

WESTERN BIRDS



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Western Specialty:

Eared Grebe



Photo by © Jeff Wilcox of Petaluma, California:

Eared Grebe (*Podiceps nigricollis*)

Christy Beach, Santa Cruz Island, California, 10 November 2014.

Although two subspecies of *Podiceps nigricollis* occur in the Old World, *Podiceps nigricollis californicus* occurs almost exclusively in western North America, east to the northern Great Plains. The Eared Grebe shares with all the grebes the extreme specializations for swimming that prevent the birds from walking on dry land. But in this issue of *Western Birds* Jeffery T. Wilcox describes effective foraging of an Eared Grebe on a sandy beach, the bird riding the incoming waves repeatedly to move itself from spot to spot.

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Front cover photo by © Greg Scyphers of Sparks, Nevada: LeConte's Sparrow (*Ammodramus leconteii*) at Dyer, Esmeralda County, Nevada, 24–27 October 2015. It represents the fifth Nevada record of this species that is characteristic of the Central Flyway of North America and reaches the western states only as a vagrant, primarily in late fall.

Back cover “Featured Photo” by © Deborah J. House of Bishop, California: melanistic Brown-crested Flycatcher (*Myiarchus tyrannulus*) at China Ranch, Inyo County, California, 25 May 2008. Though this represents the first record of melanism in the genus *Myiarchus*, the existence of several sooty or black species in other genera of flycatchers suggests that melanism like this has played a role in the evolution of the family Tyrannidae.

Western Birds solicits papers that are both useful to and understandable by amateur field ornithologists and also contribute significantly to scientific literature. Particularly desired are reports of studies done in or bearing on North America west of the 100th meridian, including Alaska and Hawaii, northwestern Mexico, and the northeastern Pacific Ocean.

Send manuscripts to Daniel D. Gibson, P. O. Box 155, Ester, AK 99725; avesalaska@gmail.com. For matters of style consult the Suggestions to Contributors to *Western Birds* (at www.westernfieldornithologists.org/docs/journal_guidelines.doc).

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NEVADA BIRD RECORDS COMMITTEE REPORT FOR 2016

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ABSTRACT: In 2016, the Nevada Bird Records Committee (NBRC) reviewed 86 reports from the period 27 November 1965–28 October 2016; 76 were endorsed. One new species was added to the Nevada list following endorsement of the first state record, the White-rumped Sandpiper (*Calidris fuscicollis*). The state list also grew by an additional species as a result of the split of the Western Scrub-Jay (formerly *Aphelocoma californica*) since both the resulting California Scrub-Jay (*A. californica*) and Woodhouse's Scrub-Jay (*A. woodhouseii*) are regular breeding species in Nevada. The Nevada state list stands at 488 species, of which 141 are currently on the review list.

The NBRC began 2016 with 47 reports pending review. During 2016, we added 61 reports to the pending queue. The committee completed reviews of 86 reports during the year, ending the year with 21 in the pending queue. One record had been removed from the queue when it was combined with another as representing a “continuing” bird. Since the founding of the NBRC in 1994, 1262 reports have been reviewed, of which 1147 (90.9%) have been endorsed.

At its founding in 1994, the committee decided not to review any sightings prior to that year, but reversed that decision several years later. Fortunately, founding secretary James Cressman and his wife Marian Cressman continued to accumulate documentation for “pre-committee” reports. One of the committee’s long-term goals has been to organize and review as many of those reports as possible, along with early documentation from other sources. The committee began reviewing pre-committee reports in 2007. Since that time, we have reviewed 169 and endorsed 144. Of the 61 reports added to the pending queue in 2016, 30 preceded the committee’s founding.

Of the 86 reports reviewed by the committee in 2016, 76 were endorsed. Photographs accompanied the documentation for 60 of these records. Two of those were also accompanied by video or audio recordings, and one was supported by a video recording but no still photos. Eleven were supported by museum specimens. Fifteen of the endorsed records were supported

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entirely by written descriptions. Only two of the 10 reports not endorsed were supported by photographs; none were supported by video recordings, audio recordings, or specimens.

The NBRC has six voting members, one of whom serves as chair, and a nonvoting secretary. During 2016, the committee's voting members were Aaron Ambos, Paul Hurtado, Carl Lundblad, Greg Scyphers, Justin Streit, and Jeanne Tinsman. The position of secretary continued to be held by Martin Meyers, and the position of chairperson continued to be held by Jeanne Tinsman.

The NBRC's website at <http://gbbo.org/nbrc> contains a statement of purpose, answers to frequently asked questions, links to a submission form that can be downloaded or completed online, the Nevada checklist, the review list, and the committee's bylaws. There is a link to a list of all submissions to the NBRC, with the status of each with respect to endorsement and, if available, a photograph. All previous NBRC reports are available through the website as PDFs. NBRC reports through 2007 (1994–1996, 1997, 1998, 1999, 2000, 2004, 2005, and 2007) appeared in *Great Basin Birds*, published by the Great Basin Bird Observatory. Reports for 2008 through 2010 are only available at the NBRC website. Beginning with the 2011 report, annual reports have appeared in *Western Birds*.

REVISIONS TO THE NEVADA STATE LIST

In 2016, two species were added to the Nevada list. The White-rumped Sandpiper (*Calidris fuscicollis*) was added following endorsement of the first state record. The Western Scrub-Jay (formerly *Aphelocoma californica*) was replaced with the California Scrub-Jay (*A. californica*) and Woodhouse's Scrub-Jay (*A. woodhouseii*) following the American Ornithologists' Union's split (Chesser et al. 2016). Both of the scrub-jay species are resident in Nevada (Floyd et al. 2007, Gowen et al. 2014). The Woodhouse's Scrub-Jay is a common breeder at middle elevations in habitats including pinyon-juniper woodlands, whereas the California Scrub-Jay is limited to the foothills of the Sierra Nevada in the vicinity of Reno and Carson City.

Early in its history, the NBRC adopted an existing checklist (Titus 1996) based on numerous sources that constituted the most reliable information available at the time. By the end of 2015, the committee had nearly completed an extensive search for reviewable documentation for all of the rare species on that list (those constituting the review list; Tinsman and Meyers 2016). The only remaining rare species on the list without an endorsed record at the end of 2015 was the Black Rail (*Laterallus jamaicensis*), of which the committee had in its database two reports not endorsed. At the 2015 meeting, the committee tabled a vote on deleting the Black Rail while continuing the search for additional details from surveys and other observations. This species had been reported on various surveys of wetlands in southern Nevada, but reviewable documentation was not submitted to the NBRC until early 2017. Two reports were received and reviewed; one was supported by an audio file and endorsed, and the other contained written documentation only and was not endorsed. Details will be forthcoming in the 2017 report.

The Nevada state list stands at 488 species as of the end of 2016.

REVISIONS TO THE NEVADA REVIEW LIST

The only changes to the Nevada review list in 2016 were the addition of the White-rumped Sandpiper (*Calidris fuscicollis*), which had been added to the state list, the removal of the Red-throated Loon (*Gavia stellata*), and the implementation of a “regional exemption” for the Curve-billed Thrasher (*Toxostoma curvirostre*). The committee is no longer reviewing reports of the Curve-billed Thrasher from Nelson (Clark County) south to the southern border of the state (see below).

There are currently 141 species on the Nevada review list, of which seven are exempt from review in some limited geographic area. In addition, two subspecies are currently on the review list: the Mexican Mallard (*Anas platyrhynchos diazi*) and Eurasian Green-winged Teal (*Anas crecca crecca*). The committee has endorsed four records of the Eurasian Green-winged Teal. The committee placed Mexican Mallard on the review list in an effort to accumulate data on its occurrence. We have five reports of this subspecies but have not yet reviewed them and have decided to wait to do so until there is more clarity on its taxonomic status and identification criteria.

SPECIES ACCOUNTS

Each account is introduced with a header in the following format: English name, scientific name, and, in parentheses, the total number of endorsed records of the species (including those endorsed in this report), followed by the number of records endorsed in this year’s report. An asterisk preceding the species’ name signifies that the species is no longer on the Nevada review list. Two asterisks after the total of records denote that the number of records refers to a restricted review period, usually signifying that the species is no longer on the review list, has been added to the review list because of a perceived drop in population, or is exempt from review in some locations.

After the heading for each species comes each report of that species reviewed in 2016, in the following format: NBRC report number, location (county in parentheses), and date or range of dates of observations submitted to the NBRC. If the report involved multiple birds, the number follows the date information. Then, for endorsed records, is the name of each submitter, followed by the notation “(P),” “(V),” and/or “(A)” if he or she provided a photo, video, and/or audio recording, respectively. If the finder(s) sent documentation to the NBRC, their names are listed first. A semicolon follows the finders’ names if other observers submitted additional documentation.

In cases where a specimen was the subject of review, the collector is identified, followed by the museum catalog number along with sex, age, and condition. The museums cited in this report are the Marjorie Barrick Museum (MBM; formerly at the University of Nevada, Las Vegas, the collection is now housed at the University of Washington Burke Museum, Seattle [UWBM]); the Nevada State Museum in Carson City (NSM); and the University of Nevada, Reno, Museum of Natural History (UNMB), formerly the University of Nevada Museum of Biology. In all instances, the committee examined photographs of the specimens, and the photographs are included in the documentation.

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Multiple observations of a species are ordered chronologically. Any discussion of the species in general, not specific to an observation, concludes the account if warranted.

BRANT *Branta bernicla* (7, 1). 2015-031, private property at Silver Peak (Esmeralda), 8 May 2015. J. Callin, K. Pringle (P). Adult.

HARLEQUIN DUCK *Histrionicus histrionicus* (4, 1). 2016-034, Jarbidge River (Elko), 15 Jun 2016. J. Bregar. Adult male. This fourth Nevada record is from a remote and poorly known habitat with potential for breeding, about 400 km from documented nesting sites in northwestern Wyoming.

BLACK SCOTER *Melanitta americana* (12, 3). 2015-019, Wayne E. Kirch Wildlife Management Area (WMA) (Nye), 11 Nov 1976. Collected by M. Wickersham, obtained for UNMB by C. S. Lawson (UNMB 1814, ♀, no fat, tapeworms in gizzard). This record is the earliest for Nevada.

2015-074, Boulder Beach, Lake Mead National Recreation Area (NRA) (Clark), 15 Jan 2015. M. Meyers (P). Immature male.

2015-081, Warrior Point, Pyramid Lake (Washoe), 18–26 Oct 2015. R. Lowry (P), B. Steger (P); M. Meyers (P), M. Andrews. Adult male.

GROOVE-BILLED ANI *Crotophaga sulcirostris* (2, 1). 2015-086, Big Bend of the Colorado State Recreation Area (Clark), 27 Oct 2015. J. Pietrzak (P, Figure 1). Adult. Listed as accidental in Clark County by Alcorn (1988). Another was observed on the same date in Inyo County, California (http://californiabirds.org/cbrc_book/update.pdf). The timing of this observation fits that of autumn vagrancy elsewhere (Mlodinow and Karlson 1999).

RUBY-THROATED HUMMINGBIRD *Archilochus colubris* (2, 1). 2016-052, Mesquite (Clark), 1 Sep 2016. N. A. Batchelder (P). Documented almost exactly two years after Nevada's first record (see Tinsman and Meyers 2016), this hatch-year male was captured and banded.

BROAD-BILLED HUMMINGBIRD *Cynanthus latirostris* (7, 2). 2016-006, Alamo (Lincoln), 22 Sep 1985. J. Cressman. Adult male. Earliest Nevada record.

2016-010, Corn Creek (Clark), 6 Sep 1990. M. Cressman. Immature male.

AMERICAN GOLDEN-PLOVER *Pluvialis dominica* (8, 1). 2015-091, Las Vegas Wash, now part of the Clark County Wetlands Park (Clark), 30 Sep–3 Oct 1973. Collected by C. S. Lawson (UNMB 1763, imm. ♂, moderate fat). Earliest Nevada record.

MOUNTAIN PLOVER *Charadrius montanus* (9, 1). 2015-082, Humboldt Sink Spillway Area (Churchill), 22 Oct 2015. A. Wallace (P). The species' migratory patterns are unclear (Knopf and Wunder 2006), but with Nevada lying directly between its breeding and winter ranges, the species may be underreported.

RUDDY TURNSTONE *Arenaria interpres* (8, 3). 2016-042, Henderson Bird Viewing Preserve (Clark), 30 Jul 1997. M. Cressman (P). Adult.

2015-062, south end of Pyramid Lake (Washoe), 6 Aug 2015. M. Meyers (P); B. Steger (P). Adult.

2016-035, south end of Pyramid Lake (Washoe), 20–21 Jul 2016, two birds. M. Meyers (P); M. Andrews. Adults.

BLACK TURNSTONE *Arenaria melanocephala* (2, 1). 2015-064, Henderson Bird Viewing Preserve (Clark), 22–27 Aug 2015. B. Miller (P), J. Pietrzak (P); C. Titus, K. Lee (P, Figure 2), T. Almond (P), R. O'Connell (P), G. Scyphers (P). Elsewhere inland, Arizona (Stevenson 2005) and New Mexico (Cleary and Parmeter 2010) currently list one record each.

WHITE-RUMPED SANDPIPER *Calidris fuscicollis* (1, 1). 2016-032, Ash

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Meadows National Wildlife Refuge (NWR) (Nye), 1 Jun 2016. D. Feener (P, Figure 3). Adult; first Nevada record. The timing fits that of northbound adults reaching California (Hamilton et al. 2007). In that state, 60% of the 30 observations fall between the second week of May and mid-June; only adults have been recorded. Utah has eight records (www.utahbirds.org/RecCom/UBRC_SightingsIndex.html), including a juvenile in fall 2006. The first Arizona sighting was at Willcox in 1977 (Rosenberg and Witzeman 1998); the majority of Arizona's 18 records have been from the southeastern part of the state in spring.

PARASITIC JAEGER *Stercorarius parasiticus* (11, 1). 2015-059, near Davis Dam (Clark), 17 Sep 1976. NOT ENDORSED.

2015-090, Las Vegas Bay, Lake Mead NRA (Clark), 12 Oct 1992. NOT ENDORSED.

2015-078, near Sutcliffe, Pyramid Lake (Washoe), 5 Sep 2015. P. Hurtado (P). Immature.

ANCIENT MURRELET *Synthliboramphus antiquus* (4, 3). 2015-092, Carson City (Carson City), 27 Nov 1965. Collected by A. Taylor (NSM 866, ♀, very lean, almost no fat). Found alive but very weak after a storm; found dead the next day. Earliest Nevada record (Figure 4).

2016-011, Fallon (Churchill), 5 Apr 1970. Collected by C. J. Chamberlain (MBM 1295 [B-1660], ♀).

2016-008, Las Vegas Bay, Lake Mead NRA (Clark), 24-26 Mar 1974. M. V. Mowbray, F. Long (P).

According to Munyer (1965), migrating Ancient Murrelets can be displaced by severe weather and poor visibility, as exemplified by the Nevada record in 1965. Weather conditions were not included with the other two reports. There are four confirmed reports of this species in Utah (Knopf 1976).

BLACK-LEGGED KITTIWAKE *Rissa tridactyla* (8, 1). 2016-041, Las Vegas Bay, Lake Mead NRA (Clark), 5 Dec 1980–28 Feb 1981. Collected by C. S. Lawson (NSM 1798, ♀, no molt, moderate fat). First cycle. Found alive tangled in fishing line, died shortly thereafter.

LITTLE GULL *Hydrocoloeus minutus* (3, 1). 2015-017, Boulder Beach, Lake Mead NRA (Clark), 12 Nov 2014. G. Scyphers (P). First cycle. The three Nevada records extend from late October to late November.

*RED-THROATED LOON *Gavia stellata* (14**, 5). 2015-094, Las Vegas Bay, Lake Mead NRA (Clark), 21 Dec 1969, two birds. C. S. Lawson. One adult and one immature; earliest Nevada record.

2015-095, Las Vegas Bay, Lake Mead NRA (Clark), 18 Dec 1971, four birds. C. S. Lawson. Age was not determined.

2015-097, Sportsman's Beach, Walker Lake (Mineral), 7 Oct 1977. B. Barnes. Adult.

2015-093, Government Wash, Lake Mead NRA (Clark), 1 Mar 1997. M. Cressman (P). Second-year or nonbreeding adult.

2016-002, Lake Mojave, Lake Mead NRA (Clark), 17 Jan 2016. D. Vander Pluym (P). Immature.

Following the positive review of these five records (four of them antedating those already on file), and the NBRC's endorsement of at least one record in six of the last 10 years, the committee voted to remove this species from the Nevada review list in July 2016.

YELLOW-BILLED LOON *Gavia adamsii* (9, 2). 2016-003, Lake Mojave, Lake Mead NRA (Clark), 23 Jan–12 Feb 2016. B. Zyla, T. DeBardeleben (P). Immature.

