



Formation of Port Phillip and an insight into its marine inhabitants

(MUSIC PLAYS)

RAY LEWIS:

Welcome to the Summer by the Sea activity, which is run by Coastcare Victoria. We hope to pass on our knowledge from years of volunteering and see you down here at Ricketts Point.

(MUSIC PLAYS)

My name is Ray Lewis and I'm a local Bayside environmentalist. And I'd like to talk to you today about two things. One, a rather exciting history of the bay, and then get on to something quite different and perhaps unexpected and that is squids. We acknowledge and respect Victorian traditional owners as the original custodians of Victoria's land and waters and their unique ability to care for Country and deep spiritual connection to it. We honour elders past and present, whose knowledge and wisdom has ensured the continuation of culture and traditional practices. For fifty thousand years, they've looked after this land and cherished it. They've a thousand stories about it. They know exactly what to harvest and when to harvest when the take eggs not out of season on a fish and more. And it's our proud heritage that I would very much hope that each of us who views videos like this takes to heart and follows on that tradition so this land and these beaches, and these environments will be here even better for future generations.

(MUSIC PLAYS)

The history of the bay is really quite wonderful. It goes back millions of years. An excess of 5 million years ago, we had these Strzeleckis' and the hills down to the south here all rising and the centre part, they run down to Portsea which we call the Mornington Peninsula that it rose too and the land between here and there, both those things settled down, came deep enough for the water from Bass Strait to run in. And it's wonderful bay of one thousand nine hundred and sixty square kilometres, the largest and the cleanest body of water in the entire world next to a major city. That water filled up very rapidly with wildlife. Now the bay hasn't been as calm and as peaceful as it might look today to most of us. It's been rather dramatic, and there's one good example, round about twelve thousand to sixteen thousand years ago, we had an Ice Age and that Ice Age sucked up the water of the bays all over the world and sea levels dropped. The bay dried out and people went out there to live again for thousands of years. And at that time, at the Port Phillip Heads, there was a waterfall tumbling down, and it tumbled one hundred and thirty metres down to the sea and you could see the land bridge to Tasmania that just disappeared into the mists. So, it must have been a wonderful time. However, that slowly, slowly, slowly changed as the Ice Age vanished and the waters rose again and refilled the bay. Now we'd normally think that that was a long time ago, if you're a geologist or an archaeologist, you know, twelve thousand or sixteen thousand years ago is like yesterday. But, but and we have this exact from Aboriginal history, from the Bunurong People. They call that lake Lake Nairn, just in passing, instead of Port Phillip. The Bunurong people have passed on the story of another dramatic event that occurred here. And that was the time when, for some really unknown reason at the moment, our rivers all started flowing down with a lot more silt



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and mud and that eventually silted up the heads and created a barrier. And when that started, the waters of the bay couldn't get refreshed from the Southern Ocean and evaporation exceeded the inflow. So, once again, the bay slowly, slowly, slowly sank until we had just one creek down the bottom or one river down the bottom, and a lake at the end which we call Lake Nim, as distinct from Nairn for the main body of water itself. And things are pretty good again. So, humans are forgetful. All our Aboriginal friends from the Bunurong People in particular wandered back out there and had a grand old time until in one catastrophic moment, that mud barrier breached and it breached instantly, collapsed and all the people out there, there's nothing you could do. You couldn't run away from it. The waves came forward, crashing through right through the bay up into all these areas so here, knocked down every single tree around the bay backwards and killed every person out there. So, it was a big day and traumatic day. I'm just reminding you that because that wasn't so long ago. That was only eight hundred or nine hundred years ago.

Since then, the bay has been very stable. Its marine life has expanded dramatically and we've begun to deeply value what's here. But unlike our Aboriginal friends, when we arrived in the late 1870s/80s, we began a deep predation of places around here, in particular Ricketts Point, we spear fished, fished out, ran motors through, trampled and carried on as if it was gonna last forever. And it didn't. So, for one hundred and something years, things got worse here, because we'd actually broken the food chain. Take one predator out, take one special grass that people feed on animals feed on out, do that and eventually it collapses. And I did. When I first dived here, it was still unprotected and the seaweed alone was covered with brown mulm everywhere, and you couldn't find much a fish. I never saw decorator crab, I never saw even the Port Jackson sharks, which are quite common now. And then in 2003, the state government thank goodness declared a number of sanctuaries around the top of the bay and around the bottom of the bay. They cover about five percent of the bay now. And those sanctuaries had a special rule, which made it so simple and the first to do that in the world was the Victorian Government. No take. You can swim here, you can do whatever you like here pretty well, you can paddle in a canoe, but no intrusive noise, no intrusive engines, and you couldn't fish, couldn't spear fish or anything else. After seven years, things returned to normal and out there now we can find fish of all kinds. And in this sanctuary in particular there's one thing I noted. We had just a little Morwong, about that big. I still like them because they're soft hearted and they weren't too scary, but they never got much bigger because they'd been fished out before they had a chance to grow in the past. After seven to ten years, in about 2010, we're starting to find Morwong, twice as long and four times the volume. That's an indication that things return to normal. And over at Point Cook declared a sanctuary in 2003 as well, in the last three or four years, a diver there went into the water and found to his absolute delight, one hundred plus beautiful big Port Jackson sharks all girls, sitting peaceably in the water. Now that was impossible in my time. They'd been fished out and speared out, panicked and gone. So, there are two examples of how good this place is, and how effective the declaration the sanctuary has become.



