



Hummingbirds of North America: The Photographic Guide

Source: The Auk, 119(3) : 877-880

Published By: American Ornithological Society

URL: [https://doi.org/10.1642/0004-8038\(2002\)119\[0877:HONATP\]2.0.CO;2](https://doi.org/10.1642/0004-8038(2002)119[0877:HONATP]2.0.CO;2)

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The Auk 119(3):877-880, 2002

Hummingbirds of North America: The Photographic Guide.—Steve N. G. Howell. 2002. Academic Press Natural World (A Harcourt Science and Technology Company). San Diego, California. ix + 219 pp., 230 color photographs, 4 color plates, 9 black-

and-white figures (line drawings), 8 maps. ISBN 0-12-356955-9. Paper, \$29.95.—Howell tells the reader at the very onset that hummingbird identification, particularly under field conditions, can be extremely challenging. In the preface he states, “Remember that responsible field identification always includes the ability to ‘let birds get away’ as unidentified, and also that some individuals (perhaps hybrids or just oddballs) may defy specific identification, even in the hand.” He does not soften his stance in this regard because throughout the book he reiterates that caveat many times. Having established that there are inherent difficulties, Howell devotes the rest of the book to providing a wealth of useful information (virtually all of which is supported by excellent photographs, descriptions, and vocalizations) that enables the reader to enhance their hummingbird identification skills under field conditions.

The book has greater breadth than implied by the title; it is more than just a photographic guide. The first 34 pages (the introduction) are very informative and deal with a variety of topics. Major subheadings include: (1) “What Are Hummingbirds?”, (2) “Taxonomy And An Identification Framework”, (3) “Field Identification Of Hummingbirds”, (4) “Molt And Plumage”, (5) “Voice And Wing Noise”, (6) “Habitat And Behavior”, and (7) “A Summary Of Identification Characters”. This material is followed by an additional section (“How To Use The Book”) that details the organization, rationale, and the manner and method of presentation of the remaining segments of the book. Citations first appearing in the preface (page vii) and throughout pages 1–37 are the final items to be listed. The bulk of the remaining text (pages 39–209) consists of species accounts. A single paragraph precedes the first account under each genus and provides information such as the number of species within the genus, habitats occupied, geographic range, and distinguishing characteristics.

Four full-page photographs, each depicting a different species in a different posture, are presented to illustrate the essential terminology used to describe the topography and appearance of hummingbirds (line extending from the term to the exact location or trait). The basic suite of characters presented by Howell relate to the following: (1) size, (2) bill shape and color, (3) head topography and pattern, (4) throat pattern and shape, (5) body color and pattern, (6) wing structure and pattern, (7) tail structure and pattern, (8) molt and plumage, (9) age, (10) voice and wing noise, and (11) habitat and behavior. In addition to descriptions detailing each species, segregated with regard to sex and age, the discussion of similar species under each account also provides important and useful clues for species separation. Some readers may initially find that a bit overwhelming but they are assured that with practice and time a multitude of characters can be checked in a matter

of just a few seconds. Nevertheless, the reader is reminded that not every individual will be identifiable and that even experts cannot identify all birds, even when the bird is in the hand.

Howell accomplishes his primary objective of providing information that will enable the reader to become more proficient at identifying hummingbirds in the field. Unfortunately, he is guilty in some respects of reaching beyond the scope of the book when it comes to taxonomic issues (see below) and that detracts from what is otherwise a very worthwhile contribution. There are a few errors and some inconsistencies in matters of style and format (see latter segment of this review) but none of those items seriously undermines the book’s primary objective. The book is written, illustrated, and organized in a way that makes it easy to read, understand, and is user friendly in its design and dimensions. Both the front and back covers fold out for ease of marking one’s place and on the inside of the front cover the beginning page numbers for each of the 24 species accounts are listed. The book is 21.5 cm in length (8 1/2 in), 14.0 cm in width (5 1/2 in), and the approximate thickness is 1.5 cm (5/8 in). The paper binding appears to be durable (my copy has been used extensively) and should withstand heavy use.

My major criticism of Howell’s book involves taxonomic issues, where the terms “vexed” and “remains unresolved” are used to characterize the taxonomy of many groups. He is correct in that modern revisions of hummingbird taxonomy at generic, specific, and subspecific levels are needed. However, most taxonomic revisions in the present work are as yet unsubstantiated (e.g. in the genus *Calothorax*) and generally date back to his 1995 book *A Guide to the Birds of Mexico and Northern Central America* (coauthored by Sophie Webb), which also failed to substantiate proposed changes (see A. T. Peterson and A. G. Navarro-Siguenza’s 1996 review; *Auk* 113:975–997). There are curious inconsistencies in the present work in that only a few of the revisions proposed in the 1995 book are prominently presented (i.e. within the title of each species account). The taxonomic nomenclature in the title of most accounts is that currently accepted by the AOU (e.g. Anna’s Hummingbird [*Calypte anna*] is shown within the title of the account to be in the genus *Calypte*; Howell and Webb’s 1995 merger of *Calypte* into *Archilochus* is cited, but less prominently in the account under the subheading “Taxonomy”).

Howell has invested a great deal of time and given serious thought to taxonomic issues, but where are the data? Taxonomic revisions should not be undertaken lightly and should be made only when supporting data can be provided. To do so prematurely does a disservice in that this material enters the literature without supporting details, often escaping the rigor of peer review, which in turn increases the likelihood of even more gyra-

tions in nomenclature. Taxonomy represents a set of working hypotheses, but the extent to which these gain acceptance must be based on data subject to the scrutiny of others. Unsubstantiated revisions (pronouncements) can undermine the utility and importance of taxonomy, which in turn undermines support from the scientific community, granting institutions, and the public for taxonomic investigations. I have been dealing with issues concerning hummingbird taxonomy for several years and my colleagues and I are just now in a position to publish our findings; our data support some of Howell's proposed revisions, refute others, and call into question other relationships.

