

FATHOMS

Registered for posting as
a publication category B
Reg. No. VBH 2101

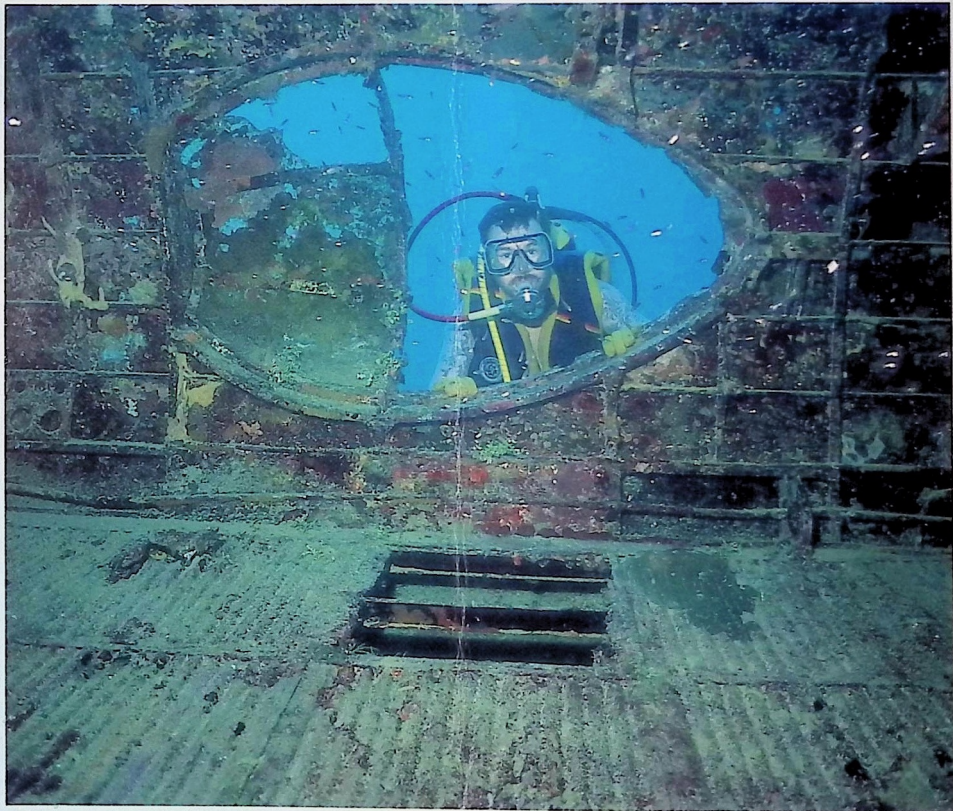
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Safety in Diving

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VSAG

JUN-JUL 92

VICTORIAN SUB-AQUA GROUP

VSAG

Victorian Sub-Aqua Group. Box 2526W, G.P.O., Melbourne. 3001 Australia

These magnificent photographs are all examples of Des Williams' work taken on the VSAG trip to Truk Lagoon 1990.

I am sure you will agree that they are all outstanding, so good in fact that I couldn't decide what to keep or reject, so I've used the back cover as well and reproduced them all.

*Yours in Diving,
Alex Talay*



Front Cover:

Chris Llewellyn at Port-Side Gun Port. Betty Bomber Wreck. Truk Lagoon.

Back Cover:

1. Alex Talay with Ships Telegraph inside bridge of "Nippo Maru" Truk Lagoon.
2. Chris Llewellyn with lamp on "Nippo Maru" Truk Lagoon.

3. Chris Llewellyn on bridge of "Nippo Maru" Truk Lagoon.
4. Stern of "Gosei Maru" Truk Lagoon, divers from left to right: Neil Medhurst, Justin Liddy, Pat Reynolds & Bob Scott (standing), Ross Luxford, Andy Mastrowicz (back)
5. Alex Talay inside fuselage of Betty Bomber Truk Lagoon.
6. Stern mast of "Gosei Maru", Truk Lagoon divers left to right Chris Llewellyn, Alex Talay, Justin Liddy, Pat Reynolds and Neil Medhurst.

The Victorian Sub-Aqua Group was founded in 1954 and has continued as a strong and active diving club since that time. It is incorporated as a non profit company and has no commercial affiliation with any organisation. VSAG is committed to the preservation of independent diving freedom. It believes that divers must take a responsible attitude toward the protection and preservation of the marine environment but as a general rule is opposed to legislative measures that place prohibitive limitations and restrictions in diving activities.

Local diving is organised on a bi-monthly basis, generally out of participating member's boats. This is supported by weekend camps, charters to more remote locations and annual overseas trips. The club has a considerable investment in diving equipment. Regular functions provide an opportunity for members, friends and families to socialise. Each month VSAG meets at North Melbourne Football Club where bar facilities are available prior to and after the General Meetings. Visitors are very welcome - smart casual wear essential.

FATHOMS

Official journal of the Victorian Sub—Aqua Group

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Next general meetings

Thursday 21st June 8.00 p.m.
Thursday 16th July 8.00 p.m.
North Melbourne Football Club,
Fogarty Street, North Melbourne.

Next committee meetings 23rd June - Doug Catherall's
Place.
21st July - John Goulding's
Place.

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EDITORIAL



If in recent months, you've been wondering why your Fathoms has been late, spare a thought for the staff of this very fine publication, who have been up to their eyeballs with work.

In so far as the Editor is concerned, yesterday I worked for Australian, and tomorrow I'm part of Qantas - (damn fine airline!).

Seriously though, I cannot recall a time when work pressures have been so great, and I know that both Alex and John have also had a lot on their plate.

The last issue of Fathoms was a bumper edition, and this one is a bit thin. So I'll again make a plea for more articles. The more you (the members) contribute to Fathoms, the easier it is for me to prepare it for printing and publication.

In this edition, we include media reports of confiscated artifacts. At the time of writing, the matter is still to come before the court, so it would not be prudent to comment on the reported incident. However, I understand that the Authorities may well tighten the laws relating to the taking of relics and artifacts, which could result in the declaring of all shipwrecks as historic. We will endeavour to keep you informed on developments as they occur.

The Club annual subscriptions are due in June, and you should receive your reminder notice with this issue of Fathoms.

