First breeding record for Allen's Hummingbird in the Central Valley

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Julian Wood of Point Reyes Bird Observatory (PRBO) found a female hummingbird coming to a nest in the southern part of the Tall Forest parcel of the Cosumnes River Preserve (CRP) in southern Sacramento County on 1 May 2002. He thought the bird was an Anna's Hummingbird (*Calypte anna*) and reported his discovery to one of us (JC) who was responsible for following nest success in that portion of the forest as part of a long term study by PRBO. The nesting bird afforded no opportunity for careful study until JC found her feeding young at the end of May and reidentified the adult female as a *Selasphorus* hummingbird, a taxon unknown as a breeder in the Central Valley. She then informed JT of the location of the nest. For reasons noted below, we believe this to be the first documented Central Valley nesting of Allen's Hummingbird (*Selasphorus sasin*).

The position of the nest precluded close examination of its structure and the nestlings within it. JT studied the adult female, the nest (Figure 1), and the nestlings through a 20-60x spotting scope on 2 June, 3 June, and 6 June. The adult bird was fairly easy to study on half of her nest visits, when she landed at the south side of the nest. She also came to a feeder placed near the nest on 6 June. Compared to Black-chinned Hummingbird (*Archilochus alexandri*), the common hummingbird in the woodland, the nesting bird was a more sturdily built hummingbird, thicker particularly in the neck and chest. The bill was medium length for a hummingbird, fairly straight and appeared entirely dark. The crown, nape and back were iridescent green. A dark line ran from the bill to the eye. The face was mostly washed with rufous, dappled with some small grayish spots on the ear coverts, particularly posteriorly. A small, bright white postocular spot set off the dark eye. The throat had a whitish ground color on which more or less linear arrays of small grayish green spots radiated away from the chin area, except in the midline of the lower throat. Here there was a prominent wedge of larger, iridescent, deep-orangish gorget feathers. A white forecollar and white ventral midline set off solid, strongly rufous sides and flanks. The tips of the folded wings fell well short of the tail tip. The wing coverts were green and the folded flight feathers appeared dark grayish brown. The rump and uppertail coverts were a mix of iridescent green and rufous, the latter especially notable on the uppertail coverts. The tail appeared fairly strongly graduated. The visible portions of the central rectrices (R1) were strongly rufous for their proximal 20-25 percent, bright green for about 25-30 percent, and strongly blackish tipped. The lateral rectrices (R3-R5) were extensively (50-60 percent) rufous basally, with white spots terminally and black in between. The lateral rectrices (R5) appeared fairly narrow when the tail was "flipped" on approach to the feeder. The paramedian rectrices (R2) were never seen

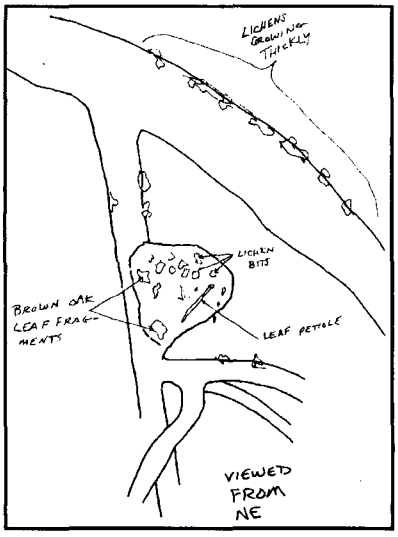

Figure 1. Nest and surroundings of an Allen's Hummingbird (*Selasphorus sasin*) at the Cosumnes River Preserve, Sacramento County. The sketch was made on 6 September 2002, after the nest had been abandoned.

sketch by John Trochet

satisfactorily. The vent and undertail areas were not seen well. The tiny legs and feet appeared dark.

The nest was built approximately 14 m up in an Oregon Ash (*Fraxinus latifolia*) of 17 m height and 22 cm dbh. The nest was built against a pendant branchlet such that the overhanging limbs, their leaves, or the leaves of an oak limb overtopping the ash tree nearly always shaded it. The nest was anchored to its support at the side of the nest and not supported from below (Figure 1). The structure appeared light olive gray from a distance, matching the surroundings well, a fact enhanced by the placement of bits of lichen and other plant material fragments on the nest perimeter.

When first seen by JT on 2 June, both nestlings fit into the nest cup. By 3 June the shorter-billed young bird perched on the nest edge adjacent to the supporting branch. The scope view afforded was fairly good. The nestling was very like the adult, though the rufous wash on the face and the rufous of the sides were somewhat less intense. The throat spotting was paler and finer and there was no wedge of large iridescent feathers in the lower midline. While the rather hunched posture precluded getting a look at the entire back, the lowest portion was solidly green. The rump and uppertail coverts were extensively, almost solidly, rufous. The rectrices were very short and mostly still in sheath. The white terminal spots of the lateral three pairs were conspicuous. The undertail coverts appeared to be a pale cinnamon. By 6 June the tail had grown out sufficiently to see some rufous laterally. Either the same young bird was seen repeatedly on that nest edge or the plumages of the young were indistinguishable. JT saw nothing to suggest that these were hybrids.

