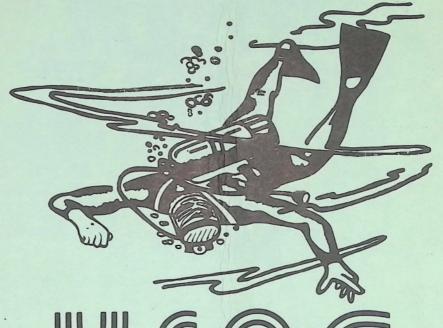
PATHOMS

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SAFETY IN DIVING

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VICTORIAN SUB-AQUA GROUP

FATHOMS

(Official Journal of the Victorian Sub-Aqua Group)
Box 2526W, G.P.O., Melbourne, 3001

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CLUB MEETING -

The next meeting of the Victorian Sub-Aqua Group will be held on Wednesday 15TH AUGUST, 1979 at 8pm at the Collingwood Football Club, Lulie Street, Abbotsford in the 2nd floor Function Room. Bar facilities are available to VSAG members prior to, and after the General Meeting and meals are served from 6pm until about 9pm. A list of VSAG members will be provided to the Football Club thereby eliminating the requirement to sign the visitors book at the entrance. Visitors welcome!

FOREWORD

Once again I have been bestowed with the dubious pleasure of being substitute editor, in place of our gallivanting ping-ponger, Comrade Lynch.

There have been one or two good dives this month, only because the weather has allowed them. With this lack of diving, members have put pen to paper with the aim of taking the crown from our current reigning literary champion, June Furneaux. June, on behalf of the committee and club, I would like to congratulate you on winning the "Jay Cody Award", above all other nominations.

God has seemed to have extended his wrath on JFG and Murgatroyd on the eve of their wedding by inflicting the bridgegroom with a dose of Shaggers-back. So be warned ageing VSAG members who are contemplating this marital union. Next year, 1980 is "The Year of the Ferret." I say no more.

At the last committee meeting it was decided that as a deposit of \$200 had been paid for sites at Narooma for our Christmas trip, bookings would only be taken with a \$10 deposit, which should be paid at the next meeting to ensure a site.

Also discussed was punctuality at meetings, not only members but also committee. It was decided to start each meeting promptly at the time stipulated.

Awards seem to be in the air at the present moment - Literary, Clubman of the Year etc. but what of the bunny who contributes the most to the club without self gain; who just received a "thanks" and nothing else because he doesn't or can't participate in every club function. I personally believe that a special award should be created for this person and this award should not go to a committee member. This award may not necessarily be awarded every year. If you have an opinion on this topic don't be afraid to bring it up at the next meeting. (The writer's views are not necessarily those of the committee as a whole.)

With the end of the club year at hand, another phase of club duties arises - that of committee elections. Five members of the committee must stand down according to the constitution and they are listed in the committee news. If you wish to nominate these or any other persons for the coming vacant positions, nomination forms are enclosed in this magazine.

DIVE CALENDAR

DATE	LOCATION	TIME	DIVE CAPT.	NOTES
AUG. 15	COLLINGWOOD Football Club	8 PM		General Meeting
AUG. 19	GOLDEN BOWL Camberwell	2 PM	F.Ferrante 211-0708	Family Day Ten Pin Bowling
AUG. 22	5/29 DOVER RD Williamstown	8 PM	Dave Carroll	Committee Meeting
AUG. 26	PINNACLES	10 AM	B.Scott - Ring B.Lynch 795-2834	San Remo
SEPT. 2	GRAVEYARD	Т.В.А.	B. Lynch 795-2834	Barwon Heads Jetty
SEPT. 9	TREASURE HUNT Dive		D.Moore 547-2791	Mornington Jetty - Entry \$1.00 Prizes
SEPT. 19	COLLINGWOOD Football Club	8 PM		Annual General Meeting

COMMITTEE NEWS

Subjects discussed at the last committee meeting were:-

- 1. Further enquiries re Fenzy bottles Fill capacity up to 3000 psi. If you want the bottle checked, next time your tank requires testing take the Fenzy bottle with you to A.D.I. or any other test centre.
- 2. The Christmas trip was confirmed, \$200 deposit has been paid 10 sites available, so book with P. Tipping NOW!!!
- 3. Meetings to start promptly at time stipulated. General Meetings/Committee Meetings at $8.00~{\rm PM}$.
- 4. Sale of enlarged photos very successful to be continued.
- 5. Award for the most noticeable contribution to the club.

- 6. New format for Dive Schedule forms
- 7. More tickets to be obtained for S.D.F.V. dinner dance
- 8. Record book to be attached to compressor all tanks must be signed out by owner after airfill.
- 9. Persons to stand down on the committee for next general election
 - 1. Bob Scott
- 3. Brian Lynch
- 5. Barry Truscott

- 2. Tony Tipping
- 4. Dave Carroll

OUR DEPTH SOUNDER

Several years ago the Club invested about \$300 on a Furuno depth sounder.