The Committee has decided not to increase subscriptions this year, although there is every likelihood that the income received through subscriptions will not cover the cost of producing Fathoms in the year ahead. In the past we have tried to fund Fathoms from the annual subscriptions, however the Committee feels that some relief from imposing additional cost increases (no matter how small) is warranted at this time.

The Committee has chosen Forster on the N.S.W. Coast as the 1992/1993 Christmas/New Year diving venue. Mick Jeacle has prepared an article about the location, which promises to open up some great new diving experiences for us.

Forster has been considered in the past, but has been overlooked in favour of other destinations.

This year, we looked at such places as Coffs Harbour, Ulladulla and Jervis Bay. Whilst we know the diving in these areas from previous visits, none of these places were able to accommodate our accommodation needs.

So for people interested, please read Mick's article and start making plans.

John Goulding
Editor

V.S.A.G. COMMITTEE NEWS

- * Cash reserves of V.S.A.G. as at 26th May was \$11,599.77.
- * Charlie Brincat will take over as Temporary Secretary from Sally during June and July.
- * The options for the Christmas/New Year Trip were discussed:-
FORSTER/TUNCURRY - N.S.W. was finally selected.
- * The Committee agreed to maintain the annual subscriptions at \$45.00. However, joining fees would increase to \$30.00.
- * 2 new members were accepted:-

Geoff Higgins

Telephone: 499 7362

Bill Maher

Telephone: 796 6079**

V.S.A.G. CHRISTMAS TRIP

by Mick Jeacle

Well, the Christmas destination for this year has just been finalized, and I am pleased to advise that 10 sites have been booked at Smugglers Cove Holiday Village on beautiful Wallis Lake, Forster, N.S.W.

Forster and Tuncurry are delightful small towns, sandwiched between sparkling clear lakes and the Pacific Ocean. It is due to the fact that the towns are surrounded by water, that mild temperatures are the order of the day almost all the year round and the rain falls mainly at night, which is indicative of the semi-tropical climate that we should enjoy. Convinced?

Then how about a few of the other features of the place:-

- Diving - second to none in N.S.W.
- Extensive lake system offering all kinds of water sports.
- Marvellous beaches, rock pools, etc.
- Fantastic 4 W.D. rain forest tracks, mountainous waterfalls.
- Great lakes, aquatic and leisure centre, amusement parks (for the kids).
- Extensive national parks offering bush walking, etc. etc.

The list goes on and on, and on the fact that this destination offers V.S.A.G. members and families far much more to do than any other place I have been to in my time with the Club.

Forster is situated a comfortable 4 hours drive north of Sydney, so to do it comfortably, I would suggest an overnight stay somewhere on the way.

Details regarding diving, boats, etc., are yet to be firmed up, as is the cost of the sites (around \$18.00 for 2 people), and these will be advised in due course.

Those interested in coming should advise me as soon as possible, and be prepared to pay a \$50.00 deposit to secure your site. Telephone: (059) 712 786.

Maps, brochures, etc., will be available for inspection at the General Meeting.

DON'T DELAY - BOOK TODAY.**

WILSONS PROMONTORY BOAT RETRIEVAL

by John Goulding

I would like to take this opportunity to record the Club's appreciation to Ross Luxford, for the boat retrieval procedure at Tidal River.

This is the second year that we have adopted the current methods of boat/trailer retrieval by rope and snatch line. It was Ross who secured all of the necessary equipment last year, and through his efforts has made this once very onerous task, a relatively simple one.

His generous use of his 4 W.D. Nissan Patrol, was also most welcome and appreciated.**

MEDIA WATCH



POLICE yesterday seized hundreds of stolen maritime relics in four early-morning raids.

The items, worth thousands of dollars, had been stolen from some of Victoria's best-known shipwrecks, including the *Loch Ard*, the *SS Gulf of Carpentaria* and the *Schomberg*.

Four men were being questioned last night.

Police search and rescue squad members and Prahan detectives raided four properties in

Shipwreck relics seized in raids

Dandenong, Traralgon and Hazelwood.

"They obviously knew what they were doing," Sen-Constable Kent Clifton-Bligh, of search and rescue, said.

Relics are protected under the Historic Ship-

wreck Act and police said they feared yesterday's haul might just be the tip of the iceberg.

The recovered items are expected to be handed to the Marine Archaeological Survey.

Mr Kieran Hosby, of

● Sen-Constable Kent Clifton-Bligh, of the search and rescue squad, with some of the relics seized in yesterday's raids. Picture: ELLEN SMITH

the survey, said the thefts were damaging the attraction of Victoria's shipwreck coast.

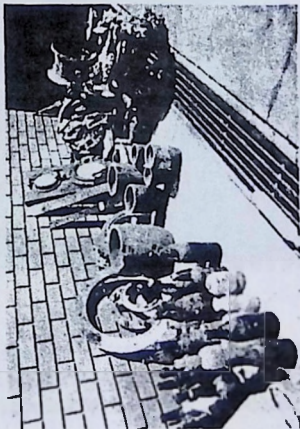
"They belong in the ocean, in their own underwater museum," Mr Hosby said.

— GLENN CONNLEY

POLICE CONFISCATE WRECK BOOTY

Dateline: 13 April 1992, St Kilda, Victoria

In simultaneous early-morning raids on four separate residences near Melbourne, police recovered marine artifacts that are alleged to have been illegally removed from more than a dozen Australian shipwrecks over the past 20 years.



Acting on a complaint continuing and charges may be laid in connection with from owners of a wreck, the Commonwealth Government executed search warrants on properties in the Commonwealth Government's Historic Shipwrecks Act of 1976, the State Government's Historic Shipwrecks Act of 1981, or

the Commonwealth Navigation Act 1912, to name a few.

More than 100 items, some meticulously turned into furniture, were recovered in three of the raids. The items included pieces that were tentatively identified from a number of destinations, including the SS Gulf of Carpentaria, SS Cambridge, Sierra Nevada, George Roper and the Loch Ard. Other shipwrecks that may have been involved are the City of Edinburgh, Iron Crown, Pe-

not touch" basis. The act provides for penalties of up to \$10,000 and/or five years in prison, or up to \$50,000 for an organisation.

Australian shipwrecks and relics that are not declared as Historic Shipwrecks are protected under the Commonwealth Navigation Act 1912. This act requires that finders of wreckage notify the Minister of their find. Shipwrecks do not belong to the individuals who find them. After a wreck is discovered, the Commonwealth Receiver of Wreck takes charge of any

triana, Loch Vennachar, Euro, Gellwood, Inverloch and the Romeo.