The Tall Forest in this area is predominately large Fremont Cottonwoods (*Populus fremontii*), 20-30 m in height, with a prominent admixture of somewhat smaller Valley Oaks (*Quercus lobata*) and lesser numbers of small and medium ashes and Box Elders (*Acer negundo*). Saplings of ashes, in places developing into thickets, were fairly numerous, but by Tall Forest standards the understory was relatively poorly developed, consisting mostly of Sticktight (*Bidens frondosa*), with lesser quantities of dock (*Rumex* sp.), California Blackberry (*Rubus ursinus*), California Wild Grape (*Vitis californica*) and others.

Two nestling still occupied the nest in the early morning of 7 June, but by noon only one remained. The adult fed this bird a few times during the following

two hours. Accompanied by Jeanne Hammond of PRBO, JT watched the second nestling fledge about 1400. JC saw the adult female a couple of times in the area beneath the nest in the first few days after the fledging of the young, but we saw no subsequent activity at the nest itself.

Three *Selasphorus* hummingbird species — Allen's Hummingbird, Rufous Hummingbird (*S. rufus*), and Broad-tailed Hummingbird (*S. platycercus*) — are of regular occurrence in the western United States. Of these, Broad-tailed Hummingbird was rather easily ruled out as a possibility on the basis of the color and shape of the tail and upper tail coverts.

The separation of Rufous Hummingbird from Allen's Hummingbird is more challenging, often requiring having the bird in hand (Kaufmann 1990, Pyle 1997). Identification of individuals of these species that are not rufous-backed adult males is sometimes possible with exceptionally informative photographs. We have neither. We feel, however, that the overwhelming probability is that this was a nesting Allen's Hummingbird. Allen's Hummingbird nests on the Pacific coastal slope from southwestern Oregon to Los Angeles County and probably Orange County (AOU 1998). Rufous Hummingbird nests in an area roughly bounded by far northwestern California, Yellowstone National Park and southeastern Alaska. The closest known Allen's Hummingbird nests are about 60 km away on the slopes of Mt. Diablo, Contra Costa County (sparingly, *fide* Steve Glover) and about 70 km away at Benicia State Park, Solano County (Robin Leong pers. comm.). They may also nest near Vacaville at Pena Adobe Park, Solano County, some 55 km from the Tall Forest (Robin Leong pers. comm.). Yolo County has no nesting records (Michael Perrone pers. comm.). While conducting surveys as part of the Sacramento County Breeding Bird Atlas Project of 1987-1992, June Persson observed this species near Walnut Grove and saw a pair and observed territorial behavior in April 1990 near Ryde, meeting the standard for probable nesting in the latter instance (*fide* Tim Manolis). This is only 13 km just south of due west from the Tall Forest. Arvil Parker reported in 1968 that Allen's Hummingbirds had for several years remained in the vicinity of Courtland, Sacramento County, for the entirety of the breeding season (Lynch and Ames 1970). Mitchell (2000) states that virtually all Allen's Hummingbirds nest within 32 km of the coast, but clearly this is not true of the greater San Francisco Bay region. The Cosumnes nest site is approximately 105 km from the Golden Gate and 50 km from Suisun Bay. The closest Rufous Hummingbird nesting area is about 350 km to the north-northwest (Calder 1993). That the nest was anchored to its supporting branch at its side and not from below is a common characteristic of Allen's Hummingbird nests, but is not typical of nests of Rufous, Anna's, or Black-chinned hummingbirds (Bent 1940). The adult hummingbird reported here had significant rufous color in her uppertail coverts, a feature seen on some 30 percent of adult female Allen's Hummingbirds and rarely found (about one percent) on Rufous Hummingbirds of the same age and gender (Howell 2001). The narrowness of the outer rectrices also suggested Allen's Hummingbird, but this feature is difficult to assess in the field and exhibits some overlap between the

two species, so we do not feel confident about its applicability in this case. We thus base our assertion that Allen's Hummingbird nested at the Cosumnes River Preserve in 2002 on proximity to known nesting distributions, nest construction, and to a strong inference from plumage.

ACKNOWLEDGEMENTS

We wish to thank Steve Glover, Robin Leong and Michael Perrone for sharing their knowledge of the breeding distribution of Allen's hummingbird in Contra Costa, Solano and Yolo Counties, respectively. We also thank Tim Manolis for providing the relevant Sacramento County Breeding Bird Atlas Project data and the hybrid hummingbird reference. JT salutes the PRBO 2002 team of JC, Jeanne Hammond, Andy Pfeffer and Julian Wood for continuing that organization's great work regarding the breeding birds of the Tall Forest and vicinity, and he thanks Ramona Swenson, Rick Cooper, Mike Eaton and the past and present staff of the Cosumnes River Preserve for the many courtesies extended him over the last eight years.

