AUSTRALIAN LONGLINE

Antarctic Aurora

A Maiden Voyage into the Deep South.

For the Antarctic Chieftain

Written by
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November 2020

A Covid-19 World

By most accounts the year 2020 was at best forgettable. It was a year defined by face masks, hand sanitiser, and for some reason, toilet paper. The coronavirus pandemic had changed everything, and to make matters worse, the age of science and reason felt like it was slowly retreating in a disorienting fog of social media-powered opinion and identity politics. For those directly affected it was horrible, and for everyone else, it was frustrating. The worst place to be was where everybody else was, and I was beginning to feel like I needed to maintain a personal space much larger than 1.5m.

When the opportunity came to speak with Emma Lehman, CFO of Hobart based Australian Longline Fishing, I had to sound convincing. Having spent the fishermans' equivalent of zero time at sea, I played what few cards I had. "If I lose an eye I'll wear a patch - and If I fail I'll walk the plank." No, channelling Hollywood pirate movies wouldn't work. Emma will need real fishermen to voyage months at a time into the deep south. Men who wear ten metre waves like water off a duck's back. Men who pull together and abandon nobody. Men who can't get to sleep at night unless a stormy sea throws them out of bed twice. Men who know how to tell a good tale.

"If I survive and return to shore, I'll spin the yarn, and let everyone know that we catch the best fish in the sea, and we do it at the edge of the earth."

Photo: Jordan, Mic, and Doc stretch out their land legs on Mt Wellington one last time before departure.

December 2020

Dockside – Salamanca

The 68m Norwegian designed Antarctic Aurora is one of the best things that 2020 produced. A "Covid baby" of nautical proportions, she was built both to catch and process the prized Patagonian Toothfish, and to protect the natural beauty of the Southern Ocean. When the taxi driver dropped me off at Princess Wharf in Hobart after two attempts at entering Tasmania, I felt like a pirate stumbling upon great treasures.

A teacher of mine once told me that memory is triggered in only two ways: pleasure and pain. So if being invited aboard a new ship to visit Antarctica wasn't memorable enough, perhaps working 8hr on/off shifts in a floating fish factory for months at a time would get things done. Several tens of thousands of hooks had to be tied to kilometres of longline and manually loaded onto magazines before we departed.

I compared my rate of knot tying to that of Young'ne (Maurice) and Grommet (Morgan), skilled fishermen in their early 20's, and discovered that I was tying at 30% capacity. Worse still, Young'ne wasn't concentrating at all, spending as much time making sure the music playlist on his giant stereo was tough enough for the work at hand. I asked him how I could condense my four consecutive hand movements into one, and he showed me, and it worked.

"Pain is just weakness leaving the body."

This was our 2nd Mate, Shaun's advice to us as we unpacked 28 tonnes of frozen squid by hand at a truck depot near the airport. I love this quote. It fits perfectly with the hardcore pirate narrative I'm pretending to live. Days earlier, Factory Manager Doc (Dave) had begun to cultivate this strong mental attitude among his new recruits, as we were unloading two 40ft shipping containers full of tightly packed "backbone" fishing line. This time, the training was to avoid mental interference: "I don't want to have to think. I just want to muscle it out.

Our crew had been steadily growing week by week and luckily Hobart was still secluded enough from the rest of the world to enjoy a decent nightlife. Sure there are plenty more dockside tales but as most weren't witnessed by the Aurora herself, I'll leave them for someone with a riskier social appetite to tell! On the whole December was a pleasurable month.

Photo credit: Malcolm McNeill,
Managing Director of Australian Longline

January 2021

The Pain

The Southern Ocean knows I'm a stranger. It has a way of reminding me this with each passing wave. I look out the porthole of my cabin and see a desert of furious whitecaps - just like the day before, and before that. The larger of the rogue waves must be 4 or 5 metres tall. Although small compared to the swells around Heard Island that the Kiwis speak about, it's still enough to lift the ships propellor into the less dense whitewash high in the water column. This launches the propellor into overdrive, and the shaft sends violent shudders of disagreement all the way back to the 2800hp Yanmar motor which lives under my cabin. When that conversation has finished I'm left with the background grunting of the Yanmar mixed with the sickly motion of an indecisive gravity.

