MARINE Life

Issue 8
August - September 2010

Inside This Issue

An eco-friendly community-based magazine for the Tasmanian marine and marine life enthusiast

Our goal

To educate, inform, have fun and share our enjoyment of the marine world with like-minded people.

Our Team

Mike Jacques

Editor – no, email spam does not cause weight gain.

Emma Flukes

Asst Ed, survivor of a major reality internet show where she is locked into a joint enterprise with a group of lazy idiots.

Rolli

Mr North. Seeker of enlightenment in the perfect grain of sand.

Phil White

Mr North West. He is the "Cable Guy".

Marine LIFE

This issue

Planning News

Critics damn coastal policy

Mercury July 03, 2010 09:11am

Councils have labelled the plan grossly inadequate, narrow and confused. The Tasmanian Planning Commission received 49 submissions and the consensus among submitters was that the State Government did not think the coast was significant enough to protect with a strict policy. The Break O' Day Council said that under the policy the State Government would not take its share of responsibility for the protection and development of Tasmania's coastal areas. "There is no clear vision of the important coastal zone issues for Tasmania or targeted solutions to be pursued at state level," the council submission said. Environment Tasmania called the document grossly inadequate and said Tasmania had missed an important opportunity to protect coastal values with a clear policy that could guide developers, governments and the community.

More information http://www.planning.tas.gov.au

Fishing News

Channel Scallop season

A new size limit has meant the majority of the Channel's remaining stock is undersized with divers reporting up to 60% being thrown back in some areas. A lot of the usual old haunts are now empty of scallops. Roe condition has also been often poor, but with bit more effort than normal a lot of scallops have been caught.

Diver Death after scallop dive

ABC July 26, 2010

The 48-year-old was in Great Bay, off Bruny Island, when he got into difficulty yesterday. Tasmania Police said cardio-pulmonary resuscitation was given until the Tasmanian Ambulance Service met them at Woodbridge but the man was pronounced dead at the scene.

The divers were fishing from a 6m aluminium boat in the busy area when the accident was reported at 11.35am. Detective-Constable Michael Glancy said the death was not believed to be suspicious and a report would be prepared for the coroner.

Earlier this month, diving and hyperbaric medicine department medical co-director David Smart said many divers were risking death. On July 5, three scallop divers were treated at the Royal Hobart Hospital. One almost drowned and two were treated in the hyperbaric unit, one

for decompression sickness or the bends, the other for injured sinuses and ears. One of the injured was not trained.

Dr Smart said divers needed to take care and should have diving certificates. He advised those using air hose hookahs to have a spare air cylinder in case the hose was kinked or cut, and marker buoys should also be used. Dr Smart said many carried bags of scallops that were too heavy and divers rushed to the surface, risking the bends.

[this turned out to be a fit fellow well known and liked around Underwater Hockey circles]

Activists Speaks out against Netting

This is an extract of what Christian Bell had to say to say online,

"The Tasmanian practice of recreational gillnetting is a destructive an unnecessary fishing method that has unacceptable impact on non-target species such as seabirds and marine mammals as well as other non-target species of fish. Many of these species are fully protected under state and Commonwealth legislation but die as a result of their entanglement with recreational gillnets. While in commercial fisheries there are programs in place to mitigate the impacts on non- target species, there are for all practical purposes none with regard recreational fishers.

It is particularly galling that the Tasmanian Government cites a lack of information on the impact of recreational gillnetting on fish stocks and its impacts on marine biodiversity overall as its reason for not banning the practice. For start it does not fund sufficient research to adequately assess such impacts and it is never likely to fund the research to a scale that would provide a comprehensive and scientifically adequate assessment.

Long ago recreational gillnets were banned in Victoria, South Australia, Queensland and New South Wales (where it is considered a wasteful and unsustainable fishing practice). Until our state outlaws this fishing technique for recreational fishers, any attempts to claim that we have in place an effective fisheries management system that conforms to sound ecosystem based management principles is entirely laughable."

Lobster fishers reject urchin claim

ABC Jun 7, 2010

Only larger rock lobsters are able to eat the bigger urchins, stopping the urchins from over grazing and destroying habitat for other marine species . The Rock Lobster Fishermen's Association has rejected proposals made by the Tasmanian Government for controlling the spread of an invasive urchin. The proposal to increase the maximum size limit for rock lobsters was made by the Department of Primary Industries in a discussion paper, aimed at boosting

fish stocks in the industry. The Department says bigger lobsters can eat the sea urchins that are choking sea beds along Tasmania's east coast. But the Rock Lobster Fishermen's Association's Rodney Treloggen says the regulation will not work. "From the scientific evidence available, it would be 18 years before we even began to see a benefit, if there was a benefit," he said. "And if we don't do something about this pest in the next 18 years, there won't be any big lobsters there to eat them, because there'll be nothing left for anything to survive on."

Police snap up illegal shark fishers

ABC Jun 1, 2010

Tasmania Police say they have caught a boat with 100 kilograms of shark on board in Strahan on the state's west coast. Police say 25 school sharks were found onboard a boat at Strahan last Friday. The allowable catch is five sharks per boat. The fishermen involved were also found to have used excess hooks and removed fins from the sharks before landing. Police say the fishermen will be charged with a range of state and commonwealth offences and face fines of more than $12,000.

Tasmania's school shark fishery has been in decline, prompting the introduction of bag and boat limits. Police have warned they have the power to seize fishing equipment, boats and the cars of people involved in illegal fishing.

Abalone fisherman cops fine

ABC May 20, 2010

A Tasmanian man has been fined more than $50,000 for breaching the state's abalone fishing rules. James Maxwell Mason, 58, was one of five people fishing for abalone from a boat called the Glen Eden in March 2001. Mason declared to authorities that over a two day period he had caught more than 1, 300 kilograms of abalone worth about $59,000.

Mason's friends Berkley Dilworth and Robert Knapek, who were also on board the boat, declared they had caught no abalone. But the court heard Mason paid the men to dive for him and had made a deal to declare the entire catch as his own. He pleaded guilty to one charge of conspiracy and has been ordered to pay the state of Tasmania more than $52,000.

Coastcare News

NRM Strategy Public Comments Sought

The deadline for submissions in response to the Draft Natural Resource Management Strategy for Southern Tasmania 2010-2015 has been extended. Interested organisations and individuals have a further month in which to make a submission. All submissions must be received by close of business Friday 30 July 2010. Enquiries related to the submission process or seeking a hard copy of the Draft Strategy should be directed to Laura Joss on 03 6221 6111 or via email to admin@nrmsouth.org.au. Enquiries regarding the content of the Draft Strategy should be directed to Kathleen Broderick via email to kbroderick@nrmsouth.org.au

Grants

Applications will open shortly for the 2010-11 Caring for our Country Community Action Grants. Small community groups are encouraged to apply for grants ranging from $5000-$20,000 to help take action to protect and revitalise the Australian landscape. The guidelines and application form will be available from Tuesday 6 July 2010 from www.nrm.gov.au or by calling 1800 552 008. Applications close 5pm Tuesday 31 August 2010.

General Information regarding Australian Government Grants can be found on the following websites:
Caring for our Country www.nrm.gov.au/funding/index.html
Department of Agriculture, Fisheries and Forestry www.daff.gov.au/about/grants_and_assistance
Department of Environment, Water, Heritage and the Arts
www.environment.gov.au/programs/index.html
Grantslink www.grantslink.gov.au

BIEN (Bruny Island Environmental Network)

Clean-up Day

The clean up weekend in May was very successful with over 150 bags collected (mostly rope ends). More importantly good connections were made with the sea food industry and we have agreed to work together to make the reduction of this marine debris at source a priority. We are planning a public forum with Tim Hunt from Tassal to identify community concerns and to hear what the fish farms are doing to reduce environmental impact.
Details will be published when confirmed.

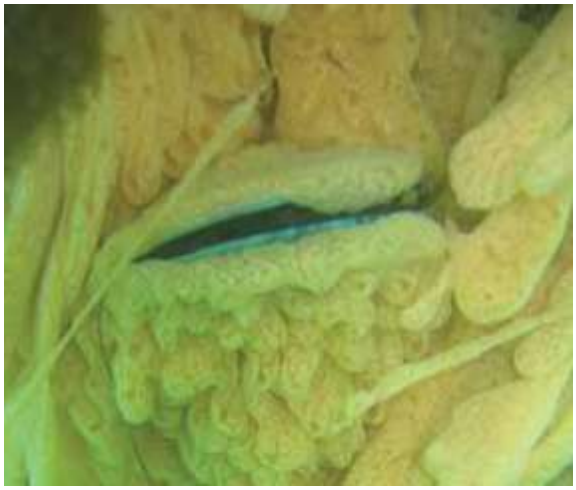
Climate Change Forum

About 20 people attended this forum on Saturday May 22nd. The day proved very productive and the decision was made to focus on four main areas for follow up action. These are community education, solar hotwater unit bulk purchase, transport options & carpooling and whole food cooperative. Group members are currently researching and planning activities in each of these areas. Keep watch for developing news and please contact us if you have a particular interest in these or any other local response action you would like to be involved in.

DPIPWE News

New Marine Pest – Colonial Tunicates

Colonial sea squirt



There has been a suspected detection of the nationally-listed marine pest Colonial sea squirt (*Didemnum vexillum*) at Two Fold Bay in New South Wales. It is currently believed that the colonial sea squirt is not present in Tasmanian waters, however if it is introduced it is likely to have significant impacts on the marine environment and industries.

The Department of Primary Industries, Parks Water and Environment (DPIPWE) is undertaking a range of measures to prevent this marine pest entering into Tasmanian waters, but we also need your help. As such, we ask all persons bringing vessels, fishing and diving equipment into Tasmania from NSW to pay particular attention to ensuring that all gear and equipment that has been in the water has been thoroughly cleaned and dried. If entering by air or by the Spirit of Tasmania, it is important to know that you are required to declare all vessels and fishing equipment for inspection by a Quarantine Officer.

How to identify them;

- A distinctive mustard or orange/yellow colour
- Often appears waxlike when hanging from artificial structures
- Prefers artificial structures such as wharf piles, jetties and mussel lines

Experts advise that the Colonial Sea Squirt is difficult to positively identify in the field. Anyone seeing something that looks like this species should make an accurate note of the location, with GPS if possible, and report the sighting to the **DPIPWE marine pest hotline: 0408 380 377**. DPIPWE will then obtain samples and have them formally identified by a taxonomic expert.

What to do

- Clean and antifoul boat hulls regularly
- Using freshwater, CLEAN, DRAIN and DRY vessels and equipment
- Using a mild detergent, disinfectant or soap, wash boats and gear away from shore where it does not drain back into the marine environment.

Information on Colonial sea squirt (*Didemnum vexillum*) and other marine pests

Ocean Planet News

Cocktail party

Environment Tasmania will be hosting a fabulous cocktail party with stunning art for auction in November this year to raise money for our valuable marine work. There is currently a working group beavering away on this project, but if you would like to get involved in any way, please let us know on marine@et.org.au

Ocean Planet on Facebook

We have a new page for Ocean Planet Tasmania! Now you can follow us on Facebook too.

We SaveD Ralph's Bay

The Tasmanian Planning Commission has officially opposed the building of a canal estate at Ralphs Bay Conservation Area and the Tasmanian Government has backed this decision. The Government has also suggested they will ban canal estates in all of Tasmania, which is also in line with coastal policy in NSW and Victoria. The Ralphs Bay Conservation Area was doubled in size the day after the proposed canal estate was officially denied. The perfect celebratory gift!

CONGRATULATIONS and THANKS to everyone who put in submissions, or spent time volunteering to spread the message and help SAVE RALPHS BAY! We can proudly say we have done our bit to protect this special area for the next generation.

Please consider contacting your local representatives to applaud the Ralphs Bay decision and support the proposed Tasmanian canal estate ban.

