See nature with the eyes of a naturalist.
Feel nature with the heart of an artist.

If you enjoy birding, gardening, or the great outdoors, *Drawn to Birds* is for you. Naturalist and watercolorist Jenny deFouw Geuder combines her vast knowledge of nature with her artistic expertise to create a book like no other. This collection begins with an introduction to bird anatomy. From there, more than 60 different bird species are showcased in watercolor, paired with a beautiful wildflower. Jenny further offers advice on how to become a naturalist, and she provides step-by-step guides for drawing, painting, and inking your own pictures.

Inside you’ll find:
- More than 100 captivating watercolors
- Jenny’s naturalist insights and tips on how to attract birds
- Extra pages for journaling and sketching
- BONUS: Section dedicated to insects and wildflowers

“Being a naturalist is about more than simply stopping to smell the flowers. It’s about observation and making a record. Pause and notice the shapes, colors, and patterns around you.”

— Jenny deFouw Geuder

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$29.95 U.S.
To my Mom: always my biggest fan and who encouraged me most. Thanks for instilling in me a love for art and nature.
Explore This Book

How to Use This Book ........... 6
A gentle introduction to the world of birds, from eggs and nests to feathers and fledglings.

Birding by Season ............... 24
A brief look at the birding each season has to offer, and how you can help birds throughout the year.

The Birds

Backyard Birds ................. 30
From year-round residents like cardinals and woodpeckers to summertime visitors like orioles, grosbeaks, and tanagers, this is your introduction to backyard birds. Say hello!

Raptors ......................... 60
Majestic, impressive, and even a little intimidating—get to know the birds of prey.
Near the Shore
Ducks and loons are familiar favorites, but there’s more to see—herons, kingfishers, and others—if you look closely!

Prairie and Woods
The fields and woods are alive with birds, including grouse, cranes, and pheasants, not to mention the always-impressive wild turkey.

How to be a Naturalist
Observe, sketch, record; if you become a noticer, you’re a naturalist!

Welcoming Birds to Your Yard
Simple steps to make your yard bird- and wildlife-friendly, plus garden plans to welcome birds and pollinators to your yard, garden, or balcony.

Wildflowers & Insects
Get to know your other garden neighbors: butterflies, beetles, bees, dragonflies, and more.
How to Use this Book


2. Be inspired! Find out more about a bird you love, or one you know nothing about. Have fun!
Whatever you do, it doesn't have to be “perfect.”

Don't compare your art, photos, doodles, or garden to anyone else's.
Birds have a very light bone structure and many extra muscles that aid in flight. These features, combined with a high metabolic rate and a frenetic circulatory system (a hummingbird’s heart can beat up to 1,200 times per minute), produce a very efficient flying system.

Note the neck: All mammals have 7 vertebrae in their neck, but birds have between 8 and 25! This gives birds additional flexibility, which not only compensates for their less mobile eyes, but also provides stability when flying, landing, taking off, and tracking prey.

Many birds have bones filled with air spaces. But not all birds have these pneumatized bones, as they are known. Some birds, such as loons, have adapted to have heavier bones, which enable them to swim more easily.
Raptors have talons—strong claws to capture, kill, and carry their prey. Owls have two toes forward and two pointed back, but they can also move an outer toe backward to walk and grip better.

Woodpeckers—two toes facing forward, two backward (zygodactyl feet). This allows them to climb up, down, and sideways on trees.

Water birds—long toes that spread their weight out. This helps them walk along soft ground so they don’t sink in.

Perching birds—three toes in the front, one in the back, ideal for gripping branches.
Feathers do so much! They...

- blanket
- cushion
- provide shade
- protect skin
- distract attackers
- camouflage
- attract attention
- help birds float
- help birds glide
- provide lift
- distract attackers
- camouflage
- attract attention
- help birds float
- help birds glide
- provide lift

1) Bristle feathers—usually on head, protect eyes/face

2) Plume feathers—fuzzy; closest to body to trap heat

3) Wing feathers—asymmetrical, with a shorter, less-flexible leading edge

4) Tail feathers—usually with more rounded edges, strong to help steer in flight

5) Filoplume feathers—whisker-like; help sense position

There are seven types of feathers.

*Feathers not to scale!*
6) Semiplume feathers—fluffy; they help with insulation.

7) Contour feathers—overlapping; they cover the body and streamline it.

