

Location, Location, Location

One of the most popular offerings at ornithological society meetings is “Stump the Chumps.” It’s an old tradition, with several variants, but the basic format is always the same. Invariably, “Stump the Chumps” requires the involvement of the following three parties: a panel of bird identification experts (the chumps), a moderator (the guy with the defective PowerPoint slideshow), and the audience. The moderator presents the experts with an impossibly hard photo: a backlit shorebird, a flying-away sparrow, or a facing-the-other-way flycatcher. The experts mumble their way through an analysis of the mystery bird. The audience laughs it up. For sure, “Stump the Chumps” is high hilarity.

True enough.

But expert ID panels are also a splendid learning opportunity. It is instructive to listen to panel members as they work their way to a correct identification, and it is especially worthwhile to make note of the diversity of approaches employed by the experts. In this regard, I remember an expert panel that was confronted with a particularly tricky photo of a Yellow-throated Warbler.

Each panelist had something to contribute. One person noted that this gray-backed bird was relatively long-billed and short-winged. Another pointed out that the bird ap-

peared to be foraging right on a tree trunk. Yet another was able to discern a single yellow pixel on the bird’s otherwise invisible throat. It all added up. Size and shape, behavior and ecology, even a glimpse of a color—all those things led the panel to the correct identification of Yellow-throated Warbler.

The process of becoming skilled at bird identification is basically an exercise in learning to process information in an integrative fashion. In our earliest days as birders, we focus on color and pattern. Soon we start to appreciate the importance of songs and calls. We begin to notice be-

havioral cues: flight style, foraging behavior, and so forth. Eventually we figure out that a bird’s shape and proportions are essential pieces of the puzzle. And we are constantly aware of the importance of the spatiotemporal context: the date of the sighting, the geographic location, the habitat.

Or are we?

I’m afraid the following will come across as a little preachy, but I hope you’ll bear with me. (And believe me, I’ve been as guilty as anybody). Well, here goes: I am intrigued by birders who know the exact pattern of feather wear on a sandpiper’s scapulars yet who are unaware of that sandpiper’s basic patterns of habitat preference, seasonal occurrence, and regional distribution. In these photo quiz answers, I am going to focus on habitat preference, and in particular on *microhabitat* preference. By habitat, I refer to coarse distinctions such as “forest” or “desert.” By microhabitat, though, I have in mind a finer level of resolution: “clusters of dead oak leaves,” “edges of small freshwater ponds,” “tips of branches in conifers,” and so forth.

Let’s take a look now at how paying attention to microhabitat cues can greatly simplify the identification process. And let’s also note that microhabitat cues can be whoppingly obvious—much more so than, say, millimeter-scale differences in the extent of tertial fringing. And let’s finally keep in mind that microhabitat cues are, on average, highly reliable.

Quiz Bird A

The month is June. The plant is sagebrush. We’re almost there.

Seriously, there are very few bird species to be found on a sagebrush in June. The sagebrush breeding bird community is one of the most specialized in North America. The bird clearly is not one of the two species of sage-grouse. It is not a Sage Thrasher. In its brownness and drabbery, our quiz bird appears to be some sort of a sparrow. And there just aren’t a lot of species to choose from. It is

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Quiz Bird A—early June.

not strikingly enough patterned to be a Sage Sparrow. It is not green enough to be a Green-tailed Towhee, a species that often occurs in sagebrush at relatively high elevations and high latitudes. Neither is it a streak-breasted Vesper Sparrow, another sparrow that is partial to sagebrush.

All that's left over, really, is Brewer's Sparrow, which happens to be the most abundant breeding bird species in the vast sagebrush deserts of the Intermountain West. The plant shown here, with its relatively flat leaves, appears to be mountain big sagebrush, treated by some authorities as a full species (*Artemisia vaseyana*) and by others as a subspecies of big sagebrush (*A. tridentata*). Anyhow, it's a sagebrush of some sort, and the bird is a Brewer's Sparrow. Now we can seek confirmation in the bird's actual feathers: the streaked crown, the thin eye-ring, and the malar stripe or moustachial streak or whatever we're calling it these days. That's great, but the key mark is the sagebrush. If Clay-colored Sparrow entered your mind, then you weren't really paying attention.

This adult Brewer's Sparrow was photographed by Bill Schmoker on 8 June 2003 in Jackson County, Colorado, at an elevation of 8,800 feet above sea level.