Sarah Island yields more of its secrets

Per NPWS website

Graffiti might be seen as a modern day urban scourge, but a recent archaeological excavation at Sarah Island has revealed that leaving one's tag on walls is an activity which hasn't lost its appeal through the centuries.

Bricks with graffiti – presumed to be convict names scratched into the limewashed surface - were among the fascinating items discovered by an international team of archaeologists that spent three weeks in late March and early April excavating two sites at the historic convict ruins at Sarah and nearby Grummet islands in Macquarie Harbour.

On Sarah Island, work focused on the jail, one of the island's more substantial ruins. The brick building consisted of a 16feet by 14 feet guard room and six 7 feet by 3 feet cells for solitiary confinement. TJ Lempriere, Commissariat Officer on the island, described the goal and

surrounding buildings in less than flattering terms: '*The remainder of the buildings in the row consisted of the bakehouse, the tan yard and the goal. The latter is a miserable, small place…'*. This 'miserable, small place' however has survived in a more intact condition than many other buildings, thanks to its 50 cm thick brick walls.

At the jail the team excavated two separate trenches, one in the guard room at the front of the building and across two of the solitary cells at the back of the building. "In the guard room, we were interested in finding out what the military officers were doing in this space or if they were using it at all. The historical records talk about it being used as a large cell, so it was holding five or six men before they were sentenced and being sent to Hobart for their crimes.

"What was interesting was that in the first convict era, all of the sketches of the buildings don't show any chimneys in the building but when we excavated down to we found the first cell had a hole punched through the wall and had a fireplace built into it. It appears that this happened after the convict settlement closed in 1833, when they came back in 1846 and modified the building. At that time most of the prisoners would have been 'pass holders' on their way out of the system, so they've changed the building to make it warmer and improve living conditions."

The team found a similar situation at the back of the jail where the solitary cells were. Originally, there were six solitary cells, but excavations revealed that a wall had been cut out between two of the cells, to make that space larger as well. They were also hoping to uncover relics from everyday life that would have fallen through the original pine floor boards but what they found instead was that brick floors had replaced the timber floors. It was on those limewashed bricks that the scratched names were found. Among thousands of artefacts recovered were from the dig were clay pipes, buttons, clasps from uniforms, rusty nails and small fragments of ceramics.

The tiny jail nearby Grummet Island once housed as many as 60 of the more troublesome prisoners. On Grummet, the archaeologists focused their attention on the location of a structure thought to have been a cookhouse, however their efforts were not nearly as fruitful as at the goal.

Two trenches were established and sandstone flagstones and a lot of burnt bone confirmed the use

of the building as a cookhouse, but apart from some clay pipes, there was nothing else across the site. The team could only surmise that either all of the building's materials were completely removed for re-use elsewhere, pilfered over time or washed away in bad weather – a possibility presented by historical documents that described waves crashing over the island in the fierce West Coast weather.

The artefacts recovered at the site have gone to the Tasmanian Museum and Art Gallery to be prepared for shipping to the University of Manchester where they will be painstakingly catalogued and analysed. Eventually they will come back to TMAG as part of its archaeological collection.

Maritime History News

Peta Knott heads North

For those of you who know her, Peta has taken up another career opportunity on the Big Island. Her job of Maritime Heritage Co-Ordinator at TMAG/TMM is vacant and we assume is being refilled.

Help needed Merseyside

It seems that the Mersey Maritime Museum in Devonport is struggling for young volunteers and has approached the local council to help with the provision of labour to run the museum. No shortage of enthusiasm or funds, just that the volunteer base is aging and needs some help. Why not drop by to have a look one day, especially if you might be interested in helping out.

History buffs bring ketch up to scratch

ABC May 7, 2010

The art of wooden shipbuilding is being revived in north-west Tasmania where the historic fishing ketch, Julie Burgess, is being restored. The 19-metre ketch is on the slips by Devonport's Mersey River and shipwrights have begun stripping the hull and replacing the rigging. Age-old techniques like steam bending and caulk sealing will be revived to preserve the boat's authenticity. Built from Tasmanian blue gum in 1936, Julie Burgess plied Bass Strait for five decades as a cray-fishing boat then had a make-over for Australia's bicentenary. Since then it has gathered barnacles in the Mersey River, until a $2 million Federal Government grant last year secured its future as a tourist drawcard.

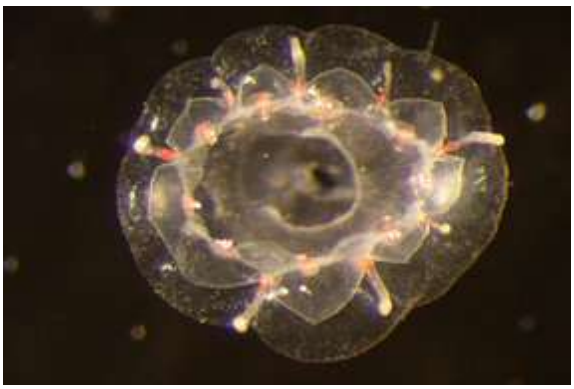
Last Chance for the "Belle Brandon"

What was once the oldest wooden vessel afloat in Australia has now been dragged ashore at Franklin. She has been allowed to sink at her wharf and after months of inaction MAST stepped in and demanded that she be cleared from the wharf. In the process of moving her she broke her back. Now she would have to be virtually pulled apart and rebuilt rather than restored and it seems unlikely that any local will have the cash to take it on. Here's hoping the Belle Brandon gets a second chance, but it looks most likely that she will burn or be broken up in situ. This is a bit of a blow after the failed attempt to save the "Enterprise" at Bicheno. What happens when the "Cartella" comes up for retirement. Is there a financial plan, or is she also doomed for the breakers? These developments might be investigated a bit further in later editions.

Stuff scientists like

Experts astounded by 'city of gonads' jellyfish

ABC May 6, 2010 9:36am AEST



Tasmanian scientists have discovered a new species of jellyfish in Hobart's River Derwent. The species is only a few millimetres wide and scientists say it looks like a flying saucer with a cluster of gonads, or sex organs, on top. Scientists discovered the jellyfish while surveying the waters outside the CSIRO in Hobart.

The new species has been named *Csiromedusa medeopolis*, meaning "jellyfish from CSIRO" and "city of gonads". Launceston jellyfish expert Lisa-Ann Gershwin says it is an astounding discovery. "It's absolutely different from every other jellyfish that's ever been known," Dr Gershwin said."So we not only put it into its own new species and its own new genus, but it's actually a brand new family." Dr Gershwin says the find is also tremendously exciting. "Quite possibly and quite humbly the greatest discovery of my career, ever. I mean I'll be lucky if I ever get a discovery even half as incredible again," she said. "You know any mum with a new bub is always excited, but when you have a whole family of new bubs I think it's triply exciting."

Check out Lisa-Ann's Hydrozoa website on http://www.medusozoa.com/hydrozoa.html

Dear Redmap

Question

Hi Redmap

I was diving up at Bicheno this weekend and came across a complete moult (carapace + tail) of an eastern rock lobster in Waubs Bay. It looked fairly new. I was just wondering if I should still report this on the Redmap site, or whether the sighting is only valid if the animal is actually alive!

Cheers, Emma

Answer

Hi Emma

That's a very good question! Yes, we would recommend to still log this sighting as it would be highly unlikely that a complete carapace would remain intact on a long journey down the coast from somewhere it was more common. We'll soon be adding the capacity for people to add captions to their photos and include other detail like this for the Redmap team, so stay tuned!

*Redmap is now on **Facebook**.*
Become a fan of our page at
http://www.facebook.com/pages/Redmaprangeextensiondatabasemappingproject/121764204502516?ref=ts

*If you have any questions about Redmap that you would like answered, comments or suggestions, please email **enquiries@redmap.org.au***

Recent Sightings

A **rock flathead** caught by Damien Vireaux on the east coast of Tasmania. This fish has been recorded previously in northern Tasmania, but never this far south – and this one might be one of the biggest caught yet (measured 84 cm!).

Frigate mackerel are found around the whole mainland but are more common in northern waters. Until last year, they had not been formally recorded in Tas since about 1980.

Critter Files

Swimming anemone (*Phlyctenactis tuberculosa)*

Habitat: moderately exposed and sheltered reef, macroalgae
Depth range: 0-35 m
Size: diameter to 150 mm
Diet: drifting food particles, small invertebrates and fish

The swimming anemone is the largest anemone commonly seen in southern Australian waters. Its body consists of numerous reddish brown vesicles striped with blue, and it also has many long orange tentacles visible only when feeding. The species can move rapidly either by crawling or drifting during the current. During the day this anemone looks like a collapsed bag of baked beans, but at night it moves to a high vantage point on kelp fronds and catches floating prey. An exceedingly terrifying and voracious predator if you're a zooplankton, otherwise rather harmless.

Photo © Emma Flukes

Serious Kids Stuff

By AMY

More on Flathead

While I was doing my squid project, my friend Ella was looking for information about flathead on the internet. We got an email from Peter Sellers asking a question about where Tiger flathead go to breed. He hasn't seen any baby ones when he goes fishing. We have asked Michael to help us look on the internet.

Like a lot of fish, flathead seem to have funny habits and no-one really knows for sure what they get up to in the ocean as its hard to study them under the water, especially deep water. The studies that are around aren't always about Tiger Flathead.

A different species, Dusky Flathead, is the most studied and scientists have said that ½ the fish population is ready to breed when the males are about 1 1/2 years old and the females 4 1/2 years old.

Some deepwater flathead species school in groups of males and females during breeding and it is possible that Tiger flathead might have some odd breeding behaviour as well which hasn't been seen. Some of the studies also say that some of the flathead species might be "protandrous sex reversers" which means that they can change from male to female when they are ready to breed, but the male and female numbers are out of balance.

People mostly think Tiger Flathead move inshore in Spring and Summer to lay and fertilise their eggs. The longer Summer days and warmer waters make them feel like breeding.

Flathead eating a goby

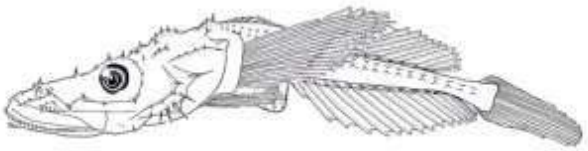
Flathead release eggs into the water that are spread around by the currents and tide. Flathead quickly change from eggs into little schools of baby fish larvae, in a few weeks probably. As they grow they start to look more like adult flathead and look for a sheltered spot. They will hide

among weed in shallow bays and the saltier parts of rivers near the ocean called estuaries. They are hard to see because of their camouflage colours and ambush any food that swims by.

As the baby fish grow bigger they gradually spread out. They can move reasonably long distances around bays and estuaries looking for food before moving out to sea again. Deep ocean flathead generally aren't seen again until they get caught in nets at about the 30cm size range, but this might be because they get trapped in the nets at that size and the juvenile ('teenager') flathead might have moved out to deep water when they were much smaller than 30cm.

You can help flathead to breed by only catching fish when they get to the legal size. Even then, these size limits are only a guess as to the best time to catch the young fish. We often don't know exactly when they breed. Often scientists have to wait until the flathead sizes start to get too small, then they ask the government to increase the size limit. If people are slow to agree to changes in the law, sometimes flathead numbers can 'crash' before the rules are fixed. This can make it very hard for quite a few years afterwards to get a catch of nice sized fish for the table as it can take a long time for the fish populations to increase again after overfishing.

What baby flathead look like - A deepsea flathead larvae, Aust Museum



Fun Stuff for Kids on Science Week.

During Science Week there are lots of fun things for kids on. Go to http://www.scienceweek.gov.au for details.

There are kids events like stuff on fossils, getting messy hands at Science for Families, stuff on space, poster contests, making robots, nature printing on T-Shirts, young zoologists at the Museum, maths puzzles, school science prizes.

My Compact Camera

Kelp at Fortescue by Saeed Rashid

Some of our favourites from your portfolio

Presenting Ren Lim, Part II

Diving Legends

JOHN (JOHNNO) EDWARD JOHNSTONE, MBE.

