

Glossary

acre – a unit of land measurement; equal to 43,560 square feet and slightly smaller than a football field

Aunt Grace plants a one-**acre** garden every spring and sells the vegetables in town.

adapt (adapted, adaptation) – to adjust to new conditions or surroundings in an effort to survive

When our family moved to Minnesota we had to **adapt** to the cold winters.

agricultural – land planted to harvest, such as hay or row crops

Corn is the primary **agricultural** crop in our state.

altricial – the condition of being helpless and naked when hatched, such as blue jays and doves

The baby blue jays are **altricial** and hatch without feathers.

barb – the part of the feather that sticks out of the shaft; collectively, a vane

The structures that look like little hairs growing out of the shaft of a feather are **barbs**.

barbule – structures that grow out of the barbs of a feather; have hooks and rolled edges to lock the barbs together

Under the microscope the **barbules** look like the hook and eye on our garden gate.

binoculars – a device that makes distant objects look larger and closer

Viewing the bird through the **binoculars** let us identify it as a yellow warbler.

biologist – a person who studies living and once-living things

The **biologist** showed our class the differences between birds and mammals.

birding – to watch birds

We went **birding** with a biologist and learned six new bird calls.

booming – to make a deep, hollow sound to attract mates

Each spring prairie-chicken males attract females by **booming** and dancing.

boycott – people that join together to protest a person or business

I joined the **boycott** of products from the business that was dumping chemicals in the river.

brood – collectively, all the offspring from one nesting of a bird

The hen wood duck led her **brood** to the stream.

calcium carbonate – a white compound (CaCO₃) found in bones, teeth and shells

The shells and bones of birds contain **calcium carbonate**.

call – a vocalization that is not a song; made during courtship, feeding, migration or as a warning

The **call** of the northern bobwhite parents warns their young of approaching danger.

camouflage – protective coloring that helps hide an animal

The hen ring-necked pheasant's brown color helps to **camouflage** her while sitting on the nest.

cavity – hollow place or hole

The red-headed woodpeckers are nesting in a **cavity** in the elm tree.

characteristic – a quality or feature that makes something different from others

One **characteristic** used to identify the meadowlark is the black "v" on its breast.

classification – to arrange things in groups or classes

The **classification** of birds is based in part on their feeding habits and types of beaks.

clutch – a nest of eggs or brood of chicks

The nest in the evergreen tree contained a **clutch** of song sparrow eggs.

common – ordinary or average

The northern cardinal and blue jay are birds **common** to both the city and country.

communicate – to exchange information

Birds **communicate** through songs, calls and body posture.

competition (compete) – the act of trying to win or gain something from another or others

The **competition** between woodpeckers for the suet was intense.

contour feather – a feather having a strong, hollow shaft and a network of hooks

Contour feathers hide the fluffy, soft, down feathers that lie close to the bird's body.

courtship – a behavior pattern that leads to mating

Courtship behavior for birds includes singing, strutting, booming and posturing.

cover – the vegetation and debris that provide areas for animals to hide, sleep, feed and breed

The brushy fence row provides excellent **cover** for songbirds.

covey – a small flock or group, often a family

On our walk through the field, we disturbed a **covey** of northern bobwhite that scattered noisily in every direction.

crop – the organ at the bottom of the esophagus where food is stored for later digestion

While sitting under the bird feeder, the dove filled its **crop** with millet seed.

dehydrating – the process of drying out

The eggshell prevents the embryo from **dehydrating**.

dimorphism – having two distinct forms; males and females of the same species having different appearances

Dimorphism occurs in the northern cardinal: the male has red feathers while the female's feathers are brown.

diurnal – active during the day

The American robins, northern cardinals and blue jays we saw on our picnic at the park are **diurnal** birds.

down feather – soft feather next to the body that provides insulation; the covering of young birds

The newly hatched owlets look soft because they are covered with **down feathers**.

drumming – to make a loud, reverberating sound by quivering the wings

Each spring, male ruffed grouse attract females by **drumming**.

ecological balance – an environment that is healthy and fully functional

Removing the food supply from a habitat upsets the **ecological balance**.

egg tooth – a small, sharp tip on the upper bill used during hatching to chip out of the shell

I held a newly hatched chicken and felt its **egg tooth**.

endangered – a species which is in danger of extinction

The greater prairie-chicken is an **endangered** species in Illinois.

embryo – a bird developing inside an egg

The **embryo** is protected by the egg's shell.

energy expense – the amount of energy used in performing a task

The **energy expense** of a bird feeding young is greater than for one without young.

environment – the surrounding area in which an organism lives

Our zoo tries to make each animal's cage like its natural **environment**.

ethical – having to do with ethics or morals

Ethical sportsmen harvest only their legal limit of birds.

extinct (extinction) – a species that is no longer existing

Passenger pigeons became **extinct** when the last one died in 1914.

feeding station – structures filled with bird seed and placed outdoors

During breakfast we watch birds at the **feeding station** outside our dining room window.

field – a piece of open or cleared land

The weeds growing in the **field** provide food for many birds.

field guide – a book used to identify organisms or other objects.