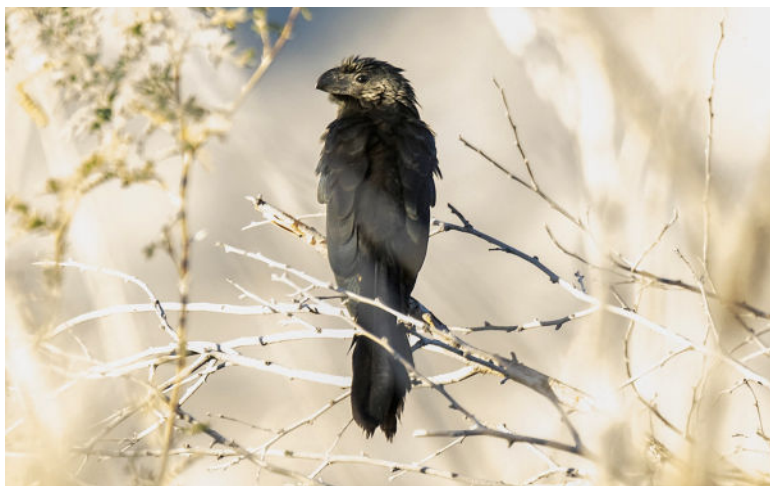


Figure 1. The second Nevada record of the Groove-billed Ani came 11 years after the first, nearly to the day. The first was observed on 28 October 2004 at the Henderson Bird Viewing Preserve, and this bird was found on 27 October 2015 at Big Bend of the Colorado State Recreation Area (both in Clark County).

Photo by Jason Pietrzak

2016-029, Pahrnagat NWR (Lincoln), 26–31 May 2016. A. Pellegrini (P); L. Duvall (P), M. Andrews, D. Serdehely (P), G. Scyphers (P), J. Tinsman (P). Immature.

The number of observations for Nevada parallels that in Utah (10) and Arizona (seven).

*NEOTROPIC CORMORANT *Phalacrocorax brasilianus* (12**, 2). 2015-063R, Sunset Park, Las Vegas (Clark), 7–8 Aug 2015. J. Streit (P). Immature.

2015-065, Henderson Bird Viewing Preserve (Clark), 6 Sep 2015. J. Streit (P).

This species was removed from the Nevada review list in 2015, but older records on file will continue to be reviewed.

CALIFORNIA CONDOR *Gymnogyps californianus* (0, 0). 2015-061, Ash Meadows NWR (Nye), 23 Feb 1984. NOT ENDORSED. In the early spring of 1984, the wild population of California Condors was nearing its nadir of 15 birds (U.S. Fish and Wildlife Service 2013). The report of an immature bird was from a single observer and lacked a photograph.

MISSISSIPPI KITE *Ictinia mississippiensis* (8, 1). 2015-044, Corn Creek (Clark), 21 May 2015. J. Tinsman (P). A second-year bird.

COMMON BLACK HAWK *Buteogallus anthracinus* (13**, 2). 2015-067, Meadow Valley Wash (Lincoln), 4 Sep 2015. R. Lowry (P). Adult. In late September 2015, the committee decided to exempt from review reports of this species from the Meadow Valley Wash area of Lincoln County. Seven of the 13 Nevada records are from this riparian corridor, where successful breeding was documented in 2014 (Meyers 2016). This 2015 record antedates that decision.

2016-027, Key Pittman WMA (Lincoln), 14 May 2016. C. Hines (P). Adult.

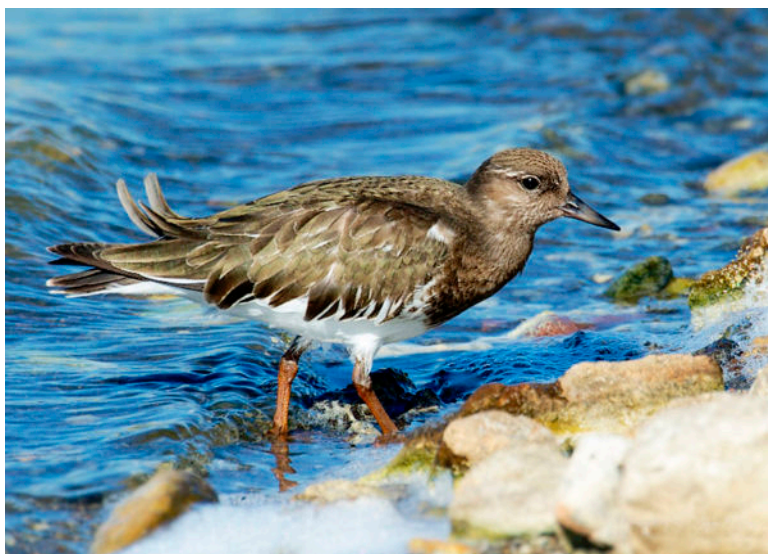


Figure 2. A six-day visit provided birders plenty of time to document Nevada's second Black Turnstone. This bird was observed 22–27 August 2015 in the southern part of the state (Clark County), whereas the first Nevada record was of an April migrant found in the middle region (Churchill County).

Photo by Ken Lee



Figure 3. The White-rumped Sandpiper was the only species new to Nevada found in 2016. It was observed along the shore of Crystal Reservoir, Ash Meadows National Wildlife Refuge (Nye County), on 1 June 2016.

Photo by Darlene Feener



Figure 4. Ancient Murrelet records have been endorsed four times for Nevada. This specimen, collected in 1965 in Carson City after a late November storm, represents the first.

Photo by Greg Scyphers

LEAST FLYCATCHER *Empidonax minimus* (11, 2). 2014-071, Miller's Rest Stop (Esmeralda), 29 Sep 2014. R. Aracil (P).

2016-033, Yerington (Lyon), 9 Jun 2016. M. Dorriesfield (V). This bird was observed singing along the Walker River, the second record of this behavior in Nevada; the first was in the NBRC's 2010 report (available at the NBRC's website, www.gbbo.org/nbrc/). In California, nesting has been confirmed on two occasions (Hamilton et al. 2007), and other observations of singing Least Flycatchers have been recorded (see www.eBird.org).

GREAT CRESTED FLYCATCHER *Myiarchus crinitus* (3, 1). 2015-076, Dyer (Esmeralda), 20 Sep 2015. G. Scyphers (P, Figure 5); D. Ghiglieri (P), R. Strickland. Utah has one accepted record from October 1992 (www.utahbirds.org/RecCom/UBRC_SightingsIndex.html), and Arizona has four, including a specimen collected in June 1901 and three fall observations (Rosenberg et al. 2007, http://abc.azfo.org/ABCVote/_ABCReports_Public_View_list.aspx).

THICK-BILLED KINGBIRD *Tyrannus crassirostris* (3, 1). 2016-058, Clark County Wetlands Park (Clark), 28 Oct 2016. A. Bankert (P). This species was first recorded north of Mexico in Arizona in 1958 (Levy 1959). California saw its first record in 1965 (McCaskie and Banks 1966), and the NBRC listed the first Nevada record in its inaugural report (Cressman et al. 1998). Utah has one accepted record from 2009 (Tripp et al. 2010).

SCISSOR-TAILED FLYCATCHER *Tyrannus forficatus* (9, 1). 2016-030, the private Parker Ranch (Nye), 26 May 2016. K. Guadalupe (P).

YELLOW-THROATED VIREO *Vireo flavifrons* (7, 1). 2016-012, Corn Creek (Clark), 7–12 Oct 1989. M. V. Mowbray. Earliest Nevada record.

BLUE-HEADED VIREO *Vireo solitarius* (2, 0). 2016-016, Great Basin National Park (NP) (White Pine), 26 Sep 1995. NOT ENDORSED. The differentiation of the Blue-headed from Cassin's Vireo (*V. cassinii*) is difficult, and this report was not strong enough without a photograph.

*RED-EYED VIREO *Vireo olivaceus* (18**, 1). 2016-009, Corn Creek (Clark), 20 Sep 1970. NOT ENDORSED.

2016-007, Montello (Elko), 1 Jun 1991. S. Finnegan (P), P. E. Lehman.

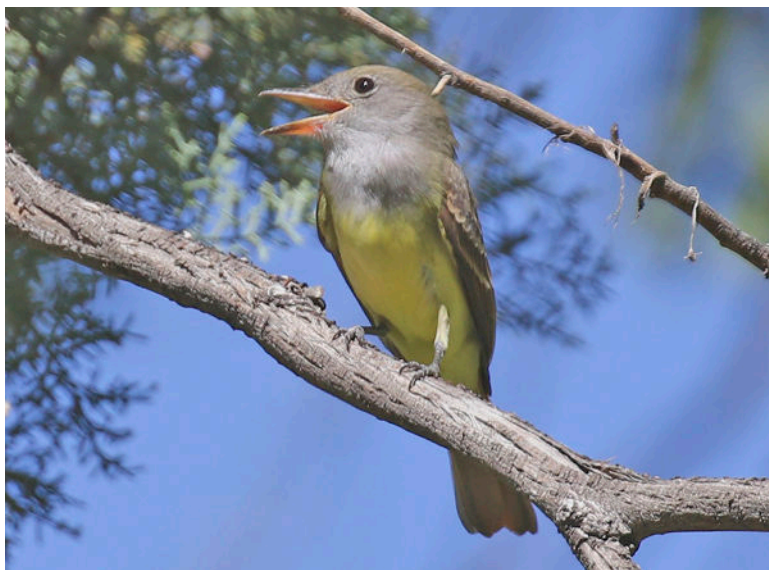


Figure 5. The Great Crested Flycatcher has been recorded three times in Nevada, and all of the observations have come from Esmeralda County between late September and the first week of October. This individual was found on 20 September 2015.

Photo by Greg Scyphers

The Red-eyed Vireo is no longer on the Nevada review list. The 1970 report preceded Nevada's first endorsed record, in 1980 (Tinsman and Meyers 2016).

YELLOW-GREEN VIREO *Vireo flavoviridis* (3, 1). 2016-050, Mountain Springs (Clark), 20 Sep 2016. J. Streit, M. Swink (P, Figure 6). According to Rosenberg et al. (2011), as of 2009 all 10 of Arizona's records fell between late May and mid-August. Two of three Nevada records are from late September, in alignment with California records for the species, most of which are from mid-September to late October (Hamilton et al. 2007).

PURPLE MARTIN *Progne subis* (14, 1). 2016-043, Keddy Ranch area (Elko), 29 Jul 2016. W. Munns.

WOOD THRUSH *Hylocichla mustelina* (6, 2). 2016-040, Floyd Lamb Park (Clark), 18–21 May 1970. C. S. Lawson. Earliest Nevada record.

2016-014, Pahrangat NWR (Lincoln), 7 Oct 1976. C. S. Lawson (P).

CURVE-BILLED THRASHER *Toxostoma curvirostre* (5**, 1). 2016-013, Nelson Ghost Town (Clark), 3 Apr–20 May 2016, two birds. J. Tinsman (P, V), K. Drozd (P). A small breeding population of this thrasher has recently become established in the vicinity of Searchlight (Clark County). Birds from this group, plus a number of other individuals that might be from this breeding group but might also be part of a significant expansion of the species in southern Nevada and surrounding areas more generally, are being observed regularly. In July 2016, the committee established a regional exemption for review of this species in southern Clark County, from Nelson south.



Figure 6. Breeding largely south of the Mexican border, the Yellow-green Vireo is highly migratory, heading to South America for the winter. This individual strayed north in late September 2016 to Mountain Springs (Clark County).

Photo by Mike Swink

*BROWN THRASHER *Toxostoma rufum* (19**, 1). 2016-022, Dyer (Esmeralda), 25 May 1991. P. E. Lehman. The species was removed from review list in 2013, but the committee continues to review earlier records.

PURPLE FINCH *Haemorhous purpureus* (9, 3). 2016-001, Reno–Caughlin Parkway (Washoe), 3 Jan 2016, four birds. T. Lenz (P, A). One adult male and three female-plumaged birds, all identified as subspecies *californicus*.

2016-004, Verdi (Washoe), 28 Feb 2016. B. Thomas (P). Adult male, subspecies *californicus*.

2016-024, Floyd Lamb Park (Clark), 10 Apr 2016, five birds. A. Lee (P). All five birds were in female-like plumage and were identified as subspecies *californicus*.

WHITE-WINGED CROSSBILL *Loxia leucoptera* (1, 0). 2016-057, Great Basin NP (White Pine), 22 Oct 2016. NOT ENDORSED. This nomadic and irruptive species invaded Idaho and other northern states during the late fall and early winter of 2015 (C. Lundblad, pers. comm. 2016; www.eBird.org), preceding this report by a year. No such migration was noted in late 2016.

CASSIN'S SPARROW *Peucaea cassinii* (3, 1). 2015-072, Amargosa Valley (Nye), 26–29 Sep 2015. G. Scyphers (P); R. Strickland, D. Ghiglieri (P), D. Vogt (P, Figure 7). Adult. This is the first Nevada record since 1998.

GRASSHOPPER SPARROW *Ammodramus savannarum* (12, 5). 2015-089, Clark County Wetlands Park (Clark), 23 Apr 2015. J. Lefever. Adult.

2015-080, Amargosa Valley (Nye), 26 Sep 2015. G. Scyphers (P). Adult.

2015-077, Floyd Lamb Park (Clark), 4 Oct 2015. A. Lee (P). Adult.



Figure 7. Nevada's third Cassin's Sparrow, found in Amargosa Valley (Nye County) in late September 2015, was the first of the species observed in fall.

Photo by Deb Vogt

2015-085, Las Vegas Bay, Lake Mead NRA (Clark), 17 Oct 2015. B. Miller (P). Adult.

2016-025, Las Vegas Bay, Lake Mead NRA (Douglas), 1 May 2016. B. Steger (P), D. Serdehely (P), R. Strickland, D. Ghiglieri (P). Originally found by Rob Lowry. Adult.

LECONTE'S SPARROW *Ammodramus leconteii* (5, 1). 2015-084, Dyer (Esmeralda), 24–27 Oct 2015. G. Scyphers (P; see front cover of this issue of *Western Birds*); D. Ghiglieri (P), R. Strickland, M. Andrews, D. Vogt (P). This is the third Nevada observation from late October; the other two are from early September and early October.

BALTIMORE ORIOLE *Icterus galbula* (12, 1). 2016-021, Indian Springs (Clark), 22 Sep 1996. M. Patten. Adult male.

BRONZED COWBIRD *Molothrus aeneus* (5, 1). 2015-075, Henderson Bird Viewing Preserve (Clark), 6 Jul 2015. E. Horton (P). Adult male. Though four birds were reported, the brief documentation included a photograph of only one and no description of the other three.

GOLDEN-WINGED WARBLER *Vermivora chrysoptera* (5, 1). 2015-083, Ash Meadows NWR (Nye), 20 May 2015. D. Crowe. Adult female. Detailed written documentation was sufficient to satisfy the committee that the bird showed no signs of hybridization.

KENTUCKY WARBLER *Geothlypis formosa* (8, 1). 2016-005, Corn Creek (Clark), 23 Sep 1985. M. Cressman. Adult male. Earliest Nevada record.

CAPE MAY WARBLER *Setophaga tigrina* (6, 2). 2015-087, Corn Creek (Clark), 31 Oct 2015. B. Zyla; B. Miller (P). A drab immature, possibly female.

2016-031, Tonopah Cemetery (Esmeralda), 15–16 May 2016. G. Scyphers (P); B. Zyla, S. Topham (P, Figure 8). Adult female.

*MAGNOLIA WARBLER *Setophaga magnolia* (18**, 1). 2016-019, below Lake



Figure 8. This northbound Cape May Warbler may have been fueling on the nectar of Prince's Plume (*Stanleya pinnata*) along with the insects attracted to this plant during a two-day visit to the Tonopah Cemetery (Nye County) in May 2016.

Photos by Seth Topham

Las Vegas, Las Vegas Wash (Clark), 20 Oct 1974. Collected by J. Blake (MBM 2352 [B-1156], ♀?, very heavy fat). Earliest Nevada record.

BAY-BREASTED WARBLER *Setophaga castanea* (3, 0). 2016-015, Corn Creek (Clark), 10–11 Oct 1977. NOT ENDORSED.

*CHESTNUT-SIDED WARBLER *Setophaga pensylvanica* (17**, 1). 2015-098, Corn Creek (Clark), 13 Oct 1974. Collected by C. S. Lawson (UNMB 1785, imm. unsexed, skull not ossified, slight fat, plumage fresh). Earliest Nevada record.

*BLACK-THROATED BLUE WARBLER *Setophaga caerulescens* (20**, 3). 2016-020, Corn Creek (Clark), 6 Oct 1970. Collected by C. S. Lawson (UNMB 1725, ad. ♂). Earliest Nevada record.

