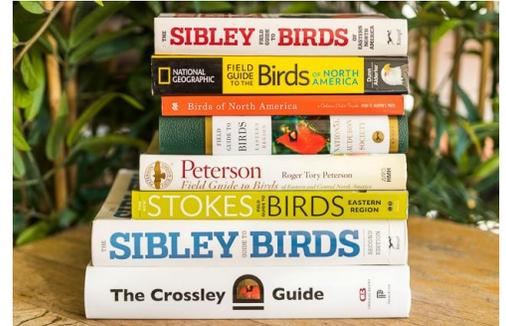


CHOOSING AND USING A FIELD GUIDE

Things to consider when choosing a field guide:

- Past taxonomy has been based on morphology, behavior, habitat, nest characteristics, etc., but most recently DNA hybridization techniques have been used with probably the most accurate results of any method.
- Most field guides do not have the most up-to-date taxonomy but are good for morphology, behavior, habitat, range maps, etc
- Be sure to use the Official Science Olympiad List of Birds (National and State list if your state has one for regional and state competitions.
- **Portability:** If you are an avid outdoor birder, you'll want a guide that is easy to carry and flip through quickly. If you are more of a backyard birder, watching local species on your feeders and birdbath, portability is not as important.
- **Specialized/Localized Guides:** If you want to study bird behavior or are searching for more elusive species, a more comprehensive, specialized guide is better suited for you. For instance, a guide based on a certain habitat or region.
- **Photos or Illustrations:** You will also want to take into consideration whether you prefer illustrations or photos. Some guides may also portray different views of a bird, such as how a species looks in flight, close-ups of distinct markings, etc.
- **Read Your Guide.** This may sound obvious, but your guide has much more information than you may realize. It not only has pictures to help you identify birds, but also contains information on bird habitats and behaviors that can help you find the birds yourself. Look for the following information to help you prepare:
 - **Bird Topography:** This diagram divides birds into distinct parts such as nape, crown, and vents, for more specific identification.
 - **Learn the Terminology:** In relation to topography, there are other terms you will need to know. For example, color names are not as simple as red and blue; the hues can vary widely, so you may see descriptions like rufous and indigo instead.
 - **Variations in Appearance:** Identification of certain species can be tricky when it comes to distinguishing marking and coloration of the male and female sexes, or juveniles and immature stages, or summer and winter plumages.
 - **Range Maps:** These maps are very helpful for knowing which birds are native to your particular area and which species may be migrating through it at a given time of year.



Choosing a field guide

- The ideal field guide is easy to use, portable, and accurate. We are lucky as birders that we have many excellent field guides from which to choose. We provide a list of some of the current field guides at the end of this article.

- The **MOST** important thing about your field guide is that you have one that is appropriate for the region in which you live and watch birds. Today there are field guides for all of North America; for just the eastern or western half; for specific states or provinces, and even for smaller geographic areas, such as counties, birding trails, and specific refuges, parks, or preserves.
- The **SECOND** most important thing is that your field guide is easy for you to use. Become familiar with its content and layout. When you have some non-birding time, flip through the guide and get to know where the sparrows are, where the owls are, where the ducks are – so you can find them quickly when you need to look up a bird.
- Field guides are typically organized taxonomically. This means that related birds are grouped together in an order established by ornithologists going from the least-evolved birds (loons, grebes, waterfowl) to the most highly evolved birds (warblers, sparrows, finches). Many guides provide a color-tab key to help you find bird families quickly.
- The **THIRD** most important thing to remember when using your guide in the field is: Look at the bird, not at the book. We often make the mistake, in our excitement at seeing an unfamiliar bird, of taking a quick glance at the bird and then dropping our binoculars to find it in the field guide. Frequently we don't have enough visual information to make a positive identification, so we grab the binocs for another look and the bird is gone.

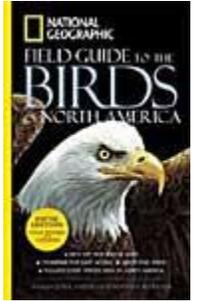
Field guides are organized in three main ways:

- **According to physical traits of the things being identified.** For instance, a field guide to the trees might group its species according to whether leaves are attached to twigs singly, in pairs, or in threes. Within these groups, further subdivisions might take into account whether the leaves are composed of single blades or divided into leaflets..
- **According to what's related to what** -- by "taxonomic relationships." For example, bird field guides nearly always group together birds belonging to the same order (the duck order, the owl order, the perching-bird order...), and then within each order all birds belonging to the same family are placed together (within the perching-bird order, there's the nuthatch family, the wren family, the warbler family...).
- **According to both the above criteria.** A field guide to wildflowers might first group its species according to flower color, then within each of these groups, according to plant family. Thus all red-flowered members of the Sunflower Family may be in one place, then next to them all red-flowered members of the Milkweed Family.

