



SUMMER BY THE SEA

Southern Right Whales- The Right Whale to Watch!

GREG MULLER:

Mandy.

MANDY WATSON:

Hi, how are you going?

GREG MULLER:

Good.

MANDY WATSON:

Can you believe it's summer?

GREG MULLER:

I know, you've got the right idea. I've got a beanie in the car, should I take it?

MANDY WATSON:

I know what it's like up here, so you probably need a beanie.

GREG MULLER:

I'll go and grab it!

(‘DRIFTING UPWARD’ BY MOUNTAIN HOUSE PLAYS)

GREG MULLER:

So normally we'd remind people to bring a hat and sunscreen when visiting the beach. And while that still stands when visiting Logan's beach near Warrnambool, to watch whales, a beanie and jacket are a good idea too no matter what time of year. Welcome to a Summer by the Sea Podcast,

I'm Greg MULLER. This podcast is part of Summer by the Sea which is run by Coastcare Victoria. We hope that by listening it motivates you to learn more about these magnificent mammals and inspires you to look after the marine environments they call home.

Let's start by introducing yourself.

MANDY WATSON:

So my name is Mandy Watson, I work for the Department of Environment, Land, Water and Planning as a Natural Environment Programs Officer, here at Warrnambool.

GREG MULLER:

Firstly, you should explain where we are.

MANDY WATSON:

Yeah, so we're standing on the Logan's beach whale watching platform, which is located just to the east of Warrnambool. Which is located in Eastern Maar Country. And I'd really like to acknowledge the Traditional Owners of the lands on which we're sitting. We try to work as closely as possible with



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the Traditional Owners, and partner with them on many projects. That's one of the things that we think is really important. This is their country, and they feel very strong connections to that country. I know that they have expressed that sea country is really important to them. And they've expressed to me their interest in getting involved in the research.

And I know spiritually that these whales would have been and still are extremely important to the Eastern Maar traditional owners. So, this is a beautiful large platform specifically built for people to come and watch whales just off the coast here. The Southern Right Whale is a species that spends a lot of time in shore when it migrates to Australian coastal waters. And this place here, Logan's beach is the only calving nursery for Southern right whales in the south eastern Australian region. And for many many years now, there's been a small group of females that have been returning to this particular location to calf.

GREG MULLER:

And how common is the sightings?

MANDY WATSON:

Well it's a reliable spot to see them. But there is only a very small population of Southern right whales in south eastern Australia. And the average number of females that comes here every year to calve is only two. We've had up to seven or eight females here in the nursery in a given year, and some years we have none, but the average is two. So, in most winters, you can come here and reliably see a female and a calf through the winter months.

GREG MULLER:

Why here? Why did they come here?

MANDY WATSON:

Well, Southern right whale females have what's called a site fidelity or calving site fidelity. So, they have a very strong affinity for the same calving locations. So, the females come back to the location that they were born, and they bring their calves back here. So, what we think has happened is that this particular part of the coast was an area that a couple of females survived the onslaught of commercial whaling. And those females lived on and their female daughters brought their calves back here. And so, it's remained, there's a cultural memory, if you like, of this particular location for Southern right whale females.

GREG MULLER:

So when did the whaling stop?

MANDY WATSON:

So, whaling on Southern right whales occurred between about 1790 and as late as 1980. But in this particular part of the world, it was around the turn of the last century. So, it was very rapidly depleted, out of places like Portland and Port Fairy in the space of about 30 or 40 years. It pretty much wiped out the entire population in this part of the world.



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GREG MULLER:

Right. So, when you say almost wiped out, how close did we get?

MANDY WATSON:

Well, the species was really brought to the brink of extinction in the southern hemisphere. It's believed that probably every breeding female virtually was taken from these coastal waters. So, if you think about a species that has the females needing to come back to the same locations to calve; if those females are continually being hunted, and there's none to return that you can see that there's really almost complete extinction of the species locally.

GREG MULLER:

And so it's stopped here for almost 100 years. And have you seen the benefits of that?

