Fast Facts

- Barn swallows are instantly recognizable by their forked tail
- They are the most widespread swallow species in the world, found in North America, Europe, Asia and parts of Africa.
- Barn swallows will defend their territory from predators and other birds, often grouping together to mob the invaders.
- As agile flyers they are able to catch insects in flight.
- Young barn swallow nestlings hatch with muted colours and a forked tail; these features develop as they grow older.
- Threatened in Canada (COSEWIC) and least concern internationally (IUCN); the major threats they face are habitat loss, climate change and pesticides.

Description

Watching a barn swallow soar is an amazing sight. These agile flyers can swerve, dart and change direction on a dime, skills that are really important for them to catch their meal of choice, insects, “on the fly”. Part of their flying ability comes from the shape of their wings, which are long, tapered and built for speed.

Perhaps the most distinctive feature of a barn swallow is its forked tail; its outer tail feathers are longer than the inner feathers creating a deep “V” shape. Legend has it that the barn swallow's tail was singed by a fireball thrown at the fleeing bird after it angered the gods by stealing their fire. While the legend is not true, it’s this tail that makes the barn swallow instantly recognizable when they are flying. Adult males are 15-19 cm long, with the tail making up 2-7 cm, female barn swallows also have a forked tail but it is shorter. Not all swallows have forked tails; for example, purple martins and tree swallows are also highly agile flyers that catch flying insects in mid-flight but do not have forked tails.

Apart from tail length, there are some other differences in appearance between the sexes. Male barn swallows have a rich glossy ultramarine/navy blue head, back and wing, with a whitish rusty underside. Females, on the other hand, have whiter undersides and their blue upper parts and breast band are less glossy.

Habitat

Barn swallows are the most widespread swallow species in the world. Outside of North America, they can be found throughout Europe, Asia and parts of Africa.

Since barn swallows are migratory birds, they have both a wintering and breeding range. When the weather gets colder here in the temperate zone, barn swallows head south to Central and South America where it is warmer. Some will fly all the way down to northern Argentina and the Galapagos Islands!

During the breeding season, in the spring and summer, barn swallows can be found in North America. In Canada, they can be found in every province in summertime, as well as much of the Yukon Territory and the south-western portion of the Northwest Territories.

When it comes to building a nest during the breeding season, barn swallows look for open agricultural pastureland, meadows and other grasslands with a natural water source and perching sites near their nesting habitat.

At one time, barn swallows nested in caves but over the past 300 years they have adapted and now build their nests in more developed areas. Ideal nesting structures include old wooden barns, bridges, roofs and piers. Today, the only North American barn swallow population that uses caves regularly for nesting can be found in the Channel Islands off the coast of California.
Ecology

Barn swallows have many predators. Birds, like hawks, owls, grackles, small mammals (rats and squirrels), larger mammals (raccoons, domestic cats and bobcats) as well as reptiles and amphibians (snakes and bullfrogs) are among the predators of barn swallows and their nestlings. There has even been a reported case where fire ants attacked nests in Texas and carried young barn swallow nestlings away. Despite all the animals they are up against, barn swallows aren’t willing to give up without a fight.

Barn swallows are territorial birds and will defend their nest against much larger animals. Working in groups of up to 19 barn swallows, including birds from nearby nests, they will mob predators by circling and flying around them, giving alarm calls and diving toward them. These birds will dive so close to their predators that they sometimes make physical contact, hitting them on the head or back! Individual birds are more likely to mob only if their nest is threatened directly.

Diet

About 99.8% of a barn swallow’s diet is made up of animal matter. Their meal of choice is flies, of all kinds, but they will also snack on beetles, bees and wasps, ants, dragonflies, butterflies and moths, as well as other flying insects. Rather than gathering many small insects at one time, barn swallows prefer to catch larger insects individually. Larger insects provide more nutrients than small prey so they save energy by catching fewer large insects rather than many small insects.

In addition to insects, barn swallows will also eat seeds from plants like elderberry, red osier dogwood, croton and buckwheat. To make sure they have enough calcium to lay eggs, female barn swallows will eat small pebbles, eggshells and pieces of small seashells. Males will also eat small pebbles to help break down their food.

Barn swallows eat while in flight. When hunting for insects, they will fly as little as a metre or less above the ground or water. These birds are not afraid of getting right up close to the water’s surface. They will drink by skimming the surface and lapping water with their bottom jaw (“mandible”).

Reproduction

Female barn swallows start to look for mates very soon after they arrive at their breeding grounds in spring. The qualities they look for depend on the continent where they live. European female barn swallows look for males with symmetrical tail feathers (rectrices), while in North America, females choose males based on the brightness of their chest feathers.

Both males and females help build the nest. They search for the perfect nesting spot by flying up and investigating potential areas. Barn swallows usually build their nests on eaves, rafters, cross beams of barns or sheds, and even bridges. Their nest is shaped like a half-cup and made from mud and lined with grass and feathers. During nest building the female will sometimes sit in the nest so that it takes the shape of her body.

On average, females lay 4 to 5 eggs that are creamy white with small reddish-brown spots. They hatch after about 15 days and nestlings will be free from their shell after about 24 hours.

Nestlings are born with a brownish/grey face and upper parts. Their breast band is mated, and they have pale white undersides. Young barn swallows have to wait a while before they develop their famous forked tail.

Sometimes parents have help from other barn swallows when it comes to taking care of their young. These helpers are usually older siblings but non-related birds are known to help as well. These extra care givers will not only feed the
young but occasionally will also keep the nest safe by defending it against other birds that fly too close.

Conservation Status
- Threatened (COSEWIC) and least concern (IUCN)
- Biggest threats include nesting and foraging habitat loss, climate change and pesticides

Barn swallows are a highly adaptable species which is somewhat rare in the animal kingdom. Where other species struggle to adapt to a human presence, barn swallows have embraced it. However, just because they are able to adapt doesn't mean there aren't some serious threats to their survival.

Given new farming practices commonly found today, many small family farms are disappearing and being replaced by intensive industrial agriculture. As a result, lots of the small wooden barns where barn swallows build their nests are being torn down. Very few experiments have been conducted to test the effect of artificial nest structures in wooden barns and outbuildings. Lack of nesting habitat, coupled with the fact that much of their hunting territory is being converted for development, has led to declines in barn swallow populations.

Climate change is another major threat to the barn swallow, having a fundamental large-scale impact on the ecosystem. Changes in temperature and precipitation are affecting animal and plant phenologies in many species. In other words, it is shifting their timing of breeding and flowering, respectively. Insects are emerging earlier in the spring as well, limiting the number of prey available during barn swallow peak nesting periods. These changes in when insects are available are reducing the bird’s ability to reproduce successfully and find food for their young.

Barn swallows are obligate aerial insectivores, meaning they feed on flying insects and when those insects aren’t available it can have a serious impact on the bird’s survival. Pesticides are also playing a role in the barn swallow’s decline. Pesticides have been found in the birds themselves, which leads to egg shell thinning, lower reproductive success and can even cause death.

When you sign up for a campaign to protect the barn swallow you can make a real difference for these amazing songbirds. By helping this species, we will be able to purchase grassland in barn swallow territory to be restored and protected. Five run down nesting structures will also be rehabilitated to improve nesting habitat. Additionally, your donations will help fund research to study the effectiveness of artificial nest structures as good nesting sites for barn swallows. This research will include scientific monitoring of the birds and their reproductive success. Nest cameras will help researchers monitor the use of these structures.

References:


