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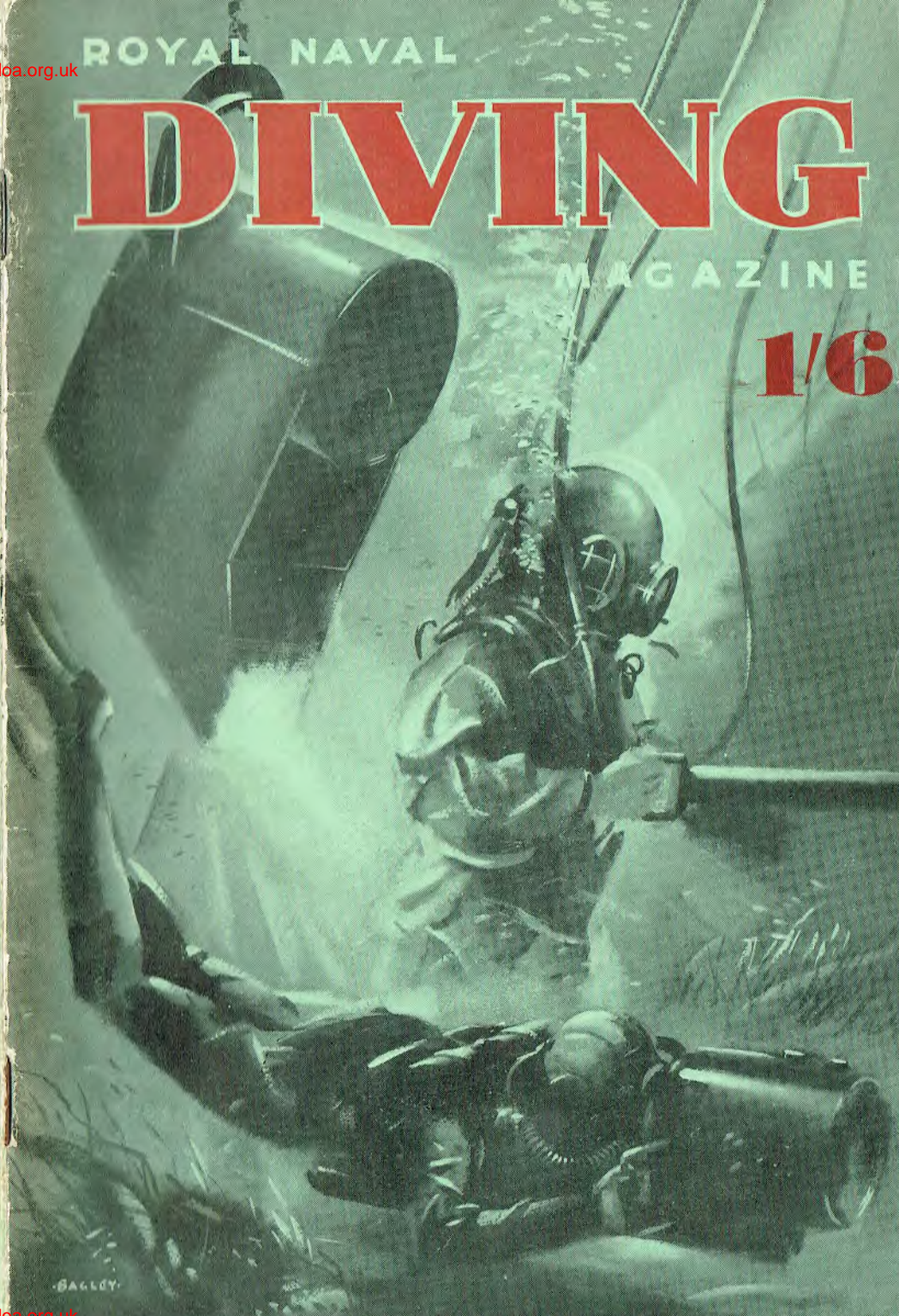
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Vol. 4

H.M.S. VERNON

No. 4

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*Christmas Greetings to all our readers  
from all R.N. Divers*



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# R.N. Diving Magazine

## EDITORIAL STAFF

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Petty Officer R. W. COLLAR, *Editor*.

Vol. 4

December, 1956

No. 4

## EDITOR'S NOTES

Dear Readers,

Owing to the international situation many of the diving fraternity have left the home comforts for places abroad! Due to these movements, very little material arrived which left me in doubt for a while as to the publication of this edition. Eventually, however, more material trickled in and it was then decided at the last minute to go to print.

Most readers will probably notice this magazine is slightly smaller than our previous editions. On this subject the Treasurer has commented and I think you will all agree, as the old axiom goes 'It might have been us'.

Once again may I give vent to the well worn cry of 'Please send me material' whether you may be Service or Civilian. This hint is especially directed at those serving members who are working in that 'world famous stretch of water.' I feel sure that some of your experiences would make very interesting reading.

Late October, a farewell dinner to the Superintendent of Diving was held in the Chamber of Commerce, Portsmouth. The attendance to this function consisted of Diving Officers and Divers from all home units, and a very enjoyable evening was had by everybody. Thanks are due to 'Jock' Campbell and Lt.-Cdr. Wardle the organisers. Commander Harland relinquishes his present post as Superintendent of Diving early in the New Year and will be relieved by Commander Carr.

It has been suggested that a dinner be held annually for the purpose of a 'Get Together'. Please send me your views on this subject.

It is with regret, that early in the New Year, we say farewell to our present Treasurer who has been a pillar of strength on the Editorial staff of this magazine. He is forsaking the 'Steady Steamers' to qualify Clearance Diving Officer.

May I take this opportunity to wish all readers A Very Happy Christmas and a Prosperous Diving New Year.

Cheerio for now,

EDITOR.



## TREASURER'S NOTES

Dear Readers,

It's time once again for a few words from the Treasury Department. I am pleased to say the financial situation is still sound. No emergency measures necessary here!!!

You will already know by the Editor's remarks, this edition was touch and go. We regret this magazine is smaller in size compared to our previous editions, although you are being asked to pay the same price. Nevertheless, I feel sure you will all be pleased to hear that the difference in the cost of producing this magazine to that of our normal size, will be forwarded to the Lord Mayor of London to help swell his Hungarian Relief Fund. Details of the money forwarded will be given in the next edition.

I am due to be relieved early in the new year so this will be my last contribution as Treasurer. I shall be sorry to leave the Editorial staff, for I have enjoyed my term of office, but there it is, 'All good things have to come to an end at some time or other.'

A Merry Christmas and a Happy New Year To You all.

TREASURER.

## THE RECORD BREAKING CRUISE OF H.M.S. RECLAIM

by JAYGER

On Monday, 27th August, summer leave was a pleasant memory, and the ship's company of HMS *Reclaim* turned their minds and hands to the task of preparing for sea. A class of Divers 1 qualifying joined during the afternoon and quickly settled into the routine of the ship.

Next morning we slipped from Fountain Lake Jetty and proceeded to sea. The weather was mild, the barometer was rising, and every omen promised fair as we slipped through the Needles. On the way north, we received a signal diverting us to Loch Ryan where we would embark a Bomb and Mine Disposal Team from Lochinvar. A trawler had picked up a mine in her nets and as quickly dropped it again, about half a mile west of Corsewall Light House. She reported that a pellet buoy had been laid on the mine. On the way into the Loch, an object like a pellet was sighted and its position noted. A short while after we anchored and Mr. Messervy joined us with his team, we weighed and returned to the danger areas.

Fortune, however, did not smile on us, as when we arrived at the position there was no sign of the pellet. The hunt was on then. We combed the area, the search going far on into the night. Searchlights, Aldis lamps, even hand torches were used. Every bit of driftwood, every piece of seaweed was scrutinised. The search went on until three in the morning, but to no avail. There was no sign of the pellet. Tired and

disgruntled we turned in, and next afternoon, when the tide had slackened, the search was resumed. There was no result by late afternoon and the hunt was called off. We said goodbye to Mr. Messervy and his team, who had their long journey for nothing, and then pointed the ship towards Islay and points north.

The Sound was entered about 2230 on August 31st. The night was black and Radar was used to negotiate the narrow passage. An hour and we were through and the ship altered towards Lismore. About 0330 we entered the Sound of Mull and in the early hours of the morning we came to anchor in Tobermory Bay, of Spanish galleon fame.

When daylight dawned, the motor launch was sent away crammed with divers, on a scallop hunting expedition. This was a most profitable banyan, as by midday not less than 300 large juicy scallops were gathered. Many more were harvested after lunch. Supper in *Reclaim* that night was an orgy of sea food, scallops were eaten raw, baked, boiled and even included in a potmess. We have plenty of ashtrays on all mess tables now.

Next morning, Sunday, September 2nd, we left Tobermory and sailed for Fort William, where we arrived p.m. By 1530 the ship was moored to four anchors and the natives were climbing into their best bibs ready for shore and happy re-unions.

Diving started on Monday and carried on without incident until Tuesday, 11th September, when we unmoored and sailed to Londonderry



Mr. Wookey being dressed

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to refuel. A quick turn round on completion and we anchored in Loch Leven during the middle watch on Thursday morning. When the dawn broke, the anchor was weighed and mid afternoon found us moored in Northern Loch Linne in 290 ft. The class started diving right away and everything went with a swing.

On Saturday morning, we were delighted to see HMS *Starling* sailing up the Loch. The annual Regatta had been fixed for that afternoon. Accordingly races, both pulling and sailing, were organised between *Starling* and ourselves. Needless to say *Reclaim* just walked away with the pulling race. There was no wind unfortunately, so after all boats had drifted around aimlessly for an hour or more, the sailing was called off. The day was saved by a volunteer diving crew from the ship, who put on an impromptu display, much to the gratification of the Regatta Committee, and the pleasure of the many hundred spectators.

*Starling* sailed on Monday morning, and the ship's work was resumed. We removed in 360 ft on September 26th, and the class was dived on Oxy-Helium, using the new tables. These proved successful and there were no incidents. During this period we had some heavy rain and strong winds. In consequence the burns and mountain streams poured thousands of tons of fresh water into the Loch, resulting in stronger tides than usual. In spite of a well spread moor, the ship swung 180° one forenoon which put an effective stop to diving. This was our only serious stoppage and the class finished the deep diving part of their course well on schedule.

Engine trials were carried out on October 3rd, after which we anchored nearer the town for the last weekend. Mr. Grace, DO2, the only bachelor in the wardroom, was at long last led to the altar on October 4th. This could be another record, as there have been five marriages from the wardroom in 18 months, despite the small number of officers borne.