2016-036, Corn Creek (Clark), 10 Oct 1974. Collected by C. S. Lawson (UNMB 1784, imm. ♂, skull not fully ossified, light fat, plumage fresh).

2016-037, Boulder Beach, Lake Mead NRA (Clark), 10 Oct 1974. Collected by J. Blake, prepared by G. Austin (MBM 2355 [B-1155], ♂, no fat).

*PALM WARBLER *Setophaga palmarum* (17**, 1). 2015-099, Floyd Lamb Park (Clark), 16 Oct 1974. Collected by C. S. Lawson (UNMB 1786, imm. (?) ♀, moderate fat, fresh plumage). Earliest Nevada record.

BLACK-THROATED GREEN WARBLER *Setophaga virens* (4, 1). 2016-023, Corn Creek (Clark), 15 Oct 1978. NOT ENDORSED.

2016-054, Floyd Lamb Park (Clark), 8 Oct 2016. B. Zyla (P). Immature or adult female.

CANADA WARBLER *Cardellina canadensis* (5, 1). 2016-049, Floyd Lamb Park (Clark), 16–19 Sep 2016. A. Harper; B. Miller (P), D. Vogt (P), M. Meyers (P), B. Zyla (P), P. Gaffey, C. Gaffey (P), G. Lau (P, Figure 9), N. McDonal (P). Adult female.

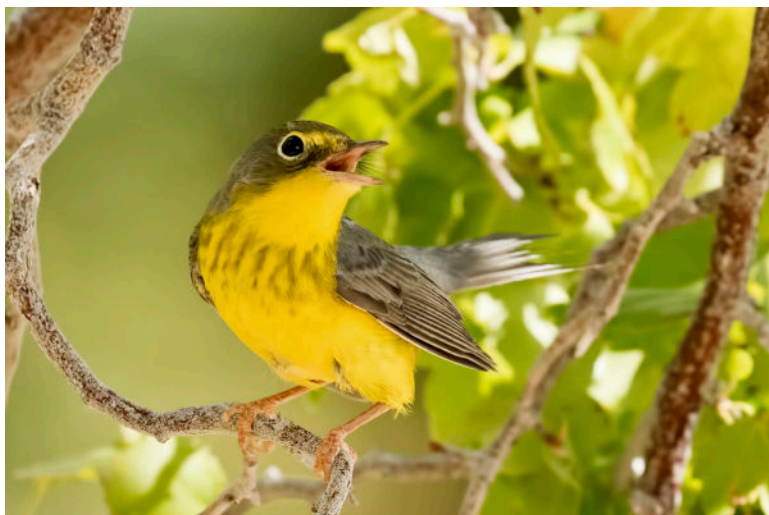


Figure 9. Four of the five Canada Warblers recorded in Nevada have occurred in the two-week interval from 8 to 22 September. This adult female was observed from 16 to 19 September 2016 at Floyd Lamb Park at Tule Springs in Las Vegas (Clark County).

Photo by Garrett Lau

SCARLET TANAGER *Piranga olivacea* (7, 0). 2015-073, Pahrnagat NWR (Lincoln), 19 Sep 2015. NOT ENDORSED.

NORTHERN CARDINAL *Cardinalis cardinalis* (3, 0). 2015-010, Las Vegas (Clark), 28 Dec 2014–11 Feb 2015. NOT ENDORSED. This adult male appeared to belong to one of the eastern subspecies. The extensive black mask covered the area above the bill, and the color of the crest was quite dusky, not nearing the brightness of the red breast. This would not be the case for *superbus*, the subspecies resident in Arizona, so the NBRC inferred the bird was likely an escapee from captivity.

*PAINTED BUNTING *Passerina ciris* (15**, 1). 2015-039, Corn Creek (Clark), 27–31 Oct 1981. M. V. Mowbray. Adult male. Earliest Nevada record. Though this species was removed from the review list in 2015, older reports on file may still be reviewed.

Of the 15 records, this is the third of an adult male and the first in fall. Concerns about provenance were raised during the review, but the bird was bright in coloration and wary in behavior. Autumn vagrancy in California is the norm, and “misorientation may occur in adult birds” (Mlodinow and Hamilton 2005:178).

DICKCISSEL *Spiza americana* (11, 4). 2015-070, Floyd Lamb Park (Clark), 20 Sep 2015. M. Swink (P). Male.

2015-071, Primm (Clark), 25–27 Sep 2015. D. Vogt (P), N. McDonal (P), M. Meyers (P). Immature female, originally found by Jason K. Pietrzak.

2015-079, Corn Creek (Clark), 3 Oct 2015. G. Scyphers (P). Immature male.

2015-088, Corn Creek (Clark), 26 Oct 2015. J. Boone, D. Crowe. Age and sex undetermined.

NEVADA BIRD RECORDS COMMITTEE REPORT FOR 2016

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ATTEMPTS TO ESTABLISH COLONIES OF THE PURPLE MARTIN IN NEST BOXES IN CALIFORNIA: FIRST SUCCESS AND EVALUATION OF FAILURES

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ABSTRACT: The Purple Martin (*Progne subis*), designated a species of special concern by the California Department of Fish and Wildlife, has been reported using nest boxes in California only a few times, in contrast to its extensive adoption of nest boxes in Oregon, Washington, and British Columbia and long-term use of them in eastern North America. We installed and monitored nest boxes and artificial gourds at Shelter Cove along California's northwest coast, where a substantial population of nesting martins is threatened by loss of snags. We placed three nest boxes at one nesting area in 2002, and, after the martins used two boxes in 2007, we added 15 boxes and seven gourds in groups at six other sites early in 2008. From 2008 to 2011, martins used up to 11 boxes and two gourds, as well as nesting in snags, utility poles, and buildings. We monitored their nesting success in 2008, when three of five occupied boxes successfully fledged young. We also installed boxes or advised on attempts to establish box-nesting colonies at six other sites elsewhere in northern California, none of which were successful. Reasons for failure may include too great a distance from the nearest source population, improper placement, and the martins' unfamiliarity with a novel type of nest site. Our experiment at Shelter Cove represents the first successful use of nest boxes designed and placed for Purple Martins in California and suggests boxes may be an effective tool for securing and recovering Purple Martin populations in California.

In western North America, populations of the Purple Martin (*Progne subis*) are small and declining in many areas (Tautin et al. 2009). The species' population and geographic range have contracted in California, where the martin is recognized a species of special concern (Airola and Williams 2008). Suggested major causes of the decline include loss of nest sites (primarily woodpecker-excavated holes in dead trees), competition for nest sites with the non-native European Starling (*Sturnus vulgaris*), and pesticide-induced decline in insect prey (Airola and Grantham 2003, Airola and Williams 2008, Airola et al. 2014).

In eastern North America, Purple Martins have a history of using human-supplied sites extending back to precolonial times (Brown and Tarof 2013). Martins there have undergone a "cultural shift," now nesting in nest boxes and gourds almost exclusively. In the West they have adopted nest boxes relatively recently, presumably because of western populations' shorter and less extensive exposure to human-supplied nest sites. Nest boxes have been widely introduced and adopted in large areas of British Columbia, Washington, and Oregon over the last 40 years, resulting in dramatic increases in previously depleted martin populations (Kostka and McAllister 2005, Tautin et al. 2009, Cousens and Lee 2012). Currently, the proportion of the Pacific Northwest population estimated to be breeding in nest boxes is high: 50%

in Oregon (Horvath 1999), 90% in Washington (Kostka and McAllister 2005), and 100% in British Columbia (Cousens and Lee 2012). In the Pacific Northwest most boxes have been sited where martins were nesting in marine pilings, on which the boxes are often mounted (Kostka and McAllister 2005, Cousens and Lee 2012). The martins' prevalence of nest-box use in the Pacific Northwest has not caused the species to abandon natural sites. Rather, the increased availability of nest sites has dramatically augmented the previously depleted population (Horvath 1999, Kostka and McAllister 2005, Cousens and Lee 2012).

We know of no previous concerted effort to establish Purple Martin colonies in nest boxes in California, perhaps because population declines there were less extensive and well documented than in the Pacific Northwest. Martins are known to have nested in boxes in California only rarely, in boxes erected for other species (Williams 1998). Establishing nest-box colonies could provide an important tool for stabilizing and recovering Purple Martin populations in California as it has in the Pacific Northwest. Nest-box programs have demonstrated success for other depleted cavity-nesting species in North America, including the Eastern Bluebird (*Sialia sialia*; Gowaty and Plissner 2015), Western Bluebird (*Sialia mexicana*; Guinan et al. 2008), and Barn Owl (*Tyto alba*; Marti et al. 2005).

Kostka initiated the first California nest-box program at Shelter Cove, Humboldt Co., in 2002 by placing boxes near existing nesting snags at one site. After Purple Martins used two of the boxes in 2007, Airola and Kostka installed additional nest boxes and artificial gourds there in 2008, and Elwood surveyed the martins' use of nest boxes and other substrates in 2008, which was reported informally (Elwood et al. 2009).

On the basis of the success at Shelter Cove, from 2002 to 2016 Airola and Kostka established and encouraged others to erect nest boxes for Purple Martins at six other northern California sites. We selected sites for box installation on the basis of conditions observed at occupied snags and bridges locally and suitable in California generally (Williams 1998, Airola and Williams 2008, Airola 2009) and where landowners were interested. The sites differed in characteristics that may have affected the likelihood of successful colonization, including potential source populations (size and trend, distance) and habitat (openness, potential insect abundance, presence of competitors). Here we summarize results of attempts to supply nest boxes for recovery of Purple Martin populations at seven locations in northern California.

METHODS

The locations where we installed nest boxes ranged from southern Humboldt County south to Santa Clara County and inland to Sacramento (Figure 1, Table 1). All nest boxes were of the same design as used successfully in the Pacific Northwest (Milner 1988, Figure 2). Boxes were wooden with a single compartment 15 cm high by 15 cm wide by 27 cm deep and a rectangular entrance hole 7 cm wide and 3 cm high to discourage entry by starlings. At most sites, we hung boxes 4 m above ground on a 5- × 10-cm pole (i.e., a "2 × 4"). At one site (Mt. Umunhum) boxes were mounted on abandoned utility poles. At all sites except one (Greenwood Creek), we

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Table 1 Survey Effort and Locations Where Nest Boxes Were Erected and Monitored for Purple Martins in Northern California

Site	Years	Specific location	Latitude, longitude	References
Shelter Cove, Humboldt	2008–11	Rawhide Ct.	40.0369, –124.0623	Elwood et al. 2009, Williams 1998, Kostka, Airola pers. obs.
		Pine Ct.	40.0360, –124.0688	
		Combs Ct.	40.0230, –124.0406	
		Cantle Ct.	40.0372, –124.0752	
		Shaker Rd.	40.0323, –124.0732	
		Spring Rd.	40.0411, –124.0736	
Greenwood Creek, Mendocino	2012–14	Oak Dr.	40.0410, –124.0548	Airola 2009, M. Morris and S Grimes pers. comm.
		NW of State Rt. 1 bridge	39.1270, –123.7125	
Navarro Vineyards, Mendocino	2011–17	Main pond	39.0981, –123.4810	Airola pers. obs.
I St. Bridge, Sacramento	2008–17	California Railroad Museum parking lot	38.5855, –121.5039	Airola and Grantham 2003, D. Kopp pers. comm., Airola pers. obs.
		Between parking lots A and B	38.5541, –121.6292	
Yolo Bypass Wildlife Area, Yolo	2008–17	West of parking lot B	38.5498, –121.6292	J. Zinkl pers. comm., Airola pers. obs.
		Southwest of parking lot B	38.5422, –121.6292	
Davis Core Area Drainage Pond, Yolo	2009–17	Toad Hollow Park	38.5473, –121.7276	Airola pers. obs.
Mt. Umunhum, Santa Clara	2014–17	Loma Almaden Rd.	37.1604, –121.9136	Jaramillo 2012 and pers. comm., M. Chaney pers. comm.

mounted boxes in groups of three spaced 6–40 m apart. In addition, at Shelter Cove, we installed plastic gourds (Supergourds and Troyer horizontal models, available at <http://purplemartin.org/shop/>).

Study Areas

Shelter Cove. Shelter Cove (Humboldt Co.) is a small residential coastal community in the remote, rugged King Range. The surrounding region supports one of California's largest population of Purple Martins (Airola and Williams 2008, Airola 2009). Shelter Cove has many snags created in 1973 by the Finley Creek wildfire, which destroyed much of the overstory forest (Robinson 1985, Bureau of Land Management and EDAW 2004, Kostka et al. 2008), and here martins nest in snags left after the fire (Williams 1998). These snags are declining because of rot and removal to reduce fire and safety hazards as the human community expands (pers. obs.). Replacement of large numbers of snags is unlikely under such conditions, and, absent intervention, the availability of cavities suitable for Purple Martin nesting

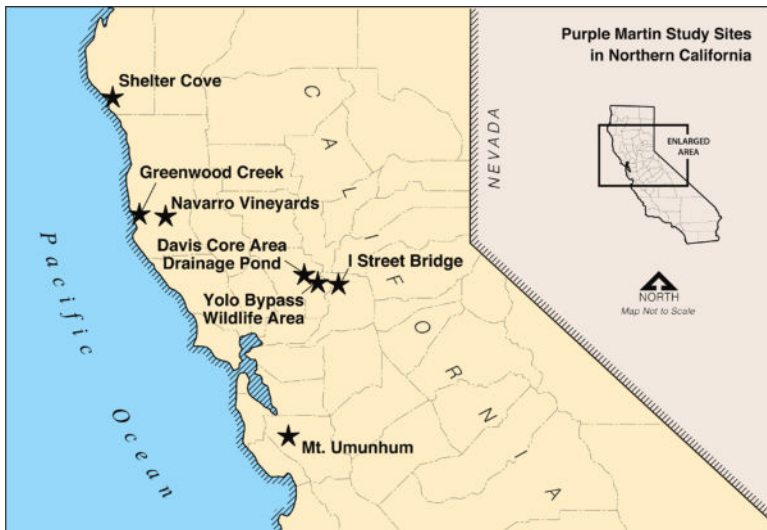


Figure 1. Locations of nest boxes installed for Purple Martins in northern California.

will decline. The area has been extensively subdivided for development and is gradually being built out. Much of the undeveloped area supports thick stands of Douglas-fir (*Pseudotsuga menziesii*) regenerated since the fire and a scattering of large remnant trees and snags.

The Purple Martin population at Shelter Cove is difficult to estimate accurately, owing to its apparent large size and extent and the site's remoteness, steep topography, and dense vegetation (Airola and Williams 2008, Airola 2009). Bailey et al. (1994) reported "40 nesting birds" at Shelter Cove in 1994, and Williams (1998) listed nesting-season records for 1990 and 1997, both without detail. On the basis of a survey of less than one day in 2002, Hill et al. (2004) reported 33 individuals and confirmed six nesting pairs.

In 2002, we placed three nest boxes 15 m from an active martin nest in a snag (Kostka et al. 2008). In 2008, we added 15 boxes in groups of two to four, each spaced about 6 m apart at six other sites within 250 ha, in grassy forest openings on middle and upper slopes facing south to west. All sites were within 1 km of known nests in snags (see Table 1). We also placed seven gourds opportunistically at local residences, near some of which martins were nesting in other substrates. We considered quality of the habitat at these residential sites to be lower than where we erected boxes but placed them there because of concern for vandalism in more open areas. All nest boxes and gourds remained available from 2008 at least through 2011, after which monitoring ended.

Greenwood Creek Bridge. This site on State Route 1 along the Pacific coast near Elk, Mendocino Co., was first reported to be used by breeding martins in 2004 and supported five to ten pairs in 2009 (Airola 2009). The bridge was reconstructed from 2012 to 2014. Prior to construction, the bridge site was mostly overgrown by trees that blocked martins' access



Figure 2. Adult female Purple Martin on next box at Shelter Cove, Humboldt County, California.

Photo by Daniel A. Airola

(Airola 2009), but tree removal during construction reopened it partially. As mitigation for bridge reconstruction, the California Department of Transportation placed six nest boxes about 3 m apart within 100 m² near the bridge in 2012. Despite Airola's advice to the contrary, boxes were installed in a low area in the road's right-of-way where the martins' access was impeded by adjacent trees and the bridge.

Navarro Vineyards. Anderson Valley, Mendocino Co., supports a mixture of vineyards, grassland, oak woodland, and several irrigation and frost-protection ponds. A few pairs of martins have regularly nested 2 km from Navarro Vineyards in snags at Hendy Woods State Park (e.g., records of one to ten individuals at www.ebird.org). The vineyard's staff erected three boxes on the shoreline of a 1.7-ha pond in 2011.