MANDY WATSON:

Yeah, so the Southern right whales been protected since, it was the first species globally to receive international protection in about 1935. But there was, still continued illegal hunting by the Soviet whalers in our waters. And so that's why hunting continued right up until as late as the 1970s and 1980s. Offshore, probably in the feeding grounds, not in Australian territorial waters. And at the time that hunting ceased, it was thought to be around about 300 individuals using Australian waters only. Now the current population estimate is only around 3,000 individuals. So, in all of that time, we've gone from 300 to 3,000. So, it's a very slow recovery process. And in south eastern Australia, so there's two genetically distinct populations using Australian waters, Southeast and Southwest.

So, the southeast population, which is Victoria, New South Wales and around Tasmania, the population estimate for that genetic group is around 300 individuals. So, we still got a really long way to go, this part of Australia was the most heavily hunted. As you can imagine, this was the most heavily populated area. And we're talking about whaling that was conducted from shore, it was shore based whaling so they could just row out from shore. And because these whales have the habit of aggregating very close to shore, what they were an easy target. Their called Right Whales because they were the right whale to hunt, they were considered the best whale, they were close to shore, they were very large whale, they have a lot of blubber, so they yielded a lot of oil.

They've got very long baleen plates and baleen was another really useful product. Similar to plastic, it's very strong, but flexible product, and it was used in things like corsets. So, anything that would have required a sort of strong, flexible, plastic like product. And when they were killed, they floated, so that made them easy to retrieve. So, for a whole range of reasons, they were considered the best whale to hunt. And so, they were the most targeted and whalers switched to other species once these whales were depleted.

(‘DRIFTING UPWARD’ BY MOUNTAIN HOUSE PLAYS)



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GREG MULLER:

When you see them here in winter, where have they come from and where are they going?

MANDY WATSON:

So they are a migratory species, they migrate from feeding grounds somewhere between here and Antarctica. Their feeding grounds are not well known, what we do know about the locations are basically information obtained from whaling catch records from the Soviets. So, they feed somewhere between here and Antarctica, they don't migrate as far as say humpback whales do. And then so that's in the summer months that they're feeding down there. And in the winter months, they migrate here to the shallower coastal warmer waters, for calving and nursing their young. But there's still quite a lot of unknown about that migration. It seems to be that it's mostly the females. And they're accompanied by some young whales, but also some males, but probably not the entire population is migrating to here, because when you think about it, the females are coming here for shallow water protection and for warmer waters. And the males don't necessarily need to do that unless they're chasing females to breed with.

So, it's mainly those females, now the females calve once every three years. Their gestation period is 12 months, they nurse the young for 12 months, and they have a break, and then they return, if they get pregnant, they will return. So, the average calving interval is about three years. So, what that means is that you get a cohort effect in the population. So, say this year, you would have a third of the population of females migrating presumably. And then next year would be a different third of the population. And in the following year, it would be the final third of a population that's migrating. And we use photo identification as a technique for studying them. So, we can track individual whales.

They're very easy species to photo identify, because they have these growths, on the tops of their heads, or around the whole head, called Callosities, which are thickened patches of skin. They're all born with their own unique pattern of these callosities. And the callosities become inhabited by tiny white creatures called sea lice or cyamids. And they stay in those callosities and they make those callosities look white against the whale's black skin, so they stand out a beautiful bright white colour. And every whale has a unique pattern so if we can get a good photograph looking down on the top of the whale's head, we've got a great like a fingerprint. We've got a great ID on that individual; we can track it.

So, we've got a photo identification monitoring program that's been running for decades. And Logan's beach is the only established calving sight within that whole southeast region. For that southeast population, and we know that we only get on average two females a year coming. We think we've got around 12 or 15 individuals that are using this particular location in total. Calving is being seen in other locations or females with calves are being seen at other locations in the southeast region. But there are no other locations where they're regularly coming back. So that would suggest that if they were calving locations, and we know that there would have been. Particularly in the southeast coast of around Tasmania, and places like Portland, down at Wilson's Promontory, so all on the western coast of Victoria down to the Prom, Eastern Tassie, and southern



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New South Wales, there would have been aggregations there and they've all been probably hunted out. So that's why the species in the southeast is taking so long to recover just a really small base. And when you couple that with all of the threats that these whales still face in modern day, even though they're not being hunted and killed. They're still killed by accidents with ship strike, entanglement with commercial fishing gear and disturbances is also a factor, noise disturbance in their nursing and resting aggregation areas.

