

Colorful Songbirds

By Patty Marlett

The brilliant colors of birds provide enjoyment and brighten our world. But for the birds, color is a serious matter of survival. For some, their colors are bright for attracting a mate and communication. Color also provides camouflage for hiding from predators.

Bright colors and attractive visual displays are an important part of courtship for many bird species. To the females, a beautiful male means he is healthy and vigorous, a good father for their chicks. Experiments with several species have shown the brightest males are the most successful at mating. Color can stimulate mates to be sexually receptive and synchronize the male and female reproductive schedules. The brightest males are also best at defending territory. Their color serves as a warning or threat to competitors that intimidates without the need for actual combat.

Conspicuous color patterns serve as a recognition mark for distinguishing friend from foe, or for keeping a flock together. A bright color pattern may help scare off predators. A flash of color that is shown when the bird takes flight may surprise or startle a predator and give the bird a few extra seconds to escape.

Many colorful species, like warblers, are bright only during the breeding season, and have much drabber plumage when displays are not needed. Whenever a bird is brightly colored, the color must be important enough to outweigh the disadvantage of being more conspicuous.

Birds also use color as camouflage. "Cryptic" coloration describes colors and patterns that make a bird inconspicuous. Owls, nightjars and other ground-dwelling birds blend into their surroundings with mottled brown and gray feathers.

"Disruptive" coloration is a striking pattern that breaks up the outline of the bird and makes it hard to recognize. The banding on a Killdeer is an example. Many birds have "countershading," meaning their bottom side is lighter than their topside. This eliminates a sharply defined shadow, since the dark back absorbs light from above while the light belly reflects light from below. Nearly all shorebirds are countershaded. Camouflage is almost exclusively related to protection against predators.

Color is produced by pigments in the feathers and by the structure of the feather itself. Feathers contain three kinds of pigments: melanin, carotenoids and porphyrins. Melanin, the most common, produces black, grays and brown. Melanin is the same pigment that produces color in human skin. Feathers with a high melanin concentration are physically stronger than light-colored feathers. Because of this, some white birds have dark wingtips to reduce wear on important flight feathers. Dark feathers also protect the delicate skin from the ultraviolet rays in sunlight so many birds have dark down feathers. Carotenoids produce reds and yellow, such as the red of the male Cardinal. Birds cannot produce carotenoids, but obtain them exclusively through diet. Yellow carotenes come from grains and seeds. The pink in flamingo feathers comes from the crustaceans that are their main food. The red pigments in House Finches are from carotenoids. Porphyrins produce a range of reds, browns and greens. Mixed with melanins, they increase the color palette available. The browns in owl feathers are largely produced by porphyrins.

Most blue and green birds have no blue or green pigments in their feathers. These colors are produced by the structure of the cells, which create complex patterns of reflection and refraction. These structural colors may be iridescent or non-iridescent. Iridescence is the result of the interaction of structure and embedded melanin granules. Non-iridescent structural colors

look the same regardless of the angle of the light. Thus a Blue Jay looks blue from any angle. Iridescent structural colors change with the angle of the light. The bright gorgette of a hummingbird looks black or purple or red depending on the angle of the light.

The amazing colors of birds are not for our benefit, but they add immensely to our enjoyment and fascination with watching them. Enjoy this poster's presentation of Colorful Songbirds.

**Excerpts from: *The Guide to Kansas Birds and Birding Hot Spots*
Text by Pete Janzen**

Birding Basics

OPTICS AND FIELD GUIDES

Binoculars are necessary to view most birds well. There are many excellent binocular models on the market today. It is beyond the scope of this book to discuss the pros and cons of all the choices. The price range is also broad, but with careful shopping you can obtain a good-quality pair of binoculars for a relatively modest price. Some dealers will allow a free trial for a day to see if you like them. All binoculars are labeled with their magnification power and objective lens size, such as 7X50. The first number is the magnification power of the eyepiece, and the second is the diameter of the objective lens. For birding, many people prefer binoculars with a 7X or 8X magnification, as these are lighter in weight, easier to hold steady, and usually offer a closer focus. Smaller objective lenses allow the binoculars to be compact. Larger objective lenses offer a wider field of view and a brighter image. All of these factors should be considered before you make your selection.

Many birders eventually obtain another optical instrument called a spotting scope to view birds at greater distances. Scopes are most useful at large lake and wetland areas because they allow you to view areas that cannot otherwise be reached. Spotting scopes are more costly than binoculars and require a tripod.

