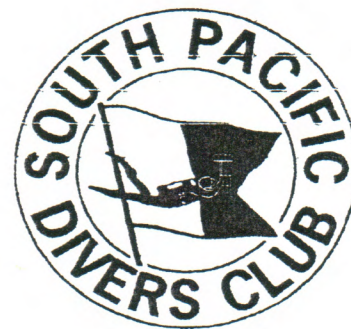


WET RAG



MONTHLY NEWSLETTER OF THE
SOUTH PACIFIC DIVERS' CLUB (established 1962)

PO Box 823, BANKSTOWN NSW 2200

TELEPHONE: 0411 343 200

JULY 1997



In Memory
Jacques Cousteau
June 11 1910 - June 25 1997

Meetings of the Club are normally held at 8 pm on the 3rd Monday of each month in the Emile McDonald Room of the Bankstown Sports Club, Greenfield Street, Bankstown. This month's meeting will be held on Monday, 21st July, 1997.

President's Message

Hi, I'm your new South Pacific Divers Club President, Gordon McDonald.

At our previous club meeting an election was held for the vacant position of President. After many candidates didn't put themselves forward for the position I won with an overwhelming majority. Thanks Scott Egginton.

Now the challenge is mine to steer the club as directed by the members. After chairing the remainder of the meeting on Mon 16th June, we watched John Szwecow's slides. It would seem to me the presentation of fellow club members accomplishments are of great interest to most members. We then have the opportunity to discuss similar experiences and exchange technical data of underwater photography. This input by fellow members is very important to improve our underwater photography and understanding of our equipment. Also our social members have the opportunity to see what is down there.

I found it very interesting and entertaining, especially the quality of the slides. John's presentation of the slides gives him credit. Thank you John.

This also brings to notice the rare footage shown in John Beddie's video of a species of diver rarely seen in NSW waters. The Latin name for this species is "non-aqua-pura diver Leo.B". The rest of the footage was again of interest to club members.

The next up and coming event I'm looking forward to is the Great Bush Christmas Dinner and Wine Tasting Night at Vicary's Winery. This has been organised by none other than our own inhouse food and wine connoisseur and renowned socialite Debbie Davis. Thanks Debbie we are looking forward to a great night of wining, dining and dancing with lots of fun as always. Too bad for those missing out BUT don't worry we will share it with you at the next meeting.

How is your winter warm dive gear and accessories? The club is stocked to meet your needs in T-Shirts, wind-jackets, bum-bags and safety sausages.

(Ed-What, no water pistols?)

Onto Club business, I will be meeting our committee to discuss innovative ways to involve the members in both social and diving activities. As you know, the Club is economically stable and membership has been significantly lifted during the past years. Therefore I will put it to the members at the next meeting for their advice on how to increase the camaraderie in the Club whilst furthering diving knowledge and experiences.

All are invited to participate in Club meetings as without your input and ideas, my job is nearly impossible.

Come to our next meeting on Mon 21st July and help me run YOUR Club as you see fit. I look forward to meeting you.

Last month's cover shot caption was slightly mixed up. The cover shot was taken BY Becca Saunders OF Mark Spencer which is an insight into the shots at next months club meeting.

Cherry on the Top of our next meeting will be Mark Spencer, renowned underwater photographer. His slides and discussion will be on cave diving and it's background. If memory recalls he visited us at our March meeting re Galapagos Islands.

Love, Santa McDonald.

Photographic Officer's Report

As you know the George Roberts Competition is currently underway.

Entry fee of \$20.00

Opens	June Meeting
Closes	August Meeting
Presentation	September Meeting

(see form at the end of this newsletter) and I hope that all eligible club members are out there busily snapping away.

As is usual for this time of year the photographic committee is working on the rules and dates for the 1997 Australasian Underwater Photographer of the Year Comp, more on this as we progress down the track.

Regards, Peter Flockart.

Editor's Message

I have returned after a great 6 weeks traveling in Europe. It was a shock to feel the cold out here after the beautiful 32deg weather of the Italian and French riviera. I've included dive reports of the two very contrasting dives I managed. Don't worry I will restrain myself from doing a whole edition on the pubs of Europe. Great to see the club has been actively diving, discovering new caves, etc, even though I heard the weather was not the best.

I was sad to see that Leo has stood down as president due to work commitments. While nothing ever runs perfectly I'm sure most will agree that Leo was a great pres who has managed to direct the club into the active and dynamic force it is now. He has done a great job and anyone who remembers what it was like a few years ago will agree the changes have been significant and for the better. Hopefully Leo will still find time to contribute somewhere behind the scenes and who knows, when he's finished his work commitments and next years voting takes place, we may just have to rope him in again. We certainly won't let him get away that easily.

Congratulations to Gordon McDonald becoming our new club president at the last meeting unopposed. It has been rumored that Gordon was merely putting his hand up to ask a question and before he knew it he'd been voted in. Gordon has been an active member for many years and brings much organisational experience to the position.

Finally thanks to Russell Stoker who took over my editorial duties while I was away and to Suzanne Evans for her continued help in printing this newsletter.