GREG MULLER:

The viewing platform is always open, and ramps allow easy access to both levels, wide tops on the wooden barriers are ideal to rest cameras and binoculars on. Interpretive boards about the wildlife habitats and the whaling history of the area are dotted about as you move around the platform.

MANDY WATSON:

Yeah, so one of the unique things about the Logan's beach platform is that you literally can drive here within five minutes of the town. And you can drive right up to the walkway and walk straight up onto the platform which sits on a very high dune. And we've got really, quite a good elevation here looking down onto the ocean, it's a very strong active surf area. And it's quite a wild looking ocean. And often during winter, you can imagine during winter, what it's like standing up here, basically facing the Southern Ocean there and copying all of the elements. But it doesn't, it actually adds to the experience of watching the whales out there. And even though those whales are coming really close to shore, we are close to the township to the city of Warrnambool, it feels like you're out in the middle of nowhere, which is fantastic.

The platform itself is huge. It's really, it can accommodate I've been up here on days when it's really busy and it can accommodate 1000 people on a good day. I've been up here when we've had least hundreds of people when the word gets out very quickly when the whales are in, in town, if you like and the word gets around, so the locals come flocking down. And the tourists are also aware that this is the time of year to come. And many people travelled from all around the world just to come here. I mean land-based whale watching I think is the way to go. We're having no impact on the whales while we're doing it. And there is actually a vessel exclusion zone I should mention around this particular part of the coast in winter. To protect those whales when they're inshore from the disturbance of boats. So, it's a really special place. And it's hopefully the foundation for recovery of the species in this part of the world.

(‘DRIFTING UPWARD’ BY MOUNTAIN HOUSE PLAYS)

GREG MULLER:

And knowing we're here in the middle of summer, and it's not swimming weather. But there's another reason we're not going to be swimming because there's a big sign up that just says there is shark activity been seen. Was that recently?

MANDY WATSON:

That was recently there was a shark cited, I think down at Port Campbell. And then about a week



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later here, whether or not it's the same shark, who knows. But yeah, the signs are up and there's no surfers out there today. It is a popular surf spot. But I certainly wouldn't swim here. Even if there were no sharks. It's just not a safe swimming beach. But when you see the whales out there in all kinds of weather, they just look so unfazed by it. I mean, they're enormous. And you can imagine they've obviously, this is calm waters for them. It looks wild to us. But this is calm, this is quiet and probably warmer. Having said that, I think that the reason that they come to shallow waters is it's much safer from predators. For a killer whale, for example, to launch a successful attack on a southern right whale calf, they need to be in much deeper water than what is here. It's not easy for them to successfully kill a whale in very shallow water. And I think that's the reason why they use these areas.

GREG WILSON:

And so what other whales are we seeing here? Mostly Southern right whales? Yeah, what else?

MANDY WATSON:

Yeah, so this, as I said, Southern right, the whale that you would see close to shore in winter. Humpback whales have recovered really well from whaling. They probably weren't hunted to the same degree that Southern right whales were hunted. So those, there's also an east and a west population of humpback whales. And they've recovered spectacularly well. So, it's estimated that there's around 30,000 humpback whales using the east coast of Australia and another 30,000, using the West Coast. Compared with the whole Australian population of 3,000 of Southern right, so they've done well. And they migrate from Antarctica up the East Coast all the way up to Northern Queensland for breeding, but they do migrate through here.

GREG MULLER:

So how important are the volunteers in this monitoring?

MANDY WATSON:

Yeah, the volunteers are enormously important now. There's a couple of really dedicated volunteers that come here, to Logan's beach, but also down at Portland. There's one person in particular who comes up here every winter, he spends the entire winter, every day all day at the platform. So, and he's been doing that for, I think about a decade now. So, he's been working with us for a number of years, helping us with our observations and also helping us to identify individuals. There're others, as well. There's a group of photographers who are really interested in the whales, and they come they're fantastic. They take photos, we've got great lenses on their cameras. They take great ID photos, and they contribute to our catalogue. And there's a whole group of them between here and Portland, a large number of photographers. Who we call the whale paparazzi, they're down here, and especially when there's a few whales out there, you can go in catch up with them. And it's like the press. They're all out there with their cameras and their lenses. And they're contributing actively. So, we've also started to recruit more incidental records from the general public through a platform that we've set up online for people to contribute their sightings information.



