TFI STRATFORD BSAC

motto:
'HE OR SHE WHO DARES FINS'

JANUARY 2018

INSIDE THIS MONTH

And attached to your email is the latest Dive Calendar

FROM THE EDITOR

I have recently told the Chairman and the Diving Officer that I feel it is time for a new editor of TFI but it was felt that the website was more current than TFI. Therefore I am emailing this last edition to you all with the articles that have been sent to me by Members since the previous issue.
May I take this opportunity to thank all of you that have contributed articles, pictures and ideas over the many years that this has been published.
Please do not send any more articles to me but speak to Chris Hastie and get them included on the website.

Prich

FROM GEOFF RUSSELL (FORMER TREASURER)

The Committee has identified there is a good chance we can claim back the Excise Duty paid for our RIBS when they are being used as a safety resource.
Currently the duty is £0.5795 per litre on unleaded petrol !!
In order to do this would all future Expedition Leaders please ensure they return to me (or any future Treasurer) receipts for fuel purchased and a brief log of trips undertaken.
I estimate this could represent a substantial windfall for club finances which if successful the Committee will discuss in due course how to distribute/spend

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FROM PAUL STOODLEY

Here is a picture for the newsletter of when Anthony and I joined the Marine Conservation team at Sand Bay, Weston Super Mare for the first clean-up of the year.

Let's hope we can get a few more people joining in the clean ups around the coast later in the year... we picked up 13 full bags from 100m of beach which included 2859 Cotton bud sticks!!! Just crazy figures...

Paul

(Ed: Well done you Stoodley Boys!)

SWEAT SCIENCE

How to Survive 75 Hours Alone in the Ocean

A new case study digs into the medical records of a lost diver's incredible survival story

Alex Hutchinson

Alex Hutchinson

Jan 17, 2018

In February 2006, Robert Hewitt was scuba diving near Mana Island, off the coast of New Zealand's North Island. Hewitt was an experienced navy diving instructor with 20 years in the service, and he told his dive buddy that he would swim back to shore himself. Instead, when he next surfaced, he had been pulled several hundred meters away by a strong current. The dive boat had moved on, and Hewitt was left alone, the tide pushing him farther and farther from shore.

In a recent issue of the journal *Diving and Hyperbaric Medicine*, a team of researchers led by physiologist Heather Massey of the University of Portsmouth in the UK take a closer look at what happened next: Hewitt's progressive deterioration over the next four days and three nights, how he survived, and what took place after his eventual rescue. It's an interesting glimpse at a branch of extreme physiology that most of us hope we'll never encounter.

(Massey's interest isn't purely theoretical. She's currently training to swim across the English Channel, which will require prolonged immersion in cool water. She also took home a gold medal from the World Ice Swimming Championships last year, in temperatures just a few degrees above freezing, and helped British open-water swimmers prepare for the Rio Olympics.)

The most pressing challenge facing Hewitt was the water temperature of 61 to 63 degrees Fahrenheit (16 to 17 degrees Celsius), well below body temperature. According to physiological models, when water is 59 degrees Fahrenheit (15 degrees Celsius), the median survival time is between 4.8 and 7.7 hours. Amazingly, Hewitt spent the next 75 hours in the water, drifting back and forth over a distance of nearly 40 miles before he was spotted by Navy diving friends and rescued.

In general, immersion in cold water produces a four-stage response. First is the "cold shock response" that triggers "an inspiratory gasp, uncontrollable hyperventilation, hypertension, and increased cardiac workload." If you're not ready for it, this shock response can cause you to inhale water and drown and can set off heart arrhythmias. Hewitt had two key defences against the cold shock: a five-millimetre custom-fit wetsuit and habituation from more than 1,000 previous dives, which eventually blunts the initial shock response.

After the cold shock, which peaks within 30 seconds and diminishes after a few minutes, the next stage of immersion is peripheral muscle cooling. For every 1.8 degrees Fahrenheit (1 degree Celsius) that your muscles cool, your maximum muscle power drops by about 3 percent. That means you can lose the ability to swim before your core actually gets hypothermic. Hewitt did indeed lose the ability to swim at some points during his ordeal—sometimes because he lost consciousness—but he had a buoyancy compensator that kept him floating with his head above water.

The third stage is deep body cooling, which affects both physical and mental function and eventually results in loss of consciousness and then death. No one took Hewitt's temperature until he had been wrapped in blankets and received warm drinks after his rescue. At that point, it was 96.3 degrees Fahrenheit (35.7 degrees Celsius), which isn't particularly low. He did have some episodes of confusion and disorientation that suggest he was on the border of hypothermia, but it's hard to be sure.