Under the careful guidance of Terry Smith some of us learned to use this delicate and highly technical piece of equipment.

After 4 years the depth sounder required an overhaul and this was carried out by the Victorian distributor, Howard Smith & Co. P/L.

Soon afterwards a fault developed in the wiring of the depth sounder but fortunately Wayne Hatch and his diving mate Con Soulias were around who were able to diagnose the problem and suggested a remedy.

After many hours of work by Wayne and Con our depth sounder is now going again, and the Club expresses thanks for a fine job.

TRUK LAGOON

In todays realm of diving, one of the greatest underwater museums, a coral encrusted tomb containing the wreckage of some thirty-eight ships and numerous aircraft, preserved almost intact, for more than 35 years. The diver's first sight of ghost ships, many in shallow water or protruding out of the water, gives the impression that the holocaust which sent these ships to their watery tomb only occurred the day before. This is due to the fact that many of the ships still had their consignments still intact on their decks and one had a Japanese Zero still bolted to its deck mountings. It would amaze anyone to see how well the wrecks have weathered their watery grave.

Out of the total number of ships lost in this area, about 16 would

be only about a half hours boat ride away from the community of Moen, headquarters village of the Truk area, many of the wrecks make good snorkelling exercise and the rest well in the reach of the scuba diver. (Local legislature has made it illegal to salvage souvenirs and permits must be obtained before you can dive in the area.)

The date, February 17, 1944, time - morning. The Japanese who had considered this lagoon in the Caroline group of islands as an impregnable bastion impervious to any form of amphibian invasion, were not ready or prepared for a strike against them from the air. Thus on that morning, the United States Navy instigated a carrier attack against a fleet of Japanese warships and cargo vessels at anchor in the 40 mile wide Truk Lagoon. Task force 90 launched an offensive which continued for 36 hours - with ordnance estimated to be 15 times greater than that used by the Japanese at Pearl Harbour two and a half years earlier.

The attack was a stunning and costly surprise to the Japanese, who were caught with some 60 warships, fuel tankers and cargo vessels still at anchor, most of the ships were either being fuelled, loaded up, unleaded or repaired and thus were not in any position to escape the holocaust. As a result of the attack the Japanese lost 15 navel vessels, 6 tankers and 17 cargo ships in and around the lagoon, in addition to 250 aircraft (defense) and not to mention the 25 navy aircraft lost by the American Navy, which had plummeted either into the lagoon or onto the surrounding small islands.

Because the attack came so late in the war, the Japanese made no attempt to salvage the vessels, where as the Americans allowed salvage of sunken ships in Micronesiå, of which Truk is a part, the sunken hulls in the lagoon remained untouched in their watery graves until the late 1960's.

This area has now become a diver's mecca, but for how long; many of the wrecks still contain the remains of the crews. One must ask how long will the American and Japanese Governments allow people to dive on their war graves.

THE WRECK OF THE ROTOMAHANA

On Sunday 15th July we once again gathered at Barwon Heads, unfort-unately two of our sturdy crew were unable to dive. Cindy had to withdraw due to a head cold, and thus became the scribe for the trip. Johnny G. had been left by Tony in mysterious circumstances, doubled up on their lounge-room floor, stricken we found out later by a torm back ligament. It seems that danger lurks for the poor diver at every turn, even just moving their gear from one car to another. Meanwhile back at the Barwon Heads jetty the 8 survivors awaited the arrival of Lance Steven's boat.

We had been lucky with the weather it had been blowing all week, and on the Monday following it began to blow again, and so we were fortunate to slot the dive in when we did. There was some wind from the north-west but the sea was reasonably flat with some swell, and further out a little choppy. This posed no problems at all for the fishing boat and after a short journey out and a little motoring around Geoff Naylor dropped the shot line overboard and down to the remains of the Rotomahana.

The S.S. Rotomahana had been built 100 years ago in 1879, she was a large ship of over 1700 tons. She was on the New Zealand run for over 14 years, then switched to the Tasmanian route. She ran between Melbourne and Launceston for 27 years until finally in 1921 she retired gracefully from service and was laid up until April 1925. Then she was sold for scrap. After she had been stripped of all that was valuable including her port holes, she was scuttled in 1928, 51 years ago. A friend of mine who had been on the Rotomahana described her as a very beautiful ship indeed.

