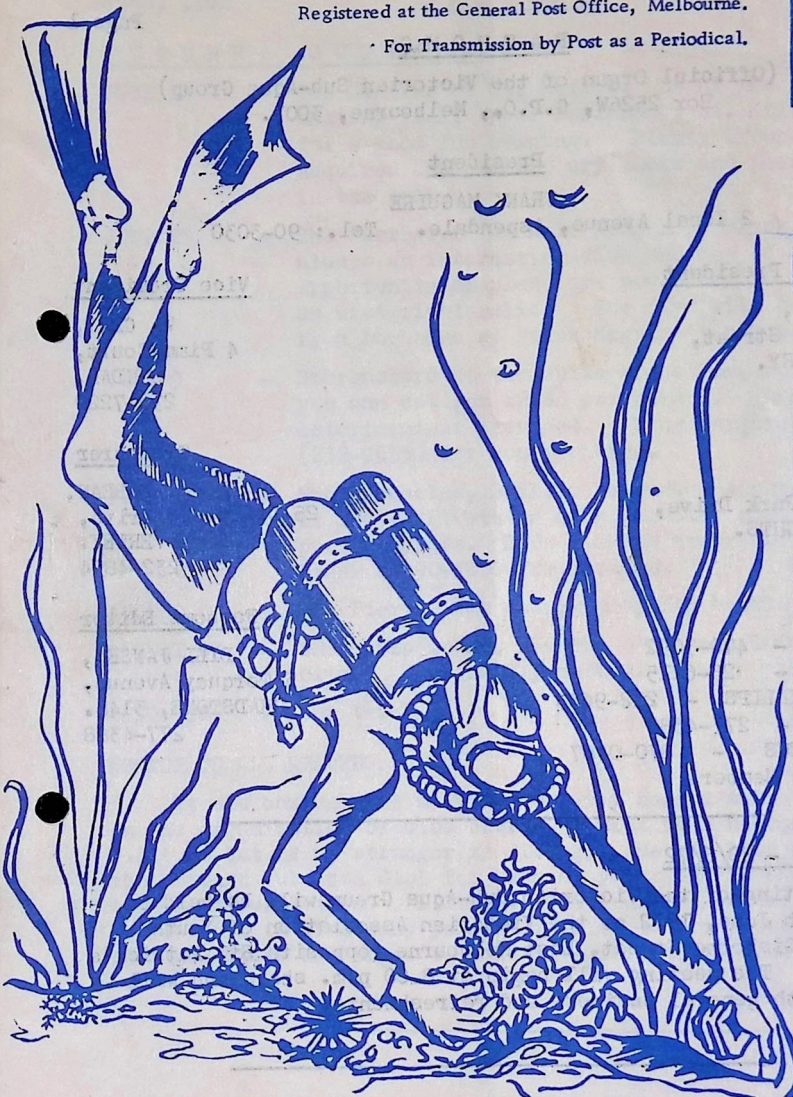


JUNE 12 3c.

Registered at the General Post Office, Melbourne.  
For Transmission by Post as a Periodical.



# FATHOMS



## VICTORIAN SUB-AQUA GROUP

FATHOMS

(Official Organ of the Victorian Sub-Aqua Group)  
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CLUB MEETING - 20/6/72

The next meeting of the Victorian Sub-Aqua Group will be held on Tuesday, 20th June, 1972 at the Victorian Association of Youth Clubs Hall, Gisborne Street, East Melbourne (opposite St. Patrick's Cathedral). The meeting will begin at 8.00 p.m. sharp and will terminate with general business and refreshments.

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FUTURE OUTINGS

- JUNE 14 - Ice Skating at St. Moritz. Be at the St. Moritz skating rink, Upper Esplanade, St. Kilda, at 7.30 pm for a good fun evening. Plenty of ups and downs. Required equipment: dry socks and plenty of padding in the seat.
- JUNE 25 - The "Serberus" at Half Moon Bay, Black Rock. This is always an interesting dive and may be our last opportunity as plans are now afoot to raise her as an historical relic. The dive will be followed by a barbecue at Frank Maguire's place.
- JULY 9 - Smorgasbord at the White Horse Inn, Box Hill. All you can eat for \$2.90 per person. Dancing and entertainment provided. Ring Margaret Phillips, (232-9633) for your booking.
- JULY 23 - The Pinnacles, Phillip Island. A natural phenomenon of marine growth on an underwater crest. Mecca for photographers. Life Jackets are required. Ring Frank at 90-3030 for details.
- AUGUST 6 - Rye Pier. The old standby for bottle collectors.
- AUGUST 27 - Snow trip to Mt. Baw Baw - approx. 100 miles from city. Good family outing.
- SEPT. 10 - Car trial.