You will eventually want to purchase one of the comprehensive field guides to birds. These guides illustrate all of the species that occur in the mainland United States and Canada, and some show all the plumages of each species. There are a number of these guides on the market today. In the opinion of many, the preferred field guide for those who are learning birds for the first time is the Kaufman Focus Guide Birds of North America, which uses digitally enhanced photographs and has pointers showing the critical field marks of each species. The Sibley Guide to Birds is by far the most comprehensive and advanced of all field guides, and virtually every serious birder in the United States owns a copy. The National Geographic Field Guide to the Birds of North America is another excellent and popular guide, which is smaller than the Sibley and therefore handier to carry.

BIRDING TECHNIQUES

A few tips are in order when you are birding in the field. Bird activity is greatest during the first few hours of daylight, and to a lesser degree in the late afternoon. Most birders are in the field at those times of the day. Avoid wearing brightly colored or white clothing, as birds perceive more of the light spectrum than humans and generally react negatively to humans wearing bright colors. When birding on foot, walk slowly and quietly. Pause frequently to look and listen. The longer you are motionless, the more birds become used to your presence. When you see a bird,

restrain the impulse to hurry toward it. Instead, approach it slowly and avoid sudden movements. When you spot a distant bird, keep your eyes on it as you raise your binoculars. This is hard to do at first but soon becomes second nature.

Weather conditions are also an important consideration, especially during migration. When low-pressure systems dominate, birds sense them and are often more active. Particularly strong low-pressure fronts during the spring and fall migrations sometimes cause large numbers of migrating birds to interrupt their flight until the weather has moderated. Birders refer to these hoped-for events as “fallouts.” When high pressure dominates, stronger winds and clear skies are the norm, and fewer migrants can be expected. In Kansas, the ideal weather conditions for birding are a combination of low wind speed, overcast skies, and low pressure. While awareness of these factors is useful, “perfect” days are few, so do not let less-than-ideal conditions keep you at home.

When you are first learning to bird, identifying the birds you encounter can seem bewildering. Do not grab your field guide and try to use it while observing a bird. Instead, observe the bird carefully and try to remember everything you can about it before it flies away. Then consult your field guide. After you learn to identify the common birds, it will be easier to identify species that are new to you. Enjoy the learning process, and remember: The best birders in the field today learned to identify birds one species at a time.

Most identification involves using a process of logical elimination. Several criteria should be taken into consideration as you study an individual bird.

Size and Shape: Compare the size of the bird to those you are already familiar with, such as the Canada Goose, American Crow, Blue Jay, or House Sparrow. The shape of a bird is another significant clue. Look for how slender or plump the bird is and how long its wings and tail are.

Bill and Legs: Observing the leg and bill structure of a bird will allow you to swiftly narrow your identification to a few families of birds. Herons have long legs for wading in water and a large spiked bill for catching fish. Sparrows have short legs and conical bills for cracking seeds. Sandpipers have long, thin bills that allow them to probe in mud for invertebrates, and longer legs for wading in shallow water. Hawks have prominent talons and hooked beaks for catching and consuming prey.

Color and Pattern: Look for the presence or absence of plumage patterns such as spotting or streaking. The presence or absence of wing bars is often a good clue on songbirds. Head markings are often important. Look for eye rings, eye stripes, and any distinctive markings on the crown or nape (back of the neck). Tail patterns often provide clues to identification.

Posture: Note the bird's posture. Herons and shorebirds stand upright on long legs. Woodpeckers cling to tree trunks. Hawks perch on fence posts or utility poles.

Habitat: Habitat is often a major clue to identification. Herons and shorebirds wade in streams and marshes. Nesting Dickcissels sing from perches in the prairies and fields. Most warblers and vireos forage in the canopy of mature woodlands.

Vocalizations: In many cases you will hear birds before you see them. Seasoned birders identify as many birds by song as they do by sight. Learning the songs and calls of birds is an acquired skill. There are a variety of commercially available recordings of bird vocalizations that will assist you in becoming familiar with these songs. However, there is really no substitute for spending time in the field and learning these calls from your own experiences.

Sometimes making a sound that birders call “spishing” will draw birds into the open, as it mimics alarm or the scolding calls of other birds. Try saying the word “spish” using only your mouth (no vocal chords). Exaggerate the “s” sounds, eliminate the vowel sound, and extend the “sh” sound at the end of the word. You end up with a sound like “sssssspssssssssshhhhhh.” Repeating this several times in a row, varying the speed and tempo, will often coax birds into the open. Some birders make wet, squeaking sounds instead of spishing.