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Recent records of hybrid buntings (*Passerina amoena* x *Passerina cyanea*) in Sacramento County, California

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On the morning of 11 May 2002, we (TM and SW) set up a bird-banding demonstration booth for a public education event sponsored by the Stone Lakes National Wildlife Refuge near Freeport, Sacramento County. We ran a series of mist nets through a revegetation plot of Sandbar Willow (*Salix sessilifolia*) and Valley Oaks (*Quercus lobata*) bordering a stand of larger oaks along Morrison Creek just west of Interstate Highway 5, about 2 km south of Freeport.

At about 1030, SW made a net run and returned to our banding table with, among other things, a male *Passerina* bunting. When he pulled it out of the net bag, TM instantly recognized that it was an apparent hybrid between Lazuli Bunting (*Passerina amoena*) and Indigo Bunting (*Passerina cyanea*). The bird was held for some time and shown to a large number of spectators attending the event. After being banded, measured, photographed (see back cover) and described in our notes, the bird was eventually released at the site of capture.

DESCRIPTION: A small, trim bunting, about 13-14 cm in total length (wing chord measured 70 mm). The bill was conical, the maxilla nearly black. The mandible had a dark tip but was, for the most part, pale gray with a yellow wash on its base. The head was mostly blue with a narrow black ring of feathers around the base of the bill and black lores. The color of the crown, auricular area and chin was a deeper cobalt blue than the blue color elsewhere on the bird. The rest of the head and throat was a paler blue with scattered light brown feathers on the nape. The irides were dark brown.

The feathering of the back was dingy, most feathers dull blue with a dusky central stripe but with a scattering of brown feathers, too. The scapulars and lesser wing coverts were light blue. The median wing coverts were mostly blue with black spots at their bases and a narrow fringe of white. The greater coverts were black, broadly edged with pale blue and very narrowly fringed with white. The tertials were mostly blue, with black along the inner web basally. The primary coverts were dusky, nearly black, and broadly bordered with blue. The primaries and secondaries were dark, nearly black, and narrowly edged with blue. The lower back and rump were lazuli blue. The rectrices were dark brown, edged with blue. The underparts were mostly white, but were mottled with blue feathers nearly throughout, most heavily on the chest, sides, flanks and undertail coverts. There was a pale buff wash on the sides of the chest. The legs were dark gray.

Many, but not all, second-year (SY) males of both these species can be distinguished from after-second-year (ASY) males by plumage characteristics (Pyle 1997). However, while the molt schedules of both species are similar in overall pattern, they differ in some particulars of timing and extent, and molt schedules of hybrids are likely to vary to an unknown extent from the patterns of either parental form.

This hybrid, for example, exhibits some characteristics of both SY and ASY males. Fairly extensive brown feathering on the nape and back is suggestive of SY males of both species, but even some ASY male Indigo Buntings can show some brown feathers in spring and summer and the limited extend of brown feathering on the hybrid was consistent with such birds. On the other hand, SY males of both species, and particularly Indigo Bunting, usually retain some brown juvenal inner primaries, outer secondaries and inner primary coverts, and this bird appeared to have none of these. However, occasional SY male Lazuli Buntings may not retain juvenal flight feathers (Pyle 1997). The extent of wing molt is probably a better indicator of age class than is body plumage (which is highly variable, particularly in Indigo Bunting) and in this case it suggests the bird was an ASY male. However, since the bird was a hybrid, this assessment is tentative at best.

Possibly this bird or another putative hybrid bunting was reported seen on the Bufferlands of the Sacramento Regional Wastewater Treatment Plant about 2 km N of the banding site on 23 May 2002 (Chris Conard pers. comm.). Unfortunately, the legs of the bird observed on 23 May could not be seen well enough to determine if it was banded or not.

Previously, presumed hybrid bunting males were recorded at the Cosumnes River Preserve (CRP) in southern Sacramento County in the years 1996-1998. In 1996, one such bird was found 17 May adjacent to the Tall Forest section of the CRP. Perhaps the same bird relocated to the Wendell's Levee MAPS (Monitoring Avian Productivity and Survivorship) banding station operated by Point Reyes Bird Observatory (PRBO) about 600 m away, where it was regularly seen from 30 May to 20 July and not found on a targeted search on 27 July. At this latter site, another or the same hybrid bunting returned in 1997. It spent a week at the MAPS station beginning 31 May. PRBO personnel netted and banded this bird on 5 June. JT did not record it subsequently. In 1998, again at this same location, he found a putative hybrid male on 30 May but not later. These years coincide with the seasons of greatest numbers of Indigo Buntings at the preserve.

