

R OCTOBER 1989

MINUTES OF SOUTH PACIFIC DIVERS CLUB MEETING
HELD ON 18TH SEPTEMBER 1989 AT BANKSTOWN SPORTS CLUB
MEETING OPENED 8.15 P.M. BY MARTIN KANDILAS.

Apologies: Lyn & Pat Manly, Noel Taylor, Jim Smith, Ilona Kandilas.

Minutes of previous meeting read. Accepted by Lloyd Tape.
Seconded Doug Smith.

Visitor: Leland McCurley - now a member.

Correspondence: Sea Sports Jervis Bay, Federal Sea Safety Centre,
Brisbane Water Aqualung Club, Ryde Underwater Club,
Illawarra Sports Diving.

Treasurers Report: Balance in cheque account at 1/9/89 - \$904.91
Petty Cash 20.00
Investment Account 7401.37

Credit Balance \$8326.28

Accepted - Penny Smith
Seconded - Kathy McDermott

DIVE REPORTS

Bob & Vinnie Nickling & Doug Smith dived Marley reef. 30-40' vis. Saw Port Jacksons, dark blue shrimp??? Doug found his camera was set on manual when he thought it was on auto so all his prized pics of weedies, jackos etc., didn't turn out. Vinnie had a horrible dive. Actually touched a Port Jackson SHARK.

Neil Vincent and Kim Kohen have been diving at Micronesia. Dived Truk Lagoon. Many wartime wrecks some in 3' water. Most wrecks are still intact with portholes, medicine bottles, telegraphs - basically as they were when they sunk. Not much else to do at Truk if your not a diver, just a small shanty town. Best place dived was Palau with reef diving, some wrecks. Most dive sites 30 km away. Found Blue Corner and Blue Hole best spots. 150' vis. Neil feels the best place in Saipan and Guam was the transit lounge.

Tony Karasanyi dived the Skillion at Terrigal. Rock hopped the Haven. Found kelp areas, mowies, slipper lobster red anemones. 50' vis. Very enjoyable.

Lyn Keller dived J.B. Clear, cold and windy later on. Had 2 dives at Ulladulla later in week. Nice and clear. Impressed with dive shop.

Ron & Jenny Mines spent 5 days diving Byron Bay. Stayed in the bunkhouse attached to the dive shop. Unfortunately the southerly winds blew for four days and stirred up the water, with vis going from 40' to 10' on the last day. There were many wobbegongs lying on the sand and as Julian Rocks is a sanctuary, there was a large number of fish. The Cod Hole was full of fish, mostly nannygies and red mowies. Very friendly morays.

PHOTOGRAPHIC OFFICERS REPORT

A booking has been confirmed for the 23/6/90 for the A.V. night at Revesby Workers Club.

There is to be a revamping of the rules with four new rules to be added to the existing ones.

These rules are printed further on in the newsletter.

The rules were put to the meeting and asked they be voted on.

Motion was carried unanimously.

Seconded by Rick Latimer.

SOCIAL ORGANISERS REPORT

Christmas Party for next year. Suggestions were asked for from club members.

1. It was suggested we go to the vineyards in the Hunter or Barossa??

2. Charter boat around Harbour.

More suggestions required.

DIVE NEWS

Penny Smith suggested we can't limit the weekend at Greenpatch to 20 people. Currarong caravan park was suggested for the plaque laying weekend. Everyone seemed to be in favour of this move for early next year.

Dive booked for the 8th October - Undola wreck. \$18.00 each club members.

GENERAL BUSINESS

Martin Kandilas asked everyone to read Rick Latimers letter in the last newsletter.

A decision is to be made in the next 12 months with which way we are to go with the A.V.

Martin spoke to Owen Coney, Sea New Guinea, about his letter. Owen was considering opting out as sponsor. But after talking to Martin, Owen has now suggested that he could do some promotion for us. He would like to suggest some marketing ways to promote the club. South Pacific Divers will still retain identity at least this year. What was originally thought to be a negative response from Owen has now turned to our advantage.

Club members are asked to look at what we want in the future.

MEETING FINISHED AT 9.10 P.M.

Neil Vincent showed some very good slides of Micronesia.

