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Chatterbox #321 – A talk about Australian wildlife with Joey Clarke

Episode description

In this special episode, Andrew is joined by Australian wildlife expert Joey Clarke, Senior Science Communicator at the Australian Wildlife Conservancy. They talk about Australia's unique animals, conservation efforts, and fire management. Listen to hear fascinating stories about the wildlife of Australia and how it is being protected while improving your English skills!

Fun fact

Australia is famous for its marsupials, a type of animal which is well-known for carrying their young babies in external pouches or folds of skin on their bodies. About 70% of known marsupial species live on the Australian continent!

Expressions included in the study guide

- To fill a role
- Analogues
- Outlandish
- To branch off
- Safe haven / sanctuary
- Pocket-sized

Transcript

Note: The words and expressions that appear in **bold text** within the transcript are discussed in more detail in the Detailed Explanations section that follows the transcript. The transcript has been edited for clarity.

Andrew: Chatterbox episode 321, "Talking about Australian wildlife with Joey Clarke." Featuring Andrew, and special guest, Joey Clarke. Today we have a very, very special episode because in just a moment I'm going to be joined by Australian wildlife expert Joey Clarke. He is the Senior Science Communicator at the Australian Wildlife Conservancy and we're going to have a conversation about some super interesting animals that call Australia home.

Earlier this year, I had the absolute pleasure of visiting Australia and while I was there, I got to see some of these animals up close and personal. And I would say that I'm a nature lover. I find all kinds of plants and animals fascinating but when it comes to unique wildlife, the kind of wildlife that you can't really find anywhere else on the planet, well then Australia is one of the first places at least that pops into my mind.

So, while I was visiting, I really wanted to learn more about Australian wildlife, and I was lucky enough to be able to connect and talk with Joey and learn so much interesting information from him. And I'm excited that I'll be able to share this conversation with you here today. Now during our conversation, Joey and I talked about a variety of topics all related to Australian wildlife and conservation and we discussed Joey's background and his journey into wildlife conservation, how we got started with that. We talked about the unique landscapes of the Australian bush and some of the incredible animals that live in these areas including some of Joey's favourites. We also talked about so many other things including some of the differences between marsupials and placental mammals, the major threats to Australian wildlife like habitat loss and invasive species, and also, we talked a little bit about fire and the impact of fire on the Australian landscape.

Finally, just before we get started, I'm going to try something new with this episode. I'm going to jump in from time to time and pause the conversation occasionally just to break things down and explain it to you in more detail. I think this way you'll be able to follow along with the conversation a little more easily. So, let's give it a try and later on you can let me know how it goes. Leave me a comment or some feedback on our Discord server. I'd love to hear what you think of this kind of format. And without any further ado, let's get started with the conversation.

We'll start with chapter one where we get introduced to Joey Clarke and learn about his background. Here we go.

I'm here today with Joey Clarke, Senior Science Communicator at the Australian Wildlife Conservancy. Joey, welcome to Culips. It's so great to have you here and I'm really looking forward to the conversation we're going to have today.

Joey Clarke: Thanks Andrew. I'm looking forward to speaking to you.

Andrew: So maybe we could start things off Joey by just having you share a little bit about yourself and your journey into wildlife conservation.

Joey: Sure. Well, I was really lucky as a child. I grew up in an area of natural bushland and forest called the Blue Mountains which is in eastern Australia, and it meant that throughout my childhood I was surrounded by the bush and by wildlife. While I was a teenager, my family cared for some of the animals that were around our place, so we looked after a young wombat which is I guess a little bit like a badger from the northern hemisphere, but a marsupial version and we cared for this animal for a year and a half. It was an orphan, so its mother had died and then soon after that we looked after a kangaroo as well.

So, we had these incredible experiences as a family up and close with some of Australia's really special wildlife. And I think from there, you know it was kind of destiny that I would move into work in an area that was to do with wildlife and nature and conservation. It's something I've been passionate about for as long as I can remember and so I studied biology and conservation environmental science at university and I found out about this group, Australian Wildlife Conservancy, just as I was finishing my science degree. And I feel really lucky that this organization sort of came to exist at just the right time so that you know as I was finishing my studies there was this incredible opportunity to go and work in a remote part of Australia as a tour guide at one of the sanctuaries managed by Australian Wildlife Conservancy. And from there, I've sort of got into science communication and other parts of the business. So that was my path into conservation.

Andrew: So, in Chapter 1, Joey told us that he grew up in a natural area called the Blue Mountains in eastern Australia surrounded by wildlife. His family even cared for animals like wombats which are small burrowing marsupials who dig holes in the ground. This early experience led him to study biology and conservation at university and after graduation then he joined the Australian Wildlife Conservancy, and he started working there as a tour guide in a sanctuary. And a "sanctuary" is a word that you'll hear often in this interview. It's a protected area where wildlife is preserved and kept safe and then over time Joey got into science communication which means explaining scientific information to the public. Kind of what he's doing exactly in this interview.

Chapter 2: The Australian bush.

You just mentioned that you grew up in the bush and the bush in a Canadian context means more like a really thick forest but I'm wondering in an Australian context what kind of landscape is the bush?

