With a wing-span of about 2 metres (as tall as an NBA basketball player!), the bald eagle is one of Canada's largest birds of prey.

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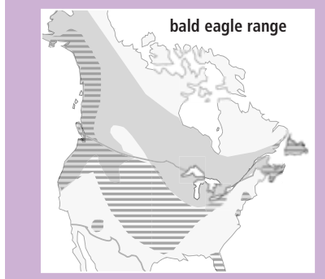
The Real Ontario Raptors

Did you know… the bald eagle was selected as the national symbol for the United States of America in 1782.



You may think of Toronto's basketball team or the movie Jurassic Park when you hear the word "raptor." In nature, raptor is a term used to describe any bird of prey that eats meat and uses its feet to grasp and capture its prey. These birds have exceptionally good vision, powerful feet with sharp talons and a sharp, hooked beak. Predatory birds such as the peregrine falcon, red-tailed hawk, barn owl, great horned owl, merlin, kites, osprey and eagles all belong to this fascinating group of birds.

Although there are 59 species of eagles worldwide, only two call Canada home — the bald eagle and the golden eagle.

Unlike its name suggests, the bald eagle has a full head of hair — or should we say feathers? The bird's name actually comes from the old English word, "balde" which means 'white'. The scientific name of the bald eagle, *Haliaeetus leucocephalus*, translates to "sea eagle" and "white head."

Although the largest population of bald eagles is found along the coast of British Columbia, their range stretches throughout the boreal forest from Alberta across the country to the Atlantic provinces.

With a wing-span of about 2 metres (as tall as an NBA basketball player!), the bald eagle is one of Canada's largest birds of prey. An adult bald eagle can weigh just over 6 kilograms, which is about the size of a large housecat.

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Place along fold

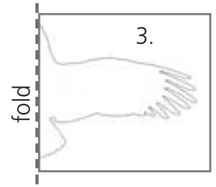
How You Can Help Birds

Because it is transparent, the glass in our windows is virtually invisible to birds. More than 100 million birds die from colliding with windows of houses, skyscrapers and other buildings in North America each year.

You can help prevent these needless deaths. Raptors are fierce predators that will attack smaller birds, so most smaller bird species will stay far away from anything that resembles a bird of prey.

What to do:

1. Fold a sheet of tracing paper in half. Crease and unfold.
2. Place the crease over the dotted line on this raptor in flight and trace the shape.
3. Refold the tracing paper and trace the shape onto the other side. Unfold
4. Glue the tracing onto a sheet of bristol board.
5. Cut out the raptor and colour it in with a black pencil crayon or marker. to create a 'silhouette'.
6. Tape the silhouette on the inside of your windows to help prevent accidental collisions.



To get up close and personal with raptors in Ontario, check out the following site:
Bird Studies Canada: www.bsc-eoc.org/bscmain.html

Outdoor cats (domesticated and feral) have a HUGE impact on wild bird populations. Always remember to keep cats indoors.

Raptor Round-Up

Unscramble the following letters to spell the names of some of Ontario's famous raptors.

1. geeneirrp lcnofa
   _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _
2. ldba geeal
   _ _ _ _ _ _ _ _ _ _ _ _ _
3. edr-iaeldt kwha
   _ _ _ - _ _ _ _ _ _ _ _ _ _ _ _ _
4. nabr wlo
   _ _ _ _ _ _ _ _ _
5. delogn geeal
   _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _
6. aretg rodneh wlo
   _
7. linerm
   _ _ _ _ _ _ _
8. kosawhg
   _ _ _ _ _ _ _ _ _
9. repsoy
   _ _ _ _ _ _ _
10. tisek
    _ _ _ _ _

Answers:
1. peregrine falcon, 2. bald eagle, 3. red-tailed hawk, 4. barn owl, 5. golden eagle, 6. great horned owl, 7. merlin, 8. goshawk, 9. osprey, 10. kites