The 1996 bird was mostly dark blue, darkest on the head, with brown feathers admixed in the nape and back. He had conspicuous white wingbars and a diamond-shaped white area on the venter, much like a Black Phoebe (*Sayornis nigricans*). The irides were dark, the bill blackish above and grayish below, the legs and feet dark gray. He sang vigorously through the season a song very like that of Lazuli Buntings in the area. The 1997 hybrid, also possessing brown in the dorsal plumage, was indistinguishable from the bird of the preceding season, based on JT's notes. JT did not record his impression

of the song in 1997 and was not present when the bird was netted. In neither season was the hybrid found to have bred.

The 1998 bird was not well seen. The bird appeared dark blue with white wing bars and a white belly, had dark irides, a blackish maxilla and bluish-gray mandible, and dark legs. JT was unable to tell how much brown, if any, was admixed in the body feathers or if the bird was banded. He made no note of voice. According to Tonya Haff (pers. comm.), then an intern with PRBO, this bird was on territory for a few weeks, but no evidence of breeding was discovered despite intensive searching.

In the not too distant past, the Indigo Bunting and Lazuli Bunting bred in different halves of North America, the former from the Great Plains eastward and the latter in the western half of the continent (e. g., see AOU 1957). Hybridization between the two species on the Great Plains has been well-studied (Sibley and Short 1959, Kroodsma 1975, Emlen et al. 1974). During the middle decades of the 1900s, however, the breeding range of the Indigo Bunting spread westward, particularly into the American Southwest, greatly increasing overlap in the breeding ranges of the two species (Phillips et al. 1964, Hubbard 1978). Indigo Bunting was first observed in California in 1939 (Grinnell and Miller 1944) and was found breeding within the state for the first time in Los Angeles County in 1956 (Bleitz 1958). The first record for the Sacramento area was of a singing male collected along the Sacramento River at Elkhorn Ferry, Yolo County, in July 1963 (DeBenedictis and Chase, Jr., 1963).

Since then, Indigo Bunting has become a rare but regular visitor to California, with an estimated 5 percent of the annual reports being of bird present through the summer (Roberson 1980). These summer records nearly all involve singing, territorial males. Females, less conspicuous and difficult to distinguish from female Lazuli Buntings, probably occur in similar numbers but are often overlooked. None the less, Indigo Bunting males in California are probably more likely to mate with Lazuli Bunting females rather than with congeners, if only because the former greatly outnumber the latter. Roberson (1980) knew of no reports of a pure pair of Indigo Bunting breeding in California but was aware of at least 5 reports of mixed pairs, all involving a male Indigo and a female Lazuli. Not surprisingly, then, a number of hybrids have been reported within the state (e.g., McCaskie et al. 1979, Roberson 1980, Gaines 1988). As far as we know, however, those reported in this paper represent the first such hybrids documented for the Central Valley.

ACKNOWLEDGEMENTS

TM and SW thank the staff of the Stone Lakes National Wildlife Refuge for access to and permission to band on refuge property. JT thanks Luke Cole for sharing his knowledge of Kings County buntings, and Mike Lynes, Jennifer White, Ryan DiGaudio and Tonya Haff of PRBO for sharing their observations of buntings at the Cosumnes River Preserve during the years 1996-1998.

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The California Natural Diversity Data Base

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It might come as a surprise to some Central Valley birders to learn that the Wildlife and Habitat Data Analysis Branch of the California Department of Fish and Game (CDFG) compiles site-specific data for over 100 of California's most threatened and endangered birds (CDFG 2002). Information on what are commonly referred to as special-status birds is stored in the California Natural Diversity Database (CNDDB). The CNDDB is a continually refined and updated statewide inventory that includes information on the state's special-status species and natural communities. In total, the CNDDB contains over 38,000 occurrences for sensitive plants and animal species and sensitive natural communities.

For Central Valley birders, the CNDDB can be a valuable source of information on recent and historic occurrences of special-status birds in their county or other geographic area of interest. The CNDDB also provides an opportunity for birders to contribute information that could be important to future local or statewide conservation efforts that might otherwise be confined to the pages of a field notebook.

The information contained in the CNDDB is available to the public, for a fee, in the form of computer generated text reports and map overlays. The entire inventory, including geographical information system (GIS) coverage, can be purchased for an annual subscription to a PC database application called RareFind 2. RareFind 2 provides flexible query options and text-based reports for any of California's 2,800+, 1:24,000-scale quad maps or United States Geological Survey (USGS) 7.5 minute maps. RareFind 2 is used as a stand-alone research tool or can be linked with the GIS application ArcView for access to the spatial data set.