Joey: What a great question. It's a word that's kind of used all across Australia for anywhere that's not an urban environment is sometimes called the bush. I guess in my

mind I picture eucalypt forests. So, the trees that are most common in Australia are eucalypts or gum trees. They're also planted overseas in plantations, but these are quite messy looking trees, so they have branches that kind of **sprawl** out at all angles. It's very different to a pine forest or an oak tree. They're quite random and beautiful shapes I think and there are all different sorts of eucalypts across Australia but yeah mostly when I think of the bush that's the sort of, you know, forested landscape that I'm picturing.

Quite often they're not thick forests. They're open, might have a grassy **understory** so it ranges from woodland to tall forest in some of the wetter parts of the country and some eucalypts are huge. They can grow to over 100 meters tall. Others are little, we call them mallee, which is kind of a shrub, a shorter tree version of the same sort of plants. But yeah, Australia is very diverse. So that's one sort of forest but there are also little pockets of rainforest in the tropics. There's obviously a lot of desert and arid grasslands and because of that diversity of ecosystems what we sometimes dismiss as the bush is actually a very, very diverse continent full of different vegetation and wildlife.

Andrew: Sure, so you just have that one nickname for it but it's actually really diverse in reality.

Joey: Yeah, it's a shorthand way of referring to outside.

Andrew: OK, fair enough.

OK, let me break down what we just heard. So, in Australia, the term "bush" refers to any non-urban area which can include a variety of landscapes. And Joey describes the typical bush as eucalypt forests which are open and grassy unlike the kind of forests that I'm used to in Canada which are quite thick. Eucalypts or gum trees are trees with sprawling branches and Joey mentions that they can look quite messy. Australia also has rainforests, deserts and dry arid grasslands making it a very diverse continent. And Joey also mentioned mallee which are smaller shrub-like versions of eucalypt trees.

Moving forward with the interview here we go to *Chapter 3: Unique Australian wildlife*.

So, I think when many outsiders like me and our audience as well, when we think of Australia the wildlife is one of the first things that pops into our minds and there's so many unique species here and it's so diverse as you mentioned. Of course, we're not going to have time to talk about all of the animals today, but maybe you could tell us about one of your favourites or one of the animals that you find the most fascinating.

Joey: What a fantastic question and I might have to squeeze in more than one, but I'll start with the one that I usually nominate as my favourite animal if I have to choose is called a tree kangaroo. So, I think most international listeners will be aware of kangaroos you know they're the famous hopping marsupials that give birth to very, very small young. And then, most of the development for their, you know, the young animals, happens in a pouch on the female's belly. And that's common across marsupials but far less well known is a group of that family called tree kangaroos and these are incredible.

So, if you imagine kangaroos as these tall mammals that are kind of specially adapted for hopping across grasslands and open country tree kangaroos are what happens when that sort of animal tries to evolve to live like a monkey and live in the rainforest. And to be honest, kangaroos are not a good starting point for that. So, tree kangaroos are quite clumsy they've still got fairly long feet, so you know they're not great at climbing trees but they're these beautiful animals that are only found in the rainforest in Australia and also a few in New Guinea. They're quite difficult to see everything in the rainforest is difficult to see, but they have beautiful long tails that act as a kind of counterbalance while they're **clambering** through the branches. They feed on leaves, and I guess one of the interesting things about Australia is how marsupials have evolved **to fill roles** in the ecosystem which are in other parts of the world filled by placental mammals.

So, if tree kangaroos are the equivalent of monkeys, you know we've got little possums and sugar gliders that are kind of the equivalent of squirrels or things like that, and you

know the list goes on. There's kind of these **analogues** in Australia for other mammals elsewhere in the world, but yeah, the country's dominated by marsupial mammals. And yeah, I think the tree kangaroos are just this incredible kind of **outlandish** example of that evolution of marsupials.

Andrew: Yeah, it sounds hilarious to picture a kangaroo trying to climb a tree. Just the image is really funny. How big are they? Because I know the typical kangaroo that we think of can get quite big, right? But what about these tree kangaroos, are they smaller?

Joey: Yeah so, they're shorter but quite stocky so they'd stand maybe up to your knee or a little bit taller than that. They've got strong forearms with big claws so that's to, you know, help them climb around and yeah really, really **thick set**. They can also hop along the ground but when you hear them hopping through the forest it's this big thump thump thump. They're quite heavy, and yeah, not great at hopping, not great at climbing trees, but very beautiful animals.

Andrew: All right well I'm gonna have to go onto YouTube after we finish this conversation and search for them so I can see some footage because you've piqued my interest here in the tree kangaroo.

Joey: Yeah, please do everyone should look them up.

Andrew: In this chapter, Joey tells us that his favorite animal is the tree kangaroo which is a type of kangaroo that's adapted to live in trees. Unlike regular kangaroos that hop on the ground, tree kangaroos are clumsy which means that they are awkward or uncoordinated especially at climbing. Tree kangaroos are shorter than regular kangaroos but stocky. And "stocky" means they have a strong, heavy build. These unique animals are found in the rainforests of Australia and New Guinea. Marsupials like tree kangaroos have pouches for carrying their young and Australia has many different types of marsupials. Joey also talks about placental mammals.

Now placental mammals are animals that give birth to fully developed young. These young are nourished before birth through an organ called the placenta and the placenta connects the developing baby to its mother's uterus providing nutrients and oxygen. Some examples of placental mammals include you. Humans are placental mammals. So are dogs, elephants, and many, many, many other kinds of mammals.