We dived in two groups with Fred and Tony, Neal and Dave leading the way. Once they were out of the way, that left more room for us oldies to change. Twenty minutes later after they had surfaced and were back on board excited and waving their hands about, we fell over the side. Paul and I following Bazza and Justin into the water. Once Paully had got himself and his camera together we swam down the line. Although following the shot line down doesn't take as long or cover the same distance as belting down Bill-boats anchor rope, 125 feet down with 20 foot visibility takes a little while. Arriving at the bottom we found Justin awaiting Bazza who had had some equalising problems, and we can tell you quite emphatically that a Fenzy can lift you from 125 feet to the surface quite quickly, so remember to keep your mouth open. After sorting ourselves out we

began to investigate the remains of the Rotomahana, we passed by one huge condenser and then Paully captured a few shots of me "driving" the ship, framed in the square super-structure still upright. Then it was off along the hull, to where two more large condensers sat side by side. My torch was now working well and as we swam between the two large boilers I could see into all the holes and crevices, no crays there though. We passed over several sheets with the gaping holes to remind us of the portholes that had once graced them. Then it was time to look for the shot line. We swam in what we considered to be the right direction only to find ourselves suspended over the bow of the vessel. Obviously, somewhere along the way we had missed our bearings. We began to ascend easing upwards slowly through the murky water. Around the 25 foot mark we could hear the fishing boats motor, then we lay back watching the sun-speckled surface we saw the boat approaching, it passed directly overhead then disappeared away to our right. Still coming up slowly we finally broke surface, to find the fishing boat about 100 yards away. We lay back in the water and awaited our colleagues to pick us up.

The trip back to Barwon Heads was uneventful but wet, and the river was a little higher than when we left which must have pleased Lance since he bumped a couple of times on the way out. We thanked Lance and Geoff, and then had a nice hot shower in the caravan parks washroom. All being well we have decided to dive the Rotomahana on September 2nd which is when our trio of dives is up. So Johnny you'd better get your back, back by then. My thanks again to all those divers taking part for their co-operation and punctuality.

BRIAN LYNCH

WRECKS AT THE HEADS

There is hardly a reef of the many within 100 miles of the Heads which has not claimed a wreck since the first recorded ship entered the Bay.

Although the likelihood of a ship being wrecked at the entrance has almost disappeared in recent years, the stranding of the 'Karoon' and 'Beltana' in 1963, and total wreck of the 'Time' in 1949, reminds one that the entrance to Port Phillip is still one of the most dangerous entries to an Australian port.

The first recorded wreck at or near the heads was a schooner of 50 tons named 'Prince Albert' in 1840. She was lost with all hards 2 miles east of Pt. Nepean.

The best known of reefs or rocks at the heads is probably 'Corsair Rock'. First gazetted in 1853, it was known of long before but never named. There has been many a ships career disastrously ended due to its fateful location.

The 1850's brought a large increase in ships using the heads on route to Melbourne due to the gold rush. 1853 going down in history as the worst for casualties, no fewer than 20 vessels being wrecked or stranded.

Among the most tragic wrecks were the 'Cheviot' in 1887, and 'Sierra Nevada' in 1900 with a total of 58 lives lost between the two.

In all well over 130 vessels have been stranded, or totally wrecked at the heads, and the number of lives lost in the vicinity of 125.

Some of the vessels that have come in contact with 'Corsair Rock' alone include:-

Ontario 1853, Prima Donna 1853, Marie 1853, Lightening 1862, Eliza Ramsden 1875, Antionette Cezard 1854, Janet 1855, Australia 1904, Time 1949, Sea Witch 1968, George Tompson 1882, Campbell 1914

D. HENTY-WILSON

MEDICALS

The following club members do not have current medicals. These names will be continuously published until medicals are obtained. Anyone who has a current medical and whose name appears here should present a photocopy to the Medical Officer, Neil Garland or the editor.

Andrew Benson
Brian Baldock
Jay Cody
Max Dawson
Carol Croxford
Frank Coustley
Phil Jefferson
Lesley Gillies
Bill Jansen

Rob Adamson
Ian Cockerell
Leo Canteri
Dave Henty-Wilson
Alan Cutts
Ken Callec
Craig Dunster
Frank Herbert
Carl Jironc

B. Kelly F. Lottner Mick Jackieu N. Knight Carey Marshall P. Matthews John Noonan Jenny Reynolds R. Koper Peter Smith John Smibert Max Synon Gordon Ryan Barry Truscett Peter Smith (Ace) M. Richardson Jim Turner Roma Waldron Amanda Wookey Paul King Wayne Hatch

Dave Mcore Dave Hurle Neil Garland John Marshall M. Matthews D.J. McBean Pat Reynolds Jon McKenzie Milton Robinson Peter Saunders Paul Sier Peter Oakley Clara Oakley Bob Scott Bruce Soulsby Paul Tipping Trevor West Graeme Hamilton Alan Whiteley Lindsay Cole Rob Woolley

If any name appears for more than 3 months it could jeopardise the diver's position on a dive, subject to the dive captain.

KELD HEAD: AN UNDERWATER CAVE SYSTEM (Cont'd.)

The Stuttgart man was not deterred, and he returned in July in a further bid by the trio to find the missing link between Keld Head and the Kingsdale Master Cave. The Englishmen had already narrowed the gap by diving from the Kingsdale Master Cave. Both ends they were convinced, should virtually overlap. This time Jochen was to dive third. Ironically, he was to be a spectator when the connection was made.

