

FATHOMS

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VSAG

VICTORIAN SUB-AQUA GROUP

JUN/JULY 99

FATHOMS

Official journal of the *Victorian Sub - Aqua Group*

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Next General Meetings:

Bells Hotel
157 Moray Street (cnr. Coventry Street)
South Melbourne - 8pm sharp!
Thursday 15th July 1999
Thursday 19th August 1999
Thursday 16th September 1999

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Monday 19h July - Gerry Devrie's home
Monday 23rd August - Robert Birtle's home
Monday 20th September - Andy Mastrowicz's home

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Andy Mastrowicz, John Lawler & Leo Maybus

EDITORIAL



I am writing this at the start of June and already we are experiencing the Winter creep. Since the last magazine there have been a number of dives cancelled through bad weather. This is perhaps a little earlier than in other years. I always reckon on good diving until the end of August when the wind takes over for the rest of Spring.

The product of this is that we have less articles than for our last issue. But the diving was not as bad as the magazine suggests. A few dive captains have been slack in writing their articles. We only just warrant a publication. My thanks to Des who is forever reliable to provide an article while others contemplate their navel. Helen Fryday

organised the visit to the hyperbaric unit in May and has written an article with some timely reminders of the care we all should be taking every time we hit the water. Of course we also did Tidal River with a top turn out of members and friends and superb weather.

While I write this Pat has taken a group of VSAGers to Truk Lagoon, a must do trip for those who have missed it to date. Look at your upcoming calendar for some first class diving to look forward to in the next few months and through to next Christmas (year 2000).

You will also have received your subscription notice for the next year. This is now due so please pay promptly. Remember that this is a club and your fellow members want to spend their time diving not chasing other members who are too lazy to pay their fees on time. The good news is that the fees are at the same level as last year. We only raise fees if it is absolutely necessary. We need cash to cover my amazingly enormous, but well deserved, stipend and to cover the other costs of producing Fathoms. So the moral to this story is to keep the fees and articles coming and I will soon be able to retire in a manner to which I would like to become accustomed.

Now while I am on the topic of putting in for your club which I now am, we are at the time for committing to , or nominating someone for the VSAG Committee. As always we have 4 members stepping down from the committee. They are Mick Jeacle, Leo Maybus, Priya Cardinalletti and yours truly. My information to date indicates that only Priya will be available for re-election . Hows that for a change after a long time with some oldies causing unlimited disruption. This is an ideal chance for the club to get some fresh faces and new direction under the guidance of the invaluable experience that remains. The club really need good people on the committee to maintain the momentum. Give it some serious thought.

Well that's it from me folks. Let's hope that we get good diving through the late Winter months.

Editor - Don Abell.

TIDAL RIVER SPLENDIFEROUS SOJOURN

BY DON ABELL

I am always keen to receive any feedback from those that attend our Easter getaway to Tidal. Like everyone I like to hear compliments if the weekend has gone well . My niece Nyssa has been to most of the Easter trips in her relatively short life (that is compared to the ever growing number of over 50's of which I am not one) so I like to know what she thinks each year. I thought this year was as good as any and probably better than most. So I was bitterly disappointed when Nyssa,s opinion was that the holiday was " really cool ".The sun shone every day. The kid is obviously hard to please and will most probably be a film or theatre critic.

This logically brings me to the subject of the Matrix , the sensational film now sweeping Australia. It is probably still hard to get tickets for this box office bonanza but my recommendation is to keep trying . Join the thousands of people seeing it for the second and third times. If you only see one movie this year it should be Matrix.

Back to subjects of lesser importance - Easter at Tidal. For the statisticians in the club we had 91 members, families and guests (including children) on 24 sites and diving off 5 boats.

Of course there were not 91 divers but the divers did exceed the available boat positions. I am very appreciative, as I am every year , of the members who volunteer to pass on the first dive day so that the others can get a spot on a boat. I have always managed to get those people on the next day but they do risk the chance that the weather will turn and they may miss out. In particular some of the longer standing members give up their priority to ensure new members or guests can dive first. It is the attitude that I would expect in VSAG but I still appreciate their support. Even more importantly it gave the dive captain a chance to hit the water at Tidal for the first time in 3 years, and I was delighted to be out even if my ears restricted me to only one dive.

As I reported to the next club meeting I decided this year that I should focus on the weather. I thought that it would be a good idea to see how well I could do with a bit of effort. Others in the club may like to note the success (despite Nyssa's assessment) and put in their own effort in future. A little advice. Those dive captains should adjust their effort in proportion to the location selected and the time of year. A dive planned for Spring off the south coast of Tasmania will require more effort than a dive in Autumn off the Queensland coast . In fact I would recommend that the DC for the first consider a conversion to serious religion or for those non believers you may want to sell your soul to the devil. However it is all for the good of the club and your fellow members so nothing should be too much trouble.

The other significant factor in me getting a dive was that everyone , barring a few extras on the weekend, had paid before the trip. That saved me a lot of time off my usual administrative schedule.

An optimistic group started looking for a dive on the Friday morning. The weather was not a limiting factor but it seems we need a day to unwind these days. I am certainly one of the unwinders so it therefore can't be old age - it must be the pressures of life in the 1990's. So rest and recreation took over on a pleasant sunny day. There was the usual group to Oberon as well as a Squeaky team, a Sealers party and some that submitted to inertia and ventured nowhere.

The quiet day was followed by a quiet night . I thought there may be some unexpended energy but most were early into the cot. I managed to find the red light district of the camp and got caught up in an illicit game of scrabble with Meg Johnson and her friend Cathy. Since there was a risk that the ranger may catch us in the act we had the table set up to inverse at a moments notice and display a game of stud poker with a bottle of scotch and a few cigarette butts. It must be over 10 years since I last played and I confess it was a lot of fun.

The ranger did confront us at 11pm . Alcohol had dulled our reaction and we were caught with the scrabble in view. In an effort to appease an otherwise irate official I did what any member would have done in my position. I claimed I had just arrived at the same location an instant before the ranger to ask them to be

quiet. When this failed I resorted to plan B and offered Shirley Rawson (club Auditor) as a hostage. In fact I pleaded with him to lock her up until the end of the week . By that time someone may have felt guilty enough to collect her. Niether worked so we resorted to plan C . We got Darren to question him on the activities and the ethical approach of rangers to catching the real criminals in our National parks. Two minutes of this and he surrendered and slipped into the night.