FOR SALE

Magnum speargun - excellent condition. Cost \$125.00. Sell \$100.00 negotiable. Brand New. Phone Bob Nickling 645 2315 after 6.00 p.m.

NEXT CLUB MEETING - 16TH OCTOBER 1989 - BE THERE GET INVOLVED

South Pacific Divers Club has promoted underwater photography in many ways.

One way to increase your knowledge and skills is to bring slides along to our general meetings. By showing your work, comparing your results with others and listening to constructive critique, you will probably find your photographic efforts will be rewarded with better results.

If you require the club's projector, which takes "universal" magazines, please ring Graham Wakeling, a couple of days prior to the meeting, to ensure he brings it.

Submissions to the newsletter are always welcome, whether it be your own article, newspaper clippings, cartoons or advertisements.

COMMITTEE

President	- Martin Kandilas	Ph: 7263570 (h)	7260022 (w)
Secretary	- Jenny Mines	Ph: 6029851 (h)	6008844 (w)
Photographic Officer	- Graham Wakeling	Ph: 6034224 (h)	6051611 (w)
Treasurer	- Davinia Nickling	Ph: 6452315 (h)	
Social Secretaries & Diver Organisers	- Sue Keller	Ph: 6445862 (h)	5171966 (w)
	- Lyn Keller	Ph: 6445862 (h)	
	- Peter O'Grady	Ph: 5206955 (h)	5261188 (w)
Publicity Officer	- Ron Mines	Ph: 6029851 (h)	6023544 (w)

UPCOMING SOCIAL EVENTS

Christmas Party, 7.00 p.m. 8/12/89 at Bankstown Sports Club. Smorgasbord and disco, bar at members cost.

Cost is \$16.00 ea for SPD members
\$21.00 ea for non members

Please confirm your booking and pay as soon as possible.

Chinese banquet Saturday 3/2/90 at New Harmony chinese restaurant at Greenacre. Good quality food at an economical price. Club will subsidise members meals. Please indicate your interest in attending.

DIVING ACTIVITIES

The charter boat dive for 8/10/89, diving the Undola was fully booked.

The shore dive planned for 29/10/89 is still open as far as the venue and whether we use members boats.

Greenpatch has been booked for 24-25/11/89. The club has paid it's booking deposit. We need names and money as soon as possible.

The site has provision for 20 people. This is always a fun weekend so book early. Bar-B-Q provided Saturday night.

Cost \$12.00 SPD members
\$15.00 non members

A night dive, from a charter boat is being organised for early December. Numbers required.

Some members commented that the Bob Smith memorial plaque laying should be run from Currarong caravan park, allowing more people to attend. We are trying to book a weekend in February 1990.



SOUTH PACIFIC DIVERS

P.O. BOX 823 BANKSTOWN 2200

CONDITIONS OF ENTRY

1. This competition is open to all underwater photographers in Australia and its territories, Papua New Guinea and New Zealand.
2. Each person may enter only one set of five slides with an entry fee of 15 dollars Australian.
3. Slides must be presented in cross section as to allow judges a view of the overall talent of entrant from close-up to wide angle of any chosen subjects. A macro photograph is defined as a view of the subject of at least 1:6 or greater magnification for the purposes of this competition.
4. The preservation of our marine environment is of the utmost importance. Also, the competition aims to have photographs of marine life alive and in its natural environment. Therefore, any deliberate use of dead marine animals as the main subject in a photograph may lead to the slide being declared ineligible. Eligibility is determined by the Photographic Officer and the judging panel.
5. All slides entered must have been taken by the entrant.
6. Any special effects are limited to 'in camera' photographs and must be accompanied by a description to ascertain that the photograph complies with the competition rules.
7. All slides must have been taken underwater by the photographer. Fish tank or aquarium photographs are not acceptable.
8. All entries are to be colour transparencies (prints are not acceptable).
9. All slides are to be mounted in GLASSLESS mounts.
10. Each slide must be clearly marked with contrasting dot on lower left corner of slide when held up to be viewed.
11. Each slide must be clearly marked with entrant's name, address and slide title.
12. Slides may be cropped or masked. (Any slide altered by any other means will be INELIGIBLE for entry.)
13. Transparencies or duplicates of transparencies that have previously won ANY prize in ANY open underwater photographic competition are INELIGIBLE for entry. Offending slides will be disqualified.
14. All entries must be accompanied by a self addressed, postage paid PADDED mail bag for return of slides (if required).



