this human weakness.

Also, I think that to mention ranges outside South Africa would have made the book even more valuable. There are many endemic species in South Africa; it would have been nice to know which ones they are.

I admire the fact that the authors have chosen to use beach shells in many occasions. This is, in fact the condition in which we are most likely to find them. I use beach shells myself, because I personally no longer believe in collecting live shells. But the trick with using beach shells in photographs is to chose your shells well. I am sure it would not have been too difficult to find a better specimen of Hastula diversa, since it's common.

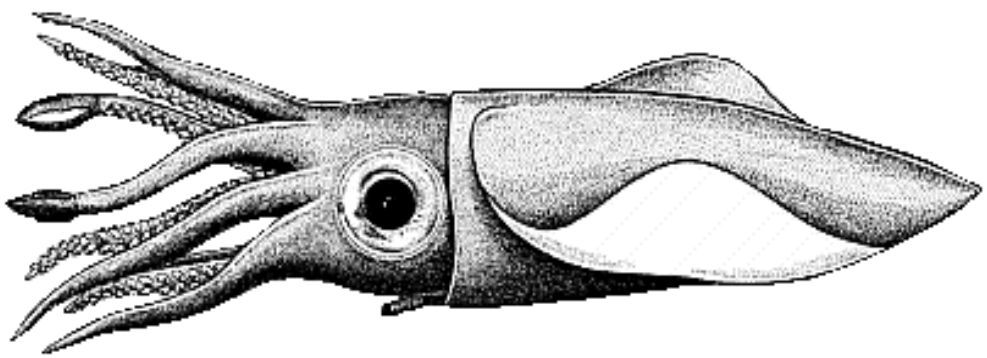
In all, I think this is an excellent book, that will prove very popular with shell collectors. I just hope the publisher has printed enough copies, or that they would be prepared to reprint if they haven't!

NSW Annual Shell Show, Results:

Category:	Placing:	Exhibitor:
Display of Cones (large 50mm+)	First	Ron Moylan
Display of Cowries (large 55mm+)	First Second Third	Ron Moylan Chris Barnes Bob Reed
Display of Cowries (smaller than 50mm)	First Second Third	Ron Moylan Chris Barnes Bob Reed
Display of Volutes	First Second	Adrian Brown Des Beechey
Display of Zoilas	First	Ron Moylan
Display of Spondylus	First Second	Adrian Brown Frank McCamley
Display of Murex (large 50mm+)	First	Ron Moylan
Display of Murex (smaller than 45mm)	First	John Dunkerley
Display of Land Shells	First	Carmel Morris & Stephanie Clark
Display of Cymatiums	First Second	Adrian Browne John Dunkerley
Educational Display of Fresh Water Mussels	Non-Competitive	Carmel Morris & Stephanie Clark

Presentations for 1999

Month	Meeting Organizer	Presentation
Jan 99	Ernie Uhle	Des Beechey
Feb 99	Steve Dean	John Dunkerley
March 99	John Dunkerley	Ron Moylan
April 99	Chris Barnes	Patty Jansen
May 99	Des Beechey	Ashley Miskelly



Members News, & Buy, Swap & Sell:

Wanted contributions to this free classified section of the sheller. Please get contributions to Steve Dean or Karen Wadwell. (See front cover for contact details)

Wanted gossip for this section of the sheller. Please get contributions to Steve Dean or Karen Wadwell.

Chris Barnes brought a *Cyprae asellus* to the last meeting. He found it the week before at Little Bay, Sydney. This was unusual because it was live, and was found without diving, at low tide level. It is belived temperate currents bring this species south. No other members present have found live specimens this far south of the equator. Members present have reported dead shells as being fairly common as far south as Woolongong. (up to 100km further south)

A few weeks back, Patty Jansen took a day off to go to the Newport (Sydney) rock platform to photograph specific specimens. Newport is an hour from her house. On arrival she was greeted with a 4M swell, thus a wasted day.

Bob Reed, has purchased a *Pleioptygma helenae* (Radwin & Bibbey, 1972) dived from the Caribbean.
Commonly known as Helen's mitre, the particular specimen is the second largest ever found. It is 124mm long and is also very fat. It compliments Bob's existing two trawled specimens and is a great addition to his collection.

Ron Moylan returned from a week collecting at a "secret location" north of Rockhampton Qld, with some locals. Ron normally collects all his shells by diving, so we were in shock when he told us that while some collectors with him snorkelled, all Rons efforts were low tide collecting. This involved the team gently raising some very large rocks. The trip was five days collecting, three hours at both low tides each day. The focus was on melanistic and rostrate Cypraeidae. At the November meeting when this edition is issued we expect to see Ron's results.

Shell Collection for sale: I have a large rare shell collection that I have put together since I was young. The collection is in cabinets at my parents house, Lane Cove Sydney. I stopped collecting four years ago. I would love it to go to another serious collector. It comprises of mainly cones, cowries and murexes, but there are also many other shells. Shells have mainly been found diving in Noumea, Vila and some have been purchased. Most include locality details.
Simon Treseder Mobile 01413005000
Home 9874 4444

Shell Exchange Request: Zvi Orlin has recently taken interest in Australian shells. He would be delighted if someone could send him some Australian shells, even just very common ones. He'll pay for postage, or send you Mediterranean shells in return.
2 Yavne St.
Kiryat Motzkin 26382
Israel