Oliver dived first, passing the constriction - aptly named Dead Man's Handshake - without incident until he was 3,600 ft. from the entrance of Keld Head. He turned round when his air supply reached the safety margin. There was no obvious indication of the elusive passage from the Kingsdale Master Cave; the visibility was only 5 feet.

Geoff swam to the same point and, crossing the 25 ft. wide tunnel,

he by chance encountered the line he had laid two weeks previous from the other end.

All that remains is for the cave divers to swim from one end to the other in a complete through trip. When they do so, hopefully this autumn, Oliver and Geoff will establish a new world record for a dive from one cave to another. This underwater cave, coupled with side passages, comprises the longest of its kind in Europe - two miles of submerged tunnels. The link has also increased the length of the West Kingsdale System to seven miles.

The connection is only part of a project lead by the two men, which has received support and a £250 grant from the Royal Geographical Society. There is much left to map and explore, but they have overcome great mental, physical and technical barriers to realise the 50 year-old ambition of Reg Hainsworth, the doyen of Craven potholers.

In 1925, Reg and other members of the Gritstone Club first laid seige to Keld Head. Ordinary swimming did not take them for inside the entrance, so they lowered the level of the pool by exhaustive spade work. They gained only a few yards. In the 1930's they summoned divers from Somerset, who were led by Graham Balcombe. Wearing the primitive equipment available at the time, he dived into the cave for 110 ft.

With the development of the aqualung, the technical problems of diving greater distances were overcome. The mental attitude - the thought of being alone hundreds and even thousands of feet from safety, and totally dependent on equipment - was the remaining barrier.

Keld Head began to succumb in 1970 when Mike Wooding, of Settle, pioneered the first of many long-distance dives in this country by swimming into the cave for 1,150 ft. In October 1970, Alan Errith embarked on his first-ever cave dive - at Keld Head. His body was found in July, 1975; it lay 150 ft. up a side passage near the entrance.

When Oliver and Geoff diverted their attention to the enigmatic underwater cave system, they prepared themselves mentally and technically for diving long distances. They designed and constructed special harmesses to carry the heavy air cylinders, and made special housings for their cameras. They are now capable of diving enormous distances and have established cave diving records which may well be unassailable in this country.

"REMEMBER S.D.F.V. DINNER DANCE"

Venue:- Oakville Receptions

Cnr. High Street & Oakover Road

Preston

Date:- 14th September, 1979

Time:- 8pm to 1.30am

Cost:- \$37.00 per double

The evening is ALL INCLUSIVE, all the food, wine

and song you can handle

Seating:- Tables are to be arranged in groups of ten

* Tickets are available from Fearless Fred on 211-0708 or August General Meeting

* Final date for purchase and payment of tickets is the August General Meeting (August 15th)

Remember as the V.S.A.G. is not intending to hold a formal (or informal) dinner dance this year, this may be your only opportunity to dance with the diver of your dreams

S.D.F.V. RAFFLE

Remember all books and monies are to be returned by August 31st. If possible make the return date the August General Meeting (August 15th).

If you can't sell all your tickets return them, but don't hold on to them because someone else could sell the rest.

If you have any problems in regard to the tickets ring Fred Ferrante on 211-0708 (Home).

ENGINEERS TAKE ON DIVERS ROLE (Part 1)

An engineer working 10m below the water surface and about a kilometre offshore was taking a seabed sample. He was knocking a tube into

LIST OF CLUB MEMBERS' ADDRESSES & TELEPHONE NUMBERS FOR POOLING CARS ETC. ON CLUB DIVES & FUNCTIONS.

ADAMSON, Rob	McLeod	459-9598	
CANTERI, Leo	Ringwood	870-2162	
CODY, Jay	Templestowe	846-1313	
CARROLL, Dave	Williamstown	391-2211	(BH)
CROXFORD, Carol	Balwyn Nth	857-7228	
COLE, Lindsay	Highett	95-3015	
CUTTS, Alan	Blackburn Sth	877-3287	
FERRANTE, Fred	Malvern East	211-0708	
HATCH, Wayne	Cheltenham	550-6504	
HENTY WILSON, Dave	Ivanhoe	497-3976	
JEFFERSON, Phil	Ashburton	25-2562	
KING, Paul	Avondale Heights	317-8782	
GARLAND, Neil	Prahran	529-5484	
LIDDY, Justin & Cindy	McKinnon	578-2310	
LYNCH, Brian	Dandenong Nth	795-2834	
MASON, Wendy	Malvern East	211-0708	
McKENZIE, Jon	Murrumbeena	56-2204	
REYNOLDS, Pat	Glen Waverley	232-5358	
ROBINSON, Milton	Malvern	20-8133	
JIRONC, Carl	Parkville	347-4110	
GILLIES, Lesley	Carlton	387-2027	
MOORE, Dave	Mulgrave	547-2791	
SAUNDERS, Peter	Sunshine	397-8033	
SIER, Paul	Balwyn Nth	859-1614	