SOUTH PACIFIC DIVERS

P.O. BOX 823 BANKSTOWN 2200

CONDITIONS OF ENTRY (Cont.)

15. The competition will open on the 1st March, 1990 and entries will close on the 1st May, 1990.
16. Whilst all care will be taken, South Pacific Divers or its members accept no responsibility for damage or loss of entries.
17. The judges decision is final and no correspondence will be entered into.
18. South Pacific Divers reserves the right to revoke any prize in the event of entrant not complying with the above conditions of entry and for misleading information supplied on entry form.
19. If, due to circumstances beyond our control, a particular prize is withdrawn from the competition, South Pacific Divers will, without accepting responsibility, endeavour to replace this prize with a suitable substitute.

AQUA SPORTS SCUBA CENTRE

SPECIALS

ALL LARGE & X LARGE BOOTS ON SPECIAL
NORMALLY UP TO \$40.00
NOW \$25 TO \$29.00
While stocks last

HOODED ARCTIC VESTS
MOST SIZES
WITH OR WITHOUT SLEEVES
ALL 1/2 PRICE \$43.00

PRIVATE SALE

Nikonos V camera, 15mm TTL lens and view finder, SB 102 flash, 35mm, 28mm and 80mm lens and finder, Nikonos close up kit all in pelican case. This unit has done NO work whatsoever and is a bargain for the serious photographer at \$4200. The system is in Queensland at present. For more details please phone Glen at the shop on 708 2826.

PLEASE REMEMBER ALL S.P.D. MEMBERS GET 10% DISCOUNT ^{on parts & labour,} ON GOODS AND SERVICES, ~~including hydroco, servicing~~

Glen doesn't know all the club members, so if you when you buy something, let him know.

ARTICLE FOR P.A.D.I. "NEWSLINE"

PANNIKIN PLAINS CAVE DIVING EXPEDITION
BY ANDREW WIGHT - EXPEDITION LEADER

The Nullarbor Plain conjures up visions of a flat desolate landscape, far from civilization, treeless and waterless; certainly not the place for a scuba diving holiday. It was in fact, just such a holiday to the crystal clear, water filled subterranean passages of the Nullarbor in September 1987, which hallmarked the start of a fantastic diving adventure, beneath the Nullarbor Plain.

The Nullarbor is one of the few remaining frontiers for exploration left on this planet, with hundreds of kilometres of submerged passages undisturbed for tens of thousands of years, waiting to be explored. The underwater tunnels of the Nullarbor lie 100 metres beneath its arid surface. Exploration into these vast passages has exceeded six kilometres in the famous Cocklebidy Cave which is the world's longest submerged passage.

Pannikin Plains Cave was first dived on snorkel in 1972 by Bob Turnbull and Ian Lewis and their report at the time concluded that the cave had no further diving potential. Later, tentative exploratory dives somewhat happily proved their initial observations to be wrong.

The 1988 Pannikin Plains Cave Diving Expedition set its objective to explore the cave to the limits of human endurance within the limitations of the current diving technology. The expedition proved to be a unique cave diving assault in its utilization of equipment not previously seen in Australia. The logistics of such an exploration were immense as was the amount of money necessary to fund the expedition. In order to raise the required finances, the expedition planned to produce a documentary film. Prior to the expedition, the concept was pre-sold to Network Seven in Australia and NTV4 in Japan. This finance encouraged the business community to sponsor the project.

The 22 strong Australian team, including some of Australia's best known cave divers, an underwater cinematographer and cave explorer from the USA, Wes Skiles, a mountain of high tech diving gear, and provisions set out from Adelaide on November 12, 1988. Its convoy of 7 vehicles, mainly 4 wheel drives, towing heavy tandem trailers and resembling some kind of oversized insect, made its way across western South Australia and onto the Nullarbor Plain. Nearly two days later, it arrived, ready to conquer the challenge beneath its feet.