According to Commonwealth Government Department of the Arts, Sport, Environment, Tourism and Territories: the Historic Shipwrecks Act of 1976 states, in effect, that declared wrecks are to be protected, not be damaged, interfered with, or removed, unless a permit has been granted. The act is in place so that declared wrecks can be used and enjoyed by as many people as possible on a "look but do

wreck in Australian waters. The owners may claim this wreck and cargo within one year, otherwise the items become the property of the Commonwealth.

For more information about Australian shipwrecks, contact The Secretary, Department of the Arts, Sport, the Environment, Tourism and Territories, GPO Box 787, Canberra, ACT 2601. In Victoria, contact The Director, Victoria Archaeological Survey, PO Box 262, Albert Park, Vic 3206.

Scam wins jail for abalone's 'Mr Big'

A MAN described as the "Mr Big" of a \$2.4 million abalone poaching and export racket has been sentenced to 12 months' jail and fined \$50,000.

Magistrate Mr Roger Frank, yesterday described the scheme as an elaborate enterprise established for large monetary gains.

Mr Frank said Graeme Stuart Fidler had sought to gain huge profits from the scam and had no regard for Australia's natural resources.

Fidler, 48, of Larne Ave, Donvale, pleaded guilty to 26 counts of falsifying

who wished to dive legally paid huge costs, with a licence to dive for abalone costing \$1.2 million.

The court heard that at the time of the scam abalone was worth between \$40 and \$45 a kg and the scam operators provided at least 134 kg of abalone to SFC virtually every day for a year.

Mr Frank, suspended six months of the bail term. Fidler's lawyer, Mr Jacob Fronlistas, said his client would appeal. Fidler was released on bail to appear at the County Court at a later date.

— ANITA QUIGLEY

Commonwealth documents, 12 counts of forgery and 22 counts of uttering. The Melbourne Magistrates' Court heard that Commonwealth fish transfer certificates were forged by Fidler, in order to mislead a legitimate buyer — SPC Pty Ltd.

The court heard that abalone stocks were controlled so Australia did not run out and only licensed divers could provide abalone to legitimate exporters such as SPC.

Mr Frankish said those

War graves

BRITISH divers are being warned not to desecrate what the Japanese say is their biggest collection of war graves in the South Pacific.

The plea, from Japanese war veterans' groups, came as a diving team began an expedition in Truk lagoon on Sunday to chart the wreckage of the Japanese 4th Fleet, which was destroyed by the Americans in February 1944.

The remains of thousands of servicemen, along with at least 60 warships and 250 aircraft, lie in water between 30ft and 160ft deep.

Truk forms part of the eastern Caroline Islands, 2000 miles south-east of Japan.

Travel arrangements for the team were made by English company Regal Diving, which advertises its \$5000-a-head package with the slogan: "Dive the legendary ghost fleet of Truk lagoon."

Japanese veterans' groups protest that this shows disrespect to their war dead. They are pressing their government to stop the diving and turn Truk into a memorial.

Andrew Telford, owner of Regal Diving, said: "In Britain, you are not allowed to dive at all if a ship is a war grave."

But the Japanese attitude to other countries' war graves is not winning them any friends. A Japanese TV company recently sent a reporter to take secret underwater film of ships in Pearl Harbor considered war graves by the Americans.

*ROCKY HORROR SHOW***RICHARD O'BRIEN'S****THE
NEW****SHOW**

Yes folks, The Rocky Horror Show is returning to Melbourne in July. The Social Secretary, Charlie Brincat, will organize a group booking if there is sufficient interest.

SEE CHARLIE OR TELEPHONE HIM ON 898 6683.

9 V.S.A.G. DIVERS VISIT HYPERBARIC CHAMBER

by John Goulding

For a Club whose motto is "SAFETY IN DIVING", our recent activities which have seen 9 members visiting the ALFRED HOSPITAL HYPERBARIC CHAMBER, might seem like a contradiction. But - read on. These visits were NOT for treatment, but rather to inspect and learn more about the facilities available.

The 2 hour presentation was organized by Sant Khan for the 14th April.

A summary of the presentation follows:-

- * The hospital has 40-50 rotating nursing staff trained in hyperbaric medicine.
- * Diving related treatment accounts for 30-40% of all patients. Hyperbaric treatment is also given to patients suffering from burns, poison and non healing injuries.
- * The biggest problems with treating divers, is that they generally do not present themselves early enough.
- * Quite often divers will wait 2 or 3 days before presenting.
- * Symptoms are:-
 - ° Pains that don't go away.
 - ° Fatigue.
 - ° Forgetfulness.
- * In 1990 - 100 divers required treatment.
In 1991 - 60 divers required treatment.

- * Gather facts about the dive before calling to seek advice.
- * To seek advice or treatment call:-

ALFRED HOSPITAL HYPERBARIC REGISTRAR
276 2269/276 2000

OR

DIVER EMERGENCY SERVICE
(008) 088 200.

- * Up to 6 people can be treated in the Chamber at one time.
- * Basic treatment usually consists of 3 separate sessions of:-
 - 5 Hours.
 - 2½ Hours.
 - 1½ Hours.**

MID AUTUMN AT TIDAL RIVER

by Don Abell

Our Easter trip to Tidal River for 1992 was about as late in the year as I can ever remember, with Good Friday falling on 17th April.

For those interested in trivia, my research tells me that the first Easter trip to Tidal was in 1973, and it fell later in April than 1992. The Minute Book does not give the date, but it fell after the April General Meeting, which was 17th April. I think that meetings were on Wednesday's in those years. We doubt the Editor will correct me if I'm wrong.

Some familiar names were at that Easter trip, notable:-

- T. Tipping.
- B. Truscott.
- J. Goulding.
- J. Liddy.
- B. Lynch.
- D. Carroll.
- D. Moore (visitor).

The first 3 of those were also present in 1992. No doubt Tony would remember what the weather was like and where they dived.

1973 was the first Easter trip for new members Tipping and Goulding, and also for Truscott, who although a long standing member of almost 18 months, had missed the 1972 trip to Rye.

Vice President, Jeacle, had assured me that late April would give stable weather, and that the trip would be a good one. I wasn't as convinced, but Mick was certainly correct. We dived on Friday, Saturday and Sunday, and each day was better than the previous one.