Reprinted by Phil from [Judith Kempens family history site]

Johnno Johnstone was a Deep Sea Diver of great renown. Some say the best ever, in Australia. His father died when John was 3 or 4 years old. He left school at 14 and worked as an office boy in a solicitors' office (which he hated) and was sacked after six weeks. He then worked as an office boy in the Accounts Dept of the Canadian Pacific Steamship Company. He was sacked from this job as well. Even though his mother was against it, he was destined to go to sea. He found a position in a ship repair yard and became a shipwright's apprentice, indentured for five years. Bill Russell was a diver on the Mersey River and trained him in the basics of diving.

John's mother died when he was 18 years of age. Late in 1910 he became a carpenters mate on the cargo steamer 'SS Cornwall' and emigrated to Australia. He arrived in Sydney in January 1911 aged 19 years. He went to Taree (had to walk all the way as he had missed his train) and worked in a shipbuilding yard at Coopernook, on the Manning River. There he was employed by the Baskerville Family. He stayed with them until he had finished his apprenticeship and then went to Taree and worked for Danny Sullivan Boat Builders. Here he met Stan Mitchell and a lifetime friendship was formed. He also met Flo (Stan Mitchell's' sister), and would have married her but for the outbreak of WW1.

In 1915 he returned to Liverpool and became Private Johnstone of the 17th Kings Liverpool Regiment or 1st Liverpool Lighthorse (in the horse brigade, grooming horses) and was stationed at Salisbury not far from Stonehenge. When volunteers were called for to train as divers he did so immediately. Discharged from the army to assist the war-effort as a shipwright at Portsmouth Shipyards, he became a Divers Assistant to Dick Leverett and in 1916 he was sent to Invergordon in the North East of Scotland to start a formal course in Deep Sea Diving. Invergordon was an important Naval Base where ships of the Grand Fleet came for refitting. It was also the home of The Diving School, which was situated, in the old battleship "H.M.S. Mars".

At the end of the three-month course he was presented with the following report. " TO WHOM IT MAY CONCERN. The bearer, J. Johnstone, has been with me for three months as a trainee diver. I regret to say that his prospects as a diver are not good." Signed R. BOWIE.
While training he was introduced to the American invention, an underwater gas blowtorch. He went on to master this device and became one of its most skilled operators. He worked off the Orkney Islands patching holes in torpedoed British ships. A condition of the German surrender

was that the German Navy delivered their ships to Invergordon Dockyards; they delivered them and scuttled the lot. So they all had to be raised again. Johnno was engaged in the Naval Salvage Section. He lived with the Wallace family. Here he met and married Edith Gill in July 1917. Phyllis, their first child, was born at Invergordon Scotland.

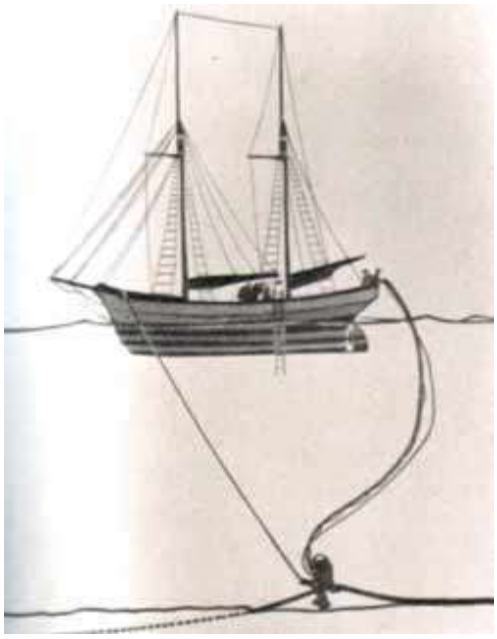
In late 1918 he decided to return to Australia with his family and they came on the "Port Lincoln" which sailed to Melbourne via Fremantle in July 1919. In Melbourne he and Edith and baby Phyllis, settled in at Williamstown next door to the Robbins family. Here the twins, EDITH and JOHN (Jack) were born in 1922. EDITH JOHNSTONE (nee GILL) died two weeks after the birth of the twins and is buried in Williamstown cemetery. Edith's best friend Edith Smith, became the carer for the children. John is listed as a Shipwright on the twins' birth certificate. When the twins were toddlers, Johnno married EDITH SMITH.

Johnno decided to become a freelance diver and would take on any work. His business card read "Specialist in Submarine Oxy-Hydrogen Cutting and Explosives at Any Depth".
In 1921 he worked for Lloyds of London salvaging the cargo of Silver from "SS Karitane" at Deal Island in Bass Strait. In 1922 he went back to the "Karitane". He recovered 454 tons of Blister Copper worth 50,000 pounds sterling.

He worked on the wall at Eildon Weir for the State Rivers Department of Victoria. During this job he cut girders at a depth of 122 ft, the greatest depth at which a blowtorch had been used at that time.

In 1932 the "SS Casino" sank with the loss of 10 lives, at Apollo Bay. As he had done a lot of repair work on this ship he was called to inspect the cause of the sinking and found that in a large swell the ship holed itself on its own anchor. Johnno removed the propeller which was made of brass. He used 28 specialised hacksaw blades to remove it. He donated the propeller to the Port Fairy Community and today it is part of a monument in Port Fairy to commemorate the lives lost.

In 1938 he was engaged by the French Government to demolish the wreck "Julette" at Thio 180 miles from Noumea. Using explosives and underwater cutting gear he removed the wreck within 12 months, He raised her cargo of 3,000 tons of nickel and cobalt ore.



Walking Bass Strait
In 1935 the Post Master Generals' Office laid the underwater telephone cable which ran from Melbourne to Tasmania. By 1939 it deteriorated due to the large swells on the sea floor. To find the damage Johnno was employed to walk along the cable under Bass Strait for some 27 miles at a depth of between 70 and 100 feet.

The walk started in September 1939. It was during this time that Johnno took his first underwater photographs. The first underwater photographs taken in Australia. He recorded every job on film after this.

Johnno and Bill with gold bars

In June 1940 the 14,000-ton passenger liner "Niagara" struck a German mine near the Hen and Chickens Islands and Johnson Point, 5 km from Waipu on the North Island of New Zealand. She sank. The 'Niagara' had been on a regular run between Sydney, Auckland and North America when she struck the mine. No lives (148 passengers and 203 crew) were lost but the gold from South Africa, in transit to America, to pay for the British War effort, was lost. In 1940/41 Johnno was the Chief Diver responsible for raising the "Niagara" Gold. He and brother William (Bill), on loan from the Royal Australian Navy, raised 8 1/2 tons of gold bars worth 2,500,000 pounds sterling. The "Claymore" barge set out from Whangarei on the 9 December 1940, to search for the wreck. It was during this period that Johnno made a world diving record when in the observation bell, he went down to 528 ft. The "Niagara" was located on 2 February 1941.

Regular diving suits could not be used as the depth of the ship, some 50 fathoms, was too great. A totally enclosed chamber was designed by David Isaacs, and built at the Thompson Foundry in Castlemaine Victoria. Today the "Bell" is on show in the Castlemaine Museum. I have copies of the original blueprints for the Bell. Johnno and Bill made a total of 316 descents in the Bell on the "Niagara".

War Work

He travelled to Darwin in the Northern Territory and was working on American ships in Darwin Harbour on 19th February 1942 when Darwin was bombed by the Japanese. He was pulled out of the water and hid under a wharf and watched the bombs dropping.

In May 1942 Captain Williams, Captain Herd and Johnno established the "Commonwealth Salvage Board". Johnno was the Chief Diver and Shipwright Surveyor. They worked in conjunction with the Australian Navy working on wrecks in Darwin and Melville Island. In April 1942 he travelled to the USA to obtain salvage experience and to see the latest diving techniques and also to purchase gear for the Commonwealth Government. During this visit he dived and worked on the "Normandie" a 79,000 ton ship that rolled over at the 48th Street Pier in New York. He also travelled to England, to study diving at the Siebe Gorman School for frogmen.

In 1943/4 Johnno assisted in raising the two Japanese Mini Submarines that had blown themselves up in Sydney Harbour. These submarines are on show at the Australian War Memorial in Canberra.

In 1944 Johnno was joined in New Guinea at Milne Bay by his son Jack and nephew Peter (Donald) The latter were both divers and just a few months out of diving school in Port Melbourne. Just after their arrival Johnno was sent to Townsville Hospital as he had contracted Malaria. He returned to Oro Bay to refloat the "Bantam" a gunship that had been bombed. There were many delays and work was stopped frequently by air raids. The ship had some 45 holes in the hull which to be sealed. The job was completed and she was towed to Milne Bay.

Johnno developed ear problems at this time. He had 1-week home with his family.

The next major job was in November 1944 when the "Santhia", an 8,000-ton troopship, caught fire and sank at the No 3 Garden Reach Jetty in Calcutta. Here all the experience gained on the "Normandie" came into use. He worked here for 7 months and suffered from Dysentery. He returned to Australia 12 months after leaving for India.

In January 1947 the liner "Wagannella" stranded on Barrotts Reef at the entrance to Wellington Harbour, New Zealand. Johnno arrived in Wellington on 25 January 1947 and successfully refloated the ship by August the same year. He also refloated the "Reynella" that ran aground 100 miles south east of Samarai. It proved to be a difficult and dangerous job and he sent for Jack to assist with the refloat.

After WW2 he salvaged Japanese wrecks around New Guinea and the Solomon Islands. He worked for a Japanese company during this time.

Johnno's One atmosphere ironman suit
In 1953 he worked once again on the "Niagara" and assisted a British Salvage Firm to retrieve another 30 bars of gold. His home-made one atmosphere suit - The Iron Man Suit - was used at this time. During the 1950's and 1960's he held a series of Silent Film nights showing the feat of raising the gold. He travelled to many venues.

The last dive
In 1960 he and son Jack went to Christmas Island and replaced the supports of the wharf. He made his last job and his last dive when he was 73 years of age.

He was a chain smoker of both cigarettes and cigars and was never without one in his mouth. When he retired and they moved to Frankston on the outskirts of Melbourne. He restored and made furniture in his retirement and did fine French Polishing work and was a perfectionist in every work that he did. He loved horseracing and he and his brother Bill went to the races every Saturday. They would go by train and meet up at the racecourse. One race day Bill had Lady Luck against him and lost a fair deal of money. Despondent he walked out the gates with this family and kicked at a roll of paper lying on the ground. It turned out to be a wad of money dropped by some unfortunate gambler and all the Johnstone Clan went out to dinner that night.

Johnno was appointed a Member of the Civil Division of the Most Excellent Order of the British Empire M.B.E. on 22 May 1968.

He died at East Melbourne Retirement Home on 27 October 1976 aged 84 and is buried at Springvale Crematorium.

Fire up that Feedback

Last edition was a great one for feedback with climate change and the Crayfish Review sparking the greatest commentary. Thanks, keep it coming.

Scientists were particularly concerned that a presentation of the climate change sceptic position was going to undermine the future of the planet, possibly because of my inept article explaining the climate change science. I will still be publishing an outline on the climate change sceptic position, but will add another article explaining the climate change debate VERY simply. For the rest of it you will just have to wait and see where I'm going with it, there is a point if you have the patience.

In between issues, I also passed on a message that people supporting the pro-change Crayfish Review position hadn't been putting in submissions, and my apparent _acquiescence' in the changes attracted some ire. I will part-reproduce a lengthy but well-thought out critique from keen recreational fisherman John Cocker, which Caleb can take apart at his leisure in a future edition.

This is perhaps where we are heading with the review, with the _pro-environment' people strangely sitting closer to the commercial fishermen than usual in wanting change to the recreational take, with the die-hard recreational fishing _tragics' wanting to hold the line. There are still persistent concerns out there about the meaningfulness of the commercial cut. There is scepticism that some _loophole' in the promised commercial reduction (like hold-over of quota) will end up allowing commercials to evade real and biting reductions of a similar kind to those imposed on recreationals.