The camp sprang up from the dust, water desalination plant and generators brought to life the stillness of the bush. The unpacking laid bare the five tons of diving gear, a formidable inventory:-

- 15 102 cubic foot Sherwood DIN valve tanks
- 65 90 cubic foot aluminium tanks

The cave diving was to commence in the previously explored passages of the cave discovered by the same divers one year before. The main tunnel travels north at a depth of 27 metres for a distance of 1000 metres where it surfaces into a spectacular underground cavern directly below the Eyre Highway, the trans-continent road running from east to west across the sun dried Nullarbor. In the eerie quiet of a cave spent night, the distant rumble of the huge trucks carrying their loads across Australia, can be heard.

A short distance beyond the aptly named Eyre Chamber, is Concorde Chamber, the divers resting place and base camp for the expedition. The divers expected to spend long periods in this chamber and in order to live comfortably one kilometre into the cave, it was necessary to transport fresh water, food, cooking and sleeping equipment as well as dry clothing into the chamber. (It was common to hear a cold and wet diver offer an exorbitant amount for a dry pullover in these isolated conditions.) It was also necessary to take sufficient diving cylinders and spare gear to safely explore the cave beyond Concorde chamber. This was achieved by the use of the underwater sleds, hugh aluminium skeletons into which gear was piled. The laden sleds were towed in relays to the air chamber by scooters.

After a week, two exploratory dives had been completed by Ron Allum, Peter Rogers, Phil Prust and Paul Arbon, adding a further 500 metres of new passage. The radio message came from Concorde Chamber that Chris Brown and myself should start our preparations for our voyage into the great blackness of the unknown. With the newly gained knowledge of the previous dives, our dive would take us yet further into the inner space of the unexplored crystal clear Nullarbor water.

It had taken 36 hours from our surface preparations to the point of departure of our push dive. Standing in the north lake of Concorde Chamber, equipment seemed to envelope each of us as we assembled the four diving cylinders to be worn on our backs. The "quads" were rigged with independent regulators and pressure guages. An extra cylinder and our oxygen bottles were fastened to our 1.8 metre long Aqua Zepps using chocks and harnesses. With eight diving lights each and 800 metres of guideline, Chris and I were ready to push the limits of the cave.

We sped past the first 500 metres of "familiar" territory aided by the extra lights of the film crew. Chris and I were anxious to leave the security of the bright movie lights, to head off into the virgin cave passage beyond. It is difficult to explain the exhilaration felt when, at the end of the previously laid guideline, you are confronted with the reality that all passage beyond has never before been visited by humans. This is the essence of exploration. The thrill of breaking new ground creates a euphoria like a dream.

- 32 CIG Oxygen cylinders
- 3 West German underwater scooters called Aqua Zepps.
Capable of 6 km per hour underwater.
- 4 Tekna scooters
- 2 Underwater sleds custom built for Nullarbor cave diving.

These items and a vast array of regulators, specialised underwater lights, harnesses, filming equipment and diving gear were lowered into the doline (cave entrance) using a specially constructed flying fox. With the use of a lower flying fox system, rope rigging, and brute strength, the massive amount of gear came to rest at the lake side, 100 metres vertically and 200 metres horizontally from the entrance. One week into the expedition, we were ready to start exploration.

Exploring the vast deep cave system of Pannikin Plains was not an easy task. Unlike mountaineering where the objective is clearly visible and an assault can be carefully planned to climb the mountain, cave diving is far more complex. Planning an exploratory dive is more like planning for a multitude of disaster scenarios. The cave diver must be prepared to cope with any contingency from loss of air supply, silt out and lost, to equipment malfunction, possibly thousands of metres from the safety of air.

The other difficult aspect of cave diving is not knowing where the cave goes to or how deep the dive will be. It is necessary to plan air consumption and decompression schedules for theoretical dives and then, once the dive has started, to continually update and modify the plan according to the changing cave environment.

The approach to be used on the Pannikin Plains "push" dives was to be similar to the classic Everest mountaineering expedition; climb a little way, establish a camp, survey the route ahead and climb some more, each time increasing the distance climbed.

On each dive our theoretical dive plan was 120 minutes bottom time at a maximum depth of 27 metres using Canadian Armed Forces decompression tables. This incurred a decompression schedule of:-

8 minutes at 9 metres
31 minutes at 6 metres
95 minutes at 3 metres,

an impressive 134 minutes of decompression time with a minimum surface interval of 24 hours after each dive. To add a safety factor into the lengthy decompressions, pure oxygen was breathed at the 6 and 3 metres stops instead of air. This practice accelerated the rate of loss of "bends" causing nitrogen absorbed into our tissues after such long exposure at depth. Each pair of push divers would take enough air and oxygen to complete the theoretical dive.