Chapter 4: Marsupials and placental mammals.

I was wondering just you know we were talking there about the differences between marsupials and placental mammals I believe you referred to them as. Why is it that there are so many marsupials in Australia and other parts of, like you said New Guinea, and I saw on Wikipedia that there are also some in the Americas a few species in Central and South America as well but why don't we see marsupials in Asia or Europe or Africa?

Joey: Yeah, that's a fascinating story too and I guess there's sort of the traditional view of why that is which was basically a colonial story that said that you know Australia as a continent has been isolated for a very long time for millions of years. And initially, scientists thought that marsupials represented an early more primitive branch of mammal evolution. So, they were kind of **denigrated** as, you know Australia, was a **backwater** for this primitive offshoot of the the mammal family tree which had only been able to succeed because placentals hadn't arrived on the continent, because it had been cut off from the rest of the world for so long.

There's elements of that that are true, but the sort of narrative that Australia's a sanctuary for primitive wildlife, was also very much to do with that colonial attitude of European animals and people at the same time were arriving and they were superior and would ultimately dominate native **fauna** but it's also to do with the removal of indigenous Australians from the country, which was done you know very forcibly and that's linked to how ecosystems have changed over the last few hundred years as well.

But yeah, back to the marsupial evolution. Marsupials were, you know, they first appeared I think in the Jurassic period, so quite a long time ago. **Branched off** from other members of the mammal family tree and there are fossils of them from other parts of the world, so they were in China as well. We know that there was a big radiation through Gondwana which is the land mass that was made up of South America, Australia, Antarctica, and a few others. And so, as those continents spread apart, they carried with them some of the the fauna that had been found across that supercontinent Gondwana.

So, in South America today there are still opossums and some of the smaller marsupials there living alongside placental mammals but in Australia that's where marsupials really flourished. And the, I guess, the bit of that you know that first story that is true is that they've had a long period of isolation in which they've evolved and diversified to fill the variety of different habitats that Australia has to offer. And it's just incredible the range of lifestyles that they've adapted to.

There's a marsupial mole which looks very much like moles in other parts of the world that swims through the sands of the desert. People hardly ever see them because they're so so rare and elusive.

There are little wallabies called bettongs and potoroos which **forage** in the undergrowth of thick forest. There are bandicoots that **snuffle** through the **leaf litter** feeding on fungus and **invertebrates**. You know, sugar gliders and other species of gliding possums which can literally fly. It's not powered flight but flying between trees 80-90 meters between trees.

All of these things have evolved from that original marsupial **stock** that was part of the Australian continent when it split off from Gondwana and I think that whole story is just incredible, that natural heritage that we've been able to protect here in Australia.

Andrew: So, Joey tells us that marsupials like kangaroos and koalas are common in Australia due to the continent's long isolation. Marsupials first appeared in the Jurassic

period which was over 145 million years ago and spread across the supercontinent called Gondwana. Now as Gondwana split into smaller continents, the ones that we know today, marsupials flourished in Australia. This isolation allowed them to evolve into many unique forms such as tree kangaroos and marsupial moles. Now while marsupials exist in other places like South America, they're much more common and much more diverse in Australia.

Chapter 5: Threats to wildlife.

So, maybe to transition a little bit now into talking about conservation and the conservation efforts that your organization is working towards as well. Could you talk a little bit about what are some of the biggest threats to Australian wildlife today?

Joey: Sure, yeah look I guess as with elsewhere in the world an obvious one is habitat loss, so just you know the conversion of natural, you know, wild landscapes into agricultural production landscapes or urban landscapes where people live. You know that's fairly universal around the world that loss of habitat drives species to decline or go extinct and **degrades** ecosystems.

If we leave that one aside, you know, there has been lots of habitat loss but it's probably not the, you know, for some groups that's **the major driver** but there are other threats even in landscapes that look intact, and we can sum it up as fire, feral animals, and weeds. And you know essentially, fire is quite a complex one so we can get into that. Feral animals, that's kind of straightforward. We know invasive species, again, they're a threat to native wildlife around the world but in Australia because of that long period of isolation, you know, there were never any cats here for example and so when cats did arrive it was a completely different sort of predator that Australian animals had no preconditioning of dealing with that kind of predation.

Similarly, you know, red foxes which English people brought over to hunt, the hunted became the hunters and so, you know, foxes have spread across basically two-thirds of the south of the continent. And as cats and foxes arrived in new parts of the landscape, **a whole host of** small animals disappeared. And you can see very clearly in the historical records, you know, huge abundance of native animals in explorer's accounts and, you know, things that have been documented from that time and within, you know, sometimes within a decade they'll just crash because cats and foxes were feasting as they moved into new territory.

So those those feral predators are responsible for, you know, at least 25 extinctions of native mammals. Yeah, which is, you know, more mammal extinctions than anywhere else on earth so that's been devastating. And then other feral animals, there are some surprises here so there's, you know, horses, things like donkeys and camels which you might not associate as, you know, a big threat just again because the Australian landscape isn't used to big herbivores of that kind that can move around, they can breed up in into very large numbers quite quickly, they have different sorts of impacts.

So yeah, lots of feral animals and that's one of the biggest pressures on our ecosystems, one of the biggest threats. And then weeds, you know, that's basically plants that are growing in places where they're having an impact, sometimes introduced on purpose, and they interact also with fire patterns.

