



Coastal Critters - WildlifeXposure

(SOFT MUSIC PLAYS)

XAVIER MORELLO:

G'day folks. My name is Xavier Morello from WildlifeXposure. And today, I've been invited by Coastcare Victoria's Summer by the Sea program to introduce you to some amazing coastal creatures that live along our Victorian shoreline. The Summer by the Sea program aims to get you excited about Victoria's precious coastline and marine environments and learn more about the amazing marine life that inhabit them. I'd also like to take this opportunity to acknowledge the Traditional Owners of the land that I'm walking on, the Wadawurrung people.

(MUSIC PLAYS)

When visiting the beach and exploring the rock pools, there are a few safety factors to consider. Number one, the sun. Here in Australia, we've got to be careful we don't get burned. Slip, slop, slap, put on a t-shirt, put on a hat. (LAUGHS). Make sure you're protected from the strong UV rays.

Number two would be to consider the weather for the day, not just the sun, but the wind and the tide. And today we're going to explore the rock pools. I want to get right out there to do that. I need a low tide. While today we're lucky we have a beautiful, calm ocean with a soft offshore breeze, the ocean can change really quickly. The next minute it can be rough, wild, and woolly. So it's really important to understand the ocean's conditions for the day and the activity you wish to pursue. Thirdly, if we're going to go exploring on these gnarly, craggily rocks, we're going to need some protection for our feet. These rocks can also be super slippery, so take your time and find your footing.

Here in Victoria, we have heaps of different species of seaweed, algae that grows along our shoreline. Did you know, here in Victoria, along our coastline in Port Phillip Bay and Western Port Bay, we have more marine biodiversity than the whole of the Great Barrier Reef? Biodiversity meaning a variety of different living things. While the Great Barrier Reef have biomass, lots of fish, lots of coral, here in Victoria we have a variety of corals, sponges, seaweeds, different fish species, snail species. We have more variety. Our southern, cooler temperate waters support vast and complex ecosystems.

Here on these exposed rocks at low tide, there is a myriad of marine life, mostly invertebrates. It's always really important to remember, make sure you can always see your fingers when you're exploring the rock pools. Animals live under rocks, in little crevices. If you place your fingers where you can't see them, you don't know if it's safe, and there are animals that live along our Victorian coastlines in our rock pools that can be dangerous.

Number one would be the infamous blue-ringed octopus. One of the most venomous animals in the world, very shy creature, very non-offensive. Doesn't want to jump out and get you as long as you



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leave them be. If you're lucky to find one crawling through a rock pool, awesome. Observe that animal but do not touch it. The bright blue rings will try to warn you to leave them alone.

Make sure you don't lift any rocks. Moving around the rocks can actually disturb or even hurt some of the animals that live there. So my advice, always make sure when you're exploring rock pools, you can see where your fingers are, and you know what you're touching. While most of the animals you'll find in our rock pools are safe to touch, it's best to handle them as little as possible for their own safety and always return them safely and gently back to the water where they were found. I have a licence with Fisheries Victoria that allows me to collect, keep, and handle some species for the purpose of education.

Here I have a few different species of sea stars that are found along our shoreline. The biscuit star, what a stunning little star. They get their name because they look like a... Yes, you guessed it. A biscuit. These have got tough, spiky skin. In this case, this animal's skin is almost like little platelets, armour to protect it. We call sea stars and animals like them echinoderms, which means spiky or tough skin. We have many different types of sea stars in our southern waters. This would have to be one of my favourites. This is a Vermillion star, known because of its bright, vibrant orange and red or yellow colours. Isn't it stunning?

Another common sea star you can find in our rock pools is this Spotted sea star. And it's named that because of its spot-like plates across its arms and body. A Zig zag star's another really common sea star you can find when snorkelling, diving or exploring the rock pools. It has a zig zag -like pattern along its arms. Sea stars' arms are also sometimes called rays. This is a Crimson star, or Gunn's six-armed star. If I turn it over quickly, you might see those little orange bits in the lines. They are, in fact, its feet. A sea star does not have two feet, but thousands and thousands of tiny little feet we call tube feet.

One of the most common sea stars I tend to find when exploring the rock pools is a common sea star, or Eight-armed star. They could be a variety of colours, blue, reds, oranges, greens, purples. Ooh, what's really interesting about a sea star, we can see it here, right up close, if I can bring it up there. That little blob in the middle that is, in fact, its mouth. Its mouth is on the bottom because all the food they love to eat, yep, is down on the bottom, moving across the bottom of the rock pool, bottom of the sea, they basically are just eating anything they come across. And a sea star, not being able to fit food in its mouth, what they do is kind of bizarre. They take their stomach acids out (RETCHING SOUND) spew them up all over their food, melt their food externally, and then... (SLURPS) suck their stomach back inside. Bizarre. (LAUGHS)

One sea star that really stands out is the largest species we get here in our temperate Southern waters. And it is a many-armed star or Eleven-arm star. This one's actually quite a medium to small size. I've seen them as large as car tyres. They are humongous. They're also sometimes called an Eleven armed star because they do normally have eleven arms. But as you probably know, a sea star



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has this amazing adaptation where they can segment. Meaning if they break up into parts, they can multiply. Yeah. If an arm breaks off, whoop, just grows a new one. How cool would that be?

