

What is a Bird? Transcript

Dr. Richard Noske

I'm here in inner Brisbane, in fact at Norman Creek near Stone's Corner which is very close to Woolloongabba. And despite it being a very noisy place, with lots of traffic, we've seen quite a lot of birds this morning, in fact about 30 species.

Some of them have been water birds, and one very special bird that you don't normally see very easily – the Buff Banded Rail.

But, what makes a bird? What is a bird?

Well, birds have beaks – but then, so do Platypus.

Birds have got wings, of course, and use them for flying – but then, so do bats.

In fact, not all birds can fly.

What about the legs? Well, birds have got two legs, but then so do kangaroos – they hop with those legs.

Those features don't make birds unique. No, what really makes birds unique is their feathers. And feathers are wonderful things because they're the lightest thing known in nature and of course, they permit birds to fly.

But do we know that feathers evolved for flying? In fact the fossil record tells us that the first birds were very weak flyers. We now think that in fact feathers evolved to keep birds warm.

And in fact around the same time mammals were developing from reptiles and they evolved fur, or hair, to keep warm.

So feathers may have evolved for insulation.

But then, having feathers meant that birds could develop a large surface area on their wings to fly, and birds obviously became good fliers. What happened then, they had the skies open to them, because the pterosaurs, those flying reptiles, had gone extinct.

There was a great opportunity for birds to evolve into many species, to take advantage of all the little insects flying around in the sky. But the other reason is that getting off the ground means that you could escape predators, and there

were lots of nasty animals around that wanted to catch and eat birds. So, it paid to be able to become airborne.

And we can see that in fact flight is important to escape predation, if we look on some islands, because there some birds have become flightless – their wings have gone all little and they can't fly anymore, probably because there's nothing there to eat them.

The only problem with flight is that you have to be very light, and that's why the biggest birds, like emus and ostriches, can't fly.

So birds have evolved many adaptations to make them lighter. Most importantly are that many of their bones are actually hollow, their beak doesn't have any teeth, the skull is fused, the tail doesn't have any bones. These are all things to get the weight down. Of course feathers are the best thing for covering them as they are the lightest natural substance known.

The problem comes when birds are having babies. Now they can't carry babies around with them if they want to take off in a hurry, so birds lay eggs.

They do so in a special structure in order to protect those eggs, and that of course is a nest.

And we have a perfect example right here – Mrs. Noisy Miner sitting on her eggs, keeping them nice and warm for a couple of weeks until they hatch, and then she has to feed those babies. But she does so with the help of many friends and we'll talk about that next time.