I St. Bridge. This bridge in Old Sacramento is one of 14 elevated freeways and overpasses in the Sacramento region that have supported Purple Martin colonies since 2002 (Airola and Kopp 2009, 2017). Martins nest in large chambers within concrete bridges, accessed through holes in the bridges' undersides (Airola and Grantham 2003). A population of 29–35 pairs nested in bridges along Interstate 5 at I St. from 2002 to 2005, but it declined to six pairs by 2008 and remained at four to seven pairs through 2014 (Airola and Kopp 2017). A similar decline, from 128 to 23 pairs, occurred during this period at the other colonies in Sacramento bridges (Airola and Kopp 2017). Kostka and Airola erected five next boxes with martin decoys (www.purplemartin.org/shop/product/decoy/purple-martin-decoy/) within 50 m of the I St. bridge colony in 2008. This colony is also the nearest to the two sites in Yolo County where martin boxes have been installed (see below).

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Yolo Bypass Wildlife Area. This area in Yolo Co. is within a large flood bypass and is managed by the California Department of Fish and Wildlife for water birds and other wildlife (Brice 2015). Land cover consists of seasonal and permanent wetlands and rice fields. We selected the area for box installation despite its 11-km distance from the nearest source population (I St. colony) because of sympathetic management and an abundance of flying insect prey. Also, martins had previously colonized the overpass (next to the Davis Core Area Drainage Pond site), nearly 20 km from the nearest colony in Sacramento (Airola et al. 2004). In 2008, Kostka and Airola installed 15 boxes with Purple Martin decoys on poles in four groups. During 2008 and 2009, as a further attractant, we placed a recorder that played the Purple Martin's dawn song (Morton 1988) during the mornings. Additional boxes (two per pole) were added at some sites in 2010.

Davis Core Area Drainage Pond. This site is a 1.4-ha stormwater-detention basin in the city of Davis, Yolo Co., adjacent to an overpass that had been colonized in 2003 by two pairs of martins (Airola et al. 2004) but had not been used subsequently. Three nest boxes were installed in 2008.

Mount Umunhum. Mount Umunhum is a 1144-m peak on the San Francisco Peninsula within Santa Clara Co. Land cover includes coastal chaparral, mixed hardwood–Douglas-fir forest, roads, and former Department of Defense facilities. Purple Martins were identified nesting on the mountain in 2011, and three to six pairs nested there in 2012, all in utility poles (Jaramillo 2012). The regional martin population is small, dispersed, and declining (Airola 2009). A. Jaramillo (pers. comm.) placed six nest boxes on and adjacent to utility poles along a ridge-top road in 2014. From 2015 to 2017, several of these boxes were removed for road construction, and several others became unsuitable because of lack of maintenance (M. Chaney pers. comm.).

Monitoring

At Shelter Cove, we monitored boxes and other nest substrates at different frequencies in different years. In 2007, Kostka and Airola checked nest boxes during a single early-season visit in late May. In 2008, Elwood systematically checked all boxes and other nest sites every 14 days from 13 April through 14 August. She estimated nesting pairs on the basis of the frequency and duration of detections at nest sites, examination of boxes, and diagnostic breeding behaviors (Airola and Grantham 2003). We considered a nest successful if nestlings reached 23 days of age (i.e., within 5 days of the average 28-day fledging period; Brown and Tarof 2013). In 2009, Elwood surveyed all boxes and gourds on 16 May and 18 July, determined in 2008 as within the optimal periods for counting pairs and confirming nesting (Airola 2009). Subsequent surveys consisted of single late-season visits by Kostka on 1 and 2 July 2010 and on 27 June 2011 to check all boxes and gourds and incidentally record use of other substrates.

Monitoring at other sites was variable in the number of years surveyed (Table 1) and the frequency of surveys. Multiple visits were made annually to the I St. Bridge, Yolo Bypass, and Davis Core Area Drainage Pond sites. Mt. Umunhum was visited multiple times during the first year after box installation, then monitored once or several times annually during the breeding season.

Greenwood Creek was intensively monitored only from 2012 to 2014. The Navarro Vineyards were visited once during the nesting season in most years.

RESULTS

Shelter Cove. Purple Martins nested in two of five nest boxes at Shelter Cove in 2007 (Kostka et al. 2008) and in five of the 15 boxes available in 2008, including two boxes installed just prior to the 2008 nesting season (Table 2). In total, we detected 18 nesting pairs using a wide variety of substrates in 2008, including snags, utility poles, and buildings, but no gourds. Sixteen (89%) of 18 occupied nests surveyed for reproductive success in 2008 fledged young, including three of the five in boxes. In 2009, we confirmed nesting at 24 cavities, including 10 nest boxes and one gourd. An estimated 10 additional pairs, some with fledged young, nested in a nearby area where snags were the only nest substrate available. The total of nesting pairs detected increased from 18 to 33 (+83%) from 2008 to 2009, despite the reduced survey effort in 2009.

In 2010, 13 of 23 inspected nest boxes and gourds contained Purple Martin eggs, and martins continued to occupy a variety of other cavities, but success was unconfirmed because of lack of access and the early survey date. In brief 2011 surveys, martins were using 10 nest boxes and several other substrates. Given the early dates of the 2010 and 2011 surveys, additional boxes, gourds, and other sites could have been used by later-nesting martins, especially second-year birds, which arrive at colonies and begin nesting later than older martins (Brown and Tarof 2013). From 2008 through 2010, when we surveyed all nest boxes and gourds, Purple Martins used a greater proportion of available boxes (58%) than of gourds (14%; $\chi^2_{1d.f.} = 11.0, p = 0.0009$).

Other Sites

Greenwood Creek Bridge. During reconstruction in 2012, martin access was reduced to half of the bridge, but 10 pairs continued to nest in

Table 2 Number of Pairs of Purple Martins Observed Nesting in Boxes, Gourds, and Other Sites at Shelter Cove, California, 2007–2011^a

Year	Nest Box ^b	Gourd	Snag	Utility Pole	Building	Total
2007	2	NA	NS	NS	NS	2
2008	5	0	7	5	1	18
2009	10	1	14 ^c	4	4	34
2010	11 ^d	2	NS	NS	2	15
2011	10	NS	NS	NS	4	14

^aNA, none available for use; NS, substrate not surveyed.

^bFive nest boxes were available in 2007. Seven gourds and 15 boxes were available in 2008 and thereafter.

^cNesting in four snags was confirmed through repeated surveys; the other 10 were estimated to have been used based on late-season association of pairs with snags near the main survey area.

^dAdditional boxes found with nesting material but no eggs, including one in 2010 and two in 2011, were not counted as representing nesting pairs.

the accessible section (S. Grimes pers. comm.). The martins' access to the bridge was eliminated entirely in 2013 (M. Morris pers. comm.). Despite the reduction in availability of nest sites during 2012 and 2013, martins did not occupy nest boxes then or in subsequent years (M. Morris, S. Grimes pers. comm.). After exclusion netting was removed when construction was complete, 10 martin pairs reoccupied the bridge (M. Morris pers. comm.). Each year, Violet-green Swallows (*Tachycineta thalassina*) nested in some boxes.

Navarro Vineyards. Tree Swallows (*Tachycineta bicolor*) adopted all nest boxes here the first year they were erected. Swallows, and in some following years House Sparrows (*Passer domesticus*), occupied all the boxes. We noted martins flying high over the site during the breeding season, but they never nested in the boxes.

I St. Bridge. Although martins from the adjoining bridge colony perched regularly on boxes, they never nested in them from 2008 through 2015, when all boxes but one were removed for a construction project.

Yolo Bypass Wildlife Area. Most of the installed nest boxes were immediately adopted by Tree Swallows and several pairs of House Sparrows and House Finches (*Haemorhous mexicanus*), which nested in them annually thereafter through 2017. No Purple Martins have been observed on or near the boxes.

Davis Core Area Drainage Pond. The boxes were used by Tree Swallows and Western Bluebirds within the first few years after being installed in 2009 but were never used by Purple Martins.

Mt. Umunhum. No martins nested in nest boxes or utility poles on this mountain in 2014 or 2015 (A. Jaramillo pers. comm.). The nearest area occupied during those years was Mt. Thayer, about 1.6 km away. In 2016 and 2017, after the loss of some boxes to construction and weathering, none of the few remaining suitable boxes was used, but utility poles were reused by three pairs in both years (M. Chaney pers. comm.).

Characteristics of all seven sites where boxes were set out are summarized in Table 3.

DISCUSSION

Our study documents the first instance in California in which Purple Martins have been attracted to breed in nest boxes placed for them. Previous reports of nest-box use in California consist of only four records of incidental use at three locations over nearly a century (Williams 1998). At Shelter Cove, martins used a variety of nesting substrates greater than at any other site in California (Williams 1998, Airola 2009), suggesting that natural nest sites were limited and that martins were required to explore novel nesting substrates, such as buildings. Placement of boxes adjacent to existing nest sites or in similar open areas lacking nest sites likely encouraged the boxes' adoption. The rate of use of gourds may have been lower than that of boxes because of their novelty to local martins or placement in less open areas, or simply a preference of local birds to use boxes over gourds. Although we could not determine the total population nesting at Shelter Cove annually, the rapid adoption of newly installed boxes between 2007 and 2009 suggests that the population may have increased here as a result of boxes being installed.

Table 3 Characteristics of Sites Where Nest Boxes for the Purple Martin Were Installed in California, 2008–2017

Site	Source colony	Distance to nearest source colony (km)	Size of nearest source population (pairs)	Status of the source population	Main nest		Status of nest substrate	Accessibility to nest-box site	No. boxes available
					substrate of nearest source population	snags			
Shelter Cove	at site	0.2	20+	stable	snags	limited, declining	open	open	20
Greenwood Creek	at site	0	10	stable	bridge	limited	obstructed	obstructed	6
Navarro Vineyards	Hendy Woods State Park	2	2–5	stable	snags	limited	open	open	3
I St. Bridge	at site	0	30–83	declining	bridge	abundant	open	open	5
Yolo Bypass Wildlife Area	I St. Bridge	11	30–83	declining	bridge	abundant	open	open	15
Davis Core Area	I St. Bridge	20	30–83	declining	bridge	abundant	open	open	3
Drainage Pond									
Mt. Umuhanum	at site	0	3–6	irregular	utility poles	limited	open	open	2–6

Potential causes for the lack of use of boxes at Greenwood Creek include the dissimilarity of the boxes from nesting sites in bridges, and the placement of the boxes in a low area with obstructed access. In addition, the nearly continuous availability of 15–29 nesting cavities in the bridge may have adequately accommodated the nesting population and thus discouraged adoption of the boxes. Vegetation removal adjacent to the bridge during construction likely made more existing nesting sites available. Competition with other cavity nesters was likely not a factor, as the presence of empty boxes suggests swallows' use of boxes did not discourage occupancy by martins.

Use of Navarro Vineyards may have been discouraged by the small size of the source population, the small number of boxes, and the resulting competition for nest sites. Observations of martins above the site during the breeding season attest to the presence of a source population. Since Tree Swallows and House Sparrows both nest earlier than Purple Martins and are known to compete with them for nest sites (Jackson and Tate 1974, Brown and Tarof 2013), they may have preempted the few boxes there.

In Sacramento, suitable nest sites were superabundant in the I St. Bridge (>160 nesting chambers, Airola and Grantham 2003), yet the population here was declining before boxes were installed and continued to decline through our study (Airola and Kopp 2017). The boxes also were dissimilar in design from the nest sites in bridges. Several of the five nest boxes were occupied annually by House Finches, but over many visits we observed no aggressive interactions that suggested competition for the boxes.

Factors discouraging martin use of Yolo Co. boxes include a substantial distance (11–20 km) from the closest potential source population in Sacramento, the decline of that population, and difference in nest substrate (i.e., bridge versus box; Airola and Kopp 2017). Although other species occupied most boxes, we saw no Purple Martins near boxes, suggesting competition with other species was not a factor that prevented martin use.

Overall, conditions appeared promising for nest-box use at Mt Umunhum, especially the similarity of the utility-pole nest sites to boxes and the limited number of alternatives. Factors that may have discouraged martin use here during our study were the small number of suitable boxes, the small size and irregularity of the source breeding population, and perhaps the dry conditions that reduced insect prey.

Although artificial gourds were used for the first time in California at Shelter Cove, our opportunistic placement of them prevents us from fully comparing their adoption to that of nest boxes. Martins use gourds extensively in eastern North America (Brown and Tarof 2013), and gourds have been readily adopted in some western areas where boxes were already in use (Fouts 1996, Kostka pers. obs.). We suggest that because they differ more in appearance from existing natural nest sites than do nest boxes, gourds should not be introduced exclusively, but rather should be used either together with nest boxes or after martins have occupied nearby boxes.

Selection of sites for future nest-box projects poses a dilemma. Martins are more likely to adopt boxes where populations are larger and healthier. Establishing a population in boxes, however, may be of greatest conservation value in areas with small populations that are declining because of a lack of nest sites or nest-site competition, and thus where adoption of boxes

is less likely. Areas where the availability of nest sites is declining, whether from natural processes or human activity, should be priorities for proper installation of boxes, regardless of population size. Although the prospect for success in any one area with a depleted population may be low, multiple attempts over a wide area are still desirable because the species is so seriously reduced over so much of its range (Garrett and Dunn 1981, Airola and Williams 2008, Airola 2009).

We offer the following guidelines for site selection for attempts to establish the Purple Martin in nest boxes as a conservation tool in California and potentially elsewhere in the West where boxes have not been adopted:

- Sites should be near (<3 km from) a sizable (>5 pairs) source population; closer and larger is better.
- The trend of the source population should be positive or stable or the available nest sites should be threatened, whether by physical elimination, obstruction by vegetation, or colonization by competing species.
- Use of boxes at sites where the source populations nests in snags, utility poles, or other sites may be more successful than where the source population uses entrance holes in the undersides of bridges.
- Boxes should be of the single-compartment design (not “apartment style”) and placed 5–20 m apart in open terrain where the martins have good flight access.
- At least six boxes should be installed per site (in groups of three) to offer a range of conditions and reduce the potential for competition with other species.
- Ensure that boxes can be managed over time, which includes being cleaned out at least every few years; native competitors can be managed by opening boxes just before the martin’s spring arrival, and non-native competitors can be removed, where warranted.

The fate of the Shelter Cove nest boxes after 2011 illustrates the challenges of these attempts and the need to sustain them. The initial program succeeded because of substantial effort to build and transport boxes, gain permission from landowners to place boxes, enlist a small group of resident enthusiasts to monitor and maintain boxes, and recruit a college student (Elwood) to monitor the population consistently and carefully. Many of the resident landowners and helpers were retirees and since 2011 have moved away. The remoteness of the site from our homes (400–1200 km) has prevented us from performing needed maintenance and recruiting additional volunteers. As a result, we are uncertain if the boxes are still being used.

The need for a dedicated team of volunteer Purple Martin “landlords” has long been recognized as critical to the success of nest-box programs (Kostka and McAllister 2005, Tautin et al. 2009, Cousens and Lee 2012). Our inability to transition box management beyond the initial pioneers emphasizes that establishing a sustainable tradition of box management is critical for long-term success. Often, success comes from the dedication and persistence of a single local individual or small group, who recruits, trains, monitors, and supports individual landlords.

The Purple Martin’s adoption of nest boxes at Shelter Cove and success elsewhere in the species’ range demonstrates that boxes may be useful in securing and recovering Purple Martin populations in California and else-

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where in the West. Successful use of boxes, however, should not diminish the importance of protecting martins at their existing nesting sites in California, whether in trees or bridges. Indeed, our results reemphasize the importance of their conservation.

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NOTES

THE ALASKA RED-TAILED HAWK

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Grinnell (1909:211) described a new subspecies of the Red-tailed Hawk, *Buteo jamaicensis alascensis*, as “always blackest dorsally, and decidedly smaller” than a “large series” of Western Red-tailed Hawks, *B. j. calurus*, at that time the only subspecies of *B. jamaicensis* recognized in western North America. He based his description of this “Alaska Red-tailed Hawk” on four specimens collected in 1907 in southeast Alaska (Figures 1–3), two of which he designated as the type specimens. Grinnell compared the adult type, MVZ 51 (♂), with adults of *calurus* and found it darker dorsally, with a wider dark subterminal tail band, stronger flank barring, and wider black shaft streaks on the belly. The other three specimens comprise a juvenile (MVZ 41), also designated as a type, and both of its parents. The latter (MVZ 42, ♀; MVZ 43, ♂) are more typical of *alascensis* in having the breast rufous (Figures 2 and 3). Grinnell wrote that the juvenile type specimen is also darker above and has the dark tail bands wider than those of juvenile *calurus*; he saw no suggestion of a dark morph in *alascensis*. So far as known, the range of *alascensis* comprises the temperate rain forests of southeast Alaska and coastal British Columbia, including the Queen Charlotte Islands (now Haida Gwaii) and western Vancouver Island (see Hellmayr and Conover 1949, Wheeler 2003).