The "pro-change" view,

I think Christian Bell sums up one end of this view quite well,

> "Recently recreational fishermen have criticised commercial fishers for the current state of the Tasmanian rock lobster fishery and accuse the industry of being entirely to blame. Consistently the tone of the material circulated rejects the notion that recreational fishers share any responsibility for the decline of rock lobster in Tasmania. Their arguments are entirely selfish and unscientific and show clearly that they are unwilling to take their fair share of responsibility for the decline of this species.
>
> In 1995, there were 8500 licensed recreational rock lobster fishermen in Tasmania, in 2010 there are 21,500 licensed recreational rock lobster fishers. The number of recreational fishers has more than doubled in the last fifteen years and so has the killing power of modern fishing aids (fish plotters, GPS, dry suits and in general larger boats) which mean that they can access the targeted species far more easily than recreational fishers of the past. In many parts of the east coast of Tasmania mature rock lobsters are rarely sighted.
>
> The Tasmanian Government needs to greatly reduce the take of rock lobster if the future of this species is to be secured. This may include moratoriums on fishing rock lobster on parts of the coastline where this keystone species has a very shaky hold.
> Better yet would be the creation of some permanent conservation areas for the protection of this species and other marine wildlife through the establishment of marine reserves.
> Tasmania's current management approach is entirely inadequate."

The oppositional, or "not these changes thanks" view

Michael,

> Your carte blanche support for the proposals is disappointing. The proposals are one sided and DO NOT address the key issue of biomass protection or increase. Commercial fishers will benefit from the availability to catch those rock lobster that recreational fishers would have caught. Recreational fishers will have their catch rates reduced to less than the 1.9 per day of effort. Compressed air (including scuba) will be the first to go, followed by potters, meeting the stated aims of the TRLFA. The fishery will then be at the behest of the commercial sector. Your carte blanche support of a permanent constraint to recreational catches is difficult to understand.

John Cocker

[John then forwarded a very detailed rebuttal which regrettably, I will have to try to summarise so that you will get the gist of it in a quick read. The complete draft of John's comments have been submitted to the review]

Overarching Items:-

1. Statewide catch is not being achieved – total catch exceeds sustainable levels and needs be reduced. Commercial catch per unit of effort has declined for three consecutive commercial seasons. Recreational catch has also fallen on a per licence basis – weather conditions can significantly constrain this sector.
2. Commercial catch has fallen over the last three years to the lowest level since 1994/1995
3. Total allowable commercial catch (TACC) reductions for 2009/2010 3.5% and 2010/2011 10% (effective 13.1% over the two seasons). Future movements subject to consideration.
4. "A (sic recreational) bag limit reduction from 5 to 2 approaches the targeted level of catch reduction." Estimated reduction 20%. 60% for some.
5. Total Allowable Recreational Catch (TARC) has not ever been reached. Biomass has benefited cumulatively as a consequence.
6. Recreational sector, is substantially physically restricted to east coast activity, north coast being non productive, west coast and south coasts being exposed and substantially less safe waters for recreational fishers. This is borne out by stated catch rates in respective areas – if access safety was equal, then catch rates would be more evenly distributed.
7. Commercial gross value of product (GVP) 2007/2008 $66M (TAFI Rock Lobster Fishery Assessment: 2008/09). Return of $45 per kg.
8. Recreational **expenditure** estimated at $24.1M (TAFI - S. Frijlink & J.M. Lyle March 2010). Before any consideration of either pre tax income or GST, a return of $178 per kg.9
9. Catches in zones one to four (east coast zones) for 2008 2009 (TAFI - Lyle & Tracey January 2010) – estimated recreational 78.9 tonne, commercial c 460.9 tonne.
10. Estimated returns for zones one to four – Recreational $14.0M, Commercial $20.3M
11. A 20% reduction of recreational catch by 21.4 tonnes to 85.62 tonne (to 50.4% of TARC) would reduce recreational expenditure by some $3.8M
12. The GVP from the commercial sector for the same 21.4 tones would be around $0.963M.

[Extract on comments]

> Until TARC is approached, change to recreational fishery is not justifiable without meaningful changes in the commercial sector.
>
> Uncaught TARC should be available to recreational fishers for future use. As in excess of 90% of rock lobster are caught by the commercial sector, the committed (?) 13.10% reduction by that sector is pathetic and evidences a lack of intent to address the problems facing the fishery. Failure to recognise overfishing by this sector is not a reason to inflict punitive measures on others.

To reduce the effort on zones one through four, commercial fishing should be prohibited from waters less than 30 metres (creating a band of low effort between 20 and 30 metres), reduced TACC from these zones by at least 30% on mean catch in each of those zones over the past two seasons.

No additional limitations to be applied to recreational fishers henceforth without fully compatible and equally binding limitations to apply to commercial fishers.

Seasonal limits could be managed with the introduction of a tag system.

Support maximum size limit applicable to both commercial and recreational fishers between Eddystone Point and Whale Head at least.

Having one or 10 crayfish does not change the inherent issue of disposal of legally caught lobster for profit. Apprehension and proof are required. Creation of artificial reasons to replace adequate policing seems a guise for justification of a further constraint on recreational fishers.

There is a concerted bias expressed against divers versus other recreational fishers – that is only productive if the considered intent is to "divide and conquer" recreational participation over time.

To the reader – please forgive my scepticism. Having seen shaftings of differing magnitudes in the past, I fervently hold to my right to paranoia.
John Cocker

The Proposed Mako Fishing Ban from Tarfish

A quick update on the above issue we have been involved with and monitoring. I have attached a copy of Senator Richard Colbeck's media release on amended legislation which was passed last night and removes the prohibition on the recreational take of Mako and Porbeagle Sharks. Whilst this issue will not impact on the vast majority of recreational fishers in Tasmania, TARFish's major concerns were with the process by which the ban came about in the first place.

Mark Nikolai

Tasmanian Association for Recreational Fishing Inc

[Extract only - readers be advised this comes from a political source. The Liberals don't get much of a run normally, so we'll see what they are up to. Mark - Perhaps you can send over the Labor response too next time]

"Recreational fishers, particularly game fishers, charter boat operators and regional businesses reliant on their trade will breathe a sigh of relief with the passing of this legislation," Senator Colbeck said.

In December, recreational fishers were made aware of a plan by Minister Garrett to ban the fishing of popular game fish, the mako and porbeagle sharks, under the Environment Protection and Biodiversity Conservation Act from 29 January.

This came about due to international action on threatened stocks particularly in the Mediterranean and North Atlantic Ocean, but there was no scientific evidence or data suggesting low stocks in or around Australian waters.

A massive effort by thousands of recreational fishers, in conjunction with the Federal Coalition, saw a grassroots campaign eventually force a backdown by Minister Garrett in January.

"This whole saga is symbolic of Labor's attitude to the recreational fishing sector. Over the past two and half years, Labor has:

- stripped the national peak body, Recfish, of all of its funding;
- threatened massive new no-take marine parks around Australia;
- allowed fringe environmental groups to unilaterally influence policy; and
- the Fisheries Minister makes the fishing sector only his third or even fourth priority in his list of four portfolios.

"Unlike Labor, the recreational fishing sector and its many millions of participants can be assured they will be listened to by a Coalition Government.

"We will not place bans on fishing without very strong reason and, even then, not before genuine consultation.

"The Coalition will give recreational fishing the respect and recognition it fully deserves as a contributor to the environment, to healthy lifestyles and to the nation's economy."

Pest Eradication (no, not the seals)

Two major conservation projects are underway; the eradication of cats from Tasman Island, and further south on Macquarie Island rabbits, ship rats and mice are the targets of an eradication effort.

Tasman Island Pest Eradication Project

You may not realise it, but Tasman Island is one of Australia's largest seabird breeding sites. Feral cats are feeding almost exclusively on fairy prions and short-tailed shearwaters, killing an estimated 50,000 each year, along with occasional forest birds, lizards and insects. May 2010,

an aerial and ground baiting program began, followed immediately by trapping, hunting and monitoring by remote cameras. Their objective was simple: remove every last individual cat.

Following the aerial baiting, rotating teams of up to six people were on the island. Traps were set along pathways Cat numbers plummeted very rapidly following the intensive effort on the 120 hectare island and no cats, signs of cats or fresh bird kills were observed only 12 days after the baiting effort. On 28 May, DPIPWE wildlife biologist Dr Sue Robinson and her two cat detecting dogs, terrier Clay and labrador Shark travelled to the island. After five days, only one dead cat was located, however an eye shine from a cat was later detected by spot lighting. Hunting teams will now return to the island in an attempt to locate and remove the last cat. Experience elsewhere has shown the last few cats can be extremely difficult and time consuming to locate and remove from islands. Monitoring with remote cameras will remain in place for approximately 12 months to confirm that eradication has been achieved.

Macquarie Island Pest Eradication Project

In the past few years the World Heritage listed island has been ravaged by introduced ship rats, house mice and rabbits. The effects of up to 100,000 rabbits grazing on the once lush vegetation have been dramatic, with an estimated 90 per cent of the island vegetation showing evidence of removal, including from landslides. The rodents are also having a significant impact on the island - particularly ship rats which prey on chicks and eggs of burrow-nesting petrels. They are also having a significant impact on vegetation and invertebrate populations. The $24.7 million project, required a significant amount of detailed planning. There were 11 rabbitdetecting dogs to train, 305 tonnes of bait to be sourced, contracts for shipping and helicopters to be secured, and staff to recruit and train. It will be painstaking work, up to five years before the island is declared to be free of rabbits.

Editor's Rant of the Month

The Great Climate Change Non-Debate and the Psychology of Denial

[We hope readers recognise that the information presented here is simply the arguments put forward by the sceptics and does not necessarily represent the views of any of the editor(s). Climate change is likely a sticky issue with some of you, and we'd rather keep out of that!]

What the sceptics say

1. Global warming is not occurring

- Timothy F. Ball, former Professor of Geography, University of Winnipeg:
  (a) The world's climate] warmed from 1680 up to 1940, but since 1940 it's been cooling down. The evidence for warming is because of distorted records.
  (b) There's been warming, no question. The dispute is, what is the cause. And of course the argument that human CO_2 being added to the atmosphere is the cause just simply doesn't hold up
  (c) Temperatures declined from 1940 to 1980 and in the early 1970's global cooling became the consensus. ... By the 1990's temperatures appeared to have reversed and Global Warming became the consensus. It appears I'll witness another cycle before retiring, as the major mechanisms and the global temperature trends now indicate a cooling." (Feb. 5, 2007)

- Robert M. Carter, geologist, James Cook University: "the accepted global average temperature statistics show that no ground-based warming has occurred since 1998 ... there is every doubt whether any global warming at all is occurring at the moment, let alone human-caused warming."

- Vincent R. Gray, coal chemist, "The two main 'scientific' claims of the IPCC are the claim that 'the globe is warming' and 'Increases in carbon dioxide emissions are responsible'. Evidence for both of these claims is fatally flawed."

2. Accuracy of IPCC climate projections is questionable

Individuals in this section conclude that it is not possible to project global climate accurately enough to justify the ranges projected for temperature and sea-level rise over the next century. They do not conclude specifically that the current IPCC projections are either too high or too low, but that the projections are likely to be inaccurate due to inadequacies of current global climate modeling.

- Richard Lindzen, Alfred P. Sloan Professor of Atmospheric Science at the Massachusetts Institute of Technology and member of the National Academy of Sciences: "We are quite confident (1) that global mean temperature is about 0.5 °C higher than it was a century ago; (2) that atmospheric levels of CO_2 have risen over the past two centuries; and (3) that CO_2 is a greenhouse gas whose increase is likely to warm the earth (one of many, the most

important being water vapor and clouds). But – and I cannot stress this enough – we are not in a position to confidently attribute past climate change to CO_2 or to forecast what the climate will be in the future.[T]here has been no question whatsoever that CO_2 is an infrared absorber (i.e., a greenhouse gas – albeit a minor one), and its increase should theoretically contribute to warming. Indeed, if all else were kept equal, the increase in CO_2 should have led to somewhat more warming than has been observed."