The CNDDB can be searched by a variety of parameters. Figures 1 and 2 show examples of how CNDDB data can be graphically displayed for a single species. Figure 1 depicts historic and current Swainson's Hawk (*Buteo swainsoni*) nesting sites. Figure 2 depicts historic and current Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) breeding sites. Each point on the figures is linked to the following information in the database:

- Habitat requirements and associations
- Location information
- Dates observed, including the last date the element was observed and the last date the site was surveyed
- Ecological descriptions, including threats to the population
- Land ownership
- Population information, including trends and reproductive outcome
- Data sources.

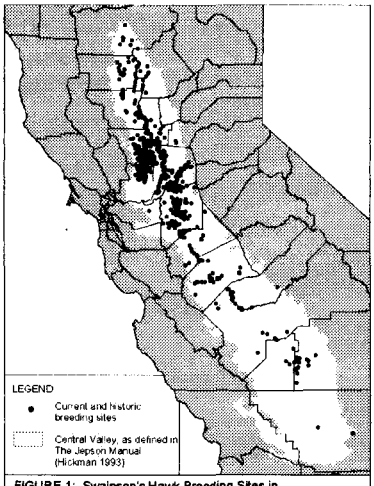

FIGURE 1: Swainson's Hawk Breeding Sites in the Central Valley (CNDDB 2002).

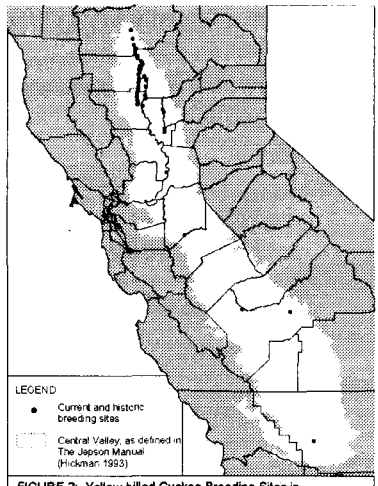

FIGURE 2: Yellow-billed Cuckoo Breeding Sites in the Central Valley (CNDDB 2002).

If information on all special-status species within a specific geographic region is required, the CNDDB can be searched by other parameters including USGS quad, county, and natural plant communities.

The CNDDB is currently soliciting information on occurrences of approximately 40 special-status birds that nest and/or winter in the Central Valley (Table 1). This includes birds that are listed as threatened or endangered, and those that are otherwise considered sensitive by a governmental and non-governmental agencies and organizations (e.g., CDFG, U.S. Fish and Wildlife Service, Bureau of Land Management, U.S. Forest Service, Partners in Flight, and the National Audubon Society).

Many of the birds in the CNDDB are considered by CDFG as Species of Special Concern. The list of Bird Species of Special Concern is currently being revised as part of a collaborative effort between CDFG, the Bird Species of Special Concern Technical Advisory Committee, and Point Reyes Bird Observatory (PRBO). A draft of a revised list has recently been released along with species accounts for all California Species of Special Concern (Shuford and Gardali 2002). The revised list has not been officially adopted by CDFG but its adoption is expected sometime in 2003 (Lyann Comrack pers. comm.). Table 1 includes birds currently designated as Species of Special Concern, as well as those whose addition or removal is expected when the new list is adopted.

It is important to note that the CNDDB is only as good as the information provided to CDFG. Blank areas on maps such as those shown here may not indicate real gaps in distribution but may simply reflect a lack of survey data for those regions. We would like to encourage Central Valley birders to help improve the CNDDB by submitting completed California Native Species Field Survey Forms (available online at: http://www.dfg.ca.gov/whdab/natspec.pdf) when they detect special-status species in the field. Doing so contributes to one of the most useful tools available for conserving

California's most threatened plants and animals. For more information on CNDDB products and services, call the CNDDB Information Services Staff at (916) 324-3812, (916) 324-0475 FAX. More information is also available at: http://www.dfg.ca.gov/whdab/html/cnddb.html.

Table 1. Special-status birds (as designated by the California Department of Fish and Game) that occur in the Central Valley.