Passing of a Legend

It is with great sadness that the world learnt of the death of diving's greatest legend and founding father Jacques-Yves Cousteau on June 25 1997. Co-inventor of the aqualung, Capt. Cousteau was also well known for his pioneering work in underwater cinematography as well as his continual promotion of environmental issues, particularly those concerned with the world's oceans. He dedicated his life to the 'Silent World' which we all find so fascinating and will be sadly missed by all divers.

Welcome.

Welcome to new club members Dr Mecki Kronen and Gerhard Zieroth from Suva, Fiji.

Coming Events**July Club Meeting**

Mark Spencer will be at our next meeting to present slides and a talk on cave diving. Come along and find out about the newly discovered cave at Jenolan and other caves in NSW. Merv (Nipper) Maher may also be present to tell us about these exciting discoveries.

Mark is also doing a presentation on wrecks including the Catterthun, Birchgrove Park, Kelloe, Woniora and Koputai at the National Maritime Museum on Sunday 27th July at 10am. For bookings and info call (02) 95527544. There is also a feature display presently running at the Museum on Shipwrecks and diving so if you haven't been get down there soon.

August Club Meeting

Becca Saunders will be speaking about a trip she made last year to Mexico to dive with the world's friendliest manta rays. Traveling to Cabo San Lucas on the southern tip of Baja California, she boarded a liveaboard vessel and steamed for 36 hours nonstop due west into the Pacific Ocean arriving a day and one-half later at a small sea mount (dubbed "The Boiler") which is no bigger than a house on top. The Boiler is a cleaning station for Pacific Manta Rays and is visited daily by these majestic animals, often up to a dozen at a time and some more than five metres from wing-tip to wing-tip.

For Sale

Aquatica Underwater Camera Housing, including F3 Nikon body and 16mm fish eye lens, twin strobe bulkheads, 8" dome port, sunshade, macro port for 60mm Nikkor lens, extension ring for 105mm Nikkor lens, all focus and aperture gears, MD-4 motor drive, DA-2 action finder. This camera /housing system is ready to start taking underwater photos. The action finder offers the best viewing system underwater. All the equipment is in very good condition. The whole lot ready to go \$2500 or everything less the camera, lens and motor drive. \$1500.

Osborne Computer 468 - 33. 8meg RAM, 14" monitor, keyboard, 1.44mg drive, 400mb hard drive. Including Autocad version 1, Wordperfect V5.1, Corel Draw V3, Winfax pro V4, Windows 3.1, Microsoft money, Netscape and Eudora, plus manuals and disks. A Bargain at \$900 the lot.

Neil Vincent 043 971798 or email neilv@ozemail.com.au
UK-400 DiveTorch with rechargeable battery and charger. \$250

BCD suitable for single or twin tanks. \$100

Call Scott-(048) 771 236

Dacor Pacer 360 Reg, Sea Sport Occy & dacor twin imperial guages. All recently serviced, service report available. \$250

Sea Quest ADV BCD with adjustable backpack to suit med to large in good condition with new inflator and LP hose. \$250

Call Peter Flockart (w) 02-9374-2382 (h) 02-9371-0265

Holy Cow, or, the sky IS falling! (from the Maritime History Info Exchange Group)

Earlier this year, the dazed crew of a Japanese trawler was plucked out of the Sea of Japan clinging to the wreckage of their sunken ship. Their rescue, however, was followed by immediate imprisonment once authorities questioned the sailors on their ship's loss. To a man they claimed that a cow, falling out of a clear blue sky, had struck the trawler amidships, shattering its hull and sinking the vessel within minutes.

They remained in prison for several weeks, until the Russian Air Force reluctantly informed Japanese authorities that the crew of one of its cargo planes had apparently stolen a cow wandering at the edge of a Siberian airfield, forced the cow into the plane's hold and hastily taken off for home.

Unprepared for live cargo, the Russian crew was ill-equipped to manage a now rampaging cow within its hold. To save the aircraft and themselves, they shoved the animal out of the cargo hold as they crossed the Sea of Japan at an altitude of 30,000 feet.

BIOCHEMICAL DECOMPRESSION:

A Fundamentally New Approach.

Susan R. Kayar

(Reprint from: Pressure, Undersea and Hyperbaric Medical Society April 1997, Volume 26, Number 2)

Our research team at the Naval medical Research institute in Bethesda, Maryland, is working on a radically different method for decompressing divers. Safe decompression currently depends on the loss by passive diffusion of breathing gases that went into solution in the diver's tissue's while at depth. Our new approach envisions an additional active removal of some of these gases by biochemical processes, utilizing bacterial metabolism as the source for the biochemical machinery. The bacteria are packaged, swallowed, and delivered to the large intestine of the diver before the start of the dive. During the dive, some of the gas that is carried in the blood diffuses into the intestine, down the partial pressure gradient created by the metabolism of that gas by the bacteria. End products of this metabolism have a safe route for elimination from the intestine. Judicious selection of the bacterial species prevents a pathological response to the bacteria, which are outcompeted by the native intestinal flora and eliminated over a period of one to a few days following the dive.

