

Showing Off

Some birds need to stay hidden, but others need to show off. The male *hummingbird* below is putting on a show that can't be missed. He flares out the **shimmery** feathers on his throat, which catch the light in just the right way. The feathers flash a fiery-bright signal. To other males the signal says, "Back off, buddy—this place is mine!" And to females it says, "Aren't I handsome? Want to be my mate?"



I'm Molting! I'm Molting!

When feathers become worn out and damaged—or are no longer needed—they fall out and get replaced. This is called **molting**.

For example, the young *gentoo penguin* on the left wore only down feathers for warmth while growing up on land. But soon it will need to dive into the cold ocean to find its own food. So it's replacing its fuzzy baby feathers with **sleek**, waterproof adult feathers.

Many other kinds of birds exchange drab feathers for colorful ones as mating season arrives. And some, like the *willow ptarmigan* below, shed brown summer feathers and grow winter-white ones that blend in with snow.

summer

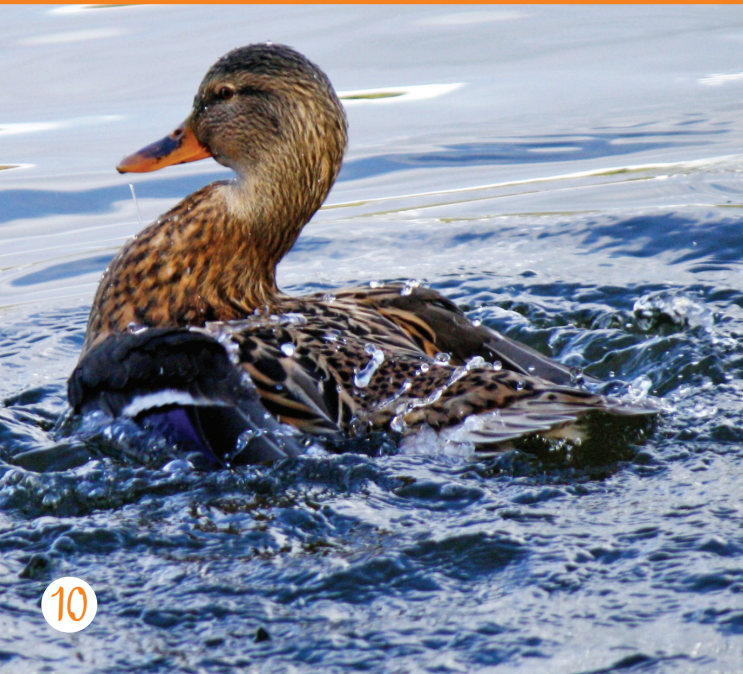
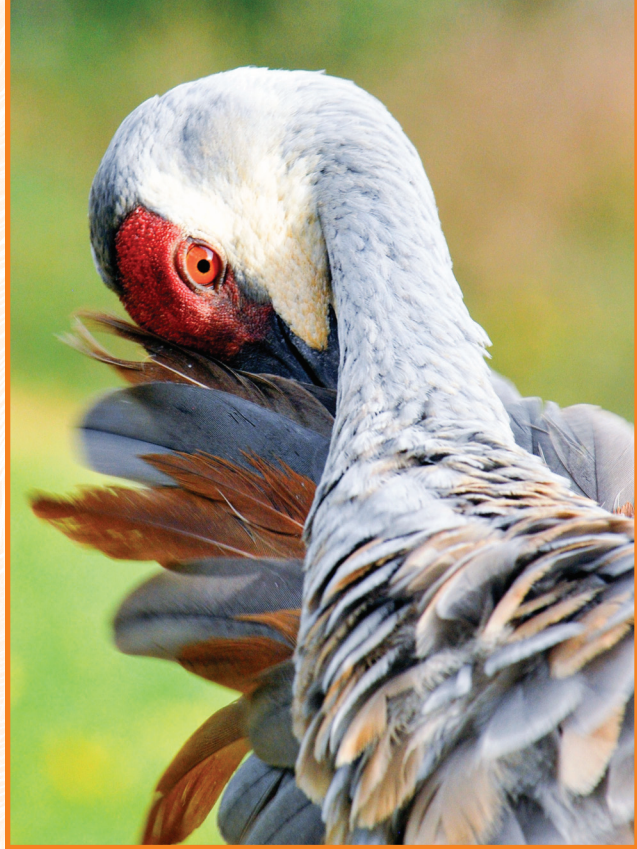


winter



Taking Care

Birds spend a lot of time preening, or keeping their feathers neat and clean, as the *sandhill crane* on the right demonstrates. Here are some of the techniques they use for taking care of their feathers.



Oil Me Up!

Have you heard the saying, “like water off a duck’s back”? Ducks really are waterproof, as you can see in the photo of the *mallard* on the left. And for good reason: To float like a boat, you have to keep your feathers dry!

Many birds stay dry by coating their feathers with a waxy oil. The oil comes from a gland at the base of a bird's tail. The *white-winged crossbill* below is dipping its bill in this gland. Then it will spread some of the oil onto its feathers.

Besides shedding water, the oil also helps keep feathers smooth, shiny, and less likely to break. That's why most birds—not just water birds—use this oil to care for their feathers.