ELECTION OF DIRECTORS 1979-80 NOMINATION FORM

We, the undersigned, being full members of the Victorian Sub-Aqua Group, hereby nominate:

for the position of Director.			
Signed:	Date:	/	/
Signed:	Date:	/	1
Ι,	here	еву а	ccept the
above nomination for Director of the Group.			
Signed:	Date:	1	1
ELECTION OF DIRECTORS 1979	9-80		
NOMINATION FORM			
We, the undersigned, being full members of Group, hereby nominate:	the Victo	rian	Sub-Aqua
for the position of Director.		-311	
Signed:			
Signed:	_ Date:	/	/
I,			accept the
above nomination for Director of the Group.			
Signed:	Date:	1	1

ELECTION OF DIRECTORS 1979-80 NOMINATION FORM

We, the undersigned, being full members of the Victorian Sub-Aqua Group, hereby nominate:

for the position of Director.	
Signed:	Date: / /
Signed:	Date: / /
I,	hereby accept the
above nomination for Director of the G	roup.
Signed:	Date: / /
ELECTION OF DIRECTO	RS 1979-80
NOMINATION F	
We, the undersigned, being full members Group, hereby nominate:	s of the Victorian Sub-Aqua
for the position of Director.	
Signed:	Date: / /
Signed:	
I,	hereby accept the
above nomination for Director of the G	roup.
Signed:	Date: / /

GOULDING, John	Hawthorn	819-1739
SMIBERT, John	South Yarra	267-3439
SMITH, Peter	Pascoe Vale	306-5053
OAKLEY, Peter	Malvern East	509-4655
SYNON, Max	Thomastown	465-2812
TIPPING, Paul	Carlton	387-2027
TIPPING, Tony	Deepdene	80-4956
TRUSCOTT, Barry	Frankston East	783-9095
WALDRON, Roma	Hawthorn	818-7596
WHITELEY, Alan	Templestowe Lwr	850-2801

THE RESERVE OF THE PARTY OF THE

the sand with a hammer when the floor erupted and, in a swirl of water and sand, a stringray shot out from under the core.

Another engineer was doing a similar job offshore from Forster on the north NSW coast when he was told, from the surface, that a killer whale was circling the area. He was told to stay on the seabed and remained there for about 15 minutes until the whale went away.

Two engineers working together on the seabed were attacked by an electric ray and the sting knocked one of them down.

These are some of the more unusual hazards that face an elite band of engineers in NSW who, as part of the coastal branch of the Dept. of Works, have become engineer divers. "We also get the occasional nibble from a passing eel," said Angus Gordon, engineer in charge of the coastal investigation section.

Gordon is one of about 12 scuba diving engineers who because of their job and a natural interest in the sea have extended their knowledge from theoretical to practical.

Behind the excitement and glamour of adventures under water, serious engineering work takes place. The team is concerned with beach erosion, currents and seabed movements for the whole NSW coast.

One of the largest jobs undertaken was a study of the beaches and sea movements in the Byron Bay to Hastings foint area, just south of the Queensland border.

Projected theories on sea and sand movements contained anomolies which could not be fully understood. A land-based study showed and being carried away from the beach near Byron Head but it was not being redeposited in the beach north of the Head as expected.

A team of divers was able to show that the sand was being taken away by a strong easterly current and deposited on a bank about a kilometre offshore.

A major job at present is the Coff's Harbour erosion study along about 30km of coastline. The local council has sought the Department's advice before approving building development along the shore.

The investigation section of the coastal branch is studying sand movement to find out where and at what rate erosion is occurring. This investigation includes diving to take core samples from which geologists and engineers can see how old or new the various seabed layers are.

Later in the year divers will try to identify and plot offshore reefs which could also have an effect on beach erosion. At the end of this 2 year study, the geological information, computer studies, details of tides and currents, storm data and aerial photography will form the basis of a report which will then go to the local council and other authorities. From this report the council will be able to reach a conclusion on future coastal management.

The new Coastline Protection Bill which came into effect on July 1 now gives the Minister for Public Works, through the coastal branch, authority to control development in a defined coastal zone of NSW.

A similar investigation is nearing completion at Tathra on the NSW south coast.

Another aspect of the branch's work involves supervising and inspecting underwater construction of slipways, bridge piers and boat ramps. This is carried out by the branch's fishing, port and recreational boating investigation section.

It is these types of investigations where theory can be tested by practice that make diving a valuable additional tool to the coastal engineer.

Another aspect of the coastal engineer's job is determining the history of an area. One method of doing this is sending engineer divers to the seabed to collect core samples. So far there is no more effective method than by knocking a tube into the seabed with a hammer. The engineer's knowledge allows him to decide from where the sample should be taken and while on the seabed he can watch for other indications to help in classifying the results of the study. As a trained observer looking for an answer, bottom ripples, shell beds and types of sand can all indicate what is happening on the coast and in river estuaries.

Usually one of the diving team is a geologist from the Dept. of Mines who helps with geological history. Most dives take place in water between 10 and 20m deep and up to 2km offshore. About every second week throughout the year a team of divers can be found somewhere off the coast.