So, you know, a really interesting example is a grass that was introduced as **pasture** for cattle, buffel grass. It grows in a way that forms this dense blanket so it's kind of a thick layer of fuel which means that fires are able to spread much more quickly, and they burn much more intensely, which is different to how fire normally works in the Australian landscape.

So, that's really interesting because it's a weed that is in itself fine, but it affects the fire pattern which then has an effect on wildlife.

Andrew: Joey explains that the main threats to Australian wildlife include habitat loss, feral animals, and invasive plants, which we also sometimes call weeds. Now, habitat loss happens when natural areas are turned into farms or cities. Feral animals, or animals like cats and foxes, are predators that many Australian animals can't defend against. Feral animals are animals that once were domesticated and kept as pets or farm animals, but now are living out in the wild. Predators are animals that hunt and eat other animals. Think sharks, bears, lions, OK? These are predators. So feral animals have caused many native species to become extinct, which means they no longer exist, and invasive plants or weeds can also change the natural fire patterns of Australia, making fires more intense and harmful to wildlife. Speaking of fires, we're going to talk about that in more detail right now. So, let's move on to the next chapter.

Chapter 6: Fires in Australia.

I know a lot of our listeners are probably familiar with the tragic fires that happened several years ago and really made news around the world. How are the fires this year? What's the fire season like this summer?

Joey: It's... yeah, and we sort of need to take a step back to just introduce sort of how fire is part of the landscape here. And, it's a story that includes people because, as listeners will know, Indigenous Australians have been on the continent for at least 65,000 years. So, we don't really use the word wilderness here anymore because there are no landscapes here that haven't been managed by people for thousands of years. And that's been quite a shift in how we think about conservation. We're not trying to just remove the influence of people from these landscapes. In fact, quite often, removing people is what has done the damage, and no more so than in how fire operates.

So **Aboriginal** Australians, First Nations people, used fire very widely across the continent. It would have looked a bit different in the desert to in the bush, in the eucalypt

forests that we were talking about. But across almost every part of the country, fire was used very regularly as a part of life. It might have been to make it easier to move through the country, to **draw in** animals for hunting, or to promote the growth of particular plants that were sources of food.

But no matter what the purpose was, there's now really strong evidence, as well as ongoing cultural practices, to show that fire was a big part of life and a big part of the bush for a very, very long time. Most of those fires probably were small in scale and fairly low intensity. So, some people call it "cool fire" or "healthy fire." And I think that's quite a shift too, to think about fire as a positive part of how an ecosystem functions. It's different to how we normally see fire as a threat or a danger.

Andrew: Right, like a natural disaster.

Joey: Exactly. Yeah. But mostly in Australia, it's just been a part of life. And that's true with how the animals have adapted to fire as well. So typically, before colonization, there would have been small, **patchy** fires through woodlands and grasslands that maintained those habitats and also brought diversity. So, because of the patchiness, you'd have one area that had burned just last year, and then within a few kilometers, an area that hadn't burned for three or four years, and so on. And people describe it as like a mosaic or a patchwork, a patchwork burning, quite intentional by the people that were living there. And the disruption that came with colonization, when people were forced off the land, was that instead of that diversity of small patchy, relatively frequent burns, vegetation was allowed to grow for year after year after year.

And so, you'd end up with lots and lots of fuel on the ground. And instead of small fires, then you get very big fires that burn much more intensely and cover, yeah, a much bigger area. And then the frequency is the other thing that we look at. So, it might be less frequent, but you might get much bigger area burnt when it does happen. And that's the pattern that is really damaging for **biodiversity**.

So, the sorts of management that we're doing now as a conservation organization, partly it's trying to emulate that original fire pattern, those original fire regimes. And we're working with **traditional owners**, with Indigenous people, to try and reinstate some of those burning practices that the landscape needs.

So, that's probably a different side to the fire story than, you know, what makes headlines overseas when, what was it, 13 million hectares or something burns or even more. It's easy to see that as a disaster. You know, in some cases, probably not that bad that some of those landscapes burned, but the scale and the intensity of those fires was unprecedented. So yeah, we know that had an impact on some species, quite a severe impact. So, they've been from species that were fairly abundant, some of them are now critically endangered since that fire season.

To come to your actual question, the last season, across Northern Australia, there's fire every year in this sort of tropical savannah. That's normal. Largely that's us. So traditional owners and conservation operators actually lighting fires at the right time of year. So that's good. That's fine. As we get into the later part of the year, we call it the "dry season" in Northern Australia. That's when you get some of the bigger, hotter burns. And, to my knowledge, it hasn't been that unusual this year. It's been sort of a standard year for fire. In the desert, there was a lot more rainfall over the past sort of three or four years, and that means more grass. So there have been very big fires in the desert in Central Australia. Again, partly that's a natural cycle driven by rainfall, but yeah, it's a natural part of the landscape. If you get fire management right, you can have huge benefits for biodiversity and for conservation.

Andrew: We just heard Joey explain that fire is a natural part of the Australian landscape. And fire has been used by Indigenous Australians. "Indigenous" means "native to." So, the original people who inhabited Australia before European contact. These Indigenous Australians have used fire for thousands of years to manage the land. These controlled burns were small and low intensity, which helped to maintain the diversity of habitats. And

then after colonization, the removal of Indigenous people and their fire practices, well, this caused a lot of problems. It led to larger, more intense fires. And Joey explains that proper fire management, including traditional practices, is crucial for biodiversity. Now, thankfully, this year, the fire season has been pretty normal, with controlled burns helping to maintain the balance.