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So, citizen science data is actually a really important part of this program. Now we've got in the last few years two thirds of the data that we've had for the photo ID catalogue has come from those photographers, from citizen scientists.

GREG MULLER:

So how many individual whales have you identified?

MANDY WATSON:

In my catalogue, there's around 400 different whales. The population estimate for the southeast is only 300. So, to explain that, we know that the whales when they come north, from their feeding grounds, they come to the coast, and then they move west, along the coastline here into the Southwest population. So, we think what's happening, we know what's happening from our photo ID matching. That a proportion of the whales that we see in the Victorian context, and also anywhere in the southeast, a proportion of those whales are actually part of the Southwest population, and they're just moving through our waters.

So, we have whales that are coming here to breed and stay in the southeast there the Southeast right whales, but we also get the Southwest whales moving through. So that's why the catalogue is actually bigger than the population for this region. But for Logan's beach, we've only got about 12 or 15 known females that are regularly using this area. We've recorded around, I think, 70 females at this location, but only 12 or 15 that are regularly using this location.

GREG MULLER:

How do you identify the difference between a male and a female?

MANDY WATSON:

You don't, I mean, you can but it's based on their behaviours. And so, the presence of a calf obviously, is the first one. But if you see them, and normally these whales are solitary, but they do aggregate socially during the winter. When you see them in what we call mating pods, where there's usually a group of males pursuing a female. You can pretty quickly work out which is the male, and which is the female just by the behaviours. It's fascinating. You get a female who's just been constantly pursued and jostled by three or four males, and she will constantly evade mating. It's really interesting and it can go on for days. So, they've got to they must expend a huge amount of energy in just trying to successfully mate.

GREG MULLER:

So, with hunting banned and the southern right whales now having worldwide protection. Their numbers are slowly recovering, but there remain other threats to the whales.

MANDY WATSON:

We know that whales are struck and killed by ships. We know that whales become entangled in commercial fishing ropes. The department has whale stranding and entanglements are considered emergencies in Victoria. We're pretty unique in that regard. And we have training and resourcing set



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up and put in place to deal with those incidents. An entanglement in particular is pretty tricky, but we have a number of trained people along the coast of Victoria and specialised equipment ready to go. So that we can if we get a report, we can respond to that get out there and try and disentangle it. It's pretty dangerous work that the techniques are highly specialised, and the equipment is specialised. And it's been based on techniques that were developed in the Northern Hemisphere for trying to rescue the North Atlantic Right Whale in particular, which is really on the verge of extinction. There's, they're down to their last few 100 whales, and they suffer greatly from vessel strike and entanglement. They're the two key threats. So, we have to deploy these specialised techniques and crews.

Which is based on ironically, the technique is based on the old whaling techniques. Of the whalers used to harpoon the whales and attach with long ropes and attach barrels to keep the whales on the surface and slow them down, eventually kill them. What we do is we attach to the entanglement on the whale, the entanglements usually on the tail, but it can be around the body but or around the mouth, but usually they end up on the tail around the tail. And if you can get a long rope onto that entanglement, and we attach very large buoys. Inflatable buoys to those to slow the whale down and tire it out and keep it on the surface. That means it's a safer environment for us to come in. And we use small vessels. And we come in with specialised blades on long poles and cut the entanglement away. And we aim to cut away everything because if anything stays on the whale, it often or normally ends up being lethal.

GREG MULLER:

I can only imagine looking out at the sea today, and it's quite choppy. What a difficult job that must be?

MANDY WATSON:

Yeah, so and one of the biggest challenges we face in this part of the world is the weather and the ocean conditions. And we have very strict protocols about how we do this work. And the biggest thing is to try and get an aircraft in the air as quickly as possible. To try and locate the whale because usually these reports come in someone's seen it somewhere at a particular time. But those whales are usually on the move. So, trying to relocate that whale. So, aircraft up as soon as possible, try and find that while once we find it. We'll get boats out there to stay with it as soon as possible if the weather permits, and then we'll get our crews with our gear. The process can take a day or longer. We have satellite trackers that we can put on to the entanglement as well.

GREG MULLER:

That's extraordinary. So, if you've been on some of these?