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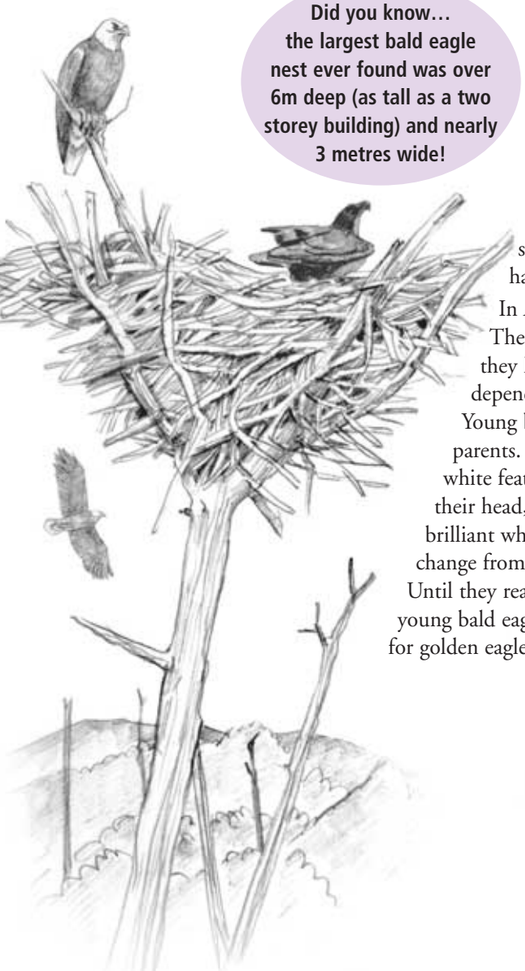
The diet of the bald eagle usually consists of fish, small mammals and aquatic birds. However, in winter, when food is scarce, they will forage for the dead carcasses of deer or other large mammals. With eyesight three to four times better than ours, an eagle can easily see its prey from high up in the sky. When its quarry is spotted, the eagle will dive quickly with its talons outstretched. Eagles capture unsuspecting prey by clenching their strong talons around the animal. The bird then flies to higher ground to consume its tasty meal.

Amazing eyesight... the bald eagle has eyesight that is far superior to yours — it can see a rabbit moving in a field over 1.5 kilometres away. Despite its amazing eyesight, the eagle has a poorly developed sense of smell and taste and can only hear about as well as you do!

The golden eagle

The golden eagle gets its descriptive name from the golden-coloured feathers on its head and the back of its neck. Although golden eagles are found throughout North America, Asia and Europe, there are unfortunately only a few nesting pairs found in the very remote, northern portions of Ontario. These large birds have dark brown feathers and distinctive golden-brown feathers along the back of their heads, neck and wings. Unlike the bald eagle, the golden eagle's beak is black. These birds of prey usually build their large nests on the edges of cliffs but will sometimes nest in trees if a suitable ledge cannot be found. When searching for prey, this master-hunter can reach diving speeds of over 320 kilometres an hour. This is faster than nearly any train on earth! If spotted by a golden eagle, a prairie dog, rabbit, grouse, duck, fox, skunk, small bird or reptile has very little time to get away from this awesome agile aviator!