The Superintendent of Diving, Commander Harland, with Surgeon Commander Crocker, and Mr. Hempleman from RNPL joined us for the trip to Norway and to supervise the attempt on 600 ft.

On Sunday we set sail for Norway and we stopped at Lyness on route. A football match was played against the Orcadians, the ship's team winning by a fabulous number of goals. We slipped at 2300 and wended our way through the maze of islands that dot the Pentland Firth, and just after mid-night passed Muckle Skerry and into the North Sea. The passage across was pleasant, and twenty-four hours later Marsten Light was raised. We dawdled around until daybreak, when we entered the fjords, and anchored in the Puddefjord until the official calls had been paid. On completion we set off for our old billet at the north junction of Salhus Fjord and Sorfjord.

On arrival, sounding runs were carried out over the 100 fathom patch where the observation chamber trials had been done, earlier in the Summer, and a pellet was laid. On the final run into moor, we lost our port stern anchor and all the wire. This caused some delay, but eventually we managed to moor about 1430. Diving was started right away and a depth of 486 ft was reached by Chief Petty Officer Linscott. When the SDC was being broken to surface from 30 ft, the attendant, AB Maloney

developed a severe bend in both legs. Maloney had a recurrence after treatment, but was cured by decompression on Table 3. The diver, too, developed a bend about three hours after, but was successfully treated.

Next morning the ship was unmoored, and dragging operations were carried out in an effort to find the port stern anchor. The diving launch from the Norwegian Diving School also assisted, by permission of our old friend, Lieutenant Commander Salen. Owing to the uneven nature of the bottom, the search was unsuccessful. In fact, the flukes of a boat's anchor were ripped off during the operation. We moored again in 620 ft, with two bowers and our remaining stern anchor. During the night a strong south-west gale blew up, and we dragged into 40 fathoms.



Concentration during the record breaking dive

Our exposed position proving unsatisfactory, it was decided next day to find a more sheltered spot and so we moved deep into Sørkjord. After a number of sounding runs a likely place was found opposite Arne and we moored. The tables had been revised by Surgeon Commander Crocker and Mr. Hempleman, and it was hoped that they had found the final answer. Helps had quite a successful dive to 450 ft with no apparent ill effects to himself or his attendant, Petty Officer Flanagan. Later in the afternoon the class were given a chance to use the Observation Chamber, two dives being made to 600 ft.

The stage was now set for the big dive. As the evening wore on, interested spectators from the ship's company began to drift down to the

flat. Mr. Grace arrived with his tape recorder, Lieutenant Border took up station in the cofferdam. Dr. Crocker and Mr. Hempleman conferred in whispers in a corner, and every now and then one could hear mysterious clicks which proved to emanate from Mr. Hempleman's magic box, into which he fed numbers which came out as divers stop's. The diving team, under the supervision of the Chief, were also active, cheering down, testing phones and doing the hundred and one odd jobs that precede any dive.

Mr. Wookey was being carefully dressed by his attendants, and about 1900 he stood in the cofferdam doing his injector test. The SDC was lowered into the water and tested. A few moments later Mr. Wookey was on the bottom of the ladder. The SDC started its descent and a few seconds later the diver started on his way. He was checked at 40 ft and changed over to helium and then he carried on. It took Mr. Wookey seven minutes to reach the bottom at 600 ft, including the time taken to change over from air to helium. It was a great thrill for all concerned when he stopped at 540 ft since, even if he had not gone one inch further, a new record had been made. The time allowed on the bottom was three minutes, though in fact five were spent there, but the extra couple of minutes were allowed for, and no harm was done. This was caused by a bight of breast rope hanging below the table, which was suspended about twenty feet above the ocean bed. The diver asked for the slack to be taken up, but the combination of helium and depth was too much for our ears, and his request was absolutely incomprehensible for some time. This was brought out very faithfully on the tape recorder, and unfortunately one of the national dailies made quite a thing about it. We were all startled to see huge headlines—DIVER FOUL AT 600 FEET.—However, the diving world can be assured that *Reclaim* was in no way responsible for the sensationalism.

All's well that ends well, the saying goes, and it was with feelings of profound relief that we saw the diver leave his lonely table at 600 ft. After a long decompression in the water, Mr. Wookey eventually reached the SDC where his attendant Able Seaman Clucas waited for him. The cold was bitter, and on the stops we could hear the diver shuddering audibly. Once in the SDC it was not long before the report came through that the lower door was closed and in a few minutes the chamber had been hoisted and was sitting safely inboard in the hold.

At about 0230 the chamber was broken down to surface and Mr. Wookey developed a bend in both shoulders. He was recompressed to 50 ft and brought up on table 1. Clucas developed a bad bend at 10 ft and had to be decompressed on table 3. Both were right as rain by the following evening, but very tired. It was a long ordeal.

Great credit is due to all concerned for the success of the dive. Lieutenant Harry Border was in charge in the diving flat, and the smooth running of the operation was in his capable hands. How smoothly everything went is borne out by the result, a new world record for deep diving.

The Captain, Lieutenant Commander G. M. H. Drummond, was a tower of strength, as being a diver himself he knew most of the answers and he led the team all the way, and his encouragement was a big factor in the



Chief Diver Linscott manning the control panel

*It will be observed, the reading for this World Record Dive to 600 ft shows 700 ft. The reason for this difference is the Diver is receiving Air For Depth plus an additional 50 lbs per square inch (50 lbs pressure=100 ft) thus ensuring correct functioning of the Injector System necessary in all deep diving.*

success of the dive. It goes without saying too, that but for the physiological and mathematical skill of Dr. Crocker and Mr. Hempleman, 600 ft would never have been achieved. The team, also, worked as a team. They were all for it to a man, and no hours were too long and no work too arduous for them. The star, of course, was Mr. Wookey. He has done something that up to a few years ago was a dream in the minds of cranks. He took a calculated risk which came off, and all praise is due to him. He has proved that a man, fit and willing, can reach the fantastic depth of 600 ft in a flexible suit, and what is more, do a useful job of work there. May the occasion never arise.

Saturday morning arrived, the big dive was behind us, the next item was celebration. The anchor was weighed and we made for Bergen with all speed. That afternoon and Sunday were spent in time honoured sailor fashion, and when Monday morning arrived all were glad to get to sea where the fresh salt winds would blow the cobwebs away. The voyage across the North Sea was nothing to write home about, contrary winds and a head sea that reduced our speed to six knots at times. We plugged on however, and on Thursday we saw the Nab Tower, that lonely sentinel that says welcome home to Portsmouth ships. A couple of hours later, the heaving lines were hissing through the air and *Reclaim* was once more safely ensconced alongside the Dockyard wall.

Newsmen by the dozen flocked on board, and wives and sweethearts were pushed to one side until the hungry Press had had its fill. Some day a story may be written on pressmen. They deserve it. Never has such a varied assortment invaded any ship at any time. Eventually they were satisfied. *Reclaim's* sailors, happy to be home, did their best. Peace descended when the Press left. Then and then only could one think about one's own affairs.

Refit time is here now, and we shall not go to sea until the New Year. I hope we have another story to tell in the next issue. In the meantime, Happy Christmas and a Prosperous New Year to all divers everywhere.

## THE NEWCASTLE TEAM

When *Newcastle* commissioned for service on the Far East station in November 1955, we found we had the nucleus of a diving team consisting of D2 Burton, and D3s Husselby, Thornhill and Wilkins, all under the mighty watchful eye of PO Benfield, known to many of you for his services as a previous Editor of this magazine. After a very brief pre-work up, consisting of a run up to Hong Kong, the ship returned to Singapore for a prolonged (thanks to a strike of dockyard labour) refit. The divers went promptly to work to secure a foothold in the quarters occupied by Mr. Mappley, PO Hills and other members of the Far East Clearance Diving team, so that they could commence training sufficient shallow water divers. Despite the usual 'Corkhead' v 'Steamers' match, the natives proved friendly and we were allowed to use their base and equipment in return for some assistance in building up their facilities. Nothing was achieved, naturally, until the dockyard strike ended, but then work really began.

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Course after course repaired to the school for what was a very pleasant occupation, much more pleasurable than it would have been in the conditions existing around *Deepwater* and Horsea Island at the same time of the year.

Out of 35 contestants, however, we only qualified 7 Shallow Water Divers, all the others fell by the wayside for reasons varying from medical unfitness to a professed fear that a 'rubber suit might bring me out in a rash.' On the Lend side of our Lease-Lend agreement, our team assisted in erecting various stowages, cages, and tables which helped to make Mr. Mapple's domain into the finest self designed, self-built school imaginable—so, with thanks on both sides, we left for Pulao Tioman.

Pulao Tioman is a small island some 100 miles from Singapore which is famous for its glorious clear water, malaria, and sharks. We were informed that the shark season had not opened, but it was a fairly careful party that started the Diving Operation.

In May we began our second 'working up' cruise, the first stop was Hong Kong and a job came up on arrival. Someone had thrown a 3 cwt sinker, attached to a Dan buoy stave, over the side and it was feared that the propellers had suffered. Forty minutes after we started work we knew that all was well—though Husselby was dead against repeating that sort of work: he had to swim against a 2–3 knot tide on his journey from one screw to the next. (On the other side of the ship we floated him down tide!) As usual divers were regarded with amused tolerance on board and the same held good when we reached Yokosuka, Japan, and asked for a day of Standard diving practice. Permission was granted and the whole team was embarked in an LC (M) kindly loaned by the USN. We had a double aim; to give each of the new shallow water divers a dip and to have a look at the American shallow DG range which was producing some rather strange readings. After a forenoon with the newcomers, we embarked the American DG Officer and started work. Good progress was made and the team located and reported on the various units which had made up the range. 'Had' is used advisedly, as some of the units had taken up some quite original and decorative postures—quite unsuitable for Degaussing. 'Ben' achieved the feat of the day by finding, indentifying, and turning over one of these gadgets, no mean task as we found out when we recovered it later on. All the pushing and shoving of the effort, were liberally sprinkled with the usual 'Ben' epithets, plus some other heartfelt announcement that 'You b——s are trying to drown me.' The chief diver, recently promoted incidently, finally rose majestically to the surface and the day was over; we recovered the gear and went home accompanied by the thanks of the American Officer. The gratitude was returned; we had had a good day's diving made better by the use of a very suitable boat.