Here, Chris tied on his giant spool of measured guideline, to mark our presence for the first time in this underwater tunnel and headed off. I followed taking compass bearings and distance readings to chart our progress. The cave continued for another 190 metres through a giant sized room leading into a smaller tunnel, 10 metres by 5 metres, with a very silty floor dotted with a vast array of marine fossils. The tunnel headed north to a boulder choke where our bulky diving equipment thwarted our attempts to push through the rock collapse. We had reached a distance of approximately three kilometres from the entrance lake.

Chris tied off the guideline, and we reluctantly turned around, the mid-point of our theoretical dive plan having been reached. Our watches showed an elapsed bottom time of 65 minutes as we commenced our long journey home. We sped back on our scooters, following our newly laid line, anxious to minimise our dive time. Approaching Concorde Chamber, we met up with the film crew who were still decompressing and shared animated underwater conversations with them, scribbled on waterproof notepaper.

Our long voyage of discovery had taken us on an unforgettable flight through inner space into a huge labyrinth of submerged cave passage. We had taken ourselves and our equipment to the limits of endurance and had found the end of the cave.

The elation of the successful dive was soon overshadowed by a freak occurrence. On the final day of filming, with the last divers emerging from the water and the rest of the team involved in hauling equipment from the cave, the totally unexpected happened. A fast moving, ominous storm cloud approached from the south, looking like a vengeful spirit. The team members in the upper doline ran to secure the fragile camp, but for the remaining fifteen, there was little time for escape. In a split second, the cloud was above the cave site and had rent open, pouring twice the annual rainfall of the area on the surrounding Nullarbor Plain in only 30 minutes.

The desert plain transformed instantly into a muddy sea and water poured into the doline in a giant circular waterfall as though a plug had been pulled from a bath of water. The raging torrent destabilised the rockpile and collapsed the middle section of the cave. Trapped at the top of the second "pitch" where we had been hauling gear, Vicky Bonwick and myself crouched on a ledge with water and rocks hurtling past us. In the instant before the onslaught we had called to those below us to head for the lake side and were worried that they had not heard us above the roar. For three fearful hours, Vicky and I remained trapped, our concern for ourselves and the thirteen others building as the cave below us collapsed, sending tremors through our tiny ledge. We had no alternative but to wait for the water to subside sufficiently to allow a climb to the surface.

It was not until we reached the surface, to the relief of the three team members who had lived through the fury of the storm, that we could see the real force of what had passed. Trees were torn from the ground, trailers blown sideways, and an entire tent holding heavy equipment had be carried 800 metres. Our camp was in ruins.

With heavy hearts, we prepared for our 8.00 pm radio schedule set up for dive progress reports from Concorde Chamber base camp. We knew that Ron Allum, the inventor of this ingenious radio device would have brought his equipment out from Concorde that day on the final dive of the expedition. This simple system, consisting of a 30 metre loop of wire below ground and another above, sends a 1 kHz signal through the earth. At 8.00 pm, it allowed us to hear Ron's voice assuring us of the safety of our thirteen trapped team members.

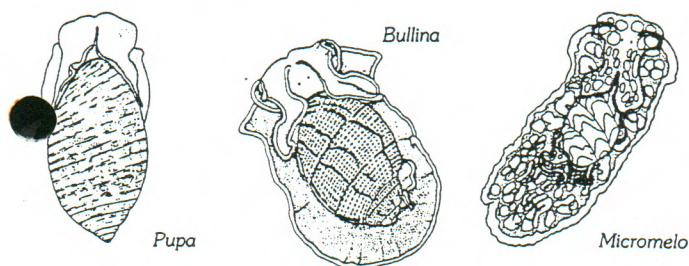
The rescue and drama that was to unfold on every television network in Australia paid tribute to the professionalism of the team and won the highest praise from the state rescue authorities.

The documentary film of this extraordinary trip has many fascinating surprises, excellent underwater footage and the enchantment of the Nullarbor dreamtime. The film will be shown on Network Seven's "The World Around Us" sometime in May/June.