Friday saw 24 divers loaded into 6 boats in sunny weather. We headed to Forty Foot Rocks, but some uncertainty mounted, and 4 boats aborted and ended at Skull Rock. The 2 boats that proceeded, roared on glassy waters from the lighthouse to Forty Foot Rocks. The dive there was beautiful, as always.

We returned for a second dive at the Glennies. When the sun goes down in late April, it sure gets cold. I found myself suffering from a dose of the Truscotts, and was glad to head to shore.

Saturday was another good one and 5 boats hit the water. Our first dive was in new territory, off the Anser Island Group. The territory was brilliant, with big overhangs and swim throughs. A number of divers got caught in a strong current, and surfaced just north of Tasmania. We are not so used to currents at Tidal River, and I for one was not reading the obvious signs. A good reason for having a manned boat on the surface.

Second dives were around the same area, or back off the mainland. We had plenty of time to play with the seals, which is an experience divers never get tired of.

Sunday improved again. 16 divers boarded 4 boats and headed off. Unfortunately, Andy had some engine trouble and had to return. Conditions were so good, the other divers boarded the remaining 3 boats, so everyone (except Andy) managed a dive.

The night time activities were the usual fun. There is always a group gathered somewhere, which a wanderer with a stubbie in hand is welcome to join.

I missed Mick Jeacle's entertainment on the Thursday, but I was there on the Sunday night while Mick caught up on the sleep he had obviously been missing. Mick must have known the old eyelids were closing. Every few minutes he would throw his head back with a force, which was intended to catapult the eyelids back to the open mode. Usually with a distinct lack of success.

Sunday night was very mild. A highlight was sitting outside at 1.00 a.m. drinking scotch, tea and eating chocolate cake with Ross, Chris and Ruth. It was the calm before the storm, and it rained heavily early Monday morning, and then stopped for those who wanted to pack up.

The weekend was still a big success. We had 69 people on 20 camp sites. This is the most we have booked and is the right number. Over the 3 days we would have had over 100 dives and a fair amount of fun.

Thanks to everyone and particularly the boat owners Jeacle, Scott, Lawler, Mastrowicz, Goulding and Rossi in his good looking new craft (a lot niftier than the old "Wine and Dine"). Thanks also to Mick Jackiw for his help with the compressor.**

EDITOR'S COMMENT:

Thanks Don, for once again organizing our Easter trip to Tidal River.

This trip is certainly one of the highlights of the V.S.A.G. Calendar, and I know that there's a lot of work required to ensure our requirements are met.

John Goulding

FLINDERS BY WINTER SUNDAY 3RD MAY, 1992

by Doug Catherall

"North Westerlies x 10 knots, with less than $\frac{1}{2}$ metre seas" they said, and that is what we had, all be it a little later than expected.

Thanks to Big Mick, John Lawler and Ross for making their boats available. 11 divers took the opportunity and enjoyed a pleasant day in mild conditions, diving firstly on the George Kermode, where the visibility was 15-40 feet depending on depths and currents. Yet again the Carrot had a $\frac{1}{2}$ bag full, by checking under the steel plates. Others saw some good fish life and all had a safe return.

Phillip Island turned on motor bike races for our lunch time entertainment, and as usual, lately the troubles of the State were solved. Vote 1 - Don for President, it's not a Con-Don for us.

Second dive for the 2 remaining boats, after Big Mick headed for the pub, dived on the Flinders Point Reef, where a rather strong current made for a strenuous dive, but most rewarding for some.

Long live the President and his bag of many. Has this guy got his eye in or what!

Back at shore the retrievals were orderly and with Ross around, well organized.

I'm pleased to say a trouble free day, but maybe some radio repairs are required.**

Diving at Port Phillip Heads

by John Marks

On a good day, the diving at Port Phillip Heads is world class. Myriad varieties of fish, colourful sponges, leafy kelp, and dramatic underwater terrain combine to thrill and entertain the visitors from above.

On other days, bad weather or poor visibility can deter all but the keenest divers.

A quick glance at any chart of the Bay reveals the closely drawn contours of a deep S-shaped gutter which winds its way westward from near Portsea, down parallel to the coast between Queenscliff and Point Lonsdale, then eastwards towards Point Nepean, and finally in a southerly direction outside the Heads.

Other steep contours radiating from Shortland Bluff form a series of steps down to 309 metres, just a kilometre or so from shore.

The massive tidal flow across this area completes the geographical conditions necessary to sustain the diversity of animal and plant life found at Port Phillip Heads.

Each 12 hours, the tide ebbs (at up to 10 knots, across the shallow bank of the entrance), then slows and stops at ebb slack. Slack water lasts for 10 to 45 minutes, depending on local conditions, then the tide gradually picks up speed, to flow for nearly six hours until flood slack. The times of slack water are around three hours later than the times of nominal high and low tides as further massive flow is required to create high and low tides further up the Bay.

Divers plan their day around the slack water periods, ideally at 9 am and 3 pm, giving two diveable slacks. Divers who can't or won't wait for slack water conduct 'drift dives', often covering kilometres of effortless diving in 30 or 40 minutes. This can be risky, though; strong tides can pull unwary or inexperienced divers down to dangerous depths.

On the best days, diveable slack water combines with good 'viz' and calm weather. Only untimely shipping can spoil these conditions for the diver. Ironically, the best diving sites in the Bay are inside the boundary of the 'Port Rule 62A' area, where small boats are forbidden to anchor, and where diving operations cannot take place when ships are due.

Commercial dive charter vessels and some privately owned boats equipped with VHF radio can receive shipping advice from 'Dive Relay', a free service provided by DIS (Diver Instruction Services) based at Portsea. Divers can then make informed decisions as to the available sites. Some private dive boat owners sometimes take pot luck, and occasionally find themselves in front of a huge, speeding ship which cannot easily change course, even if divers are seen in time.

These days, scuba diving is very much a mainstream activity available to most people who feel the urge to explore this 'inner space'. Anyone from 14 to 60 years, or older, who is healthy and fit enough to pass a dive medical examination, can learn to dive for

a few hundred dollars. Australian standards set the guidelines for diver training, which is conducted by instructors accredited by four main agencies, known mainly by their acronyms, eg PADI, NAUI. Most dive shops hire equipment to trained divers who wish to continue diving before major investment in equipment such as wetsuit and the scuba 'kit'.

