



## All About Birds

### ID SKILLS

[Four Keys to ID](#)   [Size & Shape](#)   [Color Pattern](#)   [Behavior](#)   [Habitat](#)   [Field Marks](#)   [Songs and Calls](#)

## Building Skills: The 4 Keys To Bird Identification

**To identify an unfamiliar bird, focus first on four keys to identification.**

April 20, 2009

With more than 800 species of birds in the U.S. and Canada, it's easy for a beginning bird watcher to feel overwhelmed by possibilities. Field guides seem crammed with similar-looking birds arranged in seemingly haphazard order. We can help you figure out where to begin.

First off: where not to start. Many ID tips focus on very specific details of plumage called field marks—the eyering of a Ruby-crowned Kinglet; the double breast band of a Killdeer. While these tips are useful, they assume you've already narrowed down your search to just a few similar species.

So start by learning to quickly recognize what group a mystery bird belongs to. You do this in two ways: by becoming familiar with the general shape, color, and behavior of birds, and by keeping a running tally in your head of what kinds of birds are most likely to be seen in your location and time of year.

Of course you'll need to look at field marks—a wingbar here, an eyering there—to clinch some IDs. But these four keys will quickly get you to the right group of species, so you'll know exactly which field marks to look for.

## Put The 4 Keys Into Practice

Bird watchers can identify many species from just a quick look. They're using the four keys to visual identification: [Size & Shape](#), [Color Pattern](#), [Behavior](#), and [Habitat](#). Practice with these common birds to see how the 4 keys work together:

You can also see the 4 keys in action in our free [Inside Birding series of instructional videos](#).



## BLACK-CAPPED CHICKADEE

**Size & Shape:** Tiny bird with large head, plump body, narrow tail, and short bill

**Color Pattern:** Shiny black cap and throat against white cheeks. Buffy sides; wings and back soft gray

**Behavior:** Busy, acrobatic, and often in feeding flocks of several species

**Habitat:** Forests, woodlots, backyards, and shrubby areas; in the West, associated with deciduous trees



*Photo by [Kevin Bolton](#) via [Birdshare](#).*

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## CEDAR WAXWING

**Size & Shape:** A sleek songbird with a swept-back crest, plump body and square-tipped tail

**Color Pattern:** Silky gray-brown, with yellow belly and red and yellow accents on wings and tail

**Behavior:** Often in large flocks, eating berries or catching insects over open water, giving high trilling call

**Habitat:** Woodlands, orchards, parks, and treed suburbs



*Photo by [cdbtx](#) via [Birdshare](#).*

## KILLDEER

**Size & Shape:** A large plover with large bill, large eye, and round head; long legs

**Color Pattern:** Golden brown above with two dark bands across the white breast

**Behavior:** Runs swiftly along ground or breaks into stiff-winged flight with shrill *kill-deer* call

**Habitat:** Open grassy and rocky areas, often far from water, including parking lots, lawns, and driveways



Photo by [Kevin Bolton](#) via [Birdshare](#).

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## CHIPPING SPARROW

**Size & Shape:** A small, compact, fairly flat-headed sparrow with a long, notched tail

**Color Pattern:** Crisp, frosty gray-white below, striking rufous cap with black line through eye

**Behavior:** Often in flocks; feeds on open ground, sings from high in trees, often evergreens

**Habitat:** Open woodlands, forests with grassy clearings, parks, roadsides, yards



Photo by [Byard Miller](#) via [Birdshare](#).



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## Bird ID Skills: Size & Shape

**Birds are built for what they do.**

**Every part of the bird you're looking at  
is a clue to what it is.**

April 20, 2009

The combination of size and shape is one of the most powerful tools to identification. Though you may be drawn to watching birds because of their wonderful colors or fascinating behavior, when it comes to making identifications, size and shape are the first pieces of information you should examine.

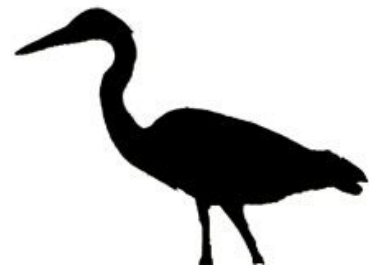
With just a little practice and observation, you'll find that differences in size and shape will jump out at you. The first steps are to learn typical bird silhouettes, find reliable ways to gauge the size of a bird, and notice differences in telltale parts of a bird such as the bill, wings, and tail.

Soon, you'll know the difference between Red-winged Blackbirds and European Starlings while they're still in flight, and be able to identify a Red-tailed Hawk or Turkey Vulture without taking your eyes off the road.

## Become Familiar With Silhouettes

Often you don't need to see any color at all to know what kind of bird you're looking at. Silhouettes quickly tell you a bird's size, proportions, and posture, and quickly rule out many groups of birds – even ones of nearly identical overall size. Practice the silhouettes in the carousel at right.

Silhouettes are so useful because they help with the first step in any identification: deciding what kind of bird you've got. Once that's done, you've narrowed down your choices to one small section of your field guide.



Great Blue Heron: A classic silhouette: long, spear-like bill, eleg shaped neck, long legs.



Need Bird ID Help?

