

## **Billie Roberts**

### *Saving Our Species*

BL Can you tell me who you are and what your koala role is?

BR My name is Billie Roberts and I work with the New South Wales government for a programme called Saving Our Species which aims to secure koalas in the wild for the next 100 years.

BL So where do you work?

BR I work in the office and in the field and my job requires me to work with the community across all of New South Wales, but I actually live in the north of New South Wales, so I spend a lot of time with the community and koala populations from around about Coffs Harbour up to the Queensland border.

BL Tell me a little bit about a typical project that you would do or an activity that would be typical in your role.

BR At the moment we are working with over twenty different communities and twenty different projects to help save koalas. From one day to the next can be very different. One day I might be helping to deliver water for thirsty koalas as a result of the drought. The next day I might be working with Aboriginal rangers in the field helping them to restore and plant koala habitat.

BL Can you tell me a bit more about what the Aboriginal rangers do because I'm very interested in the perspectives, the cultural perspectives and historical perspectives on koalas, is there anything that you're working on there that you're willing to comment on?

BR At the moment we are trying to put a web page together on our koala community website and that page is just dedicated to the work that Aboriginal rangers or Aboriginal communities are doing to conserve koalas, and that's from everything, to cultural burning, which is a slow mosaic burn that can be done that doesn't disrupt koala populations, to creating koala corridors, and I'm working with a lot of ranger groups, that their totem is a koala or they have a very spiritual connection to koala and koala country.

BL Can you tell me what you think attracts people to koalas?

BR People love koalas because they are very cute, but also they actually only occur in Australia. That makes them quite unique, but also lots of Australians will have them in their backyard. They're sort of Australia's little Aussie battlers.

BL I kind of think of them a little bit like little forest people as well.

BR I like that. I really like that.

BL It sounds condescending, but I am very interested in totem and I can see how they may, for some people, mix up. What do people get right about koalas?

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- BR Most people know that koalas eat gum leaves or eucalyptus leaves.
- BL What do people get wrong about koalas?
- BR Most people don't know that koalas are actually declining in Queensland and New South Wales and that they're threatened by a range of things that humans actually do to the landscape. For example, most people don't realise that their domestic dog can actually be a threat to koalas.
- BL Are cats, domestic cats, a problem with koalas?
- BR It's mainly dogs, not cats, they're a little bit too big for cats.
- BL I was thinking that too, but I just wanted to ask. Personally, why do you care about koalas? Either what got you into it or is there a thing you just love about them.
- BR Well, I think koalas are pretty special. They're iconic, or unique, just to Australia, but what I also like about koalas, by helping or securing them in the wild you can also help to save a lot of other native wildlife, like other nectar feeding birds and bats, and also the gliders, so we call them an umbrella species because by saving one you can actually save many.
- BL What are the biggest threats that you would like to focus on? What are the biggest threats, in your opinion, to koalas?
- BR I think one of the greatest threats to koalas is the loss of their habitat and that's mostly through building houses, or what we call urban development, and also fragmenting their habitat, which causes koalas to spend more time on the ground, which means they can be struck by cars or also attacked by dogs. Also, by changing their habitat, it increases the stress that these animals have which can also make them more vulnerable to disease.
- BL How long do you think, how much time does a koala spend on the ground, do you think?
- BR We're actually doing a study in northern New South Wales at the moment to understand exactly how much time a koala spends on the ground. In a nice healthy environment they spend most of their times in trees and they would only spend a short amount of time, as they move from one tree to another tree that's nearby, but as we fragment the habitat and their food trees are not as close together as normal, or there's not enough food, then you'll find that koalas will spend more and more time on the ground, increasing their risk to threats like cars and dogs.
- BL What keeps you interested in this field? What keeps you going?
- BR Well, other than I love koalas, what I actually love is working with the community, and the community that loves koalas, so by working with koalas I get to meet some amazing people who care about this country and native wildlife and that's just really inspiring and is definitely the best thing that I love about working with koalas.
- BL Do you believe that humans and koalas can live together successfully?
- BR Humans and koalas can definitely live together, but humans have to understand that koalas need habitat too and we need to be more sensitive to animals' needs and humans need to be less greedy.
- BL What 'koala-fications' do you have to do your job?

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- BR I had to do really well in high school, in particular in maths and science, to be able to be accepted to university. I went to university and I studied the environment and then after I finished my university degree I went on to do post-graduate or research studies. I got my PhD. I know that sounds like a lot of learning, but I loved learning because I got to learn specifically about the environment so it didn't seem too difficult or too long.
- BL Were you one of those students who really liked to be outside? I know lots of people who go into environment science and biology are the ones that just love bushwalking.
- BR Absolutely, the reason I got into the environment field is that I loved to be outside. I liked to work on the coast, I love the ocean and the beach, and actually what originally got me into koalas was bats. I have a real interest in flying-foxes and, actually, for my PhD, I studied flying-foxes.
- There's a saying 'no tree, no me' that's because the trees that koalas depend on, or the leaves from the trees, are actually pollinated and dispersed by bats, so without bats we actually wouldn't have the trees that koalas feed on. Koalas eat gum trees, or eucalyptus, and some of the main trees that they feed upon also are the key feed trees, or the flowers within those gum trees, are the key trees for flying-foxes, and lots of these gum trees actually flower and produce most of their pollen and nectar, or honey, at night particularly to attract flying-foxes.
- Flying-foxes can travel really vast distances, so for my PhD I tracked flying-fox movements and these animals can be moving hundreds of kilometres over just a couple of days. They're spreading pollen and seeds across, up and down the coast of New South Wales and that's really important for koalas. When we talk about flying-foxes, really right now, during a time of climate change, an animal that move large distances and move pollen and nectar large distances (and because there's so many of them moving), we're really increasing the genetic diversity of some of these plants over really long distances which means that the [genes] coming from trees in Queensland can move right down to New South Wales which builds up the [resilience] of these trees, which is going to be really important with climate change and changes in temperature and rainfall allowing the tree populations to be a lot more robust and therefore other species like koalas are going to have that additional safeguard to some of these changing environmental conditions into the future.
- BL So climate change is changing the bush, basically.
- BR Yeah, so, obviously temperature, rainfall, which changes with climate change is going to affect with how these trees survive, the times of year that they might be pollinating or producing nectar. That's going to be a big one. On the back of recent drought and bushfires, we're seeing lots of the gum, or eucalyptus trees, they might regrow their leaves, but it's their flowering and their nectar production which can be affected for not only months, but for years, and that's going to affect lots of migratory nectar-feeding birds and bats.
- BL Is one of the definitions of ecology this kind of linking between species?
- BR Absolutely. Yes, that's right.
- BL If you could make one thing happen, to help or to save koalas, what would that one thing be?
- BR One thing that I think we could do to save koalas would be to remove less of their habitat. You know, I'd like to see roads and houses built outside areas that we know is really important for koalas. We need to leave large tracts of land, without human interference, for koalas to thrive.

In recent years, we've seen the behaviour, the movements and the distribution of flying-foxes change dramatically. With climate change we've seen high temperatures, which can result in mortality of flying-foxes, and we're seeing them move more and more into urban areas and I am concerned about the plight of flying-foxes, that their important role is for koalas, it's not just about protecting koalas, it's about understanding and protecting the role of flying-foxes as well.