We have had recent success with the early stages of demonstrating the feasibility of biochemical decompression, using hydrogen as the diluent gas in the breathing mixture and hydrogen-metabolizing bacteria introduced into the intestines of laboratory animals. In our experimental model, bacteria that metabolize hydrogen and carbon dioxide to methane and water were placed in the large intestines of rats. When the rats were pressurized in a hyperbaric chamber, the rate at which they released methane increased with increasing pressure of hydrogen in the chamber, starting within minutes from the introduction of the hydrogen. Methane release rate decreased as hydrogen was later flushed out of the chamber. This demonstrated that hydrogen breathed by the rats was reaching the

bacteria on a time scale of seconds to minutes and that the environmental conditions in the intestine were suitable for these bacteria to metabolize the hydrogen. By measuring the total volume of methane released during the dive, we estimated the minimum volume of hydrogen removed from the rats. We had a sample dive profile for the rats breathing hydrogen and oxygen in which we knew that the occurrence of decompression sickness for untreated animals was approximately 50%. We predicted that the volume of hydrogen removed by the bacteria was sufficient to reduce the risk of decompression sickness on this dive profile to 20%. Our prediction was found to be accurate for animals up to 24 hours following bacterial treatment.

Hydrogen diving was originally proposed by Arne Zetterstrom, an innovative young engineer with the Swedish Navy in the early 1940's. Zetterstrom recognized that hydrogen, due to its small molecular mass, would reduce the difficulties with ventilating lungs when breathing high-density gases, such as encountered by divers breathing helium-gas mixtures at great depths. Arne Zetterstrom met a tragic death during an experimental hydrogen dive in 1945m and research in hydrogen diving died with him for the next several decades. However, interest was revived in the 1970's. This past summer

COMEX announced success with their twelfth human trial, using a trimix of Hydrogen, helium and oxygen to a depth of 210 meters in the open sea.

Biochemical decompression with the use of hydrogen-metabolizing bacteria has thus a very real application in human diving today. When we scale up from rats to humans, our results predict that hydrogen biochemical decompression could potentially shorten decompression time from deep saturation dives by several days. Hydrogen biochemical decompression also could reduce counterdiffusion effects potentially encountered during gas shifts, when divers switch from a gas mixture containing hydrogen to one containing helium or nitrogen. Even more exciting is the possibility that nitrogen metabolizing bacteria can be used to achieve biochemical decompression for air dives. While we are still years of animal and then human research away, the possibility exists that swallowing a few capsules the night before a dive might make sport divers safer from the risk of decompression sickness.

This work supported by NMRDC work unit no. 61153N MR04101.00D-1103 The opinions and assertions contained herein are those of the author and are not to be construed as official or reflecting the views of the US Navy or the naval service at large.

SATURDAY 2nd AUGUST

EVERYBODY IS WELCOME TO A CLUB SOCIAL NIGHT

Come to the Gladstone Hotel (cnr Meagher and Regent St Chippendale) for a social drink and chat. Also some slides on diving. B.Y.O. meat for a B.B.Q. R.S.V.P. by 25/7/96 on 0411 343 200

Not Your Average Dive Site.

Staying with friends who own a dive shop in Aachen, Germany, I knew I'd get the chance to do some sort of diving, just what sort I wasn't too sure. One evening I assisted with a course in the local

indoor pool, heated of course. This was great, no wetsuit, just like the tropics. All their courses are done in a pool and the next day I was to find out why.

We could drive to Holland to dive in the sea but that was 3 hrs away so we did the local site, the Ruhrsee, a huge lake created in the nearby mountains by the massive Ruhr dam.

We arrived at the site at 6.30pm, being summer it doesn't get dark here till 10pm, but I was told to expect darkness underwater, "Just like a night dive." I said... "No...much worse!" replied my friend Ralf in his Terminator accent.

We geared up next to the lake in drysuits and 3 finger gloves (supposedly warmer than normal gloves) and then walked a few steps to the shores of the lake. I stepped in and could feel the icy cold through my drysuit straight away. My gauge said 3deg. We descended and the first few metres was green and murky. Below 3m the vis began to open up to reveal a silty bottom with some plant life. The cold was invading my dry suit like I had never felt before.

We moved down the sloping bottom and at 10m any sunlight totally disappeared, this was just like a night dive. As we continued down the slope the vis improved however the darkness was so intense it seemed to soak up the light from the single torch we were sharing, all that was visible was what was in the beam of the torch and this revealed a few large rocky ledges every so often and occasional dead trees and sticks protruding from the silt. My hands and face were so cold it hurt, I thought of signaling to Ralf to end the dive but we had only been under about 10 mins.

The silt was deadly as I found out when I accidentally settled on the bottom while adjusting my gear, visibility was reduced to absolute zero so we swam out of it and continued down the slope to 36m. Deadly silent apart from our breathing, totally black, cold, without life, this was the most uninhabitable place I had ever visited underwater. The intense darkness made me feel that if anything could be similar to cave diving then this was it. It certainly felt much deeper and more dangerous than anything I had ever done in the open ocean. An environment hard to describe, like the moon. The pain of the cold had gone and I wrongly assumed I had warmed up.