Saturday brought an even better day. No doubt we were diving. All boats prepared , divers were allocated and it was all go. We headed down to Island found a calm spot and hit the water. Visibility was 50 feet plus and water temperature 17 deg. I enjoyed every minute of it .I was diving with Josie and we cruised leisurely at between 50 and 70 feet. It was like lunch time in Bourke street with all the divers. I couldn't possibly lose sight of Josie with everything in bright pink but I blend into the crowd in my standard Sonar so I watched amused as Josie tagged on to many different divers heading in various direction before I got her attention and we headed back to Andy's boat

Back on board we swapped stories with the other boats about all the crays seen but not caught . I had 1 that was returned to its home shortly after surfacing. Others did better and some were kept. I hasten to add that we were diving in an area not within the marine reserve. Lunch was taken around the other side of the island then we decided that this was a good enough place for a second dive.

Some passed feeling a little cold. I passed as my ear was acting strange but many fell over for a second time. While Lawler , Jeacle and Vleugel stayed on the other two boats headed to shore.

Saturday night was just beautiful and gave me confidence that the next day would be as forecast. I forced down a few red wines and wandered around as usual making sure that none of the tents or caravans were creating too much noise around the camp. Scotty's caravan was a little more boisterous than normal so I felt compelled to investigate. Well surprise, surprise there was Shirley propped up in the middle of the group possibly singing old English rugby songs but I found it hard to understand anything being said. Not unlike our own Leo Maybus

about an hour later that very same evening.

Sunday was just as I had promised all those that volunteered to sacrifice their Saturday dive. It was about perfect. Everyone that wanted to dive was allocated to a boat. Michelle and sister Elle seemed seriously disappointed to not be able to fit onto JL's boat. For those that do not know or have not guessed Michelle is a new member. The two girls were put in the safe hands of Mick and Ted who showed them the seals at Skull Rock as their first dive at the Prom. Not a bad start. Michelle did tell me at the next meeting that she was suitably impressed with the occasion. The second dive was at the Glennies. Visibility on both dives was terrific and the conditions superb. The Glennies is a prime dive location so Sunday was without doubt the highlight of a fine weekend.

I had headed home on the Sunday to meet other commitments in Sydney and I have been remiss in not asking how the annual Easter Egg hunt went. No doubt it was it's usual big success with the kids. Paul and Tony Tipping boycotted this years hunt. Their complaint was that their handicap was unfair . They were allocated a 5 minute start over the kids but they had 10 minutes in 1998 and didn't get one egg between them. Sounds to me like Tony and Paul should push for the same handicapper as the VSAG Mile on the tennis day.

Well it seems my departure time was opportune. The rain fell all through Sunday night leaving wet tent and gear to pack on Monday. In arranging my big effort on the weather I forgot that I leave earlier than most.

Can this be repeated for Easter 2000. I note that it falls late in April and runs into Anzac day on the Tuesday. I good chance for a big break to those who need it.

Postscript: Apparently Margot Johnson prefers to be known as Megs . That is according to Darren. I think Megs is a little shy about this now that Darren has revealed her secret so don't tell anyone else.

And it just wouldn't be Easter if Andy did not have a catastrophe happen . Sure enough the clutch went on the trip home. The boat did the trip on the back of a truck and the car was collected on another day.

DES AND GRAEME DO EDEN

BY DES WILLIAMS

Alright, alright I went to Eden again to dive WITHOUT V.S.A.G Mick, but it wasn't on the V.S.A.G Calendar and I wanted to go!! As you all know, I have been hanging around with a new group of diver friends using the old diving gear. This has lead to different dive opportunities and I am enjoying the change, it isn't that I no longer wish to be out with the VSAGers!

So, let me tell you about my most recent trip to Eden. Both Graeme Blanchard and I joined several other members of the Diving Historical Society on the Anzac Day weekend at Eden. The idea was that my mate, John Allen, was to dive on the wreck of the tug "Tasman Hauler" using his old hard hat gear. So, Graeme and I took both the Friday and the Monday off work to make a four-day weekend, as it was a gazetted Anzac Day long weekend in NSW and our Sydney based DHS members were to arrive on the Friday evening.

I borrowed our Mitsubishi Triton four door ute from work and we loaded it up with all our scuba gear, as well all of my heavy Standard (Hardhat) gear on the Thursday evening. Next morning, we departed at 4AM and arrived at Eden at 10AM after sharing the driving, which made the trip very easy.

We were accommodated at the dive lodge of Twofold Dive Charters, run by Peter Hall and his wife Lorna. It consists of a very spacious house with all mod-cons and we settled in throwing our swags onto a couple of bunks in the non-snoring room! Snoring seems to be a problem as we get older and my mate John Allen's nickname is "Skegger" because of his large probosis, which resembles the skeg on an out-board motor! There is no way I want to share a room with him again after the DHS meeting in Sydney last year!!

The weather was not good for us on the Friday as the wind was on-shore, just MY luck! So we relaxed at a caf  on the wharf and discussed diving and Graeme got to know the gang a little better. We drove up to Tathra in the afternoon, hoping to dive at the wharf there, but big rollers were wrapping around the point and churning away under the wharf, clouding the viz. Another coffee and ice-

cream, whilst we sat on the pier and dreamt of what might have been. Well, at least I was away from work and out in the warm sunshine! That evening, we had a great meal at the pub only a 100M walk from the lodge, and returned to watch some old diving movies and videos brought along by some of the gang.

Next day, the weather was still on-shore, but Peter Hall had us out on the "Tasman Hauler" at 8AM, before the weather ruined any chance of another dive that day. The visibility was very poor indeed, but Graeme got his first look at the "Hauler". It was good to get wet, but no chance of rigging up guide-lines on the wreck for John to dive hard hat the next day. That afternoon, we drove up to Merrimbla to seek out quiet waters, where we could dive with hard hats the next day, but to no avail.

Another good meal at a restaurant on the Saturday evening, was followed by some great dive videos and slides, which were taken during our last visit to Eden, in September 1998. We agreed that the next morning we would take all our "heavy gear" to the Eden harbour and have our "dive into the past" in the sheltered waters there. Peter Hall got the OK from his mate, who runs scenic tour around the coast, to use his floating wharf as our dive platform. We were able to drive our cars to within meters of the wharf and carry all of the weighty gear onto the pontoon to prepare for the dive. We started at 8AM in warm sunshine and had a great time diving the old hard hats, twin-hose regulators and Arga masks. We had two sets of US Navy Mark V hard hat gear (John's and mine) and Carol and Peter Bathie recorded our wanderings under the water on video.

In the afternoon, we ventured out to the "Tasman Hauler" once again and had a good dive even though the visibility was very poor. Graeme and I spent some time feeding the fish on top of the bridge area, to finish off our dive. A short tour of the scenic parts of Twofold Bay followed as Peter took us back to the wharf. There was plenty of dive gear to wash after the two dives that day, which filled in the rest of the afternoon.