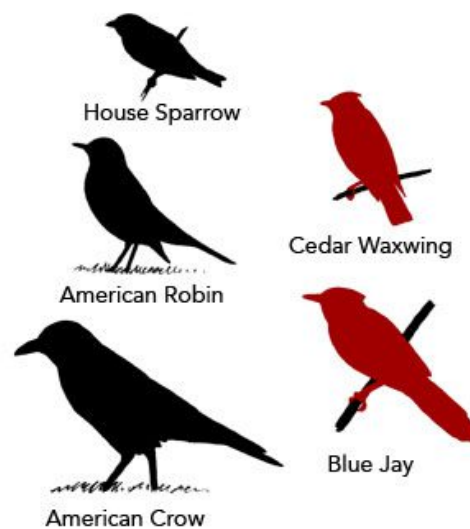
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Beginning bird watchers often get sidetracked by a bird's bright colors, only to be frustrated when they search through their field guide. Finches, for example, can be red, yellow, blue, brown, or green – but they're always shaped like finches. Learn silhouettes, and you'll always be close to an ID.

## Judge Size Against Birds You Know Well

Size is trickier to judge than shape. You never know how far away a bird is or how big that nearby rock or tree limb really is. Throw in fluffed-up or hunkered-down birds and it's easy to get fooled. But with a few tricks, you can still use size as an ID key.

Compare your mystery bird to a bird you know well. It helps just to know that your bird is larger or smaller than a sparrow, a robin, or a crow, and it may help you choose between two similar species, such as Downy and Hairy woodpeckers or Sharp-shinned and Cooper's hawks.



Sometimes you need two reference birds for comparison. A Cedar Waxwing is bigger than a sparrow but smaller than a robin. A Blue Jay is larger than a robin but smaller than a crow.

## Judge Against Birds In The Same Field Of View

Your estimate of size gets much more accurate if you can compare one bird directly against another. When you find groups of different species, you can use the ones you recognize to sort out the ones you don't.

For instance, if you're looking at a gull you don't recognize, it's a start to notice that it's larger than a more familiar bird, such as a Ring-billed Gull, that's standing right next to it. For some groups of birds, including shorebirds, seabirds, and waterfowl, using a known bird as a ruler is a crucial identification technique.





Size and shape can be very useful for birds in flight, such as mixed flocks of grackles, blackbirds, cowbirds, and starlings. In this photo, look for short-tailed, sharp-winged European Starlings among the large, long-tailed Common Grackles. *Photo by Robert Baker/PFW.*



## Apply Your Size & Shape Skills To The Parts Of A Bird

After you've taken note of a bird's overall size and shape, there's still plenty of room to hone your identification. Turn your attention to the size and shape of individual body parts. Here you'll find clues to how the bird lives its life: what it eats, how it flies, and where it lives.

Start with the bill – that all-purpose tool that functions as a bird's hands, pliers, knitting needles, knife-and-fork, and bullhorn. A flycatcher's broad, flat, bug-snatching bill looks very different from the thick, conical nut-smasher of a finch. Notice the slightly downcurved bills of the Northern Flickers in your backyard. That's an unusual shape for a woodpecker's bill, but perfect for a bird that digs into the ground after ants, as flickers often do.

Bills are an invaluable clue to identification – but tail shape and wing shape are important, too. Even subtle differences in head shape, neck length, and body shape can all yield useful insights if you study them carefully.

Noticing details like these can help you avoid classic identification mistakes. An Ovenbird is a common eastern warbler that has tricked many a bird watcher into thinking it's a thrush. The field marks are certainly thrush-like: warm brown above, strongly streaked below; even a crisp white eyering. But look at overall shape and size rather than field marks, and you'll see the body plan of a warbler: plump, compact body, short tail and wings, thin, pointed, insect-grabbing bill.

## Measure The Bird Against Itself



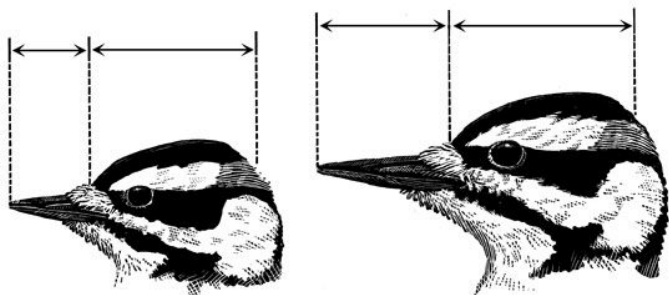
Let's start with an easy one. The **pelican's** nearly foot-long fish net of a bill is a good reminder of the dazzling variety of bill shapes in the bird world. *Brown Pelican by [Birdmandea](#) via [Birdshare](#).* Most **wood** sharp, help apart bark *Jobes* via [i](#)



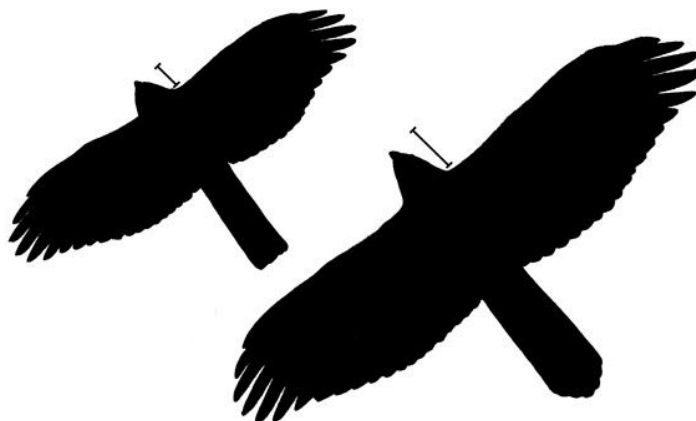


This is the most powerful way to use a bird's size for identification. It's hard to judge a lone bird's size, and an unusual posture can make shape hard to interpret. But you can always measure key body parts – wings, bill, tail, legs – against the bird itself.