On to Kure where we were just in time to see the *Asturias* sail. Little did we know what we were to find in her old berth. A young deck hand had been found to be missing just before she sailed and it was feared he might have been drowned. Would we look? That was rather a longer business than the asker envisaged, but we set to work. First we searched under the pontoon at which the *Asturias* had been lying, using shallow

## AIR SPACES IN THE BODY AND THEIR EFFECT ON DIVING

by MR. V. R. FOSTER

(Part 3)

It is my opinion that there is an urgent need for a simpler and clearer understanding of SINUS and EAR troubles as related to divers and diving, particularly by Dip-Chicks and in non-Service diving circles. I sincerely hope that this short article and accompanying illustrations (Figs 1, 2, 3) will help in answering some of the questions which are put forward from time to time regarding these problems.

Several natural air spaces exist in the body. Air passages to these spaces must be maintained if painful and sometimes dangerous tissue damage is to be avoided when excess air pressures encountered in diving are applied. The most important of these spaces are the middle-ear spaces and the nasal sinuses (See the Figures 1, 2, 3).

The structure of the ear is shown in Fig 1. The ear-drum 'C' completely seals off the outer ear-canal 'A' from the middle-ear space 'D'. When

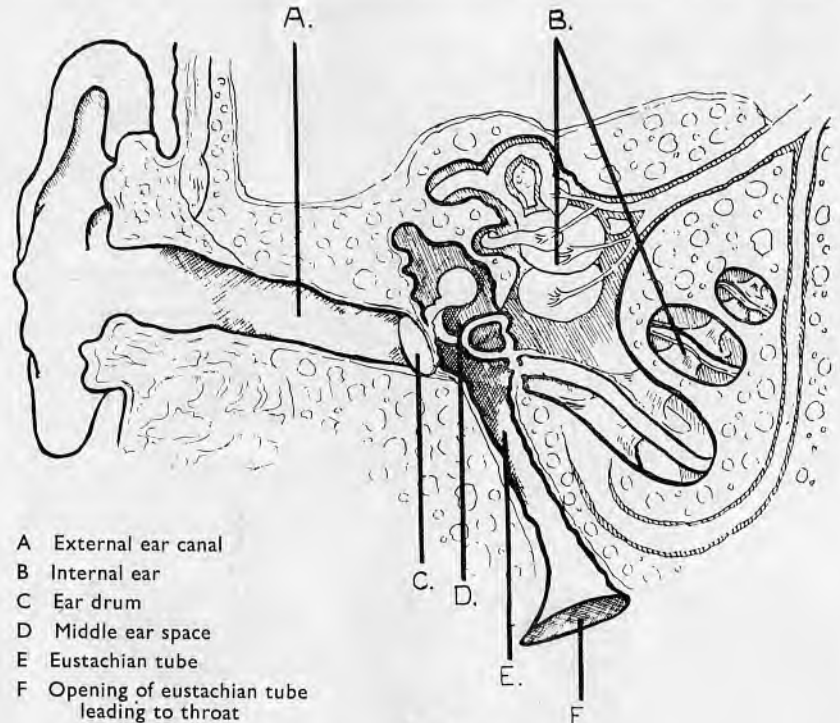


Fig. 1

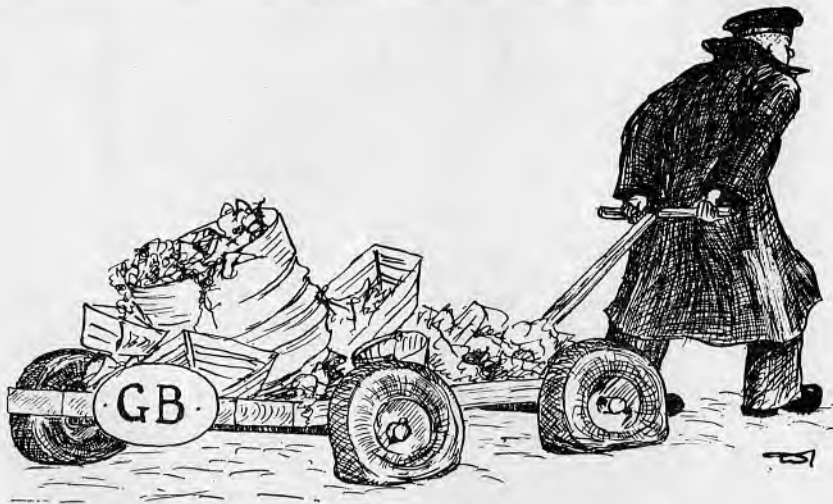
Anatomy of the ear, showing middle ear space

water gear. Leading Seaman Torrington and Leading Seaman Cockburn together with Ordinary Seaman Allen and Junior Seamen Paul and Stafford carried out a thorough search and reported all clear. Then the standard divers went into action and did a series of circular searches round the position over which her bows had lain. And there, some 11 hours after the search had begun, Burton found the body. So ended another job, but by now divers were not being regarded with quite the same amused tolerance as had been noticeable before.

The remainder of the cruise passed without further incident and, apart from a day of demolitions (in which the divers took part by exercising with the demolition party and using the Cox's Gun—also giving the UW rates instructions in its use) nothing spectacular occurred.

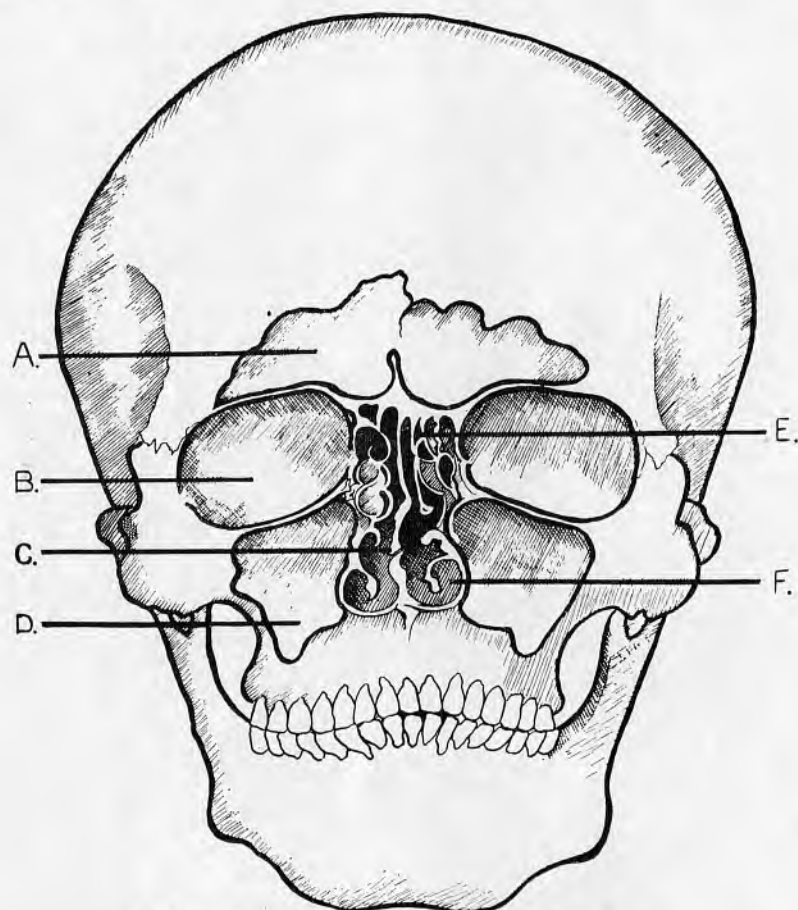
Thanks to a hurriedly curtailed cruise, we went straight back to Singapore, pausing only for fuel at Hong Kong *en route*. There we started a self maintenance period prior to our inspection by Rear Admiral Edden, who flies his flag in *Newcastle*. During this period we were again called upon for our professional assistance and each time we 'produced the goods.' Chief PO Benfield went back to the diving school—this time to train *Newfoundland's* divers—and our own depleted team, Wilkins having reverted and Burto and Thornhill being sick, prepared for the inspection. That passed off successfully last month—largely due to a selection of caps belonging to the team members, each bearing as a badge, a diver 'mixing it' with an octopus and surrounded by the motto 'Recruits Wanted.' And now our first year in commission is nearly over and although the temperature is far from seasonal we, who are out here, wish you, who are back there, a very Merry Christmas, and not too much ice on Horsea.

THE WANGHAI WANDERERS.



17th of December and thereafter

air or water pressure is applied to the outer surface of the ear—an equal air pressure must also reach the inner surface of the ear-drum. Normally this is accomplished through the narrow collapsible Eustachian Tube (Fig. 1, 'E' and 'F') leading from the throat to the middle-ear space. If the tube is blocked by mucous or a growth of tissue, this equalisation of pressure cannot take place and symptoms of severe ear pain will ensue. If the ear-drum continues to be subjected to an unequal pressure, it will bulge with such force as to tear blood vessels causing haemorrhage and finally rupture.



- |                 |                   |
|-----------------|-------------------|
| A Frontal sinus | D Maxillary Sinus |
| B Orbit         | E Ethmoidal sinus |
| C Nasal Septum  | F Nasal Cavity    |

(Front view) Fig. 2  
Location of Paranasal Sinuses

All sinuses (Fig. 2 and 3) are located within hollow spaces of the skull bones and are connected to the nasal cavity by narrow passageways. The frontal sinuses (Fig. 2 'A' Fig. 3 'B') are located within the forehead above the eyes, the maxillary sinuses (Fig. 2 'D', Fig. 3 'D') are located behind and within the cheek bones and below both eyes and the ethmoidal air cells (Fig. 2 'E', Fig. 3 'C') and sphenoid sinus (Fig. 3 'A') are located deeply in the midline of the skull bones between the nasal air space and the brain space (Fig. 3). If pressure is applied to the body and any of the passageways leading to the sinuses are blocked by mucous or tissue growth, pain will be present in the respective sinus. If the pressure is sufficiently great, swelling of the lining membranes and haemorrhage into the sinus may occur.

Other air spaces are the lungs themselves. Should a cold or other infection cause certain areas of the lungs to be congested the application of pressure may cause severe pain, haemorrhage, and other symptoms.

It appears to be a common belief that a ruptured ear-drum which occurs underwater, results in vertigo (dizziness) and nausea.