Sunday evening meal was at the Fishermans Club and we retired to the lodge to view more very old movies with dive scenes and tell stories of dives we had experienced. Next morning dawned very sunny, just MY luck as we were to

depart early for Melbourne! Graeme and I loaded the Triton and cleared our room, as the rest of the gang headed off to dive the tug again. But, before we left they were back again saying that there was a huge swell up again and they had cancelled, much to our relief!

The drive back to Melbourne was an easy one, sharing the driving and with light traffic on the roads. Home at 4PM in pouring rain, we humped all our gear out of the car and retired home. A great weekend indeed, proving you don't need brilliant weather and 100ft viz to have a good time, but it would have been an extra bonus!

ELECTION OF DIRECTORS 1999/2000

The V.S.A.G. Committee now needs your help. From the September meeting of the Committee, there will be vacancies and your chance to contribute to this great Club. This is your chance to do something as a Director of the Victorian Sub-Aqua Group. If you would like to be involved, please fill out a nomination form and have two members counter sign. This form **MUST** be returned to the Secretary personally or by mail to "The Secretary", VSAG, P.O. BOX 2526W, G.P.O. Melbourne, 3001, **NO LATER THAN 2ND SEPTEMBER 1999.**

Committee members whose term expires at the September meeting are:
 Don Abell, Mick Jeacle, Leo Maybus and Priya Cardinaletti..

NOMINATION FORM

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

.....
 for the position of Director of the Group.

Signed Date:

Signed Date:

I, hereby accept the above nomination for
 Director of the Group.

NOMINATION FORM

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

.....
 for the position of Director of the Group.

Signed Date:

Signed Date:

I, hereby accept the above nomination for
 Director of the Group.

REMEMBER: OUR SECRETARY MUST HAVE THIS COMPLETED NOMINATION FORM NO LATER THAN THURSDAY 2nd SEPTEMBER 1999.

THE PLAQUE IS FOUND

BY ALAN BECKHURST

What plaque I hear you mumble ? In 1985 a diver , Lal Mangalage, died whilst diving on the "Winged Sub" (or J1) , and subsequently , the Dandenong Skindiving Club placed a plaque in his memory , on one of the uprights of the "Wing" . 10 years later , a severe storm ripped the "winged ' section off , dumping it on the sea floor , next to the Sub .

Earlier this year , Mary Malloy and I spotted Geoff Sparkes and Annette Hall of Interdive enjoying a meal and a bottle of red at Point Lonsdale . Of course we joined them , having a great chat which went 'til 11 P.M. We inevitably relived "the Good Old Days" , and discovered Geoff and I were both present at the J1 at the time of Lal's death , with Geoff being the one who fixed the plaque to the sub . He lamented the loss of the plaque after the storm and many dives scratching around the bottom , but Mary and I knew the location of the support and attached memorial , still on the sub .

We parted , promising to recover the plaque and hand it back to Geoff and Annette at the next opportunity . Not too long after , we planned to dive the J1 , and ran into Geoff at the Queenscliff boat ramp . Mary told him of our plans , putting the pressure on me to succeed , and news quickly spread . We found the Sub O.K., located and cut the stainless bolts retaining the mounting , and surfaced jubilantly . We were greeted back at the ramp by Wayne , of Surf Coast charters , asking if we had succeeded , but we had missed Geoff . Our day turned sour when we removed the growth from the plate to find no lettering , just four bolt holes where the actual plaque had been attached .

We theorised that the plaque could have dropped into the hull as the bolts corroded away , or that someone had taken it earlier . We had to return , so we capitalised on the flat seas on the 22nd of May to revisit the J1 . I found the support and looked under to see a rectangular plate of the expected size laying within reach , Eureka ! The plaque was encrusted , and showing signs of bronze disease , but in fairly good condition . Mary rang Geoff , who was very happy , planning to fix the plaque to a plinth , and place it back on the sub .

I feel good that the plaque will once again be displayed on the wreck , to preserve the memory of Lal , and bring the realism of the danger these wrecks can be to the visiting divers . So when you visit the J1 Sub this summer , look for Lal's plaque on the plinth , give it a rub to keep the growth clear , and ponder why it's there .

REMEMBER!

V.S.A.G GENERAL MEETINGS

are on the

THIRD THURSDAY OF THE MONTH!

AT BELLS HOTEL

CNR. MORAY & COVENTRY STREETS, SOUTH MELBOURNE

Make a note of these dates in your diary or calendar now.

Thursday 15 July

Thursday 19 August

Thursday 16 September

Come and enjoy a delicious meal before the meeting
which commences at 8pm.

HYPERBARIC CHAMBER AT THE ALFRED HOSPITAL

BY HELEN FRYDAY

Helen Fryday organised a tour for VSAG of the Hyperbaric Chamber at the Alfred Hospital on 13 May with a good turnout of members. She has contributed the following article to record the event.

VSAG was the second group of divers to visit the new superduper, whizbang, extra large hyperbaric chamber at the Alfred Hospital. The new chamber was installed following a building program to strengthen the floor structure and remove part of the helipad support structure to make enough room for the new chamber. It was then craned to the enlarged entrance with doors and windows removed. Using a pulley system off the far wall it was slid along rails coming to rest in the middle of the room which is now its permanent home.

The finishing touches are still being carried out. The second stage of the building programme involves new support facilities for a greater number of staff and patients. Both stretcher and ambulance patients can be easily treated without over crowding the new chamber at any time.

We were treated to a lecture on decompression illness before our visit to the chamber and a supper of tea/coffee and biscuits.

For those who missed out an extract from the handout has been reprinted below. As a quick reminder of how careful divers need to be please take note of the following;

- Do not dive too often and for too long;
- Do not put on excessive weight;
- Do not drink alcohol or become dehydrated before a dive;
- Do not get old or sick;

and do educate others on the signs and symptoms of DCI, so when you are bent and keep denying it others will know better.

INTRODUCTION TO DECOMPRESSION ILLNESS

DECOMPRESSION THEORY

Prior to a dive, the gas partial pressures in diver's lungs, blood and tissues are in a state of equilibrium: 0.8 bars nitrogen and 0.2 bars oxygen. The factors which determine the rate of gas exchange and how quickly tissues reach equilibrium are:

- blood supply to the tissues;
- the solubility of the gas in the tissue relative to its solubility in blood;
- the rate at which the gas diffuses through the tissue;
- the temperature of the tissue;
- the partial pressure of carbon dioxide in the tissue;
- the local energy consumption (related to workload).

The rate at which gas is eliminated from tissues (off-gassing), and an equilibrium of 0.8 bars nitrogen re-established, is influenced by the same factors except that the rate of elimination is slower - the presence of systemic bubbles further interferes with nitrogen elimination. Numerous dive tables are based on the assumption that gas uptake and elimination by tissues occurs at the same rate.