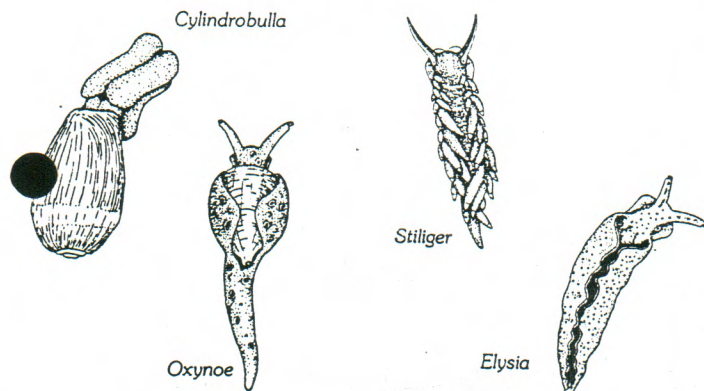
I would like to thank P.A.D.I. Australia for their assistance in funding the project. It reinforces that the P.A.D.I. organization is truly a part of the adventure that diving brings.

SEA-SLUGS

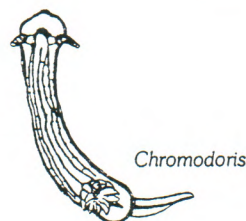
The animals illustrated in this calendar belong to three major subdivisions of the Opisthobranchia. They show the evolutionary steps from a shelled 'snail-like' ancestor to the shell-less nudibranch.



Pupa, *Bullina* and *Micromelo* are three primitive opisthobranchs showing from left to right a gradual decrease in the size of the shell. They, like *Hydatina physis* (see January colour illustration), belong to the opisthobranch Order Bullomorpha, the bubble shells. All bullomorphs have a shell although in some species it is very small and hidden in the body tissues. The bullomorphs illustrated here are all specialised carnivores feeding on marine worms. Other bullomorphs feed on bivalves crushing the shells with special grinding plates in their gizzards. Others feed on seaweeds.



Cyllindrobulla, *Oxynoe*, *Stiliger* and *Elysia* belong to the opisthobranch Order Sacoglossa. On the left are two primitive sacoglossans showing the shell gradually becoming lost. The most advanced sacoglossans, like *Stiliger* and *Elysia* no longer have a shell and resemble the true nudibranchs in shape. All sacoglossans are herbivores and are very specialised feeders. They have a dagger-like tooth which is used to pierce the cell walls of sea-weeds on which they feed, sucking out the sap. Just as the bugs are the plant-suckers on land, the sacoglossans are the plant-suckers of the sea.



It is amongst the opisthobranch Order Nudibranchia that we find the greatest range of shape and colour. The shell is completely absent. Two major sub-groups of the nudibranchs are the dorids and the aeolids.

Dorids (*Halgerda*, *Chromodoris*) are characterised by a pair of tentacles or rhinophores, which stand out on the back at the head end and by a circle of feathery gills at the posterior end. Some dorids develop long processes on their backs but most can still be recognised by their rhinophores and circle of gills. Many are sponge feeders and some feed on a wide variety of other invertebrates such as bryozoans and sea-squirrels.

The aeolids (*Godiva*) feed on coelenterates: sea-anemones, hydroids, soft corals and reef-corals. They have clusters of tubular processes down each side of the body, each called a cerata, plural: cerata. Many have a remarkable defence mechanism. The coelenterates they eat have special stinging cells, nematocysts—the sting of *Physalia*, the blue-bottle, is an example. The aeolids remove these stinging cells and store them in a sac at the tip of each cerata, and when attacked use them to sting their attacker.

Australian waters abound with opisthobranchs, ranging in size from tiny microscopic animals to giant sea-hares over a foot in length. We do not know how many different species live in Australian waters but a recent estimate of 2000 species does not seem extravagant. Some species are only found in Australia, but many, especially from tropical waters, are found as far away as Japan and Hawaii in the north, and East Africa to the west. Much still needs to be learnt about our Australian fauna and the opisthobranchs are no exception. Many species, including some in this calendar, have only recently been discovered and still have not been named by scientists. If by thoughtlessness and neglect we destroy natural ecosystems such as rainforests and coral reefs, how many plants and animals will disappear before we even know of their existence, let alone their biological importance?