Taxonomic order

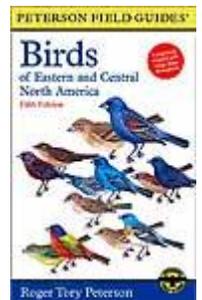
- The time-tested way for field guides to arrange species is in *taxonomic sequence*, based on the birds' evolutionary history. In general, shared ancestry corresponds to shared physical form. For example, woodpeckers, which all belong to one family, have two strong central tail feathers that brace the bird against a tree.

- However, the taxonomic sequence is not fixed. It changes as science makes discoveries about the ancestry of birds. And books tag along. In older field guides, vireos came immediately ahead the warblers. Now vireos appear before the crows and jays. Recently, waterfowl have dislodged loons from their long-held place at the beginning.
- Field guides change with the scientific advances. The new, Fifth Edition of the [*National Geographic Guide*](#) follows the new taxonomic sequence. You'll find that it begins with the waterfowl, in accordance with recent scientific understanding of how birds evolved. Earlier editions began with loons.
- Becoming familiar with the taxonomic sequence is an interesting, basic task of becoming a birder. All good field guides teach it. Without understanding taxonomic order, trying to look up a bird is like trying to find a word in the dictionary without knowing the alphabet.



Modifying taxonomic order

- For convenient comparison, some guides, such as the [*Peterson Eastern & Central N. America guide*](#) deviate slightly in order to place similar-looking birds together, such as swifts and swallows, even though they aren't closely related. Other books, trying to ease the beginner's way, make up their own arrangements. New birders may find that the time they spend learning an unusual system won't necessarily transfer to another book.
- Even the alternatively-organized field guides can be valuable supplements to a birder's library. Every guide reviewed here has something useful or unique to offer.



Field Guide Illustrations

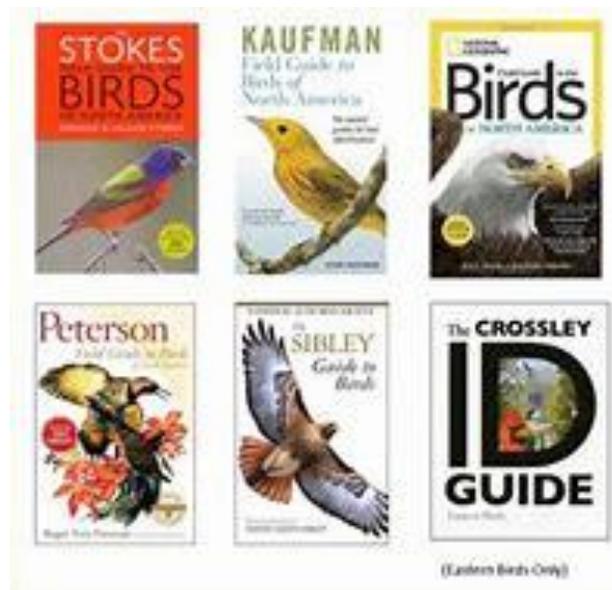
- Pictures are the heart of a field guide, showing the birds' *field marks*. Field marks may include a bird's size, bill shape, facial pattern, and even the manner of flight.
- For example, field marks let us recognize a male northern cardinal—by its red color, crest, heavy red bill, and black patch around the base of the bill. Field guides usually direct the reader's attention to field marks with arrows or comments in nearby text.
- The pictures may be paintings, photographs, or digital blends of both. Most field guides employ painted illustrations. With control over pose, lighting, and background, the artist can emphasize the most significant information.
- Some books use photographs, though birds don't always pose so as to best reveal their field marks. However, good photos do have a certain stamp of authenticity and can show great detail. Some recent field guides now employ digitally processed photos to bring out field marks.



Available National Field Guides for birds

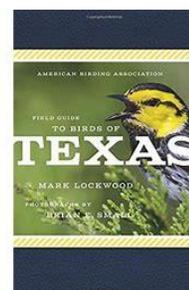
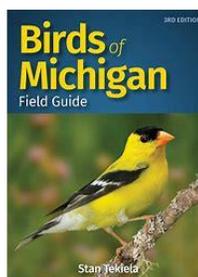
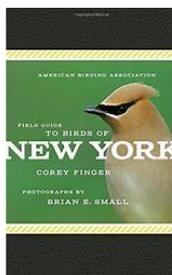
No single volume can show and tell everything. If you want to start with just one field guide, it's probably best to get one that follows taxonomic sequence.

- *The Young Birder's Guide to Birds of North America*, Houghton Mifflin Harcourt Publishing Company, Boston, MA.
- *The Peterson Field Guide Series*, Houghton Mifflin Harcourt Co., Boston, MA.
- *Field Guide to Birds of North America*, National Geographic Society, Washington, D.C.
- *Birds of North America and Eastern Birds*, Golden Press, New York, NY.
- *The Stokes Field Guide to Birds*, Little, Brown, Boston, MA.
- *Sibley Field Guides*, Knopf, New York, NY.
- *Kaufman Field Guides*, Houghton Mifflin Harcourt Publishing Company, Boston, MA.