DECOMPRESSION ILLNESS

During a dive, extra nitrogen is dissolved into the body in accordance with Henry's Law. The longer and deeper a dive is, the greater the amount of nitrogen is absorbed (the time for nitrogen to fully equilibrate in a diver's body is about 24 hours). If decompression is too rapid, the body's tissues become supersaturated and the excess nitrogen will come out of solution before it can be exhaled from the lungs.

The lungs are excellent filters of gas bubbles, however, this capacity is finite and if the bubble burden is exceeded, bubbles may transit the lungs to the arterial side of the circulation. The arterialisation of venous bubbles can also be caused by the presence of a Patent Foramen Ovale (present in approx 25% of the population). This legacy of foetal circulation provides a possible route for bubbles to bypass the pulmonary filter through right-to-left shunts. Shunting can be caused by the valsalva manoeuvre and a head down posture; both are common events in diving.

How bubbles in arterial blood interfere with tissue function is not entirely understood. One mechanism is that they obstruct small blood vessels and hence cause tissue ischaemia. However, this effect appears to be transient because cerebral blood vessels respond by dilating and thus allowing the bubbles to move on - this is why some cerebral DCI victims recover spontaneously and should under no circumstances be sat up, on the assumption they're OK, until they have been recompressed. It is now thought that most of the damage which results from bubble embolism of the brain is due to the consequences of traumatic injury to the delicate endothelial lining of cerebral blood vessels which in places may be stripped from the vessel wall. This results not only in a breakdown of the blood-brain-barrier and the consequential leaking of potentially harmful blood constituents into the brain, but also, by exposing blood components such as white blood cells and platelets to the damaged blood vessel wall, a tissue reaction injury is promoted.

Although it is recognised that bubbles in tissues may arise from two fundamentally different processes, it is often difficult to be certain of the origins of the bubbles. With respect to some organ systems, such as the ears and lungs, it may occasionally be difficult to distinguish between a bubble induced condition and a barotrauma. It is for this reason that the traditional distinction between Arterial Gas Embolism (AGE) and Decompression Sickness (DCS) is being abandoned for the new description of DCI with accompanying evolution and manifestation terms.

The clinical features of DCI are seen during or after ascent - In 90% of cases, symptoms will be evident within 6 hours and 50% within an hour of completing the dive. Less commonly, a delay in onset of 24 hours or greater has been seen. Generally, the earlier the symptoms, the more potentially serious the DCI.

Pain: Limb pain is probably the most frequent manifestation of DCI. Following shallow or "bounce", the upper limbs, particularly the shoulders, tend to be involved more often than the lower limbs. It is not unusual for two joints to be affected, usually adjacent ones eg. shoulder and elbow on the same side. It is rare for multiple joints to be affected in a symmetrical pattern.

Neurological: DCI can affect the brain and/or the spinal cord. Involvement of the nervous system may be subtle, multifocal and consequently difficult to localise. The clinical features are due to the illness interfering with one or more of the nervous systems five principal functions: 1. sensation; 2. movement; 3. consciousness; 4. autonomic functions; 5. reflexes.

The onset of cerebral DCI is often preceded by headache - most likely due to brain swelling. Tingling, weakness or paralysis affecting a limb or one side of the body, difficulty with speech, visual disturbances, confusion, loss of consciousness or convulsions are all possible presenting symptoms of this serious disorder.

Spinal DCI has a frequent association with bubbles in the blood and lungs, commonly known as "chokes". It also may be preceded by girdle pains which in the context of DCI is generally considered ominous as it frequently indicates neurological deterioration. Interference with nerve supply to the bladder and intestines may lead to difficulty in passing urine or opening the bowel. Paraplegia or quadriplegia may develop.

DCI is more likely to develop rapidly under the following conditions:

- Deep dives in which fast tissues are loaded and release gas rapidly
- Rapid ascents which increase the inert gas gradient
- The presence of residual nitrogen from a previous dive
- Gross decompression omission

The following practices will reduce the risk of a diving accident:

1. ***Following safe diving protocols.***
2. ***Maintaining your skills.***
3. ***Maintaining a good level of fitness.***
4. ***Maintaining your equipment***

FACTORS INFLUENCING DCI

DIVE PROFILE: diving to the limits of the tables will increase the likelihood of DCI. Also different dive profiles carry different risks i.e. a square profile carries a higher risk than a "V" profile.

MULTIPLE ASCENTS: this may increase the likelihood of DCI by forming venous gas emboli in the pulmonary system which redistribute to the arterial system during the subsequent compressions.

REPETITIVE DIVES: residual nitrogen accumulated from successive dives will increase the risk of DCI. It is sensible to take a day off after every three days of repetitive diving.

EXERCISE: exercise performed at depth will result in a greater absorption of nitrogen - this can increase decompression requirements by a factor of three. Heavy exercise after a dive may speed up bubble development as well as the number of bubbles - this can be likened to shaking a can of aerated drink.

PHYSICAL FITNESS: increased fitness is associated with improved circulation which may assist the diver in gas elimination. Also a fit diver is able to cope much better with the demands of diving which may result in less nitrogen being absorbed.

OBESITY: nitrogen is 4.5 times more soluble in fat than non-fatty tissues. Hence, the more fat that exists the more tissue that is available to absorb nitrogen.

DEHYDRATION: reduces perfusion of tissues & hence the elimination of nitrogen.

ALCOHOL: this not only impairs judgement but the subsequent dehydration, vasodilation and heat loss will aggravate DCI.

FEMALES: the physiological differences between the sexes (physical fitness, cold, body to fat ratio etc) may result in women having a higher risk of DCI.

AGE: advanced age increases the risk of DCI due to impaired perfusion or due to already damaged vessels being more susceptible to other flow interferences.

TEMPERATURE: may influence DCI by its influence on perfusion (increased temperature causes increased blood flow) and solubility (lower temperatures causes increased gas solubility). Cold water results in greater nitrogen being dissolved in the diver's tissues (N₂ is more soluble in cold tissue than warm which explains why you shouldn't have a hot shower after a dive - warming of the tissues may cause dissolved nitrogen to come out of solution) & also decreases the ability to eliminate nitrogen resulting in increased chance of DCI.

INCREASED CARBON DIOXIDE PRESSURES: this may result from the effects of pressure, exercise or breathing resistances with equipment & could cause increased perfusion during the dive and therefore an increased nitrogen loading.

ADAPTATION: anecdotal evidence suggests that if you "work-up" to depth (a practice used by navy divers) the risk of DCI is reduced. "Work-up" dives may eliminate some gas nuclei (the origin of a bubble) and hence reduce the number of bubbles formed within the diver's body.