For our picnics we always pack a bird **field guide** so we can identify the birds we see.

flight feather – a type of contour feather on the wing used during flight

For a few weeks each summer geese molt their **flight feathers** and are unable to fly.

flyway – a migratory route followed by birds to and from breeding areas

The Mississippi River serves as a **flyway** for many birds.

forb – a broad-leaved flowering plant that grows in a field or prairie

Prairies contain grasses as well as a variety of **forbs**, such as Indian paintbrush.

forest – an area covered with trees and other plants that form a closed canopy

The **forest** floor is a favorite feeding area for thrushes.

fragmentation – creating smaller areas of habitat from a large continuous habitat tract, such as removing a block of trees from a forested area

The road built through the forest resulted in **fragmentation** of the habitat.

game bird – a bird hunted for food and sport

My Dad's favorite **game bird** to hunt is the wild turkey.

habitat – the natural environment providing food, water, shelter and space for animals

The **habitat** for a Canada goose is a wetland.

hover – to stay in the air, flying in one place

The American kestrel **hovers** above the grassy roadside waiting to catch a mouse.

imitate – to copy the behavior of another animal

European starlings **imitate** many other birds' songs.

incubate (incubation) – to sit on eggs, keeping them warm until they hatch

The female American robin sat on her nest for two weeks to **incubate** the eggs.

instinct – a way of acting that an animal is born with

The urge to fly south for the winter is an **instinct**.

intrinsic – inherent qualities

The right to exist is an **intrinsic** value.

key – a chart showing grouping characteristics used to identify different classifications of organisms

The bird **key** helped us to decide that the bird at our feeder was a song sparrow.

mandible – the lower half of a bird's bill

Seed-eating birds, such as the northern cardinal, have a strong **mandible**.

mate (mating) – the process of male and female coming together to join egg and sperm cells; one of a pair of animals brought together for breeding

Mating takes place to produce offspring.

mating ritual – a practice conducted at regular intervals

Booming and drumming **rituals** occur during the mating season.

mating season – the time of year when mating occurs

The **mating season** for most birds is spring and early summer.

metabolism (metabolic rate) – chemical changes that provide the energy required for life; amount of food consumed, heat produced or oxygen used; speed at which the changes occur is the metabolic rate

Birds eat a lot of food because of their high **metabolic rate**.

migrate (migration, migrating, migrants, migratory, migratory species) – to move from one place to another

Warblers **migrate** from Central and South America each spring to nest in North America.

molt (molting) – to shed worn feathers and replace with new ones

Geese are unable to fly for a short period each summer when they **molt** their flight feathers.

monogamous – having only one mate

Bald eagles are **monogamous**.

naturalist – a person who knows a great deal about plants and animals

The park **naturalist** led our field trip and named plants and animals seen along the trail.

nectar – the sweet liquid produced by flowers

Ruby-throated hummingbirds are **nectar**-feeding birds.

Neotropical migrant – bird that spends the winter months in Central and South America and summers in North America

Scarlet tanagers are **Neotropical migrants**, spending part of the year in North America and the rest of the year in South America.

nocturnal – active at night

Owls are **nocturnal** birds because they hunt for food when it is dark.

ornithologist – a biologist specializing in the study of birds

The **ornithologist** showed the children the marks made by the woodpecker.

parasite (parasitize) – an animal that lives at the expense of another animal

The brown-headed cowbird is a nest **parasite** that relies on other birds to raise its young.

passerine – songbirds or perching birds

Warblers, blackbirds, finches, sparrows and vireos are types of **passerines**.

pesticide – any chemical used to control insects or weeds

Our neighbor applies **pesticides** to his yard and garden to control insect pests.

phenology – the study of natural phenomena that recur periodically, such as migration

Comparing daily records of birds at our feeding station for many years is called **phenology**.

pecking – to break through the shell

Twenty-eight days after the eggs were laid the chicks began **pecking**.

population – the number of organisms of one species living in a specific place at a specific time