Is diving dangerous? Most divers will tell you 'No'. Marine creatures such as sharks, rays and octopus do not concern the average adventurer. The possibility of being run over by a passing boat, or a car whilst driving to the departure point, is the greatest risk.

A case of the 'bends' is a diver's greatest fear. This is caused by nitrogen breathed in air during the dive, coming out of solution in the blood and tissues as minute bubbles which block arteries and veins causing pain, disability and, in extreme cases, death. A hasty ascent after a long deep dive is usually the cause. Repetitive dives on the day also shorten the odds for the bends. The treatment for bends is re-compression in a purpose-built chamber, one of which fortunately is located at the Alfred Hospital.

Boat owners who fish or cruise in the Port Phillip Heads area can usually identify a dive boat or dive group by the 'A' flag displayed on the boat or marker float. The 'A' flag (white with a blue swallow tail) is not well chosen, as it is hard to see against water or sky. Many operators use an inflatable pink or orange marker buoy, with or without the 'A' flag. In other parts of the world, a 'dive' flag is red or orange with a diagonal white stripe.

Private and commercial boat operators who place divers in the water do so at fairly high risk. The experienced operator gains weather, tidal and shipping information before each dive. Divers are briefed as to the depth, time, terrain and expectations before venturing into the water. A universal experience level ensures that beginners don't get to dive levels 2 or 3. Senior qualifications and good logbooks help with the grading.



John Marks, a Director of Dive Experience Pty Ltd which conducts regular dive charters from Queenscliff, is an experienced diver himself. In this article he outlines the attractions of Port Phillip Heads, the scene of much diving activity at weekends, the role of dive boat operators, and how private boat owners can help avoid injuries to divers.

Other boat operators can help, by keeping a sharp lookout for the 'A' flag or for divers on the water. Boat owners may consider taking up the sport as an extension of their boating activity.

Of the huge numbers of divers currently training, many 'catch the bug' and dive each weekend, as well as participating in overseas diving holidays.

Diving is definitely the sport of the 1990s: an adventurous activity still within the capability of ordinary people, which does no harm to the environment. □



▲ Corsari, Dive Experience's dive boat, is a regular feature of the boating scene at Queenscliff and around Port Phillip Heads.

Scuba Diving:

a brief review of diving procedures

by Zygmunt Polniak

There are a number of procedures that divers follow to increase their safety while diving. This article reviews those procedures so that infrequent divers can be reminded of them and non-divers obtain an understanding of what people need to consider when diving.

SUITABILITY OF THE DIVE

Before starting a dive you have to ask yourself — "Can I undertake this dive with the skills, experience and equipment I have?"

Experience

It's foolish attempting a dive of 35m if you haven't dived over 20m and you don't have the extra equipment required for deeper diving. Similarly if you learnt to dive in the tropics and are intending to dive in the colder Victorian waters, it would be sensible to perform a few easy dives to become familiar with the thicker wet suit and correspondingly heavier weight belt before leaping into the water on a 25m drift dive.

Equipment

Different types of dives require different levels of equipment. A shore dive could require the use of a compass to navigate back to the entrance/exit point. A drift dive obviously requires a large surface float that a boat can follow. A deeper dive — say on one of the deeper Bass Strait wrecks — requires a decompression line, a spare tank and regulator to be hung on the line, and personal diving equipment that has been regularly serviced and maintained.

Don't overlook the most important item of diving equipment — the diver. Has the diver been regularly serviced and maintained — is the dive fit and healthy? Not too fatigued from the drive to the dive site after that all-night party and just as well that a booze bus wasn't around? This type of diver is more likely to feature in accident reports than divers who are well rested and relaxed before a dive.

PRE-DIVE PLANNING

A certain amount of dive planning is undertaken before leaving home. Divers decide what dive they intend doing based on their experience and the equipment requirements of the dive. Before setting out, all the equipment should be checked to ensure it is all working. It's amazing the number of people I've seen arrive at a dive with empty air tanks, regulators that either don't deliver air or madly free-flow, and vests that you can't inflate or that won't hold air. If hiring gear, ensure it all functions together before leaving the hire's premises.

Check the weather forecast before leaving home; some clubs and charter operators have a dive confirmation number to ring to ensure the dive is on. Obviously the final decision has to be made at the boat departure point. Many times the weather at the southern end of Port Phillip Bay is quite different from that in Melbourne. Don't forget: Safety First.

Once you arrive at the boat departure point, speak to whoever is in charge to check that the dive is still on, confirm the departure time and which boat is being used. I've seen people carefully load their gear on board the wrong boat at busy locations like Portsea Pier — embarrassing! Then it's simply a matter of gearing up, checking everything works and putting your gear aboard. Boat operators appreciate divers who keep all their gear together and know where to find it after boarding the boat. At this time you may be able to buddy up with another diver if you meet someone you know or you may want to wait until the diver leader/boat driver/dive master assigns groups.

The trip out to the dive site can be taken up with getting to know your buddy, discussing dives you have done to get an idea of each other's experience and ability. You can discuss the dive site — formulate a dive plan; check decompression tables to ensure that

what you want to do is allowed by the tables. Once you get to the dive site a briefing of the area is normally provided together with general diving limits, eg no more than 30 minutes in the water and no deeper than 30m, everyone to do a 3 minute safety decompression stop on the way up, and other information depending on the dive site. Following this briefing you may need to revise the dive plan agreed with your buddy so that it fits the general limits.

Gear up and once again check that your gear is working correctly, ensure that your buddy's gear is also working and check where their weight belt release and octopus regulator are located — you may need to use them! The divers flag should be flying before entering the water; review your dive plan once again; set your watches/timers and start the dive.

DURING THE DIVE

If the boat has anchored then the first divers down normally check that the anchor is secure. Keep a regular check on depth, time and air pressure. Be aware where you are in relation to the anchor/shot line so that you can find your way back to it. If diving in surge be prepared to be tossed around a bit and generally try to go with the flow. If diving in current, start your dive by heading into the current. On wrecks be aware of sharp edges that can cut you or your equipment.



Checking your buddy's equipment is an important safety practice that should be carried out before each dive. Simon Blenkerhasset and Elmer tenHaken carry out a buddy check aboard Dive Experience's Cotswart. (Picture: Mary Mallow/Natographics)

SHARKS GALORE

by Des Williams

Whilst Graeme Blanchard and I were holidaying in Fiji with our families in April last, we naturally took the chance to have a dive.