PHYSICAL INJURY OR DCI: a pre-existing injury such as a sprained joint or a previous episode of DCI, predisposes to DCI due to scar tissue and the alterations in local tissue perfusion eg. a spinal fusion operation may predispose a diver to spinal DCI.

ILLNESS: a respiratory illness such as a cold, flu or hay fever usually results in the formation of mucous in the lungs, sinuses and eustachian tubes. This may result in non-communicative air spaces in areas like the lungs and eustachian tubes which could lead to difficulty in ear clearing (barotrauma) and gas trapping in the lungs (AGE).

ALTITUDE: travelling to altitude to dive, or exposure to altitude, after a dive may provoke DCI by producing bubbles or expanding existing bubbles. A common occurrence is flying after diving which can induce DCI days after a dive, especially if repetitive diving has been undertaken. Flying is not advisable for at least 24 hours after normal (ie. scuba air) and no-stop recreational diving.

DIVING THE LIMITS OF THE TABLES: all diving tables carry a risk of DCI regardless of their nature and the extent to which they have been trialled. Tables vary from the more conservative tables such as the DCIEM (Canadian) tables to the lesser conservative tables such as the USN Tables. Pushing the limits of any dive table will increase the DCI risk as well as reduce your margin for error, especially at the deeper depths.

PATENT FORAMEN OVALE: approximately 30% of the population have a PFO (a hole between the left and right atrium). This unsealed flap/valve may open under certain circumstances (eg. valsalva manoeuvre, head down posture) and result in the arterialisation of venous bubbles.

SIGNS AND SYMPTOMS OF DCI

Common

1. Fatigue/lethargy.
2. Malaise.
3. Joint pains.
4. In-coordination.
5. Tingling sensations
6. Loss of balance.
7. Poor concentration.
8. Numbness.
9. Dizziness.
10. Weakness.
11. Headaches.

Other

1. Visual disturbances.
2. Confusion.
3. Convulsions.
4. Rash.
5. Nausea.
6. Tinnitus (ears ringing).
7. Chest pains.
8. Shortness of breath.
9. Unconsciousness.
10. Itch.
11. Paralysis.
12. Bladder problems.

As can be seen, the signs and symptoms of DCI are varied. Do not take unnecessary chances, if you think you are bent, seek medical help as soon as possible. If you've been diving and surface feeling unwell, unless you can attribute your problem to something else, assume that you are bent. Typically, the longer you wait to get treated the more damage that will be done by DCI and hence the longer it will take to treat you and the less likely you will fully recover.

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NEWS - MARCH 1999

WARNING ON GAS CYLINDER FILLING PRACTICES

Many private recreational diving cylinder fillers may be putting people at risk by using unsafe practices to fill portable breathing apparatus, warns Standards Australia, the nation's peak Standards body.

This warning coincides with the release of a newly revised Australian Standard on safety procedures for filling gas cylinders used in self-contained underwater breathing apparatus (SCUBA) and for those used out of water, for example, in underground mining.

According to Alan Moore, Projects Manager with Standards Australia's Materials and Safety Group, there have been some five violent failures in Australia in the past three years where unsafe filling procedures had not been entirely ruled out.

"Fortunately, in these cases, no one was seriously injured, but luck did play a part as people were not in the cylinder filling area at the time these failures occurred," Mr Moore said.

"When these cylinders do violently fail they are similar to a grenade, sending 12mm thick pieces of aluminium flying like shrapnel." For guidance on safe SCUBA and self-contained breathing apparatus (SCBA) cylinder filling procedures, private users, including recreational divers, diving shops and diving operations, can refer to the newly revised Australian Standard, AS 3848.2—1999.

"The Standard should prove to be a boon, particularly for recreational divers who have a compressor on board their boat and constantly use and pump up their cylinders every weekend," Mr Moore said. "In these circumstances, these divers may easily forget to inspect them for fatigue at the required intervals given in the Standard." AS 3848.2—1999 combines the requirements of two previous Standards to cover safety guidelines for both decant and compressor filling in the one document. It expands on and clearly defines the pressure limitations of the types of valves used in conjunction with SCUBA and SCBA cylinders. The Standard also defines the information that should be marked permanently on the bodies of valves fitted to SCUBA and SCBA cylinders.

Sales enquiries: Customer Service Centre, Tel: 1300 65 46 46

DIVE/SOCIAL CALENDAR

DATE	EVENT/LOCATION	DIVE CAPTAIN	MEET AT
17 June	General Meeting Bell's Hotel Cnr. Moray & Coventry Streets, Sth. Melbourne		8.00 pm
27 June	130ft Submarine	John Lawler 9589 4020	Sorrento 9.30am
11 July	Scallop Dive (1 tank)	Rob Birtles 9725 2816	Rye 10.00am
15 July	General Meeting Bell's Hotel Cnr. Moray & Coventry Streets, Sth. Melbourne		8.00 pm
23 July	King Neptune Night	Helen Fryday 9417 7513	Cafe' Meletti 7.30pm
25 July	Spectacular Reef	John Lawler 9589 4020	Sorrento 10.00am
8 Aug	Treasure Hunt	Rob Birtles 9725 2816	Sorrento 9.00am
19 August	General Meeting Bell's Hotel Cnr. Moray & Coventry Streets, Sth. Melbourne		8.00 pm
22 Aug	Nepean Wall (1 Tank)	Don Abell 9889 4415	Sorrento 10.30am
28 Aug	Hurricane	Leo Maybus 9727 1568/0418 375 102	Rye
3-4 Sept	Snow trip - Hotham	Leo Maybus 9727 1568/0418 375 102	
5 Sept	Fathers Day lunch	Gerry Devries 9725 2381/0417 324 608	

16 Sept	General Meeting Bell's Hotel Cnr. Moray & Coventry Streets, Sth. Melbourne		8.00 pm
19 Sept	George Kermode	John Mills 9761 0960	Newhaven 10.00am
26 Sept	Yarra Valley Wine Tour	Helen Fryday 9417 7513	
21 Oct	General Meeting Bell's Hotel Cnr. Moray & Coventry Streets, Sth. Melbourne		8.00 pm
Xmas'99	Robe	Priya Cardinalletti	
May '00	Vanuatu	Don Abell	
Xmas '00	Tasmania	Mick Jeacle	

NOTICE: BOAT OWNERS INTENDING TO BRING THEIR BOATS
PLEASE RING THE DIVE CAPTAIN BEFORE 6.00 PM ON EVENING
PRIOR TO THE DIVE.

DIVERS PLEASE RING BETWEEN 6.00 PM - 7.00 PM.

FOR NIGHT DIVES (USUALLY SATURDAYS) PLEASE RING BY 8.00 PM
ON EVENING PRIOR TO DIVE.