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So, now I'd like to talk about that humble creature one might think, the squid. To start with, a squid's a little animal, fleshy body eight arms, two long feelers some eyes or brain and that sort of stuff. But you need to see where they fit into the scheme of things for the story to make sense. Now squids are called cephalopods. They're part of the cephalopod family. The cephalopods are squid, the cuttlefish, the octopus, and the little Nautilus, a beautiful little shell. It's a little octopusy thing with a wonderful shell that's full of eggs. The squid is a remarkable creature. There are over three hundred species that we know of in the world. It surprised me. And many, many, many of them and the reason why we didn't know there were so many live one thousand foot down in the water. That's 300 metres to the current generation. Downwards, huge pressures, no light, icy cold, but they thrive down there. And as a result, they've generated some rather rare capacities to do that. And you might ask yourself how they vary in size. Well, if you pulled off your boot and your sock and looked at your big toe, that's the size of one of the squid, the little dumping squid. And if you were to stand here and place your hand across the reef for fourteen big striding paces and look back to where you came from, that's how long the biggest is and that one weighs seven hundred and fifty kilograms. So, that giant squid, which lives in the deeps, occasionally came up. People are very frightened of those in the northern Atlantic and the Northern Pacific and that's where most of them are in those deeps.

And there's many, many drawings online you'll be able to find of the great giant squid coming up, wrapping its arms around a boat and tugging it down. Back to squids, and our local squids, their little body is protected by a mantle. It's rather remarkable thing the mantle. It's a thick and strong and it can give them plenty of protection and warmth, but it also carries some special qualities. If the squids want to move, they bring water into the mantle between the mantle and the body and they squeeze, squeeze, squeeze, squeeze, squeeze into a tube and that syphon comes out the front of their body and they go backwards jet propelled. And the reason they go backwards jet propelled is it takes a lot less energy than going forward when you got all these flailing arms and you've got the flailing other pieces of your body and rest of it to go backwards which is smooth and somewhat streamlined. So, that syphon comes out of their back, goes forward under their mouth squirts out. How fast can they move underwater? Believe it or not, as Ripley used to say, forty kilometres an hour. Apart from that high speed jet propelled travel, it's got another bonus. They can actually angle up, come out of the water like a flying fish and drop back in again. They also can have chromatophores, which are cells on their back, which when they take in white light, can make a decision to hold back all the rainbow colours within white light, and whichever one they like go return. So, if they decide to hold back every colour of green let the green light come out, they'll look exactly like green sea grass and they can match it exactly so much so that a normal mind can't see them.

And as well, they carry within their body an ink sac. People often heard of squid ink. Might have used it in the school days perhaps I don't know. But the squid ink is there to protect them as well. So, if you're on the bottom, you're a squid, and you're fairly susceptible to attack because you've got a soft body shark comes nosing up to you, (BLOWS) squid ink comes out, completely envelopes the



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area, shark can't see through it, gets confused, it's never seen that before you go backwards at forty K. You got every chance of being out of sight before they get their act together. And if you need to, you can jump out of the water and settle down on the bottom on a rock face anything you like, you can change colour to that as you're going down toward it. And as well as that just in case, like many little animals like that, the top of them is brown. So, if a bird or someone is looking through the water down, they'll tend to see them related to the bottom and think they're stone or something, not notice them. And the bottom is very white so when people, when the other animals look up, a predator perhaps they're more in tune with the sky and the light. Another thing about these wonderful little creatures, the squid, is they've got three hearts. Not one, not two, but three. One's specialised for the gills on the left-hand side of the body to keep them pumping oxygen and things they need out of the sea water, one for the gills on the right-hand side and the heart in the middle to run their major body and run wonderful things, wonderful things like sending instruction to the mantle with all those wonderful colour cells turn green, turn red, turn yellow.

And when they're mating I would think, I don't know this for fact but it's highly likely they Colorscope with all the colours of the rainbow. It looks splendid rowing through them. It must be a wonderful sight to see. And the last small comment about the squid itself is that their blood is different. Our blood is red. Haemoglobin which we've got actually carries a lot of iron and that causes our blood to be red. Their blood carries haemocyanin and that's got a copper base. That copper base causes the blood to turn blue. So, as a last note on this wonderful creature, I'd like to describe them as the blue bloods of our oceans.

(MUSIC PLAYS)

I hope you've enjoyed learning about the incredible squid, but it's only one of the very, very many creatures out here in our bay that also have their own stories. For instance, we have a crab here, the decorator crab about that big.

He walks along the bottom, thinks he'll get caught, so he snips off sea grass puts on the hooks on his back so you can't see him. And more miraculous than that, if he finds he needs a lot more coverage because things are a bit grim he snips off the sea grass, puts on his tongue with an underwater superglue, and sticks that on his back. The bay is full of wonderful stuff like this. And I'd say to all of you join in on Summer By The Sea activities, get down to the beach, look for a local marine care group or whatever and join them. And a whole range of disabilities including blindness can be catered for. We have the Disabled Divers Association, which has taken people out with a whole squadron and given them the one experience of their lives that they never thought they'd get. So, anyone can come down and get involved and take advantage of this rare world asset that we have here in Port Phillip Bay.

(MUSIC PLAY)



SUMMER BY THE SEA

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Now I also should comment at the end here on the crucial role that volunteers play in maintaining our wonderful waters in Port Phillip Bay. I'm proud to be one of those volunteers. I'm involved every day and I think it's significantly important to me in my quality of life and mental health and I say that for many others too. So, go for it. Volunteer and get involved. I'd love to see you down here one day!.

(MUSIC PLAYS)