(LAUGHS) So they're amazing little creatures, well adapted to a very volatile, rough environment where they could easily be injured. A predator may attack them even, and they can grow back their arm, how cool.

Again, looking underneath, you can see the lines under the arms where the tube feet emerge from to stick to surfaces. They have thousands of these little tube feet, making them really, really strong when it comes to rough seas, they can stick to the rocks to stay safe. Also, the centre, that tiny dot in the middle, that is its mouth, again, you can see. Now, having its mouth on the bottom. Do you want to know where the bottom is? You guessed it, it's on the top. So its mouth on the bottom, the bottom on the top, things in the ocean are a little bit different to things on land.

Another type of echinoderm related to the sea star is the sea urchin. A sea urchin is covered in spikes to protect itself. And these spikes are known as bristles. I guess because they look a bit like bristles on a brush. The spikes allow them to move around, but they also use them to catch food. As food floats, passing, it's stuck in the spikes. They can even manipulate that food using their spikes and hold onto them almost like chopsticks. They can hang on to the bit of food, pass it through their spikes, down to their mouth, which is on the bottom. There you go. And the mouth being on the bottom, like a sea star its bottom then is up on the top.

Echinoderms have existed in our oceans for millions and millions of years. They were some of the first life forms on our planet. And in the cliffs behind me, there are fossils of sea urchins and other types of now-extinct echinoderms. Just like sea stars, they have tube feet that reach out past the spikes to stick to surfaces. Again, helping them to move around or even stick on so they don't get washed away. They don't have eyes, but they do have sensors, light sensors so they can tell when it's daytime or nighttime, mostly moving around in the dark. They are a lot safer.

Now, these animals do not look very appetising, and most creatures cannot eat them with their spiky defences. Although there are some that have adapted ways to penetrate through those spikes. Some sharks have tough grinding jaws to break through the spikes and eat the soft parts of the animal inside. Crabs can chop them with their claws of course, and even people, people eat them. And in New Zealand, they're very popular. They're called a Kina. What's eaten is, in fact, the eggs of the sea urchin. It's a soft roe, orangey coloured, that I've been told can taste quite sweet. The species we get here in Victoria are not venomous. I'm able to handle them quite safely. You just wouldn't want to sit on one.

Another group of animals that is really well adapted to this rough and rocky coastline are molluscs. And molluscs are animals with soft, squishy bodies and, yes, snails. So sea snails are, in fact, the



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largest snails in the world. Here on our Victorian coastline, the largest snail we have is the abalone snail. So abalones get a little bigger than this, and they are a type of gastropod, which means stomach foot. So basically, they're a big sticky foot with a stomach in their shell. But another snail that's really common along the shoreline is a snail with a really cool name, the Elephant snail. And he's actually stuck on this shell. The Elephant snail is called this because of its shell shaped like an elephant's toenail. Yep. I can see it.

They're a bizarre kind of snail. You can see it here. A small shell with a big black body. Now, if I can get him off the shell, oh, he's really stuck. See that, he sticks on. I'll gently, but firmly slide him off. He's really stuck. He's stuck. I can't get it off. I'll just leave him there. Really strong. You can see, muscly foot helps him to stick to a surface. Now these snails have a small thin shell, allowing them fit up under rock ledges, where they're going to be much safer from predators. Also from those strong tidal conditions and wave action.

Now, they are a herbivore, meaning they eat plants. Coming out onto the reef when the tide has covered the rocks, they'll start feeding on algae, and one of their favourite algae? Sea lettuce. Oh, you can see the long parts are starting to come out of his face. And those long parts are, again, antennae. They use them to feel their way around in the dark and underneath the rocks.

Octopus are another incredible creature that you'll find in rock pools along our shorelines. This is a sand octopus, and they do spend most of their time during the day buried in the sand, coming out at night to feed. They have amazingly long tentacles to reach across the sand when hunting at night to catch fish and crustaceans. Shrimp, prawn, crabs are their favourites. Octopus don't have teeth, but rather a beak that they'll use to crack open the hard shells of the crustaceans they love to eat.

Octopus, what an incredible creature. Eight arms, nine brains, and three hearts. Would you believe it? The next little rock pool resident I'd like to introduce you to is...Hermie, the little Hermit crab. Here he comes. These little crabs are pretty well known and they love to use old shells left behind by the snails. So when a snail dies, the shell's left behind, a crab, like a Hermit crab could even eat the snail out to take the shell. When they need a new shell, of course, they have to come all the way out to find a new shell, pretty handy way to get a new home. No stamp duty, no moving trucks, just jump on in.