Species	Status*
Double-crested Cormorant (*Phalacrocorax auritus*)	(CSC)
Least Bittern (*Ixobrychus exilis*)	CSC
White-faced Ibis (*Plegadis chihi*)	(CSC)
Tule Greater White-fronted Goose (*Anser albifrons elgasi*)	[CSC]
Bald Eagle (*Haliaeetus leucocephalus*)	E
Northern Harrier (*Circus cyanus*)	CSC
Cooper's Hawk (*Accipiter cooperi*)	(CSC)
Swainson's Hawk (*Buteo swainsoni*)	T
Ferruginous Hawk (*Buteo regalis*)	(CSC)
Merlin (*Falco columbarius*)	(CSC)
American Peregrine Falcon (*Falco peregrinus anatum*)	E
California Black Rail (*Laterallus jamaicensis coturniculus*)	T
Greater Sandhill Crane (*Grus canadensis tabida*)	T
Lesser Sandhill Crane (*Grus canadensis canadensis*)	[CSC]
Mountain Plover (*Charadrius montanus*)	CSC
Black Tern (*Childonias niger*)	CSC
Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*)	E
Burrowing Owl (*Athene cunicularia*)	CSC
Long-eared Owl (*Asio otus*)	CSC
Short-eared Owl (*Asio flammeus*)	CSC
Loggerhead Shrike (*Lanius ludovicianus*)	CSC
California Horned Lark (*Eremophila alpestris actia*)	CSC
Purple Martin (*Progne subis arboricola*)	CSC
Bank Swallow (*Riparia riparia*)	T
Yellow Warbler (*Dendroica petechia*)	CSC
Yellow-breasted Chat (*Icteria virens*)	CSC
Grasshopper Sparrow (*Ammodramus savannarum*)	[CSC]
Modesto Song Sparrow (*Melospiza melodia mailliardi*)	[CSC]
Tricolored Blackbird (*Agelaius tricolor*)	CSC
Yellow-headed Blackbird (*Xanthocephalus xanthocephalus*)	[CSC]

*California Department of Fish and Game Status Categories:
E = Endangered
T= Threatened
CSC = California Species of Concern - on current and draft revised lists
(CSC) = California Species of Concern - on current list, but not on draft revised list
[CSC] = California Species of Concern - not on current list, but on draft revised list

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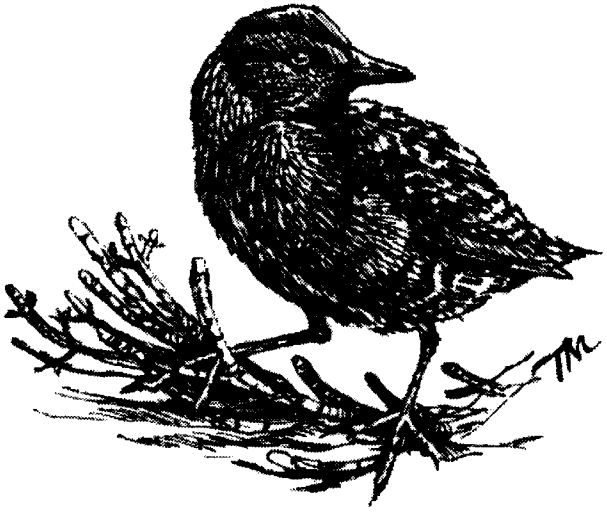

California Black Rail *sketch by Tim Manolis*

A Field Guide to Hummingbirds of North America by Sheri L. Williamson. 2001. Boston, MA: Houghton Mifflin. Softcover, $22.00. ISBN0-618-02496-4.

Hummingbirds of North America; the Photographic Guide by Steve N. G. Howell. 2002. San Diego, CA: Academic Press. Softcover, $29.95. ISBN 0-12-356955-9.

After much anticipation, hummingbird enthusiasts have now been treated with not one but two fine field guides to help them understand and identify these small birds in North America. Given the similarity of these books and their almost simultaneous publication, a comparative review is appropriate.

Both authors are well qualified to write such a guide. Hummingbird aficionados will recognize Sheri Williamson as cofounder of the Southeastern Arizona Bird Observatory and contributor to many internet hummingbird-listservs. She is an active hummingbird bander who has banded several thousand individuals of 16 species. She leads birding and natural history tours and lectures on hummingbirds and other wildlife of the Southwest. Her articles have appeared in a variety of scientific and popular publications. Birders will recognize Steve N. G. Howell as a research associate at Point Reyes Bird Observatory in California, birding tour leader, and author of a number of popular birdfinding and field guides. He has published numerous scientific articles on bird taxonomy and identification, including several on hummingbirds of Mexico and Central America.

Williamson's book (hereafter, FGH) is part of the Peterson Field Guide series, and as such presents the photographic plates and species accounts in separate parts of the book. This hummingbird guide is 263 pages long and contains detailed information on all 24 species of hummingbirds recorded in North America. In addition, Williamson usefully includes accounts of seven more species considered possible or hypothetical — species such as Wedge-tailed Sabrewing, Antillean Crested Hummingbird, and Canivet's Emerald. Howell's book (hereafter, HNA), published as part of the Natural World Series by Academic Press, is much larger in size than is the FGH, and as such is more of a reference book than field guide. It is 219 pages long and like the FGH contains detailed information on all 24 species of hummingbirds recorded in North America. Over 200 photographs are interspersed throughout the book; color paintings by Sophie Webb are used where good photographs were unavailable.

Both guides begin nicely by introducing the natural history of the hummingbird family. Topics such as taxonomy and topography, plumage and molt, habitat and behavior are addressed. The FGH provides additional information on using plants and feeders to attract hummingbirds. It also discusses hotspots to watch hummingbirds in the U. S. The HNA focuses on

hummingbird topography and identification in the introduction, dedicating four pages to large pictures illustrating the parts of the hummingbird and several more pages of explanatory text; the FGH shows hummingbird topography on one page containing a handful of small pictures.

