

THE GREAT OUTDOORS



Quack This Way

Watching ducks? They'll have an eye on you!
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I'll never forget many moons ago when I took my then 6-year-old daughter to the doctor and she decided not to participate in the exam. She crossed her arms and closed one eye. The intrigued physician inquired, "What are you doing?" And she replied, "I'm sleeping, with one eye open." That is when I decided my daughter was indeed a bit of a bird. All kidding aside – well, most kidding aside.

It's time to talk about ducks. In fact many birds nap resting one side of their brain and leaving the other awake. This

is called single-hemisphere sleep. Scientists, filming and studying mallards at night, discovered that ducks on the outer edges of a group will engage one side of their brain in sleep but the other side will be alert to danger. The ducks in the middle of the cluster may have both eyes shut, but the vigilant ones on the outside edges will remain on guard.

Ducks possess acute vision both near and far. Like many avian prey species their eyes are on the sides of their head and provide a 340-degree field of vision, allowing them to monitor a great deal of territory to protect themselves.

Their many other adaptations make them well-suited to be classified as waterfowl. From their bills to their webbed feet they are especially fitted for their watery surroundings and aerial migrations from one body of water to another. Their webbed feet are great for paddling. Like the bottom of an oar, the continuous surface area can push water better than the separated passerine toes designed for perching. The webbing also helps ducks travel over muddy marsh services without sinking in, like a snowshoe on a blanket of white. Depending on the species some ducks are cavity nesters and others raise their young on the ground. Those that nest in trees have a special

claw on the tips of their webbed toes, enabling them to grip bark and branches.

Ducks live on every continent but Antarctica so they have adapted to many climates. Because their webbed feet have no blood vessels or nerves they can't feel temperature. On an icy pond or in frigid waters they are, well, "a duck in water."

Duck feathers have a downy underlayer similar to that of young birds, which insulates them against severe temperatures. The down traps air which is heated by the body and keeps ducks warm. In fact manufacturers use goose down in jackets and coverlets to protect us from the cold. You may also have noticed ducks preening or passing their beaks over their feathers. If you watch closely, what looks like an obsession of continually returning to the base of their tail has great purpose. The uropygial gland at the base of their tail has a waxy substance that they are spreading over their feathers for waterproofing.

Speaking of beaks, Richard LeMaster developed a method of identifying ducks by their beaks alone. He also described, as have many other waterfowl experts, the flight heights or levels for each species. Heights,

speeds, and flight styles help in duck identification.

Ducks are omnivores; depending on the species their diet can include plants, insects, snails, mollusks, other invertebrates, acorns, fish, and don't forget gravel and small stones. The latter is used in place of teeth for grinding. Waterfowl have a gizzard, a very muscular organ that uses the rough textures of the stone and gravel to mechanically break down food. Birds and crocodilians evolved in prehistoric times from a group called Archosaurs, and today they still have gizzards like their ancestors. Gizzards also occur in some fish, earthworms, gastropods and crustaceans.

The longer the daylight hours the more eggs a duck can lay. Waterfowl and chicken farmers often increase light artificially to get hens to produce more eggs. Broods can vary, and on average ducks lay 8-15 eggs. However, some ducks "dump" in other ducks' nests, fostering out their responsibilities in a practice called nest parasitism. I once read of a record 50 eggs in one wood duck's nest. In some instances dumping can be across species. A Canadian study found that 90 percent of canvasback nests also contained redhead duck eggs. Eggs must be turned and warmed so in a nest this

extraordinary number of eggs would likely fail. Thus parasitism is often counterproductive. However, CU Maurice River's nest camera has documented 24 chicks successfully hatching out of one wood duck box!

Ducklings are precocial like shorebirds; their eyes are open at birth and within a day or two they are seeking their own food, although they still stay close to their mother. Within 40-60 days they reach complete independence.

Although ninety-seven percent of bird species do not have a phallus, male ducks have a retractable organ for mating. In the autumn it drops off, only to be re-formed in the spring. This phallus can grow to be the length of their body or even longer, and it is a corkscrew-shaped appendage, with no blood or muscle supporting it. Reproduction occurs so quickly that only a high-speed camera can capture the half-second process (Yale Scientific).

Ducks are in the fast lane in other ways as well. They have very strong chest muscles that enable great feats of flight, and most waterfowl can reach speeds of 40-60 miles an hour. Ducks Unlimited shares that mallards assisted by a tailwind have been known to fly 800 miles in a single 8-hour flight.

Ducks also have 12,000 separate skin muscles for individual feather control. This plays a part not only in flight but in the insulative qualities mentioned earlier. Black brant are the champion flyers of the duck world, traveling about 3,000 miles in just 60-72 hours. While canvasbacks can fly in the low 70 mph range, a red-breasted merganser was clocked at 100 mph.

We could fill pages about the miraculous qualities of ducks from flight to fancy. But if you're interested in keeping an eye on them, why not join us for our upcoming Duck Waddle adventure. CU Maurice River's naturalists will fill your morning with a host of opportunities to learn about ducks' habits and habitats.

In addition to cited sources mentalfloss.com contributed facts.