Now, diving with commercial operators is not my favourite way to dive, but there is little choice without a boat of your own.

We signed on with Aqua-Trek based at Nadi who operate dives from Mana Island. We made a day of it with our families, who joined us on the ferry to Mana from our accommodation at the Regent of Fiji. Out there we split off to do our 2 dives.

We were met at the jetty by two Fijian guys from Aqua-Trek, who insisted on carrying our dive gear to the dive hut.

Soon we were on our way in a narrow beamed, high speed open boat, to a dive site they call the Supermarket. We had made it clear to Aqua-Trek that we didn't want to be dropped into 30 feet of water on a sandy bottom to feed bread to the fish. So we were pleasantly surprised to find this site was on the edge of a deep reef drop off.

It was a beautiful sunny day and very light seas as our 2 guides took 5 of us on a shark feed. A one metre white-tip shark greeted us on our descent to about 80 feet, where a guide speared small fish to feed the sharks from the end of his spear.

Soon we had about 17 sharks circling us. There were white-tips up to 2 metres long and bronze whalers around 2 to 2½ metres long. The Bronzies were my favourite, as they look very business-like. They were literally all around us, swimming between our legs and Graeme was even trying to get a hold on the white-tips!

My camera was running hot, as I was able to get nose to nose with the feeding sharks. I hope there will be at least a couple of good shots out of the 36 I took. As I was using my 17mm. wide angle lens and viewing the action through the view-finder, the close up action seemed to be several metres away, until I put the camera down and found myself only 1 metre away from the shark as it ripped another fish off the spear.

Graeme pointed out the Japanese couple who were diving with us, both had their backs to the reef and the girl was actually hiding behind her husband. It made a very comical sight indeed. This was a very good dive, something we hadn't done before, and Graeme was wishing he had his fishing rod!

Then we returned to the dive hut at Mana for a short break and changed tanks, before speeding out to the site known as The Fingers. This is Mana Island's equivalent to a pier dive in my book, and because we were the only 2 divers in the afternoon, we got stuck with this site.

The water was dirty and corals very poor, a few tropical fish about, and we did see a couple of huge wrasse or Napoleon Fish. Still, we made the best of it and dawdled along before returning to the boat. V.S.A.G. dived this site during our trip to Fiji back in 1984, when Geoff Birtles led our group to Taveuni and Viti Levu.

Back at Mana Island I met up with Api, the huge Fijian dive guide who is a resident on Mana. He and I had 2 great dives from Mana back in 1982, when Julie and I had our honeymoon in Fiji. He is a wonderful guy and it was great to meet up with him again, but bad luck he wasn't on duty the day we were there.

At the June General Meeting I will bring the slides I took of the shark feed, so see you there.**

THE DIVER'S LONELY WORLD

THE pearls described in sixth-century-BC Sinhalese and Indian literature and the sponges mentioned by Homer and Hippocrates must have been fished by divers. The oldest unequivocal reference to diving is in book sixteen of the *Iliad*, in which Patroclus gives the following description of the Trojan Cebriones whom he has just hit with a stone and knocked from his chariot: "Ha! Quite an acrobat, I see, judging by that graceful dive! The man who takes so neat a header from a chariot on land could dive for oysters from a ship at sea in any weather and fetch up plenty for a feast. I did not know the Trojans had such divers." Thucydides and other historians of Antiquity also describe how divers managed to take enemy fleets by surprise.

The first skin divers certainly lived in parts of the world such as the east Mediterranean and Polynesia and on the shores of the Yellow Sea in southeast Asia where there was a combination of several favourable factors for diving, including relatively calm seas, clear water, and a temperature enabling divers to stay in the water for a reasonable time.

Until the end of the Renaissance diving was limited in time (by lung capacity) and depth (by visibility). From the time of the Roman author Vegetius in the fifth century to that of Leonardo da Vinci in the fifteenth, people thought of connecting the diver to the surface by means of an air tube, but attempts to do so came to nothing since certain principles of hydrostatics (the branch of mechanics which deals with the equilibrium of fluids) were only established by Pascal in the seventeenth century. It then became known that an underwater swimmer breathing through a tube linked to the surface needs to exert a force greater than the water pressure in order to inhale. The human respiratory muscles are weak. Two metres underwater the effort to inhale is very tiring, and impossible any deeper.

Nevertheless, experiments with diving bells were carried out during this period. These bell-shaped hulls open to the water at the bottom were modelled on saucepans or on the urns containing air which Roman divers placed on the seabed, with the mouth facing downwards, and used to supply themselves with air.

BELLS AND CAISSONS

In 1690, Edmond Halley invented a method of renewing the air inside the diving bell from barrels lowered to the seabed.

Taking up an idea formulated a hundred years before by Denis Papin, the English engineer John Smeaton (1724-1792) went one step further when he fitted a pump to the bell in order to provide it with fresh air from a ship on the surface.

But diving bells were heavy, unwieldy, and difficult to use. A diver has to breathe air at the surrounding water pressure, the inflow of air must be sufficient to keep him or her supplied with oxygen, and carbon dioxide must be eliminated so that it is not reinhaled.

Early in the nineteenth century, the German engineer Augustus Siebe took the decisive step of providing the diver with a "bell" tailored to his own size—a diving suit in which the diver was equipped with a copper helmet with port-holes, and supplied with compressed air pumped from the surface. The supply of air was continuous, and excess air escaped through the edge of the helmet below the chin. By 1837 Siebe had developed an improved model with a valve which let air out without letting water in.

Inventers next tried to make an autonomous diving suit which would free divers from the need to be in contact with the surface and enable them to move about more easily.

Borelli (1680), Fréminet (1776), Forfait (1783), Klingberg (1796) and de Drieberg with the Triton (1811) had already tried to construct apparatus of this kind, in which the diver breathed through the mouth by means of a tube connected to a container carried on his back and caused the air to circulate by activating a bellows with movements of the head.

Further improvements were added by W.H. James (1825-1828) and then by Condert, who designed a system for adjusting the supply of compressed air, a primitive regulator and a free escape system for surplus air. Cabrol improved this apparatus even further in 1885.