Chapter 7: Conservation success stories.

So, you've told me and told our audience here a little bit, you know, some doom and gloom about the feral species and about fires, but I'm wondering if you could tell us maybe about a success story about some kinds of species that was saved due to a conservation effort. I'm sure you have a success story as well.

Joey: Luckily, I've got too many to choose from. So, our organization has been working in Australia for the last three decades. And basically, it was started by an entrepreneur who had, you know, he was familiar with the science, he knew what the threats to wildlife were, fire, ferals, and weeds. But he also saw an opportunity, because there are really large properties in Australia that, you know, they might have been used for **grazing** cattle for a few decades, but they're still pretty much, you know, they look similar, the bush is still intact, the landscape still looks like it might have 100 or 200 years ago. So, there was an opportunity to try and deal with those systemic threats at a landscape scale.

And this guy, Martin Copley is his name, he started buying these huge properties, first in Western Australia, and then across Northern Australia, with the goal of restoring them to ecological health by dealing with each of those threats. And one of the most exciting and sort of most successful initiatives that he set about doing was to develop a network of fenced areas, we call them **safe havens**. And these are not just your ordinary fence for stock, but they're sort of six-foot-high mesh fences. I mean, it's not quite Jurassic Park, but if you think that that level of, you know, electrified wires, they have an overhanging section, so nothing can climb in.

Anyway, very, very secure fenced areas. And they're very large scale. So, some of these are, yeah, around 10,000 hectares is some of the largest ones. So, we've got at least 10 of those. And by doing that, you can remove not just a few cats and foxes, you can actually get cats and foxes down to zero, you can remove the rabbits and the goats and whatever other feral animals are in there, and then re-establish populations of species that have disappeared from those regions.

So, we might take something like the numbat. So that's a beautiful little marsupial that eats termites. Again, one of these specialists. It's got an orange and sort of orange and black fur with white stripes along the back. They're quite small, maybe as long as your **forearm**, something like that. And they're just adorable. And they were found across, you know, maybe a quarter of the Australian continent, feeding on termites happily in the woodland. They were **decimated** by cats and foxes, the same old story. But luckily, some of them survived. And that means that we've got a source population that we can use to re-populate these landscapes where we're working in our sanctuaries. So, we've now established four populations of numbats within that network of safe havens. And, you know, there are hundreds of them now in places like Western New South Wales, where before that, they'd been extinct for 100 years. So, for a species that's endangered, you know, could easily head towards extinction if nothing was done to **intervene**.

We've now got secure populations being managed really effectively across that network of safe havens. And we've done that with a bunch of different mammal species. So, there are places on our sanctuaries now which have 10 species that have been reintroduced. And that's, as far as we know, a world record for this kind of rewilding or reintroduction project. So, it's a really, really cool program.

Andrew: Yeah, that's an amazing idea, the safe haven. And it sounds like it's really effective. So that's great to hear.

Joey: Yeah, it's been super successful. And, you know, there are species that are even closer to the edge of extinction. One is called the Northern Bettong. It's basically a **pocket-sized** wallaby. So, you know, there's so many of these things that people probably haven't heard of before. But yeah, Northern Bettong, this one, and its population was down well below 1000. There were maybe 750 left in the wild. And at that point, you know, for a wild population, you're really in trouble. And so, over the last two years, we built a dedicated fence just for that species in North Queensland. And we **translocated** 49 of those animals into that fenced area last year. They're doing really well. So, they're breeding up now. And, you know, in that case, it's an intervention that could well have prevented the extinction of that species. So, it's such a privilege to be involved in work like that.

Andrew: So, we just heard Joey explain about the safe havens that have been created by the Australian Wildlife Conservancy. Now, these safe havens are large, secured, fenced areas that protect endangered species from predators like cats and foxes. Now, these fenced areas are really safe and secure. They have high, mesh fences and electrified wires, which keep predators out. One success story that we heard about is the numbat, which is a small marsupial that eats termites. And termites are those little bugs that are famous for eating wood. Very dangerous if you get them in your house. Anyways, by creating these safe havens, they have reintroduced numbats to areas where they had been extinct for 100 years.

Another success story we heard about is the Northern Bettong, a small wallaby whose population is now growing in a special dedicated fenced area in North Queensland.

Chapter 8: Responsible tourism.

You know, I think after listening to this interview, a lot of our listeners are going to think about visiting Australia as a tourist. And in fact, I'm here now as a tourist as well. So, I'm wondering, how can we be responsible as tourists? How can we visit Australia without harming the wildlife?

Joey: That's a great question. I think, you know, Australia is sort of famous as a, you know, a nature destination. The whole nature tourism is a huge part of the appeal of visiting Australia. And, you know, partly that's because of the landscapes. There are, you know, these ancient landscapes here that are unlike anything else in the world. But yeah, the wildlife, of course, is another part of it. I think, you know, as with any sort of nature tourism, just look up places that are actually working to care for the places where they work. So, there's a number of our AWC sanctuaries where you can visit. A couple near Perth. You can go camping out in Central Australia if you want to see the desert in great health. Yeah, I think it's looking at what each of these organizations is doing for the environment where they're working. And it's not just about conservation either. There's also, you know, cooperation and collaboration with traditional owners, which is increasingly part of the tourism experience as well, especially in Northern Australia. But yeah, increasingly across the country, all of those initiatives are really positive, I think.

