This is particularly true with passerines. Once the bird lands, we’ll look at it, but only as long as it stays perched. (Well, more accurately, we typically look at it for just a few seconds, but that’s a matter for another day.) Once a bird starts to fly away, we quickly lower our binoculars and look for another perched bird. It’s no wonder we have trouble with a lot of flying birds.

Admittedly, identifying some birds in flight can be impossible. I don’t know of anyone who would claim to be able to identify at the species level an Empidonax flycatcher flying directly away from them, spotted at a distance of 50 meters. Then again, few of us would have much trouble identifying a Sandhill Crane as it flew by 20 meters from us. The reality is that most identification challenges involving flying birds lie somewhere between these two extremes; this photo essay aims to provide readers with some tools to help them accurately identify such birds in flight.

We’ll review factors that contribute to the challenge of identifying birds in flight (more broadly, all of the following factors play a role in identification in general), and then we’ll look at some specific examples that present particular challenges.

From the outset, we should get one thing clear: The birds in these photos won’t look like this when you are in the field. Yes, for some millisecond in time these birds looked like what you’re about to see, but that millisecond is simply too short for any of us to be able to see the bird just as it appears in these images. These images are simply tools to help you improve your skills and to think about what to look for.

As with identification in general, the best thing is to go out in the field and study birds for yourself. Go out and actually look...
at that Red-tailed Hawk that you drive by on the way to work everyday. Take a notebook and jot down what you see. How does its shape differ when the bird is soaring? When it’s windy? When it’s calm? What do you see when the bird is strongly backlit? When it is flying over a layer of snow compared to when it flies over a summer landscape? How do the shape and coloration change through the year? Go out with more experienced birders and learn from them. Even lead a few trips for your local birding club, for you’ll find that teaching others will greatly improve your own skills.

In particular, when you are trying to learn species of some of the more challenging groups to identify in flight (say, warblers or sparrows), see if you can identify the bird when it’s perched, and then watch it when it flies. How does it beat its wings? Does it pause between bursts of wing-beats or does it flap continuously? How does your impression of the bird change when it’s far away? What can’t you see once it’s a certain distance away? All this may sound like a lot of work, and in a way it is. But by watching the common birds in flight, you will soon be able to pick out birds that are different or that don’t fit your perception of the common species. And even when they do end up being common species, you will begin to appreciate why they looked different. Down the road, you’ll know the common species so well, and under such a variety of conditions, that when something different appears, it will really stand out.

Lighting greatly influences how birds appear. While this generalization may seem obvious, it is easy to overlook or ignore. Appreciating how lighting conditions affect the appearance of birds can greatly aid in correct identification.

Here’s an important starting point: Dark areas stand out on pale backgrounds, whereas pale areas stand out on dark backgrounds. Consider a Ring-billed Gull viewed against a bright cloudy background under cloudy skies (top photo). Here, our attention is drawn to the dark in the primaries, whereas the white primary tips and mirrors almost blend into the background. The trailing edge of the secondaries begins to merge into the background of the clouds. Compare this effect to that of a Ring-billed Gull photographed on the same day, but in warm evening light against a dark storm cloud (bottom photo). The dark primaries merge into the storm cloud, whereas the white in the secondaries and inner primaries stands out. The contrast between a bird and its background also influences our perception of size. In these two photos, note how the Ring-billed Gull against the dark background (bottom) appears larger than the same species against a pale cloudy background (top). Conversely, dark birds appear larger against pale backgrounds.

Behavior greatly affects the way a bird appears. These two photos of Cooper's Hawks show how dramatic the differences in shape can be when birds are soaring vs. gliding. The shape of the soaring Cooper's Hawk (left; juvenile) gives it an appearance not unlike that of a soaring Northern Harrier, whereas the gliding Cooper's (right; also a juvenile) is more likely to call to mind a Sharp-shinned Hawk. Similar differences can be noted in most groups of birds. Wind speed also affects the way birds hold their wings and how fast they flap their wings. For these reasons, it is important for us to consider how flight behavior may influence our perception of a bird's size and shape.

Left photo: Cape May, New Jersey; October 2003. © Jerry Liguori.
Right photo: Cape May, New Jersey; October 1996. © Jerry Liguori.

Age plays an important role in the way a bird appears. These two images of Red-tailed Hawks were taken under similar lighting conditions and angles, but they appear very different because of the birds' ages. In addition to the striking differences in overall color and pattern, note the differences in body shape. The juvenile (top) has shorter remiges (flight feathers), which create the impression of a narrower-winged bird with a longer tail than that of the adult (bottom). Also note the more pointed feathers of the juvenile (shown here particularly well on the secondaries and on the rectrices).