One key factor that helped stave off hypothermia was the fact that Hewitt is (in the words of the researchers) “a large, muscular male”; at 5'11" and 220 pounds, he clearly had a decent amount of insulation. In fact, for every 1 percent increase in body fat, you slow your rate of heat loss by 0.18 degrees Fahrenheit (0.1 degree Celsius) per hour—a big deal when you extrapolate to 75 hours. Hewitt also tried to maintain the foetal position, which minimizes heat loss and extends survival time in cool water.

The fourth and final stage of immersion, if you make it that far, is the “circum-rescue” phase. It’s apparently quite common for people to collapse during rescue, thanks in part to the change in pressure when you leave the water and the strong nervous system reaction to the idea of being rescued. With this in mind, Hewitt’s rescuers kept him horizontal to maintain blood flow to the brain and gave him “verbal encouragement” to keep fighting for his life.

Of course, cold water wasn’t the only challenge in play. Despite water, water, everywhere, dehydration is a serious problem—in fact, the squeeze of the wetsuit and water pressure shunt blood to your core, which stimulates urination, even when you’re already dehydrated. The practical guidance in situations like this is that you should avoid drinking for the first day; this will trigger hormone changes that make your body start conserving water. After that, aim to scrounge up half a litter per day. Hewitt used his mask and wetsuit jacket to collect rainwater, but this was far below his needs. When he was rescued, he drank a litter and a half of water, and then received another six litters intravenously.

Prolonged soaking in seawater, along with the friction from his wetsuit and fins, damaged Hewitt’s skin pretty badly. When found (put your spoon down for a moment), “his body was covered with sea lice feeding on his macerated skin.” And then there’s the psychological challenge, both during and after the ordeal. By the third day, he was contemplating (and half-heartedly attempting) suicide, but he managed to keep fighting.

Can we extract any lessons from Hewitt’s ordeal? Well, wearing a wetsuit and weighing more than 200 pounds obviously helped, but those aren’t particularly useful takeaways. Staying in the foetal position—sometimes known as the “heat escape lessening posture,” or HELP—was a good idea. Ultimately, the most pointed lesson, and the one Hewitt himself now spreads as a water safety advocate, is that he shouldn’t have been in that situation in the first place. Rather than diving alone, he should have aborted the dive and joined another group or, at the very

least, used a surface-marker buoy to flag his position. “In some ways, Rob almost contributed to his own demise,” the police search team leader said bluntly. “He took some shortcuts.”

Still, shit sometimes happens. And if it does, the other big lesson to keep in mind is that in defiance of all the physiological models, Rob Hewitt survived for an astounding 75 hours alone in the cold water. If you find yourself out there, don’t give up

(Ed: I don’t care how many years’ experience he had, he was extremely lucky to survive and it could have all been avoided so easily.)

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St Abbs and Eyemouth Trip

Dates July 6th to 9th inclusive.
There are fantastic reefs and wrecks and lots of seal action around St Abbs and Eyemouth. We will also be diving off the famous Bass Rock and The Isle of May. Our Dive Boat is Wavedancer II which has a diver lift and loo and we will be staying B&B. I have booked 4 days diving, two dives/day: Friday July 6th through to Monday July 9th inclusive. This is because it takes over 5 hours to get there so it would be daft just to go for the weekend especially if we get blown out on one of the days. Because of the distance we will need to travel up on the Thursday July 5th. We also have an option to stay over after diving on the Monday Night. Contact Sally Richards: sallyrichards.myzen@outlook.com

SO YOU THINK THAT YOU UNDERSTAND BOYLE’S LAW?

Question from the University of Washington:
Is Hell exothermic (gives off heat) or endothermic (absorbs heat)?

Most of the students wrote proofs of their beliefs using Boyle's Law (gas cools when it expands and heats when it is compressed) or some variant.

One student, however, wrote the following:
First, we need to know how the mass of Hell is changing in time. So we need to know the rate at which souls are moving into Hell and the rate at which they are leaving. I think that we can safely assume that once a soul gets to Hell, it will not leave. Therefore, no souls are leaving. As for how many souls are entering Hell, let's look at the different religions that exist in the world today

Most of these religions state that if you are not a member of their religion, you will go to Hell. Since there is more than one of these religions and since people do not belong to more than one religion, we can project that all souls go to Hell. With birth and death rates as they are, we can expect

the number of souls in Hell to increase exponentially. Now, we look at the rate of change of the volume in Hell because Boyle's Law states that in order for the temperature and pressure in Hell to stay the same, the volume of Hell has to expand proportionately as souls are added.

This gives two possibilities:

1. If Hell is expanding at a slower rate than the rate at which souls enter Hell, then the temperature and pressure in Hell will increase until all Hell breaks loose.

2. If Hell is expanding at a rate faster than the increase of souls in Hell, then the temperature and pressure will drop until Hell freezes over.

So which is it?