SCUBA DIVING

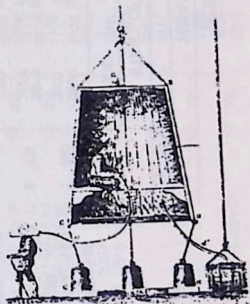
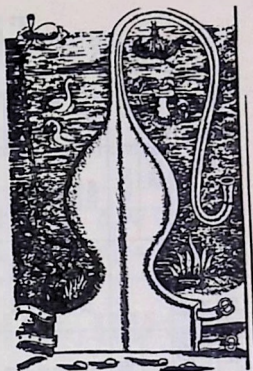
In 1860, a French mining engineer, Benoît Rouquayrol, and a naval officer, Auguste Denayrouze, made a decisive improvement to the diving suit when they invented a regulator, a valve which provides air at a pressure equal to the prevailing water pressure.

In 1864, a swimmer equipped with a gas regulator supplied by a pump on the surface could thus easily move around up to 40 metres down.

In the following year, these brilliant inventors devised a system for providing the air supply directly from a container carried on the diver's back. This was the birth of modern SCUBA (self-contained underwater breathing apparatus) diving.

Divers could now operate for up to half an hour at a depth of ten metres without any link with the surface. The apparatus was outstandingly successful. Jules Verne understood its potential immediately and equipped Captain Nemo and his men with it in *Twenty Thousand Leagues under the Sea*. ■

Source: *Revue de la Fondation Océanographique Ricard*, No. 7, 1984.



Right: "Got a spammer?" Mechanics adjust a diver's helmet (1927). Above: Malley's diving bell (17th century). Top, diving hood designed by the Roman writer Vegetius (9th century AD).

PORT PHILLIP HEADS

LAT 38° 18' S LONGS 144° 37' E TIME ZONE -1000

TIMES AND HEIGHTS OF HIGH AND LOW WATERS

JULY - 1992

Time m	Time m	Time m	Time m	Time m
1 0458 0.25	9 0653 1.46	17 0054 1.28	25 0638 1.31	
1 1229 1.50	9 1152 0.63	17 0705 0.33	25 1200 0.70	
WE 1744 0.81	TH 1825 1.51	FR 1403 1.48	SA 1819 1.35	
		1946 0.64		
2 0002 1.32	10 0041 0.30	18 0141 1.29	26 0025 0.32	
2 0595 0.21	10 0753 1.44	18 0749 0.34	26 0737 1.30	
TH 1321 1.56	FR 1239 0.72	SA 1438 1.49	SU 1246 0.77	
1841 0.72	1913 1.44	2028 0.57	1904 1.30	
3 0103 1.38	11 0132 0.33	19 0223 1.31	27 0113 0.31	
3 0652 0.19	11 0851 1.42	19 0828 0.36	27 0844 1.30	
FR 1410 1.60	SA 1331 0.80	SU 1507 1.50	MO 1342 0.83	
1936 0.61	2005 1.38	2103 0.50	1959 1.26	
4 0200 1.44	12 0228 0.36	20 0302 1.33	28 0212 0.29	
4 0747 0.21	12 0949 1.40	20 0902 0.40	28 0954 1.31	
SA 1456 1.63	SU 1433 0.86	MO 1534 1.50	TU 1450 0.85	
2030 0.51	2102 1.32	2137 0.45	2107 1.24	
5 0254 1.48	13 0328 0.37	21 0341 1.34	29 0321 0.27	
5 0842 0.26	13 1047 1.40	21 0935 0.44	29 1101 1.35	
SU 1539 1.64	MO 1544 0.87	TU 2209 0.41	WE 1605 0.82	
2123 0.41	2204 1.28		2230 1.25	
6 0348 1.49	14 0427 0.37	22 0419 1.34	30 0431 0.25	
6 0932 0.33	14 1145 1.42	22 1009 0.50	30 1202 1.42	
MO 1620 1.63	TU 1654 0.84	WE 1633 1.47	TH 1715 0.74	
2215 0.34	2305 1.26	2239 0.39	2347 1.31	
7 0446 1.49	15 0523 0.35	23 0500 1.34	31 0537 0.23	
7 1020 0.43	15 1238 1.44	23 1043 0.56	31 1257 1.49	
TU 1700 1.60	WE 1800 0.79	TH 1706 1.44	FR 1818 0.61	
2303 0.29		2311 0.36		
8 0550 1.48	16 0002 1.26	24 0546 1.33		
8 1106 0.53	16 0616 0.33	24 1119 0.62		
WE 1742 1.56	TH 1325 1.46	FR 1741 1.40		
2351 0.28	1858 0.71	2345 0.34		

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PORT PHILLIP HEADS

TIDAL STREAM CHANGE

JULY 1992

	START OF		START OF		START OF	
	FLOOD	EBB	FLOOD	EBB	FLOOD	EBB
1 WE	0844	0157	18 SA	1114	0445	
	2053	1507		2326	1733	
2 TH	0939	0259	19 SU	1148	0526	
	2152	1601			1805	
3 FR	1001	0358	20 MO	0003	0602	
	1121	0658		1218	1636	
4 SA	1121	0454	21 TU	0099	0638	
	2342	1743		1249	1808	
5 SU	1211	0548	22 WE	0114	0714	
		1631		1321	1596	
6 MO	0036	0640	23 TH	0150	0752	
	1256	1918		1355	2009	
7 TU	0111	0733	24 FR	0229	0833	
	1340	2002		1430	2043	
8 WE	0227	0828	25 SA	0312	0919	
	1424	2047		1510	2122	
9 TH	0222	0923	26 SU	0401	1012	
	1509	2153		1535	2209	
10 FR	0417	1016	27 MO	0459	1113	
	1556	2223		1651	2306	
11 SA	0513	1111	28 TU	0603	1222	
	1648	2316		1759		
12 SU	0609	1211	29 WE	0711	1333	
	1748			1917	0014	
13 MO	0708	0015	30 TH	0817	0131	
	1854	1316		2031	0438	
14 TU	0800	0116	31 FR	0917	1538	
	2000	1420		2136		
15 WE	0901	0214				
	2101	1519				
16 TH	0951	0309				
	2156	1612				
17 FR	1035	0400				
	2244	1655				