Look for details like how long the bird's bill is relative to the head – a great way to tell apart Downy and Hairy woodpeckers as well as Greater and Lesser yellowlegs, but useful with other confusing species, too. Judging how big the head is compared to the rest of the body helps with separating Cooper's Hawks from Sharp-shinned Hawks in flight.



Downy and Hairy woodpeckers look almost identical and occur in similar habitats. One of the best ways to tell them apart is to judge the length of the bill compared to the head. The Downy Woodpecker's measures only about half the length of its head. The Hairy's is about the same length as the head.



The two common accipiters of North America, Sharp-shinned and Cooper's Hawks, are hard to tell apart. Try comparing the head to the body. Sharp-shinned's head barely protrudes in front of the wings. The slightly larger Cooper's Hawk has a much more prominent head. *Images by John Schmitt/Cornell Lab.*

Get in the habit of using the bird itself as a ruler, and you'll be amazed at how much information you can glean from each view. Good places to start include noting how long the legs are; how long the neck is; how far the tail extends past the body; and how far the primary feathers of the wing end along the tail (or past the tail).



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## Bird ID Skills: Color Pattern

**Every bird you see is in your field guide somewhere.**

**Focus on patterns instead of trying to match every feather.**

April 20, 2009

A picture – even a fleeting glimpse – can be worth a thousand words. As soon as you spot a bird, your eyes take in the overall pattern of light and dark. And if the light allows, you’ll probably glimpse the main colors as well. This is all you need to start your identification.

Use these quick glimpses to build a hunch about what your mystery bird is, even if you just saw it flash across a path and vanish into the underbrush. Then, if the bird is kind enough to hop back into view, you’ll know what else to look for to settle the identification.

Imagine a walk through a western forest, for example: A small, bright-yellow bird flits into the understory. Yellow immediately suggests a warbler (or the larger Western Tanager). Did you pick up a hint of grayness to the head? Or perhaps some glossy black? Just noticing that much can put you on track to identifying either a MacGillivray’s Warbler or a Wilson’s Warbler.

Some birds have very fine differences that take practice even to see at all. But don’t start looking for those details until you’ve used overall patterns to let the bird remind you what it is. Read on for a few tips about noticing patches of light and dark, the boldness of a bird’s markings, and making the most of outrageous colors.



When you're trying to make an ID, focus on overall color pattern instead of matching every detail to the pictures in your field guide. Remember that birds molt and their feathers wear. Their appearance can vary if the bird is old or young, or by how well it had been eating last time it molted. And of course, the light the bird is sitting in can have a huge effect on the colors you see.

At a distance and in very quick sightings, colors fade and all that's left are light and dark. It helps to familiarize yourself with common patterns. For example, American White Pelicans are large white birds with black trailing edges to their wings. Snow Geese are similarly shaped and colored, but the black in their wings is confined to the wingtips.

Ring-necked Ducks and scaup are dark ducks with a pale patch on the side; Northern Shovelers are the opposite: light-bodied ducks with a dark patch on the side. Many birds are dark above and pale below – a widespread pattern in the animal world that helps avoid notice by predators. By reversing this pattern, male Bobolinks, with their dark underparts and light backs, look conspicuous even from all the way across a field.

Other birds seem to be trying to call attention to themselves by wearing bright patches of color in prominent places. Male Red-winged Blackbirds use their vivid shoulder patches to intimidate their rivals (notice how they cover up the patches when sneaking around off their territory). American Redstarts flick bright orange patches in their wings and tail, perhaps to scare insects out of their hiding places.

Many birds, including Dark-eyed Juncos, Spotted and Eastern towhees, American Robins, and several hummingbirds, flash white in the tail when they fly, possibly as a way of confusing predators. White flashes in the wings are common, too: look for them in Northern Mockingbirds, Acorn, Golden-fronted, and Red-bellied woodpeckers, Common and Lesser nighthawks, and Phainopeplas.

## Bold And Faint

There are some confusing bird species that sit side by side in your field guide, wearing what seems like the exact same markings and defying you to identify them. Experienced birders can find clues to these tricky identifications by noticing how boldly or finely patterned their bird is. These differences can take a trained eye to detect, but the good news is that there's a great trial case right outside at your backyard feeder.

House Finches are common backyard birds across most of North America. Much of the continent also gets visits from the very similar Purple Finch. Males of the two species are red on the head and chest and brown and streaky elsewhere. The females are both brown and streaky. So how do you tell them apart? Look at how strongly they're marked.



Male Harlequin Ducks are so strongly patterned that it's very c mistake them for anything else. Photo by [Jim Paris](#) via [Birdsha](#)



Male House Finches tend to be boldly streaked down the flanks, whereas male Purple Finches are much paler and more diffusely streaked. Even the red is more distinct, and more confined to the head and breast, in a male House Finch. Male Purple Finches look washed all over, even on the back, in a paler raspberry red.

The all-brown females of these two species are an even better way to build your skills. The streaks on female House Finches are indistinct, brown on brown, with little actual white showing through. If a female Purple Finch lands next to it, she'll stand out with crisply defined brown streaks against a white background, particularly on the head.

Once you've had some practice, these small differences can be very useful. Similar degrees in marking can be seen between the coarsely marked Song Sparrow and finely painted Lincoln's Sparrow, and between immature Sharp-shinned and Cooper's Hawks.

## Outrageous Color

Some birds flash by in such splendid color that they can only be one of a very few things.

These are some of the gratuitous pleasures of being a bird watcher: a blazing-orange male oriole; a scarlet cardinal or tanager; a Mountain Bluebird as pale as a winter sky. All-out assaults on your eyes like the Painted Bunting and Green Jay, or a Gulf Coast oak tree dripping with spring warblers.