These symptoms may follow a ruptured ear-drum but are caused by the sudden ingress of cold water acting on the internal-ear, vestibular

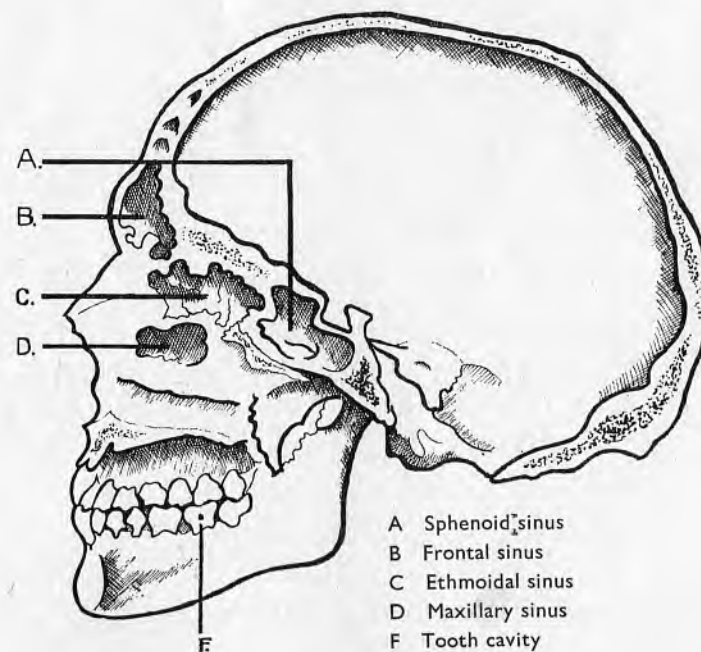
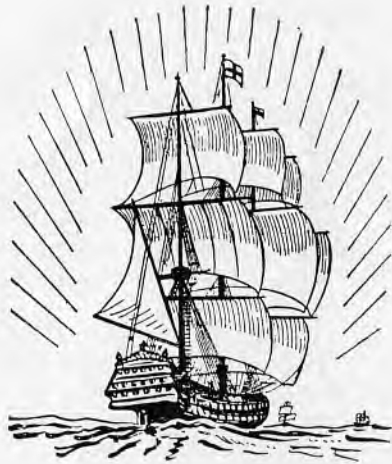


Fig. 3  
Location of Paranasal Sinuses  
(Median view of right half of the skull)



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organ. They can also be caused by very cold (or hot) water being present in the external ear canal. The symptoms are the result of the cold water causing convection currents in the fluid-filled canals of the internal-ear vestibular organ, simulating those induced by a fast rotating of the body. Fortunately, this reaction is seldom noted since the small volume of water which enters the outer-ear canal (Fig. 1 'A') is warmed to body temperature quite rapidly. If these symptoms do occur, remain calm, avoid movement, and grasp a submerged object if possible. The water will quickly reach body temperature and the effect will disappear. This is true whether or not the ear-drum has been ruptured.

#### EAR DISORDERS

These become most apparent when a diver descends and is unable to equalise the pressure on each side of his ear-drum. The equalisation of pressure usually takes place by yawning, swallowing, holding the nose shut and blowing, or by coming up a few feet from the depth at which the pain is first felt so that the pressure equalises and the pain lifts. However, it must be remembered that the method used will vary according to the type of equipment being worn at the time.

If a diver has a cold, or sore throat, the mucous membranes of the throat will be inflamed and swollen, the eustachian tube will become completely or partially blocked and equalisation of pressure will become difficult or impossible.

Forcing a diver down when he has a cold and in consequence is unable to equalise the pressure, will result in a sharp pain in the ear, stretching of the ear-drum and perforation of the drum if the pressure is increased further. Relief of the pain usually follows reduction of pressure. Treatment usually consists of temporarily discontinuing diving, and treating the cold. Using  $\frac{1}{4}\%$  Neosynephrine as nose drops or spray will shrink nasal membranes and aid in relieving residual pain, ringing or 'stuffy' feeling in the ears.

#### SINUS DISORDERS

Sinus troubles also result when diving because of inability to equalise pressure between nasal passages and the sinus cavities.

When this happens, you feel extreme pain in the blocked sinus, usually either above one or both eyes or beneath them. The pain is often very severe, and goes away suddenly when the blockage is relieved. After such an experience, a diver on returning to the surface will have blood in his mouth and nose. Sometimes a diver can get down easily, but when he starts back up, he gets the same type of pain and has to drop to the bottom again to relieve it. This occurs if some thick mucous or phlegm has been forced into the sinus on the descent and is pushed back, blocking the opening on the ascent. It is not generally appreciated that such a plug acts as a ball valve, and has effectively kept many a diver on the bottom much longer than he intended to stay. Infection of the sinuses can and does occur very easily after diving with a cold. The germs are forced into the sinus by the air pressure and grow there quickly. When this happens the diver develops a fever, headaches, impaired hearing

and needs immediate medical attention. Here again, it is far easier to prevent these troubles than to cure them. Avoid diving with a cold, or sore throat.

Some divers believe that sinusitis can be cleared up by going under pressure and then releasing the pressure quickly. They are acting on the theory that the pus is blown out of the sinus by the expanding air behind it. Occasionally this does happen, but it is a dangerous and most often an unsuccessful treatment. Don't try it, or you may be in the same fix as the diver who reached the bottom, but could not surface. Always seek medical aid when you have trouble with your sinuses or your ears.

### TEETH

Teeth which ache under pressure indicate loose fillings, cavities or soft spots. (Fig. 3 'F'). During compression the air does not get in quickly enough to cavities under the stopping, so the tooth may cave in. During ascent the air cannot get out and the tooth may explode. This form of accident is extremely painful and unpleasant. MR. V. R. FOSTER.

## FLATHOLM ESTABLISHES A NEW WORLD RECORD

**80 ft dive 2,000 ft above Sea Level.**

And there was a wailing and gnashing of teeth among all steamers.

During our summer tour of duty, a safari was made into the Welsh hills to investigate a blockage in the Alwen Dam at Carrigy druidon. The party which consisted of the Boss, Ben Sherpa Housden, and Tony Brooker was driven there by our tame RPO (Wilkenson) from the shore patrol, who is now regarded as the best non-qualified recorder in the business.

We arrived in blazing sunshine which lasted for five or six hours and was, so the locals said, the best summer they had seen for years. The whole party were looking forward to the beautiful viz. after our experiences of the Mersey gloom, but received a rude shock when they gazed into the murky depth of peat coloured water.

Several inspections of the bottom revealed that the blockage was caused by a fall of rock and would take several weeks of hard work to clear. This and other points were made known to the Birkenhead Water Board Authorities who responded with a large dinner and lots of revelry at the local hostel. The meal was served by a very sweet young thing, whose favours were keenly fought for until someone discovered that her husband was the local blacksmith, a man with no sense of humour! One member of the team then transferred his affections to her mother. Your scribe thinks that there is no need to mention his name, as most readers will be able to guess.

At 11 p.m. the team commenced to wend their weary way home with empty pockets and memories of Welsh charm. A week later our normal routine was interrupted again to go 'Body Finding' for the local police. It might be added that this is the only known occasion when divers and police have been known to converse without any detrimental effect on the divers.

Late July found us on a week's 'Jolly' in Brixham, but due to certain after effects the less said the better. Devonport in August for our summer leave and then back to Liverpool for September to press on with the good work. This is where we said good-bye to AB Callaghan and welcomed AB Patrick as his relief, the man no self-respecting publican will serve. This is also the opportune moment to mention that our CDO Lieutenant Gillam is living the life of a hermit on board and there are some ugly rumours as to the reason. However I have it in good authority that a certain actress is not the cause. Our new First Lieutenant has also settled down well and it is very noticable that since he has gone 'Native' the boys have had more 'Make and Mends'.

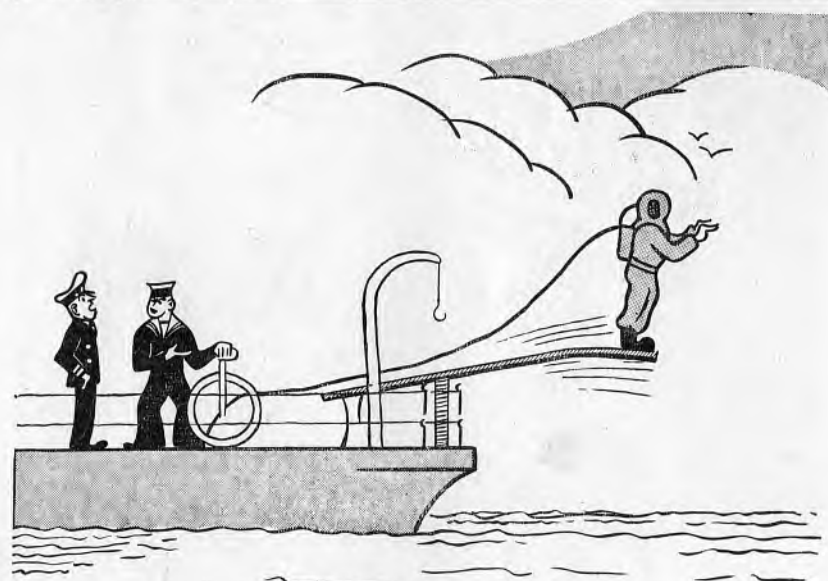
Early in December PO Claxton leaves us to return to the fold and PO Edwards is his relief. Also on draft is laughing boy Smith and if anyone requires a good Scoutmaster just let him know. December 7th, sees us sailing to Devonport again and then in the New Year, well, who knows?

One other point of interest is that LS Paxton has been winning all his races recently, and is now Plymouth Command Champ, which just goes to show a good CD can't be beaten.

And now last but by no means least, may we all from *Flatholm* offer our congratulations to Mr. Wookey and all concerned with their record breaking. Good luck to all the fraternity, and a Happy Christmas and a Prosperous New Year.

For information of any friends (???) the Team consists of:—

Lieutenant Gillam, PO Claxton, LS Housden, LS Farley, LS Paxton, AB Phipps, AB Brooker, AB Horrocks, AB Newman, AB Smith, AB Patrick.



—But he swears blind he's a qualified diver'

# The Outstanding Cigarette of the Day



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## CLEARANCE DIVING DEVELOPMENT TRIALS TEAM NOTES

They sought it with thimbles, they sought it with care,  
They pursued it with forks and hope,  
They threatened its life with a railway share,  
They charmed it with smiles and soap.