GREAT DIVE? NO DIVE SCHEDULED?
RING NEVILLE VIAPREE - 9551 1547 (H)

TIDE TABLES

TIMES OF FLOOD AND EBB. - The tables of Times of Flood and Ebb give the times when the rate of change in the sea level at Point Lonsdale (Port Phillip Heads) is a maximum, each time approximately time when the tidal flow at the entrance to port Phillip bay changes direction, this time is given in the column marked "Time". The direction of this flow is indicated by the words "flood" and "ebb" in the column "start". Thus the word "flood" indicates that the tide starts to flow into the bay, at the given time in the "Time" column. The word "ebb" indicates that the tide starts to flow out of the bay at that time.

PORT PHILLIP HEADS (PT.LONSDALE) PORT PHILLIP HEADS (PT.LONSDALE)

LAT 38° 18'

LONG 144° 37'

LAT 38° 18'

LONG 144° 37'

TIMES AND HEIGHTS OF HIGH AND LOW WATERS

TIME ZONE -1000

TIMES AND HEIGHTS OF HIGH AND LOW WATERS

TIMES OF SLACK WATERS

TIME ZONE -1000

JULY - 1999

JULY - 1999

Time m	Time m	Time m	Time m
1 0058 1.30	9 0016 0.40	17 0223 1.46	25 0206 0.44
TH 0708 0.31	FR 0715 1.34	SA 0818 0.22	TH 0950 flood
FR 1402 1.54	FR 1230 0.64	SA 1504 1.66	TH 1205 ebb
TH 1943 0.68	FR 1911 1.42	SA 2056 0.49	TH 2259 flood
2 0742 1.33	10 0107 0.36	18 0315 1.45	26 0304 0.43
FR 1439 1.57	SA 0826 1.36	FR 0907 0.27	MO 1024 1.27
SA 2022 0.64	FR 1437 0.72	SU 1607 1.63	MO 1523 0.65
	SA 2005 1.38	SA 2107 0.45	MO 2138 1.20
3 0224 1.34	11 0206 0.33	19 0407 1.42	27 0408 0.41
FR 0820 0.30	MO 0939 1.41	MO 0952 0.35	TH 1119 1.31
SA 1516 1.58	SU 1433 0.79	MO 1645 1.58	TU 1636 0.84
SA 2100 0.59	SU 2107 1.36	MO 2233 0.42	TU 2239 1.19
4 0306 1.35	12 0313 0.29	20 0459 1.38	28 1209 1.38
FR 0853 0.32	MO 1047 1.47	MO 1034 0.43	WE 1741 0.79
SU 1553 1.58	MO 1548 0.81	TU 1722 1.53	MO 2337 1.22
SU 2136 0.56	MO 2217 1.36	(P) 2315 0.41	
5 0347 1.34	13 0424 0.34	21 0552 1.34	29 0558 0.34
FR 0929 0.35	MO 1152 1.54	MO 1114 0.51	TH 1254 1.42
MO 1630 1.56	TU 1701 0.78	WE 1755 1.46	TH 1833 0.72
MO 2213 0.52	TU 2328 1.38	MO 2355 0.41	
6 0430 1.34	14 0530 0.20	22 0645 1.30	30 0031 1.25
FR 1008 0.39	WE 1251 1.60	TH 1553 0.60	FR 1910 0.65
TU 1705 1.53	WE 1808 0.71	TH 1830 1.39	FR 1917 1.20
(P) 2250 0.48			FR 2335 1.47
7 0517 1.34	15 0031 1.42	23 0034 0.42	31 0120 1.30
FR 1051 0.46	TH 0630 0.16	FR 0739 1.27	SA 1921 0.29
WE 1743 1.50	TH 1346 1.65	FR 1234 0.68	SA 1415 1.52
2331 0.44		FR 1908 1.33	SA 1959 0.57
8 0611 1.33	16 0129 1.45	24 0832 1.43	8 0239 flood
TH 1138 0.54	FR 0726 0.19	FR 1321 1.25	TH 1358 flood
TH 1824 1.46	FR 1437 1.67	SA 1950 1.27	TH 2036 ebb
	FR 2005 0.56		

Time Start	Time Start	Time Start	Time Start
9 0327 flood	17 0445 ebb	25 0516 flood	25 0516 flood
FR 1400 ebb	SA 1807 ebb	FR 1442 flood	SU 1651 flood
FR 2112 ebb		SA 2112 ebb	SU 2226 ebb
10 0424 flood	18 0005 flood	10 1125 ebb	26 0611 flood
SA 1540 flood	SU 1152 flood	SA 2158 ebb	MO 1830 flood
SA 2158 ebb			MO 2320 ebb
11 0530 flood	19 0055 flood	11 1249 ebb	27 0707 flood
SU 1702 flood	MO 1230 flood	SU 1702 ebb	TU 1442 ebb
2255 ebb			TU 2005 flood
12 0638 flood	20 0142 flood	12 1404 ebb	28 0025 ebb
MO 1850 flood	TU 1306 flood	MO 1850 ebb	FR 0800 flood
			WE 1527 ebb
13 0005 ebb	21 0225 flood	13 0005 ebb	WE 2108 flood
FR 1442 flood	WE 1341 flood	FR 1442 ebb	TH 0132 ebb
TU 1507 ebb	WE 2013 ebb	TU 2025 ebb	TH 1604 ebb
2025 ebb			TH 2156 flood
14 0121 ebb	22 0304 flood	14 0121 ebb	30 0235 ebb
WE 1600 ebb	TH 1416 ebb	WE 1600 ebb	FR 0931 flood
WE 2130 flood	TH 2042 ebb	WE 2130 flood	FR 1638 ebb
			FR 2234 flood
15 0237 ebb	23 0021 ebb	15 0237 ebb	31 0330 ebb
TH 1645 ebb	FR 1456 flood	TH 1645 ebb	SA 1710 ebb
TH 2224 ebb	FR 2113 ebb	TH 2224 ebb	SA 2307 flood
16 0345 ebb	24 0427 flood	16 0345 ebb	
FR 1728 ebb	SA 1545 flood	FR 1728 ebb	
2315 flood	SA 2145 ebb	FR 2315 flood	

TIDE TABLES

TIMES OF FLOOD AND EBB - The tables of Times of Flood and Ebb give the times when the rate of change in the sea level at Point Lonsdale (Port Phillip Heads) is a maximum. Each time approximates the time when the tidal flow at the entrance to port Phillip changes direction, this time is given in the column marked "Time". The direction of this flow is indicated by the words "flood" and "ebb" in the column "Start". Thus the word "flood" indicates that the tide starts to flow into the bay, at the given time in the "Time" column. The word "ebb" indicates that the tide starts to flow out of the bay at that time.