Distance can make any bird difficult to identify. Still, you can often identify birds, to the family level or lower, by watching flight characteristics of an individual bird and of the entire flock. For instance, migrating terns and gulls will often travel in loose flocks like this one of migrating **Common Terns**. When viewing any large flock of birds, it is often helpful to scan the edges for other species. Different species have different flight styles, flight speeds, and flight characteristics. Even when these differences are relatively minor, they are often strong enough to make “the other species” appear near the edge of the flock. With this flock, I would probably start by looking at the trailing two birds and at those at the top and bottom. Boulder Reservoir, Colorado; 13 September 2003. © Bill Schmoker.

Few birds present less of an identification challenge than this stunningly handsome adult male **Bufflehead**. But what if the bird were flying a half-mile offshore? In a strong wind? With salt spray wafting over you and your optics? Under these conditions, such a bird would become challenging to separate from Common Goldeneye. Yet, as Michael O’Brien once wrote in one of his seawatching notebooks, “Buffleheads rock!” Awesome though they are, Buffleheads rock in another sense; what Michael’s comment referred to was the tendency of Buffleheads to rock back and forth in flight; Common Goldeneyes do not. Westport, Connecticut; 27 February 2003. © Jim Zipp.

Birds in flight often appear appreciably different from when they are perched. Note that the rumps on some of these **Common Redpolls** appear quite white, a traditional Hoary Redpoll field mark. With close views, we would probably see some streaking on the rumps of these birds, but with this fast view we may be tempted to think of the rarer Hoary Redpoll. Barnegat Light, New Jersey; 3 January 2004. © Brian L. Sullivan.
While this adult male Yellow-headed Blackbird is a straightforward identification, it still pays to listen to call notes and to note the general shape and structure and flight style. Then when the bird is backlit, far away, or backlit far away, you will have a better understanding of what it looks and sounds like. Weld County, Colorado; 15 May 2003. © Bill Schmoker.

Identifying flying warblers, like this adult male Common Yellowthroat, can be one of the most challenging aspects of birding. In order to do it well, it pays to carefully study birds when they are perched. Note relative proportions, obvious patterns, and what seems like it will stand out in flight. Keep watching the bird—it will probably fly. When it does, you have the advantage of knowing what it is so you can focus on what you see when the bird is flying; best of all, you know you are right. Listen carefully, too, as many species have flight notes that will aid in their identification. Weld County, Colorado; 19 July 2003. © Bill Schmoker.
Flocks of Horned Larks often include other species, such as longspurs and Snow Buntings. And other species (e.g., Savannah Sparrow, American Pipit) will often be found in the same habitat, even though they may not actually flock with the larks. Open country species are deceptively challenging to see among the short grasses and forbs, so being able to recognize them in flight is very important. At first, it may be necessary for you to look at the face and tail patterns to identify Horned Larks, but after a short while, you will gain an appreciation for Horned Larks’ general shape and buoyant flight. Once you easily recognize this and other more-common birds, it will be easier to find less-common species. The key is to study whatever species are common. Tooele, Utah; January 2003. © Jerry Liguori.

It’s unlikely that many of us would simply see this bird flying by and exclaim, “Red-throated Pipit!” Yes, one can see that this bird has a pronounced very dark lateral throat-stripe and that the flanks are buffy with bold streaks. But this bird’s rarity alone should make us hesitant to proclaim it a Red-throated Pipit. More to the point, these plumage features are not easy to see as a bird whips by. Yet flying birds often call. As is the case with many species, one of the best ways to identify Red-throated Pipit is by its call note—rather like a Yellow Wagtail and very unlike an American Pipit. Even if we could not separate it from an Olive-backed Pipit by call, we would know that it was something we should focus our attention on. San Clemente Island; 26 October 2003. © Brian L. Sullivan.

Even with fast-flying landbirds, you typically can see the same parts of the bird that you would use to identify it if it were perched. Here, this bird’s heavily streaked underparts, relatively short and straight bill, and lack of prominent white patches in the wings are enough to identify it is a Sage Thrasher. (Bahama Mockingbird, admittedly, would be similar, but it is completely allopatric with Sage Thrasher.) Just because a bird is flying doesn’t mean we need to look only for things we can’t see when the bird is perched. Jackson County, Colorado; 8 June 2003. © Bill Schmoker.
Where should you go to study birds in flight? A good starting point would be your nearest hawkwatch. Naturally, raptors take center stage at such locations; but you will have a good chance to view migrating passerines (such as these Bohemian Waxwings noted at a spring hawkwatch in northern Michigan), waterfowl, and even butterflies and dragonflies at many North American hawkwatches. Nocturnal migration (detectable by ear or possibly by moon-watching) is often good at hawkwatches, too.


It is important to remember that photographs of birds present us with one still image of how a bird appeared at one point in time and space. In other words, it is difficult or impossible to judge flight style, size, shape, and vocalizations from photographs. In this image, we have an unsurpassed view of the underside of an adult Parasitic Jaeger, but we don’t get a feel for how the bird flies and our impression of its shape is limited to this one instant in time. As we review the lessons presented in this photo salon, we should recall there is no substitute for actual field experience.