Quiz Bird B

The month is August. One of the plants, with its feathery compound leaves and tiny leaflets, is clearly some sort of mesquite (genus *Prosopis*). There is also a shrub willow (genus *Salix*) or willow-like species (perhaps a

seepwillow, genus *Baccharis*) in the photo; it's the one with the cream-colored flower buds and with simple leaves that are relatively long and dark.

Obviously, we are in a lowland riparian setting in the Desert Southwest. And remember that it is August, and in particular that it is early August. We have more avian possibilities than in the case of Quiz Bird A, but, really, there aren't that many options. Where to start? Well, why not start with the most likely species? If there is one bird that perfectly emblemizes riparian vegetation of the Desert Southwest in the summertime, it is the small, drab, pointy-billed, short-winged, hyperactive Verdin. Oh, sure, we could have started with something less common—a Lucy's Warbler or Northern Beardless-Tyrannulet or something. But why? Even in places where Lucy's Warblers and Northern Beardless-Tyrannulets are relatively common, they're still usually outnumbered by Verdins.

Everything checks out for Verdin. The bird is tiny, appearing to be dwarfed by the surrounding vegetation. The bird's pointy bill is almost perfectly straight above and below. Our photo is just a snapshot, of course, but the bird appears to be in the midst of some sort of active foraging maneuver. And if this were real life, the bird would say *tyeef*, loudly and brightly so, and almost continually.

This juvenile Verdin was photographed by Bill Schmoker on 3 August 2006 in Pima County, Arizona, at an elevation of 2,900 feet above sea level.

One more thought, if I may, about Quiz Bird B. Recall that we started out by placing the bird in desert riparian



Quiz Bird B—early August.

vegetation in mid-summer. With that perspective, check out Quiz Bird C in the September/October 2006 *Birding* Photo Quiz. It's late June, and that *Myiarchus* flycatcher is sitting in a mesquite. It is almost assuredly not a Great Crested Flycatcher. Oh, sure, it *could* be a mixed-up bird that decided to spend the summer in the blazing hot deserts of the Southwest. But probably not. Besides, physical field marks are often highly variable, and typically more prone to variation than behavioral traits. That mesquite is a more reliable "field mark" than, say, the distribution of red and yellow in the bird's plumage. A nice treatise on the dubious value of plumage color and pattern is provided by Richard Crossley (*Birding*, March/April 2006, pp. 68–71).

Quiz Bird C

July. Bird. Rock.

It's definitely not a Rock Ptarmigan. Rock Sandpiper doesn't seem to fit, either. So we're left with Rock Wren.

I really cannot think of another way to approach this photo than to start with the rock. If we focus only on the bird, there just isn't much to go on. The bird is drab and basically plain-breasted, with maybe a darkish post-occipital stripe and a lightish supercilium. There's a faint buff wash across the lower breast, and the bill looks to be long and thin. Come to think of it, why *isn't* this a Rock Sandpiper? The preceding marks aren't inconsistent with juvenile Rock Sandpiper.



Quiz Bird C—early July.

So let's go back to the rock. It is coarsely textured, and it is stippled with gray and black. This rock is granitic—perhaps granite, perhaps granodiorite. There's a good chance, then, that we're up in the mountains, in New Hampshire or

Colorado or somewhere. Rock Sandpiper is quickly falling out of contention. And there are other cues. Those orange blobs are lichens, and there are only two major genera of orange lichens: *Xanthoria* and *Caloplaca*. Several species of *Xanthoria* are nitrogen-lovers that concentrate on rocks with rodent droppings.

Speaking of which, check out those big black lumps. This is not the work of a mere ground-squirrel or pika. Neither was it deposited by a mountain goat or bighorn sheep. Just as there are folks who can distinguish between first-cycle Thayer's and Iceland Gulls, so there are persons who can tell you that these large droppings are those of a marmot.

Now we're getting somewhere. We have orange lichens and black scat on a granitic outcropping. We're leaning toward *Xanthoria* on the lichen, and we're guessing a marmot on the scat. The range of possibilities for that drab songster has been drastically reduced: Rock Wren, American Pipit, maybe a dull Mountain Bluebird. The bill is wrong for Mountain Bluebird, though, and the underparts are not richly enough colored for American Pipit.

This adult **Rock Wren** was photographed by Bill Schmoker on 9 July 2007 in Clear Creek County, Colorado, at an elevation of 12,350 feet above sea level.

