

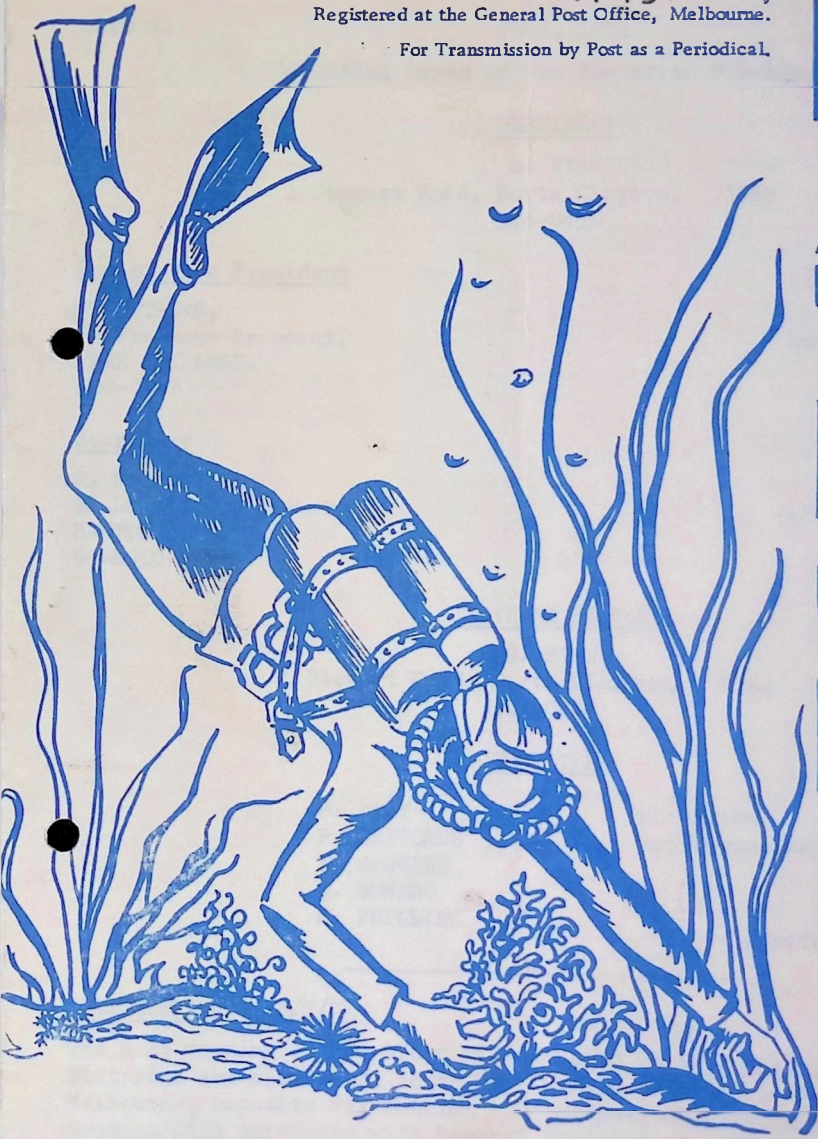
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A. CUTTS. July 71

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FATHOMS



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(Official Organ of the Victorian Sub-Aqua Group)

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CLUB MEETING - 13/7/71

The next meeting of the Group will be held on ²⁰13th JULY, 1971, at the Victorian Association of Youth Clubs Hall, Gisborne Street, East Melbourne, opposite St. Patrick's Cathedral, at 8.00 p.m. sharp. Meeting will terminate with General Business at 9.00 p.m. sharp.

C O N T E N T S

				<u>Page</u>
EDITOR'S REPORT	..	..	..	4
DIRECTOR'S MEETING - MARCH		..	..	4-5
OUTINGS - Past	..	..	..	5-6
POLLUTION IS A DIRTY WORD		..	..	6-8
ARCHAEOLOGY	..	..	..	8-9
MARINE BOREERS - An Australasian Survey			..	10-13

EDITOR'S REPORT -

I have found that due to personal reasons I have to relinquish the position of Newsletter editor after this edition, so any person who can help out by accepting the position should contact the Secretary, or mention their willingness at the next general meeting.

GORDONDIRECTORS' MEETING - MARCH

After much research into the financial position of the Victorian Sub Aqua Group, it was decided that the group's annual expenditure be looked into.