MANDY WATSON:

Yeah, so I have actually led the training for many years. We disentangled one successfully a couple of years ago in Poland, which was fantastic. And that actually was helped greatly by the citizen scientists, they reported it, they spotted it. First of all, they reported it to us. They kept an eye on it while we were getting our crews out there. And throughout the whole process, it took us four days



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to get that gear off it. And throughout that whole process, they were there along the coast, monitoring everything documenting the whole thing. The local community was so involved in that a local rose farm named a variety of rose after that, particular locals were calling that whale tangles. That sort of sense of ownership of these whales is fantastic to see.

The other major threat is potentially climate change. What we have started to see here and at many other locations around the southern hemisphere for Southern right whales is four-year calving intervals. So there seems to be a bit of a stretching out from a three year to a four year. And that is a bit of a worrying sign, you know that the most obvious cause for that would be nutrition. If they're not calving as often it's most likely related to their health and their nutrition. So, what is it that's causing them to not calve as often? Are they not getting the food and what's causing that? And, you know, obviously the most likely causes are ocean, changing ocean temperatures and currents. Whether they're not finding the food, or whether the systems are just not as productive or whether there's other species competing with them. And that is worrying, a real worry. This season just gone we were due to get two or three well known breeding females; those females didn't arrive. So that means they were here in 2017. They were due here this year. If they if they come back next year, they've obviously extended their calving cycle by a year.

In 2019 we had two females that were resident here, and both of their calves died while they were here. We've never recorded that before, and we don't know what caused that. So, you put those two things together and it's a worrying sign for Logan's beach, but for the population as a whole.

GREG MULLER:

But you've seen this what since the '80s and '90s since there's been close monitoring, you've seen the same whale come back?

MANDY WATSON:

So I can tell a story about one female in particular that the locals all called Wilma. She was easily recognised by the locals, not for her callosity pattern, because people didn't really, there was no photo ID research happening here at that point in time. But she had a small piece of the left of her fluke, one of her flukes missing a corner of a fluke missing. So, when she fluked, when her tail was up out of the water, you could see that little piece cut off. And everybody knew that was Wilma. So that's how she was recognised. And we obviously got an actual callosity pattern ID on her. And we've been monitoring her for many years.

So, we've got a really good record of her history here. And so, she was coming regularly to calve, I think we had her every three years, sometimes two years, occasionally female will come back after two years. And that suggests that she's actually lost a calf and she's gotten pregnant earlier. So, there were a couple of two-year intervals in that period of time. But she stopped coming in the last time we saw her here was in 2002. And then she stopped coming. So, we just assumed that she had either died, or she was no longer calving, she passed breeding age.



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That was the assumption. But once we built up the catalogue for the Southeast, in 2016, we did a cross matching exercise between our catalogue and the catalogue that was held by the West Australian Museum. We picked up Wilma at the head of the bite. So, she's actually done something that's really not normally seen, and she switched her breeding / calving location.

GREG MULLER:

Do you name many of them?

MANDY WATSON:

Yeah, that's a great question. Actually, in the catalogue they have a catalogue ID number. And I try, I do, naming is something you just can't help doing. And it really actually really helps. As a scientist, you find that quite amusing. But it really helps the community to you know that with that ownership. But also, it helps them to identify individuals and follow individuals and say, well, that's big lips, or that's long combing. So, we tried to name them based on the features of their callosity. That's the best way to do it. Because it, actually if you see the callosity, you can say oh, that's big lips, because she's got extremely large lip callosity. So that's long combing, because she has a long thin, combing callosity. But inevitably, people start giving them humanistic type names. And that's a little harder for people to follow. If you're doing the research, it's a little harder to sort of follow. So, it's an inevitable thing. And I think it's actually, it's great for the community.

(‘DRIFTING UPWARD’ BY MOUNTAIN HOUSE PLAYS)

GREG MULLER:

Thank you so much.

MANDY WATSON:

No worries, you're welcome. Thanks very much.

(‘DRIFTING UPWARD’ BY MOUNTAIN HOUSE PLAYS)

GREG MULLER:

Summer by the Sea is organised by Coastcare and Parks Victoria. It's a great way to learn about the amazing marine species and habitats along Victoria's coastline. Also, volunteers and community organisations are critical to run the program. A lot of these events are run by people who work hard to protect and improve the health of Victoria's marine and coastal environments. Summer by the Sea events show people how we can all make a difference.

(‘DRIFTING UPWARD’ BY MOUNTAIN HOUSE PLAYS)