These activities came about as an extension to the normal work of the coastal division engineers. Previously they had been able to build conceptual models of study areas. Now by diving and taking a close look at the seabed, they can test their theories.

To become an engineer diver the two main qualities needed are an

aptitude and a temperament for working under pressure, in both senses of the word, and an ability to cope with the unexpected.

Mike Nolan, a technical officer and diving supervisor, is the man responsible for giving the engineers their dual role. With Bandu Sena, the diving supervisor for the Dept. of Public Works and a man with 20 years experience underwater, he works out the aspiring diver engineer.

When an engineer comes into the section he is asked if he wants to dive. Many of them have already gained rudimentary knowledge from simple courses run by shops which sell equipment. From this starting point, Nolan and Sena use work situations to extend the knowledge of the new divers.

There are always two divers down together - one being more experienced than the other. One may be a geologist or a technical officer. A life line links them to a \$30,000 5.4m Sharkcat or other small craft on the surface. The Sharkcat is a twin-hull craft with twin 96kW motors to enable it to work through surf if necessary. On board is sophisticated equipment to enable it to be positioned within a metre of the study point.

There is no verbal contact with the surface during the half to threequarters of an hour of the average dive but a complex system of signals through the lifeline enable some communication. Divers may soon be equipped with radiophones.

During an underwater investigation, the diving team can work anything up to a 16-hour day. A six-man team made 120 dives into 6m of water off Cronulla where moving sand was dyed for easy tracking. In another probe a team spent 16 hours in Broken Bay in 60m of water recording currents and tides.

The equipment worm by the divers depends on where and how deep they are. A single scuba tank is sufficient for shallow water down to about 15m. Beyond that a twin tank is used. For depths down to 60m low or high pressure compressed air is supplied by lines from the surface vessel.

Although divers, because of their versatility and their ability to recognise factors outside the immediate area of investigation, are unlikely to be replaced the Dept. is looking at augmenting some studies by using underwater television and side-scan sonar.

But television has limited use as its angle of view is very narrow

compared with the human eye and the necessary lighting creates extra problems, such as scatter and unwanted reflections. "There is little doubt that the main tool will remain people because they are so flexible," said Gordon.

Submitted by - D. CARROLL

DIVING EQUIPMENT FOR SALE

- 1. 1 72 cu.ft. Aluminium Tank with Backpack & boot (in test)-\$150
- 1 Aquarius Regulator (completely serviced) 1st & 2nd stage perfect working order_\$65
- 3. 1 Seatec BC Vest co² bottle; scuba feed; easy oral inflation (in excellent condition)-\$75
- 4. 1 pair Healthways Scuba masterfins (open heel fin-as new)-\$20
- 5. For the diver with everything here's a bargain1 Trombone in good condition (N.B. has been waterproofed)-\$50
- 6. 1 Twin Hose Aquamaster Regulator-\$90
- 7. 1 Cressi, full face mask-\$20
- All inquiries about the above equipment contact Fearless Fred A.H. 211-0708
- . If you have something to sell and want it advertised, make up a list and give it to Fearless, because something you don't want may be needed by someone else.

FOUND - 1 pair Sunglasses lost on Australia Day Weekend this year.

FLOTSAM & JETSAM

This must be one of the quietest winters dive wise that I have yet experienced with the VSAG.

Apart from the magnificent charter boat dives in the Graveyard area conducted under the watchful eye of Geoff Naylor, the other scheduled dives have rather been non events - Portsea Hole, cancelled; The Wall, cancelled; Cerberus, cancelled. Who was it that only a month or two ago said how lucky we were in Melbourne to be able to find sheltered seas in almost any wind condition. Oh well, weather forecasters are not known for their accuracy!!

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Whilst two huge supertankers spew thousands of tornes of precious oil into the Carribean waters off Tobago after colliding in fog, one must question how such a disaster could happen in these days of sophisticated navigation.

If we take other recent ship collisions, the major contributing factor has been human error.

There was the time that Dave Moore's Glastron rammed Bazza's boat amidships, and of course the near disaster when Max Synon in command of his 15 foot aluminium dive boat collided with the good ship "Mirrabooka".

The annuals of sea history are full of disaster and barely a week would pass that is not an anniversary of such disaster. By their very nature disasters at sea are usually without warning and are swift and deadly in creating their grizzly moments of death and destruction.

One such disaster that although swift in its conception prolonged its agony upon its victims for 4 months, had its anniversary recently. June 4th 1979 marked the 250th anniversary of the wrecking of Dutch East India Merchant Ship "Batavia" at the Abrolhis Islands some 300 miles north of present day Perth.

The ship took several days to break up in the pounding and relentless surf, and thus enabled most of the ship's crew and passengers to reach the relative safety of the Islands. But here the real disaster was to start. On the departure of the "Patavia's" commander in the ship's longboat to seek rescue nearly 2000 miles away in Java, the crew mutineered and reaked havoc, murder and rape on those whom they so desired.