The FGH contains 62 pages of plates where photographs and explanatory text are on facing pages. The first 17 plates show adults and immatures of each sex for nearly all species covered in the guide. Plates 18-23 show close-up head photographs for various categories of hummingbirds: adult and immature *Selasphorus*, *Archilochus*, and *Calypte*, southwestern species, large hummingbirds, etc. Plates 24-29 show close-up spread tail photographs for the same categories. Plates 30-31 show hybrids, abnormal plumages (e. g., albinism), and even a few sphinx moths which novices often confuse with hummingbirds. Eight photographs are on each page, with the typical Peterson Guide arrows pointing to key field marks which are discussed in text on the facing page. The HNA provides a plethora of well-captioned photos in the species accounts in lieu of plates.

The last half of the FGH contains the species accounts, without photographs. The text is detailed, with measurements, descriptions, sounds, behavior, habitat, distribution, status and conservation, subspecies and taxonomic relationships, and plumage variation and molt information. References follow each species account. Exceptionally detailed range maps illustrate breeding and nonbreeding ranges in the United States, Mexico and Central America. Seasonal records of vagrants or out-of-range birds are also shown by symbols on these maps where appropriate. The locations of all records are illustrated for very rare species. For the more common migrants, separate maps use isochron lines to illustrate average arrival dates in 10-day increments.

The species accounts in the HNA are similar in content to those of the FGH. Footnotes within the text point to exact references at the end of each species account. Range maps are only included for eight common species, though the status and distribution for all species are described and footnoted in the text. The few range maps shown are typical of many basic field guides — broad strokes with assorted colors to give a general impression of breeding and nonbreeding ranges. Howell provides line drawings of tail patterns and wing shape for the more common hummingbirds. In addition to the expected bibliography and glossary in both guides, the last few pages of the HNA contain a list of nectar plants, hummingbird organizations and other resources that might be of interest to hummingbird enthusiasts.

It is clear that both authors are experts in their fields, and I have no problems with the accuracy of the species accounts. Whether or not you prefer a particular guide will likely come down to your personal opinion of a few key differences between the guides: range maps, photograph quality, species coverage, layout, and how the identification information is presented.

The FGH excels in providing well-researched range maps based on published information. This alone is worth the price of the book for those who thrive on status and distribution information. While some may quibble about

the detailed accuracy of these maps, the attempt to illustrate *every* species' occurrence in as much detail as possible given the available information should be applauded. Williamson's attempt to show arrival dates for common migrant species is useful as well. The range maps in the HNA are very little improved over those in standard field guides and as such make no real contribution to the guide.

Williamson also provides excellent in-hand photographs of head and tails for many of the species likely to be encountered by hummingbird banders, making the FGH valuable to that group of researchers or those lucky enough to get great looks at such features in the wild. The line drawings of tail features in the HNA are good, but in this case photographs seem to do more justice to the features than pen and ink. The HNA's strength lies in the 200+ larger photographs and detailed captions. By allowing no more than three photographs to a page, Howell is able to use larger photos, which in turn show greater detail and still leave ample room for excellent captions. Usually two or three photographs of the same age/sex are shown. Even without captions on the same page, the eight photographs per the smaller page of the FGH fall short of providing the amount of discernable detail required in many cases. Usually one or two photographs of the same age/sex are shown, not counting the head and tail shots. In addition to pointing out key field marks and comparisons between species in the captions, The HNA also includes the name of the photographer, the location, and the date each photograph was taken. The value of these latter two items will not be lost on anyone interested in comparing plumage characteristics, including molt patterns, between places or dates.

In keeping with the Peterson Field Guide format, the FGH provides standard descriptions with thorough detail in the text accompanying the plates. Howell writes in more conversational tones and tends to focus more on field marks separating similar species. Consider these adult female Black-chinned Hummingbird photo captions:

FGH (p. 62): "Dull green to golden green above, *forecrown dull gray to grayish tan,* blending to dull green in hindcrown. Pale gray below, sides washed gray-green, often with tawny to cinnamon patch on lower flank. Cheek dull gray, lores dusky. Throat unmarked or with variable dusky streaking or spotting at center of gorget. Tail square to slightly notched or double-rounded, extends slightly beyond wingtips. Central tail feathers (R_1) green, with or without diffuse dark band at tip. R_2 gray-green tipped black; R_3 like R_2 but narrowly tipped white; R_4, R_5 pointed, broadly tipped white. *Bill long, slightly to moderately decurved.*"

HNA (p. 143): [one of three photos with captions showing this age and sex] "The grayness of face and underparts, and even some dark on the throat, suggest Anna's Hummingbird but note the relatively long bill, small head, and, especially, the relatively narrow inner primaries (with P7 strikingly broader) which identify this as an *Archilochus*. The long bill and blunt P10 (plus the overall relatively broad and truncate primaries, lacking a notch on the inners) indicate Black-chinned. William E. Grenfell, Placer Co., California. June 1995."