Today is Tuesday, January 12, and the last time I ate a meal was when our Skipper, Noel, shouted us all for burgers in Hobart the evening before departure, Wednesday 6. For the briefest moment as we sailed out of Hobart, I had that rare feeling of elation. "Is this real? What am I even doing? Am I really going to sail the coast of East Antarctica in a new boat, in my own cabin, tasked with the protection of the giant albatross from our baited hooks?" The closest feeling I can think of is when a surfer catches their first wave. That's a special moment and surfers will spend their whole lives intoxicated by the idea feeling it again. You've put aside your fears of the ocean and trained with your paddle fitness. You know the theory of standing up on the board but when you finally do, you realise you are not surfing on a wave - you are just a colourful and insignificant extension of the ocean's great energy.

I surely wasn't the only pirate on board giving away hints of excitement, and high fives and selfies were the order.

"We're going to Antarctica boys!"

It didn't take long for reality to catch up, especially for me, the newest of seafarers. In the first few days I vomited more times than the combined tally of my previous life. I lost count in the mid 20's. I tried all the tricks; staring at the horizon, ginger tablets. I can tell you the Southern Ocean doesn't care much for ginger, and its horizon is a mess in every direction.

By Sunday I was feeling critical. My body hadn't retained a droplet of water and my lips were starting to crack. I could feel this awkwardness in the skeleton like the bones and even joints were drying out. My sky was turning piano black and so where my thoughts. Should I go for a swim? Am I the wrong person - Is this all a mistake?

It's hard to retain much self confidence when you've shared such intimacy with every toilet bowl on board, sometimes on hands and knees, other times lying down and spooning the pedestal.

The whole crew had really stepped up by now and I was getting more offers for room service meals and drinks than a sleeping victim of motion sickness could capitalise on. Especially from Coach (Adam) who visited frequently. He reminded me that pain is just weakness leaving the body, and I knew that if my sea legs didn't start walking soon, he would start taking them for walks!

With his and the advice of the Kiwis (collective noun for ship Officers) I tried to maintain a kind of pathetic productivity so as to not give in to the darkness.

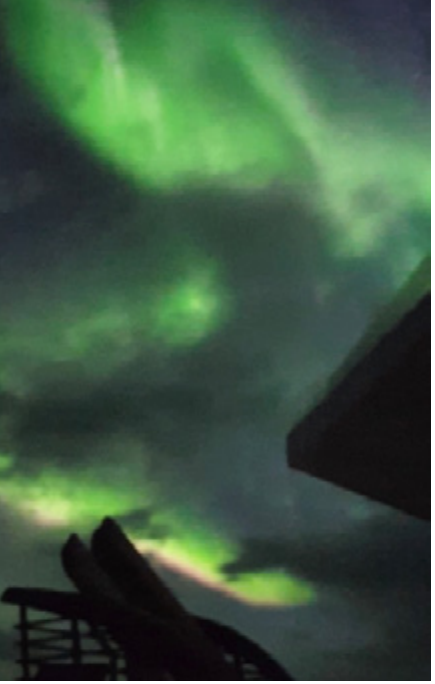


Photo credit: Noel Anderson

Photo: The Antarctic Aurora's first opponent appears out of the blue.

I managed to hook at least one or two160m coils of backbone rope each day, my chores, and my measly 2hr watches in the bridge. This morning at 4am I dragged my exhausted body up 4 flights of stairs to do watch with Noel (Skipper) and Cheyne (Bosun).