EXPENDITURE FOR 30 FINANCIAL MEMBERS

Newsletters	\$ 80.52
Magazines	13.75
Post Box & Phone Calls	18.88
Subsidies for Boat Trips	10.95
Rent for Meetings	30.00
Treasurer's & Secretary's Petty Cash	40.00
Sundries	<u>56.00</u>
TOTAL:	<u>\$250.10</u>

Directors' Meeting (Cont'd.)

The above total is the average yearly expenditure on necessary items for the Group to run smoothly.

As the total income cannot include such items as profit from Dive Training, Barbeques, etc. because they are not run frequently enough, the only frequent income is from 30 members. As you can see $30 \times \$5.00 = \150 , so the Club either has to have a continuous Dive Training programme or some well attended social activities. As these have not brought enough money in for at least the past three years, the only alternative is to raise the subs to a level above our expenditure, so as not to require another rise, say, for another 10 or 15 years.

Joining Fee \$8.00 - Annual Subs \$12.00 - Associate & Country \$2.00

OUTINGS - PASTFLINDERS DIVE - 20/6/1971

After having some difficulty with country roads, we arrived at Flinders Pier at 10.00 a.m. Within 15 minutes there were 9 divers on the spot. After a long discussion with the boat owner, it was decided it was too dirty for any reasonable diving in the area. The boat dive was then abandoned and the skipper agreed to keep in touch and to inform Frank Maguire when diving and weather conditions would permit a good dive in the area.

The dive was not altogether a flop, although several members went off to find a better spot or go home, the latter being the case.

At 11.30 a.m. five divers were ready to enter the water. One diver had to return to shore as her air supply was very erratic.

The four divers then proceeded to do a pier crawl. Although this form of diving does not appeal to many divers, the remaining divers were fairly well rewarded. Pat Reynolds scored another bottle for his rapidly expanding collection. Peter Trevor and

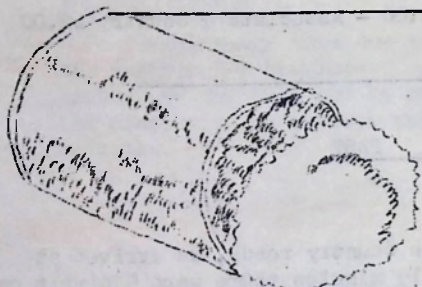
Flinders Dive (Cont'd.)

Les Walking did not emerge with arms full of goodies, but they certainly enjoyed themselves. I emerged with a sack (with a large hole in the bottom) containing only about 30% of the loot I had managed to scoop up.

The barbeque afterwards was attended by no less than 12 (including wives and children) which was not bad considering about seven people had left earlier.

Thank you all for turning up.

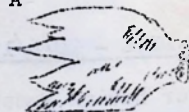
ALAN CUTTS



P O L L U T I O N

IS A

DIRTY WORD



HOUSEWIVES CAN BE MAJOR OFFENDERS

Do you pour grease down your sink, flush coloured tissues down your toilet or use hard detergents? If you do, you are adding to Australia's pollution problem.

Maybe you think of pollution only in terms of the waste and fumes belched out by industry every day - but household waste contributes.

Grease is not always broken down at the sewage plant before it is swept out to sea, coloured tissues pollute with their dyes, and hard detergents eventually lead to the destruction of marine life. So even if you are an ordinary housewife you can still start on anti-pollution campaign in your home.

You can change from hard non biodegradable detergents to soap powders or some of the few biodegradable detergents which are reaching the market.

The hard detergents are not broken down by bacterial action, they produce more suds in the rivers, compete for oxygen and eventually

destroy bacterial and marine life.

Manufacturers have agreed that by the end of this year, all detergents will be at least 80 per cent biodegradable.

But at the moment none but the smaller companies have any biodegradable detergents on the market.

According to Mr. K.A. Fowles, Unilever's consumer affairs executive, they are all ready to change over to the biodegradable product but at the moment cannot obtain one of the main basic raw materials.

"We need a soft alkalate to make the change-over, but at the moment it is not available," he said. "It is a by-product of the petrochemical industry and our suppliers, the Shell company, are in the process of changing over plant and can't make sufficient quantities available to us."

"We are hoping they will be able to soon, and that the biodegradable product will be on the market by the middle of this year."

Colgate-Palmolive are similarly placed, but Mr. Robert Brady, the chief chemist, says that their plans for the change-over are going well and that their liquid detergents should all be biodegradable within the next few months.