## NOTICE TO ALL READERS:

At the coming club meeting, we will hear a talk by Mick Ryan on the organization of club diving. Mick is a newcomer in the V.S.A.G. but is no stranger to diving. He has been a member of the British Sub Aqua Club for several years and is a qualified instructor with them. B.S.A.C. standards are second to none and we are sure to find many points of value to our group. Trainees and new divers are urged to make an effort to be there.

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D I V E   R E P O R T

MORDIALLOC ARTIFICIAL REEF - 14th May, 1972 - Dive Captain -

Sunday morning presented itself with clear blue sky, no wind, and smooth seas - a perfect day for good diving. I arrived at Frank's place at 10.00 a.m. in preparation for a 10.30 a.m. start. Frank and D.J. had already gone to put John Noonan's boat in at Mordialloc Creek. They were coming back by sea, to pick everyone else up at the end of Frank's street at 10.30 a.m. Two keen visitors, Paul and Tony (friends of Bill Jansen), were there already kitted up. We then moved down to the beach to meet the boats. Paul and Tony loading themselves into "Chubb's Tub", Frank, D.J., Justin and myself into John's boat. And off we went.

The dive was to be on the old hulk, put down some 4 miles off Mordialloc, as an aid to an artificial reef that was in the same area. After asking a boat load of fishermen for directions, we soon ran straight into the buoy marking the correct area. With no one being sure of the Hulk's exact location, the boats anchored on the buoy, and two divers from each boat went down to search, Tony and Paul from "Chubb's Tub", Frank and myself from the other boat. The water was cold, murky, and tasted foul. On reaching the bottom at 60', Frank and I found ourselves knee deep in mud and with only 2' to 3' visibility (very hazy at that). Anyway, after tying approximately 140' of rope to the bottom of the buoys anchoring chain, we started to do a tight circle, knowing we probably wouldn't see anything, we hoped that the rope might snag something. Eventually the rope caught, but it was only our own anchor line. After a few more futile minutes, we decided it was useless and called it off. We packed up and started back for shore.

When nearly 3/4 of the way in, we met Bill Gray and Margaret in Bill's boat, and it was then thought best to move back to Frank's place for lunch as it was about 1.00 p.m.

After a relaxed lunch, it was decided to have a look at the Cerberus in Half Moon Bay, Black Rock. This time 3 boats went, carrying a total of 8 divers. Soon after arriving everyone was in the water, and having a good look inside the old wreck. The water was clear, a good 20' to 25' visibility, but as usual, inside the wreck it was icy cold. All divers paired up, Val and myself snorkelling while the others "lunged". It was really great inside, with light rays shining through every little

Mordialloc Artificial Reef (Cont'd.)

crack, overall dividing the inside into light or dark areas; Val seemed to prefer the light ones? The silhouetted twisted and broken bits of metal made it a photographer's funground, however, a certain photographer left his camera at home? Everyone had a ball in ideal conditions, and around 4.30 p.m. decided to make the move back to Frank's place. After a quick pack up, most people started making their way home, as it was rapidly becoming dark.

Overall it was a really good day's diving, enjoyed, I'm sure, by all those attending, and I think it was generally thought that a few more dives of this nature, i.e. close at hand, should be held (weather permitting) around this time of the year.

LES WALKLING.SAVE THE REEF !

Victorian divers were summoned to a meeting last Thursday night, June 8th at the State Library Theatre, Melbourne. The 80 divers who attended heard an earnest plea for support by Senator Georges of Queensland and saw graphic evidence in 2 films of the destruction that has already been caused to the Great Barrier Reef by Crown of Thorns starfish.

This species of starfish has reached plague proportions throughout the Pacific in recent years. They move slowly through a coral reef, stripping it completely of the living coral polyps. Once devastated, a reef does not quickly recover and the dead coral quickly decomposes. It has been found that an injection of Formaldehyde or Ammonia will kill the starfish, but this requires the effort of very many trained divers.

In the Ryukus Islands, 220,000 starfish have been removed. In Guam and Hawaii, they have been brought under control by teams of divers with formalin guns. In Fiji a bounty is paid which works well with the seafaring natives. The British government, which does not suffer from the problem has granted £63,000 for research. Australia has the largest reef in the world, a natural wonder and an important tourist attraction, yet it has not yet seen fit to allocate any funds for direct action. It prefers to hide its head in the sand. "If we pretend we don't see it, it might go away."

Public spirited people have formed the Save the Reef Committee, which will endeavour to do what the Australian government has avoided.



Save the Reef (Cont'd.)

They are raising funds by sale of stickers, debenture issues and any other means available. The assistance of sports divers throughout Australia is being enlisted and committees are being formed in every state to organize action. Two members of the V.S.A.G. have volunteered to serve on the Victorian committee.