- Garth Paltridge, Visiting Fellow ANU and retired Chief Research Scientist, CSIRO Division of Atmospheric Research and retired Director of the Institute of the Antarctic Cooperative Research Centre. "There are good and straightforward scientific reasons to believe that the burning of fossil fuel and consequent increase in atmospheric carbon dioxide will lead to an increase in the average temperature of the world above that which would otherwise be the case. Whether the increase will be large enough to be noticeable is still an unanswered question."
- Hendrik Tennekes, retired Director of Research, Royal Netherlands Meteorological Institute: "The blind adherence to the harebrained idea that climate models can generate 'realistic' simulations of climate is the principal reason why I remain a climate skeptic. From my background in turbulence I look forward with grim anticipation to the day that climate models will run with a horizontal resolution of less than a kilometer. The horrible predictability problems of turbulent flows then will descend on climate science with a vengeance."

3. Global warming is primarily caused by natural processes

Individuals in this section conclude that the observed warming is more likely attributable to natural causes than to human activities.

- Chris de Freitas, Associate Professor, School of Geography, Geology and Environmental Science, University of Auckland: "There is evidence of global warming. ... But warming does not confirm that carbon dioxide is causing it. Climate is always warming or cooling. There are natural variability theories of warming. To support the argument that carbon dioxide is causing it, the evidence would have to distinguish between human-caused and natural warming. This has not been done."[23]
- William Kininmonth, meteorologist, former Australian delegate to World Meteorological Organization Commission for Climatology: "There has been a real climate change over the late nineteenth and twentieth centuries that can be attributed to natural phenomena. Natural variability of the climate system has been underestimated by IPCC and has, to now, dominated human influences."[30]
- George Kukla, retired Professor of Climatology at Columbia University and Lamont-Doherty Earth Observatory, said in an interview: "What I think is this: Man is responsible for a PART of global warming. MOST of it is still natural."[31]
- Willie Soon, astrophysicist, Harvard-Smithsonian Center for Astrophysics: "[T]here's increasingly strong evidence that previous research conclusions, including those of the United Nations and the United States government concerning 20th century warming, may have been biased by underestimation of natural climate variations. The bottom line is that if

these variations are indeed proven true, then, yes, natural climate fluctuations could be a dominant factor in the recent warming. In other words, natural factors could be more important than previously assumed."[45]

4. Cause of global warming is unknown

Scientists in this section conclude it is too early to ascribe any principal cause to the observed rising temperatures, man-made or natural.

- Claude Allègre, geochemist, Institute of Geophysics (Paris): "The increase in the CO_2 content of the atmosphere is an observed fact and mankind is most certainly responsible. In the long term, this increase will without doubt become harmful, but its exact role in the climate is less clear. Various parameters appear more important than CO_2. Consider the water cycle and formation of various types of clouds, and the complex effects of industrial or agricultural dust. Or fluctuations of the intensity of the solar radiation on annual and century scale, which seem better correlated with heating effects than the variations of CO_2 content."[51]
- David Deming, geology professor at the University of Oklahoma: "The amount of climatic warming that has taken place in the past 150 years is poorly constrained, and its cause – human or natural – is unknown. There is no sound scientific basis for predicting future climate change with any degree of certainty. If the climate does warm, it is likely to be beneficial to humanity rather than harmful. In my opinion, it would be foolish to establish national energy policy on the basis of misinformation and irrational hysteria."[55]

5. Global warming will not be significantly negative

Scientists in this section conclude that projected rising temperatures will be of little impact or a net positive for human society and/or the Earth's environment.

- Craig D. Idso, faculty researcher, Office of Climatology, Arizona State University and founder of the Center for the Study of Carbon Dioxide and Global Change: "the rising CO_2 content of the air should boost global plant productivity dramatically, enabling humanity to increase food, fiber and timber production and thereby continue to feed, clothe, and provide shelter for their still-increasing numbers ... this atmospheric CO_2-derived blessing is as sure as death and taxes." (May 2007)[58]
- Sherwood Idso, former research physicist, USDA Water Conservation Laboratory, and adjunct professor, Arizona State University: "[W]arming has been shown to positively impact human health, while atmospheric CO_2 enrichment has been shown to enhance the health-promoting properties of the food we eat, as well as stimulate the production of more of it. ... [W]e have nothing to fear from increasing concentrations of atmospheric CO_2 and global warming." (2003)[59]
- Patrick Michaels, Senior Fellow at the Cato Institute and retired research professor of environmental science at the University of Virginia: "scientists know quite precisely how much the planet will warm in the foreseeable future, a modest three-quarters of a degree

> (Celsius), plus or minus a mere quarter-degree ... a modest warming is a likely benefit... human warming will be strongest and most obvious in very cold and dry air, such as in Siberia and northwestern North America in the dead of winter." (October 16, 2003)[60]

Well I'm through all this and notice that it hasn't helped much. I don't have the necessary tools to really thread through the mountains of data myself. I have to rely on one opinion or the other. I did notice a common theme amongst the sceptics. Generally, they are retired, usually not in mainstream climatological areas of study, seem uncomfortably close to the mining industry, or look a bit like the 'reserve team' coming from some pretty low-brow sounding institutions. The IPCC has one big advantage, it gets a lot of mainstream support from a wide variety of big hitters in science. As for argument 5, well at least we get some nice holiday weather even if biodiversity and food security on the planet is totally undermined.

[Next month I'm going to more away from science and into cyberspace where by far the greatest volume of chat can be found. Like all the cyber-sceptics, I'm also going to ignore climatology and go into the politics and psychology of the noise around climate change]

And now for a completely unrelated image that may reflect how you feel after reading that jumble. I expect it has left many of you feeling pretty incensed. Justifiably. - Emma

The 5th annual Tasmanian Combined Clubs weekend was successfully held over the Queens Birthday weekend, 12th-14th June at Bicheno, Tasmania. 90 divers from 8 clubs took part in the weekend which saw warm weather, calm seas and spectacular diving.

This year saw two new introductions to the event. The first was the 'Synchronised Swimming' event with the theme of "The World Cup". The TUDC was the only successful entry but was an absolute corker – as a matter of fact it scored 32 out of 30 by our guest judges! Have a look http://www.youtube.com/watch?v=zsrf0B1VUWk. The second new addition to the event was gear trials with Scubapro. Scubapro had a huge selection of gear to try for free and every time you took some gear you went into a draw for a new Galileo Luna Computer. Phil White (LSC) was the lucky winner of this computer. Old favourite events such as the Scuba Olympics, Spud Hunt, Gnome Hunt and Quiz night were also a huge success. This year, the Tasmanian University Dive Club deservedly dominated the event and took home the coveted Tugboat as well as two aluminium tanks kindly donated by Aqua Scuba. The bucket award went to the TDA Crabs who were only able to field a few numbers this year but have a year to plot their revenge. Also hiding in the wings were Sea Green Dive, a new group who are intending to take next year's event by storm. The final results were:

- Tas Uni Dive Club 164
- Tas Scuba Diving Club 110
- Tas Sub Aqua Club 90
- Ocean Divers Plus 87
- Leven Scuba Club 82
- TDA Crabs 40
- Sea Green Dive 28

Presentations this year were varied and ranged from body identification and recovery of a World War 2 bomber crash in Papua New Guinea to gear maintenance, a RedMap overview, baseline marine life surveys information and of course a wonderful underwater slide show by John Smith. The photo competition was the biggest ever with 6 categories this year. The main 4 categories were lucky enough to have three prizes each due to our generous supporters this year. The standout performer this year was Emma Flukes from TUDC who took out 6 prizes across most of the fields. The amazing thing is that Emma shoots with a compact to boot!

There were 106 entries this year judged by our resident photo pro Jon Bryan who once again offered constructive criticism to help us all improve our photos. Jon's first comment was that he was blown away by the increase in quality over the last few years which is great. Rumour has it that next year the competition will be even bigger so watch this space.....
The awesome raffle was the crowning piece of the event with a huge prize pool thanks to our generous supporters. The Prize winners were: Scubapro Everdry 4 Drysuit (Scubapro)– Jen Porteous (TSAC), Oceanic Computer (Go Dive Launceston) – Kate Rayment (TUDC), OZTEK'11 Gold Pass (OZTEK'11) – Gail Friswell (TSDC), Anchor Wetsuits Semi Dry (Anchor Wetsuits) – Phil Jocham (OCDC), Stormy Yokes (Stormy) - Mick Greenwood (ODP) and One of Phil's Kids (LSC). A Big Thanks.....Sponsors are the lifeblood for this event and we say a big thank you for your generosity in the past and hopefully in the future as we close off this year's event – without you the event would be only a fraction of what it is today. To everyone who took part we ask that you support your local supplier so that they can continue to sponsor us.

Thanks to all who helped run and organise the event and thanks also to those of you who attended.

For those that couldn't make it or were not sure, you'll only be one year older when you do :)
See you all next year for a bigger and better Tasmanian Combined Clubs Weekend
Safe Diving
TCCW'10 Organising Committee

Best Macro from over the last 12 months

1st Emma Flukes

2nd Emma Flukes

3rd Eric Filisch

Best Wide Angle from the last 12 months

1st James Parkinson

2nd John Keane

3rd Emma Flukes

Best Macro from the weekend

1st James Parkinson

2nd Emma Flukes

3rd Justin Vogelear

Best Wide Angle from the weekend

1st David Mitchell

2nd Mick Greenwood

3rd Emma Flukes

Biodiversity Events

A Year of Wonder in the Island Arc

Ends: 21st December, 2010 9:00 am

Venue: Tasmanian Museum and Art Gallery

Tasmania, with its living cargo of plants and animals, has been a separate island for 12,000 years. The wide variety of landscapes and habitats has been protected from some of the effects of climate change, human impact and introduced species that have caused extinctions in mainland Australia. Through this program of public lectures, curatorial talks, sessions in the Zoology Gallery and web-based outreach, you will discover Tasmania's ancient origins, unique biodiversity, unusually high numbers of endemic animals and plant species that are present here.

Choose one or more of the following events.

An Island Arc: the Unique Animals and Plants of Tasmania

Biodiversity trail

Intergenerational Biodiversity Discovery Sessions – Holiday program

Video podcast of the Biodiversity Scientists at work

Public talk(s)

http://www.biodiversity2010.org.au/2010/04/a-year-of-wonder-in-the-island-arc/

West Coast Adventures – Part I

Hell's Gates from seaward

I have long been intrigued by the history and beauty of "Hells' Gates". At last I got a chance to get back and have a good look around. The base for this exploration was to be Macquarie Heads, or as it is not so romantically known "Hell's Gates", the only opening from Macquarie Harbour to the sea.

We camped at Macquarie Heads where the West Coast Council maintain a camping ground on what has recently become National Parks and Wildlife land. Only the tip of the peninsula is maintained in this way, the rest being a Forestry Tasmania softwood plantation.

The caretaker is a proud West Coaster with independent and firm ideas about things, including the parks service's bureaucratic ways. This of course misses all their useful measures, like attempts to control the rampant erosion that has been eating away at the foreshore. He has the usual standard of dental care you get in an isolated area with poor access to fresh food. He is proud of his park, which he hacked out of "rubbishy bush" and weeds. He cleared a mountain of litter that had accumulated around the area and generally tidied it up. The pit toilets are typical of the NPWS standard of 20 years ago, but its cheap and tidy. The caretaker also takes an interest in the surrounding area and recently picked up 3 ute loads of rubbish off the beach in just a couple of days. Most of it floated in on the tide rather than being caused by the locals.

We set up camp in regrowth coastal eucalypt forest surrounded by noisy groups of Yellow-Tailed Black Cockatoos, New Holland Honeyeaters and Blue Wrens. As the light faded we headed 1 km down the road to walk on Ocean Beach and admire the brilliant sunset.