Crabs are a crustacean and crustaceans have an exoskeleton, bones on the outside, and they also have 10 legs, but we can only see six legs of the hermit crab as he comes out. And that's because four legs are smaller on the back of his abdomen, his four legs are helping him hold onto the shell. And that's what's pulling him in and out. By moving quickly like that, he's hoping he may startle a predator, possibly me. He doesn't realise I'm not going to hurt him.

Can you see the long eyes popping out of his head? They're his stalk eyes, crabs have stalk eyes popping right out of their head. They're able to see up out of the sand or over the seaweed. Also his



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antennae, those long parts coming out of his head. He can feel his way around in the murky waters. This is a little red-legged hermit crab, and you can see those red hairy legs, but he doesn't shave his legs like people do. These crabs need their hairy legs to comb through the sand to find food.

Well, the tide is starting to come in. So we're going to head back to WildlifeXposure headquarters, where we keep a few other animals and some large holding tanks that we can have a look at.

(MUSIC PLAYS)

Always while visiting the beach, try to have as little impact on the environment as you can. While it's really tempting to take home shells we find at the beach, try to leave them where you find them, as they're homes for animals. Snails, crabs, octopus, they will live in these empty shells.

(MUSIC PLAYS)

Plastic pollution in our oceans is a huge problem. So when we can, picking up any little bits of plastic you see on the beach can make a difference. Making sure you take your rubbish home with you and don't leave anything that could get blown away from where you're sitting into the ocean is really important.

(MUSIC PLAYS)

It's important to remember the products we buy and the things we consume on land can have a direct impact on ocean pollution.

We're back at WildlifeXposure headquarters, where we keep a number of different marine species in some holding tanks we have at our zoo. There are many different species of crustaceans, such as prawns, crabs, shrimp, barnacles, and others. And in fact, crustaceans are the largest of all the arthropods, arthropods being animals with bones on the outside. This is an exoskeleton from a King crab. King crabs are the second-largest crab in the world, after the Japanese spider crab. King crabs are found in the deep water off Victoria and Tasmania.

This crab weighed six kilos and they can get up to a whopping twenty kilos. That is a big crab. Here in Australia, we have our own spider crab species. This is one of Port Phillip Bay's giant spider crabs. The males have larger claws to wrestle and fight with one another and to show off. The male crabs have a small V on their abdomen. Whoa, watch out for the claws. (LAUGHS)

A couple of times a year, the spider crabs go through an amazing transformation where they shed their exoskeletons. When this happens, they move into the shallow waters around Port Phillip Bay, where safety in numbers protects them from predators. Once they peel off their old bones, underneath, the new exoskeleton is quite soft. So predators, sensing this, come in and feast on the



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newly moulted crabs. So staying together in their big numbers keeps them safe. And this crab actually peeled off its old bones only a couple of weeks ago.

This is the old carapace, or shell of the body of the crab we're looking at right now. So as they grow, they peel off their old, smaller bones and become larger in size. This is some amazing time-lapse footage captured here at WildlifeXposure of this very crab moulting its exoskeleton. Large aggregations of spider crabs is a world famous phenomenon, and has featured on Sir David Attenborough's Oceans series.

Last marine creature is one with a very infamous reputation, the shark. This next shark that I would like to show you, it is completely harmless to humans. This is an egg from a Port Jackson shark, and the Port Jackson shark is the one we're going to look at right now. It hatched out of that egg about one year ago, you can see its mouth on the bottom, under its chin, and that helps this shark feed across the bottom of the sea. You can see here the gills of the shark, pumping the water in and out, helping them to absorb the oxygen from the water. Their beautiful stripes and markings help them to blend into the shadows on the bottom of the sea.

The Port Jackson shark is one of those sharks that has adapted to eating hard-bodied animals. They've got a grinding like teeth structure and strong jaw to help them to grind up crab's exoskeletons, snail shells, and even the spiky sea urchins and sea stars we saw earlier. While some sharks can be potentially dangerous to people, it's a very small number, with a very low percentage risk of you ever encountering or being hurt by a shark. Please remember our oceans are where sharks live and belong.

Unfortunately, many shark species are now listed as endangered, and with sharks having lived in our oceans for hundreds of millions of years, how can we imagine an ocean without them?

I hope you enjoyed learning a little bit about some amazing marine creatures we find along our coastlines and out in our oceans. And remember, it's vitally important that we keep our oceans clean and healthy, not just for the animals that live there, but all of us land-loving creatures also.

Our oceans are vitally important for the health of our planet. So let's all do what we can to keep the oceans beautiful, protect our beaches and our beautiful marine life. And remember when you're at the beach, have a great time, enjoy the environment, but that old saying goes, take only photos and leave only footprints. Thanks so much for watching. See you next time.