The Western Red-tailed Hawk breeds east of this subspecies’ range in British Columbia (Clark and Wheeler 2001), and Harlan’s Hawk (*B. j. harlani*) breeds north of its range, in most of the rest of Alaska, the Yukon, and northwestern British Columbia. Clark and Wheeler (2001) and Liguori and Sullivan (2010) described and depicted the many differences between *harlani* and the other subspecies of the Red-tailed Hawk.

Field guides to North American birds in general (e.g., Sibley 2000, Dunn and Alderfer 2011) do not describe or depict *B. j. alascensis*. Clark and Wheeler (2001) and Wheeler (2003) described adult and juvenile plumages of this subspecies in their species accounts, but did not depict them. Other raptor guides (e.g., Wheeler and Clark 2003, Liguori 2005, 2011, Dunne et al. 2012, Crossley et al. 2013) have not described or depicted this subspecies.

I examined 45 specimens of this little-known taxon, including the type specimens, in 10 museums. Gus van Vliet, Chuck Susie, Amy Clark Courtney, and Elleana Elliot sent me more than 20 photos of Red-tailed Hawks taken in southeast Alaska over the last decade. When I replied to van Vliet that they were typical *alascensis*, he said that he did not know precisely what that was and suggested that I write an article on the field identification of this subspecies so that Red-tailed Hawks in southeast Alaska could be properly evaluated.

Twenty-five of 27 adult *alascensis* specimens examined, including the adult type (Figures 1–3), have a decided rufous wash on the breast but not much rufous on the belly (Figure 4). In this they differ from the rufous morph of adult *calurus*, which has a mostly rufous belly (Clark and Wheeler 2001: plate 25, figures 1a and 1f). Interestingly, the adult type specimen lacks this rufous wash (Figure 1). Two of these 27 adult specimens also have some whitish on the breast (perhaps due to interbreeding with *harlani*). All show much less tawny on the scapulars than does adult *calurus* (Figures 2–4), most have numerous dark tail bands, and all have a rather wide dark subterminal band (Figure 4) and a rufous breast. Figures 5–7 show adults from southeast Alaska, and Figures 8 and 9 show adults being rehabilitated in (and probably also from) southeast Alaska.

NOTES



Figure 1. Type specimens of *Buteo jamaicensis alascensis*. Ventral (A) and dorsal (B) views of MVZ 51, adult σ , 10 July 1907, Glacier Bay, coll. Frank Stephens (upper of each pair), and MVZ 41, juvenile q , 28 July 1907, Port Frederick, Chichagof Island, coll. Joseph Dixon (lower of each pair).

Photos by W. S. Clark

Seventeen juvenile specimens differ from the light morph of juvenile *calurus* by having wider dark tail bands and denser, more blob-like markings on their leg feathers (Figure 10). The upperparts of juvenile *alascensis* show less whitish mottling, thus appearing darker. Two recently fledged juveniles photographed at Hoonah, Alaska, are very dark, however; the juvenile on the right shows wide dark bands on the upper side of the tail (Figure 11). A juvenile male (USNM 141116) collected in southeast Alaska in summer was beginning its second prebasic molt and shows new rufous breast feathers.

NOTES



Figure 2. (A) MVZ 43, adult σ , 28 July 1907, Port Frederick, Chichagof Island, coll. Joseph Dixon; (B) parent of MVZ 41. Note the rufous breast, paler belly, and lack of pale scapulars.

Photos by W. S. Clark

Preston and Beane (2009) reported that adults of *B. j. alascensis* are much smaller in measurements than those of *calurus*. In wing chord, eight males of *alascensis* average 347 mm, whereas 31 males of *calurus* average 389 mm. Twelve females of *alascensis* average 361 mm, whereas 36 of *calurus* average 412 mm. Females of *alascensis* thus average smaller than males of *calurus*.

Taverner (1927:18, plate II, bottom bird) illustrated a typical adult *alascensis* collected on the Queen Charlotte Islands (now Haida Gwaii) during the breeding season.



Figure 3. MVZ 42, adult f , 28 July 1907, Port Frederick, Chichagof Island, coll. Joseph Dixon; parent of MVZ 41. Note the rufous breast, paler belly, and lack of pale scapulars.

Photos by W. S. Clark

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Figure 4. Adults of *B. j. alascensis* at the Beaty Biodiversity Museum, University of British Columbia, ventral view showing rufous breast and paler belly and dorsal view showing lack of pale markings on scapulars.

Photos by W. S. Clark

It shows the rufous breast and buffy belly of this subspecies. He doubted the validity of this subspecies at that time, however, but later guardedly accepted it on the basis of its smaller size (Taverner 1936).

None of the 45 specimens in 10 museums collected from these areas are of the dark or rufous morph, another difference from the Western Red-tailed. Furthermore, none of the 37 adult and 12 juvenile specimens of dark-morph *calurus* I examined in 19 museums came from the coastal range of this subspecies.

The status of *alascensis* as a migrant is not known, although it seems much less

NOTES



Figure 5. Adult *B. j. alascensis*, 4 October 2014, near Ketchikan, Revillagigedo Island, Alaska. Note the rufous breast and paler belly.

Photo by Chuck Susie

common north of Juneau in winter than in summer (van Vliet pers. comm.). Heint and Piston (2009) recorded spring migrants in small numbers near Ketchikan and mentioned only a few winter records. Tobish (2012) reported an extralimital winter record of an adult *alascensis* on the Kenai Peninsula on 30 December 2011; see photo at N. Am. Birds 66:370, 2012.

The darker coloration of this race conforms with Gloger's Rule (Terres 1980), which states that warm-blooded animals are darker in hot and humid environments and paler in colder and drier ones. The range of *B. j. alascensis* is predominantly the temperate rain forest (Commission for Environmental Cooperation 1997) of southeast Alaska and coastal British Columbia, which extends into western coastal Washington and Oregon, where some nesting birds might also be this subspecies. Red-tailed Hawks of other subspecies breed in more open areas (Preston and Beane 2009). Furthermore, there may be a tendency for raptors breeding in more closed forests to have rufous underparts, as shown by Cooper's Hawk (*Accipiter cooperii*),



Figure 6. Adult *B. j. alascensis*, 15 August 2015, near Hyder, Alaska. Note the rufous breast and paler belly.

Photo by Steven C. Heint

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Figure 7. Adult *B. j. alasensis*, 20 June 2016, Chichagof Island, Alaska. Note the faded rufous breast and paler belly.

Photo by Amy Clark Courtney



Figure 8. Adult *B. j. alasensis*, November 2013, in rehabilitation, Juneau, Alaska. Note the rufous breast.

Photo by Gus B. van Vliet

NOTES



Figure 9. Adult *B. j. alascensis*, in rehabilitation, Haines, Alaska. Note the rufous breast and paler belly.

Photo by W. S. Clark



Figure 10. Dorsal and ventral comparison of three juvenile specimens of *B. j. calurus* (left) versus three of juvenile *B. j. alascensis* (right) at the Beaty Biodiversity Museum, University of British Columbia. Note the wider dark tail bands and blob-like leg markings on the latter.

Photos by W. S. Clark

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Figure 11. Juveniles of *B. j. alascensis*, 30 July 2016, Hoonah, Chichagof Island, Alaska. Note the overall dark coloration and wide dark bands on the upper tail of the bird on the right.

Photo by Elleana Elliot

the Sharp-shinned Hawk (*A. striatus*), and many other forest raptors world-wide, especially accipiters.

I caught and banded an adult Red-tailed Hawk that had some traits of this subspecies, including wing chord 363 mm, near Vancouver, British Columbia, in February 2010 (Figure 12). Note the rufous wash on the breast and the lack of pale markings on the scapulars. Two adults being rehabilitated in southeast Alaska both show a rufous breast (Figures 8–9), but adults in the wild may have the breast faded to rufous-buff or buff. Adults that have rufous areas on the breast have been observed and photographed outside of but near the range of this subspecies, which is to be expected, because of gene flow across subspecies boundaries.

The American Ornithologists' Union's *Check-list of North American Birds* included *B. j. alascensis* in its fifth edition (1957), the most recent edition to include subspecies.

Birders and researchers in southeast Alaska should be on the lookout for the Alaska Red-tailed Hawk.

I thank the curators and collection managers of the following museums for permission to examine their valuable bird specimens: American Museum of Natural History, New York City; Beaty Biodiversity Museum, University of British Columbia, Vancouver; Canadian Museum of Nature, Ottawa; Field Museum of Natural History, Chicago; Museum of Vertebrate Zoology (MVZ), University of California, Berkeley; Academy of Natural Sciences of Drexel University (formerly of Philadelphia); Royal Ontario Museum, Toronto; Santa Barbara Natural History Museum, Santa Barbara, California; University of Alaska Museum, Fairbanks; and U.S. National Museum of Natural History (USNM), Smithsonian Institution, Washington, DC.

NOTES



Figure 12. Adult *B. j. alasceus*, 27 January 2010, Ladner, British Columbia.

Photos by W. S. Clark

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RIVER WARBLER (*LOCUSTELLA FLUVIATILIS*) AT GAMBELL, ALASKA: FIRST RECORD FOR NORTH AMERICA

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During the late afternoon on 7 October 2017 at Gambell, St. Lawrence Island, Alaska, local residents and bird photographers Sue Bryer and Clarence Irrigoo Jr., as well as visiting birder Ebbe Banstorp, were in the village's "near boneyard." The several boneyards at Gambell are midden sites that support a relatively lush growth of two species of *Artemisia* (wormwood), which provides food and cover for migrating landbirds. At the east end of the near boneyard, Bryer flushed a small passerine, which she was able to photograph only in flight. Shortly thereafter, visiting birder Monte M. Taylor also obtained brief views of the bird in flight. Upon reviewing Bryer's photographs, Taylor saw enough detail to radio me that I should quickly come over to see a bird resembling a Blyth's Reed Warbler (*Acrocephalus dumetorum*), an Asian species previously documented at Gambell twice in fall (Lehman and Ake 2011).

I soon joined the group and was quickly able to flush the bird twice again. It appeared to be a medium-sized Old World warbler with very uniform dull olive-gray-brown upperparts, a somewhat rounded tail, weak flight, and skulky behavior. After the third flush of the bird, I was able to observe it on the ground briefly before it ran into cover. I noted that it had bright flesh-pinkish legs and feet and that it lacked a noticeable supercilium, instead showing a pale eye-ring that was thin yet distinct. These characters suggested that it was a species of *Locustella* warbler previously unrecorded in North America.

Over the next several hours, we followed the bird around the near boneyard. The bird's behavior throughout was remarkably consistent, flushing at close range and flying short distances before landing where it could sometimes be seen on the ground before scurrying back into cover. No vocalizations were heard. The bird's features included

- Upperparts (including the wings) mostly uniform in color, appearing, in neutral lighting, to be a dull light-to-medium brownish tinged with dull olive, but they sometimes appeared to be warm brown when viewed in brighter lighting (Figures 1–4).
- A fairly distinct but narrow whitish eye-ring on an otherwise blank-looking face that on several occasions showed a pale, very weak supraloral stripe between the base of the bill and the eye or simply above the eye. When the bird could be seen well, some fine dusky streaks were visible on the auriculars (Figures 1–4).
- A thin and pointed bill of medium proportions, with the upper mandible mostly dark but much of the lower mandible and the cutting edge of the upper mandible distinctly pale—either dull yellowish or yellowish flesh (Figures 1, 2, and 4).
- Underparts pale, mostly dirty whitish, lacking yellowish or strong buff, but with the breast and lower throat showing extensive blurry dull olive or brownish-olive streaking (Figures 1 and 2). The sides of the breast and especially the flanks were washed with olive brown or grayish brown.
- Bright flesh-pink legs and feet (Figures 1–4).
- Upper side of the tail the same uniform olive brown as the remainder of the upperparts; the tail appeared rather broad, of short to medium length, and clearly rounded to weakly wedge-shaped at the tip, as the rectrices were distinctly graduated (Figures 1 and 4).
- Very long undertail coverts that extended approximately 90% of the distance

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Figure 1. This view of the River Warbler at Gambell on 7 October 2017, taken in neutral, flat lighting, captures many of the features of the bird: a mostly plain face with a thin pale circular eye-ring, blurry broad olive-brown streaks on the lower throat and breast, mostly uniform dull olive-gray-brown upperparts from crown to tail, a broad and strongly rounded tail, a mostly dull yellowish or flesh-yellow lower mandible and cutting edge to upper mandible, and bright fleshy legs and feet. Also note the pale edge to the outermost primary—a character of a number of the *Locustella* warblers.

Photo by Clarence Irrigoo Jr.

to the tip, light brownish with broad and somewhat irregular off-white tips that produced a slightly messy pattern of alternating broad brown and off-white bars (Figures 3 and 4).

- Outer primaries that in photos appeared somewhat curved (Figure 4).

These characteristics pointed to one of three primarily European/west Asian species of *Locustella*, the Grasshopper (*L. naevia*), Savi's (*L. luscinioides*), or River Warbler (*L. fluviatilis*), none previously recorded in North America. Species that could be eliminated from consideration in the field included



Figure 2. This photo was taken in slightly brighter light than was Figure 1, and the browns of the wing coverts and scapulars appear somewhat warmer than when viewed under more neutral lighting.

Photo by Monte M. Taylor

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Figure 3. This photo shows the River Warbler's broad and graduated tail feathers and brownish undertail coverts broadly tipped in off-white, resulting in a slightly messy pattern of alternating bars. In the River Warbler the undertail coverts extend some 80–90% of the distance to the tip of the tail.

Photo by Sue Bryer

Acrocephalus

- Blyth's Reed Warbler has a narrow but distinct supercilium in front of and over the eye rather than an eye-ring; it lacks breast streaks, has shorter and unmarked undertail coverts, and has duller legs; the Eurasian Reed (*A. scirpaceus*) and Marsh (*A. palustris*) Warblers, unrecorded in North America, are



Figure 4. This photo was taken partly in bright, direct light, which tends to accentuate the grayish tones to the head and the warmer brown tones to some of the upperparts and wing-coverts. This photo also shows the color pattern and relative length of the undertail coverts. Note the fine, faint dusky streaks to the auriculars and the somewhat curved shape to the outer primaries.

Photo by Sue Bryer

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eliminated on the basis of these same criteria, although some Marsh Warblers also show strikingly pale legs and feet.

- The Paddyfield Warbler (*A. agricola*), also unrecorded in North America, has a distinct pale supercilium that flares behind the eye, lacks breast streaking, and has shorter, unmarked undertail coverts.
- The Oriental Reed-Warbler (*A. orientalis*), unrecorded in the New World, is larger overall, has a larger bill, a distinct supercilium, and a longer tail but shorter, plainer undertail coverts.

Locustella

- Middendorff's Grasshopper-Warbler (*L. ochotensis*), a species that had been recorded at Gambell in fall (Lehman 2005) several times previously, and Pallas's (*L. certhiola*) and Styan's (*L. pleskei*) Grasshopper-Warblers, both of which are unrecorded in North America, have a distinct supercilium rather than merely an eye-ring, shorter and plain undertail coverts, pale tips to the tail feathers, and (in Middendorff's and especially in Pallas's) a more warmly colored rump and tail; Pallas's also has much bolder dark streaking above.
- The Lanceolated Warbler (*L. lanceolata*), with two previous Gambell records in fall (*North American Birds* 68:132), is distinctly smaller, has a different facial and undertail pattern, and has much more distinct dark streaking above and below, including on the flanks.
- Gray's Grasshopper-Warbler (*L. fasciolata*) is eliminated by the same criteria as the Oriental Reed-Warbler (above).

After several hours following the bird in the boneyard, we returned indoors to consult the available literature and to download our many photographs. After consulting the limited literature at hand, followed by internet-based searches of photos, I was able to rule out the Grasshopper and Savi's warblers. These species breed from western Europe east to central Russia (western Siberia) and winter in Africa (Savi's) or Africa and India (Grasshopper). Savi's has a more distinct supercilium (in front of the eye), warmer but plainer undertail coverts, and the dusky spots on its upper breast are fewer and more restricted than the River Warbler's more extensive blurry streaks. Most but not all Savi's Warblers have warmer brown upperparts. The Grasshopper Warbler has obvious dark streaks or mottling on the crown, mantle, and rump and dark-centered tertials. It usually shows a more obvious, though weak, supercilium and has dark streaking restricted mostly to the lower throat and uppermost breast. Its tail appears slightly longer, with the long undertail coverts showing broad diffuse streaks rather than being pale tipped and strongly barred as in the River Warbler.