While the change-over is being made there are plenty of soap powders on the market which wash clothes just as clean even though they don't produce lovely foaming suds. (Remember that foaming in streams is a pollution problem in some areas.)

Old-fashioned bar soap (you can flake it and melt it in boiling water before adding to the washing water) and blue bags are effective too.

Paper waste, glass and plastic containers also add to the pollution problem. Fancy packaging on goods is in part to blame.

You can try to persuade manufacturers that you do not want all this tinsel on your goods by buying non-packaged goods, taking off packaging in the shop and writing to complain to the manufacturers.

The housewife can also take a stand by not buying non-returnable bottles, only buying white tissues and toilet paper and making sure she disposes of her waste correctly.

A Metropolitan Water Board official says that apart from pouring grease down sinks and using hard detergents some housewives have some "very irritating habits".

They flush panti-hose, stockings and plastic bottles down the toilet which clog up the plant at the sewerage works.

"Housewives in general don't cause a great problem, but some do some stupid things. It's just a matter of commonsense not to flush panti-hose and bottles down the toilet," he said.

If you are really pollution conscious you can start a campaign for three garbage bins, one for food waste, one for paper waste and the other for tins and glass.

Also children should be educated not to drop litter or pollute waterways and beaches with glass and paper.

And finally, although this may come a little hard, if you are a smoker, why not stop? Cigarette smoke pollutes the atmosphere.

Sydney Morning Herald,
19th February, 1971.
"News for Women"

ARCHAEOLOGY

Probably the most difficult marine archaeological project ever undertaken in Europe was the raising of the Swedish 64-gun Warship VASA, which sank in Stockholm Harbour in 1628, shortly after being launched from the ways. Early salvage efforts failed: the deepest parts of the wreck lay in 100 feet of water, a depth too great for bells, from the parts within reach of the bells, a few cannons were all that were recovered. The wreck lay at the bottom of the harbour for more than 300 years.

Generally, salvage of a wooden vessel is impossible after fifty years, for the wood is eaten away by shipworms. However, Stockholm Harbour is one of the few places in the world where there are no shipworm, and the VASA was presumed to be intact.

In 1936 a Swedish petroleum engineer, Anders Franzen, became interested in the VASA and decided to locate and raise it. He found the wreck with a core sampler (a device used by geologists to obtain samples of the sediments on the sea floor), then arranged for Swedish naval divers to investigate its condition. The divers found the VASA intact, as Franzen has expected. With the aid of the Swedish government and funds from private sources, a team of helmet divers under Franzen's supervision, began the work of raising the ship. It was not easy: the VASA was very large for its day and had a displacement of 1400 tons, four times as great as that of the Mayflower; also, the wreck was deeply buried in the mud of the harbour. First the divers had to remove all the loose objects aboard. Next, with the use of a water jet they had to blast tunnels under the wreck (a perilous task, for the ship could easily have slipped further into the harbour sediment and crushed them, so that steel lifting cables could be inserted under the wreck. The construction of the tunnels took three years. While it was going on, other divers were busy removing the masts, spars and rigging. Throughout 1960 and 1961, all the ship's gun ports were covered and cannons were tied down to prevent them from moving.

Finally, the cables were strung through the tunnels and attached to pontoons on the surface. On April 24, 1961, five years after the work began, the VASA broke the surface of the water bed in which it had rested for 333 years. It was placed in a specially constructed dry dock and millions of dollars have been spent to preserve it.

The dry dock, now a museum, has been visited by countless people eager to see the oldest existing warship in the world.

P. BEECHER.

MARINE BORERS - AN AUSTRALASIAN SURVEY

By J. Beesley, Preservation Section.

Ever since he first attempted to sail the seas in wooden boats or to build wooden piers or jetties to service those coasts, man has had to combat marine borers. He soon discovered that some timbers had a longer life in the sea than others and, naturally, the more durable timbers were favoured for boat-building and piling. In some instances, the service obtained from these durable timbers was very satisfactory, in others it was disappointing, with sturdy structures collapsing after only a few years of use.

Even today there is conflict of opinion about the "seaworthiness" of such timbers as jarrah (*Eucalyptus marginata*), ironbark (*E. drepanophylla*), and red gum (*E. camaldulensis*). In some localities these timbers give many years of maintenance-free service; in others failure takes place in less than 10 or 12 years. In a number of cases, issues become confused because rapid deterioration and sudden failure may occur after many years of apparent immunity from marine-borer attack or, conversely, at sites once noted for their high hazard, timbers of little natural resistance remain attack-free for long periods.

