

Age, Sex, Plumage

In the previous issue of *Birding*, we gave you an unusually generous hint: We told you that the quiz images are all from Cape May, New Jersey. We also told you the dates for each quiz photo, as we always do. And that gives us the opportunity to make the following, essential point yet again: Birders who are skilled at field identification *always* factor date and location into the ID process. Always. Date and location are as important as wing bars and crown streaking, tail spots and malar stripes, song and behavior, and so forth.

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Now a word about Cape May.

Cape May is synonymous with bird migration and bird diversity. This little peninsula at the southern tip of the most densely populated state has great habitat diversity packed into a small area. Cape May hosts a tremendous number of species, but knowing the location these photos were taken nonetheless narrows down the possibilities. To narrow it down even further, all these photos were taken during fall migration, the peak season for birding Cape May.

Good luck with the quiz!

Quiz Photo A

Given the popularity of hawk watching at Cape May, no photo quiz with a Cape May theme would be complete without a raptor. Although not the place hawk watching was born, Cape May nonetheless has played an important part in the development and popularization of hawk watching. The book *Hawks in Flight* was the product of three Cape May vets by the well-known names of Dunne, Sibley, and Sutton. That book

was my primer when I arrived in Cape May at age 18, trying to learn more about in-flight identification. With this little bit of history out of the way, it is time to examine the quiz photo.

When dealing with an unknown raptor, or any bird for that matter, it is best to put the bird in a specific group and then break things down. Accipiters are the bread-and-butter raptors at Cape May, and although the quiz bird does have a long tail like an accipiter, its wings are too long and narrow.

Falcons make up another huge chunk of the hawk flight at Cape May, but this bird lacks the aerodynamic shape of a falcon. The outermost primary (p10) is far too short compared to the rest of the outer primaries, and the entire wing seems to be a rectangular shape, not the tapered scimitar shape of a falcon.

Neither of the eagles nor Osprey comes close. So is the quiz bird found among the diverse raptors of the genus *Buteo*, known for their ability to soar? Again we come up short. The rectangular, many-“fingered” wings of the quiz bird are similar to those found on a buteo. However, no buteos in eastern North America have a tail that is quite this



Quiz Photo A—late November.

long, and none shows the slender, tube-like body of the quiz bird, much less its unmarked rusty breast.

Only one species possesses all these seemingly mismatched characteristics: **Northern Harrier**. Going further, the bird can be aged as a juvenile by the smooth, cinnamon breast and belly. Adult females are similar but have a paler breast marked with moderate streaking. Adult males are attired in an attractive mix of white and pale gray with black wingtips and are known to many hawk watchers as “Gray Ghosts.” This juvenile Northern Harrier was photographed by the author at Cape May on 23 November 2008.

Often I have listened to birders on the Cape May Hawk Platform struggle with the identification of passing harriers. I have heard harriers called—often with great amounts of confidence—Red-shouldered Hawks, Cooper’s Hawks, and various species of falcons. In part this speaks to the tendency of harriers to take on different flight profiles depending on the conditions, but there is another reason for the confusion. Many birders have keyed in on the harrier’s white rump patch as the quintessential field mark for this species and struggle to adapt when they cannot see the rump. Often at migration sites such as Cape May, harriers are seen when they are high overhead, moving purposefully, making it impossible to see the rump.

This shouldn’t cause major problems, as the white rump is far from the only distinctive characteristic Northern Harriers possess. The best way to identify a migrating harrier is by its distinctive wing beats. In migratory flight, the harrier adopts a measured wing beat that is deep and elastic, typically spaced at about one-second intervals and interspersed with short periods of gliding. This is only one of many traits that stand out at a distance far better than the traditional field mark.

This tendency to key in on a single field mark is a problem that extends well beyond the identification of Northern Harriers. Most birders likely have a few species that they identify based on one or two well-known field marks. This approach will invariably lead to errors.

Did you find yourself focusing on the quiz bird’s obvious, owl-like facial disk? Yes, that is another well-known field mark for the Northern Harrier, a trait that it does not share with any other North American raptor species. But it is not easy to see at many angles. As you look again at the quiz photo, think about all the other marks that combine to make this bird a Northern Harrier.

Quiz Photo B

In the late summer and early fall, the coastal areas of the mid-Atlantic region are filled with evidence of the breeding season that was. Juvenile gulls, herons, and other colonial waterbirds seem to be everywhere. So are terns, with juveniles quite numerous on the beaches of Cape May in the post-breeding season. The build of our quiz bird, its predominately white plumage, its slender wings, and especially the slight, sharply pointed bill combine to tell us that this bird is indeed a tern, not a gull. The insinuation that this is a juvenile is confirmed by the scaly pattern of the upperwing, the dark chevrons on the scapulars, and the slight buff wash on the head.



Quiz Photo B—late August.