State and Regional Field Guides

Your state may have a state field guide for the birds in your state that you can use for regional and state competitions if your state has a state bird list on its Science Olympiad website.



Using A Field Guide

General tips on arrangement are: (Expect some exceptions of course.)

- The organization of most field guides follow an established taxonomic order as does your Science Olympiad Official Bird List
- Most field guides do not have the order characteristics listed – they start with families.
- You will have to have additional resources for the Order Characteristics
- Field guides are made up of a series of species accounts arranged within a family
- The characteristics of the families are listed
- The families reflect how birds have evolved and have many distinctive features and behaviors.
- The characteristics of a genus is listed after the characteristics of the family and groups of birds within an family
- Specie accounts will include pictures with field marks, size, appearance, common and scientific name and specie information as habitat, call/songs, behavior and special field marks

The Organization for the Family is usually as follows:

- Ocean, shore, game and predatory birds appear first, they are generally large birds.
- Next are hole-nesting birds without true songs, they are smaller.
- Last come the song birds which are still smaller.
- Generally the feeding habits go from eating fish and small mammals to eating seeds and insects.
- Special modifications in morphology allow birds to succeed in their environment.
- These are very helpful in identifying families, species, and their unique behaviors

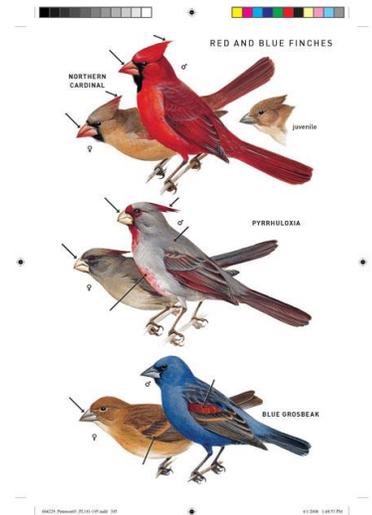
Tips for using the field guide

- Examine the organization of the field guide and compare it with the organization of your SO official list (National and/or State)
- Review the introduction for the field guide which will review morphology, major field marks for identification, vocalizations, range maps, habitats etc.
- Determine where the picture plates, range maps and genus specie information is located. Some field guides have the together while others have them in different locations

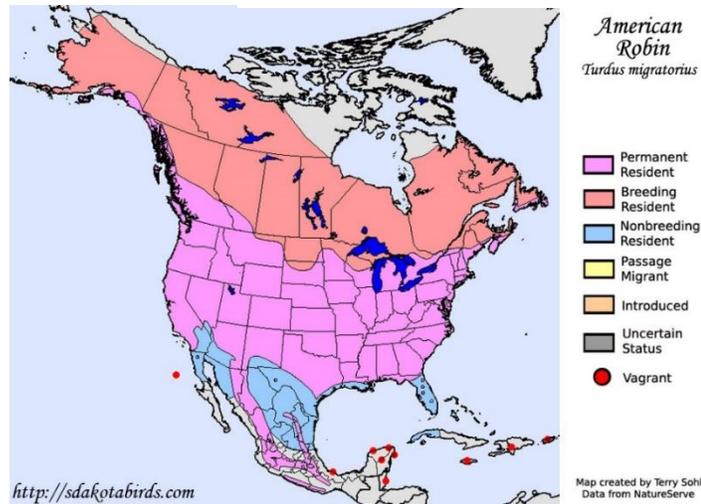


- Become familiar with the placement of plates and/or photos of the organism – male, female, young

- Pay attention to the field marking illustrated on the diagrams
- The field markings will give your key identification clues and key differences between similar species
- The field markings are usually also described in the text
- Pay attention to the species text information including
 - Size in inches and centimeters
 - Key distinguishing field marks
 - Differences between males, females and juveniles
 - Voice songs and calls
 - Similar species
 - Habitat
- Review the range map key information and terminology
- Birds can be conveniently categorized by their migratory or non-migratory status in an area.



- Residents: are those birds that do not enter or leave the state during migration. Generally, these birds do not move very far during their lifetime.
- Transients: migrate through in the spring and/or fall but do not nest in the area. Some are pure transients that merely pass through.
- Winter visitors: are those birds whose breeding range is somewhere north.
- Summer visitors: are those birds whose winter range is somewhere to the south.
- Perennial visitors: are those of which individuals are always around.
- Casual visitors and accidentals (occur unexpectedly). The remaining 6% defy categorization.



- Tab the guide to quickly locate family information and major groups of birds
- Practice using the field guide to identify species from your official list to become proficient using your guide and to improve your identification time.