After a while at 36m we began our ascent (although the bottom continued down to 50+m I was told) and soon came across a pink plastic basket suspended in the water by a rope. This was attached to one of the yachts moored above and contained various bottles of alcohol. We took two bottles of beer, to preserve them from further corrosion, and continued our ascent. At 12m we began to approach the light zone again and could make out a dim green glow above. We were very lucky and saw 2 fish here, only 2 but I was told we were very lucky to see any at all, they were similar to goat fish. We also observed some fish eggs attached in clusters to the branches and twigs protruding from the silt.

After 45mins we ascended next to the steps we had entered by. I had thought I had warmed up through the dive however once out of the water I realised the pain had only gone away because I had gone numb. I could hardly move my fingers and talking was a problem, my lips didn't work for a full 5 mins.

While not the sort of dive I would like to do every

weekend it was certainly an experience and I had a new found respect for the local German divers who do this regularly. It was definitely not a place for the inexperienced or feightnt hearted. After we had changed and warmed up we headed home to enjoy our beers. This was German diving? No wonder they all go to the tropics for their holidays.

Members List

We are compiling a members list which will be sent out to all members on the condition that it is NOT to be used as a mailing list. If you do not wish your details to be included please contact the club by the July meeting.

COD HOLE & OSPREY REEF

by Graham and Samantha Oates

We set off one Friday in mid-April flying to Cairns where we joined the liveaboard diveboat TAKA II for a five day/four night trip to the Cod Hole and Osprey reef. We boarded the boat late p.m. and settled into the honeymoon suite(!) complete with a splendid one poster bed. We set sail straight away to travel to Cod Hole overnight. En route the diving rules were laid down: max depth 35m, each subsequent dive must be shallower than last, max dive time 50 mins and must return to boat with 50 bar.

Waking up on Saturday the boat was already moored at the Cod Hole. First dive was just a potter around spotting several big cod and napoleon wrasse. Second dive was the cod feed. One of the boat's divemasters sat atop a small pinnacle and fed sardines to the biggest cod, which monopolised the feed, whilst each of us in turn posed for photographs. One of the local businesses sends a videographer along on most dive boats to compile a trip video which is then sold. The videographer insisted that everyone kiss the cod which most of us did. One Japanese girl actually licked the cod very vigorously - perhaps with fresh sushi in mind. Sadly, all of the large morays were removed last year due to a girl being bitten by one. We only saw one moray on our two dives there.

After another day dive and a night dive on the ribbon reefs we headed out to Osprey Reef overnight. A healthy 25 knot wind made for a restless nights spent picking up books, cyalume sticks and endless other things as they toppled from the shelves onto the bed. By the time we woke on Sunday morning the boat was moored at Osprey Reef. Barry, the resident great barracuda, had taken up position at the back of the boat and remained there for the day watching closely as everyone got in and out of the water. Our first dive at Osprey was in 30-40m visibility with whitetips everywhere and grey whalers circling in open water away from the wall. As we headed along the reef wall at about 30m we saw a school of six scalloped hammerheads followed by a further school of four - for us this was the highlight of the trip.

The second dive at Osprey was the shark feed. We were accompanied by lots of whitetips as we headed to the feed site. The grey whalers were much more numerous and closer in this time obviously aware of what was in store. We all sat on the reef wall in a natural amphitheatre around a small pinnacle. The food (a mixture of tuna bits chained together) was slid down a buoy line attached to the pinnacle and

was quickly set upon by the whalers who looked set to demolish it all in under a minute. They took half the bait and then left it to the whitetips and a couple of potato cod which just barged the sharks aside to get at the food. One whitetip tried to bite off more than it could chew and, finding itself unable to swallow it or break it off just hung motionless in the water until it was physically pulled off. To round things off a large silvertip arrived and, showing no interest in the food, just cruised around and weighed us all up. The silvertip was belted several times with the video camera to deter it on its closer approaches and acquired a scar above its eye which showed up well on subsequent video footage.

After two more afternoon dives the boat returned to the Ribbon Reefs traveling overnight again.

We had four more dives on Monday including Steve's Bommie - schools of chevron barracuda, bigeye trevally and clouds of anthias, chromis and small snappers swimming in the current. The boat gradually worked its way south back to Cairns fitting in two early morning dives on Tuesday before reaching Cairns mid pm.

It was a very enjoyable and well organised trip. The boat was comfortable, especially with only 14 guests out of a possible 26 (which would be crowded). Food was very good with a constant supply of nibblies. The diving was excellent, especially Osprey Reef and Steve' bommie. It was the only trip we could find which visits both the Cod Hole and the Coral Sea within a 4 to 5 day trip and was great value for money. We would certainly recommend this trip on TAKA II.

Rebreather Update

Club member Rodney Nairne has made some modifications to his rebreather since his last trip to Sydney when he dived the Koputai. He is continuing to dive in deep water with no problems encountered yet. He is also going O.S. for a few months with his 'Mermaid' for some diving in the U.S.A. Hopefully he'll come back with some good stories and maybe even some new dive-gadgets to play with.