Andrew: Let's just break down what we heard there from Joey. So, he said that to be a responsible tourist in Australia, make sure to visit places that actively work to protect the environment. Look for nature tourism options that also involve cooperation with Indigenous people. And some of the Australian Wildlife Conservancy's sanctuaries offer such experiences, allowing you to enjoy Australia's unique landscapes and wildlife responsibly.

Chapter 9: Learning more about the Australian Wildlife Conservancy.

Finally, what about the Australia Wildlife Conservancy, the AWC as you called it? Could you tell our audience a little bit more about where to find you on the internet and where they can learn more about your organization and what you guys do?

Joey: Sure. Yeah, so we're a non-profit NGO. So, we're funded almost entirely by donations. If anyone's keen, they can head to australianwildlife.org. There's also Australian Wildlife Conservancy USA, so there's a charity set up that can direct funds from the US, and you get the tax benefit if you donate that way. Similar in the UK, so we've got an equivalent over there. Yeah, so australianwildlife.org is the website. We've also got a really great presence across social media.

So, if you look up Australian Wildlife Conservancy, Instagram, Facebook, LinkedIn, X, we're across all of those channels. I've run a series of webinars as well. So, on YouTube, there's about 40 episodes of conversations between me and a bunch of our different field ecologists and land managers and staff from around the country. So, that gives you a good picture of what life on the ground is like living and working on one of our wildlife sanctuaries in remote parts of Australia.

So, there's plenty of ways to keep in touch and you can sign up for e-news as well through the website australianwildlife.org.

Andrew: OK, fantastic. Well, we'll try and link as many of those resources in the show notes for this episode as well so that listeners can easily find them. But I think for now, Joey, that will bring us to an end. So, thank you so much for sharing these great stories with us about Australian wildlife. It was fascinating for me to listen to them, and I think our audience will really enjoy them as well.

Joey: So, thank you so much. Thanks, Andrew. It was great speaking with you.

Andrew: All right, everyone. That brings us to the end of today's episode. I hope you enjoyed my conversation with Joey. Personally, I think it's so amazing that we can improve our English fluency and also learn about fascinating topics such as Australian wildlife at the same time. If you're interested in learning more about the Australian Wildlife Conservancy and the work that they do, please visit australianwildlife.org. You can also follow them on social media and subscribe to their YouTube channel. We'll put the links in the description for this episode. Once again, another massive thank you to Joey Clarke for talking with me and for teaching me more about Australia and the magnificent plants and animals that call it home.

That brings us to the end of this lesson. Talk to you next time, bye!

Vocabulary glossary

1. **Sprawl:** To spread out in an uneven or messy way.
2. **Understory:** The layer of plants and bushes that grow under the main trees in a forest.
3. **Clambering:** Climbing in an awkward and unsteady way.
4. **Thick set:** Strong and heavy build.
5. **Denigrated:** Criticized unfairly.
6. **Backwater:** A place or situation that is not developed or active.
7. **Fauna:** The animals that live in a particular area.
8. **Forage:** To search for food.
9. **Snuffle:** To make a sniffing sound while searching for something, usually food.
10. **Leaf litter:** The layer of fallen leaves and other plant material on the ground in a forest.
11. **Invertebrates:** Animals without a backbone, like insects or worms.
12. **Stock:** A group of animals or plants from which others are bred or produced.
13. **Degrade:** To break down or damage.
14. **Major driver:** The main cause or reason.
15. **A whole host of:** A large number of.
16. **Pasture:** Land covered with grass used for grazing animals like cows and sheep.
17. **Aboriginal:** Native to a particular area, especially the original people living in Australia.
18. **Draw in:** To attract or bring in.
19. **Patchy:** Not even or regular; having areas that are different from each other.
20. **Biodiversity:** The variety of different types of life in a particular area.
21. **Traditional owners:** The original people who have lived in an area for a long time and have cultural connections to the land.
22. **Grazing:** When animals feed on grass in a field.
23. **Forearm:** The part of the arm between the elbow and the wrist.
24. **Decimated:** Greatly reduced in number, usually by destruction.
25. **Intervene:** To step in and take action to prevent or change a situation.
26. **Translocated:** Moved from one place to another.

Detailed Explanations

To fill a role
Verb

Andrew asks Joey to share one of his favorite Australian animals. Joey's answer is the tree kangaroo – a delightful little kangaroo that behaves a lot like a monkey. Tree kangaroos jump from tree to tree and feed on leaves. Joey explains that because Australia has so many marsupials, they have evolved **to fill roles** that placental animals have traditionally filled in ecosystems elsewhere in the world.

You may have heard **role** used as a synonym for position or job in business English. For example, "Jacob has an important **role** in our company as finance manager." Common collocations with role include to have, play, or **fill a role**. This simply means to perform a specific function required within a system.

In this case, Joey is talking about ecosystems – a complex network of biological life (plants, animals, and so on) interacting with each other and their environment. There are many **roles to be filled** in ecosystems – there are predators (animals that eat other animals), grazers (animals that eat living organisms without killing them), decomposers (animals that decompose waste and dead organisms), and so on. Joey says that Australian tree kangaroos **fill the role** that other animals fill in North America and Europe.