The motion in the bridge is slightly amplified compared to the bowels of the ship because of its height, and after doing a routine walk of the whole ship to check for safety issues or flooding, I regurgitated all the blueberries I managed to keep inside since the day before. While losing my blueberries saddened me deeply and left me dizzy and clutching the arms of the navigators throne, I was quickly distracted by Noel pointing to something outside in the dark of night.

It was the Southern Aurora. I had forgotten all about it. Although I physically couldn't get out of the chair to look properly, a sharp green flicker of excitement flashed once again in my mind. It was a most poetic, and beautiful light at the end of the tunnel.

Four days have passed since I saw the Aurora Australis. While I'm no longer vomiting at the thought of staying alive, my weakened immunity has me coughing and sneezing continuously. My last pee - which should have been super exciting given my previous dehydration - was a three-cough-pee. I think it also coincided with the senior officers practicing some acute emergency steering in the bridge.

I questioned my firm belief that a man should pee standing and cleaned up my mess. But the sharp sideways lurching of the ship continued. Battle preparations.

Several hours earlier, after Nathan, Young'n and I finished the ship chemicals inventory, we had a meeting about collision preparedness.

We went over muster points and blackout procedures, what to expect and what not to do. Skip reminds us that a ship with no power, no light, and no vibrations, can quickly turn you mad - especially as the ship slows and spins whichever way the ocean decides. This had happened once to Skip for two days and he said it was pretty cold!

Shaun steps in and reminds we novices not to freak out from the sound of ice grinding along the hull. You see growlers (icebergs still with 20% exposed ice but very flat profile, often lower than wave height) unlike sea ice, are made of multiyear ice. Each year as the surface thaws and refreezes, the ice becomes harder and denser, not unlike the forging of a samurai sword. This ancient samurai growler is now our arch enemy. The final word is to maintain higher vigilance when on watch duty.

It's likely that the Kiwis timed this safety briefing because of what they had seen earlier on the 16 mile radar. I started hearing people rushing up and down corridors with phones and lifejackets. Our first encounter was imminent, starboard, several hundred meters.

January 2021

The Pleasure

If seeing the Aurora Australis was a light at the end of the tunnel, this divergent beast from East Antarctica was the whole steam train. Not sure if I nailed this analogy, but you know what I mean. I can try to add words here to describe what I saw but I confess it's not easy. A purer form of white than you can imagine, with shades, still of pure white on the cliff face. It is both strong and angular, but fraught with weakness - fissures and crumbling fragments on top. The opaque blues of the subsurface ice is enhanced with rolling wave action - my mind starts to wander. Jordan, our senior deckhand, can read me like a book. He takes off his lifejacket and gives it to me. I step outside and have my moment with the Antarctic Aurora's first iceberg.

What captures me is how this piece of frozen water can affect the observer. We are all asking questions but not all knowingly. I can't stop wondering how much time is stacked inside this iceberg, 20% of which is about 3 times as high as our ship. What is the oldest layer of snowfall that is about to be released back into the motion of the sea, and the higher frequency lifecycles of water? Would a molecule of water from one of Queen Nefertiti's tears be locked inside this iceberg? I'm glad no-one can hear me thinking and I tell myself to stop it.

Obviously I was excited. Not my corpse, but the rest of me, the invisible bits. As someone who spent most of his 20's in the deserts of NT and WA, I'd never really put me and icebergs together in the same thought. During the lead up to departure I had played down any enthusiasm about the wonderment of Antarctica. Mostly because I knew many of the crew had built a career upon ploughing through ice and dodging icebergs. Most of the crew have seen a lot in their fishing careers anyway, if not Antarctica itself. However, I guess I underestimated just how powerfully beautiful the remote wonders of the deep south really are. The whole crew, officers, engineers, observers, and deckhands alike devoured our iceberg encounter with as much enthusiasm as we do one of Cookie's (Karl) three course meals. Sure, the Kiwis didn't give too much away, but I could tell from the grins on Skip and Chief's (Peter, Chief Engineer) face they were happy and proud to see the crew scurrying around on the deck like water rats, filling their picture frames with iceberg and upper-torso fist pumps in equal measure. I knew Skip had conspired with his officers to guide us by it as close as was safely possible.