The wreck of the "Batavia" was first dived later in the year of 1629 when Commander Pelsaert returned to the Abrolhis to rescue those who had entrusted themselves to his care. Much of the fortune she was carrying was recovered, yet still more has been recovered since the remains of the "Batavia" were relocated exactly 334 years later on June 4th 1963 by West Australian diver Max Cramer.

Since then the West Australian Museum has undertaken a complete archaelogical project on the wreck site and has preserved this gruesome part of Australia's history.

Glad to see that "Skindiving in Australia and New Zealand" is maintaining its usual high callibre of reading material - even if

it does have to pinch articles from "Fathoms".

Congratulations to "Ferret's Friend" in winning the Jay Cody literary award. The winning article written about the VSAG golf day was brief yet highly amusing and very fitting for a ferret to write about holes!

July 26th marked an event in the history of Australia, which is not likely to be recorded in the What's What or School Boy's Almanac. but for one of our members it was a very important day.

At 12.40pm at Scots Church in the city. Brian Lynch became a dinky di Aussie.

When Lynchy came to Australia in 1972 he was thinking of buying a boat and living on board, so that at any time he could slip his moorings and sail back to his beloved England. As time went by he peddled his way around Victoria involving himself with Australians and their customs, things started to look better for him. He joined the Victorian Sub-Aqua Group, began drinking beer and watching pornagraphic movies. Not content with this he snatched one of our womenfolk. bought up in real estate, started to win races, and above all provided some little Australians.

The cheek of this bloody little pom!! Well that's now all in the past, and just between Aussie to Aussie. "Welcome to the ranks of manhood." I'll now dive with you anytime, but then, I always did, because I always thought you were a bloody Irishman!!

LYLE B. DAMNED

Here are some more of those "How many times have you heard" questions complete with answers.

How do you regard the much discussed intelligence of the bottlenosed dolphin?

Trainers find that captured bottlenosed dolphins have a marked ability to learn. to imitate and to obey. Many researchers, however, argue that this ability is not a definitive indication of "intelligence", which raises the question: What do we mean by intelligence? If we base our criteria purely upon anatomy, we can say that the dolphin comes right after man on the scale of evolution because the brain of a dolphin weighs more than that of human (1700 grams for the dolphin, and about 1450 grams for man). Intelligence in the sense that the term is generally accepted, however, is partly

a product of social and cultural environment.

Dolphins do communicate a wide range of expression to each other, and they do have a social sense: members of a school have often been observed coming to the aid of an injured companion to help and support him. They also love to play, which presupposes the existence of a well developed spirit of invention and is sometimes considered as one of the manifestations of intelligence. Other animals exhibit similar behaviour, however, and if dolphins are really more intelligent than other animals, as many observers believe, this has not been scientifically demonstrated yet.

Are there any new developments concerning communication between dolphins and humans?

People have known that dolphins communicate with each other for a long time: Aristotle wrote about the phenomenon 23 centuries ago. In fact, most marine mammals can communicate with other members of their species by producing a series of whistles and squeakings (cataceans have no vocal chords), but man has yet to find a "Rosetta Stone" that would give us a key to what any of these sounds might mean. Also, to date, all communications between man and dolphins has been programmed and limited by the conditions of captivity.

The various experiments that have been done to try to communicate between men and dolphins can be divided into three general categories: those which try to teach dolphins English; those in which the researcher tries to learn "dolphinese", and those which try to create a whistled language to use as a basis of communication. Each of these experiments is interesting in its own way, but none has been successful in establishing spontaneous "vocal" communication between the trainer and the dolphin.

Dr. John Lilly, an American researcher, recently proposed that the minds of dolphins "...operate with acoustic analogs, even as our language is primarily based on visual analogs. They "see" their environment and one another with sound." He hopes that with the help of computers, we will be able to start understanding how these "sound images" might relate to the "visual images" of man, so that ultimately we could start breaking down the communication barrier between the two species. However, such investigations have not started.

What do you think of man's use of sea mammals to work for them?

Included in the ancient tradition of the "bond" between people and dolphins are many stories of a working association between the

two species. Some people believe, for instance, that the ships of ancient Crete had fish tied to their bows so the dolphins would pilot them through dangerous waterways; and there are many stories of dolphins driving fish into the nets of human fishermen. The Cousteau team documented one such working association along the coast of Mauritania, in Africa, where dolphins "herd" mullet fish into the nets of native fishermen while taking their share. The whole scheme worked like a tacit "profit sharing association." If fishermen accidentally caught a dolphin in their nets, the animal was released immediately.

To work in association with a free animal, and to capture a free animal to train to work for you are two different concepts. Unfortunately, most experiments in the past 20 years have included the capture of dolphins to be trained as entertainers by private entrepreneurs, or as messengers or carriers of tools by navy trainers. Although it would be impossible to argue that these trained dolphins are "happy" or "unhappy" in captivity, in general we believe that man should not jeopardize the life of any animal for purposes which contribute nothing to the very survival of our species.

