



BRAVE LITTLE BIRDS Kalispell naturalist and photographer John Ashley shot this sequence of a mother bufflehead peering from her nest in a tree cavity at Rogers Lake; three babies looking down 40 feet below to where she flew; and finally all three taking the plunge themselves.

Soft Landings

How can duck and goose hatchlings survive falls of 50 feet or more?

By Barbara Lee

“BOTH PARENTS CALLED FROM BELOW, and one by one the goslings jumped from the nest and fell at least 40 feet, ricocheting off tree limbs on the way down,” says Kim Pennington, an administrative assistant at Lee Metcalf National Wildlife Refuge south of Missoula. As six newly hatched Canada geese, perched high in their nest in a dead tree, tuned into calls from their parents to make the leap of a lifetime, Pennington says her hands tightened on the spotting scope.

“I knew they would jump, but I kept asking myself, how can this possibly work? How can they make it? They weren’t even 24 hours old, and they dropped from a tall platform nest generally used by ospreys. A couple of the goslings hesitated for a long moment, peering over the edge before tumbling off,” she says.

Pennington was describing geese “calling down” their young, a behavior of waterfowl that nest in tree cavities and on cliffs. Calling offspring to the ground is a powerful

illustration of the connection between imprinting—a kind of “follow me” programming—and the ability of ducklings and goslings to travel soon after hatching.

Ducks and geese have “precocial young”—able to leave the nest to walk, swim, and forage within hours of breaking free of their shells. “The classic precocial chick is downy, open-eyed, and capable of running about and feeding itself on its first day of life,” according to *Current Ornithology* magazine.

By nesting high off the ground, cavity-nesting ducks and geese create safe distance between their eggs and predators. But what happens when the eggs hatch? Imprinting is a dependable way for geese and ducks to quickly gather their hatchlings on the ground, lead them to water and safety, and keep them close at hand.

There are different kinds of imprinting. The most familiar is the line of goslings or ducklings following their waddling mother. This primal bonding occurs with a parent

bird, or even a human, generally within the first hours of a bird’s young life. Ornithologists say the process is strongest among cranes, geese, and ducks.

In Montana, six duck species nest in cavities and use imprinting to call their hatchlings to the ground: wood ducks, buffleheads, Barrow’s and common goldeneyes, and hooded and common mergansers. John Ashley, a Kalispell naturalist and photographer, captured the moment when a trio of new bufflehead ducklings jumped from the nest to join their mother far below. In a series of three photos (left), Ashley’s first image shows the female duck at the tree cavity’s entrance. In the second photo, three tiny buffleheads peer down from the nest to where, 40 feet below, Mom has landed on the ground and beckons them to follow. In the third image, the fuzzy siblings are in freefall, their stubby wings, pipe-stem legs, and over-sized webbed feet extended.

“I discovered the nest when I noticed a female bufflehead peering out of a hole in a tree close to one of my favorite trails along Rogers Lake,” Ashley says. “Guessing that hatchlings were in the cavity, I raced home to grab my photography gear.”

Ashley says he waited three hours while the mother bufflehead poked her head out every five minutes or so. She finally flew down to the base of the tree and, after about ten minutes, emitted just one soft “cluck.” The hatchlings appeared at the entrance to the cavity and soon made the heroic jump. They bounced about a foot in the soft grass.

It seems miraculous that every baby bird isn’t injured or killed by falling from such heights—or even farther. A 2014 video narrated by BBC filmmaker David Attenborough shows one gosling making a jump that seems impossible to survive. The newly hatched barnacle goose follows its siblings off a cliff nest in Greenland 400 feet above the ground. Its long and harrowing plunge is interrupted at several points by crashes into the cliff wall. Amazingly, the gosling is found by its parents at the

end of the fall, alive and intact. (To view the remarkable descent, Google “YouTube goslings cliff.”)

Not all young geese and ducks survive the ordeal. In the Attenborough video, the fall kills one of the survivor’s siblings. But most come through unscathed. Waterfowl hatchlings are extremely light for their volume: a newly hatched goose weighs only three to four ounces and a duckling even less. These fuzzy puff-balls almost drift down, Ashley says, and they don’t accelerate during longer falls as a heavier bird might. In addition, bones of day-old birds are flexible and a little squishy, “like licorice,” Pennington says. With luck, the landing is in water, leaves, tall grass, or forest duff. But even when goslings and ducklings strike solid ground, the tiny birds usually amble away unharmed.

It’s important that Mom get them down at the same time. After all, she can’t waddle off with a few and leave the rest of the crew

behind for a few days.

The key to making that happen is for all the eggs to hatch at roughly the same time, so that all the hatchlings are ready to jump together. Jim Hansen, Montana Fish, Wildlife & Parks’ Central Flyway coordinator in Billings and the agency’s resident waterfowl expert, says the mother visits the nest once each day to lay one egg but doesn’t settle down on the clutch until the last egg is laid. This “delayed incubation” ensures that all eggs get an equal duration of her body warmth. “That’s the beginning of a synchronized hatch,” Hansen says.

Next comes a remarkable form of inter-egg communication. Goslings and ducklings about to hatch begin “pipping”—using their egg tooth on the tip of the bill to break out of the shell. This makes a clicking sound heard by the siblings. Three days before hatching, individuals start pipping at different speeds. Then the group moves toward pipping and chirping at the same rate to synchronize hatching.

Once out of the eggs, the hatchlings generally stay in the nest for 12 to 24 hours, until they are dry, fluffy, and strong. This gives any late hatchers time to catch up. Once on the ground, the imprinting continues as the young birds follow their mother to the safety of a lake, river, or pond.

At the Lee Metcalf NWR, Pennington realized that the Canada goose eggs in the dead tree were close to hatching when the male goose joined the female at the nest. “That was very unusual,” she says. “I began checking frequently, and later saw that both parents had moved to the ground beneath the tree.” Through her spotting scope, she saw the adults’ bills opening and closing as they looked up. It appeared that the geese were calling down their new offspring from the nest above.

“The six goslings made the leap and survived,” Pennington says. “Soon after, I saw them in a tight line, following their parents to water. They scurried to keep up, and not one fell out of position. You would have never guessed that, less than 24 hours earlier, they were high up in a tree, encased in shells.” 🐾

• The puff-balls almost drift down, and have squishy bones as flexible as licorice.



HERE WE GO Canada goose hatchlings jump from their nest in a hollowed-out tree. So light are the tiny birds that they bounce slightly after hitting the ground, landing unharmed.

LEFT TO RIGHT: JOHN ASHLEY, RANDY BEACHAM

Writer Barbara Lee lives in Oregon and regularly visits Montana.