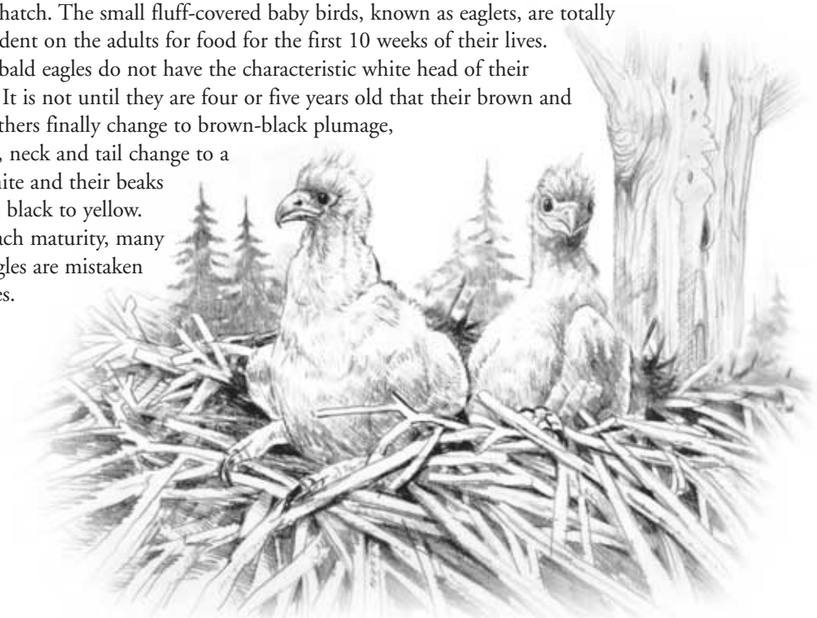


Did you know… the largest bald eagle nest ever found was over 6m deep (as tall as a two storey building) and nearly 3 metres wide!

The biggest nest

It only makes sense that one of the largest raptors in Canada would build the biggest nest and, at a width of over 2 metres and a depth of nearly 4 metres, this nest is a whopper! You can find bald eagle nests high atop the tallest trees near bodies of water or, where trees are scarce, at the top of a cliff. Bald eagles often nest in white pines, but they may also nest in sycamores, red oaks, black maples or cottonwoods depending on the type of habitat they live in.

In April or May, the female usually lays two to three blue-green eggs in the nest. The parents care for the eggs by keeping them warm for about 35 days, until they hatch. The small fluff-covered baby birds, known as eaglets, are totally dependent on the adults for food for the first 10 weeks of their lives. Young bald eagles do not have the characteristic white head of their parents. It is not until they are four or five years old that their brown and white feathers finally change to brown-black plumage, their head, neck and tail change to a brilliant white and their beaks change from black to yellow. Until they reach maturity, many young bald eagles are mistaken for golden eagles.



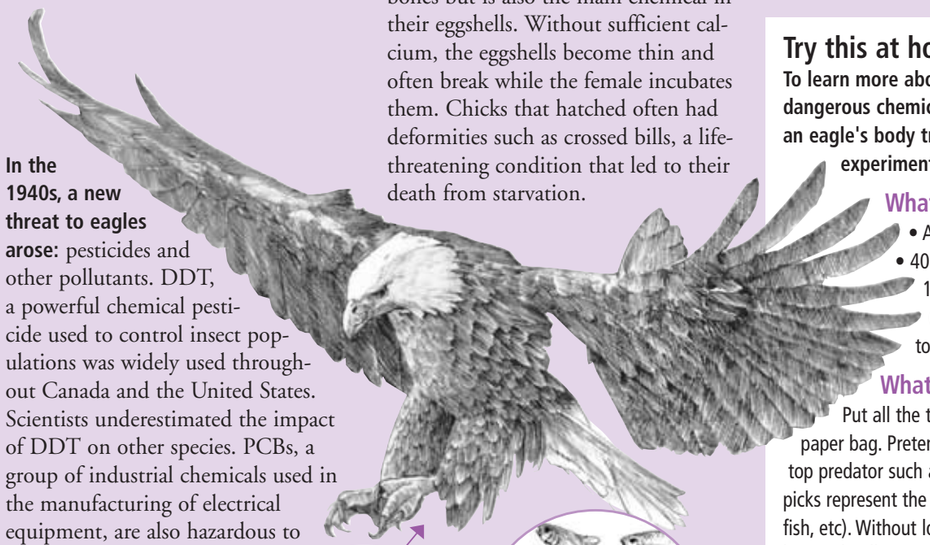
Threats to bald eagles

Ever since Europeans began to settle and colonize North America, about 200 years ago, the number of bald eagles in Canada has diminished. In the early 1800s, there may have been as many as 500,000 bald eagles in Canada. Over time, forests were cut down to build houses and farms. Some farmers, fearing the birds would attack their livestock, shot eagles. The number of these majestic birds plummeted. Between the early 1920s and 1950s, up to 150,000 eagles were killed in Alaska alone!