There is no shortage of valuable information in the FGH species accounts, yet I find the physical layout of the HNA text to be more reader friendly. Subheadings within the species accounts are blue in the HNA, black accompanied by a small descriptive icon in the FGH. Species names at the beginning of each species account are very large and bold in the HNA with ample white space before and after. They are only slightly larger than the subheadings and bold in the FGH, with virtually no white space before and after. The result is that the beginning of each species account and subsequent subheadings tend to jump out at the reader in the HNA. Readers almost need to search for information in the FGH, which seems cramped by comparison.

The footnotes within the text, the emphasis on separating similar species in the photograph captions, and the lack of general hummingbird attracting information in the introduction lead to a more scholarly tone in Howell's guide. Williamson's guide, on the other hand, seems written for a broader audience given her coverage of general hummingbird topics, such as hummingbird-watching organizations, hotspots, flowers, and feeders. Layout shortcomings of the FGH almost certainly stem from constraints placed on the author by the publishing company in keeping with the Peterson Field Guide format.

Whatever your interest in hummingbirds, you'll probably find yourself wishing you had both guides at some point. I highly recommend both, but Howell's may be most attractive if I had to choose just one guide for those interested in identifying California's hummingbirds at their feeders. On the other hand, if I lived in the southeastern USA where an increasing number of hummingbirds spend the winter, or in the desert southwest or Florida where a few first North American records are possible, the FGH range maps and treatment of potential vagrants would sway me that way. Since I live in Idaho . . . I bought both!

Stacy Jon Peterson

Corrigenda

In the Spring 2002 issue of the *CVBC Bulletin*, the "Yolo Bypass Wildlife Area" was consistently, but incorrectly, referred to as the "Yolo Basin Wildlife Area." This state-owned wildlife area, in Yolo County between Sacramento and Davis, is also know as the "Vic Fazio Wildlife Area."

Nesting Yellow-billed Magpies in Fresno County – On 9 April 2002 I discovered a nest of Yellow-billed Magpies (*Pica nuttalli*) near the town of Tranquillity, Fresno County. The nest was located in a small eucalyptus grove comprised of 15 Blue Gum (*Eucalyptus globulus*) of varying ages and a lone Valley Oak (*Quercus lobata*). Agricultural fields and an irrigation canal, which borders the eastern side of the grove, dominate the surrounding landscape. The nest was a typical domed, stick structure approximately 20 meters from the ground in a large, dead eucalyptus tree. I visited the site on a number of occasions until 16 May. Three adult Yellow-billed Magpies were frequently observed at the grove during this 5-week period. No nesting activity was observed after 22 April and the nest was eventually abandoned. Due to the extreme height of the nest, I could not ascertain clutch size nor determine the reason for nest abandonment. I had seen magpies at this site in 2001, but did not observe nesting activity then.

The Yellow-billed Magpie is endemic to California, ranging west of the Sierra Nevada on the floor and in the adjacent foothills of the Central Valley and in coastal valleys from San Francisco to and including Santa Barbara County (Grinnell and Miller, Pac. Coast Avifauna 27, 1944). Although high densities of this species still exist in the Sacramento Valley (Reynolds, Yellow-billed Magpie (*Pica nuttalli*), The Birds of North America, No. 180, 1995), it has virtually been extirpated in the San Joaquin Valley south of Madera County, and there have been no recent reports of breeding on the valley floor from Fresno County southward (Rob Hansen pers. comm.). An examination of 26 Breeding Bird Survey routes in Fresno, Tulare, and Kern counties revealed only one route that consistently documented the presence of Yellow-billed Magpies over a 35-year period (no data were available for Kings County). The Coalinga BBS route in Fresno and San Benito counties has documented an apparently stable population of Yellow-billed Magpies for 24 of the total 35 years of the survey (Sauer et al., The North American Breeding Bird Survey, Results and Analysis 1966 - 2000. Version 2001.2, 2001). Tranquillity is on the floor of the San Joaquin Valley about 58 miles north of Coalinga.

Land alterations, primarily agricultural conversion, have undoubtedly affected historical Yellow-billed Magpie populations in the southern San Joaquin Valley. Yellow-billed Magpies prefer to occupy habitat where large trees are scattered among broad expanses of open ground (Reynolds loc. cit.). The destruction of many of the Valley Oaks originally found in the San Joaquin Valley probably lessened the habitat suitability of the region for this species. — *Kimberly Kreitinger, California State University Stanislaus, Endangered Species Recovery Program, 1900 N. Gateway #101, Fresno, CA 93727.*