Colors like these are high on the list of reasons many of us started bird watching – you probably don't need a tip from us to notice them. But we do encourage you to use those colors for a near-instant identification. Then sit back and enjoy the view.



Female Purple Finches have similar size, shape, and streakiness to female House Finches. But the streaks are a much more crisply brown on white. Overall, the patterns of these two species are distinct. *Photo by Gary Lee/PFW.*



*Vermilion Flycatcher by Joan Gellatly via Birdshare.*



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## Bird ID Skills: Behavior

**There's what birds wear, and there's how they wear it.**

**A bird's attitude goes a long way in identification.**

April 20, 2009

Bird species don't just look unique, they have unique ways of acting, moving, sitting, and flying. When you learn these habits, you can recognize many birds the same way you notice a friend walking through a crowd of strangers.

Chances are, you'll never see a Cedar Waxwing poking through the underbrush for seeds – or a Wood Thrush zigzagging over a summer pond catching insects. But similar-sized birds such as towhees and swallows do this all the time. Behavior is one key way these birds differ.

Because so much of a bird's identity is evident in how it acts, behavior can lead you to an ID in the blink of an eye, in bad light, or from a quarter-mile away. Before you even pick up your binoculars, notice how your bird is sitting, how it's feeding or moving, whether it's in a flock, and if it has any nervous habits like flicking its wings or bobbing its tail.

And remember that to get good at recognizing birds by their behavior, you must spend time watching them. It's tempting to put down your binoculars and grab your field guide as soon as you see a field mark. Or, after identifying a common bird, you might feel rushed to move on and find something more unusual.

Resist these urges. Relax, and watch the bird for as long as it will let you. This is how you become used to the way a bird acts, how you discover it doing something new – and let’s face it, it’s probably why you went out bird watching in the first place.

## Posture

The most basic aspect of behavior is posture, or how a bird presents itself. You can learn to distinguish many similarly proportioned birds just from the poses they assume. It’s a skill that includes recognizing a bird’s size and shape, and adds in the impression of the bird’s habits and attitude.

For example, in fall the small, drab green Pine Warbler looks similar to the Acadian Flycatcher, right down to the two wingbars and the straight bill. But you’re unlikely to confuse the two because their postures are so different. Pine Warblers hold their bodies horizontally and often seem to crouch. Flycatchers sit straight up and down, staying on alert for passing insects.

Horizontal versus vertical posture is the first step. Next, get an impression of the bird: Does it seem inquisitive like a chickadee or placid, like a thrush? Does it lean forward, ready for mischief, like a crow? Or is it assertive and stiff, like a robin? Do the bird’s eyes dart around after targets, like a flycatcher – or methodically scan the foliage like a vireo? Is the bird constantly on alert, like a finch in the open? Nervous and skittish like a kinglet?



**Crow** Alert, inquisitive, and poised for action or opportunity. *Illustrations by Susan Spear/John Schmitt/Cornell Lab.*



## Movement

As soon as a sitting bird starts to move, it gives you a new set of clues about what it is. You’ll see not only different parts of the bird and new postures, but you’ll also sense more of the bird’s attitude through the rhythm of its movements. There’s a huge difference between the bold way a robin bounces up to a perch, a mockingbird’s showy, fluttering arrival, and the meekness of a towhee skulking around.

You can also tell a lot from the way the bird moves: notice whether it hops, like many sparrows, or walks like a pipit; whether it always hitches upward like a woodpecker or scurries around like a nuthatch seemingly unaware of gravity.

On the water, some ducks, such as Mallard and Northern Pintail, tip up (or “dabble”) to reach submerged vegetation. Others, including scaup and Redhead, disappear from view as they dive for shellfish and other prey. Among the divers, you’ll notice that some species, such as eiders, open their wings just before they dive. These ducks flap their wings for propulsion underwater, and they almost always begin a dive this way.

### Short-eared Owl



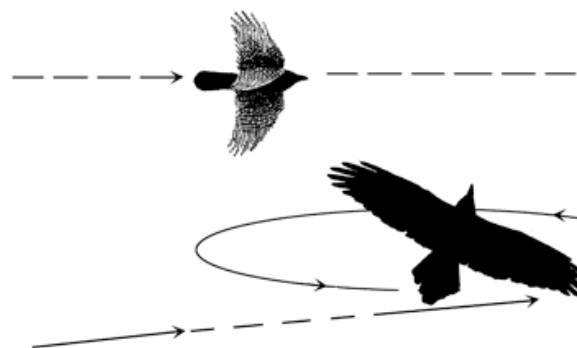
In these 6 short videos, compare the movement styles of a Short-eared Owl, Arctic Tern, Prothonotary Warbler, Great Blue Heron, Northern Goshawk, and Rock Ptarmigan

## Flight Pattern

Certain birds have flight patterns that give them away. Almost nothing flaps as slowly as a Great Blue Heron – you can see this from miles away. Learn the long swooping flight of most woodpeckers and you'll be able to pick them out before they've even landed.

Many small birds, particularly finches, have bouncy, roller-coaster trajectories caused by fluttering their wings and then actually folding them shut for a split second. Other little birds, including wrens, warblers, and many sparrows, fly in a straight path with a blur of little wings.

Birds of prey have their own distinct styles. Red-tailed Hawks and other buteos fly with deep, regular wingbeats or soar in circles on broad wings. Accipiters like the Sharp-shinned Hawk give just a few stiff flaps and then glide. Falcons fly with powerful beats of their sharply pointed wings. The White-tailed Kite often hovers, wings beating, pointed into the wind.