Photo credits: Sam Langholz, AFMA Observer

January 2021

60 Degrees South

On the surface, the 60 degree latitude may just be a cartographic navigation tool. But in my experience its symbolic relevance is as clear cut as night and day. Take the weather as just one example: north of this latitude there is the roaring 40's, then some dark and stormy ocean until you arrive at the screaming 60's. Obviously my inner world mimicked these latitudes, and even wildlife seemed absent in this deep ocean desert.

Now, having recently crossed that sacred latitude, the sun shines through my portal as bright as it does on the beaches back home. In fact its summer here, and the night has almost abandoned us altogether. The ocean is glassed over and the air clear with much higher visibility to count the heards of gigantic icebergs in every direction. In the bridge, Grommet and I note that the conditions are perfect for surfing - temperature aside.

South of 60 degrees, there isn't quite enough heat in the atmosphere for the air column to rise - the low sun angle mixed with the high albedo of ice means that most light here is reflected before it can be converted into heat. Even a calm flat ocean that is dark still reflects most light coming in at a low angle. Predominantly cold descending air means Antarctica is often trapped in a high pressure system of clear fine weather. Two minke whales flip their tails in the air not far from the boat. They are in no rush at all. Because of my mood I straight away assume it's a waving salute, but they could be flipping us the bird - who knows if they are having a good day or not. Or maybe my human arrogance is misplaced - and we are irrelevant altogether when compared to krill soup and the rigours of sonar conversation.

Photo credits: Sam Langholz, AFMA Observer

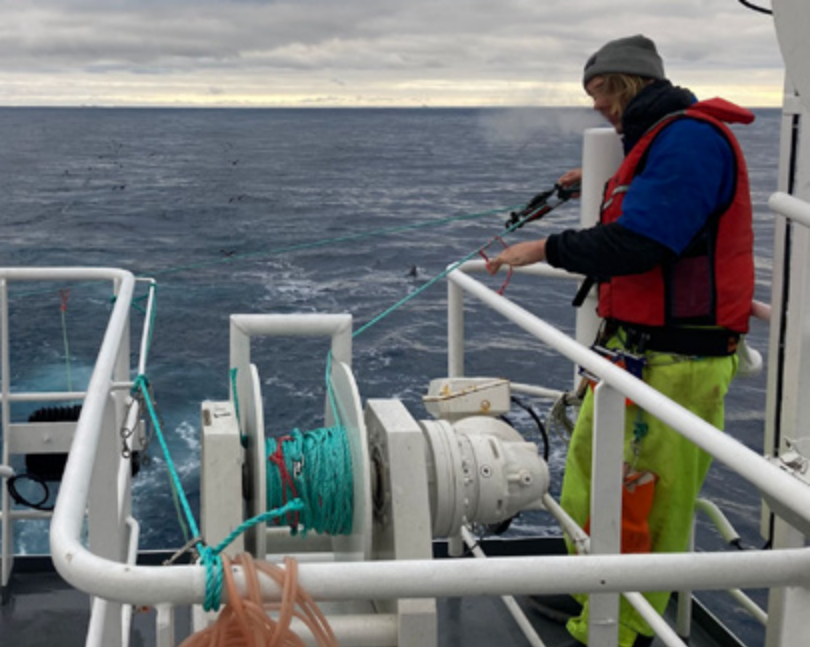


Photo: Jimmy-Lynx fights off the Mollymawks and Cape Petrels with the tori line and streamers.

Photo credits: Sam Langholz, AFMA Observer

60 degrees south isn't only a sharp geographical boundary however. For the Antarctic Aurora, we are entering CCAMLR waters (Commission for the Conservation of Antarctic Marine Living Resources), and this means business.