Some correspondents to whom I sent the photos also mentioned that the poorly known Chinese Bush Warbler (*L. tacsanowskia*), and several other species of bush warblers formerly placed in the genus *Bradypterus*, including the Baikal Bush Warbler (*L. davidi*), needed to be considered. None of these species is previously recorded in North America. The Chinese Bush Warbler and Baikal Bush Warbler, however, are long-distance migrants that breed north to the Lake Baikal region and winter in southeast Asia, so they are potential vagrants to Alaska. All of these species are smaller, less robust, and have thinner tails. Except for some Chinese Bush Warblers they have a more distinct supercilium and are typically more warmly colored above. The Chinese Bush-Warbler's long undertail coverts have a pattern of dark and light bars, as in the River Warbler, but are often warmer brown with less distinct pale tips (Kennerley and Pearson 2010). In both these species as well as the Spotted Bush Warbler (*L. thoracica*), the undertail coverts are distinctly shorter, extending only about half way out the tail. In young Chinese Bush Warblers in autumn, the throat and belly typically are ocher or dull sulfur yellow, and the breast striations, if present, are relatively inconspicuous (P. Kennerley in litt.).

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Kennerley, co-author of the authoritative work *Reed and Bush Warblers* (Kennerley and Pearson 2010), also noted that the “pale edge to the outer primary [of the Gambell bird] is unique to some [species of] *Locustella*, including some but not all River Warblers.” He added that the Gambell bird “looks spot on for River.”

The bird was never definitively identified again after 7 October.

The River Warbler at Gambell was a young bird on the basis of its pointed primaries and rectrices, and by a molt limit in the greater coverts, visible in photos (P. Pyle in litt.).

Almost all authorities refer to *Locustella fluviatilis* with the English name “River Warbler,” but Clements et al. (2017) and www.eBird.org refer to the species as the “Eurasian River Warbler.”

The River Warbler is a widespread though patchily distributed species, and it is a long-distance migrant. It breeds in damp herbaceous vegetation from Germany and Denmark north to southern Sweden and Finland and south to northern Romania, east to western Siberia in the area of Omsk on the Irtysh River at ~70° E. It winters in southeastern Africa, from northeastern South Africa north to southern Kenya (Kennerley and Pearson 2010, Birdlife International 2017). Thus the eastern limits of its breeding range in Russia, and the winter range in southern Africa, are broadly similar to those of several other species that have occurred as vagrants to western Alaska, such as the Sedge Warbler (*A. schoenobaenus*; Gambell, September 2007; Rosenberg and Lehman 2008), Spotted Flycatcher (*Muscicapa striata*; Gambell, September 2002; Lehman 2003), and, especially, the Wood Warbler (*Phylloscopus sibilatrix*; multiple Alaska records; Gibson and Withrow 2015, Dunn and Alderfer 2017)—as well as that of an apparent Red-backed Shrike (*Lanius collurio*) present at Gambell at the same time as the River Warbler (Lehman et al. unpubl. data). The Wood Warbler has occurred also twice in Korea, approximately four times in Japan, and once in Taiwan; there are single records of the Sedge Warbler for Korea and Japan (OSJ 2012, N. Moores in litt., L. Ohtsuki in litt.). By contrast, there are as yet no documented records of the River Warbler from eastern Asia (N. Moores in litt.), probably the result of the species’ skulking behavior. River Warblers have occurred as vagrants at various seasons to the west of their normal range in northwestern Africa and in western Europe from Great Britain to Spain, and there are at least three records for Iceland (Kennerley and Pearson 2010).

A hearty thanks to the photographers who first flushed the bird and who worked so hard to obtain many photos: Sue Bryer, Clarence Irrigoo Jr., and Monte M. Taylor. I received invaluable input on the identification of the River Warbler from Peter Kennerley. Other helpful comments on the bird’s identification were received from Jon L. Dunn, Julian Hough, Nick Lethaby, Curtis A. Marantz, Guy McCaskie, and Peter Pyle. Information on the occurrence vagrant passerines in Korea and Japan was supplied by Brian E. Daniels, Nial Moores, and Leo Ohtsuki. Suggested improvements on a draft of the manuscript were provided by Sue Bryer, Jon L. Dunn, Kimball L. Garrett, Peter Kennerley, Curtis A. Marantz, and Dan Ruthrauff.

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ATTEMPTED KLEPTOPARASITISM OF A WHITE-TAILED KITE BY A PEREGRINE FALCON

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Kleptoparasitism, the intraspecific and interspecific stealing of food already procured, is an opportunistic method of foraging used by many species of birds (Brockmann and Barnard 1979). The Peregrine Falcon (*Falco peregrinus*) is known to kleptoparasitize a variety of bird species, including large gulls (*Larus* spp.), the Osprey (*Pandion haliaetus*), Black-winged Kite (*Elanus caeruleus*), Bald Eagle (*Haliaeetus leucocephalus*), Northern Harrier (*Circus hudsonius*), Eurasian Sparrowhawk (*Accipiter nisus*), Sharp-shinned Hawk (*Accipiter striatus*), Golden Eagle (*Aquila chrysaetos*), Eastern Imperial Eagle (*Aquila heliaca*), Bonelli's Eagle (*Aquila fasciata*), Red-tailed Hawk (*Buteo jamaicensis*), Rough-legged Hawk (*Buteo lagopus*), Common Kestrel (*Falco tinnunculus*), Merlin (*Falco columbarius*), Gyrfalcon (*Falco rusticolus*), Carrion Crow (*Corvus corone*), and Common Raven (*Corvus corax*) (Bent 1937, Meinertzhagen 1959, Dekker 1980, 1999, 2003, Longrigg 1981, Zubero-goitia et al 2002, Moshkin 2009, White et al. 2002, 2013). In this note we report the first documented incident of a Peregrine Falcon attempting to kleptoparasitize a White-tailed Kite (*Elanus leucurus*).



Figure 1. Attempted kleptoparasitism of a White-tailed Kite by an immature Peregrine Falcon near Lakeport, California, on 31 January 2014. Three photos illustrate the falcon approaching (A), the kite pivoting upward toward the falcon (B), and the falcon flying away (C).

Photos by Faith Rigolosi

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Around midday on 31 January 2014, Rigolosi was photographing two White-tailed Kites foraging in an orchard about 4 km southeast of Lakeport, Lake County, California (39° 00' 42" N, 122° 53' 34"). When she observed one flying with a small rodent, probably a California Vole (*Microtus californicus*), she began taking photographs. An immature Peregrine Falcon suddenly appeared and approached within 1 m of the kite (Figure 1a). In response, the kite hovered while facing the falcon and presented its talons and its prey toward the falcon (Figure 1b). The falcon instantly broke off its attack by flying above the kite (Figure 1c) and flew away. Afterward the kite flew away with its prey toward the area where the second White-tailed Kite was last seen.

Interspecific kleptoparasitism by the Peregrine Falcon is an opportunistic and seldom used foraging strategy. For example, Dekker (1980, 2003) recorded it in only six of 958 (0.6%) observations of foraging in Alberta and four of 652 (0.6%) observations in British Columbia. Given a previous report of a Peregrine Falcon successfully kleptoparasitizing a Black-winged Kite in Africa (Longrigg 1981), it is not surprising that a falcon would attempt to kleptoparasitize the congeneric White-tailed Kite.

Although the White-tailed Kite often attacks and is often attacked by other species of raptors, it is rarely kleptoparasitized. Of 37 successful prey captures by the White-tailed Kite observed by Stendell (1972), only one (3%) resulted in kleptoparasitism (by a Northern Harrier). Bammann (1975) did not report any incidents of kleptoparasitism during 586 interspecific interactions between White-tailed Kites and other raptors, which included only one interaction with a Peregrine Falcon, but he could not determine whether the kite attacked the falcon or vice versa. Warner and Rudd (1975) did not report any incidents of kleptoparasitism during 67 prey captures by the White-tailed Kite. Mohan (2004) observed 757 hunting flights by White-tailed Kites resulting in 195 captures; of the 757 it was victimized during <1% (no further details, including the kleptoparasitizing species, were reported). However, two species of raptors, the Aplomado Falcon (*Falco femoralis*) and Chimango Caracara (*Milvago chimango*), and one corvid, the American Crow (*Corvus brachyrhynchos*), have been reported to kleptoparasitize the White-tailed Kite (Dixon et al. 1957, Heredia and Clark 1984, Brown et al. 2003, Baladrón and Pretelli 2013). The rarity of the White-tailed Kite being a target of kleptoparasitism and our observation of the Peregrine Falcon's failing in its attempt suggest that the kite is tenacious in defending captured prey, rendering it a relatively unprofitable, seldom targeted host for potential kleptoparasites.

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ONSHORE FORAGING BY AN EARED GREBE

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The Eared Grebe (*Podiceps nigricollis*) is an aquatic, largely halophilic, species that inhabits open waters of the western half of North America (Jehl 1988, Grinnell and Miller 1944). A diving bird, it feeds primarily on benthic invertebrates (Cramp and Simmons 1977, Winkler and Cooper 1986, Jehl 1988, Roberts et al. 2013) but also gleans invertebrates from the water surface (Fjeldså 1981). Eared Grebes breed colonially in large freshwater lakes and marshes throughout the western United States and Canada, but at other life stages are uniquely adapted to use water of high salinity (Boe 1994, Ryser 1985). Immediately after breeding, Eared Grebes migrate to large inland saline lakes with abundant food sources, where they congregate and molt, becoming flightless (Jehl 1988, Ryser 1985, Cogswell 1977). Once the molt has ended and food resources are exhausted (between October and February), large numbers of Eared Grebes depart these inland saline lakes and spend the remaining winter months in open ocean (Jehl 1988). The species overwinters primarily in the Gulf of Mexico (Jehl and McKernan 2002), but coastal waters the entire length of California—including the Channel Islands (Howell 1917)—may host large wintering populations as well (Grinnell and Miller 1944). At Mono Lake, a large saline lake in eastern California, Eared Grebes feed on brine shrimp (*Artemia monica*) and brine flies (*Ephydra hians*), the latter often gleaned from the emergent bases of tufa towers (Jehl 1988). Here, I report a previously undescribed terrestrial gleaning behavior on a sandy ocean beach.

In the early afternoon of 14 November 2014, I accompanied a field course from the University of California, Berkeley, to a stretch of beach near Christy Ranch on the west end of Santa Cruz Island, the largest of the Channel Islands, in Santa Barbara County, California. Christy Ranch is situated adjacent to a wide sand beach (approximately 20 meters) that faces 280° west and extends 1.8 km. While walking north along the beach, I encountered an Eared Grebe hauled out on the wet sand at the maximum extent of the reach of the sweeping surf, just downslope from a deposit of beach wrack—piles of algae, terrestrial plants, driftwood, small rocks, and animal remains that had washed ashore, marking the tideline (Bousfield 1982). Although Merrill (2017) recently reported terrestrial foraging by the Pied-billed Grebe (*Podilymbus podiceps*) (see below), in 40 years of field experience I had never encountered any grebe species on land, and assumed this one was either injured or in poor health. The grebe appeared unconcerned by my presence during my extensive observations. When I had approached to within 10 meters, I witnessed the grebe lunge and stab in differing directions, seemingly at the sand around it. While I observed, a breaking wave swept slowly up the beach and the grebe rode it back to the surf. In the shallow surf the grebe dove once, briefly, and then bobbed and preened in the surf for a few moments as wave action carried it south, just past me. The grebe then rode back up the sand beach on another breaking wave. When the water retreated, the grebe, now within 5 meters of my position, began lunging and stabbing at the sand again (Figure 1). With the aid of a 200-mm camera lens, I could see that it was foraging for amphipods, specifically beach hoppers (*Traskorchestia traskiana*).

Amphipods such as *T. traskiana* dwell primarily in or under beach wrack carried ashore by wave action (Bousfield 1982). Beach wrack routinely becomes dislodged with incoming tides or waves that push it higher up the beach (Koch 1989). When the wrack is dislodged, large numbers of *T. traskiana* may be exposed, hopping randomly about until they find their way back to cover. On this occasion, in the moments after the retreat of the wave, I observed the grebe capture many amphipods with little effort. The capture rate diminished over time, yet the grebe persisted in one spot, pivoting on

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Figure 1. Eared Grebe lunging for amphipods on the open sand beach, downslope from displaced beach wrack (left, not pictured). Christy Ranch, Santa Cruz Island, California. Arrows indicate direction and extent of the last wave sweep (ocean is opposite direction from arrow).

Photo by Jeffery T. Wilcox



Figure 2. Note depressions in the sand as the Eared Grebe pivots on its breast before pushing off with its feet to lunge for prey.

Photo by Jeffery T. Wilcox

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its breast and lunging farther and farther (Figure 2). Only once did it clumsily shuffle up the beach after prey, but for only a distance of about twice its body length. When the supply of nearby amphipods was exhausted (i.e., out of reach or out of sight), the grebe caught a wave back into the surf and, using the same wave-riding action as before, repositioned itself on another section of beach and repeated the same feeding behavior as described above. I observed the grebe for more than 30 minutes in total. Even after I had walked to the end of the beach and returned, its behavior continued.

Grebes, as a group, are superb divers but move awkwardly on land because their legs are set far back on their body and the large cnemial crest on the tibiotarsus limits the flexibility of the knee joint, specializations for subsurface diving. Their principal foraging medium is water. Eared Grebes, however, have been known to glean off a terrestrial surface from the safety of water. In a foraging behavior described by Jehl (1988) at Mono Lake, Eared Grebes glean brine flies from tufa towers but do not leave the water to do so, since the towers are surrounded by lake water. In this situation, the grebes are safe from terrestrial predators and can dive under the surface if threatened from above. Merrill (2017) reported observing a Pied-billed Grebe scanning the muddy shore of an artificial pond before jumping from the water to shore and scooting through mud to seize an earthworm. The specific terrestrial foraging behavior that I witnessed on Santa Cruz Island appears to be unique, not only as a new observation for any grebe species, but also because the grebe left the relative safety of the water time and again, repeatedly exposing itself on the open beach.

Foraging behaviors previously described in the Eared Grebe demonstrate its ability to take advantage of congregations of prey (Jehl 1988, Caudell and Conover 2006). The deliberation with which the grebe I observed repeatedly rode the surf to within foraging distance of amphipods exposed by displaced wrack may reflect this, as beach hoppers are concentrated between the edge of breaking waves and the beach wrack. Although the risks of predation are elevated when foraging on the beach, the tradeoff may be access to concentrated prey.

I thank Lyndal Laughrin of the University of California Reserve System, The Nature Conservancy, and Paul Fine and his class IB 157 (Ecosystems of California) at the University of California, Berkeley, for inviting me to join them. Comments from Jeff Alvarez and edits by Nicole Parizeau greatly improved the manuscript.

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NOVEL FUNCTION OF FLUTTER DISPLAY IN THE BLACK-BACKED WOODPECKER

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Reported for a diverse array of avian taxa, flight displays span a wide range of behavioral functions, most commonly associated with territoriality, courtship, or threat defense (Sutherland 1963, Mather and Robertson 1992). *Picoides* woodpeckers engage in a variety of fluttering aerial displays, including the dramatic “butterfly flight” associated with pair bonding in the Downy (*P. pubescens*), Hairy (*P. villosus*), and Red-cockaded (*P. borealis*) woodpeckers (Kilham 1962, Jackson 1994). However, for many woodpecker species including the Black-backed (*P. arcticus*), fluttering displays occur in the context of territory defense and function as a threat display to deter intruders (Lawrence 1967, Short 1971, Tremblay et al. 2016). To remain consistent with other published sources (Short 1971, Tremblay et al. 2016) we refer to this behavior as the “flutter aerial display.” During the flutter aerial display in *Picoides* woodpeckers, an individual engages in a quivering, mothlike flight with rapid, shallow wingbeats. The wings are extended outward in line with the body and bowed slightly downward at the distal ends. The tail is spread, revealing the outer rectrices. The flight is usually directed toward an intruder and accompanied by territorial calls.

While monitoring Black-backed Woodpecker nests in burned forests of California’s Sierra Nevada, we observed flutter aerial displays between pair-bonded male and female Black-backed Woodpeckers in the absence of territorial intruders. Each of our three observations, representing two pairs, was made in Plumas National Forest during May 2017.

Pair A, 14 May 2017: A male and female were on two separate trees, about 30 m apart. The female flew to a nearby Jeffrey Pine (*Pinus jeffreyi*) and perched crosswise on a horizontal branch 0.3 m out from the trunk. Both the male and female were stationary for 20 seconds before the male flew 12 m, using the flutter aerial display, and landed beside the female. The female adopted a pose with her tail pointed straight out, head tilted slightly upward, and body lowered against the branch—a position termed the “invitation pose” (Kilham 1974). The pair then copulated for 8 seconds, then both individuals flew from the tree toward their nest cavity.

Pair A, 25 May 2017: The female was foraging on the trunk of an Incense Cedar (*Calocedrus decurrens*) when the male landed on a dead tree 1 m from her. The female then flew 5 m to a nearby dead Incense Cedar and perched crosswise on a horizontal branch. After a 15-second pause, the male flew 6 meters, using the flutter aerial display, and landed next to the female, who adopted the invitation pose. Copulation lasted 5 seconds, and both individuals flew off the tree in the same direction.