**Crows and Ravens** Flight style can be a great way to identify birds. Crows and ravens look very similar, they fly quite differently. American Crows take frequent breaks from flapping to glide, whereas Common Ravens take frequent breaks from flapping to

## Feeding Style

Much of the time that you watch birds on the move, you'll be watching them feed, so it pays to become familiar with foraging styles. Some are obvious: the patient stalking of a heron; the continual up-and-back sprints of Sanderlings; the plunge of a kingfisher. But you can develop a surprisingly specific impression of almost any bird just from a few seconds of watching it forage.

For example, swallows, flycatchers, vireos, finches, and thrushes are all roughly the same size, but they feed in totally different manners. Swallows eat on the wing; flycatchers dart out from perches at flying bugs; vireos creep through leaves; finches sit still and crush seeds; and thrushes hop low to the ground eating insects and fruit.

Experts take this skill to incredible lengths – identifying distant seabirds on a choppy ocean just from the way they hold their wings, for example. But just as there are dozens of different ways for a person to eat an ear of corn, even closely related birds have developed their own telltale foraging habits. All it takes to discover them is time, practice, and your own powers of observation.

## Flocking

A flock of kingfishers? A single starling all on its own? Some species seem to be born loners, and others are never found solo. Even among flocking birds, there are those content to travel in threes and fours, and others that gather by the dozens and hundreds.



### Belted Kingfisher



Compare the feeding styles of kingfishers, crossbills, dabbling and diving ducks, snipe, and woodcocks in these 7 short video clips.

A noisy group of yellow birds in a treetop is much more likely to be a flock of American Goldfinches than a group of Yellow Warblers. A visit to northern coasts in winter might net you several thousand Brant, but you'll probably only see Harlequin Ducks by the handful. Learning the tendencies of birds to flock – and their tolerance for crowding – is one more aspect of behavior you can use.

Just remember that many species get more sociable as summer draws to a close. After nesting is over and young are feeding themselves, adults can relax and stop defending their territories. Still, some birds stay in large groups even in summer, sometimes even nesting cooperatively. Scientists have learned this often happens when a species' food source is scattered and unpredictable, as with gulls and other seabirds, or when suitable nesting sites are hard to come by, as with many swallows.



Waterfowl tend to be gregarious, and some geese, such as the: thousands, and even millions. *Photo by [Gerry Dewaghe](#) via [Bir](#)*



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## Bird ID Skills: Habitat

**A habitat is a bird's home, and many birds are choosy.**

**Narrow down your list by keeping in mind where you are.**

April 20, 2009

Identifying birds quickly and correctly is all about probability. By knowing what's likely to be seen you can get a head start on recognizing the birds you run into. And when you see a bird you weren't expecting, you'll know to take an extra look.

Habitat is both the first and last question to ask yourself when identifying a bird. Ask it first, so you know what you're likely to see, and last as a double check.

You can fine-tune your expectations by taking geographic range and time of year into consideration.

## Birding By Probability

We think of habitats as collections of plants: grassland, cypress swamp, pine woods, deciduous forest. But they're equally collections of birds. By noting the habitat you're in, you can build a hunch about the kinds of birds you're most likely to see.

North America has more than 50 species of warblers and over 30 species of hawks. It's impossible to keep all these possibilities straight every time you spot one of these birds. But you can make things a lot easier by considering the habitat you're in.

For example, your field guide shows lots of sparrows with rusty heads, but you can use habitat and probability to winnow them down. Is yours hiding in a bunch of reeds, hopping around the base of a pine, or singing from a fencepost? The reeds tell you it's probably a Swamp Sparrow. If you're in pine woods, it's more likely a Chipping Sparrow. And if it's along a fencerow it could well be a Field Sparrow. Click through the illustrations at right for more examples.

Of course, if you only let yourself identify birds you expect to see, you'll have a hard time finding rare or unusual birds. But the best way to find rarities is to know your common birds first. (The ones left over are the rare ones.) Birding by probability just helps you sort through them that much more quickly.

## Use Range Maps

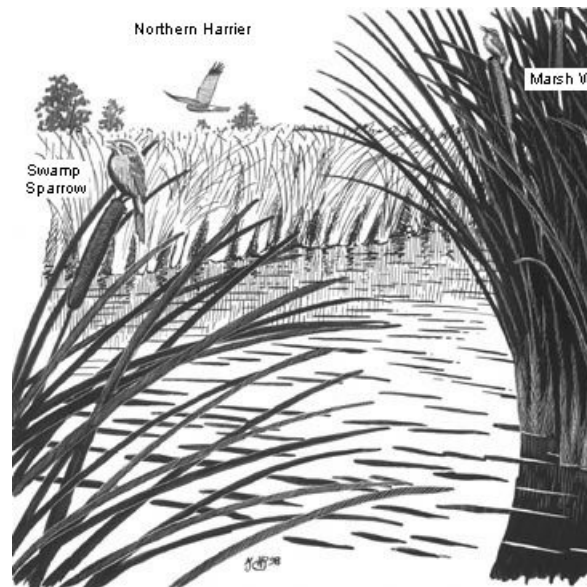
You don't have to give yourself headaches trying to keep straight every last bird in your field guide. They may all be lined up next to each other on the pages, but that doesn't mean they're all in your backyard or local park.

Make it a habit to check the range maps before you make an identification. For example, you can strike off at least half of the devilishly similar Empidonax flycatchers at once, just by taking into account where you are when you see one. Baltimore Orioles look a lot like Bullock's Orioles, but you're unlikely to be in a place where you can see both at the same time. Similarly, North America has two kinds of small nuthatches with brown heads, but they don't occur within about 800 miles of each other.