Another meeting is called in the mess to remind the crew of the codes of conduct. Nothing goes overboard. Not one cigarette butt, not a bread crust. Being here is a privilege and we can be asked to exit on any code breach. Our two observers and 35 built in cameras are here to ensure catching toothfish comes at no other cost to the Antarctic Circle. Doc has already taken several deckhands to sweep the exposed decks by hand and collect any visible fragment of rope or plastic or cardboard.

Everything can be contained aboard. Food scraps are bagged and refrozen, while cardboards and light waste can be incinerated. I'm reminded of my duty to scare away the giant albatross and other birds using the tori lines and streamers when fishing begins. Already we have begun soaking the downlines every hour each day with the fire hydrant. This is to ensure the baited line sinks as fast as regulation stipulates - to take bait below the diving capability of seabirds as soon as possible. My job of waiving streamers for several hundred meters above the sinking line is our secondary bird defence, the air canon is the third. Leaving the Antarctic Circle is the very real fourth.

My mind darts back to the protesters back on Princess Wharf. I have so many questions for them and I wonder if they knew how many crew aboard have backgrounds in marine science and environmental activism. Are they aware of the narrow guidelines under which CCAMLR allow fishing, and the mandates of the Antarctic Aurora to further research and prevent poaching? Have they heard of the Coalition Of Legal Toothfish Operators (COLTO)? Or is one single bycatch just one too many? What about the game theory of this - if we leave, will Antarctica just become a smorgasbord for the pirates? If CCAMLR dissolves, do we go straight back to the days of pirates and depleted fish stocks? What really is best case scenario for a toothfish if Covid-19 fails and humans stick around?

Normally, I'm the one holding the signs, demanding industry improve its standards and stop monetising every resource at the expense of this sacred planet. I'm glad the protesters are there, keeping industry on its toes, setting the bar for human stewardship of life. They are important, and I hope they never leave. I'm also happy to be on a boat that can reach that bar, and hopefully even raise it. After all, I love eating quality seafood as much as the next person!

Photo: The scribe lying down on the job after slaying this 107kg Antarctic Toothfish in a one-sided battle.

January 2021

Killer Instinct

I won't water down the fact that we are here to do a lot of killing. As a huge 100kg Antarctic Toothfish rises like a shadow in the glowing blue moonpool, I make a quick estimate of a hooks ability to haul it all the way out of the water and into the hold. Negative. I already have the three metre fibreglass gaff pole in my hands ready for this line failure, and I won't suffer the embarrassment of letting this one fall and swim back down the moonpool shaft. I'm told a head shot is preferred but in my mind I am one step ahead. No longer channelling pirates, I breath out slowly and aim for between the eyes – "This. Is. Sparta!" My untrained Spartan thrust catches the deep sea beast somewhere near its head.

Sure this isn't the first thing I've killed, but I need to come to terms with it all the same.

Fatality is the game of life, and I guess killing for sustenance is as natural as 60,000 years of Indigenous culture. Perhaps one day we will learn to source nutrient without the cost of lives, but until then humans will maintain a better relationship with species through scientific management, than with the individual fish.

As Cheyne and Doc show me how to remove the prized collar from a 10kg fish head, I swear I see its flipper give a final wave goodbye. I squirm just a little. Doc can see I'm still near the base of this learning curve so he grabs another head and surgically removes the still-beating heart. I accept the prop along with the fate of the fish and internalise my respect. Then I grab the next head by the eye sockets instead of the sharp teeth and get on with business.

January 2021

Life on Main Deck

So what is longline fishing? Well, the hustle begins by sending floats off the back of the ship. These are attached to a length of 14mm tar-soaked downline equal to the depth where we want to catch fish. To avoid too much lice damage to fish, this is usually 1400 – 1800m deep. This line concludes with a 60kg anchor, and soon after our backbone line is laid on the ocean floor. At this point, our master baiters, Demitri and Steve, are feeding defrosted squid into the baiting machine with great rigour, and the tori line bird scarers are dancing above the baited line from the upper deck.