Hell's Gates

"Hell's Gates" was named by the convicts who had to pass through the Heads on their way to the dreaded secondary punishment prison at Sarah Island. The name stuck because every sailor since then has to draw a deep breath before threading through the pounding surf to find a 30 metre wide tide-swept gap between two rocky landmarks. In the early days there was a sandbar at the entrance only a few feet deep to add to the excitement. Surf would be breaking on the bar in heavy weather.

The first European visitor was the prominent Hobart whaling captain, James Kelly, who at the age of 24 entered the bar in a whaleboat during his 1815 circumnavigation of Tasmania. He only just found the entrance which was obscured by smoke from a bushfire lit by the local Aboriginal people. He feared being attacked by their spears as he entered the narrow gap. Instead the local people largely kept their distance and he explored the bay and shot dozens of black swans for food. He reported stands of Huon Pine in the Eastern reaches of the harbour, then much valued for shipbuilding.

Surprisingly the heads were negotiated regularly during this period by Government vessels without mishap, perhaps because they were not working to a schedule and could wait out adverse weather. The government had facilities at the Heads and used the convict labour to maintain a navigation beacon on the entrance. To feed these men they cleared nearby land and planted a convict garden which is still marked on some maps. This convict garden has long since been overgrown and is now used for shack sites.

The most prominent structures at the Heads are the navigation aids and harbour works created during the mining era and they were to be the subject of tomorrows journey.

Bonnet Island

The Lights

We launched at the new deep ramp near the camp ground and threaded our way through sand shoals towards the heads. Alison is fair weather sailor, so the small standing waves and whirlpools caused by the tide rushing through the narrow opening caused some excitement. We passed by Bonnet Island which is now the subject of nightly penguin and birdwatching tours from Strahan. The lighthouse jetty has been rebuilt so small groups can watch the Little Penguins and Muttonbirds come ashore. Twice a day the massive Gordon River charter cruisers roar through the opening to give tourists a 2 minute look at the amazing coastal scenery of the Heads.

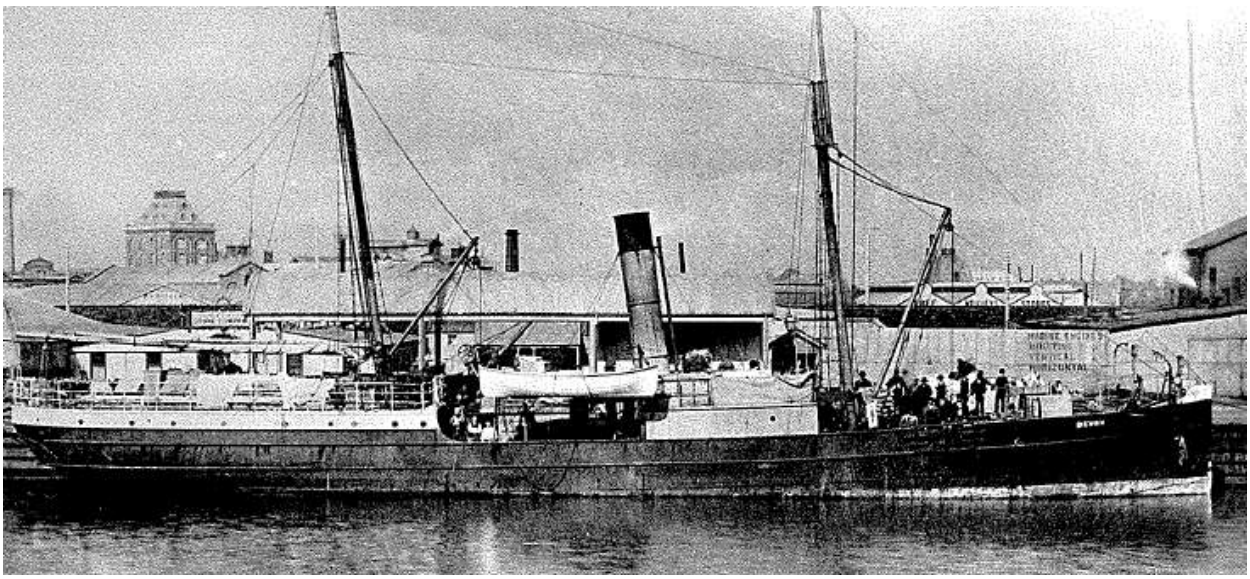
Going through the heads we also admired the spectacular scenery before returning to the old jetty at Macquarie Heads. Formerly the main jetty for the lighthouse settlement it is now used by a few holiday makers who have bought the remaining old buildings for shacks. The land under these old homes is now national parks land, so there is a tussle on as to how long they will be allowed to continue to use the area. When we walk above the settlement we can see both sides of the argument. The shack owners have protected the old buildings, but also left behind mountains of rubbish. They haven't been able to stem the regular firing of the undergrowth by vandals and unnecessary clearing that has stunted the nearby vegetation. Going up to the headland where a semaphore station once stood, we can get a fantastic view of the treacherous Hells Gates and its amazing harbour works.

Gateway to Riches

In the 1880s an amazing reserve of copper, the largest deposit in the world at that time, was found at Mt Lyell. Shortly after, rich silver ores were found at Zeehan. At the time Tasmania's economy was stagnating and the population in decline. This vast reserve of minerals gave hope that Tasmania could be a land of untold riches rather than a pastoral backwater. Getting to these riches was impossible by land, thanks to the rugged and impassable West Coast Ranges. At that time the West Coast was a total wilderness with absolutely no infrastructure for sea or rail transport. Massive plans were hatched for new harbours, towns, railways and ore processing plants. Nearly all of the materials needed for these developments had to come in by sea through this 30 metre wide hellish gap.

Attracted by huge shipping rates, a few small steamers of less than 500 tons tried to run a regular service. From accounts it seems they waited for the weather for as long as their freight contracts would allow before charging the sandbar at high tide and bumping over. A disaster was only a matter of time.

The wreck of the "Devon"

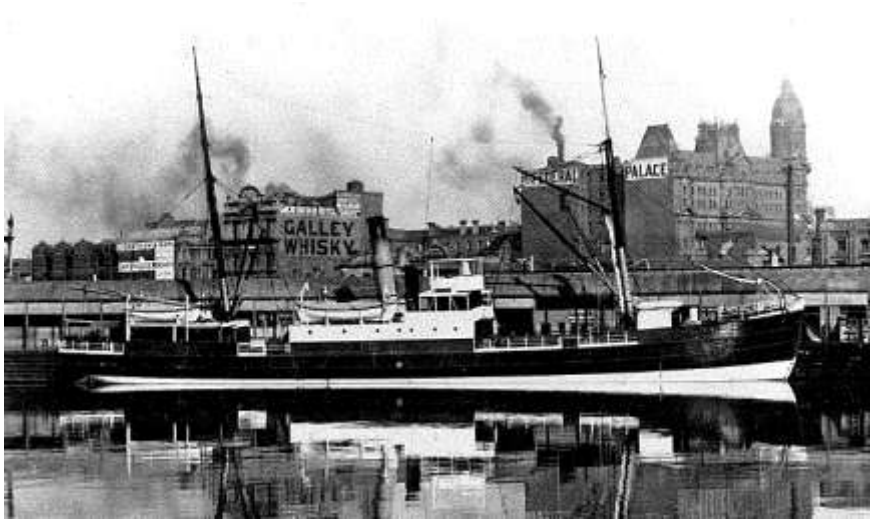


In 1888, the small 191 ton iron steamer "Devon" joined the West Coast trade under the flag of the Launceston and North West Coast Steam Navigation Company. She had weathered many bad storms and by 1894 her crew was well-versed in the dangers of the bar, perhaps too well-versed and a little complacent. In September 1894 they struck on the bar so heavily that she lost her propeller, but luck was with them and the tide carried them to safety. Only a few weeks later the barway was similarly rough. As she was lightly laden, the captain did not wait for calmer weather as he tried to leave the port. The "Devon" struck heavily and swung broadside on to the bar. The force of the waves crashing down on the vessel burst a steam pipe and broke off the propeller and rudder. Helpless, she finally washed off the bar and grounded on the old South Spit. There she sank with the superstructure partly exposed and was a total loss.

Years later a breakwater was constructed on the spit and actually covered the bow of the old wreck. Sand has accumulated behind the breakwater, advancing the shoreline and causing the wreck to now be in shallow water. The majority of the wreck is buried with only the stern uncovered. This is a wreck that the non-diver can enjoy as the steering gear actually breaks the surface at low water. This wreck provides an interesting snorkel dive if you are in the area. Divers have to be wary of strong currents that occasionally sweep around the bay and affect the wreck site. A flood tide will also provide better viewing conditions.

Approx location of the "Devon"

The wreck of the "Grafton"



Ten years were to elapse before another disaster. This time it was the elegant clipper bowed steamer "Grafton" of 299 tons. She was an old vessel built in 1854, but she had recently been extensively remodelled before joining the Union Steam Ship Coy's West Coast fleet in 1896.

In June 1898, she was loaded in Melbourne with vital machinery for the Mt Lyell Mining and Railway Coy, including their new furnaces and several ABT system locomotives for their new railway to Strahan. Overseeing this vital operation was the American metallurgist Robert Sticht, the man who had cracked the secret of smelting Queenstown's notoriously difficult sulphur laden copper ore. His discoveries had propelled the company's operations into the

black, but his pyritic smelting process also bathed Queenstown in a pall of sulphurous smoke that poisoned the vegetation and turned Queenstown into a bleak moonscape.

The "Grafton" arrived off the heads in a hurry to unload her cargo despite the foul weather. The S.S. Mahinapua" was also waiting but decided not to risk it. The "Grafton" ploughed forward and bounced heavily on the barway. With most of her propeller blades snapped off she only just managed to back out to sea again. The engineer reported that the plates were sprung and she was leaking badly. Passengers were transferred to the "Mahinapua" who agreed to attempt to tow the "Grafton" over the bar. Heavily weighed down with water the "Grafton" struck even harder the second time and the tow cable broke. Helpless, the vessel drifted onto the North Spit where huge surf raked across the decks and she was soon a total loss. All the crew were saved. When the weather abated, much of the cargo, including most of the furnace parts and all of her locos were recovered. So when you go to the ABT railway its even more astounding that the locos are so well preserved considering that they have already been for one swim before starting their long service life.

I only know of one dive team who has visited the wreck and she lies in a treacherous area of very dangerous surf that can only be visited at risk on an exceptionally calm day. Almost never visited she still has rows of brass portholes in place along her heavily broken up hull.

Macquarie Heads Township

I believe this is the old pilot station, now a shack

The first works to improve harbour safety were the lighthouses at Entrance and Bonnet Islands. The Entrance Island light was erected in 1899 and was serviced by a large staff. On the island there was a large wooden cottage for the lighthouse keeper. Another light was built

at Bonnet Island to further define the entrance at night. As the facilities grew and port traffic increased a pilot station was added. From these beginnings the entrance facilities rapidly grew to meet the demands of harbour workers and shipping services. From the pilot station and lighthouse keepers quarters grew a small town, at one stage even with its own hotel. Unfortunately, many of these have long disappeared, some only quite recently due to fires lit by local vandals.

From the semaphore lookout, an easy walk takes you out along tracks that were once railway routes for the old harbour works. The vehicle tracks go on past a series of remote shacks right out to the Cape Sorell lighthouse. Well worth a more detailed exploration on a day when it isn't pouring with squally rain. Along these tracks you can access the lonely beach at Pilot Bay and walk along the old breakwater to the "Devon" wreck. This breakwater is part of one of the minor miracles of human achievement, the Napier-Bell harbour works.

One of the minor miracles of nature, shell drift on Pilot Bay beach

A lesser scene, a stroll away from the track reveals either an exposed old rubbish dump, or evidence of one hell of a bender.