PORT PHILLIP HEADS (PT. LONSDALE) PORT PHILLIP HEADS (PT. LONSDALE)

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LONG 144° 37'

TIME ZONE -1000

LAT 38° 18'

LONG 144° 37'

TIME ZONE -1000

TIMES AND HEIGHTS OF HIGH AND LOW WATERS

TIMES OF SLACK WATERS

AUGUST - 1999

AUGUST - 1999

Time m	Time m	Time m	Time m	Time m	Time m	Time m	Time m	Time m	Time m
1 0206 1.34	9 0145 0.28	17 0350 1.43	25 0307 0.41	1 0421 ebb	9 0508 flood	17 0025 flood	25 0621 flood	1 0206 1.34	9 0145 0.28
SU 1453 1.55	MO 1412 0.76	TU 1609 1.52	WE 1543 0.79	SU 1740 ebb	MO 1841 flood	TU 1836 ebb	WE 1919 flood	SU 1453 1.55	MO 1412 0.76
2037 0.50	2044 1.31	2204 1.31	2200 1.13	2200 1.13	2340 flood	1836 ebb	1819 flood	2037 0.50	2044 1.31
2 0251 1.37	10 0253 0.28	18 0435 1.40	26 0419 0.40	2 0510 ebb	10 0621 flood	18 0102 flood	26 0728 flood	2 0251 1.37	10 0253 0.28
MO 0836 0.30	TU 1029 1.39	18 0007 0.41	TH 1127 1.26	1 1211 flood	TU 1342 ebb	WE 1445 ebb	TH 1525 ebb	MO 0836 0.30	TU 1029 1.39
MO 1530 1.55	TU 1527 0.77	WE 1641 1.47	TH 1659 0.74	MO 1809 ebb	TU 1829 flood	WE 1244 flood	TH 2034 flood	MO 1530 1.55	TU 1527 0.77
2 115 0.44	2200 1.30	2241 0.31	2307 1.16	2307 1.16	1903 ebb	1903 ebb	1929 ebb	2 115 0.44	2200 1.30
3 0334 1.39	11 0409 0.27	19 0517 1.36	27 0523 0.36	3 0015 flood	11 0731 flood	19 0138 flood	27 0825 ebb	3 0334 1.39	11 0409 0.27
MO 0915 0.34	TU 1132 1.44	19 0045 0.48	TH 1218 1.33	3 0558 ebb	11 1445 ebb	19 0752 ebb	27 1325 ebb	MO 0915 0.34	TU 1132 1.44
TU 1606 1.54	WE 1645 0.73	TH 1713 1.42	FR 1800 0.65	TU 1838 ebb	WE 2012 flood	TH 1316 flood	FR 1525 ebb	TU 1606 1.54	WE 1645 0.73
2 154 0.38	2315 1.32	2317 0.31	2307 1.16	2307 1.16	1929 ebb	1929 ebb	2123 flood	2 154 0.38	2315 1.32
4 0419 1.40	12 0519 0.25	20 0600 1.32	28 0615 0.32	4 0053 flood	12 0833 flood	20 0835 ebb	28 0913 flood	4 0419 1.40	12 0519 0.25
MO 0958 0.39	TU 1232 1.49	20 1122 0.55	FR 1345 1.46	4 0648 ebb	12 1133 flood	20 1349 flood	SA 1959 ebb	MO 0958 0.39	TU 1232 1.49
WE 1642 1.52	TH 1756 0.65	FR 1745 1.36	SA 1847 0.55	5 0134 flood	13 0237 flood	21 0247 flood	29 0355 flood	WE 1642 1.52	TH 1756 0.65
2 353 0.34	2354 0.33	2354 0.33	2354 0.33	1906 ebb	13 1311 flood	21 1619 ebb	SU 1630 ebb	2 353 0.34	2354 0.33
5 0505 1.40	13 0020 1.36	21 0645 1.27	29 0659 0.30	5 0743 ebb	13 0927 flood	21 1212 flood	29 0955 flood	5 0505 1.40	13 0020 1.36
MO 1042 0.46	FR 1327 1.54	SA 1821 1.29	SU 1930 0.46	TH 1933 ebb	14 0345 ebb	22 0325 flood	SU 1630 ebb	MO 1042 0.46	FR 1327 1.54
TH 1718 1.49	FR 1857 0.55	SA 1930 0.46	2010 0.36	6 0219 flood	14 0345 ebb	22 0325 flood	SU 1630 ebb	TH 1718 1.49	FR 1857 0.55
2 315 0.30	14 0119 1.40	22 0734 1.23	30 0739 0.29	6 0844 ebb	14 1014 flood	22 1030 ebb	MO 1701 ebb	2 315 0.30	14 0119 1.40
6 0600 1.39	SA 1415 1.57	SU 1243 0.68	MO 1425 1.50	FR 2004 ebb	14 1014 flood	22 1030 ebb	MO 1701 ebb	6 0600 1.39	SA 1415 1.57
MO 1127 0.54	SA 1951 0.46	SU 1902 1.23	2010 0.36	7 0308 flood	15 0442 ebb	23 0413 ebb	MO 2308 flood	MO 1127 0.54	SA 1951 0.46
FR 1759 1.44	SA 1951 0.46	SU 1902 1.23	2010 0.36	7 0308 flood	15 0442 ebb	23 0413 ebb	MO 2308 flood	FR 1759 1.44	SA 1951 0.46
7 0000 0.28	15 0214 1.43	23 0115 0.38	31 0231 1.44	8 0403 flood	15 0442 ebb	23 0413 ebb	TU 2345 flood	7 0000 0.28	15 0214 1.43
MO 0700 1.37	SU 0804 0.26	MO 0829 1.20	23 0829 1.20	8 1109 ebb	16 1134 flood	24 1247 ebb	31 1110 flood	MO 0700 1.37	SU 0804 0.26
SA 1215 0.82	SU 1457 1.57	MO 1331 0.74	TU 1503 1.51	8 1525 flood	16 1807 ebb	24 2127 ebb	TU 2345 flood	SA 1215 0.82	SU 1457 1.57
SA 1845 1.40	2040 0.39	1951 1.18	2049 0.28	2049 0.28	2127 ebb	2223 ebb	31 1110 flood	SA 1845 1.40	2040 0.39

2051 1.14

2051 1.14

TIDE TABLES

TABLES OF FLOOD AND EBB - The tables of Times of Flood and Ebb give the times when the rise of change in the sea level at Point Lonsdale (Port Phillip Heads) is a maximum, each time approximately there is a high tide flow at the entrance to port Phillip bay changes direction, this time is given in the column marked "Time". The direction of this flow is indicated by the words "flood" and "ebb" in the column "Start". Thus the word "flood" indicates that the tide starts to flow into the bay, at the given time in the "Time" column. The word "ebb" indicates that the tide starts to flow out of the bay at that time.