Howell does a good job of depicting and bringing to the reader's attention the importance of having an appreciation of the natural variation that exists among individuals. He instructs the reader to gain an understanding of individual variation within each species, each age and sex class, and to learn when differences are great enough to indicate a different species. Within that context he reminds the reader that "good views and a lot of critical and comparative experience with several species" are important and that "there is no short cut to this, it takes time and observation." Through the use of select photographs, figures, and pertinent discussions, the reader gains an appreciation of natural variation beyond that conveyed in many standard field guides. As an example, two photographs of adult female Lucifer Hummingbirds (*Calothorax lucifer*) are presented, one a richly colored individual and the other a paler individual. From this the reader immediately can appreciate the fact that not all adult female Lucifer Hummingbirds are richly colored (buffy), some are quite different in appearance in that they are very pale with little buff and are thus more whitish than generally depicted.

Most photographs selected for inclusion depict typical birds of a given age and sex, but a limited number have been provided to demonstrate extreme departures or to impress upon the reader the fact that photographs can be misleading. In regard to the former, a photograph of a "gorgeted" adult female Costa's Hummingbird (*Calypte costae*) attending a nest with young has been included. The occurrence of such individuals must certainly be rare, but aberrant birds are more common than most people realize. For example, there are other cases of adult female Costa's Hummingbirds that resemble adult males in the degree of iridescent feathering on the throat, including in the elongation and lateral projection of those feathers (e.g. University of California Berkeley-Museum of Vertebrate Zoology specimen no. 32909). The inclusion of a few photographs that in essence demonstrate that photographs can lie is also very relevant (e.g. a bird with a dark bill that nonetheless appears to be pinkish). In support of photographic evidence, the case is made that pho-

tographs may be the only way to "capture" and view diagnostic traits that otherwise are unlikely to be seen given the rapid and often erratic movements of live birds.

Structural characters and call notes remain the most diagnostic traits. Howell includes and describes many of the structural characteristics routinely used to identify birds in the hand (focusing on their usefulness under field conditions) and greatly expands upon vocalizations. In addition, the positioning of folded wings at rest with respect to the tip of the tail is heavily touted (i.e. whether the wings extend beyond or fall short of the tip of the tail) as are general tendencies while feeding regarding items such as tail-wagging and the placement of the tail with respect to body plane. Such characters are often not individually or collectively diagnostic, but they are useful for narrowing the suite of possible species. In the absence of call notes (described for each species) or structural characteristics, it is often not possible to safely identify some individuals and identification becomes problematic. That is conveyed throughout the introductory material and various species accounts, but is especially well depicted in the photographs detailing identification problems associated with the separation of Rufous (*Selasphorus rufus*) from Allen's (*Selasphorus sasin*) hummingbirds.

It is refreshing to see scientists receiving credit for their work. There has been a disturbing trend during the last few years for many books similar to Howell's in scope and purpose to contain an extensive listing of photographic credits and yet fail to cite the scientists upon whose work much of the publication was derived (in extreme cases of no citations, one wonders whether the author wrote the entire book based upon their own discoveries). Literature citations do not have to be exhaustive (just relevant) and should be an integral component of all works, not an expendable component whose inclusion is at the discretion of the author or publisher. Many of the details provided by some authors (e.g. maps, distinguishing characteristics, etc.) and the manner in which those items have been presented border on or are outright plagiarism. Howell is to be commended for his efforts in this regard; he has made new discoveries and replicated for himself the work of others, yet throughout the book has done a good job of giving credit where credit is due. His 5 1/2 pages of literature citations (115 references) are a reasonably complete listing of relevant works and by their inclusion add credibility and value without being burdensome.

With the possible exception of one or two items that are debatable (e.g. how definitive a particular trait is with respect to a given species or age class), I did not find any errors in identification or basic biology. The relatively few mistakes that do exist generally pertain to issues of style and format, but more substantive errors do exist. The most important of

those deals with the legend to Figure 9 on page 190; the third component of the figure pertains to an immature “female” not an immature “male” (this has been repeated). On page 159, the statement is made that “Breeds mainly in . . . , especially washes with *Ocotillo*, other cacti, and, in more northern areas. . . .”; note that *Ocotillo* is not a cactus so “other cacti” is not correct, nor should *Ocotillo* be italicized because it is not a generic name—the genus is *Fouquieria*. In various places throughout the text the “M” of mountain should be capitalized when referring to the Rocky Mountains.

Hummingbirds of North America: The Photographic Guide is an important contribution and I recommend the book to anyone interested in hummingbirds; it provides a wealth of information and is reasonably priced. Ornithologists will appreciate the fact that it realistically deals with the inherent difficulties associated with hummingbird identification; there are no shortcuts and not every bird can or should be identified. This will not necessarily be met with enthusiasm by some in the bird-watching community, but most will certainly appreciate the knowledge the book conveys and use this information to improve their skills and to develop the perspective required to identify a greater percentage of birds. Interspersed throughout are notations pointing to gaps in knowledge and in that regard the book will serve to focus interest and be a catalyst for new inquiries. The dedication of the book to the memory of Luis F. Baptista is fitting because hummingbirds were high among his many passions. He would be pleased.—
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