Napier Bells Harbour Scheme

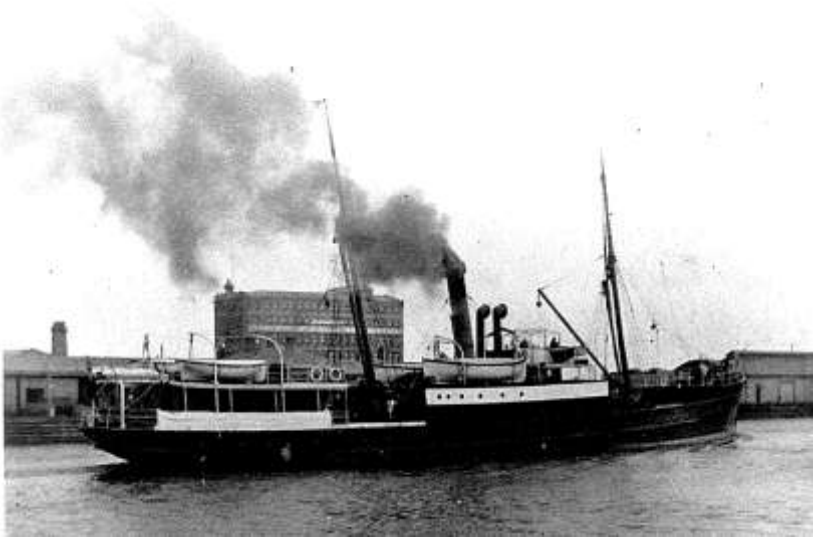
For a long time the risks of Hell's Gates had to be tolerated as the cost of the massive harbour works needed to correct the problem were not considered to be worth the effort. The loss of the "Grafton" had been a wake-up call to the mining companies and they used their new economic muscle to speed up reforms of the government. The old pastoralists had been slowly pushed into the Upper House, while a new regime of liberal businessmen with pro-mining sympathies took over the reins of government. They were to grant State aid for new mining infrastructure including more West Coast railways and long-overdue harbour works.

In 1899, an eminent harbour engineer from New Zealand, Charles Napier-Bell, was consulted. He recommended an ambitious and expensive scheme of works including breakwaters and training walls along the approaches to the harbour as well as extensive dredging of the bar. The massive cost put off the Strahan Marine Board and they opted instead for a scaled down version.

Napier-Bell went ahead with his revised plan and opened two quarries at the heads and connected them to the site of his proposed works by railway. Locos and railway wagons were shipped over to the heads in what must have been a major project in itself. Workers laboriously began to claw at the quartz outcrops for quarry stone. The sometimes massive boulders were then railed out to the end of the new breakwater. When a section was finished, new track would be laid down for the next stage of the works. The South Spit was completely covered by a new breakwater, works that also partly buried the wreck of the "Devon". A massive training wall was also constructed along the entire southern side of the inner harbour. This wall was to 'train' the current to follow the shipping channel, harnessing the strong tides to cut away at the sand and deepen the channel naturally. What remains is still a huge and

impressive series of structures, even if massive storms have blown the tops off some of the breakwater walls. These walls are now perfect roosting spots for local seabirds including Black and Pied Cormorants, Pacific Gulls and Oystercatchers who nestle among the boulders and the rusting railway iron, all that remains of Napier-Bell's impressive railway network.

Wreck of the "Kawatiri"



After spending £147,000 which was a colossal figure for the times, and depositing hundreds of thousands of tons of rock, Napier-Bell had only increased the depth at the bar to 25 feet. Ever larger vessels were arriving, so fast they were moored three abreast at Strahan harbour. They demanded even safer facilities and something more had to be done to get rid of the troublesome sandbar. Despite the excellent works, sand would still be regularly washed back in after storms and the varying depths at the bar were a constant and evolving threat to the larger vessels. The semaphore station at the Heads was used to signal the bar depths to incoming vessels and each morning a boat had to be launched from the Heads to check on the depth with a sounding lead.

Some unsuccessful attempts were made locally to build a dredger out of an old wooden lighter, but it was a dismal failure. It was the wreck of the "Kawatiri" that was the final straw, spurring the local marine board into action and forcing the government to provide further loans to complete the harbour dredging operations.

In August 1907, the S.S. "Kawatiri" was attempting to enter Hell's Gates in a heavy sea. Among her passengers was the family of Assistant lighthouse keeper Hooper at Entrance Island . While crossing the bar she was hit by a large wave and flung against the new breakwater that now covered the South Spit. The sea then dragged her off the breakwater and threw the "Kawatiri" up onto the treacherous North Spit. Waves swept along the decks of the vessel and she groaned under the stress of each impact. It was obvious that not everyone could escape. Only one lifeboat was sheltered enough from the waves to be launched and this was loaded with the women and children. The local papers made a bit too much of the 'true spirit of British manhood' as the men stayed back to make room for women and children, except for two "foreign" sailors who panicked and forced their way aboard the lifeboat. The boat tried to make for the safety of Entrance Island lighthouse, but instead they were swept away by the current. A standing wave reared up and pushed the stewardess overboard and

she disappeared into the boiling sea. As the boat swept past the lighthouse the Assistant Keeper watched helplessly as his wife and children cried out for him to come and save them. The lifeboat was then rammed into the breakwater. In a mad scramble to get out, four children and one woman were drowned. The dead included the Assistant Keeper's whole family. Onboard the "Kawatiri" the men clung on and waited for what seemed like certain death. Then, at 8.30 A.M. the wind suddenly abated. The Head Lighthouse Keeper and six men set off in a leaking boat to attempt a rescue. Many times they were washed back by the swell, but finally they threw a line to the wreck. By this action all the remaining passengers and crew were saved.

The tragedy left the local population in shock. This was doubly hard to bear because of the loss of a local family and then two local fishermen drowned trying to recover the ship's mail. The Assistant Lighthouse Keeper was given enough time off for the funeral, but he soon had to return to watch over the waterway that had claimed his whole family. According to local legend he went mad in the keeper's house that was once located at Entrance Island. Official records show that he was soon unable to work and that he was transferred to the light at Low Head. People say that his ghost still haunts the lightkeeper's house, even after it was later dismantled and moved to Strahan.

The wreck managed to remain intact for three months despite groaning under the impact of constant battering by the waves. Finally, she canted over onto her port side and broke up. The dangerous North Spit was renamed Kawatiri Shoal.

Approximate location of the wrecks on 'North Spit', Kawatiri to the left, Grafton to the right. This is exceptionally calm, normally relentless tiers of breaking waves crash down over the sites.

This wreck lies buried in shifting sands, nestled within dangerous breaking surf. Sand movement has uncovered part of the starboard hull plating and the machinery, while moving sand particles have polished every piece of exposed brass, as if the ghosts of long dead sailors still keep her in trim. The white sand and shallow depth make her a photogenic wreck, but you don't linger here long. Even on calm days there is still a serious risk from freak waves that build up over the shoal. Not a place for the faint-hearted. One more place of rugged unforgiving beauty.

This wreck is still remembered on the West Coast and even today the caretaker at the Heads camping ground remembers the story of the wreck as it has been handed down to him. As a result of the outcry at the time, a further massive sum was spent to buy a dredge from Scotland and finally remove the bar (see the February 2010 issue for details on the life of the Dredge "Macquarie").

No work of man can make the West Coast totally safe. The old semaphore mast base is now a memorial to a local fishermen, killed near here in an accident in 1996

A 'quiet' stroll along the beach

A stroll along the beach every evening was a highlight of the trip. Ocean Beach is one of the few beaches with permitted access for 4 wheel drives. Fishermen use the beach to access the sand banks when Australian or 'Cocky' Salmon run every Summer. When we were there, quite a few of the locals were stocking up their freezers. The beach is also used for "hooning" which is possibly relatively harmless while kept down on the wet sand. Harmless to the wildlife, but not so the cars. The notoriously soft boggy beaches regularly claim vehicles that venture out too close to the surf. Within a few days they have disappeared under the sand to possibly re-emerge in a few million years time as odd shaped fossils. Up in the dry dunes 4WD's are a menace to the local vegetation and nesting birds. They can also be a curse to other beach users except that the numbers are pretty low at present. In Queensland the beaches have hundreds of vehicle movements every day. Fraser Island is more highway than national park.

I have also heard of people disappearing into dead whales buried in the beach, as Ocean Beach is a notorious stranding spot for whales. The confusing sand banks and strong tides and surf are a threat to any animals moving too close to the Heads.

For something different we head down the road to the viewing platform used by the parks service for their nightly mutton bird presentations as part of their Summer talks program. The talk is obviously popular from the huge clouds of dust and the evening traffic jams.

A small area of coastal heath has been fenced off to prevent tourists from trampling the burrows in their enthusiasm to see the birds. After an informative talk, it's time for them to fire up the Winnebagos and get back to a hotel room in Strahan. The Winnebagos are protection from the March flies, but only if you never get out of the car. If tourists buy a tent and a dinghy instead, and throw away the holiday schedule, it's amazing to think what wonderful (or terrible) things might ensue.

Next Edition - an Amble through historic Strahan…

Climate Change – Once again to be clear

By Mike Jacques

I have had requests to make sure the climate change science message is sinking in, possibly due to my inadequate efforts to date. I've looked for a paper you could read in and ad break while eating a sandwich, the average attention span of the population at present. I had to search for "climate change for kids" to find a really soft and compact message and surprisingly, still had to struggle through that tome to edit that down to fit in your Inbox. The average literacy levels in Tasmania are such that less than ½ the populace has what is considered functional literacy to a modern standard. As that probably includes a lot of people you know, it's a reminder to go easy on the explanations and advocacy.

Climate Change for Kids (or for ad breaks in TV cop shows)

Earth's atmosphere behaves like a gigantic greenhouse. Gases high in the atmosphere, such as carbon dioxide and methane, behave like a giant piece of curved glass wrapped right round the planet. The Sun's rays pass straight through this "greenhouse gas" and warm up the Earth. Without some greenhouse effect, the Earth would be much too cold to support life. The greenhouse effect would be nothing to worry about except that humans have been doing a variety of things like burning stored energy from coal and oil, which releases lots of stored carbon gases.

The carbon dioxide drifts up into the atmosphere and makes Earth's greenhouse gas a little thicker. This is called the enhanced greenhouse effect and it makes the earth heat up at an unnatural rate, the process we call global warming. The problem is getting worse all the time because we keep using more energy from fossil fuels, both in the West and in developing countries.

Before industry started, CO2 in the air was about 280 parts per million (ppm), now it's around 380 ppm. There is now more carbon dioxide in the atmosphere than at any time in the last 420,000 years. This isn't natural as a lot of the increase has happened in only the last 150 years, a blink of an eye in geological time.

The Earth's climate is finely balanced and is affected by even these tiny amounts of CO2. If you had a chunk of atmosphere about as big as your bedroom, all the carbon dioxide in the world would fit into half a shoebox. It is still enough to make the Earth warm up a lot. It's not really warming up much as far as you and I could tell. Since 1900 the whole planet has warmed up by only around 0.8 degrees centigrade, but even this still has big effects, especially on wildlife.

It will get a lot worse. By the end of the 21st century, scientists agree that the warming is most likely to be around 3 degrees. It took 5000 years for the planet to warm 5degrees after the last Ice Age but we might manage it in about the next 100 years. Once something as big

as a planet starts to warm up too much, it's very hard to slow down the process.

Lots of the world's animals, including humans, are going to struggle to adapt to this extra fast rate of change. Animals are usually adapted only to live in a particular climate, as that changes they have to adapt, move or die. But with a relatively rapid climate change, plants and animals may not be able to adapt quickly enough. Some predictions say climate change could make 30-40 percent of the world's species extinct. Some animals, including nasty things like malarial mosquitoes will extend their range.

They predict polar ice will partly melt in some places. Currently, the world's sea levels are rising at 3cm (just over 1 inch) per decade. Scientists think sea levels could rise on average by anything from 10 cm to 1 m (4 in to 3 ft) by 2100.

Changes in climate will make it easier to grow food in some places, but much harder in others. Overall, the world's poorest people are expected to be hit hardest, but we could also see very big droughts affecting the settled parts of Australia.