Of course, birds do stray from their home ranges, sometimes fantastically – that's part of the fun. But remember that you're birding by probability. First compare your bird against what's likely to be present. If nothing matches, then start taking notes.

## Check The Time Of Year

Your field guide's range maps hold another clue to identification: They tell you when a bird is likely to be around. Some birds don't move much throughout the year – nuthatches, chickadees, and many woodpeckers are good examples. Others leave North America entirely. And a few come south from the Arctic to spend their winters with us. That information can help you.



Likely species in a freshwater marsh. Typical sparrow: Swamp warbler: Common Yellowthroat; typical wren: Marsh Wren; typ



Brown-headed Nuthatches look very similar to Pygmy Nuthatches, but the farthest west they occur is the pine flatwoods of East Texas. Photo by [Mike Powers](#) via [Birdshare](#).



Many of summer’s birds, including most of the warblers, flycatchers, thrushes, hummingbirds, and shorebirds, are gone by late fall. (Or, if you live in southern or coastal parts of the country, this may be when birds start arriving in your area.) Other birds move in to replace them. This mass exodus and arrival is part of what makes bird watching during migration so exciting.

For example, Cedar Waxwings move south for winter, but Bohemian Waxwings replace them across much of northern North America. Field Sparrows depart as winter approaches, just as American Tree Sparrows are arriving.

## Find Out What You’re Likely To See: Use eBird

While range maps are a good starting point for learning where and when you’ll find a certain bird, there’s only so much detail that will fit on one map.

For ways to get more detail about what birds are near you, try using the online tools at eBird. It’s a free checklist program that lets you keep track of birds you’ve seen.

The great part about this system is that eBird also lets you look at the data that other bird watchers have recorded. When you visit the eBird tools page, you can view bar charts and range maps generated for any species, time period, and location you choose.

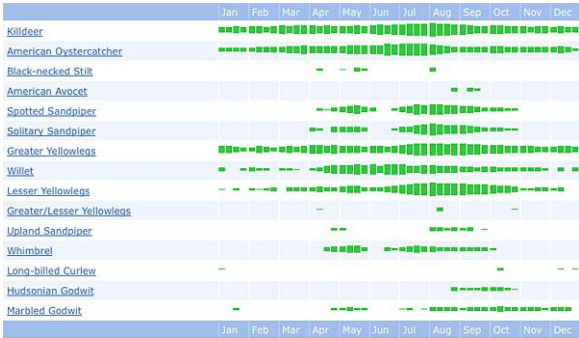
The bar charts that eBird produces give you a sense for how often a species has been detected in a certain region. It’s a great way to see what birds you can expect to see in your state, county or a nearby birding hotspot (such as a national wildlife refuge or state park).

You can also use eBird to look at arrival and departure dates for migrants as well as high counts, either for a certain year or a range of years.

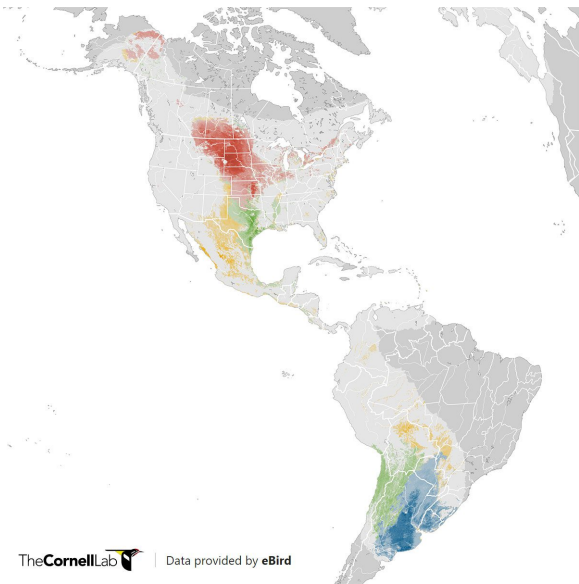
We’ve also put the immense eBird database (provided by bird watchers like you) to use making animated occurrence maps—the animated Upland Sandpiper map is pictured here. These novel maps let you see how a bird’s range changes in the U.S. from week to week throughout the year.



You're not likely to see **American Tree Sparrows** until after Field Sparrows have flown south. Photo by [Kevin Bolton](#) via [Birdshare](#).



**When should you look for Upland Sandpipers in Cape May, New Jersey?** Cape May is a legendary birding spot, but of course not all species are there all the time. This [eBird](#) bar chart shows you seasonal shorebird numbers at Cape May through the year. Killdeer and American Oystercatchers are good bets pretty much any day. But if it's Upland Sandpiper you're after, come in August.



This eBird Status map can help you tell when and where to look for Upland Sandpipers: Red is the breeding season, blue is the nonbreeding season; yellow and green are migration. The darker the color, the more abundant the species is. For more details, see the [eBird Status page for Upland Sandpiper](#).



## ID SKILLS

[Four Keys to ID](#) [Size & Shape](#) [Color Pattern](#) [Behavior](#) [Habitat](#) [Field Marks](#) [Songs and Calls](#)

## Bird ID Skills: Field Marks

The first four keys help you decide what sort of bird you have.

Next, it's time to look at some field marks.

April 20, 2009

Once you've looked at Size & Shape, Color Pattern, Behavior, and Habitat to decide what general type of bird you're looking at, you may still have a few similar birds to choose between. To be certain of your identification, you'll need to look at field marks.

Field marks are the distinctive stripes, spots, patterns, colors, and highlights that birds have in such abundance and variety. Birds developed these patterns for many reasons, but one way they use some of these markings is to recognize members of their own species. And bird watchers can use them for the same purpose.