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TIME ZONE -1000

TIME ZONE -1000

TIMES AND HEIGHTS OF HIGH AND LOW WATERS

TIMES OF SLACK WATERS

SEPTEMBER - 1999

SEPTEMBER - 1999

Time m	Time m	Time m	Time m	Time Start	Time Start	Time Start	Time Start
0324 1.48	0359 0.34	17 0441 1.41	0435 0.42	1 0557 ebb	9 0721 flood	17 0050 flood	25 0054 ebb
0903 0.33	1111 1.33	1016 0.45	1135 1.26	1148 flood	1411 ebb	0723 ebb	0756 flood
WE 1940 1.51	TH 1636 0.63	FR 1633 1.36	SA 1718 0.55	WE 1802 ebb	FR 2010 flood	FR 1256 flood	SA 1427 ebb
2309 1.28	2309 1.28	2309 0.24	2348 1.24		1845 ebb	1845 ebb	2042 flood
0409 1.49	10 0511 0.33	18 0516 1.36	0542 0.39	0226 flood	10 0126 ebb	18 0123 flood	26 0213 ebb
0946 0.38	1210 1.38	1053 0.50	1226 1.33	0648 ebb	0826 ebb	0801 ebb	0864 flood
TH 1616 1.48	FR 1746 0.54	SA 1707 1.31	SU 1810 0.43	TH 1227 flood	FR 1502 ebb	SA 1328 flood	SU 1506 ebb
2213 0.19	2314 0.27	2314 0.27	2314 0.27	1832 ebb	2109 flood	1909 ebb	2120 flood
0456 1.47	11 0015 1.32	19 0556 1.31	0045 1.35	0110 flood	11 0245 ebb	19 0157 flood	27 0317 ebb
1030 0.44	0612 0.31	1130 0.55	0634 0.36	0741 ebb	0918 flood	0844 ebb	0942 flood
FR 1555 1.45	SA 1301 1.43	SU 1744 1.25	MO 1311 1.39	FR 1305 flood	SA 1545 ebb	SU 1400 flood	MO 1543 ebb
2256 0.18	SA 1844 0.43	2350 0.30	MO 1854 0.31	1903 ebb	SA 2155 flood	1936 ebb	2157 flood
0546 1.43	12 0112 1.39	20 0641 1.25	0137 1.46	0156 flood	12 0346 ebb	20 0233 flood	28 0413 ebb
1114 0.51	0703 0.30	1209 0.61	0719 0.34	0837 ebb	1002 flood	0931 ebb	1023 flood
SA 1736 1.40	SU 1345 1.46	MO 1825 1.18	TU 1953 1.44	SA 1345 flood	SU 1623 ebb	MO 1437 flood	TU 1617 ebb
2341 0.19	SU 1931 0.35		TU 1937 0.20	1937 ebb	2234 flood	MO 2008 ebb	2235 flood
0544 1.38	13 0203 1.44	21 0028 0.34	0225 1.55	0245 flood	13 0439 ebb	21 0316 flood	29 0505 ebb
1200 0.58	0748 0.31	1732 1.20	0803 0.34	0938 ebb	1042 flood	1020 ebb	1101 flood
SU 1824 1.34	MO 2014 0.28	TU 1914 1.13	WE 1434 1.46	SU 1430 flood	MO 1657 ebb	TU 1520 flood	WE 1652 ebb
			MO 2015 1.09	2110 ebb	2311 flood	2047 ebb	2316 flood
0030 0.23	14 0249 1.46	22 0112 0.38	0311 1.59	0340 flood	14 0525 ebb	22 0410 flood	30 0555 ebb
0750 1.33	0828 0.34	1732 1.17	0847 0.36	1044 ebb	1117 flood	1135 ebb	1140 flood
MO 1251 0.54	TU 1459 1.46	WE 1345 0.70	TH 1514 1.46	MO 1523 flood	TU 1728 ebb	WE 1627 flood	TH 1727 ebb
1921 1.28	TU 2052 0.24	WE 2015 1.09	TH 2105 0.09	2110 ebb	TU 2345 flood	WE 2147 ebb	
0126 0.28	15 0330 1.46	23 0207 0.42	0445 flood	15 0607 ebb	15 0607 ebb	23 0521 flood	
0900 1.30	0905 0.37	1736 1.16	1156 ebb	1155 flood	1155 flood	1243 ebb	
TU 1354 0.69	WE 1530 1.44	TH 1451 0.70	TU 1639 flood	2220 ebb	WE 1751 ebb	TH 1831 flood	
2033 1.24	WE 2129 0.23	TH 1717 1.09	2220 ebb		TH 1831 flood	2319 ebb	
0237 0.32	16 0406 1.45	24 0317 0.44	0603 flood	8 0603 flood	16 0018 flood	24 0644 flood	
1008 1.30	0941 0.41	1039 1.20	1309 ebb	1309 ebb	0645 ebb	1341 ebb	
WE 1513 0.69	TH 1601 1.40	FR 1608 0.65	WE 1837 flood	WE 1837 flood	TH 1223 flood	FR 1953 flood	
2155 1.23	TH 2204 0.23	2242 1.14	2351 ebb	2351 ebb	TH 1820 ebb		

EMERGENCY CONTACT INFORMATION MORNINGTON PENINSULA AREA

	PHONE
POLICE - AMBULANCE - FIRE	(000)
PENINSULA AMBULANCE (ROSEBUD, SORRENTO) (MORNINGTON)	(008) 137333 (03) 9783 2222
SOUTHERN PENINSULA HOSPITAL 1527 NEPEAN ROSEBUD	(0359) 86 8444
FRANKSTON HOSPITAL HASTINGS ROAD FRANKSTON	(03) 9781 3111
MORNINGTON BUSH NURSING HOSPITAL MAIN ST MORNINGTON	(0359) 75 2009
MORNINGTON BAY RESCUE SERVICE	(0359) 75 2733
SOUTHERN PENINSULA RESCUE	(0359) 84 2000
DIVING EMERGENCY SERVICE	1800 088 200
COAST GUARD	(03) 9598 7003
STATE EMERGENCY SERVICE (S.E.S)	(03) 26 1468
WATER POLICE	(03) 9662 0911
MELBOURNE AMBULANCE	(03) 9662 2533
DOCTORS DIVING MEDICINE	
DR. GUY WILLIAMS	ROSEBUD (0359) 81 1555
DR. J De B.J. DADE	MORNINGTON (0359) 75 5288
DIVING EMERGENCY SERVICE	1800 088 200

V.H.F. EMERGENCY CHANNEL..... (16)