**PORT PHILLIP HEADS
TIDAL STREAM CHANGE
AUGUST 1992**

PORT PHILLIP HEADS
LAT 38° 18' S LONG 144° 37' E TIME ZONE - 1000
TIMES AND HEIGHTS OF HIGH AND LOW WATERS

AUGUST - 1992

Time m	Time m	Time m	Time m	Time m	Time m
0653 1.40	0059 0.31	0207 1.33	0207 1.33	0041 0.26	25
0639 0.23	0820 1.35	0806 0.38	0806 0.38	0810 1.25	25
SA 1346 1.55	SU 1259 0.74	MO 1430 1.44	MO 1430 1.44	TU 1309 0.75	TU
1918 0.48	1930 1.31	2035 0.39	2035 0.39	1931 1.22	19
0152 1.48	0151 0.36	0245 1.37	0245 1.37	0140 0.28	26
0735 0.25	0916 1.30	0840 0.40	0840 0.40	0922 1.25	26
SU 1451 1.59	MO 1356 0.80	TU 1500 1.46	WE 1415 0.76	WE 1415 0.76	WE
2015 0.35	2029 1.23	2108 0.34	2108 0.34	2049 1.20	20
0246 1.54	0253 0.40	0322 1.40	0322 1.40	0253 0.31	27
0829 0.30	1015 1.28	0914 0.44	0914 0.44	0632 1.26	27
MO 1513 1.61	TU 1508 0.82	WE 1532 1.45	WE 1532 1.45	TH 1527 0.72	TH
2106 0.25	2134 1.18	2139 0.30	2139 0.30	2222 1.23	22
0344 1.56	0358 0.41	0359 1.40	0359 1.40	0412 0.32	28
0917 0.37	1114 1.28	0947 0.48	0947 0.48	1134 1.34	28
TU 1553 1.61	WE 1628 0.79	TH 1604 1.43	TH 1604 1.43	FR 1654 0.60	FR
2155 0.19	2242 1.17	2209 0.28	2209 0.28	2341 1.33	23
0439 1.56	0500 0.40	0438 1.39	0438 1.39	0523 0.31	29
1002 0.44	1208 1.31	1021 0.53	1021 0.53	1223 1.42	29
WE 1632 1.58	TH 1741 0.72	FR 1637 1.40	FR 1637 1.40	SA 1800 0.46	SA
2241 0.18	2345 1.19	2239 0.27	2239 0.27		
0535 1.52	0557 0.38	0520 1.36	0520 1.36	0046 1.44	30
1045 0.52	1253 1.35	1056 0.58	1056 0.58	0627 0.32	30
TH 1713 1.54	FR 1840 0.63	SA 1711 1.35	SA 1711 1.35	SU 1317 1.49	SU
2326 0.20	2313 0.25	1900 0.31	1900 0.31		
0630 1.47	0039 1.23	0609 1.32	0609 1.32	0145 1.55	31
1128 0.60	0646 0.37	1134 0.64	1134 0.64	0722 0.33	31
FR 1754 1.47	SA 1330 1.39	SU 1748 1.31	SU 1748 1.31	MO 1401 1.54	MO
	1925 0.54	2353 0.25	2353 0.25	1953 0.20	19
0011 0.25	0126 1.28	0126 1.28	0126 1.28	0704 1.28	24
0725 1.40	0729 0.37	1217 0.70	1217 0.70		
SA 1211 0.67	SU 1401 1.42	MO 1833 1.27	MO 1833 1.27		
1839 1.39	2001 0.46				

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	START OF			START OF	
	FLOOD	EBB		FLOOD	EBB
1 SA	1012	0346	18 TU	1150	0543
	2235	1602			1804
2 SU	1103	0444	19 WE	0015	0618
	2332	1723		1223	1838
3 MO	1151	0539	20 TH	0049	0650
	0225	1810		1256	1907
4 TU	0255	0631	21 FR	0124	0730
	1258	1854		1329	1938
5 WE	0117	0721	22 SA	0200	0808
	1917	1936		1404	2013
6 TH	0208	0810	23 SU	0241	0852
	1359	2020		1441	2051
7 FR	0258	0859	24 MO	0329	0941
	1441	2103		1525	2137
8 SA	0348	0948	25 TU	0436	1040
	1525	2149		1620	2236
9 SU	0440	1040	26 WE	0531	1149
	1614	2241		1733	2351
10 MO	0534	1136	27 TH	0643	1304
	1713	2341		1900	
11 TU	0634	1242	28 FR	0753	0117
	1821			2018	1414
12 WE	0736	1351	29 SA	0856	0232
	1935	0046		2123	1515
13 TH	0834	0151	30 SU	0952	0337
	2043	1485		2225	1609
14 FR	0925	0251	31 MO	1042	0434
	2140	1547		2317	1657
15 SA	1008	0343			
	2226	1628			
16 SU	1045	0428			
	2304	1701			
17 MO	1118	0507			
	2340	1732			

DIVE/SOCIAL CALENDAR

<u>DATE</u>	<u>EVENT/LOCATION</u>	<u>DIVE CAPTAIN</u>	<u>MEET AT</u>
18 June	General Meeting - North Melbourne Football Club (Meet beforehand for dinner at The Homebush Hotel, 415 Abbotsford Street, North Melbourne).		8.00 p.m.
21 June	Limestone Caves Point Nepean	J. Lawler 569 9851	Sorrento 9.30 a.m.
5 July	Diamond Bay	P. Reynolds 789 1092	Sorrento 9.30 a.m.
16 July	General Meeting - North Melbourne Football Club (Meet beforehand for dinner at The Homebush Hotel, 415 Abbotsford Street, North Melbourne).		8.00 p.m.
19 July	Spectacular Reef	D. Abell 889 4415	Sorrento 9.30 a.m.
31 July -7 Aug	Skiing - Falls Creek	J. Goulding 829 2213 (B)	
2 Aug	Winery Wander	D. Abell 889 4415	
16 Aug	Heads Area/Scallops or even Portsea Hole	J. Lawler 569 9851	Sorrento 9.30 a.m.

<u>DATE</u>	<u>EVENT/LOCATION</u>	<u>DIVE CAPTAIN</u>	<u>MEET AT</u>
20 Aug	General Meeting - North Melbourne Football Club (Meet beforehand for dinner at The Homebush Hotel, 415 Abbotsford Street, North Melbourne).		8.00 p.m.
30 Aug	Heads Area	M. Jeacle 059 712 786	Sorrento 10.00 a.m.
17 Sept	Annual General Meeting North Melbourne Football Club (Meet beforehand for dinner at The Homebush Hotel, 415 Abbotsford Street, North Melbourne).		8.00 p.m.



1



2



3



4



5



6