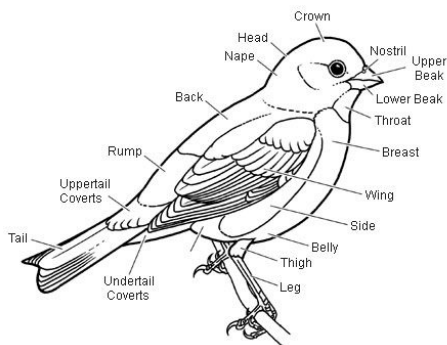


Image by Charles Ripper/Cornell Lab.

When you dive into the world of field marks, it helps if you learn a little bird anatomy. Trust us, it's a lot easier to notice what color a bird's malar stripe is if you know it's that line angling back from the bird's chin, separating the cheek from the throat. You'll know the difference between an alula and a greater secondary covert in no time.

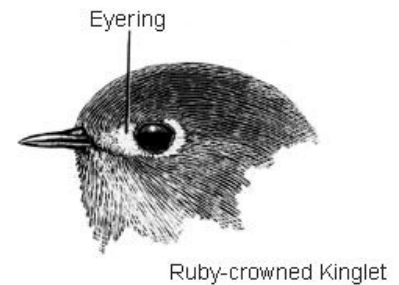
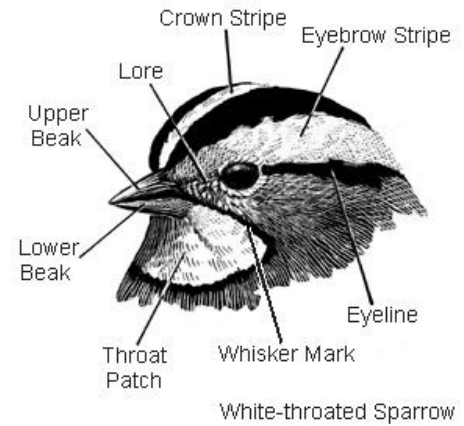
Ornithologists talk about parts of a bird by dividing its body into topographical regions. The main divisions are beak (or bill), head, back, throat, breast, wings, tail, and legs. Many of these regions are divided still further.

## Field Marks Of The Head

You've probably already taken a close look at your mystery bird's head by now, if only to note its beak shape as a clue to its group. Make it a habit to note these useful field marks as well (listed clockwise starting from the eyebrow stripe):

You've probably already taken a close look at your mystery bird's head by now, if only to note its beak shape as a clue to its group. Make it a habit to note these useful field marks as well (listed clockwise starting from the eyebrow stripe):

- **Eye brow stripe** (or **superciliary**, line *over* the eye)
- **Eyeline** (line *through* the eye)
- **Whisker mark** (also called mustache or **malar stripe**)
- Throat patch
- Color of upper and lower beak
- Color of the **lore** (area between base of beak and eye)
- Crown stripe (stripe in the midline of the head)
- Eyring (ring of color around eye)
- Presence or absence of crest
- The color of the eye itself (**iris**) can also be very useful

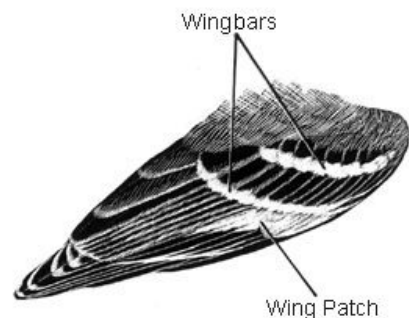


*Image by John Schmitt/Cornell Lab.*

## Field Marks Of The Wing

Birds' wings are another great place to pick up clues to a bird's identity. In a few groups, including warblers and vireos, wing markings can give you a positive identification even if the bird has molted out of its colorful breeding plumage. In other groups, such as flycatchers and sparrows, the absence of wing markings may be important. Ducks, shorebirds, raptors, among others, often show distinctive markings in flight, when their wings are spread and new feathers are exposed. Keep an eye out for these field marks:

- **Wingbars** (stripes across the folded wing)
- Wing patches (blocks of color on the wing)
- Wing lining (the feathers covering the underside of the wing)
- **Primaries** (the long flight feathers on the outer half of the wing)
- **Secondaries** (the flight feathers on the inner half of the wing)
- **Speculum** (the patch of colored secondaries that helps identify many ducks)
- Wing tips



*Image by John Schmitt/Cornell Lab.*



### ID SKILLS

[Four Keys to ID](#) [Size & Shape](#) [Color Pattern](#) [Behavior](#) [Habitat](#) [Field Marks](#) [Songs and Calls](#)

## Bird ID Skills: How To Learn Bird Songs And Calls

**When a bird sings, it's telling you what it is and where it is.**

**Learn bird calls and open a new window on your birding.**

April 20, 2009

You can only see straight ahead, but you can hear in all directions at once. Learning bird songs is a great way to identify birds hidden by dense foliage, faraway birds, birds at night, and birds that look identical to each other. In fact, when biologists count birds in the field, the great majority of species are heard rather than seen.

Learning calls and songs helps you in two ways: First, you can do a quick survey of what's around before you're even out of the parking lot. And second, when you hear something you don't recognize, you know where to put your attention.

Owls and nightjars are obvious examples of the usefulness of hearing in identification. Another great example are the dozen or so confusing flycatchers in the Empidonax group. These birds look so similar they're sometimes impossible to identify even in the hands of a bird bander with a precise set of measurement calipers. But all that uncertainty vanishes as soon as they open their mouths.

## Five Tips For Beginners

### Watch And Listen

When you see a bird singing, the connection between bird and song tends to stick in your mind.

### Learn From An Expert

Need Bird ID Help?