Coverts - These contour feathers cover the bases of the flight feathers.

Long, broad wings for strong soaring, flight—eagles, hawks.

Long, pointed wings for bursts of speed (e.g., for catching insects)—swallows, hummingbirds.

Short, rounded wings for fast take-off & flight or flying short distances—pheasant, grouse.

Common Loon

Indigo Bunting

Parts of the Wing

primary coverts

alula

marginal coverts

scapulars

secondaries

secondary coverts

primaries

Coverts - These contour feathers cover the bases of the flight feathers.
Bird beaks are often well adapted for specific food sources.

Aerial fishing (kingfisher)

Crossbill

"Strainer" (duck)

Surface skimmer (Black Skimmer)

Chisel-beak for woodpecker (Downy Woodpecker)

Filter feeding (Flamingo)

Nectar, tube-shape beak (hummingbird)

Raptor; notch helps tear into meat (eagle)

Insects (Black Phoebe)

Grain/Seeds (Rose-breasted Grosbeak)

Beneficial Beaks
Birds all have three eyelids—an upper one, a lower one, and a nictitating membrane that helps clean and protect the eye.

Bird eyes are a lot like human eyes, but with some distinct adaptations. Most birds can’t move their eyes much, if at all. They turn their heads to move their eyes. This is because a bird’s eyes are quite large compared to the size of its head.

Raptors have their eyes situated toward the front: they don’t have very good peripheral vision (another reason many raptors are injured on roadways).

An owl can turn its head about 200 degrees but can’t move its eyes at all! Smaller birds have eyes situated on the sides of the head; this provides good peripheral vision, enabling them to see much of their surroundings.

Raptors have amazing eyesight—they can see their prey from over a mile away.
Whose Nest is This?

I found this nest in my wreath on my front door last week, and this week there were eggs!

Soft, fuzzy feathers line inside.

Pale blue eggs, dark speckles

A House Finch!
Nest Notes

Be a detective. If active—leave a nest a lot of space—binoculars are handy. Write a description of the birds and their activities; take notes!

Location and time are key. Migratory birds have separate territories versus "resident" birds. A nest found earlier in the spring is probably that of a resident bird rather than a migratory one. Keep track of where you have found it. Is it on the ground? On your house?

Composition and shape?
Mud, feathers, sticks, pine needles, grasses, mosses, or something else?
Is it a cup, a dome, hanging, etc.?

Eggs—size, shape, and color.
Markings and color can vary a lot, so don't base your investigation on this alone.

Remember to leave a nest where you find it, even if you think it is not being used. Bird nests, even inactive ones, are often protected under federal law.

For fun, nest-related community science, visit nestwatch.org
How many eggs: Depends! Some birds only lay one egg (condor), while others lay three (red-tailed hawk) or up to a lot more (wood duck can lay up to 17)! Most small songbirds lay about one egg a day until they reach the number they want. A clutch of eggs is the total number of eggs laid in one nest.

Egg shape: Recent research suggests that egg shape has to do with how good a flier a bird is: better fliers tend to have more asymmetrical eggs, maybe relating to fitting the babies in shapes better suited for sleeker, more aerodynamic bodies.
Hatchlings & Nestlings

A very recently hatched baby bird with only sparse down and eyes still closed.

If you see a baby bird out of its nest—leave it. Protect the area, keep pets inside, and let the parents care for it.

"Chicks" is the most common name for baby birds, and it can refer to any young bird.

A young bird several days old, covered with fuzzy and fluffy down. They still cannot care for themselves.
Altricial vs. precocial birds; the birds on the opposite page are altricial. They need lots of care when little. They are featherless and helpless when hatched. Precocial birds (ducks, geese, turkeys, etc.) are basically mini-adults and can get going on their own much sooner. They are born with eyes open and covered with their first down, and they leave the nest within a day or so.
A fledgling (juvenile) has its first coat of feathers and can move around on its own. Fledglings will start adventuring out on their own at this stage, but they still need their parents for food and safety. Often their colors are noticeably different than adults.

These young birds do not usually return home to their nests at night—it is pretty messy there and they are too big! They usually group together in trees for safety. If you see one—don’t move it; just make sure it is safe (no cats around, etc.). They are still being cared for!
Wood Ducks—these birds nest in tree cavities or boxes, anywhere from 2–60 feet high! A day after hatching they leave the nest by jumping out to follow their mother.
Birds follow migratory routes, called flyways, between northern breeding grounds and wintering areas farther south.
Flyways are a little like highways in the sky, and their endpoints range greatly, from the Gulf of Mexico and the southern United States to Mexico and into South America. Some birds only migrate far enough as they need to.