\* \* \*

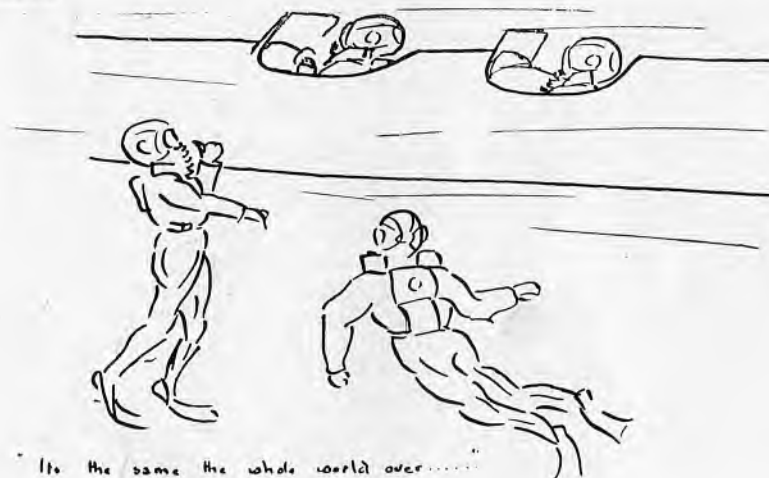
That being the story of Felixstowe. Once more the 'exact' location was known. No 'vis', racing tides, and a landlady who didn't understand divers made Felixstowe an unpopular place. To make it worse the railway authorities at Liverpool Street made it very difficult even to get to Felixstowe. It's a problem to decide which was the harder, getting there or the actual staying there.

(With the Mini-Subs and Glen Froers there's talk of requesting flying and submarine pay.) This 'underwater flying' was done in company with a flying and diving doctor who is well known in the surrounding country-side for other things besides flying and diving. Our claim for submarine pay will be further endorsed when we carry out our 'Rock-n-Roll' trials. After that we have a trip to visit the 'Liver Birds'.

The 'Pillar of Strength' of the Acceptance trials team was almost sent on draft by a 'beer bar buzz.' Using his own words 'Who's little dog am I?' This was brought about by the fact that someone was needed to replace AB Mardlin who had worried so much over his loss of hair that he gave himself stomach ulcers.

'Nick' Carter is to be relieved by 'Pete' Cobby, here's wishing both of them the best of luck, Nick in the land of the 'screaming bagpipes,' Pete in the land of the 'screaming !!! ?'

If any of our friends want to contact us, try our old store in HMS Vernon, but don't blame us if you are forcibly evicted by the Acceptance Trials Team because we have now moved to a country residence on Horsea Island.



The following has been extracted from the *Admiralty News*

Summary dated December 1st

## CLEARANCE OF THE SUEZ CANAL

### "ENORMOUS SALVAGE OPERATION" SAYS THE FIRST LORD.

The clearance of the Suez Canal will prove to be the greatest task faced by marine salvage in history.

After the cease fire in Egypt it was estimated that there were 51 wrecks between Port Said and Suez, 21 in Port Said area and 30 between El Cap (the farthest point reached during the Anglo-French advance) and Suez, the latter including the El Firdan bridge and a pontoon bridge at Ismailia which were blown up by the Egyptians.

Almost all these vessels constituted the maintenance, repair and salvage equipment used in operating the canal. In varying degrees many of them block the free passage of ships, some almost completely, others only to a limiting extent.

In the Port Said area and that part of the Canal north of El Cap the task of surveying and clearing obstructions began immediately after Anglo-French forces were in command of the situation. When British and French forces entered Port Said, 13 vessels were visible above the surface, and about 7 were completely submerged. The main barrier consisted of 8 ships ranged in a horse-shoe shape across the Canal. The largest of these was the new dredger *Paul Solente*, sunk in the centre of the canal; and among the others were the *Pollux*, a salvage pontoon lying on its side; the *Peluse*, a bucket-dredger; and an 80 tons floating crane.

These vessels had all been sunk by high explosives and most of them were badly damaged; others sunk further up the harbour were assessed to have been scuttled by opening their sea-cocks only.

The First Lord of the Admiralty referred to the problem in a public speech on November 14th. He said;

"The unblocking of the Canal is an object to which we are entitled under the Canal Convention of 1888, which guarantees free passage in war and peace. It is important to stress that the blocking of it was a sheer act of sabotage by Nasser in direct breach of the Convention and of his repeated assurances that his object was to protect the Canal. It was not the result of allied military action. For months Nasser had had a blockship full of cement in Lake Timsah for the purpose if he could not get his way. He deliberately blocked one of the world's main waterways - on which not only Britain but the whole of Western Europe is largely dependent. They have scuttled many ships, destroyed bridges, and sabotaged the Canal equipment. The unblocking of the Canal is not only one of our main interests but an urgent duty.

"This duty is at present being discussed in the United Nations. We are confronted with one of the most enormous salvage operations in history. Her Majesty's Government have offered to place the United Kingdom's

salvage resources at the disposal of the United Nations. Meanwhile the Admiralty are giving the highest priority to the clearance of the Canal: we already have a salvage force working at Port Said and we are mounting the largest possible salvage fleet to deal with the clearance task. This huge force will amount in all to some 30 ships as well as tugs and salvage pontoons.

"The unblocking of the Canal is a technical problem, and you cannot deal with a technical problem by importing political passion or prejudice. Britain has the largest salvage organisation in the world and in my judgment the only organisation in the world capable of dealing with the problem efficiently, and the problem is so large that all available national salvage organisations will be required to deal with it. Our organisation is at the disposal of the United Nations."

Following this statement it became known that salvage craft and equipment and expert personnel accompanied the assault convoy from Malta and began work in the harbour as soon as Port Said had been occupied.

Since then two ocean salvage vessels, one coastal salvage vessel, two boom defence vessels, one survey and wreck dispersal vessel, two lifting craft and ten salvage pontoons, comprising this initial force, have been hard at work. The ships and equipment have been operated by Anglo-French working parties under an Anglo-French shore organisation and supported by Anglo-French diving teams. By the end of November this force had been augmented by two further coastal salvage vessels, four boom defence vessels, one lifting craft and one wreck dispersal vessel, and at subsequent intervals more ships and equipment will reach the Canal area. In all, the additional reinforcements amount to 28 vessels, one of which is a French Naval vessel and 8 of which are chartered from commercial firms. The British companies concerned are Risdon Beasley Ltd., Maritime Salvage Ltd., Liverpool and Glasgow Association, and Metal Industries Ltd.

Of the damage from the cease-fire line (at El Cap) to Suez, it is assessed that the two bridges and nine of the wrecks are obstructions which affect the free passage of ships drawing 25 ft or more. The remaining wrecks are assessed as ineffective, or probable ineffective, obstructions to free passage in the fairway.

Clearance of the approaches to the Canal proper and of the Canal itself has so far necessarily been confined to Port Said harbour and the stretch of the Canal under the present control of the Anglo-French forces. The immediate plan was to clear as soon as possible a channel suitable for ships of 10,000 gross registered tons.

HMS *Dalrymple* has completed a survey of Port Said harbour and of the Canal up to the cease-fire line which shows that the Canal is cleared from Port Said up to this point. The waters have already been swept for mines with negative results. On shore the sabotaged workshops of the Suez Canal Company at Port Said are being made serviceable.

From such wrecks as have been examined it is apparent that most of them were sunk in haste and unskilfully by means of explosives, and many

of them apparently were sunk wantonly and indiscriminately where they lay. None of the ships at Port Said seemed to have been deliberately prepared as a block ship, but it is known that at least one of those south of the cease-fire line was filled with concrete in advance of her sinking.

The time needed to clear the entire Canal cannot be estimated because of the lack of accurate information about the conditions of the obstructions beyond the cease-fire line and also because the rate of clearance would obviously depend upon the strength and quality of the salvage and clearance resources and the degree to which they could have simultaneous access to several obstructions.

As has already been stated, Her Majesty's Government have offered to place their salvage and clearance resources at the disposal of the United Nations Organisation and there is little doubt that any attempt to clear the Canal as a whole without this help would result in very considerable delays.

A channel which the Allied Forces have now cleared at Port Said should make it possible to release through Port Said into the Mediterranean some of the 13 Foreign merchant vessels which were marooned by the Egyptian obstructions in the Canal north of the destroyed El Firdan bridge. The ships are facing South, having been part of a Southbound convoy; one is at the point, Kilometre 41, and the remainder in the Western branch of the El Ballah cut. Pilots consider that some of the ships could be turned at South Junction and brought to Port Said—provided the Egyptian authorities do not impede them in any way. The matter is being raised with the United Nations representatives at Port Said.

There are reports of two other merchant ships marooned in the Canal south of the El Firdan bridge.

Latest information received in London indicates that a channel 160 ft wide has now been cleared, the Naval Task Force Commander on the spot reporting on November 26th that 'the west channel is clear to a depth of at least 25 ft.'

Following the receipt of this information the Admiralty stated "as a result of these naval salvage operations freedom of movement for shipping of the above limited size now exists as far as El Cap, the position reached by Anglo-French forces when the 'cease-fire' was declared.

"The inability of Anglo-French salvage teams to examine obstructions beyond this point will inevitably delay clearance as far south as Suez to free a channel for the through passage of international shipping between the Mediterranean and the Red Sea.

"Until full surveys can be made on the wrecks below El Cap it is impossible to estimate the time required to complete this further clearance, although British salvage teams and equipment are available to undertake the work immediately."

According to information available, the Admiralty has also stated, that 13 Foreign merchant ships are marooned in the Canal between El Cap and the destroyed El Firdan bridge, the nationality of these ships being Dutch, Italian, Liberian, Norwegian, Panamanian, Russian and Swedish. One of the above is in the neighbourhood of Kilometre 41 and the other 12 ships are in the western branch of the El Ballah cut.

In addition a Yugoslav ship and another Liberian ship are reported to be marooned in the Canal to the southward of the El Firdan bridge.

The clearance operations at Port Said have so far been carried out by the following 8 ships:—

HMS *Salvestor*, RFA *Sea Salvor*—Ocean Salvage Vessels.

HMS *Kingarth*—Coastal Salvage Vessel.

HMS *Barhill*—Boom Defence Vessel.

HMS *Dalrymple*—Survey ship employed as a Wreck Dispersal Vessel.

FS *Criquet*—French Naval Boom Defence Vessel.

LC 10, LC 11—Lifting Craft manned by Admiralty dockyard civilians.

Further salvage reinforcements are on the way.

The two Ocean Salvage Vessels are concentrating on raising a 15 Ton Floating Crane and the Bucket Dredger No. 19, two large and difficult wrecks in the centre of the original channel at Port Said. Meanwhile, the Lifting Craft and smaller vessels are employed on lifting wrecks clear of a new channel running along the western bank and removing them to a temporary dumping ground in the Outer Harbour. The Hopper *Triton* has already been moved in this way and a channel for ships of 25 ft draught has thereby opened to the 'cease-fire' line at El Cap. It is hoped the 15 Ton Floating Crane will be moved shortly and thus widen the channel for the ships of the same draught to 250 ft and afterwards to go on to the Hopper *Neptune* and Hopper No 44 or 45.