[Try Merlin](#)



It's much harder to learn bird songs from scratch than to have a fellow bird watcher point them out to you. Check for a nearby bird club or Audubon chapter and join a field trip.

## Listen To Recordings

Start by listening to recordings of birds you see often. Play them often to make the sounds stick. Our online bird guide has more than 600 sounds you can listen to, with thousands more available in a searchable format at the Cornell Lab of Ornithology's Macaulay Library. You can also purchase regional audio guides produced by the Macaulay Library or you can use our free Merlin Bird ID app to listen to songs and calls of birds nearly everywhere.

## Say It To Yourself

Some songs almost sound like words – who can mistake the Barred Owl's "Who cooks for you all?" Mnemonics can make a song a snap to remember.

0:00 / 0:27

Barred Owl's "Who cooks for you?"

## Details, Details, Details

Break the song apart into its different qualities, including rhythm, pitch, tone, and repetition. As you listen to the birds around you and study the recordings, try placing the songs in different categories as shown below.

## Use Merlin Bird ID's Sound ID Feature

Record the birds singing around you and let Merlin help you ID who's singing. Merlin provides you with real-time information about who's singing to help you identify more birds. [Check out Merlin Sound ID.](#)

## How To Listen To A Song

When you first listen to a dawn chorus in full swing, the sheer onslaught of bird song can be overwhelming. How does anyone start to pick apart the chirps, whistles, and trills that are echoing out of the woods? The answer, of course, is to concentrate on one bird at a time – and that approach holds true when you're trying to learn individual songs, too.

Don't try to memorize each entire song you hear. Instead, focus on one quality of the sound at a time. Many birds have a characteristic rhythm, pitch, or tone to their song. Once you zero in on it, you'll have a better sense of the bird's identity. When you combine these characters, you can narrow things down even further. Here are a few examples:

## Rhythm

Get used to a bird's characteristic tempo. Marsh Wrens sing in a hurry, while White-throated Sparrows are much more leisurely.

0:00 / 0:38

Fast and jumbled: Marsh Wren

0:00 / 0:20

Slow and leisurely: White-throated Sparrow

Need Bird ID Help?

Try Merlin

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# Pitch

Most birds sing in a characteristic range, with smaller birds (like the Cedar Waxwing) typically having higher voices and larger birds (like the Common Raven) usually having deeper voices. Many bird songs change pitch, as in the Prairie Warbler’s rising, buzzy song or the Canyon Wren’s sweet descending whistles. Some birds are distinctive for having steady voices, like the Chipping Sparrow’s trill.

**“Cedar Waxwing”**

00:00

00:00

1. “Cedar Waxwing”	0:25
2. “Common Raven”	0:20
3. “Prairie Warbler”	1:10
4. “Canyon Wren”	0:24
5. “Chipping Sparrow”	0:35

# Repetition

Some birds characteristically repeat syllables or phrases before moving on to a new sound. Northern Mockingbirds do this many times in a row. Though Brown Thrashers sound similar, they typically repeat only twice before changing to a new syllable.

0:00 / 0:56

Northern Mockingbird: 3 repeats or more

0:00 / 0:23

Brown Thrasher: typically 2 repeated syllables



# Tone

The tone of a bird’s song is sometimes hard to describe, but it can be very distinctive. To begin with, pay attention to whether a bird’s voice is a clear whistle, harsh or scratchy, liquid and flute-like, or a clear trill. If you can remember the quality of a bird’s voice, it can give you a clue to the bird’s identity even if the bird doesn’t sing the same notes every time. Here are a few examples:

**“Whistles: Black-capped Chickadee”**

00:00

00:00

1. “Whistles: Black-capped Chickadee”	0:19
2. “Whistles: Tufted Titmouse”	0:21
3. “Harsh sounds: Blue Jay”	0:12
4. “Harsh sounds: American Crow”	0:25
5. “Liquid or flutelike: Wood Thrush”	0:26

Need Bird ID Help?

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6. "Liquid or flutelike: Hermit Thrush"	0:32
7. "Trills: Dark-eyed Junco"	0:21
8. "Trills: Pine Warbler"	0:42
9. "Mnemonics: Carolina Wren (germany-germany)"	0:18
10. "Mnemonics: Northern Cardinal (birdie, birdie)"	0:13
11. "Mnemonics: Common Yellowthroat (wchity-wchity)"	0:23

## Spectrograms

Ever wish you could "see" a sound so you could study its details? Spectrograms allow you to do just that. They're simple graphs that show you the frequency, or pitch, of a sound, its loudness, and how these change over the course of the sound. With a little practice, they can reveal much more about a sound than your ears could ever detect on their own.

With a little practice, you can read the sounds almost like you might read a sheet of music. The higher the marks on the graph, the higher the pitch of the sound. The brightness of the marks indicate how loud the sound is at that moment. As you move from left to right on the graph you move farther along in the bird's song.

Next, click over to [Bird Song Hero](#) to try out your new skills with other bird songs. It's a great way to start visualizing what you're hearing—which will help you learn who's singing.

### Bird Song Hero: The song learning...



[All About Bird Biology](#) has many activities to help you learn bird song. Start with this Bird Song Hero tutorial.

## Learn More

- [All About Bird Song](#)
- [How to listen to bird song](#)—tips from the authors of The Warbler Guide
- Study spectrograms for hundreds more species in our [Macaulay Library](#) archive



**NEW ONLINE COURSE!**

**The Macaulay Library Presents:**  
**HOW TO RECORD BIRD SOUNDS**

The Cornell Lab of Ornithology  
**Bird Academy**  
Photo: Eleven Lakes Media