To fill a role is a can be used for any system or structure. For instance, parents **fill the role** of caretaker in their child's life. Your eyes and ears **fill roles** of sensory perception in your body. A character on a TV drama might **fill the role** of a love interest.

Here are a few more examples with **to fill a role**:

Abigail: I think there are opossums living in my backyard. Should I call an exterminator?

Kyle: No way! Opossums are harmless and they **fill** an important **role** in the ecosystem by eating insects and rodents.

Abigail: But I don't want one to end up biting my dog and giving her rabies.

Kyle: Actually, it's incredibly rare for opossums to carry rabies. I wouldn't worry about it.

Fred: I heard Stephanie put in her two weeks' notice yesterday.

Bonnie: Me too. It's a real loss – she's so talented and **fills** such a critical **role** on our team. I doubt they'll be able to find a better replacement.

Analogues
Noun

Like the tree kangaroo, Joey says there's a long list of **analogues** in Australia for mammals found in other parts of the world.

An **analogue** is something that is comparable or similar to something else.

In biology and ecology, **analogues** are comparable solutions for problems experienced in different contexts. In other words, if an animal evolved in East Asia **to fill the role** of decomposer (an organism that breaks down dead organisms or waste matter) in an ecosystem, there may be a similar but unrelated animal in North America **filling** that same type of **role**. These two animals would be **analogues** (noun), or **analogous** (adjective) to one another.

Analogues can refer to organisms themselves, body parts and structures, or behaviors. For example, bats and birds have an **analogous** physical feature – their wings. Although they are different species, both bats and birds had a need to fly and developed wings.

You can use the word **analogue** outside of the context of biology. For instance, the role of a CEO could be **analogous to** that of a captain on a ship. This means they are similar in many ways and comparable to one another. If you were comparing sight and sound, you might say that the pitch of a sound is **analogous to** the hue of light.

Here's one more example with **analogues**:

George: I don't really understand the symbolism in the book we're reading for class. What does it all mean?

Cathy: As far as I understand, I think the struggles and choices that the main character faces are supposed to be **analogues** for the rise and fall of the Roman Empire.

George: What?! You're reading too much into it! I don't see that parallel at all.

Samantha: I learned in biology class that Australian kangaroos are **analogues** to deer in North America.

Jim: What does that mean?

Samantha: It means they are completely unrelated animals, but they fill the same ecological roles as one another – they have similar herbivorous diets, are preyed upon by similar animals, and have many physical features in common.

Outlandish
Adjective

Joey says that tree kangaroos, with their clumsy bodies and long feet that aren't well-suited for climbing, are an **outlandish** example of the evolution of marsupials in Australia.

Outlandish is an adjective that means bizarre, strange, or strikingly unusual. The word comes from Old English, with "out land" meaning "foreign country." So, it was originally used to describe something that was unusual due to being from a different country or culture. However, the meaning has widened and now you can use **outlandish** to describe anything remarkably unusual.

Joey describes the evolution of tree kangaroos as **outlandish** because you wouldn't expect an animal with physical characteristics poorly suited for climbing to spend a lot of its time hopping from tree to tree. It's bizarre and strange that tree kangaroos evolved in this way – it's **outlandish**.

Outlandish can also mean unreasonable or going beyond the usual limit. For instance, let's say you propose that your company give everyone twelve weeks of paid vacation time this year. Your boss might tell you, "That's an **outlandish** idea!" because there's no way the company could afford such an extreme amount of paid vacation time.

Outlandish is usually used in a neutral or negative way.

Here are a few more examples with **outlandish**:

Daniel: Adam wore the most **outlandish** outfit at his wedding.

Emily: What was so **outlandish** about it?

Daniel: Not only did he wear a bright yellow suit with shiny green buttons, but he also wore a giant fedora with a peacock feather sticking out of the side.

Maddie: Welcome back! How was your vacation?

Anthony: It was… alright. I'm pretty tired.

Maddie: Tired? But you were gone for two weeks! I thought you'd be feeling well-rested.

Anthony: Yeah, well… my wife always wants to go on these **outlandish** vacations and do extreme activities. This time, we went mountain climbing! I wish we could just have a relaxing beachside vacation for once!

To branch off
Phrasal verb

Joey tells Andrew that, at some point in history, marsupials **branched off** from other members of the mammal family tree and formed their own category.

To branch off is a phrasal verb that's best remembered through the image of a tree. A tree has a trunk (its base) and many arms that are called branches. Each branch often has other smaller branches, and each smaller branch often has its own even smaller branches.

Just like one of these branches on a tree, **to branch off** means to separate and go in a new direction. We often use this term when talking about evolution. Millions of years ago, an ape-like creature lived on earth. This was the ancestor of humans. It was also the ancestor of chimpanzees. At some point, the descendants of this ape-like creature evolved in different ways. They **branched off** and developed into their own unique species. The evolution of humans was a result of this **branching off**.

Branching off can describe physical things (like the branches on a tree or small streams connected to a river) or a conceptual thing like a system. For example, the finance department at a company might **branch off** into two smaller subsections – accounting and analytics.

Be careful not to mix up to branch off with the similar phrasal verb, **to branch out**. **Branching out** means trying new things and exploring new paths, especially personal interests and career choices. For example, "I thought I would **branch out** and sign up for a singing class."