Before we proceed, I feel compelled to address the likelihood that some of you are a little dissatisfied with my analysis of Quiz Bird C. I mean, c'mon: orange blobs, black turds, and a big ole rock—what kind of a solution is that? And, yet, that's exactly how we do it in real life. In actual field conditions, Rock Wrens rarely present an identification challenge. We glimpse a little brown bird scurrying about on a distant pile of rocks, and we know it's a Rock Wren. We just know. We know it's not, say, a Canyon Wren, because Canyon Wrens tend to favor steeper rock faces, often with a sandstone component. Those microhabitat preferences really make a difference. And there are other cues: the jerky bobbing motions; the explosive call note; the jangling, breathy, mockingbird-like song. Color and pattern—that is to say, field marks—are basically an afterthought.

Additional perspective on identifying birds without recourse to molt limits and feather tracts is supplied by Ted Eubanks (*Birding*, July/August 2007, pp. 36–39), Kevin Karlson and Dale Rosselet (*Birding*, July/August 2007, pp. 56–63), and Cameron Cox (*Birding*, July/August 2008, pp. 32–40).

Quiz Bird D

Ah. Ravens and crows. The genus *Corvus*. Or, as Henry Ford put it, "Any customer can have a car painted any col-

or that he wants so long as it is black.”

The six species of *Corvus* that occur regularly in North America are completely devoid of color and pattern. They have no field marks. Why bother? They're impossible. Indeed, David Sibley laments in the April 2002 issue of *Birding* (p. 140) “that ravens are among the least-identified birds in North America.” Not *misidentified*. Rather, *unidentified*. “Most ravens are just brushed aside or labeled as whatever species is expected,” according to Sibley.

I have to confess, my instinctual approach to Quiz Bird D would be to call it the expected species: Chihuahuan Raven. The microhabitat cues are perfect. First off, we have two native grasses: the tall-stemmed *Bouteloua gracilis* (blue grama) and the shorter *Buchloe dactyloides* (buffalograss). We also have that taller forb: It is the exotic *Salsola tragus* (Russian thistle, or “tumbleweed”). So we're out on the shortgrass prairie of the southwestern Great Plains. And there's a grasshopper flushing in front of the bird. It is one of the “bird grasshoppers” in the genus *Schistocerca*. With its pale wings, banded femurs, and blue tarsi, it might be an obscure bird grasshopper (*S. obscura*), a species that is characteristic of semi-native/semi-exotic arid grasslands. Recall, too, that the date is late July. Chihuahuan Raven is the only species in the genus *Corvus* that should be out in this microhabitat at that time of the year.

This adult **Chihuahuan Raven** was photographed by Bill Schmoker on 26 July 2005 in Kiowa County, Colorado, at an elevation of 3,700 feet above sea level.

Wait a minute.

What about Sibley's admonition? Aren't we guilty of having “just brushed aside” and “labeled [our quiz bird] as whatever species is expected”? How do we know this isn't some other species of *Corvus* in the “wrong” microhabitat? That's a very good question in Colorado, where raven populations have been misbehaving for several years now. Chihuahuan Ravens exploded north into the Front Range region following the terrible blizzards of 2006–2007, and they appear to have colonized the San Luis Valley of south-central Colorado in the past few years. Meanwhile, Common Ravens are slowly expanding into new habitats and regions all across North America.

We need to look at the bird itself.

Fortunately, this one is a no-brainer. The bill is perfect for Chihuahuan: thick-based, short (compared to a Common), and with nasal bristles extending well out along the culmen. All other species of *Corvus* are ruled out.

Or are they?

Check out the raven on p. 36 of the May/June 2006 issue

of *Birding*. That photograph, taken in central coastal California, is of a short-billed Common Raven with long nasal bristles. It turns out that the Common Raven is a “paraphyletic” species. That's a fancy term, but it's a fairly simple concept. In the case of ravens, it means that the Common Raven contains another species nested within its evolutionary history. And that other species is the Chihuahuan Raven. A so-called “California clade” of Common Ravens shares a closer evolutionary history with Chihuahuan Ravens than with Common Ravens in, say, Colorado—not



Quiz Bird D—late July.

to mention Kazakhstan. If you're interested, the formal scientific presentation of these results is laid out in a 2000 paper by Kevin Omland and colleagues (*Proceedings of the Royal Society-B* 267:2475–2482).

Anyhow, there's no quick answer to this one. Raven populations in North America are unstable; raven populations in North America are evolving; raven identification in North America is an uncertain prospect. In all their blackness and uniformity, ravens are endlessly fascinating—more so, in a sense, than Painted Buntings or Scarlet Tanagers or Resplendent Quetzals. Ravens are challenging. Ravens are vexing. Ravens are a reminder that American birders will be plenty busy with new and exciting field identification puzzles in the years to come.

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