Mixed flocks of songbirds will gather to noisily mob predators such as cats, snakes, and owls when they become aware of them. Playing the calls of Screech Owls sometimes triggers this response and draws birds into view as they attempt to locate the “predator.” This technique is effective but should not be overdone. Another method for attracting birds into view is by playing a recording of their own songs or calls. This can also be an effective technique but should not be overdone, as it can potentially cause birds to leave the area or even abandon their nests in response to what they perceive as competition from a more aggressive member of their species.

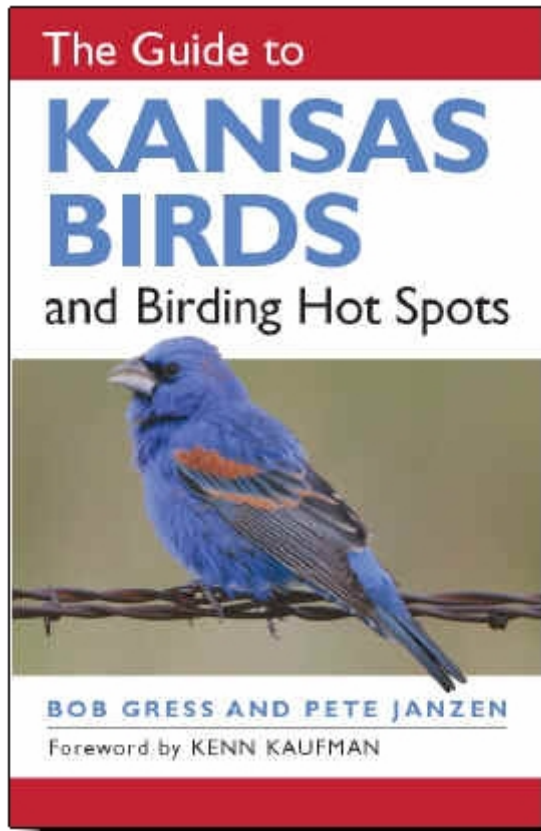
Birding Ethics: As benign as birding may seem, there are ethical standards that you should adhere to. Birding ethics mostly involve using common sense. Avoid disturbance of natural habitats, nesting birds, and rare or threatened species. Respect property rights. Birds should not be disturbed as a result of the actions of birders. If you discover an exceptionally rare bird, try to not disturb it so that others may have an opportunity to see it.

WHERE TO FIND BIRDS

If you are just becoming interested in birding, start in your own yard. You can attract many birds to your yard by providing their basic requirements. This usually involves a combination of landscaping, plantings that offer food and shelter, bird baths, bird feeders, and bird houses.

Once you have familiarized yourself with the birds around your home, you may decide to venture elsewhere in your local area to search for new species. When you are considering where to go looking for birds, remember that birders are not wired to observe the outdoors in the same way as most people. Birders do not really see landscapes—they see habitats. As they do so, they consider what species might be present within those habitats. Make an effort to sample a variety of habitats, and do so at different seasons of the year. Check woodlands along rivers and streams, especially in areas where trees are otherwise scarce. State or county parks usually have areas of native habitat. Native grasslands offer a different set of birds from those found in woodlands or urban situations. Lakes and wetlands should also be investigated. Is there a low-lying area that always floods after significant rains? It probably attracts migrating shorebirds in the spring and fall, herons in the summer, and waterfowl in the winter. The brushy fringes of both woodlands and grasslands (often referred to as “transitional” or “edge” habitats) typically provide the most productive birding in a given area. Weedy patches of sunflowers attract many birds in the fall and winter months. In many small towns, the local wastewater treatment ponds attract birds, especially in western Kansas, where other bodies of water are absent. These are not glamorous locations to visit, but they are great places to see birds you otherwise would not find. Cemeteries with numerous pines and cedars are another good place to look for birds, especially in the winter and during migration. These are some examples of the kinds of places that birders frequent, but there are many others. Each local area is different and has its own habitat dynamics.

The Guide to Kansas Birds and Birding Hot Spots by Bob Gress and Pete Janzen with a foreword by Kenn Kaufman; © 2008 by the University Press of Kansas. All rights reserved. Reproduced by permission of the publisher.



This easy-to-use field guide includes:

- Profiles of 295 species commonly found in Kansas
- 351 brilliant and detailed color photographs
- Insider tips on more than two dozen birding hot spots
- Color coding for easy reference
- A handy checklist for all state birds
- All the birds you are likely to see in Kansas

Purchase *The Guide to Kansas Bird and Birding Hot Spots* by Bob Gress and Pete Janzen for \$19.95 from the Owl's Nest gift shop at the Great Plains Nature Center and help support our educational mission! Owl's Nest gift shop hours: Monday thru Saturday 10-4. To order by mail call 316-683-5499 x111.