In all these operations, clearance forces are working in the closest co-operation with the French under a fully integrated command. The Allied Diving Teams in particular are showing ingenuity in passing messenger wires, to which the heavy lifting wires can be attached, under severely damaged wrecks.

## 51st C.D.T.

Having missed one edition (except for the kind remarks of the 50th!) we return to the fold.

As a complete change to the waters of the Thames Estuary, we have been basking in Mediterranean waters. The Inshore flotilla arrived in Malta in fine fettle, and we joined up with the Med. fleet team, *Dingley*, and the CDT(A). The trip out was reasonably uneventful apart from muttered statements to the effect that the 'powers that be' should be invited to be taught the meaning of INSHORE'.

We left Porto de Leixoes doing a number II zig-zag that had not been signalled, the wine of the country was rather stronger than Exports!

It took us some time to get used to the visibility ranges but were distressed to hear that it did on occasions drop to 20 ft! For one exercise we were allocated as E-Boats, initial starting position 65 miles south-east of Malta. However, when *Royalist* opened fire on us at 1,500 yards we decided we were sunk.

Days in harbour were spent doing harbour surveys, the only thing of interest found was, one in number, pot, enamelled, baby, for the use of!!

On a weekend visit to Syracuse, diving effort was concentrated on finding amphorae, these old wine bottles proved to be more elusive than the modern glass ones—the latter being full. Some members decided that the local communist rally would be brightened up by some good capitalist slogans. The subsequent 'brain washing' with the odd half brick proved to decrease the S9 earning capacity.

Our return was announced out of the blue (and 500 buzzes at least). The trip to Gibraltar was quite uneventful and within 24 hours of arrival we were sorry to hear that the HFCDT was to return to Malta. Next morning the CDT (a) was recalled and our fate hung in the balance for the next 48 hours.

We returned to Portsmouth having been told we were not to pay off after all, but to be employed on trials. Now the threat of paying off is rising again with the news that both the HF team and CD (a) are returning home. So this may be the last article from us until the 51st MSS re-commissions early next year.

This commission has been most varied in its work and for those who are interested we have steamed 15,373 miles since commissioning in October, 1954 and have anchored bow and stern 317 times.

So if we do pay-off—Au-revoir from the 51st CDT.

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## GUINEA PIGS

by SURGEON COMMANDER S. MILES, R.N.

Guinea pigs are regarded by most of us as the animals used in laboratories to aid research into problems affecting the welfare of man. In actual fact they form only a small proportion of the experimental animals used which range from small insects to mules and horses. The choice of animal depends firstly on the nature of the experiment and secondly on such other factors as the similarity of its reactions to those of man, its cost and its availability.

Whatever animal is chosen however, it can only give limited information essentially peculiar to that species and any application to man must be by inference. Much very valuable knowledge has been obtained from animal work but ultimately the final trial must be carried out on man—the human guinea pig.



Scientists who work with animals are, quite rightly, very strictly controlled, must possess a Home Office licence, keep accurate records and be subject to inspection without warning. Oddly enough no such control exists for those who work with human guinea pigs, so for the physiologist, man, as well as being the ideal, is the least troublesome of all experimental animals, though not always the most co-operative. One can do things to human guinea pigs that the Home Office would never tolerate in animals.

Lest these remarks tend to discourage any likely volunteers for human guinea-piggery let it be emphasised that the human subject is of course protected by the common law and an unwanted jab with a needle, for

example, constitutes an assault. Moreover there is an unwritten law amongst physiologists that they would never subject their volunteers to any test they would not themselves undertake.

At the RN Physiological Laboratory an attempt is being made to study the reactions of members of the diving community to all the possible changes in environment they would be likely to meet in their work; such changes as might be due to increased pressures, breathing unusual mixtures and the effect of being surrounded by water.

The most striking fact which comes to light is the quite remarkable differences which occur in individuals when subjected to identical conditions. This is particularly true of respiration and it is becoming quite clear that by a study of a man's breathing pattern it is possible to predict how he will react to such things as a failing oxygen supply or an accumulation of carbon dioxide.

Much time is spent on measuring basic conditions such as lung capacity, maximum breathing volumes, physical efficiency and mental reaction times. Individual reaction to oxygen lack and carbon dioxide accumulation are recorded and the ease with which a man might black-out is being studied. It is hoped eventually to have a complete record of the more important measurements and reactions of every diver in the service and from this data information of value to the equipment designers will be forthcoming.

Much is being done also with human guinea-pigs to clear up outstanding problems connected with narcosis, oxygen poisoning, and shallow water black-out. The last of these is now pretty well explainable and has indeed been produced in the laboratory.

Those who visit RNPL will be familiar with the difficulties under which the work is done but the enthusiasm is there and with luck one day there may be room for much wider research in the field of underwater physiology, which is so exclusively a Naval responsibility. Much of the work at present being done must be repeated both under pressure and underwater.

This is perhaps a new approach to diving problems where, in the past, each problem has been tackled as it arises. The present aim is to study independently from any specific problem, man's behaviour under a variety of circumstances and so accumulate a wide fund of useful information as a basis from which approach to the understanding of peculiar hazards may be more readily made. Above all the accent is on the individual and it is clear that, although much can be achieved by experience and training, basic differences must remain which will influence a man's underwater capabilities just as one athlete may be more efficiently trained as a sprinter and another as a long distance runner. Life under water is dependent upon the artificial supply of a breathing mixture and of necessity any apparatus used must be of a standard pattern. How best this may be adapted to the range of human variation and how best each man may adapt himself to such apparatus is the fundamental principle of underwater research.

The enthusiasm with which this project has been received has been most encouraging, for its success is entirely dependent upon the good will of officers and men of all ranks and rating in the diving world. If this welcome and healthy co-operation can continue, much should be achieved in increasing men's comfort, safety and usefulness under water.

## NOTES FROM H.M.S. ANNET

Once again we stop the mighty ships of Southampton Water in order to bring you news of our latest escapades. Since our last communique we have been, as a well earned rest from our work, to 'foreign lands.'

Yes the *Annet* went abroad—to Belgium—and, I might warble, in the very distinguished company of HMS *Steepleholme*, on board which there was a very pleasant crew.

As for our 'Foreign' in Ostend itself I think the less said the better, just in case Interpol get their hands on this, but I can assure you all, that the divers behaved as normal.

Our arrival back in England again brought further adventures at Chatham. The school once again did us proud. Admittedly we had to break down the doors to get in, not that they did not want us, the doors were only locked while the cutting of cards was in progress for drafts. Someone going native in Harwich! Also in Chatham we had the distinguished and most pleasant company of HMS *Kingfisher*. We take this opportunity to thank them for bearing with us on our calls on board. We moved around the docks so much, doing trials, etc. (must have been), we were hard to find and popped up in the most unexpected places, once even alongside *Kingfisher*. I would like to bring to notice that some of her divers were the finest drunken shower I've had the misfortune to come across for some time and what lady killers.

We have been back at Southampton carrying on with the good work for some time now and will operate from here until the end of November when we go back to Chatham for our annual refit.

Lieutenant Burstall, our diving officer, is leaving us in January—all the best to him in his new job. I hope our new diving officer from HMS *Vernon* remembers to put as many stores as he can possibly get in his pockets before leaving. The team now is CPO McKinlay, PO Macrae-Clifton, L/Sea Harrison, ABs Webb, Stancombe, Kilby, Rogers, Mason, Ellen, and Smith.

Before I close I would like to take the opportunity to say from the team 'Congratulations Sam' on your British Empire Medal.

I expect many will mention the farewell dinner to Commander Harland, but I would like to add a vote of thanks to the organisers for a very good show, and I hope at the next dinner to see many old faces in attendance (Boy, have we got them) and as many new ones as possible.

By the time this goes to print, our First Lieutenant, Lt. Lloyd-Williams, will have left and I hope his relief can tolerate divers as he did. Good luck to him from the team.

All the best to teams and other divers everywhere, and a Very Merry Christmas. Mac.

---

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## THE STATELY TRAWLER 'ANNET'

Here you see the nine of us,  
There's not a very long line of us  
Who're Dipchicks when we're borne;  
We can in racing tides below  
Breathe either air or H<sub>2</sub>O,  
Apart from that our constitution  
Has had no evolution.  
Though our habits may seem strange,  
And our clothes are quite a change  
From any others, that are worn,  
We're from that ship serene and stately,  
That only lately  
Looks rather more forlorn . . .

That stately trawler *Annet*,  
How nicely she performs,  
To let the Clearance divers  
Fill in their diving forms;  
But she's always having to go into dock,  
Where we work on the upper deck round the clock,  
Which comes as quite a shock—  
There's never time to dive,  
Which tends to spoil the fun  
Of the CD 1  
But surveying's not the only path  
That's open for a dip:  
Swimming in a swimming bath  
Is still worth quite a bit;  
And though the mess gear may disappear,  
And we may have to pawn each diving dress,  
We'll press for the safety of the *Annet*.

Here you see the best of us,  
Cleverer far than the rest of us,  
Who've got any sort of clue;  
We're in a handy port of call  
And without any fuss at all,  
We've managed to dispose of  
Rows and rows and rows of  
Anchors and diving floats,  
Two thirty-two foot motor boats,  
About which no-one ever knew;  
And if you think we shoot a line,  
Well we reckon that is fine—  
To us it's nothing new . . .

That stately trawler *Annet*  
 We proudly represent;  
 She's only kept on so that  
 The divers keep content,  
 And though the pump on the well-deck may have burst,  
 And the heads and bathrooms are the worst,  
 They're invented by the first  
 Dockyard specialist;  
 But later on condemned  
 As they'd got an awful bend.  
 All the messes keep their  
 Old nautical renown;  
 It's better not to sleep there  
 When wet in case you drown,  
 And if a limpet mine on her bottom line  
 Blows up, and with luck it might,  
 We'll fight for that stately trawler *Annet*.

Coel Noward, c.d. B.A.