Other news is that club member Jason Rogers has also completed construction of his rebreather and has completed a number of test dives with it performing perfectly. He did raise a few eyebrows recently though when he emerged from the depths of Gordons Bay in the middle of a group of divers on their first night dive. At first they didn't know what to think of this guy with a mangle of plumbing supplies on his back, but they were quite happy to discover he had found a torch one of them had lost during their dive. Well done, and keep us informed of any new developments Jason.

Winter = Blue (but cold) Water

Brrrrrrr. The water IS getting colder but, as usual, that means it's getting clearer too so don't be put off. Most people, apart from those still living in the dark ages, own drysuits so the cold shouldn't be much of a turn off anyway. If you don't already own one get one soon, you'll be glad you did. I know of a number of members who have recently purchased drysuits and they can't believe the comfort these provide in winter conditions. The added bonus is that diving in winter is no longer a pain and they can now enjoy the blue water that winter brings that much more. Reports from the past few weeks are that vis has been excellent on the Malabar, Kelloe and other areas south of the Harbour. Don't be put off by the

rain, I dived the Tuggerah after a week of wind and rain with brown water for the first few metres but very clear water on the bottom, so get on the phone this weekend and call one of the dive organisers and get wet (or should that be dry?) soon.

Viva la France

After diving in the Ruhrsee in Germany in 3deg blackness I wasn't too keen to try my luck anywhere else in Europe, however after 4 weeks of traveling we found ourselves in Toulon in the south of France. The weather was very hot and the water looked blue so, together with the Roving Rabbit, I set about trying to arrange a dive. This was where the fun began. After finding a dive shop without too much trouble and using all manner of hand signs (luckily something divers are familiar with) we were given a map and told we needed to get the bus to the nearby beach of Fabregas. With some help from a freindly French girl and a number of bus changes we arrived at a small beach in an area not unlike Bundeena in the national park in southern Sydney. We were greeted by Jean-Paul, the ex-Navy SEAL who runs the Hippocamp (that's French for seahorse) dive club. Jean-Paul spoke no English and Rebecca spoke only a few words of school girl French, however we were soon fitted out in all the necessary gear and heading out to the wreck of the 'L'Arroyo' just off the coast, a scuttled oceanographic research vessel lying in 36msw.

While we had only contents gauges Jean-Paul had a large perspex slate with depth gauge and compass. I assume this was so we would not be tempted to wander off on the dive, or perhaps it was a case of what you don't know can't hurt you for newer divers. We entered the glassy calm warm water and could almost see the bottom from the surface. We descended to rocky reef, not unlike that found in Sydney, and swam a short distance until we came across the wreck. Approximately the same size as the colliers we are used to, but much more intact and the wreck was totally covered in growth. It reminded me of the wrecks in the Solomons, covered in huge gorgonians and with schools of small fish hovering about.

I noted what a great thing diving is, above the water Jean-Claude and I really couldn't communicate effectively at all, however, here we were using all the international diving signals, such as pointing and going 'ugh ugh' into our regulators when we saw something interesting. Communication was no problem in this environment, we were all having a great time. We were happy the dive was so good and I think he was happy we knew what we were doing and weren't the beginner tourists he probably usually has to baby sit. We swam down under the huge bronze prop and then slowly worked our way back along the port side. Among other things we saw a huge yellow nudibranch and numerous small cuttlefish.

The front of the wreck was broken and laying up on the reef and below the hull at this point was a large swim through. Visible under the hull here was a blast hole, the hull plates bent outward, from one of the charges used to send the wreck to the bottom. After 16 mins Jean-Paul signaled that we should ascend but with plenty of air left and such great conditions we delayed this as long as possible. After 5 more mins we decided he was looking a bit anxious so we ascended to our deco where we had a large school of sardine type fish hanging in mid water only a few metres away.

After such a great dive we were all on a high, another universal that divers of all cultures share I thought to myself, and headed back to shore. Back at the club we shared strong black coffee and spent over an hour talking, mostly with our hands, about the dive and diving in

general. They were very impressed as we told them all about the South Pacific Divers Club and diving in Australia and yes, they had heard of Jean-Claude and knew him as someone who worked with Costeau.

Although we only had time for one dive I would certainly try to dive here again the next time I am in Europe as it was just as good as anywhere in the tropics.

REBREATHER PRICES WITHIN REACH

If you are interested in rebreathers but are put off by the cost, there is good news ahead. Already in this country the Uwatec/Drager Atlantis has had it's price slashed to \$3950. In the UK, the immanent arrival of the Buddy Inspiration for 2000 pounds has made Drager/Uwatec drop the price for the UK Atlantis from 3500 to 2000 pounds. You have to laugh at this kind of blatant opportunistic behavior from dive gear peddlers.

The Inspiration is the bargain of this century for a fully closed electronically controlled rebreather. Other very similar units from the US sell for US\$13,000. Spare parts, a big money spinner for some manufacturers, are another area you should look into before a purchase. Again the Inspiration looks good as Buddy, the manufacturer, is renowned for well made products at reasonable prices.