Biologists estimated the **population** of mallards on the lake to be 125.

prairie – a type of habitat characterized by native grasses and forbs

Prairies once covered most of Illinois.

precocial – newly hatched birds that are covered in down and able to walk away from the nest with their parents as soon as they have dried off

Ring-necked pheasants and northern bobwhite have **precocial** young.

predator (predation) – an animal that feeds on other animals

Hawks and owls are **predators**.

preening – to clean, straighten and fluff feathers

The house sparrows sat in the road dusting and **preening** themselves.

prehensile – adapted to grasp or seize; flexible

The American woodcock's **prehensile** bill allows it to probe the ground and, when it finds an earthworm, open only the tip to grasp the worm and pull it out.

prey – an animal that is hunted by another animal for food

Insects, crayfish and songbirds are **prey** for the screech owl.

primitive – an organism that has evolved little from early ancestral types

Hawks and owls are more **primitive** birds than warblers.

rally – to bring or come together

When scattered, northern bobwhite whistle their **rally** call to locate and rejoin members of their covey.

range – the land on which an animal lives

The home **range** of birds contains the food, cover, shelter and water required for living.

rare – something not seen or found often

The black rail is **rare** in Illinois because much of its nesting habitat in wetlands has been destroyed.

scientific – having to do with or used in science

The **scientific** name for the barn owl is *Tyto alba*.

scientist – a person who knows a great deal about a branch of science

An ornithologist is a **scientist** who specializes in the study of birds.

scold – sharp vocalizations

Blue jays **scold** squirrels that get too close to their nest.

shaft – the hard center "tube" of a feather

The **shaft** of a feather pen holds the ink.

shelter – cover from the weather for purposes such as nesting, breeding and travel

Our apple tree provided **shelter** for the nesting mourning dove.

soar – to fly high in the air and barely flap wings

Bald eagles **soar** up and down the river in search of fishes.

song – the notes repeated by a bird in a regular pattern, used to defend territory and attract mates

Hearing the **songs** of birds is one of the first signs of spring.

space – a certain-sized area an animal needs to live

Larger animals require more **space** than smaller ones.

species – groups of animals with shared characteristics that can reproduce and produce fertile offspring

Red-headed and red-bellied woodpeckers are two different **species** of woodpeckers.

strut – to walk in a stiff manner

The **strut** of a male turkey is part of the mating ritual.

suburban – having to do with a suburb; an area with homes and stores between a city and the country

Landscaped **suburban** yards attract many birds.

suet – animal fats

Woodpeckers are attracted to **suet** hung in bags from trees.

syrinx – the vocal organ of birds

Air passing over the **syrinx** produces songs and calls.

territory – a defended area used for nesting or feeding

The northern mockingbird flew at the cat that entered its **territory**.

thermal – a rising mass of warm air

The hawk flew in a spiral on the **thermals**.

thermoregulation – keeping the temperature of a living body at a constant level

Cormorants hold their wings out for **thermoregulation** and to dry their feathers.

threatened – any species likely to become endangered in the foreseeable future

On our trip to the nature preserve we saw a **threatened** bird, the black-billed cuckoo.

toxin – a poison

Oils and acids are **toxins** to eggs and will cause a developing chick to die.

urban – having to do with a city

Peregrine falcons, rock pigeons, European starlings and house sparrows have adapted to an **urban** life.

urban sprawl – the spread of development in a way that is extensive and not efficiently planned

The **urban sprawl** of new homes and businesses into the countryside destroys natural habitats.

vane – the flat, weblike part of a feather emerging from the shaft; there are two vanes per feather

The **vane** of one flight feather overlaps the vane of the next feather.

volunteer – a person who offers to help or does something of his or her own free will and without pay

The statewide spring bird count is conducted by **volunteers**.

warm-blooded – maintaining a constant internal body temperature regardless of external conditions

Birds and mammals are **warm-blooded** animals while snakes are cold-blooded.

wetland – land that holds water for at least a portion of the year, has hydric soils and has water-loving plants

Wetland types range from cattail marshes and cypress swamps to the Mississippi River.

wildlife sanctuary – a place of refuge for animals

The area where bald eagles roost was dedicated as a **wildlife sanctuary**.

wind resistance – drag produced by the shape of a bird's body

Canada geese fly in a "v" to reduce the **wind resistance** on any one bird.

wing span – the distance between the tips of a bird's wings when extended

One of the largest birds in Illinois is the bald eagle, with a **wing span** of seven and one-half feet.

yolk – the food source in an egg for the developing bird

As a developing bird grows, the **yolk** shrinks.