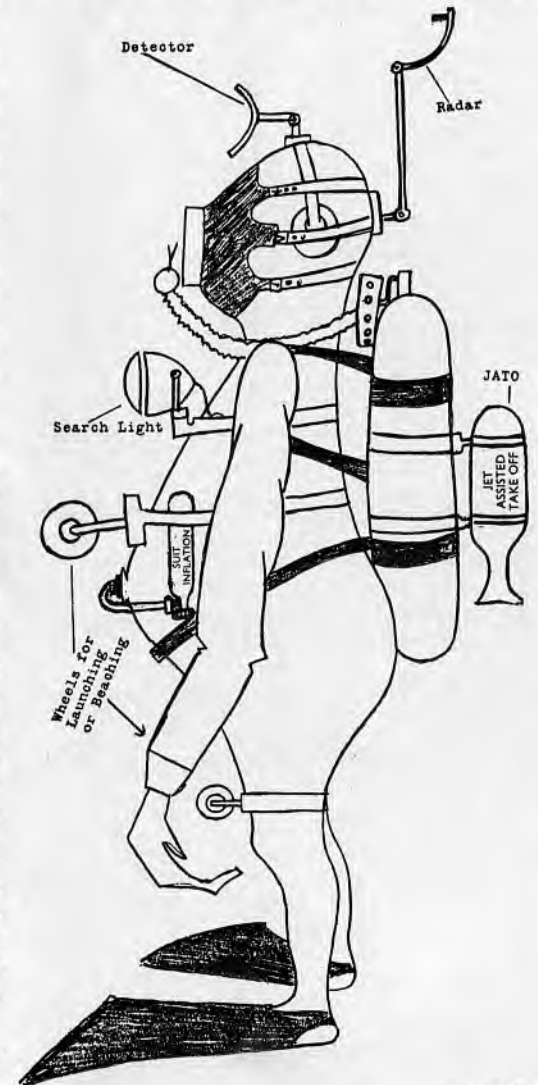


## 50th CDT NOTES

Taking things chronologically since our last contribution to the magazine we have great pleasure in recommending participation in the Oulton Broad Regatta Week festivities. For the price of five, forty minute displays and an assault on the Lowestoft beaches, the East Anglicans gave us a right royal time. Our departure from these pleasant inland waterways although somewhat reluctant was to the mutual benefit of both the inhabitants and ourselves. We were very pleased and grateful to have the assistance of AB's Sargisson and Maclean of the B&MD team for these operations.

Apart from the antics of this our mighty vessel, the passage to and from Lowestoft was enlivened by the disposal of a mine on the way South and the capture of a 'suspicious' looking object on the way back. The mine turned out to be a practice Mk XVII which was very reluctant to become a ground mine in spite of some very accurate shooting from our main armament; the 'object' was an Algerines Oropesa float with its red painted nose just showing through the swell at low water, it being moored in the vertical position by its own wire and otterboard.

Being the summer season trials have been a little slack during the past few months (things are usually at their highest pitch January and Feb-



By 'B.F.'

### A TASTE OF THINGS TO COME

(With apologies to our Canadian Cousins from whom, and without whose permission, this is a direct crib.)

ruary) so some of us decided on a short vacation in Norway. We worked our passage in HMS *Skye* at a stately speed of 9 knots, it might have been 10 but for the skin friction due to the permanent layer of coal dust, however we eventually arrived at Bergen where we 'graced' (not you Jim—the fish quay for the weekend. Our stay was pleasant enough but nothing to rave about and Bergen is hardly a sailor's paradise. We must have done the poor old Isles class trawler a power of no good as they promptly decided to write the old lady off as soon as we got back, we felt honoured to have been on her last trip after such a distinguished and varied career.

We are at present making some surveys in the Moray Firth. This is the second time we have been up here recently and from the point of view of diving conditions we would be delighted to stay here.

We were very sorry to have to say cheerio for a while to PO Lardner and AB Andrews who have departed to take the CD2s course. We trust they are giving a good account of themselves (not to the police), if not there those among us who expect to be crossing the Border before very long, so watch-out. Replacements for those stalwarts came in the form of L/Sea Hartshorn and AB Futchter who are rapidly learning to dive with a kilt on and using the bagpipes as a breathing set.

We send best wishes and good diving to all especially those in the Canal area.  
'B.F.'

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*in*

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## DANGER BENEATH THE SURFACE

by JOHN SANDILANDS

(By kind permission of John Bull)

Two years ago Dave Dikter, a deep-sea diver, was working in the gloomy depths of a seventy foot deep coffer dam on the North Devon coast, laying a bed of concrete. Alone in the narrow shaft, his only contact with the surface was through the telephone in his helmet. Suddenly, over the receiver, he heard confused shouts; a moment later the rush of compressed air into his suit faltered and then failed completely.

Almost simultaneously a frightened voice on the telephone told him that his air hose had become detached from the compressor on the surface; his life line tightened round his chest as frantic hands began to pull him upwards.

Dikter knew that he had, at best, four minutes' supply of air still trapped in his diving gear; but he also knew that a rapid ascent would set him swinging in a pendulum motion that could trap him beneath any of a series of projections on the steel walls of the dam.

With his breathing becoming laboured, he pressed the tall-switch of the telephone immediately beneath his chin and stilled the panic on the surface with the brisk urgency of his voice. As calmly as he could, he directed the raising operation, navigating skilfully past the projections while he fought for breath.

When he broke surface there was still fifteen feet of sheer steel wall between him and the diving platform—a height which had made a diving ladder impracticable, and forced him to enter the water on a steel skip lowered by a crane.

'My air supply was finished and the last few feet seemed like the end,' says Dikter. 'I had just enough strength to order one of the surface crew to dive in and unscrew the facepiece of my helmet before I blacked out completely.'

For Dikter the incident was another example of the absolute self-reliance that is necessary for survival in what is recognised as one of the loneliest and most hazardous occupations. At thirty-nine, Dikter has the ideal compact build of a diver—he is five feet eleven inches tall and weighs eleven stone nine. And he has the equable temperament essential to his job.

After nearly twenty years of diving in various parts of the world he has acquired the calmly competent air of a craftsman and the wryly humorous approach to the dangers of his trade that marks the seasoned diver.

He is a freelance, available for any type of underwater job from the salvage or demolition of wrecked ships to the underwater construction and repair of piers, dams and harbour installations. But he prefers civil engineering assignments.

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'Although salvage, particularly of valuable cargoes, produces more spectacular wage packets over a short period, construction work provides the steadier income,' he says. In a year of full employment he reckons to earn an average of £2,000, and for especially difficult and dangerous jobs can expect bonuses running, occasionally, into hundreds of pounds.

Few jobs are alike. On one occasion he found himself working in the middle of a road in the East India Dock. Workmen digging a sewer outlet had struck water ten feet down and Dikter, in full diving gear, was lowered into the narrow hole with orders to drill fourteen feet through the earth to the dock wall to let the water out. The task took him a fortnight.

He has also dived in wells, ponds, canals and rivers, and once was lowered into thick mud in Southampton harbour to search for a piece of secret equipment which had been dropped overboard from a troopship. He probed unsuccessfully for three days—once having to be hauled bodily from the clinging mud by a crane—and then discovered a corpse which became the subject of a long police inquiry.

During his career Dikter has almost daily faced the risks of working in pressures of up to a hundred pounds to the square inch and the strange effects which this can produce on the human body; the dangers of torn suits, snagged air lines, fierce fish and the innumerable un-looked-for complications of working alone and in darkness on the sea bed.

During the building of a dam on the West Africa coast, an iron pipe twenty-two feet long, filled with cement and weighing several hundred-weights, slipped from a block and tackle and fell on him, pinning him by the neck. The muddy sea-floor cushioned the shock and saved his life, but he was held prone for an hour and a half until another diver could be sent down to rescue him. Lying helpless he had to thrash his arms and legs wildly to beat off an aggressive barracuda.

Civil engineering under water calls for a wide variety of skills from the diver, including carpentry, rigging, cementing, steel cutting, patching, riveting, sketching and a knowledge of explosives. The constant necessity to work blind—light diffuses too rapidly beneath the sea to be of any use—has made Dikter's hands almost as sensitive as a surgeon's.

Heavily scarred, they still enable him to 'see' with complete confidence even in semi-darkness. The facility remains with him on the surface, where he finds that he uses a screwdriver, wrench or hammer without having to look at what he is doing, and he can move easily in a darkened room.

The numerous trades which divers have to master provide them with a living when diving jobs are scarce. Many divers, however, refuse to take surface jobs. 'Under the surface they are usually doing the work of two men, but they will push themselves to the limit before asking for assistance,' Dikter says. 'There is tremendous satisfaction in having to rely on your own ingenuity and judgement.'

Dikter dives in twelve-bolt gear—named from the number of bolts that secure his brass helmet in position on his breast plate.

Under the canvas of the suit, which is weighted with forty-pound lumps of lead in a cartridge belt round his back and chest, he wears flannels, a roll neck sweater and thick woollen undersocks. Steel-studded diving boots weighing nearly twenty pounds, a sheath knife, and occasionally gloves secured by rubber cuff rings complete a kit weighing more than two hundred pounds.

In addition to his telephone link with the surface he has a life line attached to his waist.

Dikter's working hours are largely dictated by the weather and the state of the tides. Even at depths of a hundred feet a rough sea surface can make undersea work dangerous. While he was salvaging a Liberty ship in the Channel last year, Dikter was picked up bodily by a heavy swell and carried twenty yards along the submerged deck into the bows, where he slid into the hawse pipe of the anchor chain.

Although he was badly bruised he regarded it as a lucky escape. If he had been swept over the rails he would have dropped forty feet to the sea-bed and risked the 'squeeze'—an over-rapid change of pressure within the diving suit which brings the outside pressure of the water to bear and, in sufficiently severe cases, could force the whole of a diver's body into his helmet.

When he dives, Dikter's air line is connected to a compressor which shows the linesman—his surface assistant—both the depth he has reached and the pressure of the air, and there is a valve on the breast plate of his suit which allows him to control his own air supply.

Correct pressure is vital for the avoidance of the 'bends', the paralytically painful attacks which are a constant risk for divers working in deep water. Below the surface the diver breathes atmospheric gases under great stress. When he comes to the surface the gases which he has absorbed must be released slowly or they form minute bubbles in the bloodstream and body tissues which, in some cases, can prove fatal.

On one occasion a torn suit forced Dikter to blow to the surface from 110 feet. Three hours after coming ashore he had a severe attack of bends while sitting in a bar and had to be taken out to a tug, put into diving gear and lowered into deep water, where he remained at various levels for more than three hours, until the pains subsided.

A non-swimmer who is passionately fond of the sea, Dikter gave up working as an instrument maker at the age of eighteen to become a deck-hand on a diving vessel at Plymouth. Learning the job from the surface he was eventually allowed to try his hand at minor underwater tasks and quickly established himself as a regular diver. When war broke out he joined the R.A.F. and was posted to the Air Sea Rescue Service in South Africa.

On one assignment he was sent to Lake St. Lucia in Zululand to recover three bodies from a wrecked Catalina flying boat which had crashed in the lake. After probing in the wreckage for some time he

was recalled to the surface by frantic signals on his life line. He emerged in the middle of a group of about fifty crocodiles. 'Luckily they seemed too puzzled by my appearance to do more than circle around me.'