The Dark-eyed Junco breeds in far northern Canada but winters in Minnesota and other Midwestern states.
Birding by Season
Check your birdhouses, and make sure they are clean and ready to go.

Use cling decals or scare tape on your windows to try to help birds avoid collisions.

Have food and water available.

Enjoy as the birds return!

Spring
Keep feeders clean and full.
Work on identifying birds and go on a nest hunt (but keep your distance).
Watch the migration begin! Keep track of arrivals, patterns, and behavior in a journal.

Pay attention to winter visitors like juncos, as they arrive. And note the changing colors of the goldfinches.

Keep feeders up and full, as birds need fat resources for energy as they pass through.
Winter can still be a fun time for birding. Notice which birds stick around all winter.

Try making some winter treats for your backyard birds!

Consider a deicer for your birdbath; birds need water every day. Also brush snow off feeders and berry bushes.
Backyard Birds
Offer a few different types of feeders and food to attract a variety of birds.

Cover-birds like trees/bushes near a feeder for safety.

Tips:
Water—keep clean and available—many birds are attracted by the sound of water (bubblers, mist, fountain). Water heaters help keep water available during cold weather.
Baltimore Oriole

*Icterus galbula*

They love oranges!

Nest—“sock like” hanging nest

3”–4” deep, woven slender plant fibers

Dogwood

Calls: Chatter or two notes, repeated
Eastern Bluebird

If you put up a house, you may get a pair to stay near you.

Not typically a feeder bird, unless you offer mealworms.

Male

Female

Sialia sialis

Trillium

If you put up a house, you may get a pair to stay near you.

Great for your garden—they eat a ton of insects and pests. Plus, they are cheerful and charming.

A backyard favorite!

They love open meadows near trees.
Often a bully at a bird feeder. Beautiful, though!

Noisy, bold, and aggressive—loud, gull-like scream.

Blue Jays' colors are not pigment based. Instead, they get their color from the way their internal structure reflects blue light.
**Cardinal**

*Cardinalis cardinalis*

Popular lore has it that if you see a Cardinal, a loved one who passed away is visiting you.

Cardinals are monogamous and raise their young together.

Male

Female

One of the first wildflowers in spring

- **Spring Beauty**
Cedar Waxwings are named for the waxy red tips on their secondary wing feathers, but the purpose of the waxy secretions is unknown.

Sleek, social birds that feed on fruit year-round.

One of the first spring flowers
A birder’s favorite! These cheerful, brave, and social birds are known for their plucky disposition and distinctive “chickadee-dee-dee” call.

Chickadee

Really intelligent!

Chickadees in the fall can expand their hippocampus by 30%; this is helpful for them when remembering their food caches. In the spring, it shrinks again.
Extremely intelligent birds—known for problem-solving and communication. They make and use tools.

They can identify faces and teach other crows what they have learned. They also play games!

A group of crows is called a murder.

"Caw!"

American Crow
- Respect the birds and their space—don't chase them or invade their territory.
- Try not to disturb them—stay on the path, keep quiet.
- Don't litter!
- Be aware of other people around you—keep quiet, don’t distract or scare birds away. Be polite!

- Bring a friend, or at least tell someone where you will be.
- Avoid conflict.
- Be aware of other wildlife (ticks, bears, etc.) and be prepared
- Have your phone charged and with you, and bring a compass.
- Watch out for weather!
  Be prepared.
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Recommended Reading

Birds and Bird-watching

Watercolor and Art

About the Artist

Jenny deFouw Geuder is an artist and educator from Michigan. She received her Bachelor’s and Master’s degrees in Art Education (and minored in English). She has taught art at the middle-school level for 16 years and has continued her own artistic interests on the side, both in commissioned work and personal topics. She primarily works in watercolor, but she also enjoys oils, ceramics, and graphite. She lives in the country with her husband, two small boys, a dog, five cats, a hedgehog, chickens, and occasionally two ponies. She spends most of her summers at a rustic log cabin on a lake in northern Michigan where she hikes and fishes and, in general, enjoys the natural beauty of the area.
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