

## Beaks and Bills



The Mallard duck.

Courtesy of www.Pbphoto.org

By Jenna Poole

The terms beak and bill actually mean exactly the same thing. It is the hard part of a bird's mouth and is made of a substance called keratin, which is actually the same substance that feathers are made of. A bird's beak is made up of an upper and lower mandible, much the same as a mammal's jaw, and is used for a number of different jobs such as nest building, drinking, preening and feeding.

Beaks are far from being hard and insensitive. They all contain at least some nerve-endings, which allow them to feel prey moving where they may not be able to see it clearly (e.g. the woodpecker's beak in a small hole in a tree trunk).

### Waterbird and Wader Beaks

Waders are a group of birds that have very long beaks, though they vary considerably. These are birds that feed on the waters edge and use their beaks for sweeping through the shallow water and mud looking for insects, fish and other animals at different depths in the water and shallow mud. The Snipe can even open just the tips of its submerged beak to catch its prey without the mud surrounding it!

Ducks and geese tend to have very wide and sensitive beaks. These are designed to "scoop" through murky water and muddy river or lake bottoms to find tasty treats without using vision. There is even a species called the Shoveler because of its large shovel-shaped beak.

### Vegetarian Beaks

Many of the small herbivorous birds have short and strong beaks for cracking and collecting numerous small nuts or seeds. Some, appropriately named the Crossbills, have beaks that have overlapping upper and lower parts purpose-built for extracting the seeds from inside pinecones.

Hummingbirds have long beaks so that they can reach the nectar at the bottom of large tropical flowers while hovering above them. The longest beak relative to body size amongst birds belongs to Sword-billed hummingbird of South America. It can measure up to 11cm, which is more than half the total length of the small bird!



### Hunting Beaks

Pelicans and toucans both have very large and heavy-looking beaks, however they are not as heavy as you might think. Pelicans use theirs almost like fishing nets as they swoop down and scoop up fish as well as water. They then drain the water out and swallow the fish. Toucans use their massive and colourful beaks for stealing young birds and eggs from the nest of other birds.

Birds of prey such as eagles, vultures and hawks all have sharp, hooked beaks with which they can tear the flesh of their freshly caught prey. They are also short and strong to enable them to carry their meals back to the nest or to a safe perch.



### Pretty Puffins

Like the Toucan, the Puffin has a very chunky beak for its size and it is brightly coloured with yellow, red and blue-grey stripes. This colouring is due to colourful horny plates covering the beak, which are brightest during the breeding season. In autumn the puffin will shed the plates but will regrow them again for the next breeding season. The Puffin's beak also has the ability to expand at the base, allowing the upper and lower parts to remain parallel (instead of creating a triangular-shaped opening like most beaks) so that many fish can be carried back home after a trip out to sea.



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