

Electric Blue in the Bayou:

The Mystery of the Beaumont Cattle Egret

The identity of this bird is not in question. But how it got this way is.

Frank Izaguirre • Morgantown, West Virginia • frankmizaguirre@hotmail.com

Peter Pyle • Bolinas, California • ppyle@birdpop.org

Everyone knows birders love rarities, but we enjoy several different kinds of rarities. First, there are vagrants, a key and addictive component to list-building. Then there are birds that are globally rare, which we feel a special devotion to, like Kirtland's Warblers and Whooping Cranes. Yet perhaps rarest of all, and in some ways the most exciting, is the rare morph, aberrant individual, or perplexing hybrid, even if common species are involved. In its way, an electric blue Cattle Egret I saw at Cattail Marsh in Beaumont, Texas, this past March is the rarest bird I have ever seen.

Unless it wasn't. Is this a naturally occurring color morph of the one-in-a-million variety like the viral superstar yellow Northern Cardinal photographed in Alabama in January 2018? Or did this bird manage to dive into a vat of blue paint just enough to look spectacular? Or was it maybe the unfortunate victim of a cruel spray painting?

Within hours of arriving in Texas to write about the birding in Beaumont, I was at a local hotspot, Cattail Marsh, surrounded by throngs of wading birds, wintering ducks, and recently arrived migrants. And amid all those great birds, my hosts told me there was a blue Cattle Egret somewhere out there in the retention ponds. Dusk came, and birds were moving to their roosts. "Scan the cattle egret flocks. You might pick it out." I put my bins up, hopeful, but not expecting

anything, when, my oh my, there it was: an electric blue Cattle Egret, flying in tandem with a hundred other of its kin. For a few seconds, I was filled with shock and awe at the spectacle of it. Was this the rarest bird I'd ever seen? Or was this just a bird with a rare application of acrylic?

How do we solve the mystery of the Beaumont Cattle egret? I asked Peter Pyle...

—Frank Izaguirre

You might say that Cattle Egrets suffer plumage issues. First, it was long assumed that the orange-buff coloration of spring egrets is acquired through a prealternate, or pre-breeding, molt (Telfair 2006). However, it turns out that white basic feathers slowly gain this coloration in late winter



Featured Photo. Beaumont, Texas; January 29, 2018. Photo by © Dana Nelson.

and early spring, either through topical pigment application and preening (Pyle and Howell 2004) or through some sort of feather-oxidation process, as has been proposed for cranes (Nesbitt 1975). We still don't know how this works—whether the coloration comes from body oils, or from some external source, or perhaps is not preened in at all.

Second, for some reason, Cattle Egrets seem to show up in all sorts of colors, perhaps more so than other egrets, as documented by David Sibley at his website (tinyurl.com/Sibley-CAEG-1, tinyurl.com/Sibley-CAEG-2, tinyurl.com/Sibley-CAEG-3). There could be three reasons for oddly colored Cattle Egrets: (1) genetic anomalies such as melanism; (2) an aberration in the topical application of pigment, or the process that produces this color; or (3) ancillary staining from an external source. I tend to agree with David that melanism explains some of the blacker Cattle Egrets that have been documented, including a stunning bird from South Africa (tinyurl.com/CAEG-dark), along with several similar birds recorded in fall or winter, earlier in the plumage cycle than full topical coloration is normally gained. But I also think all three of these causes may be at play. Miscues in the topical application process could well occur in some spring birds, such as the bonny pinkish-buff bird photographed in Florida and discussed by David (tinyurl.com/Sibley-CAEG-2). Asian Cattle Egrets average more orange–buff color in spring than European and American birds, which has inappropriately been used as a subspecific character; instead, it appears to simply represent variation in the environmental topical color-application process. Maybe the source of this color, whatever that may be, is more abundant in Asia?

As my favorite saying goes: More

TOP TO BOTTOM:

Supplemental Photo 1. The Cattle Egret on December 20, 2017 was extensively and intensively blue. *Photo by © Harlan Stewart.*

Supplemental Photo 2. Despite its astonishing appearance, the blue Cattle Egret consorted more or less normally with other egrets. This image is from December 29, 2017. *Photo by © Harlan Stewart.*

Supplemental Photo 3. By January 25, 2018, the blue color was beginning to diminish. *Photo by © Harlan Stewart.*



study needed.

So what do we make of the blue Cattle Egret photographed in Texas this past winter? To be clear, these photos appear to depict the same individual, based on a detailed comparison of feathers. In this case, there are several reasons to suspect the third reason for oddly colored Cattle Egrets, ancillary staining from an external source.

First, the bird was initially noted in

December, well before such complete topical pigment application occurs, even in adults. I am unable to age this egret, by the way. Second, a close look

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at the wing feathers indicates the centers to be white, or at least whiter than the fringes. This is consistent with the blue being acquired on the closed wing, leaving the protected feather centers less fully colored, as evident when the bird opens its wings. We would not expect this of normal pigment deposition.

Third, as we now know, blue feathers are not pigmented but simply appear blue due to light scattering from a complex feather structure involving spongy keratin and air (Prum et al. 1998). This effect does not result in the blue color of bird feathers fading, as it did in the Texas bird between December and January. Thus, we do not see faded Blue Jays, Western Bluebirds, and Indigo Buntings, as we do with other feather colors in worn summer plumages. So I believe this individual either rolled around in a Roundup®-sprayed field or perhaps was purposely spray-painted blue. Researchers sometimes apply non-toxic dyes to study bird movement—though doubtfully the case with this Cattle Egret. In Honolulu, a company called “Rainbow Pigeons” releases multicolored white Rock Pigeons at weekend events to great delight (tinyurl.com/freaky-pigeons). Perhaps “Rainbow Egrets” just got established in Texas? In any case, I suspect some of the other oddly colored Cattle Egrets referenced by David—

green, pink, and perhaps some of the dark ones, as well—may be victims of similar external applications.

—Peter Pyle

So it seems my once-in-forever blue Cattle Egret coloring was probably cosmetic, rather than a genetic anomaly or topical misapplication of pigment. But I learned something. I learned a lot, actually, a common feature of our hobby and community. With birding, there’s always something new and surprising to learn, and maybe the rarest thing out there is a birder who doesn’t love to learn something new.

—Frank Izaguirre

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