

Taking flight

Over millions of years, evolution has taken place any many species and organisms have undergone adaptation to become the best version of themselves. This is what has allowed fish to swim and allow birds to fly. This essay will be exploring how birds have adapted to be able to fly.

One thing that has made birds exceptionally good at flying is their bodies like their lungs. Their lungs contain air sacs and have hollow bones. These allow the oxygen and carbon dioxide to flow around the body more easily. This means one bird breath does more work and is more efficient than one mammal breath. This also means that birds have a constant supply of fresh air in their lungs so they can fly at ease. A bird is also very light for their size due to having hollow bones, e.g. a Frigate bird (often seen flying over tropical oceans) have a wingspan of over 2 metres but a skeleton that is lighter than its feathers. Their beaks are also lightweight instead of having a heavy jawbone or heavy teeth. Another way a bird has adapted is that they have quite a lot of strength. Their limb bones which are hollow contain special structures that strengthen them. This makes them stronger than a mammal without being heavier. Their sideways bones that stick out from the ribs are locked tightly together which makes them very strong. Their two collarbones are also joined in a single brace which makes them very rigid which means they can deal with stress of flying well.

The adaptation of a bird is so detailed that even something as small as a feather has been carefully related for a specific purpose. One way feathers are used is for protection. The big stiff feathers on a birds wings and tail which are called flight feathers give it the push it needs for flying. However, flightless birds feathers are limp and floppy because they don't need the push. The feathers are also arranged in lines and patterns, e.g. the smaller feathers that cover a birds body are flat and lie close to the skin to protect it from the wind, sun and cold. It also allows them to have the streamlined shape that is ideal for flying. The feathers are also adapted for a bird to keep them warm. Birds have contour feathers that they fluff out in the cold weather so they can trap a layer of warm air to keep them warm.

The final way birds are adapted is their way of flying. One way is their different wing types, e.g. humming birds have tiny wings which can flap more than 40 times a second which allows them to hover perfectly still. Another different wing type is a wandering albatross'. They have the longest wingspan of any bird (over 3m) and have a very narrow wing who's shape is perfect for gliding low over the sea so they can use the air currents that are just above the waves. Those allows them to fly many kilometres without having to flap at all.

As you have seen over the course of this essay, birds are hugely complex and detailed creatures that have adapted over millions of years to get to the place they are now. Who knows what they will be a million years from now ?