



The Hart Beat



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Watching this Anna's Hummingbird throws some light on the effect of a bird's feathers.

IN A DIFFERENT LIGHT

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Light is one of the most commonly used words in the English language. We awaken at the first light of day, have sun light all day long and go to bed by moon light, or if it's not raining or snowing, by star light; our room is lighted by a lamp; our car has a head light, seat belt lights, drives on streets with street lights, is stopped by traffic lights, or a cop's flashing lights, and goes by a mall highlighted by flood lights; a confused person sometimes finally sees the light; and some plants need good light.

A pretty girl with high lights in her hair can light up your eyes, and an expert can be a leading light in his field. One lights a match to light a



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fire or give a cigar smoker a light; and a girl with light blue eyes might be wearing a light blue dress. Light also might be used to describe a truck load; or weapons used by terrorists; or a meal or dessert eaten by a dieter; or the wine consumed with the meal. A parent may place a light kiss on a child's cheek, use light footsteps to leave the child's unlit room, only to discover the child was a light sleeper, and wanted the light left on. Many watch light entertainment; or some light-weight pundit or politician on TV, making light of some serious issue. But a good friend or good news can lighten your day and leave you with a light heart. These examples are only the tip of the ice-berg. I'm sure you can come up with many more.

How about the effect of light on a bird's feathers? This past Christmas we travelled to San Diego, California, to spend the holidays with our daughter's family. Visions of birding and photography opportunities danced in my head. Rare and seldom seen species hung from the chimney with care: OK, I've gone far enough with this. Family gatherings and activities take precedence over birding, but there were innumerable memorable family photographic opportunities, so carrying my camera was worthwhile. Nevertheless, there was one memorable birding opportunity. Our daughter has a hummingbird feeder dominated by a single male Anna's Hummingbird. In Florida and east of the Mississippi the only regular species of Hummingbird is the Ruby-throated, so studying the Anna's during the brief lulls in family activities was a welcome break. And what a fascinating study it was!

The light reflecting on the head, face, and throat feathers of this feisty little fellow, as he fed or took a watchful position to drive off any intruders into his domain, created an amazing array of colors. The default color for the male Anna's, as depicted in all the bird books, is featured in photo No. 1: bright red head, face, and gorget, which he has flared out while feeding. (I suspect the red color here may be slightly enhanced by reflection off the feeder itself.)

- However, in photo No. 2, as he approaches the feeder, the top of his head and around his bill appears to be a distinct brown color (photo 3).
- As he took up one of his two favorite monitoring positions in a plant near the feeder, his prominent color appears to be a rich purple velour;
- followed by a purple-brown combination as he turns his head ever so slightly (photo 4);
- and finally an olive drab/rufous, virtual lack of bright color, as he completes his head turn and catches the light from a different angle (photo 5).

These three photos were all taken within only seconds of each other, and have not been retouched by post-processing whatsoever.

Somewhat later, while in the same guard position, he displayed hints of gold in his gorget (photo 6), as he caught the light from yet another angle.

Still later, as he took up his second favorite guard position on the top edge of a high palm leaf, all those usual red parts of his head, face and throat, or gorget, now appear to be black (Photo 7).

And finally, very shortly after alighting on the leaf he gave brief hints of all the colors at his command. (Photo 8; did you like that word "alighting"?)

While a male hummingbird may be light as a feather, it is the light on his feathers that renders him spectacular. Artists and photographers learned many years ago the importance of light on their subjects, but birds have been way ahead of them for hundreds of years. We might wonder whether birds are conscious of the impact different kinds of



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www.birds.cornell.edu/AllAboutBirds/studying/feathers/color/document_view; and www.birds.cornell.edu/AllAboutBirds/studying/feathers/. For a fantastic video on the ultimate in bird feather display and color variation as birds move about in the light to change color effects, see The Birds of Paradise Video: www.youtube.com/watch?v=REP4S0uqEOc.

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