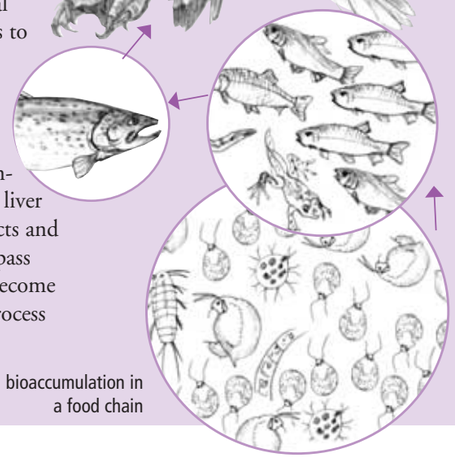
Bald eagles and other birds of prey are the top predators in the food chain. If their prey is contaminated by pesticides such as DDT or PCBs, these dangerous chemicals will accumulate in the raptors' bodies. In high concentrations, DDT can prevent the absorption of calcium from the food raptors eat. Just as you need to drink milk or eat calcium-rich foods to have healthy bones and teeth, calcium is important to not only the eagles' bones but is also the main chemical in their eggshells. Without sufficient calcium, the eggshells become thin and often break while the female incubates them. Chicks that hatched often had deformities such as crossed bills, a life-threatening condition that led to their death from starvation.

In Ontario, the Endangered Species Act protects bald eagles, along with their nests and habitat. Although their populations are increasing, raptors are still at risk from toxic chemicals in the environment such as lead and mercury.

DDT drastically affected the population of bald eagles and other raptors throughout North America. Since the 1970s, strong laws have been passed to prevent the use of such dangerous pesticides. DDT is now banned in Canada and the U.S. As a result, the raptor population is beginning to recover and there are now nearly 100,000 bald eagles across North America. If they are able to survive the first, and most difficult, year of their life, most eagles will survive in the wild for 20 or even 30 years.



In the 1940s, a new threat to eagles arose: pesticides and other pollutants. DDT, a powerful chemical pesticide used to control insect populations was widely used throughout Canada and the United States. Scientists underestimated the impact of DDT on other species. PCBs, a group of industrial chemicals used in the manufacturing of electrical equipment, are also hazardous to bald eagles. PCBs are often found in aquatic ecosystems where they poison the fish that make up a large portion of the eagle's diet. In high concentrations, PCBs can lead to liver and tissue damage, birth defects and even death. DDT and PCBs pass through the food chain and become more and more potent in a process known as bioaccumulation.



bioaccumulation in a food chain

Try this at home…

To learn more about how pesticides and dangerous chemicals can accumulate in an eagle's body try the following experiment.

What you need:

- A paper bag
- 40 regular brown and 15 coloured toothpicks (you can use a marker to colour them)

What to do:

Put all the toothpicks into the paper bag. Pretend that you are a top predator such as a bald eagle. The toothpicks represent the food you eat (rabbits, foxes, fish, etc). Without looking, reach into the paper bag and pull out one toothpick. If it is brown, you have safely eaten for the day. If it is coloured, you have ingested some DDT or other harmful chemical. Keep picking one toothpick out of the bag at a time. When you have taken five coloured toothpicks out of the bag, your egg shells begin to thin slightly. When you have taken 10 coloured toothpicks out of the bag, your egg shells are so thin they crack under the weight of the female that is trying to keep them warm. When all 15 coloured toothpicks have been taken out of the paper bag, you have such a high concentration of harmful chemicals in your body that you are no longer able to fly or hunt and will eventually starve.