The first field operation is scheduled for the 5th to 28th of August. Two chartered vessels will operate from Bowen, Q'ld. carrying teams of divers to infested sites. Several Victorian divers have volunteered for this operation. It is a problem we should all give a lot of thought to.

BILL JANSEN

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SOME DATA ON TANK PRESSURE

Quite often the question is asked, "how long can you stay underwater with a 72 cu.ft. tank?" The answer depends on several variable factors, so a little information on pressures is in order.

Scuba bottles are rated in cubic feet at maximum pressure. A so-called 72 cu. ft. tank will hold slightly less than half a cubic foot of air at atmospheric pressure. Air is compressed into this half cubic foot space to 2150 lbs/sq.in. This is 147 times atmospheric pressure. This small volume of high pressure air will expand to 72 cu. ft. if discharged on the surface. At 33 ft. depth however, the discharged volume is halved by the higher outside pressure. Since air use remains constant with depth change, the decrease in effective bottle capacity proportionately reduces supply duration.

With moderate exertion as in Scuba diving, the body requires about 1 cu. ft. of air per minute. Thus at the surface a 72 cu. ft. tank will last approximately 72 minutes. At 33 feet duration will be reduced by half to 36 minutes. Obviously, an incompletely filled tank lasts a shorter time at any depth. In charging Scuba tanks, high pressure air forced into a rigid tank results in high temperatures within the bottle, thereby expanding the air charge and reducing effective capacity. Placing a warm Scuba bottle in cold water while charging will offset this effect and allow the greatest possible volume at specified pressure.

Therefore the duration of a dive with a 72 cu. ft. tank depends on all these factors. The deeper the dive, the shorter the duration, proportionate to pressure increase. Greater exertion also increases the rate of consumption, as does fatigue, cold, nervousness and the breathing style of the individual.

BILL GRAY.

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### THE EGYPTIANS IN AUSTRALIA

In 1937, the Norwegian explorer Thor Heyerdahl discovered relics in the Marquesas Island of the South Pacific which bore a striking resemblance to those of ancient Peru. From this he developed the theory that the Polynesian islanders might have originally sailed from South America. This led to his now famous "cruise of the Kon-Tiki".

Later research gave rise to another mystery. The Mayas, Aztecs and Incas of Central and South America had raised magnificent cultures with remarkable similarities to the civilization of ancient Egypt. It was reasoned that accidental voyages by Egyptians across the Atlantic were responsible for this culture rather than coincidence. Again the theory was successfully tested, this time with a papyrus boat set adrift in the Gulf Stream to be swept across the Atlantic.

If the Egyptians had somehow reached the shores of the Americas, if those South American Indians later succeeded in crossing the vast Pacific, what other epic journeys could have taken place in the dawn of recorded history? Evidence has come to light that there were other such voyages.

Sixty years ago, a traveller paused to lunch on recently burned ground in Western Australia. There he found a beautiful flower resembling a sunflower but with 'trumpets'. He sent specimens to the Botanical gardens in Perth where they were identified as Egyptian Lotus flowers - plants utterly foreign to Australia. At Geraldton 8 years ago an Egyptian bronze plate was dug up from 28 feet below the sea bed during excavations for wheat silos. Two really ancient wooden wrecks have been found in swamps near Perth. They were about 40 ft. long and 9 ft. wide, with no sign of metal in their construction. The flower, the plate and the boats

The Egyptians in Australia (Cont'd.)

may have been co-related.

Surprisingly, the evidence is not restricted to Western Australia. A coin identified as belonging to the reign of Ptolemy IV in 221 B.C. was found in the Atherton Tablelands near Cairns. Coins, jewellery, fragments of iron, pottery, a bronze armband and a broken bronze sword have been found near Goulburn, Austinmer and Towradji in N.S.W. Even Sydney suburbs have revealed Egyptian artifacts. At Ipswich, Queensland, ancient bronze tools were found and at Rockhampton, a gold scarab, calendar stone, coins and other materials were found.

At Wollongong and Newcastle, the remains of stone dwellings and a wharf were found, and another wooden ship remarkably like those in Perth.

Evidence such as this hardly leaves any room for doubt that ancient Egyptians indeed reached Australia, stayed long enough and penetrated deep enough to leave their mark on this continent. Our recorded history is relatively short and one does not expect to find amphorae and relics of ancient civilizations as in the Mediterranean. If these clues have been found however, then other clues are waiting to be found. A diver often only sees what he happens to be looking for. It would be a tremendous find if someday a diver stumbled across the key to these ancient mariners from the land of the pyramids.

BILL JANSEN.

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MEDICAL NOTES ON PULMONARY FACTORS IN DIVING.