Pair B, 23 May 2017: A female landed on a horizontal branch of a dead fir tree (*Abies* sp.) and perched crosswise, 0.2 m away from the trunk. A male Black-backed Woodpecker flew into view and landed on a Red Fir (*A. magnifica*) 18 m away from the female. The male then flew directly at the female, using the flutter aerial display, and landed beside the female on the same branch. The female adopted the invitation pose, and the pair copulated for 8 seconds. The male then flew out of sight, and the female preened in the same location for 3 minutes before flying away.

Each of our observations followed a similar sequence: (1) female perched on horizontal branch, (2) male engaged in the flutter aerial display while flying to the female, (3)



Figure 1. A male Black-backed Woodpecker (on left) engages in the flutter aerial display while flying to copulate with a female (on right) in post-fire forest.

Artwork by Alma Schrage

female adopted the invitation pose, and (4) the male and female copulated. During the flutter aerial display, the male spread his tail to reveal the white outer retrices and flew slowly with shallow, mothlike wingbeats (Figure 1). Unlike agonistic flutter displays, the precopulatory flutter aerial display was not accompanied by any vocalizations. To our knowledge, these observations represent the first reports of the flutter aerial display functioning in a courtship role in *Picoides* woodpeckers. Male and female Black-backed Woodpeckers perform flutter aerial displays in agonistic situations, but during our observations only males engaged in the behavior prior to copulation.

The flutter aerial display is fully distinct from similar behavioral signals used by other members of the genus *Picoides*, including the agonistic wing-spreading display (Lawrence 1967, Short 1971) and a mate-pursuit duet flight termed the “butterfly flight” (Kilham 1960, 1962). In the butterfly flight, a male and female pursue each other in a flight characterized by slow, weak wingbeats with wings held well above the horizontal plane in a manner reminiscent of a butterfly’s wingbeats. The duo follow each other in a wheeling flight at canopy level (Kilham 1962, Jackson and Ouellet 2002).

During our study, every copulation we witnessed between Black-backed Woodpeckers was preceded by the male’s flutter aerial display. Additional observations would be necessary to conclude that these displays always lead to copulation or that copulation is always preceded by a display. Between members of a breeding pair, the flutter aerial display appears to represent a proximate stimulus for copulation and may be a fixed precopulatory ritual. Our observations suggest a novel precopulatory function for the flutter aerial display in the Black-backed Woodpecker.

The field portion of this study took place within national forests and was funded by the Plumas National Forest and the University of Connecticut. We thank Matthew Johnson and Plumas National Forest for providing logistical support. We also thank our dedicated field technicians for their efforts to locate and monitor Black-backed Woodpecker nests: Tina Arthur, Kristen Burgess, Nicholas Parker, and Mitch Poling. Finally, we thank Luke DeCicco and one anonymous reviewer for providing thoughtful comments to improve this manuscript. This is contribution 581 of The Institute for Bird Populations.

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WESTERN SCREECH-OWL (*MEGASCOPS KENNICOTTII CARDONENSIS*) IN THE SIERRA LA ASAMBLEA, BAJA CALIFORNIA, MÉXICO

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From 6 to 9 June 2016 Ruiz-Campos and León-Girón participated in a biological exploration of the Sierra La Asamblea, an isolated mountain range in the central desert of Baja California, lying about 25 km east of Laguna Chapala and about 65 km northwest of Bahía de los Angeles. Reaching a maximum elevation of 1661 m above sea level, the Sierra La Asamblea can be considered a sky island, having some plant species characteristic of transitional chaparral such as *Rhus ovata* (sugarbush), *Juniperus californica* (juniper), *Ephedra californica* (California ephedra), and *Simmondsia chinensis* (jojoba) as well as plants more typical of the lower surrounding desert such as *Brahea armata* (blue palm) and *Prosopis glandulosa* (honey mesquite). The plants of the Sierra Asamblea have been surveyed to substantial degree by Bullock et al. (2008), but our visit in June 2016 was the first by biologists focusing on birds

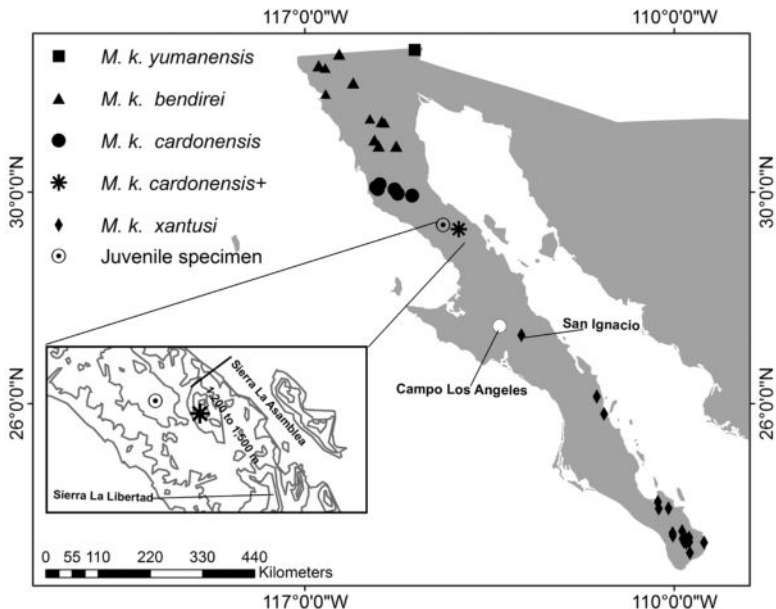


Figure 1. Distribution of specimens of the Western Screech-Owl on the peninsula of Baja California.

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Figure 2. Transitional chaparral vegetation at the site of collection of the Western Screech-Owl at Los Llanitos, Sierra La Asamblea, Baja California.

Photos by Gorgonio Ruiz-Campos

(Erickson et al. 2001, 2013). We did not reach the highest elevations of the Sierra La Asamblea, which support stands of *Pinus monophylla* (single-leaf pinyon) and *Adenostoma fasciculatum* (chamise). Therefore our survey of these mountains can be considered only preliminary.

By means of a single mist net placed on the plateau of Los Llanitos (29.30046° N, 114.08583° W, elevation 1219 m), we collected 10 specimens of nine species. This site lies about 7.4 km south of the highest point of the Sierra La Asamblea (Figures 1 and 2). The birds we observed and collected are all previously known from lower elevations in central Baja California. Among the specimens is one Western Screech-Owl (*Megascops kennicottii*), a male captured on 9 June 2016, deposited in the bird collection of the Universidad Autónoma de Baja California (UABC 2086)

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at Ensenada, Baja California, Mexico. We also heard two individuals in the same area on 7 June. The Western Screech-Owl is little known in central Baja California: through www.vetnet.org we find only three study skins collected in the 800 km between San Agustín (29.95° N) and La Paz (24.15° N), and only four reports via www.ebird.org in the same region.

Of the nine subspecies of the Western Screech-Owl recognized by Cannings et al. (2017), four occur in the Baja California peninsula: *M. k. yumanensis* in the lower Colorado River basin, *M. k. bendirei* in the region of Mediterranean climate in the northwest of the peninsula, *M. k. cardonensis* in the central desert, and *M. k. xantusi* from Campo Los Angeles in the Desierto de Vizcaino (27.47° N, 113.30° W) and San Ignacio south to the cape region (Miller and Miller 1951, Marshall 1967). Subspecies *cardonensis* is still known principally from the nine specimens in the San Diego Natural History Museum (SDNHM), collected 10–16 km east of El Rosario, on which Huey (1926) based the original description. In their map of the Western Screech-Owl's distribution in Mexico, Howell and Webb (1995) suggested a gap between these two last subspecies in the central peninsula, a gap in which the Sierra La Asamblea lies. The only specimen collected previously in this gap, LACM 73852 (Natural History Museum of Los Angeles County), from Laguna Chapala, 22 July 1939, is a molting juvenile in which the characters of the subspecies are not discernible. Therefore we investigated what subspecies UABC 2086 represents.

The subspecies of the Western Screech-Owl differ in both size and color (Miller and Miller 1951, Marshall 1967). Because of the lack of specimens of *M. k. cardonensis* and *xantusi* in the collection at UABC, Unitt brought 10 specimens, including the holotype of *cardonensis*, from SDNHM to Ensenada for comparison. We quantified the color of the dorsal plumage with a Minolta CR-300 colorimeter. Because of the heterogeneity of the mottled plumage, we took 10 readings from each specimen measured and averaged them. We measured the specimens' wings in the standard way, unflattened, from the bend of the wrist to the tip of the longest primary. After analyzing variation in the screech-owls of the southwestern United States and northwestern Mexico on the basis of 438 specimens, Miller and Miller (1951) reported other external measurements to be uninformative.

Megascops k. bendirei (with *quercinus* as a synonym, Marshall 1967, Cannings et al. 2017), occurring in the northwest of Baja California, is considerably larger than the other subspecies of the Western Screech-Owl in the peninsula: wing length $162.5 \pm$ [standard deviation] 5.3 mm (Cannings et al. 2017). At a wing length of 145.6 mm, UABC 2086 is much too small for *bendirei*, as well as differing in its finer plumage patterning. Marshall (1967) implied that the screech-owl population of San Diego County, Upper California, represents *cardonensis*, with which he synonymized *M. k. clazus* Oberholser, 1937 from a type locality still farther north in the San Jacinto Mountains, Riverside County. These conclusions do not account for the subspecies' wide difference in size, without overlap, as well as the difference in underpart pattern between the fine barring of *cardonensis* and the coarser barring of *bendirei* (Unitt 2004, Figure 3). Among 21 specimens of the Western Screech-Owl collected in San Diego County from 1979 through 2013 (SDNHM), the mean wing length of 10 males is 156.6 ± 3.5 mm (range 151–160), of 11 females is 165.5 ± 2.2 mm (range 162–169). The interpretation of Miller and Miller (1951), that the larger subspecies extends, along a cline of decreasing size, south to the Sierra San Pedro Mártir in Baja California is corroborated by two additional specimens from the west slope of that range, one from Rancho Santa Cruz (30.875° N, 115.630° W, UABC 474, male, wing chord 153.5 mm), another from Rancho Mike's Sky (31.095° N, 115.622° W, UABC 2132, female, wing chord 166 mm).

In the original description of *M. k. cardonensis*, Huey (1926) reported the wing length of four males to average 146.5 mm (range 144.5–148), of five females to average 149.5 mm (range 147.5–152). The measurements tabulated by Miller and

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Miller (1951), based on the same specimens, do not differ materially. Thus at 145.6 mm UABC 2086 is typical of *cardonensis* in size. Cannings et al. (2017) did not designate measurements of *cardonensis* under that name, but because their entries for "*M. k. xantusi*" are essentially the same as those for *cardonensis*, and those for "*M. k. xantusi* (S. Baja California)" are on a separate line, we suspect the former are actually for *cardonensis*, just mislabeled.

Megascops k. xantusi of Baja California Sur is the smallest subspecies of the Western Screech-Owl with mean wing length of males 141.7 ± 3.6 mm (Miller and Miller 1951). Thus UABC 2086 is within the range expected for *xantusi*, if on the large side. In pattern, however, it has the underparts finely barred as is characteristic of *cardonensis*, though more densely barred than in *xantusi* (Figure 4) or in the pale *yumanensis* of northeastern Baja California. In shade of the upperparts UABC 2086 is equivocal. The brightness of its dorsal plumage as measured by the colorimeter (*L*, higher values represent paler color) was 32.8. In five specimens of *cardonensis* values of *L* ranged from 28.2 to 32.7, whereas in three of *xantusi* they ranged from 32.6 to 36.4. Nevertheless, the dorsal surface appears to have the "salt and pepper" texture of fine dark freckles characteristic of *cardonensis* and *bendirei* (Figure 5).

We therefore extend the range of *M. k. cardonensis* south at least to 29.3° N and narrow the apparent distributional gap between the two peninsular subspecies. Additional specimens from between 27° and 29° N would likely reveal intergradation between *cardonensis* and *xantusi*, as reported by Marshall (1967:13) on the basis of "the only available specimen from the middle of the peninsula," presumably the specimen from Campo Los Angeles.

We thank JiJi Foundation for financial support of the biological exploration of the Sierra La Asamblea. José Delgadillo for his valuable help in the identification of vegetation at our study site, Julián García-Walther for his help in the field, and Telésforo Sánchez and ranchers for helping us with horses and mules transporting equipment and people to the study sites. The Dirección General de Vida Silvestre de México permitted our collecting (09/K5-1652/05/16). Thanks to Kimball L. Garrett for sharing a photo of LACM 73852 and to Matthew J. Baumann and Daniel D. Gibson for their helpful reviews of the manuscript.

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Figure 3. Pattern of underparts in *Megascops kennicottii bendirei* (left two specimens, SDNHM 53397 and 53728, both from San Diego County) and *M. k. cardonensis* (two right specimens, SDNHM 8671 and the type specimen, 8611). All specimens are females. Beside the wide difference in size, note the difference in pattern, especially on the belly: coarser in *bendirei*, finer in *cardonensis*.

Photo by Gorgonio Ruiz-Campos



Figure 4. Pattern of underparts in *Megascops kennicottii cardonensis* (left, SDNHM 8615, center, UABC 2086) and *M. k. xantusi* (right, SDNHM 35322).

Photo by Gorgonio Ruiz-Campos

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Figure 5. Pattern of upperparts in *Megascops kennicottii cardonensis* (left, SDNHM 8612; center, UABC 2086) and *M. k. xantusi* (right, SDNHM 35322).

Photo by Gorgonio Ruiz-Campos

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NESTING OF THE CRESTED CARACARA IN ORGAN PIPE CACTUS NATIONAL MONUMENT, ARIZONA

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In the United States, breeding of the Crested Caracara (*Caracara cheriway*) has been documented in Florida, Texas, Louisiana, and Arizona (Morrison and Dwyer 2012, Jenness 2015). In Arizona, the caracara has been long familiar to the Tohono O'odham (Rea 2007), but the first nest reported in the scientific literature was found in 1960, in the Tohono O'odham Nation (Levy 1961). More nests were discovered there in the 1970s (Levy 1961, Ellis et al. 1988). From 1986 to 1988, Levy (1988) observed 21 nests in this area. Only two nests were known outside the Tohono O'odham Nation at that time, one west of Tucson (in 1964) and one north of Tucson (in 1988). In the last decade at least 15 active nests have been found in Arizona outside of the Tohono O'odham Nation, north and west of Tucson in the North Altar Valley and on the Santa Cruz Flats (D. Jenness pers. comm.).

Located in the Sonoran Desert immediately west of the Tohono O'odham Nation, Organ Pipe Cactus National Monument (32° N, 112° W) encompasses 832 km² and shares a 48-km border with Mexico. Huey (1942) did not record the caracara on the basis of his survey there in 1939, but sight records have been consistent for several decades since. No caracara nests have previously been confirmed at Organ Pipe Cactus National Monument, though Levy (1988) mentioned a "vague" report of one in 1964.

Within Organ Pipe Cactus National Monument, we identified two active nest sites in 2016 and a third in 2017. All three nests were in the southernmost section of Organ Pipe, along the international border 25 km west of the nearest previously known nest, near Ali Chuk, Tohono O'odham Nation (Levy 1988, Figure 1). The Organ Pipe nests conform with those previously reported in Arizona, with respect to situation, habitat, and elevation (Levy 1988, 1998, Corman 2005, Jenness 2015). The Organ Pipe nest sites were in Arizona upland, Sonoran desert scrub (Brown 1982) with sparse saguaro cacti (*Carnegiea gigantea*). The dominant shrubs were creosote (*Larrea tridentata*) and triangle-leaf bursage (*Ambrosia deltoidea*). Saltbush (*Atriplex* sp.) and white bursage (*Ambrosia dumosa*) were present but less common. The nests ranged in elevation from 438 to 467 m and were placed 3.9–4.5 m above the ground in mature saguaros approximately 10 m tall. Each saguaro with a nest had nine or ten upright arms growing parallel to the main stem. Three arms and the main stem supported each nest. All nests were oriented south-southeast of the main stem of the saguaro.

In April 2016 we observed two active (*sensu* Postapulsky 1974) caracara nests in Organ Pipe, to which we refer as nest one and nest two, and discovered nest three 1 km north of site two. Nest three remained inactive in 2016. In April 2017 it was active but nest two was inactive. Nest one was active in both years. We attempted to monitor each nest at least once per month during the winter and at least twice per month in the other seasons. We documented activity at these sites from April 2016 through April 2017.