We now possess three valuable pieces of information about our quiz bird. Listed in order of importance, they are: family, location, and age. This information leaves us with a very limited number of possible species. The number can be cut even further just by noting the black bill, which eliminates all the large terns: They have either orange, red-orange, or yellow bills. Also quickly eliminated are the three “marsh terns,” consisting of Black Tern and two Old World vagrants, Whiskered and White-winged Terns. Finally, little more than a glance is needed to be assured that our quiz bird is not a Gull-billed Tern, with its thick bill and paler leading edge of the wing. After discarding a number of dissimilar terns, only a small group worth a bit more consideration remains. This group consists of Least Tern and the four medium-sized species, Common, Forster’s, Roseate, and Arctic.

When in the field, it is usually best to first consider the most-common species before considering any rarities, but for this quiz we will examine the less-common species first. We'll start with Arctic Tern, the rarest of the remaining possibilities for this location, particularly in this plumage; note that the broad, pale, trailing secondary bar matches juvenile Arctic Tern. The head, however, does not seem as rounded as expected for Arctic Tern, and the pattern of black around the eye is not typical. Juvenile Arctic Terns have extensive black crowns and, invariably, the black surrounds the entire eye, leaving no pale area underneath as on the quiz bird.

Roseate Terns are present around Cape May during the summer, although juveniles are not expected. The plumage looks pretty good for Roseate Tern, but the wing shape, bill shape, and body shape all seem wrong for Roseate Tern. Before Roseate is dismissed too quickly, though, there is a factor to consider when evaluating structure on juvenile birds in the late summer. Birds usually fledge before their bills and flight feathers are full-grown. It may take several weeks for these feathers to attain full length, and this can really throw us off. In particular, flight style differs markedly between birds with erupting vs. full-length flight feathers. Since the outermost primary (p10) is shorter than the next (p9), it does appear that the flight feathers are still growing; it is likely that the tail is not full length, either. We should keep this in mind as we go further in the identification process. Reverting back to structure, even though the bird is still growing some feathers, the body seems too stocky for Roseate Tern, which always appears slender and elegant. The tail looks far too short even if it is not quite fully grown, and the wing pattern shows too much contrast; also, the crown on juvenile Roseate Terns is typically more heavily marked. These characteristics, combined with the fact that such a fresh juvenile Roseate Tern would be quite exceptional in Cape May, point away from this possibility.

Common and Forster's Terns, the two most likely species based on abundance, can both be quickly dismissed based on plumage traits. A juvenile Common Tern would have a strong, dark secondary bar, so that species is eliminated. Juvenile Forster's Tern sports the same rectangular black eye patch worn by adults in winter and have much paler wings that lack the strong pattern of the quiz bird. While they lack Roseate Tern's slender elegance, both these species are more similar to Roseate Tern and dissimilar to the quiz bird in having proportionally slimmer bodies, longer tails,

longer necks with proportionally smaller, more rounded heads, and longer wings. This is because all three of these species plus Arctic Tern are members of the genus *Sterna*. Wait—aren't most terns in the genus *Sterna*? Why single out these four species? Well, most terns were in *Sterna* until the 47th supplement of the AOU *Check-list* was published in 2006, breaking up *Sterna* into six genera. The previously mentioned terns stay in *Sterna*, but *Hydroprogne* is the genus of Caspian Tern, *Gelochelidon* refers to Gull-billed Tern, *Onychoprion* is the genus for Sooty, Bridled, and Aleutian Terns, *Thalasseus* is the genus for the “crested terns” (Royal, Elegant, and Sandwich), and *Sternula* is the genus for Least Tern. This is the kind of taxonomic change that makes sense to me, as it reflects differences between these groups that are easily observable in the field.

To this point, we have ruled out the applicable members of all these different genera except the last, *Sternula*, the genus of Least Tern. Can this strikingly patterned bird be a Least Tern? It is impossible to judge size from this photo, but the structure seems to fit; the relatively large head, stocky body, and extremely short tail are typical aspects of Least Tern structure. The almost Sabine's Gull-like wing pattern seems odd for a bird that as an adult shows a rather plain wing pattern. Although adults show no trace of this pattern, juvenile Least Terns do possess quite a bold wing pattern. This juvenile Least Tern was photographed by the author on 28 August 2008 in Cape May.

Many birders have never seen Least Tern in this plumage, as juveniles are present only for a short time in late summer and early fall before departing our part of the world. Only a handful of the departing juveniles return to the breeding grounds the following summer, when they still wear the same wing pattern. It seems that most immature Least Terns remain in their wintering areas until they have attained adult plumage, giving most North American birders little chance to see this impressive plumage.

Quiz Photo C

Among birders, Cape May is probably best known for its raptor show, but right behind raptors Cape May is known for its warblers. Our quiz bird seems to be a passerine, and the overall color and finely pointed bill both point to a warbler.

Bird identification and field guides have come a long way since Peterson's seminal field guide, with its two notorious plates of “Confusing Fall Warblers.” Most birders have heard at least one expert go on a diatribe about how the fall



Quiz Photo C—mid-October.

warblers are not confusing at all. I will resist the urge to add my voice to what already has been said about Peterson's unfortunate choice of plate titles, but I will reiterate the important part of the argument against the confusing fall warbler hysteria. The number of warblers that show dramatic plumage changes between summer and fall is quite small, with all such species belonging to the genus *Dendroica*. Wood-warblers belonging to other genera change slightly or not at all, and even among *Dendroica* warblers, fewer than half change significantly. The bottom line is that fall warblers are manageable.

