

The Scoop on Bills

There's a lot more to waterfowl bills
than meets the eye

By Michael Furtman

Quick! What do ducks have that all but one mammal doesn't? If you said a bill, you're right! All waterfowl have a bill. What is the only mammal that has this body part? You guessed it—the duck-billed platypus!

Waterfowl bills come in many shapes and sizes, but they all have certain things in common. Each bill has two parts—a top half and a bottom half—that close together like a book. The top half of the bill is called the upper mandible. The bottom half is called the lower mandible. When you watch a duck quack, the lower mandible moves down and then up to open and close the bill. The upper mandible doesn't move at all. It is attached directly to the skull. That makes it very strong.



duck-billed platypus

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Waterfowl use their bills a lot like we use our fingers. The edges of the bill are soft and very sensitive. This helps ducks and geese find food by touch. Waterfowl also have a hooked nail on the tip of their upper mandible. They use this hard knob like a fingernail to grasp pieces of food and other objects.

The **Inside** Story

All waterfowl bills have ridges along the inside edges of the upper and lower mandibles. These ridges look like teeth (but aren't) and are called lamellae (la-mel-ee). When a dabbling duck feeds, it moves its bill from side to side in the water. The lamellae work like a strainer or comb to trap small seeds, bugs, and other bits of food in the water. Speaking of combs, waterfowl also use their bills and lamellae to keep their feathers in place, just like we comb our hair.

The lesser snow goose (above) has a strong bill with sharp edges for eating plants, while the shoveler's spoon-shaped bill is made for collecting tiny bits of food in the water.

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Don't Eat Soup with a Fork

Much like the utensils that we eat with, waterfowl bills are made for eating certain foods. Mallards live almost everywhere and eat all kinds of food, so they have an all-purpose bill that can do many things. But other ducks are more particular about what they eat. That means they need a specialized bill.

Here are some examples:

- The northern shoveler has one of the most specialized bills in the waterfowl world. The shoveler strains really small stuff—tiny bugs and plants called plankton—so its large, spoon-shaped bill has lots of lamellae.
- The northern pintail eats small seeds that cling to thick clumps of grass. This graceful duck uses its long, slender bill and neck to reach out and grab these seeds.
- Like the Canada goose, the American wigeon is a grazer. The wigeon's short, narrow bill is designed for snipping off blades of grass and other green shoots.
- The wood duck loves to eat acorns and other nuts that fall to the forest floor. The woody uses its small, narrow bill to grab these hard foods before swallowing them.

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The American wigeon's small bill is perfect for grazing on grass.

Scoters use their big, powerful bill to pry clams off rocks.



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Canvasbacks use their bill like a shovel to dig up plants.

Mergansers grab small fish with their narrow, sharp bill.

- The canvasback's favorite foods are clams and the roots of underwater plants. This impressive duck uses its wedge-shaped bill and strong, muscular neck to dig these foods out of the mud.
- Mergansers are fish eaters. Their narrow, pointed bills are lined with razor-sharp lamellae—perfect for catching wiggly minnows.
- Scoters and eiders have big, heavy bills. These diving ducks use their tough bills to pry clams from rocks on the bottom of lakes.



If all waterfowl had the same type of bill, we wouldn't have as many ducks and geese as we have today. Many waterfowl species have a special bill made for eating certain foods. This allows different kinds of ducks and geese to share the same habitats without going hungry. Mergansers eat minnows. Scaup dive to eat clams. Shovelers skim the surface for plankton. Wood ducks pick up acorns. And mallards dabble for seeds and insects.

You might say that from soup to nuts, there's a duck that eats it. It is nature's way of making use of every kind of duck food, and of giving us many different kinds of ducks to admire and enjoy.

**It Takes All
Kinds**