On this campaign, we mostly used lines made of five magazines, and each magazine is comprised of 8 coils of 160m backbone sporting 128 hooks. That's about 5,000 baited hooks over 6kms of line! In a typical 8 hr shift, we could set three of these lines, and haul one line back in.

Moving forward through the hook room we now find ourselves in the hauling room.

Photo: Ryan is only laughing because this downline is only 200m. Nathan is only laughing because Ryan is coiling the line.

Photo: No time for watching icebergs as Windows and Dimitri haul in the floats.

This is both where the magic of catching toothfish, and the nightmare of untangling hundreds of metres of line occurs.

When the fishing begins, it doesn't stop. Our two crews rotate on and off every eight hours and we are either setting line, or hauling it in. If there is a minute to spare there are fish trunks to scrub and blast freezers to load, and then unload down into the ships main hold freezer. Sure it's hard work. Both the line and the fish are the temperature of bloody icebergs, and the main hold is -40 degrees.

Sometimes we might dream of the olden days of "gentlemans hours" while steaming – a measly 8am-5pm seven days a week. Cuts on fingers start to fester from never drying out properly, backs start to ache from lifting 40kg frozen trunks, exposure to cold, isolation and fatigue all rear their ugly heads, but the seasoned fisherman laughs.

"This is fishing baby!"

February 2021

The Vegemite Sandwich Paradox

Most of the new deckhands are Aussies.

Below Main Deck you'll find Engineers Mic and PJ in the engine room drinking green tea. Also they might be fixing offal pipes, welding gaff hooks, repeatedly fixing electronic lifts, or reminding deckhands not to break things. If you're really quick you might even see Chief flash by. Everyone knows Chief doesn't get motion sickness because he moves around at Mach 1. By the time a wave lurches through the engine room, Chief is no longer in that frame of reference – he's made it to the bridge and back and the wave never knew he existed. As tough as an All Black, and as sharp as a tack, the Antarctic Aurora is certainly lucky to have him keeping things afloat.

Most of the Engineers are Kiwis.

Above Main Deck, bridge life is a whole different type of fishing. Coffee here isn't instant. Its slowly made by a machine, and its aromatic. There are panoramic windows. Looking at the dozens of dials and screens surrounding the Captain's chair, a newcomer could easily feel abducted by UFO's with Kiwi accents. The prerequisite for working here is years if not decades of commercial factory fishing experience, which usually comes with a Kiwi accent corequisite.

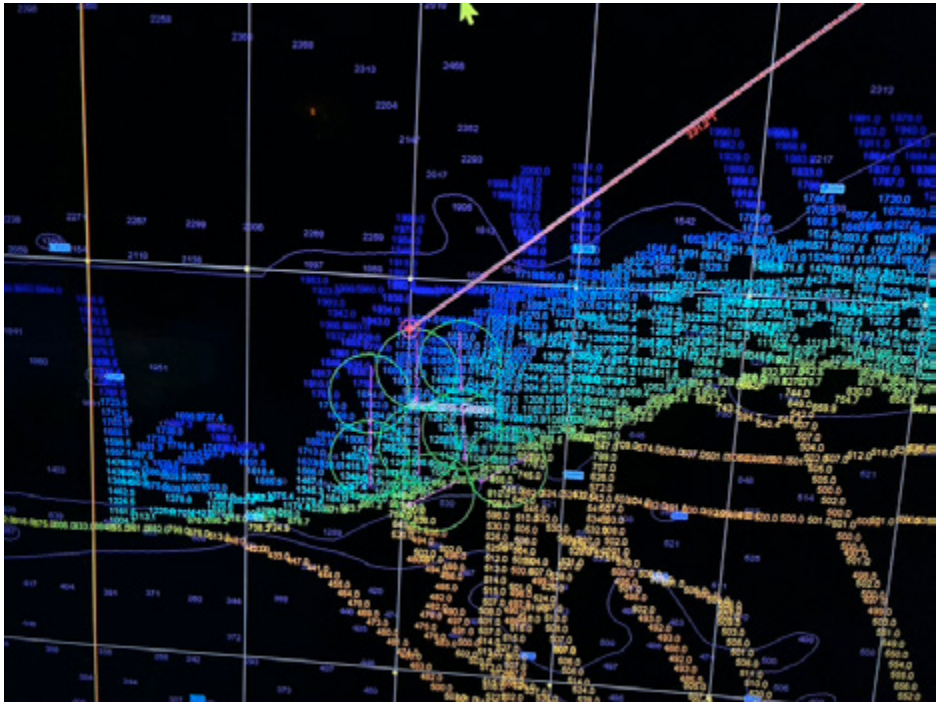
Whalewatching - I mean fishing from the bridge, is a technical game of chess with the sea floor. Taking into account sonar readings, currents, icebergs, previous catch records, and other data, a fishing plan is devised. The image below shows the plans for eight research lines at varying depths, arranged in the most economical way for fuel and Main Deck operations.