This is a very good thing since the dull green-and-yellow plumage of the quiz bird points toward one of the species Peterson dubbed confusing. We can be confident that this bird is a *Dendroica* warbler because the combination of greenish-yellow plumage and bright-white wingbars and tertial fringes is found only among the fall *Dendroica* warblers.

So the quiz bird is a fairly drab *Dendroica* with pale wingbars and a fairly uniform appearance overall. It lacks a yellow rump, a contrasting yellow face, and a black cheek patch, so we can eliminate a number of species based on those criteria: Blackburnian, Black-throated Green, Magnolia, Cape May, and Yellow-rumped. Really, there are only four possibilities: Pine, Cerulean, Blackpoll, and Bay-breasted.

Given that this bird is standing on the ground, the immediate suspicion must fall on Pine Warbler, a species with a rather variable appearance and a strong tendency to

feed on the ground. In fall and winter, Pine Warbler seems to share a habitat affinity with Chipping Sparrow, and these two species are often found foraging side by side on grassy areas with pine overstory. Although the habitat and behavior are perfect for Pine Warbler, the length of the wings immediately eliminates it. The primary projection on the quiz bird is tremendous, not something that a short-distance migrant like a Pine Warbler would exhibit. Additionally, the quiz bird has a streaked back, another trait that Pine Warbler lacks.

A first-fall female Cerulean Warbler is vaguely similar to the quiz bird, but is much shorter-tailed, and tends to be a dull greenish-yellow, not the grayish-yellow of the quiz bird. Also, fall Ceruleans show little to no back streaking and a stronger pale supercilium than the quiz bird.

With only two species remaining, Blackpoll and Bay-breasted, it is apparent that all the field marks line up in the Blackpoll column. The flanks are marked with dingy gray streaking, the wing-bars are strong but fairly narrow and fairly straight, and the sliver of visible undertail coverts is clearly white. Bay-breasted lacks significant streaking and has bold, strongly arched wingbars and yellowish undertail coverts. This **Blackpoll Warbler** was photographed on 18 October 2008 in Avalon, New Jersey by the author.

Just for kicks, let's consider the age of this individual. Since the bird is not particularly bright for a Blackpoll and it lacks any black flecking on the throat, it is unlikely to be an adult male. Since it isn't particularly dull either and because the back streaking is fairly distinct, it is likely not a first-cycle female. So the bird is either a first-cycle male or an adult female. In many passerines, these two age and sex classes can be quite similar in the fall and we will have to look closely to determine which it is. In general, the best places to look when trying to age a passerine are the primary coverts, the greater coverts, and the tertials. On our quiz bird, the primary coverts seem quite broad, blunt-tipped, evenly dark, and unworn. In a first-cycle/formative-1 Blackpoll Warbler, this feather group should be fairly narrow and pointed, and should show some wear and some contrast with the fresher greater coverts. Looking at the tertial and greater coverts, I see no signs of any molt limits, visible junctions between two generations of feathers, which would likely be present on a formative-1 Blackpoll, so our quiz bird seems to be an adult female. I will caution that aging birds can be very dif-

difficult even if the bird is in the hand and more so from a photo. While this individual seems fairly straightforward, it is possible to misread a photo, so we will leave it as a probable adult female.

Looking back at how we identified the quiz bird, it is readily apparent that the process was too slow and cumbersome. In the field, the process is more likely to be something like this: medium-large warbler; long wings; ugly, dingy yellow underparts with faint streaking...Blackpoll Warbler. The process takes less than a second. The breast color of Blackpoll Warblers in fall varies a great deal, from several degrees more colorful than the quiz bird's to almost lacking yellow. Despite this variation, they all possess a dingy, faintly streaked appearance that is virtually unique to Blackpoll. It most closely matches the palest Orange-crowned Warblers of the race *celata* from eastern and northern North America, which differs from Blackpoll in a number of significant ways such that confusing the two is unlikely. If the bird were a Bay-breasted, the process would run: medium-large warbler; long wings; smooth, clear yel-

low underparts; arched wing-bars...Bay-breasted. Basically, Bay-breasted Warblers have a more attractive appearance due to both their cleaner yellow underparts and broader wing-bars.

Two excellent characteristics that are not relevant in this quiz but often useful in the field are the color of the feet and color of the lower flanks. Blackpoll Warblers have pink or yellow feet, and this color may continue up the back of the leg in some cases. In other individuals it is limited to the soles of the feet; but even in such cases, it is surprisingly evident in the field. Bay-breasteds always have black legs and feet, and most show at least a faint hint of bay on the lower flanks. Finally, both frequently give flight calls during fall migration, but rarely give other contact calls such as chip notes. Their flight calls are typical buzzy *Dendroica* "zeep" calls and fairly similar overall, but they differ subtly in the same way the two differ in appearance. Blackpolls give an emphatic harsh buzz, while the call of Bay-breasted is typically softer, shorter, and perhaps more "musical."