Another interesting development is you will be able to trade in an Atlantis for a Florida made passive addition semiclosed system, the Halcyon. Halcyon staff say they will end up with the biggest fleet of hire units, and offer "real" training for the Atlantis. Currently Atlantis training does not include a VITAL pre-dive testing procedure, possibly because the testing equipment would be as much to purchase as the rebreather.

Of course many will opt to build their own, but few of these will have the determination necessary. Most will just shoot there mouth off. Club Member Jason Rogers has succeeded however, in addition to my unit, and if I have anything to do with it Scott's plans will become reality as well. It seems the old adage where there is a will there is a way still holds true.

Rod Nairne

Who has seen the former President Dive? Not Me...Again!

At the last AGM I handed out a number of awards, like the "Most Improved Diving Husband and Wife team", "Most Fanciful Story" for a dive conveyer to not attend a dive, culminating the evening with the "Armchair diver of the Year Award." This coveted award was issued to our former fearless leader, LeoBergagnin, for it was a fact that in the 4 years I have been a member of the SPDC I have never actually seen Leo actually diving. This topic has been the bud of several jokes and ongoing innuendo's but the fact still remained that Leo and I apparently don't dive together much or apparently not at all.

South Pac recently organised a dive on the S.S. Bombo, out of Wollongong Harbour on Jeff Hick's boat, 'Divetime'. Afterwards we were to have a Pub Luncheon but I was challenged for transport. I thankfully organised a lift with Russell Stoker and Leo B. Amongst the flowing conversation en route to Wollongong the subject came up (from Leo this time) that we were finally going to put an end to the Armchair Diver name calling nonsense and actually dive together.

He, perhaps, was hasty in making the statement because the weather was not so good on arrival and further more we were not given permission to anchor on the Bombo by the Port Authority. It was looking grim and the 'tag' was going to stick but wee had come all the way South and it

was decided to go for a dive on a rock outcrop presently deficient of brass and/or metal.(see 'Reef Dive') On the way out we saw a pod of migrating Southern Right Whales heading north. Jeff positioned the boat off the required distance from the pod and said "Quick hop in and you'll be able to hear them from here." which was followed by six quick splashes. 6 divers in...Mission accomplished...I'm truly religious from the experience...but on returning to the boat I was

aghast...speechless...There were two people on the boat, Jeff the driver and a dry Leo Bergagnin!!!! The former pres didn't dive...Again..!

The Armchair Diver Award still remains. The innuendo is now at fever pitch. His feeble excuse was amazing. "Hey. One moment you were all here and I turned around and every one was gone in the water!"

Life is really cruel to Leo Bergagnin.

See Ya, Barjumba.

COMMITTEE MEMBERS The following members are on the committee for the 1997 year.

Position	Name	Home No:	Work No:
President:	Gordon McDonald	9519 7850	017 811 422(m)
Treasurer:	Barbara Sweetman	9517 9176	9233 1402 (NOT between 12 & 3pm)
Secretary:	Deborah Egginton	93172126	0419 229 631
Photographic Officer:	Peter Flockart	9371 0265 Fax: 9374 2688	9374 2382
Publicity Officer:	Paul Howlett	9746 6720	9377 3030
Dive Organizers:	Scott Egginton Peter Foster	93172126 95642654	0419 619 866(m) 0418 435 774(m)
Social Secretaries:	Les Stewart Debbie davis	9728720 9750 4317	97154302 014 904 849 (m)
Equipment Officer:	Russell Stoker	9799 2663	9217 1739
	Email:stoker@one.net.au	018 963 527 (m)	Fax 9217 1484
Newsletter Editor:	Scott Leimroth	97596501or(048)771830	(048)771236
	Email:anscott@hinet.net.au	019 990 864(m)	Fax(048)771239
Special Operations Officer:	John Fardoulis	(043)422939	email jandj@terrigal.net.au

BOAT OWNERS CONTACT LIST

The following members of the Club are boat owners. They generally go out diving most weekends and often need extra divers to make up numbers. Why not give them a call.

Name	Home No:	Work No:
Sue Armstrong	044 437606	02 9385 2248
Martin Atkins (lives in Jervis Bay area)	044 43 4631	042 74 0210
John Beddie	9820 4272	046 20 1746
BJ has a new number which he gave to me but I promptly lost so can you please contact us BJ.		
Peter Booth	9529 3818	
John Cassidy	9546 3538	0411 398 675
Peter Cassimatis (Brisbane area)	07 3847 8082	
Geoff Cook	9543 5817	018 29 4891
Mark Dietz		
John Fardoulis	043 422 939	0419 230 244
Martin Kandilas	9725 7808	9725 7808
Bob May	045 79 1053	

CLUB SPONSORS

The South Pacific Divers' Club is honored to be sponsored by the following

Aquatic Explorers, see Steve or Lee at 7 Beach Arcade Cronulla, 9527 1518
Beverly's Restaurant at Chippendale, contact Bev on 9310 4878
Dive Quest, Mullaway, contact Chris or Gary on (066) 54 1930
Max Western's Sea-tamer II charter boat, contact Max on 9524 1818 or (018) 28 0791
Shiprock Dive at Lilli Pilli, contact Leo or Lesley on 9526 2664
Southern Cross Divers at The Spit Marina, contact Barry on 9969 5072
South West Rocks Dive Centre, contact Noel or Belinda on (065) 66 6474
Twofold Dive Charters, Eden, contact Peter or Lorna on (064) 96 1778

DON'T FORGET THE CLUB PHONE NUMBER IS 0411 343200
CLUB GEAR

The Club has a variety of gear for sale, hire or loan. This includes T-shirts, Stickers, BumBags, Shirts, Sweaters, Caps, The Magnetometer, Two sets of Oxygen equipment, BBQ, and much much more. Inquiries should be directed to the Equipment officer.