Photo: The Kiwis calling the shots. From Left to right is Doc (Factory Manager), Shaun (Second Mate), Noel (Skipper), Che (First Mate), and Cheyne (Bosun).

Photo: Mic and Inverted PJ fix a phantom cable in the factory ceiling.

As you can imaging, plenty of breakfast banter often reaches a stalemate with the Vegemite/Marmite debate. Of course there is nothing superficial about this, and in fact the diverse personalities on board are even reflected in these condiment spreads. Take the Aussie convicts for example. Still a little saltier than our free-settled counterparts, we are pretty rough if you don't know us, so ease into a friendship with small, manageable quantities. We will always be very salty but you may learn to appreciate salt. The Kiwis, on the other island, are relatively sweet. With five times the sugar content of Vegemite, these Marmite lovers are a bit more approachable and friendly, depending on whether you've done your chores. The only other major difference as advertised on the Marmite jar is that Vegemite appears to lack vitamin b12 and Iron, and this malnourishment is likely what keeps the Aussies couped up on the Main Deck.

Photo: Geoff's shirt is the fishermans' equivalent of giving the Aussies a Bledisloe Cup.



Despite being outranked and outflanked both above and below by Kiwis enjoying the sweeter and more nutritious Marmite, Vegemite is still better. Why? Well only half of the observers are kiwis, and by the end of the East Antarctica Campaign, New Zealand observer Geoff Dolan admitted defeat citing the unusually superior nature of Vegemite. The common ground here is that we are all the by-product of beer with added salt.

February 2021

Dissostichus Mawsoni

Steaming back out towards Tasmania, the bulk of the work is done, save scrubbing the factory. It took us only fifteen days of fishing to catch our research quota of 60 tonne green weight, and with the quantity sorted, the only thing left to do is a quality assessment.

This time Cookie lightly pan fries the steaks so we can taste unadulterated toothfish with just a little lemon or salt. Me, I'm one of those nervous pescatarians who can't deal with small bones or scales or exoskeletons on my plate, so toothfish already suits my narrow pallet of swordfish, salmon and tuna. The flavour of toothfish is milder however, and the texture far superior, maybe closer to lobster than say swordfish which can be a little dry and fibrous.

Arriving back into Hobart, there is now only one final task before we are once again set free onto the streets. Outside on the dock several trucks are waiting for our 37 tonnes of processed Dissostichus Mawsoni. From here they will make their way around the world, mostly to fine restaurants in America, perhaps once again to the Chinese market.

My only hope is that those who are lucky enough to find toothfish on the menu are also lucky enough to read the tales of its origin. For it is us, Vegemite-loving maverick renegades of the Antarctic Aurora, who catch the best fish in the sea. And we do it at the edge of the earth.

Photo: Eating toothfish gave me the bright idea of photographing toothfish steaks after we ate them.

Photo: Nothing incentivises a worker like -40 degrees celsius.

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