It often happens in dolphin hunts that animals are injured. Moreover, after the hunt three or four of every five dolphins captured are returned to the sea because the animals refuse to eat in captivity, or because the animals are considered too old to train. Then, many of the selected dolphins become ill, as these animals seem especially susceptible to human disease such as influenza and hepatitis, caught from visitors. Exhibitions of captive dolphins may be spectacular, but they are anti-educational, as they display unnatural behaviour, and do not justify such losses of life.

There is a common belief that the US Navy is training dolphins to attach explosives to the hulls of enemy ships. It is our understanding that this story was originated by a newspaper reporter in California in 1962, and that the reporter was speculating on why the Navy would be interested in dolphins. The Navy's response is that they are primarily interested in studying the hydrodynamics, the echolocation systems, and the diving physiology of dolphins so they can apply the principles in the design of naval equipment.

Is it true that the harvesting of yellow-fin tuna kills a vast number of dolphins?

For some unknown reason, the spotted dolphin and the spinner dolphin often travel in association with schools of yellowfin tuna. The

dolphins swim at the surface, and the tuna swim, at the same speed beneath the dolphins. This behavioural pattern has been known by sailors since antiquity, and in the eastern tropical Pacific fishermen seeking commercially valuable tuna have looked for dolphins which they could see from their ships.

Traditionally, these fishermen used hooks and lines to catch tuna. Then, in the 1940's, the fishermen began using cotton nets for the purpose. The cotton nets tore easily, resulting in the escape of great numbers of tuna and dolphins, but between 1956 and 1961, the American tuna fleet was completely modernised and strong nylon nets replaced the cotton ones. It was the use of these nylon purse nets that started to cause the deaths of hundred of thousands of dolphins each year.

When a school of dolphins was sighted by tuna fishermen off the coast of California and to a lesser extent, Mexico, Brazil, Peru and Canada, the ship was stopped and small boats were lowered. The speedboats "herded" the dolphins into a tight circle, on the assumption that the tunas below would follow the dolphins movements. and a heavy net was set around the whole group. Then the net was closed, it captured the dolphins and tuna together.

When this technique was first employed, the fishermen did not know how to get rid of the dolphins. They hauled them aboard, separated them from the tunas, and then threw them back into the sea, dead or injured. However, this effort required a good deal of time and work (to move a 300 or 400lb. dolphin whether it is dead or alive, is not an easy task), and it did not reduce the death rate of dolphins. The tuna industry has subsequently experimented with a number of modifications on their fishing techniques, but so far the results have only been moderately successful: in 1975, an estimated 134,000 dolphins were killed during the harvest of tuna.

Submitted by - Prof. Noit All

TIP'S TIT-BITS

What the hell has happened to the morale of VSAG members in the past 12 months? This year we've been graced with the mildest winter and smoothest seas I can recall for many a day but, alas, there hasn't been a private dive amongst the forefront of our members since before Easter. Admittedly the club tends to have a planned dive every fortnight during these months and a few Sundays have been

unsuitable for the particular venues but why not swap locations or the Saturday night like we used to? e.g. if there's a 4 metre swell and a 30 knot wind at Pt. Lonsdale for several days, instead of cancelling the Holyhead dive and doing nothing, what's wrong with waking up Dave Carroll at midday and going in off the shore at Williamstown - besides you may even crack it for a feed of baked beans on toast for breakfast:

I do suppose, however, that a few members have improved their golf scores since they gave up diving - Goulding has been beating Tipping and Bazza even tied with Marie recently on the second nine. One bloke is so obsessed with winning the Christmas Open at Royal Narooma that on country business trips he practises his shots by belting oral contraceptive pills around his motel room with thermometers!

Just a few weeks back several members shared quite an experience by diving the Rotomahana a passenger steamer of about 1800 tons which was scuttled and sunk off Barwon Heads in 1928. Unfortunately with only about 13 minutes bottom time at the 130 foot mark one doesn't have too much time to see the entire ship properly. It was that same fateful day that Johnny Goulding outright favourite for this year's Diver of the Year trophy met with disaster and suffered a severe injury which could have diabolical consequences (he's getting married soon). He was unable to dive, but seeing he sent his \$10 for the boat trip, the committee decided that he would be awarded points towards this years award!

TTB'S ADVERTISEMENTS: One 9' x 9' tent, built in floor, single centre pole and steel frames complete with ropes and pegs less than 3 years old a bargain at \$75 - Contact 80-4956 for one night free trial.

Room to let: fully furnished; use of kitchen living area etc., 2 garages ideal for boat-owner; respectable upper middle class area (safe liberal small L seat - if there is such a thing); convenient to public transport; \$25 per week contact 80-4956 - Males need not apply, likewise females except 20-30 years old!

TRUK LAGOON: Would those 6 members please bring cheque for \$200 each made out to Always Travel to the August General Meeting - looks like we'll have to get the other 4 from other clubs!