If we accept the postulate given to me by Teresa Brassington during my Freshman year that, 'It will be a cold day in Hell before I sleep with you,' and take into account the fact that I slept with her last night, then number two must be true, and thus I am sure that Hell is exothermic and has already frozen over. The corollary of this theory is that since Hell has frozen over, it follows that it is not accepting any more souls and is therefore, extinct.....leaving only Heaven, thereby proving the existence of a divine being which explains why, last night, Teresa kept shouting 'Oh my God.'

THIS STUDENT RECEIVED AN A+.

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Thanks to Bondy for sending to me this picture of a dry Stoney Cove

WHEN YOU WANT A QUIET DRINK

(with apologies and a smile to Russ Thompson)

I was sitting quietly at the bar staring at my drink when in walked Russell Thompson pissed and looking for trouble. He walks up to the bar grabs my drink and gulps it down in one swig, "*Well, Whatcha gonna do about it*?" he says, menacingly.

I'd had a really bad day and for some reason I burst into tears, "*Come on, man*," says Russell, "*I didn't think you'd CRY. I can't stand to see a man crying."*

"*This is the worst day of my life*," I said. "*I was called to a meeting and told my pension fund has gone bust and I'm penniless. When I went to the car park, I found my car had been stolen and my insurance has expired. I left my wallet in the taxi I took home. I found Jackie in bed with Brett and the new dog she's bought bit me. So I came to the club to have a drink and work up the courage to put an end to it all, I buy a drink, I drop a capsule in and sit here watching the poison dissolve. Then you, you jackass, show up and drink the whole thing! But enough about me Russ, how's your day going?"*

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SO YOU THINK YOU UNDERSTAND ARCHIMEDES?

You did all of this stuff at school and then you repeated it all when you did Ocean Diver Theory and you fully understand the principles concerning buoyancy.

Well try this:

There is a rowing boat floating on a swimming pool (why? we don't know).

You have a marble and you can put the marble either in the water or in the rowing boat.

The question is: Does the water level in the pool rise higher when you put the marble in the water or when you put it in the rowing boat?

Answer ? You'll have to ask me as there is no more TFI

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And finally, Bondy sent to me these pictures asking "*Where and When?"* All I could say was *"Probably Sharm el Sheikh and sometime last century but good memories of wonderful days"*

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Stratford BSAC 0730 Committee 2017

Chairman :Pete Talbot 07958 447544
Training Officer: Hilary Wilson 07779 287558
Diving Officer: Miles Howarth 07779 287558
Recruitment: Lynne McCarthy 07775 940000
Equipment Officer: Peter Scapellino 077087 25050
Treasurer: Geoff Russell (01789 552614)
Membership Secretary Paul Nash 07966 401610
Events: Angie Deaves 07792 775971
Secretary: Sally Richards 01789 773668

SUGGESTIONS OR PROBLEMS? THEN CALL ONE OF US

MEMBERSHIP FEES 2017

To the Stratford Branch, all Members pay an annual subscription of £120 towards costs of the Branch.
To BSAC, Members pay an annual subscription of £57.50 that covers BSAC costs, their monthly '*Scuba*' magazine and their third party insurance. Both of the above are due on the 1st April each year.
New members are required to pay a full annual subscription for both of the above when they join. In their second year they pay pro-rata to bring them to the next 1st April.
Hire of kit for a new trainee is £60 for a period of for five months. Thereafter it is £45 for 3 months.
Pool Sessions - £3 for all Members
Try a Dive £20 a session.
Training Books vary but typically the cost for an Ocean Diver is £60 which includes Sports Diver Books.
The Club has 2 boats (RIB's) and the Committee believes that Members should contribute towards the cost of running these boats in proportion to how often they dive from them. This is paid for by a compulsory Annual Boat Levy of £30 payable along with your Annual Subscription by all Members in their second year onwards If you do minimal diving from the Club boats during the year you will receive a full or part refund of your Boat Levy. Non members diving from Club RIBs will pay £10 per dive.
Members towing RIB's get 50% of the fuel price e.g.60 pence per mile.

CLUB DIVING STANDARDS

All Members are expected to dive in accordance with the guidelines of the BSAC as published from time to time.

No dives should be organised without the prior approval of the Diving Officer who will provide you with a
Diving Log which is to be completed with details of the dive and returned to him.

On the reverse side of the Diving Log is a list of the main BSAC guidelines that the Committee wishes to emphasise at this time.
You are reminded that the depth limits for qualified divers is as follows:
Ocean Divers – 20 metres
Sports Divers – 35 metres
All other qualified divers – 50 metres
Members who ignore any of these guidelines do so entirely at their own risk.
You are also reminded of the following:

- Members are strongly recommended to use Delayed Surface Marker Buoys which can be filled by means other than purged air from a mouthpiece.
- Sports Divers and above are recommended to carry their own independent source of back-up air in a second cylinder (twin or pony)

These extracts are not exhaustive and so if you have any queries you should clear these with the Diving Officer before diving. The Diving Officer for 2017 is Miles Howarth and his contact number is shown above.