DIVE CALENDAR TILL SEPT 1997

27th July Botany Bay Diving. La Perouse, Frenchmans Bay. Wrecks, Reefs, Deep, Shallow, a great area for diving not regularly serviced by charters so call Scott E. to book onto one of the club boats. BBQ afterwards on the beach.

9th 10th 11th August JB on the 'Victory' some spots left. Call Peter F. Deposits by or at July meeting.

17th August Harbour Day - Rose Bay. Come and dive one of the many great dive sites in or near the Harbour. The magnetometer will be taken out for a run so contact Scott. E for more info.

22nd - 24th August Weekend on the 'Victory' at Jervis Bay. Liveaboard luxury at an affordable price. Seals, Caves, Sponge gardens, don't miss out. Call Peter F. to book on.

7th September (Sunday) Bombo - Wollongong. Dive this constantly changing and always exciting wreck site in 27m. Call Scott E.

21st September Gibbon or Bundeena.

TRUCK LAGOON

November 3rd.

10 Days and at least 12 dives. Flying on

Don't miss out, see the 'Myth', the Phantom, ghost who walks, man who never dives, Leo B. Yes it's time for his annual pilgrimage to warmer waters to Dive! It's worth the price of the trip just to see him in action. Will he stumble into the women's toilets again? Will the plane have enough supplies on board to quench this mans thirst? Will he Chuuck in Truck? The truth IS out there but only those in attendance will know the truth. Included at NO extra cost, brilliant wreck diving and fixed growth (and I don't mean Leo at the local bar). This trip is not to be missed, only 4 spots left at a great price so call Leo B. on 9558 2592 9517 2853 0419 517 285(m) to find out the details.

**Please ring the dive and social
organizers on the club phone**

0411 343 200

**on the Tuesday or Wednesday
before the event to confirm details**

Contact the Dive Organizers to Book your place on any of these arranged dives. If you wish to go diving and nothing is organized call the dive organizers and make a suggestion or call one of the boat owners to see if they are going diving. Don't forget if you can't make a dive you have booked on for call ASAP so we don't inconvenience boat owners or others waiting for your spot.

Club Organized Charter Boat Dives and Dive Trips Away. By Peter Foster

As dive organizers, Scott Egginton and I have decided that while we are organizing charter boat dives and trips away that they are to be paid for in full before the actual trip. It will work as follows:

- 1) Deposit to be paid as normal as soon as possible to ensure your spot at a rate of 50% of the cost of the day trip and \$50 for trips away per person.
- 2) The full amount becomes due seven working days before trip date. If no payment is forthcoming there will be no place booked for you.
- 3) If any person pulls out of the trip before final payment is due refunds will only be made if spot is filled or at the discretion of the full committee.
- 4) If any person pulls out after paying, the full amount may be refunded dependent on the trip cost breakdown or at the discretion of the full committee.

Wet Rag, the South Pacific Divers' Club
Newsletter, is published by South Pacific
Divers' Club. Edited by Scott Leimroth.



Send material to: 'Tyacona' Old Hume Hwy
Berrima 2577 or Fax (048)771239 or
Email anscott@hinet.net.au

This is the rest of the article, as promised, by Jean Claude, the first installment was in the April edition. Sorry for the delay.

Trimix Diving - decompression procedures originating from France - By Jean-Claude Le Pechon.

All trimixes used by C.G.DORIS for bounce dives were prepared on board by manometric techniques and active transfer (for proper mixing) by the two step method Nitrox 30/70, then Trimix. The corresponding tables have been calculated by J.PARC (French Navy) accordingly. Two examples of these tables are provided below.

The diving procedures available with these mixes cover SCUBA open circuit dives to 75m for 15 mins bottom time, open bell dives to 75m with 35 min bottom times, bell dives to 120m for 1 hour bottom times and 150m for 30 mins bottom time.

During decompression in open bell or bell dives it was also decided that for divers' comfort not to use masks before the 12m stop, therefore ambient air is breathed after transfer under pressure or in the bell.

Changing from stops takes 1 minute.