Decompression sickness (the bends) and air embolism are both caused by gas bubbles; there are however, significant differences: the gas in decompression sickness is nitrogen, while in an embolism, it is air. Decompression sickness results from bubbles in the systemic veins rather than in the arteries. The nitrogen bubbles can form in any part of the body. The speed of onset and severity is greater in embolization, which results from normal lung air entering the blood vessels. The causes of the two maladies, thus, are quite different.

Air embolism most frequently results in unconsciousness.



Medical Notes on Pulmonary Factors in Diving (Cont'd.)

Because of it's rapid onset during ascent or within 5 minutes afterwards, the diver rarely complains. He may convulse or have localized impairment of motor and sensory functions. Occasionally, bloody froth will be found in the victim's mouth and throat. There are other symptoms, depending on the course of the air bubbles. Air from the ruptured alveoli can pass along the outside of the blood vessels and bronchi to reach the mediastinum. This space in the middle of the chest contains the trachea, main bronchi, major blood vessels and the heart. Air in the mediastinum will cause severe pain under the sternum (breastbone) with radiation to the shoulders and down the arms. The expanding air can compress the respiratory passages causing shortness of breath. The Vena Cava, which returns venous blood to the right heart, may be sufficiently compressed to compromise cardiac function. Air from the mediastinum may escape into the sub-cutaneous tissues of the neck. This results in a crackling sound, airway compression may result. It may also break through into the thoracic cavity resulting in lung collapse. In theory air could rupture directly from the alveoli into the pleural space but this seldom happens. With lung collapse, shortness of breath, chest pains and unequal chest expansion indicate the condition. Ascent aggravates the abovementioned symptoms. Most commonly, alveolar rupture occurs when a diver fails to exhale normally during ascent. Holding the breath while rising only 10 ft. can be dangerous.

Occasionally air embolism develops in a diver who has apparently exhaled properly during ascent. Antopsies in such cases have revealed a partial obstruction of the respiratory passages. During inspiration the tubes expand and air freely passes, but in expiration the tube contracts and air may be trapped behind the blockage. In this fashion asthma patients generally have more trouble breathing out than in.

Because of the dangers of air embolism, SCUBA equipment should only be ditched if absolutely necessary, such as if the rig became hopelessly entangled. An apparently empty tank may prove to contain a few breathfuls and by holding the mouthpiece the diver is reminded to breathe normally.

Standard therapy for air embolism calls for rapid recompression to 165 feet with decompression according to treatment tables. This compresses the bubbles thus re-establishing blood flow. The U.S.N. has recently adapted the new low pressure decompression treatment

Medical Notes on Pulmonary Factors in Diving (Cont'd.)

table for use in air embolism. Rapid descent is made to 165 ft. and after the symptoms begin to resolve, the victim is decompressed to 60 ft. for alternating O<sub>2</sub> and air breathing during ascent. The stop at 165 feet reduces bubble size and the subsequent oxygen breathing aids in restoring tissue health. This short form of therapy reduces the possibility of developing bends during the pressure therapy and permits prompt hospitalization for follow-up care.

Good health is essential for safe diving. Any limitations in capability must be accompanied by limitations in activity. Beware of getting into situations which may possibly be dangerous. They usually are, and never allow yourself to follow a more experienced and fitter diver until you are thoroughly sure of your own capabilities.

BILL GRAY.

WHAT'S THE SCORE ?

Although we haven't mentioned it lately, the points competition is still going on, some members are still piling up a mighty score and the time is coming around for somebody to take home the prize. Here's how it stands up till now:

Frank Maguire .....	99	Fritz Lottner .....	11
Don McBean .....	87	Lorraine Addison ....	11
Alan Cutts .....	80	Barry Truscott .....	10
Bill Jansen .....	58	Justin Liddy .....	10
Les Walkling .....	58	Peter Lustig .....	8
Bill Gray .....	55	Bruce Hercus .....	7
Bob Scott .....	53	D. Carroll .....	6
Pat Reynolds .....	48	P. Davcy .....	6
Margaret Phillips ...	38	Neale Knight .....	3
Ron Addison .....	24	Dave Swallow .....	3
John Noonan .....	21	Garry Muddyman .....	2
Ian Cockerell .....	20	M. Richmond .....	2
Mick Ryan .....	15	D. Magowan .....	2
Paul Beecher .....	14		

COMBINED REPORTS :

An expected report on the Flinders outing did not arrive in time for press, but apparently a good day was had by those attending. Sea conditions were rough so boats were not used. Divers explored the nearby shoreline and several paper nautilus shells were found.

The progressive dinner turned out a super success. The food was excellent and well appreciated. As each house was visited it became harder and harder to move people on to the next. The party finally broke up in the small hours near 4 a.m.

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COMPRESSOR NEWS :

The club's compressor is now located at the home of Bill Gray, 4 Pimm Court, Syndal. Power supply problems arose at Bob's place, but now things are working smoothly.

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