Here are a couple more examples with **to branch off**:

Henry: Can you help me with something? I'm setting up a meeting on Zoom but I can't find the setting that enables participants to **branch off** into smaller discussion groups.

Mia: Oh, sure. That setting is over here.

Henry: Thank you so much!

Grace: Where should we go for our walk today?

Clive: How about the park? There are several paths that **branch off** from the main trail.

Grace: Sounds great! We can explore a new path today.

Safe haven / sanctuary
Noun

Andrew asks Joey about conservation successes he and his organization have had over the years. Joey explains that one of the most effective projects they have organized are what they call **safe havens** – systems of fenced off areas where invasive threats to endangered wildlife are kept out, allowing animals to repopulate and eventually be reintroduced into natural habitats.

In conservation, **safe havens**, **sanctuaries**, refuges, and so on are terms for protected areas for wildlife managed by a government or organization. There are often restrictions on who can enter these areas and when, as well as what activities are permitted (like fishing or hunting).

There are other industries and fields that use these terms as well. For instance, **sanctuary cities** in the United States are areas that discourage law enforcement from arresting or punishing people who are staying in the country illegally or without a visa. Basically, these cities are meant to be a **sanctuary** or **safe haven** where undocumented migrants can receive help without legal risk.

You can have a personal sanctuary or refuge as well. People will often refer to a specific spot in nature (perhaps a secluded beach you go to in the summer) or a cozy part of their home where they can relax and unwind as their **sanctuary**.

Here are a couple more examples with **safe haven / sanctuary**:

Beatrice: Hey, how have you been doing? I know it's been a few months since you lost your home to that fire.

Reese: Thanks for asking, Beatrice. It's been difficult, but I've been attending a support group for people who have been victims to fires and natural disasters. It's been my **sanctuary** these past few months while I'm trying to figure everything out and find long-term housing.

Beatrice: I'm so glad you were able to get connected to that kind of group.

Max: Would you like to come to the Audubon **sanctuary** and do some birdwatching with me this weekend? There are a lot of interesting and rare birds you can observe.

Robin: Sure! Do they let you walk around, or do you have to watch from your car?

Max: Because of the at-risk birds, they want people to just stay in their cars.

Pocket-sized
Adjective

The **safe havens** that Joey's organization manage have helped protect and repopulated many different species of threatened animals. One such animal is the northern bettong, an extremely endangered animal which Joey describes as looking like a **pocket-sized** wallaby.

Pocket-sized is an adjective that means just what it sounds like – it describes something that is small enough to fit in a pocket! This term is commonly used to describe objects like books, electronic devices, gadgets, or even small animals. For instance, you might call a compact digital camera **pocket-sized**.

There are some other common adjectives used to describe size that end in **-sized**. While pint-sized doesn't literally refer to a pint of liquid, it means small, as in, "a **pint-sized** little girl came running up to me at the park." You often see the adjective **family-sized** on bags of potato chips or paper products. This means large enough for a family to share. Finally, **life-sized** means the same size as what you would find in real life – for instance, a **life-sized** statue of a tiger is the same size as a living, breathing tiger.

Here are a couple more examples with **pocket-sized**:

Josie: Oh no, I forgot my umbrella at home and it's pouring out there.

Derek: Here, you can borrow my pocket-sized umbrella.

Josie: Wow, it's so small! Does it really fit in your pocket?

Derek: Yeah, it can get surprisingly compact.

Josie: Thanks for letting me use it. I've got to get one of these.

Wally: I'm sick of how big smartphones have gotten over the years.

Izzy: Agreed. My phone barely fits in my jeans pocket!

Wally: I wish they still sold **pocket-sized** iPhones.

Izzy: Me too! Although it *is* nice to be able to watch videos on a phone with a bigger screen.

Wally: I guess so.

Quiz

1. Which of the following is a good synonym for “pocket-sized”?

a) Standard
b) Miniature
c) Jumbo
d) Conventional

2. Which of the following outfits is best described as “outlandish”?

a) A grey suit
b) A modest light blue sundress
c) A dark navy business suit
d) A yellow and red polka-dot jumpsuit with sequins

3. Your friend tells you that her backyard flower garden is her “sanctuary.” What does she mean by this?

a) She protects endangered species in the flower garden
b) She feels peaceful and relaxed there
c) She feels stressed about maintaining the garden
d) She doesn’t actually have flower garden but she wishes she did

4. Which of the following is NOT a synonym for “to branch off”?

a) To join
b) To split off
c) To break off
d) To diverge

5. Based on its physical features, which of the following animals seems analogous to the bird?

a) The dog
b) The cat
c) The bat
d) The fish

Writing and Discussion Questions

1. Is your home country famous for any wildlife? Which plants and animals pop into your head when you think of your home country? Please describe them.

2. Have you ever visited a wildlife sanctuary or safe haven before? If not, would you like to? What plants and animals are you interested in?

3. How should we encourage children to become interested in ecology, nature, and conservation? Do you remember learning about these things when you were a child?

4. When you are a tourist in another country, do you consider your impact on the local environment and wildlife? What steps do you think the average person could take to reduce their impact on the local ecology as a tourist?

5. If you could be any animal, which one would you pick and why?

Quiz Answers

1.b 2.d 3.b 4.a 5.c

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