On his discharge, he worked for three years on harbour installations and sunken and war-damaged ships until he succumbed to a combination of exhaustion and salt-water boils, a diver's affliction caused by small pieces of grit being rubbed into the skin by the chafing of the diving dress.

He was advised by a doctor to take a complete rest from diving and for a year was skipper of a fishing trawler. During rough weather in the North Sea the trawler's screw was fouled by the trawl line and the engines had to be stopped. The vessel drifted down on a survey ship which had diving gear aboard. Dikter borrowed the suit and, going over the side, cleared the screw himself.

Today Dikter lives with his wife and son in Margate. Like most divers he has several fads and superstitions. He invariably takes his watch to the bottom—'It's comforting to hear it tick.' He also takes his handkerchief and cigarette lighter tucked, with the watch, inside his woollen skull cap, though he admits that opportunities for using them on the sea-bed are limited.

One of his strongest superstitions is against beginning a job on a Friday. On Friday, March 13, two years ago, he refused to go down to lay concrete blocks for a dam under construction in the Port of London. Another diver scoffed at him and went in his place. A few hours later Dikter had to go to his rescue. The diver was trapped between two eleven-ton blocks with a crushed hand.

## H.M.U.D.E. CLEARANCE DIVING TEAM, PORTLAND

Firstly may we apologize to our friends, fans and camp followers for not appearing in the last issue, we can only plead 'pressure of work.' What work at what pressure must alas, remain a secret. Suffice to say that our trials in recent months have been very interesting and we hope, productive, if possibly in an abstract sense! By now we are quite used to working with Boffins, tankeys and nig nags, and it's quite amazing what this unholy union has produced. Indeed they have shown genuine interest in diving and in fact several have performed commendably when induced to try a 'dip'—this latter and quite voluntary practice has indirectly resulted in the formation of a local branch of the British Sub-Aqua Club—our benefits from this alliance have been somewhat more peculiar and, I regret to say, have resulted in two members of the team taking up music lessons. Maestro Shiner Wright is actually taking guitar instructions and Ginger (Peep) Richard is struggling with the clarinet. One can well imagine the CD store at lunch-time with the two virtuosi competing. Combat is inevitable and we soon expect to find Shiner's guitar wrapped round Ginger's head and Ginger's clarinet well, hmm how imaginative can you get?

## BERNARDS OF HARWICH

*wish all in the Royal Naval Diving Service a Very Happy Christmas and a Prosperous and Successful New Year.*

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As for the remainder of the team/shower (delete as desired) well, even Boom Cannon talks airily if not knowingly, about decibels and all the other little belles (with apologies to the typing pool) which function in UDE.

About our other work—the last few months have found us engaged in a variety of tasks including the proverbial 'search and recovery' of numerous items including gang planks, name boards, kit lockers and yo-yos. We are at present just completing a very interesting 'bottom survey' over an area which very much resembles the Swiss Alps.

Without doubt the greatest social occasion during the period was an invasion by the Clearance Diving Officers qualifying course, misled and conducted by the course officer, who, alas, exerted a sinister influence on one of our members resulting in the latter's withdrawal from the tranquil, domestic fireside to the cold bleakness of the dog house from which we are glad to say he has now emerged.

Still on the social aspect of an otherwise hard life our greatest discovery has certainly been the concoction of a defreshing, depressing drink known as 'mismusters' the main ingredients of this evil brew being rum and ginger wine. We commend it, in quantity, to those of you who have no further desire to live.

And finally our incoherent ramblings would not be complete without reference to our exercises with locally based ships whose shallow water divers have been receiving our attention. Worthy of special mention are HM Ships *Pellew*, *Dundas* and *Keppel* whose small but enthusiastic teams have performed exceedingly well.

Concluding may we wish you all the best for 1957.

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## DIVERS'

### CLUES ACROSS

1. The first shouldn't have any of the second if 'hooked on' properly (5, 5)
8. In one university, a don is Venus's loved one (6)
9. Put them in bags—fire them all! (4, 3, 3)
10. A different result in Ireland (6)
11. Not a coloniser but perhaps a nomad (10)
12. By Gum, it's Sheik's talk (6)
13. Without 50 its it is very strange until it is one on its own (4)
15. Queen of the jungle? (7)
19. Leslie is after a bird's home—to make himself comfortable? (7)
21. A mixed one is an age (4)
22. A saint, so be it, is essential to a flower (6)
25. They make both miners and divers go up (10)
27. Little Edward after some metal took the creases out (6)
28. A lunch desk could be freed (10)
29. A vehicle and a weight used for storing or transport (6)
30. It's cabbage for dinner all the year round! Christmas trees are this as well (10)

### CLUES DOWN

1. Topped up certain and makes a scholar wicked (8)
2. An account and a coin, both small, could distinguish a native from a foreigner (6)
3. An easy target notwithstanding (6)
4. You might make it later but this bugle call shouldn't have to wake you (5)
5. After the sixth day you assess its soaking (8)
6. It's always the same—steady (8)
7. A dive might not have the first if the last is weak (4, 4)
13. Employ Sue (3)
14. Innumerable Naval numbers initially can be met here (3)
16. Mix 4 with French wine and you'll get a stand easy (8)
17. Name on it (anag) only after selection however (8)
18. A mound which sounds like a desert song (4, 4)
20. Under walls it collapses. Is bussed? Strange! (8)
23. Would a crab be prone to this disease? (6)
24. Chilly Chinese working man (6)
26. It's not the same in both eras (5)

## CHATHAM NOTES

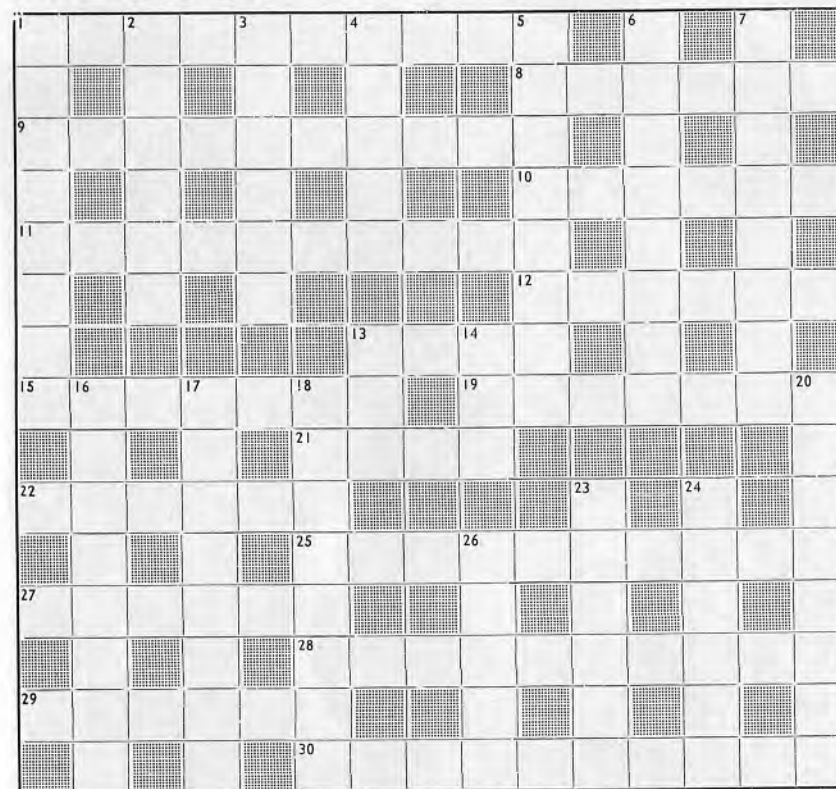
Here we are again with the latest news from Chatham. The Suez crisis has robbed us of three staunch compatriots namely PO Bull, PO Kerr, and 'Nuttie' Carr, all commissioning lifting craft, more or less over night and steaming away at five knots for the Mediterranean, minus Pump Wheels of all things.

Needless to say, since they left, Badger has been nipping around trying to establish how much he is down in stores, (he should have had Spiero, 'ain't got nun,' as store keeper). Any one hearing a loud bang from Chatham in the near future will realise that the worst (?) has happened in this respect.

We welcomed back from HMS *Reclaim* POs Brown and Bray having qualified Diver I and they have joined the school at just the right time as we were down in number as far as instructors are or were concerned.

CPO Foggin is extremely busy and to any of the old Deeps, it may be of interest to hear that he is now qualifying Cinema Operator. This may be with a view to showing pictures? when he goes outside.

## X-WORD No. 2



*The solution to this X-word will be published in our next edition.*

### SOLUTION TO CROSSWORD No. 1

**Across**—(1) Compression; (9) Styte; (10) Magnificent; (11) Shed; (14) Onestep; (18) Nylon; (19) Elder; (20) Ere; (21) Tor; (22) Had up; (23) Inure; (24) Use; (26) Sow; (27) Banal; (28) Idler; (29) Legging; (33) Tide; (36) Diving Boots; (37) Oboe; (38) Street Lamps.

**Down**—(2) Opal; (3) Pant; (4) Elfin; (5) Sacks; (6) Ounce; (7) At The Double; (8) Tender Years; (12) On The Bottom; (13) Sliding Door; (14) One Pull; (15) E.S.E. (16) Tot; (17) Periwig; (25) Egg; (26) Ski; (30) Exist; (31) Grime; (32) Night; (34) Mona; (35) Stop.

Latest news for the future is that CPO Tuck is to relieve CPO Ware at *Safeguard* in the New Year.

**Footnote.** Will anyone of our members in the Suez Area, please co-operate and buy up any of Badger's stores that they find being flogged in the bazaars and return same to Chatham, thanking you in anticipation.

CHATS.



Whatever the pleasure  
Player's complete it



Player's  
Please

## THE EMPLOYMENT BUREAU

Many enquiries have been made recently from divers away from their depot regarding the Employment Bureau, and wishing to know if we can help in any way by giving names of firms requiring divers in civilian life

Many of you I am sure will be pleased to hear the good news that the Employment Bureau has been revived. If you wish to have your name on record please forward the following information to *R.N. Diving Magazine*, H.M.S. *Vernon*, Portsmouth.

Full Name.....Rating.....Off. No.....

Time as diver.....are you willing to serve abroad.....

Time expires.....Private Address.....

This record, when received from you, will be filed, and when your turn comes, "Who knows." Please remember the bureau does not assure you of employment. It merely puts you in contact, the rest is up to you. Records held show that many divers upon receiving information from this Bureau have found good employment in civilian life.

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