More often than not, an explanation for this diversity of experience might have been found if the marine borer populations had been studied as closely as the performance of the timbers had been watched. Marine borers are sensitive to both salinity and water temperature, and a small change in either or both can have a marked effect upon their populations, favouring one species or inhibiting another. In consequence, a rapid increase (or sudden decline) in the numbers of a species occurs and this is reflected in the intensity of attack on susceptible timber. Further, if there is an abundant supply of non-resistant timber in which the insects might breed, there will be a high population density and, inevitably, a high hazard from the breeding species.

Last year, Dr. Ruth D. Turner, Alexander Agassiz Fellow in Zoology and Oceanography, Agassiz Museum, Museum of Comparative Zoology, Harvard University, spent 7 months in Australia as a guest worker with CSIRO. Dr. Turner is recognized as a world authority on the classification of the teredine borers and is the author of "A survey and illustrated catalogue of the Terebinidae", published in 1966. She came to Australia at the invitation of the Division to classify the marine borers from around Australia and New Guinea and to study their distribution.

As principal host to Dr. Turner, the Division provided more than \$3100 towards the direct costs of her visit. Monetary support totalling a further \$3600 was received from:

Forrestry Commission of N.S.W.	..	\$ 750
Department of National Development (Forestry & Timber Bureau)	..	\$ 500
Department of Forests, T.P.N.G.	..	\$ 500
Public Works Department, W.A.	..	\$ 500
Maritime Services Board, N.S.W.	..	\$ 500
Department of Forestry, Qld.	..	\$ 300
Forests Department, W.A.	..	\$ 250
Forests Commission, Vic.	..	\$ 200
Timber Preservers' Association of Australia	..	\$ 100

In addition, a CSIRO grant of \$6100 (over 2 years) was made to the Zoology School, University of New South Wales, in order to support a suitably trained postgraduate student (Miss Jeannette Marshall) in this field of research. For its part, the University provided office and laboratory space for Dr. Turner's use while she was in Australia.

The author was responsible for the overall planning of the project and for maintaining a continuing liaison with all parties concerned. With the co-operation of the Forests Department, T.P.N.G., and prior to Dr. Turner's arrival, "baits" or collecting

specimens were despatched to more than 50 ports in Australia and New Guinea so that timber suitable for dissection and study would be available from each site.

Soon after establishing her headquarters at the University of New South Wales, Dr. Turner visited Melbourne and Brisbane to familiarize herself with current work there. She then attended the annual meeting of the Australian Marine Sciences Association in Melbourne before touring Papua and New Guinea. After returning from the Territory, she attended a Malacology Conference at Yeppoon, Qld., and then collected marine borers along the Queensland coast, northwards as far as Cairns.

After a few days back at Headquarters, Dr. Turner and her party visited Darwin before proceeding down the north-west coast to Perth. After a brief visit to Bunbury and Busselton, the party flew to Adelaide and then followed the coast around to Melbourne. Finally, visits were made to collecting sites in New South Wales and Tasmania.

Early in her stay, Dr. Turner pointed out that the original set of baits, exposed in May and due to be recovered between August and October, would not necessarily yield collections of all marine borer species present at each site. Therefore, the Division provided a second series of baits to be distributed in September/October (for recovery at the end of February) and also a third series to be sent out early in January for recovery at the end of April. It also arranged for the recovery of both of these sets.

How right Dr. Turner was in her prediction can be judged from a preliminary count of the numbers of marine borer species collected in each State (see table).

During her travels, Dr. Turner and her associates collected well over 10,000 specimens, each of which had to be dissected individually from the infested wood, representing 40 different species of tereid borer, besides the Pholad, *Martesia striata*, and the Crustacean borers, *Sphaeroma* and *Limnoria*. Indubitably, Australia is rich in tereidines, for Dr. Turner found here 40 species out of the 66 she recognizes in her catalogue. Is it any wonder that Australian port engineers worry about marine borers?

 NO. OF SPECIES COLLECTED

STATE	From "Baits" (1st series)		In situ Wood	
N.S.W.	6 from	6 sites	14 from	16 sites
Vic.	5	5	6	5
Tas.	4	4	8	13
S.A.	3	5	10	5
Qld.	18	8	20	30
N.T.	-	-	13	6
W.A.	14	8	20	16
T.P.N.G.	27*	13	25*	20

* Of the total number of species collected, 10 were not found in both the "baits" and in situ wood.