Climate change is nothing new. The Earth's climate has been changing regularly for hundreds of millions of years, sometimes getting colder and sometimes warmer in a pretty slow and regular way. Scientists believe that greater amounts of carbon dioxide in the atmosphere, and hotter temperatures on Earth, will change the climate unevenly across the planet. Modern climate change is going to be faster and make the climate much more erratic. Some places will be hotter some of the time, but most places will simply see more erratic and extreme weather. That could mean heavier rainfall, more snow in some places, longer periods of drought, more storms and hurricanes, and more frequent heatwaves.

Since records of the weather date back only a hundred years or so, how can scientists make claims that the climate has been changing over a much longer period? In turns out that Earth keeps a natural record of its own climate. For example, in bubbles of air trapped inside polar ice.

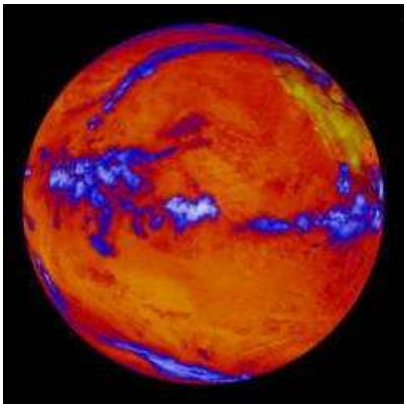
Scientists make forecasts of the climate using what is known as a computer model. This is a large and very complex program running on a supercomputer. How can the scientists be sure it's right? If they start the model with data from 1900, say, and ask it to run forward 50 years, it should predict the weather in 1950. If it makes accurate predictions, they can run it forward into the future to see what will happen in 2050, or even later. The further into the future the model runs, the less accurate it is likely to be. One reason some people are skeptical about global warming is that they doubt computer models are good enough. As time goes on, climate scientists have more and more data to work with, and computers become more and more

powerful—so the models get better.

While it's easy for individuals to make a difference to global warming, governments are finding it much harder. Using less energy could harm economic growth. So if one country tries to clean up its act, the fear is that it may find itself at an economic disadvantage. All the time the world's governments continue to debate and disagree, global warming is getting steadily worse. The longer it takes to reach agreements, the worse things will get.

In 2006, Sir Nicholas Stern argued that it makes sense to invest money and tackle climate change now, because the cost of putting off action will be greater tomorrow. Stern claims global economic activity (measured by something called gross domestic product, or GDP) could fall by up to 20 percent if the effects of climate change are really severe. By contrast, investing in measures to stop climate change now would cost only one percent of GDP—20 times less.

Although most scientists believe in global warming, a minority do not. Some agree that Earth is warming but not that humans are responsible. The "climate-change skeptics" argue that increases in Earth's temperature are either not happening at all or may be caused by other things, including natural variations in the climate. In recent years, however, fewer and fewer scientists have disagreed with the widely held view that global warming and climate change are really happening. People could still be wrong about global warming—but that's becoming increasingly unlikely.



http://www.explainthatstuff.com/globalwarmingforkids.html
for more info and exciting pictures!

Whale Tales

Southern Right Whale

Per PWS website

The Southern right whale is one of three whales listed as endangered. These whales became endangered as a direct result of the commercial whaling industry. The first whale killed in Australian waters was a sperm whale in 1791 and in 1806 the first Australian whaling station was established at Ralph's Bay on the Derwent River near Hobart, Tasmania. By the 1900s Southern right whales were being driven to the edge of extinction. They were the first species of whale to be protected in 1935 because so few were left. Over 26,000 southern right whales had been killed in Australia and New Zealand alone. They were called right whales by whalers because they were the right or best whales to kill. One reason for this is that their large amount of fat made them float after harpooning, so that they were easy to collect.

All three of our endangered whales are baleen whales. Water full of tiny marine invertebrates is strained through these baleen plates. The invertebrates (krill) are left behind and swallowed. Swarms of these krill congregate in Antarctica over summer. This attracts baleen whales there. They migrate north from Antartica before winter and can be seen off Tasmania's coastline from about May onwards and then again when they return south for the Antarctic summer.

Individual southern right whales can be identified by the size, shape and position of the callosities on their heads. Callosities are the lumps made from the living fauna of barnacles, whale lice and parasitic worms which seem to attach to these whales almost immediately after birth. Every year aerial photos of whales passing Tasmania, Southern and Western Australia are taken. These potentially provide a great deal of information on the species. We have learnt that mature females breed every three years and prefer to calve in sheltered bays. Another item hot off the press is that a male first photographed in Western Australia in 1989 as a calf has also been photographed at Swansea Tasmania in 1994. This gives us the first definite link between whales seen travelling past Tasmania and those reaching W.A. There are still many threats to our whales even without hunting. They are very slow to grow and reproduce and their numbers are very low. Southern right whales may number just a few thousand worldwide. They only produce one calf every three years and take about ten years to reach breeding age.

We need to minimise all the threats to their survival. Threats include things like collisions with boats, entanglement in drift nets, swallowing of marine debris such as plastics and oil spills. Marine pollution is a long term threat. Another is whale watching. It is important to know and follow whale watching guidelines, so that you do not put yourself or the whales at risk. For example: never drive a boat within 100m of a whale, also divers with tanks should not approach whales in the water as the tanks upset them.

A whale Hotline is available to report sightings and strandings. The Phone number is **0427 WHALES** (**0427 942 537**)

WHATS ON in Winter 2010

Biological events and Sighting Reports

South East and East– I have a non-sighting report. Following last months report of seals stealing game fish, no seals have been sighted on Eastern Tasman Peninsula haulouts, much to the concern of the tourist boat operator. There is a possibility that they have been scared off by game fishermen with shotguns.

In the same area Killer Whales have been sighted in late June, probably packs following the whale migration north.

The Summer and Autumn this year were full of action for the TAFI Redmap team with lots of range extending species spotted in the East and South-East. Now we are all wondering if the waters are now warm enough for these Bass St and NSW fish to over-winter in the South and East. Keep looking and reporting.

Whales are now moving north and have been spotted in Coles Bay and the Derwent only a few weeks ago. Likely to be a lot more activity this month.

Large schools of Atlantic Salmon have been seen around the Tasmanian coast.

The scallop season has provided some fun sightings, one large animal being variously described as either a Bull Shark or a White Pointer. Next time guys, don't be selfish. Why not linger a while and take a photo to help resolve this mystery?

(you should report any interesting finds to the TAFI CCRedmap project at www.redmap.org.au) and drop me a line too so I have something to talk about.

Coastcare and conservation events (more details this issue)

Wildcare Deslacs meet on the first Sunday of every month. For more information contact info@wildcaredeslacs.org

Geilston Bay (South Bank) Land/Coastcare Group meets on the fourth Sunday of every month. Email simonetaylor@westnet.com.au or call 03 6243 8009 for more details.

Winter Plantings Adventure Bay – ongoing, Ph Marg 62932034

22 October Bob Owens Memorial tree planting Day Bruny Is, Ph Marg 62932034

Bruny Bird Festival 23/24 October, Ph Marg 62932034

Bay of Fires - Propagative native plant species for revegetation of camp grounds

03/10/2010 Meeting at the Parks and Wildlife Depot St Helens. Locally collected seeds will be planted into tubes and then used for rehabilitation in campgrounds around the Bay Of Fires the following autumn. **click here**

Bay of Fires - Binalong Bay Foreshore - Removal of environmental weeds

01/08/2010 Meeting point - Binalong Bay Playground Car Park

Science Week 14-22nd August (details see www.scienceweek.gov.au)

Sample events

Conservation Crusaders – interactive show on conservation biology, Bridport Primary 5 Aug, Scottsdale Primary 10 Aug, Flinders Is High 18 Aug, Cape Barren 19 Aug.

Science Film Festival, Saturdays 10-4pm Devonport

Acid Seas and Lost Hollows , Film , Cradle Coast campus Burnie 22 Aug 10-2pm, UTAS Newnham 15 Aug 12.30-1.30pm, Utas Sandy Bay 8 August, 11.30am-12.30pm

Tim Jarvis Arctic Explorer, Cradle Coast campus Burnie 22 Aug 1.30-2.30pm, Utas Hbt 20 Aug 7-8pm

AMC Open Day Beauty Point 14/15 Aug

Science Films QVMAG 14-22 Aug

Arts and Science 12 Aug 4-6pm, CSIRO 3 Church St Nth Hbt

Over the Edge, Arts, Henry Jones Art Hotel, 13 Aug 6pm

Ice Baby Ice, photography, TMAG 16 Aug 6-8pm

Tasmanian Seaweed, photos, CCAMLR 181 Macquarie St Hbt 16 Aug 10-4pm daily, opening lecture 20 Aug.6pm

Mac Is lecture, UTAS Sandy Bay 17 Aug 8-9.30pm

Training

Aqua Scuba has Deep Diver, Stress and Rescue, and Wreck Diving courses on this winter.

Arts

Duncan Giblin, Icarus Exhibition 23 July to 13 August, see this issue for details

Amalgamated club calendars

Like to get in touch with someone for a dive or day out, email us and we'll forward your message. If you would like to advertise your club calendar also drop us an email.

August 2010

ODP - 7th or 8th - ICE DIVE Lake Dobson Mt Field Nat Park
TSAC – 7th or 8th - Spring beach shore dive Dave R <10m
TUDC – Thursday 12th – Night dive at Kingston Beach
TUDC – Saturday 14th – Isle de Phoque
ODP - Sunday 15th - Club Bus Trip – location TBA
TSAC – Saturday 21st - North of Pirates bay Jacquie P 25-35m
TUDC – Tuesday 24th – Night dive at Hobart Docks
TUDC – 27th to 29th – Tasman Peninsula weekend at Koonya field station

September 2010

TSAC/TSDC - 4-5th - Koonya, Tas peninsula John and Robin Various
TSAC - September 11th or 12th - Schouten Island– Cape Sonnerat / Chain locker Bay
TUDC – Sunday 12th – Drift diving in Dunalley Canal
TUDC – 17th to 19th – Weekend of East Coast diving based in Coles Bay
September 18th or 19th - Schouten Island– Cape Sonnerat / Chain locker Bay
(alternate dates should weather be bad on the 11th or 12th)
TSAC 18th Iron pot, Betsey wrecks Eric Price 25m

Leven Scuba Club may also have ad hoc dives planned and go out most calm weekends.

TUDC dives Register online at http://www.tudc.org.au/diving/dive_calendar.php

Essential news and links for the perfect day out

Water temperature http://www.bom.gov.au/cgi-bin/nmoc/latest_YM.pl?IDCODE=IDY00004

Conditions recently

Tamar- 10M-15M visibility. 14 degrees

Bicheno – reports of very good vis

Tasman Peninsula, good vis 13 degrees

D' Entrecasteaux Channel, 11 degrees, Brrr!

Link to marine wind forecasting http://www.bom.gov.au/jsp/marine/wind/index.jsp

Moon phases and Tides - Low Head, Hobart & Burnie
http://www.bom.gov.au/oceanography/tides/MAPS/tas.shtml

Advanced weather planner based on past records
http://www.bom.gov.au/climate/averages/tables/cw_092003.shtml

How to help us get the message out

We are asking people and organisations to help circulate the newsletter. Please ACTIVELY distribute Marine Life amongst your interest group, friends and colleagues so we can get the message out there, or give us email contacts (after asking your people for any objections to release of email contacts) so that we can distribute it for you.

How to make a contribution

This involves sending us an article by email, preferably not too long and with a photo or two. Sorry, no money, its all a love job and just for the glory. We'll use your contribution for the purpose for which it was given, for non-commercial uses and with attribution. *Contact Us; marinelifetassie@gmail.com*

Back Issues

We have been gathering together a lot of information and stories since November 2009, so if you are new and interested, please log on our back issues page which has been generously hosted by the Tasmanian University Dive Club,
http://www.tudc.org.au/news/marinelife.php