Bottom Time (min)	15min	20min	25min	Breathing Gas		
Ascent to 1st Stop	4min	4min	4min			
1st Stop Depth	21m	24m	24m			
24m Mix		1	5	Air	or	Bottom
21m Mix	2	6	5	Air	or	Bottom
18m Mix	5	6	6	Air	or	Bottom
15m Mix	7	7	11	Air	or	Bottom
12m Mix	8	13	17	Air	or	Bottom
9m Mix	15	20	20	Air	or	Bottom
6m	38	47	54	Oxygen		
Total Stop Time	75	100	118			
Time Between Stops	10	11	11			
Total Dec. Time	85	111	129			

Table 2: Depth: 75m, Open Bell Dive - MIXTURE: 18/42/40 (O₂/N₂/He)

2.5 French Navy nowadays

During the 80's, the French Navy has modified its tables to take into account the trials carried out to prepare deeper dives (180m/1hour) and the results of the calculations carried out for C.G. DORIS. The present navy tables have not incorporated the mix composition as proposed by J.Cl. LE PECHON, they now have an extensive set of tables to cover the various diving procedures for depths to 120m. For all tables the gasses during the stops are Nitrox (30/70 or 40/60) or pure oxygen.

The principle of the model is based on an Haldanian uptake of inert gasses considered as a single entity. The half times used for uptake and elimination are not symmetrical to take into account both the possibility of bubbles interacting with perfusion and the difference in activity of the diver during each phase. The ascent limiting factors are Supersaturation Ratios, specific for each compartment and selected according to the depth and duration of the dive. Oxygen efficiency during stops is taken for 80% only.

Various Parameters used in some of the present French Navy tables.

Half Times (Bottom Time)	min	5	10	20	40	80	160	200	240
Half Times (Decompression)	min	10	20	40	80	120	160	200	240
Critical Ratios (40-70m tables)		2.00	1.70	1.60	1.50	1.48	1.48	1.48	1.48
Critical Ratios (80-110m tables)		2.00	1.65	1.50	1.45	1.45	1.45	1.45	1.45

3-VALIDATION OF THESE PROCEDURES.

There is no sound validation studies concerning the above procedures. Some results are available from the field.

C.G. DORIS tables:

Several thousand SCUBA dives with 18/42/40 between 60 and 75 meters have been carried out and recorded in dive record with no reported cases of DCI. These tables are very safe when used in accordance with the procedures.

Several hundred of Open-bell dives in the same range of depth with the same mix have the same type of results, the only reported cases of mild bends were evidently associated with inadequate stabilisation of the bell during stops in relation with heavy swell.

Concerning Bell dives, a maximum of 300 exposures have been documented in dive reports, the results are depending on depth:

Range 50 - 100m, bottom time 1 hour : Satisfactory results

Range 100 - 120m, bottom time 1 hour : Several cases of mild bends have been documented. The hits always happen before arrival at atmospheric pressure, all of them were immediately cured by recompression to 18m followed by two to three sessions of 25mins of pure oxygen. No reports of after effects of any kind.

NAVY TABLES

The Navy tables being used for military operation there is no access to the results and they have not been published. However it seems that the Navy does not have any program to elaborate new procedures. This may be considered that they are happy with the way they operate or they do not need them!

SOGETRAM tables

Following the tables produced by P. CABARROU, SOGETRAM has carried out several deep repair jobs in a dam (Iraq) with semi closed (FFG 3 Drager) breathing UBA with open bell decompression using a mix 20/40/40 between 40 and 80 m at an altitude of 800m, with no complaints of decompression problems for the diving team which kept running about two exposures per day for more than 6 months in that remote place.

CAVE dives

At least three teams of cave divers have performed dives with procedures derived from the "DORIS" tables. The number of exposures deeper than 90m is about 70. No complaints from the cave divers. Bubbles have been monitored in the field on 6 dives, no bubbles have been heard at any time after surfacing, the bubbles have been monitored by the divers themselves and the quality of the monitoring may still be questioned, even if a level III according to Kisman-Masurel's code would have been detected in all cases.

4- CONCLUSIONS

Many technical divers have obtained photocopies of the so called 'DORIS' trimix decompression tables. Some have used them, often successfully, after several personal adaptations. However one should be very cautious in doing so since most of the time the **procedures** which must be associated with the **tables** are not available or not applicable for the technical diver's mission or even worse, the technical diver has not been properly trained to operate according to the procedure.

A "table" consists generally of a bottom mix, a dive profile [$P=f(t)$] and eventually indications of the breathing mixtures in some particular phases of the profile.

A "procedure" contains the same information plus indications on the type of UBA, the type of suit (hpt water, dry suit...), the supporting equipment (in water deco, stage deco, open bell, TUP, surDO2...) and emergency recompression schedules.

An alteration of the procedure or adaptation to a different situation (like in water deco instead of TUP) must be designed very cautiously since oxygen toxicity, physiological condition of the diver, duration of immersion... may be greatly altered by the changes and a safe **procedure** may become a dangerous **table** if used differently.

The whole set of procedures developed by the various teams from the early French navy work and experience seems to be efficient. Although the industry's needs for this type of procedures has been eliminated when diving for drillship assistance was replaced by ROVs, and construction, inspection, repair and maintenance jobs become only saturation diving.

The main reason for the lack of data and reports from the industry is that those procedures have been in operation very scarcely and the industry does not need them anymore.