On 8 April 2016 an adult caracara was found at nest one. On 18 and 25 April, an adult was incubating. On 31 May we observed two nestlings that J. L. Morrison (pers. comm.) estimated to be about seven weeks old, on the basis of our photos. Young caracaras were not confirmed in June, but on 30 June one adult was flying toward the nest carrying a horned lizard (*Phrynosoma* sp.). Thirty minutes later one adult and one caracara of unknown age flushed from the ground within 200 m of the nest. On 13 July both adults were observed, one in the nest. On 7 September one

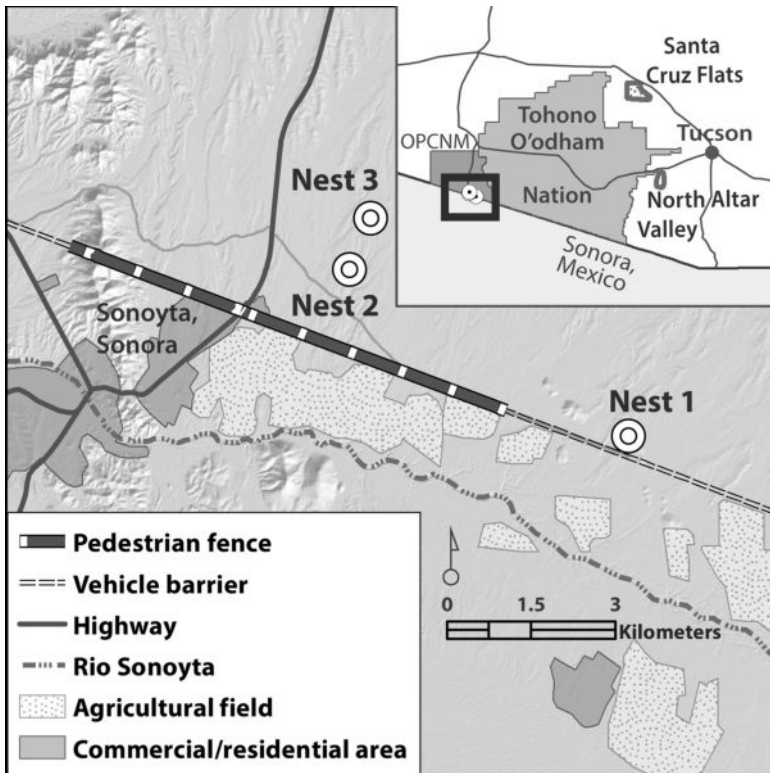


Figure 1. Approximate locations of nests of the Crested Caracara in Organ Pipe Cactus National Monument, Arizona, 2016–2017.

nestling was observed. On 5 October we observed one fledgling attempting to fly and one adult carrying a prey item to another fledgling on the ground.

On seven occasions between 14 September and 12 October we observed an adult bringing prey to nest one. Prey items included a horned lizard (*Phrynosoma* sp.), coachwhip snake (*Masticophis flagellum*), rattlesnake (*Crotalus* sp.), unidentified lizards, and unidentified insects.

On 16 February 2017 we observed two adults adding material to a nest in a saguaro 300 m south of site one (Figure 2). Because of the mixture of large sticks and small twigs this structure may have been previously used by other species. The Red-tailed Hawk (*Buteo jamaicensis*), Harris's Hawk (*Parabuteo unicinctus*), and Common Raven (*Corvus corax*) also build nests in large saguaros but use heavier sticks than do caracaras, which use fine twigs (Levy 1988). It is not unusual for caracaras to have alternate nests near their active nest (Levy 1988, Morrison and Dwyer 2012). On 10 March we observed two caracaras between this nest and site one, but on 21 March we found a Great Horned Owl (*Bubo virginianus*) in the nest. The caracaras were not seen again until 4 April, when one adult was observed in the original nest (site one).

Nest two was found 5.8 km west of site one and was confirmed active on 13 April 2016 when one adult was observed incubating. We observed an adult in the nest from

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Figure 2. Two adult Crested Caracara building an alternate nest, which was soon taken over by a Great Horned Owl. February 2017, Organ Pipe Cactus National Monument, Arizona.

Photo by Tyler H. Coleman, courtesy of the National Park Service



Figure 3. Fledgling Crested Caracara on the ground after an attempt to fly. October 2016, Organ Pipe Cactus National Monument, Arizona.

Photo by Tyler H. Coleman, courtesy of the National Park Service

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18 April to 12 May. The adults were observed near the nest four times after 12 May and were last seen on 30 June. It was not known if this nest produced fledglings, but from the timing of our observations success was unlikely (Levy 1988).

We found an alternate nest (site three) 1 km north of site two on 6 April 2016. It contained fine nest materials commonly used by caracaras (Levy 1988). We do not know if caracaras attempted to use site three in 2016. On 11 April 2017, however, an adult was incubating at this nest and a second adult was perched nearby. Conversely, no caracaras were found at nest two at that time.

The fate of nest one's first brood in 2016 is unknown. From the size of the nestlings on 31 May they would have been mature enough to fledge before 7 June when the nest was empty. We found an incubating adult on 13 July, only 43 days after nestlings were last observed. Caracaras are known to double brood as well as to attempt a second nesting when the first fails (Morrison and Dwyer 2012). In cases of double brooding in Florida, caracaras do not start a second brood until two or three months after the first brood fledges (J. L. Morrison pers. comm.). We confirmed that two young fledged from the second attempt on 5 October (Figure 3). Successful fledging of two broods has also been found in Texas and southern Baja California, where caracaras fledged in June and incubated in August (Dickinson and Arnold 1996, Rivera-Rodriguez and Rodriguez-Estrella 1998, Morrison and Dwyer 2012). If nest one fledged two broods it would be the first instance of the caracara double brooding known in Arizona. Whether or not the first attempt failed, the success of a second attempt is the first documented in Arizona. In 2015, a pair made two failed nesting attempts on the Santa Cruz Flats (D. Jenness pers. comm.).

The discovery of caracaras nesting at Organ Pipe suggests a westward expansion of the species' range in Arizona and the United States, fitting the broad range expansion described by Jenness (2015). The nesting in Organ Pipe is possibly the result of the availability of protected nest sites within the monument and opportunities for foraging in agricultural fields in adjacent Mexico, from which direction we saw an adult bringing prey on seven occasions. All three nests found at Organ Pipe were located near the international border, and searches in 2016 and early 2017 did not reveal any nests or caracaras north of site three. On 18 November 2017, Organ Pipe staff witnessed two caracaras foraging on the ground in an agricultural field in Mexico between nest one and two. Selection of nest sites in Sonoran desert scrub near agricultural fields or free-ranging livestock is consistent with observations elsewhere in Arizona (Jenness 2015). In Florida, caracaras nest in higher concentrations around cattle ranches, often within 2 km of one another (Morrison and Humphrey 2001). In Baja California, the caracara's nest success and high productivity might be related to the availability of suitable nest supports and human-provided food sources (Rodriguez-Estrella 1996). Caracaras adapt well to moderate habitat changes (Rodriguez-Estrella 1996), and minor disturbance by humans is unlikely to cause desertion of eggs or young (Morrison and Humphrey 2001). Therefore further range expansion in Arizona and the Sonoran Desert might be expected in areas with similar resources.

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BOOK REVIEW

Raptors of Mexico and Central America, by William S. Clark and N. John Schmitt. 2017. Princeton University Press. 272 pages, 32 color plates, 213 color photos, 64 maps, 3 line drawings. Hardcover, \$39.95. ISBN 978-1-4008-8507-7.

There are numerous comprehensive bird guides that cover regions in the neotropics, including Mexico and Central America, but no previously published guides for this region are dedicated solely to raptors. Furthermore, most guides do not accurately illustrate the shapes and plumages of raptors, making raptor identification in the neotropics challenging without exhaustive experience. The much anticipated *Raptors of Mexico and Central America* is the first guide dedicated to raptors in Mexico and Central America and the first to correctly illustrate them as they would be observed in the field. Those who have had the opportunity to experience the neotropics will greatly appreciate this book, as it allows for detailed study of elusive species. Raptors are arguably among the most challenging of taxa to identify, owing to their highly variable plumage, behavior, and generally low abundance. In the neotropics, many raptors are a challenge simply to observe, making a book of this magnitude a respectable feat and an important contribution to the avian literature.

With many years of experience with neotropical raptors in the field and in collections, Clark and Schmitt accurately and exceptionally depict 69 species of diurnal raptors, including vagrants, that have been recorded from Mexico to Panama. Clark has published numerous books and peer-reviewed articles and is acknowledged as a global authority in raptor identification. With this knowledge, the attention to detail in this guide is second to none.

The word “raptor” is a loosely used term that may include several avian orders. Clark and Schmitt include the Accipitriformes (kites, hawks, eagles, and allies, 50 species), Cathartiformes (New World vultures, 5 species), and Falconiformes (falcons and allies, 14 species). Owls (Strigiformes) are not included. The book is laid out like a field guide with an introduction followed by color plates and species accounts. When first seen, however, *Raptors of Mexico and Central America* does not look or feel like your standard field guide, as it is a hardcover book measuring 7 × 10.2 inches and 1.2 inches thick, which makes it more of a reference book than a field guide. The relatively large size is critical for displaying the color plates, but as a result there are areas of negative space throughout the species accounts where more photos or text could have been added. For use in the field, a softcover edition and reduced size would be useful.

The majority of the introduction is what you would expect in a field guide, but there are a few judicious additions. It includes an overview of why and how the guide was produced. A neat feature that is atypical of guides is an itemized list of helpful facts to assist the reader in properly identifying raptors in the field. I find this to be an insightful section for less experienced raptor enthusiasts or birders. Also in the introduction, there is a glossary that Clark has used in his other books that includes 160 definitions of terms related to raptors. Some are intuitive and probably unnecessary (e.g., hawk), but most could be helpful. To assist in visualizing the more descriptive terms for identification, there are six drawings of raptor topography, which is a great educational tool.

The most exceptional part of the book is the section including 32 color plates, which has a green tab for ease of location. These plates are comprehensive, showcasing how these species would be observed in the field, both in flight and perched. This book stands apart in that it shows the birds at various angles in flight, as you see them in the field. Another aspect I greatly appreciate is how similar species are illustrated on the same plate. Nothing is more frustrating than having to flip between multiple pages to compare characteristics. The nuances of the illustrations, such as birds with prey, perched on a fence post, on the ground, or in the canopy, add an important behavioral component that is often lost in field guides.

Few guides cover all of raptors' often complex plumage variations. Some species comprise multiple subspecies, some are polymorphic, some are sexually dimorphic, and

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some go through multiple plumage changes before reaching the definitive adult plumage. The only previously published guide to come close to illustrating this variation is *Raptors of the World* (2006, Princeton University Press). For example, juvenile Gray-headed Kites (*Leptodon cayanensis*) are polymorphic, with a light morph lacking streaking, an intermediate morph that has moderate streaking, and what I would call a dark morph (Clark calls it an intermediate) that has heavy streaking. The most extraordinary feat of this book is that its color plates cover all these plumage types; that is the attention to detail that this guide has to offer.

The core of the book is the species accounts, which take up 70% of the guide, with two to four pages dedicated to each species. For each species, the reference text is divided into an identification summary and sections on taxonomy and geographic variation, similar species, status and distribution, habitat, behavior, molt, description, fine points, unusual plumages, hybrids, and etymology. The information in these sections is very general and thin with information. I would like to have seen more attention to detail, especially in regards to habitat. Color photos accompany each species account, adding to the book tremendously by showing how the species appears in the field as well as fine plumage details. The photos vary greatly in size, from a full page to as small as 1.5 × 1.5 inches. This variation makes *Raptors of Mexico and Central America* feel more like a reference book, but I like the photos' dispersion throughout the text more than if they had all been grouped in a single section. The photos' quality is variable, and the number of photos per species varies from two to four. As a result, not all plumage types are included. The use of photos to illustrate such highly variable group can have its setbacks and challenges, but Clark does a commendable job choosing photos that show the more commonly observed plumages. The content is easy to read and the format is easy to follow. My favorite section for each species account is the one on behavior. Behavior is important to identifying birds, but field guides commonly neglect those important and often diagnostic behavioral characteristics.

Now that I have given this phenomenal guide the praise it deserves, I do have a few constructive criticisms. The range maps are in the species accounts at the top of the page rather than on the color plates. I do not mind the maps being in the species accounts, but the range maps are much too small. There seems to be enough white space to allow larger maps, as range maps are an important component of any field guide. Also, in the introduction, Clark states that the American Ornithological Society's (AOS) taxonomy was used, but that is not the case with four species. Clark refers to *Spizaetus melanoleucus* as the Black and White Eagle, but the AOS's common name is Black-and-white Hawk-Eagle. I have discussed this with Clark, and he believes the species is not a hawk-eagle because it is an aerial hunter that doesn't hunt in forests and that the name should be changed. The AOS and many raptor researchers consider the Harlan's Hawk to be a subspecies of the Red-tailed Hawk, as *Buteo jamaicensis harlani*, but in this guide Clark treats it as a separate species. Other taxonomic inconsistencies include the genus of the Tiny Hawk, which Clark classifies as *Hieraspiza* on the basis of bone structure but is classified as *Accipiter* by the AOS. Finally, Clark considers the White-breasted Hawk a full species, *Accipiter chionogaster*, whereas the AOS classifies it as a subspecies of the Sharp-shinned Hawk, *Accipiter striatus*. Clark alludes to making these taxonomic changes on the basis of recently published papers, but peer-reviewed articles to support these decisions are lacking.

Despite these minor criticisms, this guide is an exceptional piece of work that will be the primary reference for neotropical raptor identification for many years. The attention to detail is matched by no other guide in the region and will assist in the great challenge of identifying this exceptionally variable group of birds. It is a must-have for any raptor enthusiast, birder in the Neotropical Region, or birder traveling to the neotropics. This guide has made a paramount contribution to the plethora of bird guides and will be appreciated by anyone who opens it up.

Ryan A. Phillips
Belize Bird Conservancy

IN MEMORIAM

JON P. WINTER, 1941–2014



Jon Winter, the secretary of the California Bird Records Committee during the first seven years of its existence, died of heart failure on 3 June 2014 at the age of 73 in Santa Rosa, California, his home for 42 years. He is survived by his wife of 37 years, Christine, his two daughters, Danielle and Erin, and twin grandsons, Bryson and Wyatt.

Jon Pomeroy Winter was born in Butte, Montana, on 12 January 1941 and lived there until age nine when his family moved to San Francisco, where they resided a short while before resettling in San Rafael, California. There he grew up, started birding at age eleven, and attended high school. Besides birding, Jon's other early passions included sports (varsity football) and music (he played drums and flute), which led to gigs playing in clubs in Sausalito. After graduating from high school, he followed a musical friend to New York City in 1963 and soon immersed himself in the avant-garde (free)

jazz scene, supporting himself with odd jobs, including delivering notes and scripts to Broadway actors as a courier for a talent agency. Playing flute and percussion, Jon led a band, the Free Form Improvisation Ensemble, was a charter member of the Jazz Composers Guild collective, and enjoyed the company and inspiration of some of the jazz giants of the day. In 1965 Jon, tired of the jazz lifestyle, returned to northern California and turned his attention to birds.

In 1969 Jon moved to southern California to attend San Diego State University, where he majored in zoology. He soon met many of the area's prominent birders and began to bird regularly with Guy McCaskie (whom he described as a mentor), Cliff Lyons, Scott Terrill, and others, often going on extended trips throughout California and beyond (e.g., Baja California and Texas). Jon was as much into mammalogy as ornithology and while on birding trips put out mammal traps nightly. On such trips Jon would play his wind instruments around the camp fire, and was known to call in saw-whet owls with a wooden flute. Between birding locations he would let others drive while at least once a day he meditated. On a trip north from San Diego, Jon first met Rich Stallcup on a pelagic trip to the Farallones.

In the late 1960s Jon learned of the nascent California Field Ornithologists (CFO), joined as a charter member, and also joined its nine-person Rare Bird Committee in 1970. At its inception the committee adopted procedures similar to those used for about a decade by the Belgian and British rarities committees, which were familiar to CFO co-founders Pierre Devillers and Guy McCaskie, respectively. Jon volunteered to serve as the committee's voting secretary, and for the next seven years managed the committee's process of reviewing rare bird reports in a manner that is remembered as organized, clear-headed, and without drama. Jon wrote the committee's first report, covering the years 1970–1972 (*W. Birds* 4:101–106, 1973), and co-authored its second report (*W. Birds* 6:135–144, 1975). Details of the format and contents of such committee reports have changed over subsequent decades, but those first two set in place the essential elements of all of the reports that followed. Jon's active involve-

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ment in the committee, and in WFO, ended when he stepped down as committee secretary in November 1976, but he remained a member of WFO until his death.

Jon left San Diego and transferred to Sonoma State University in 1973 to be near his terminally ill father, and he received his B.A. in biology from that institution in 1975. After returning to northern California, Jon was extremely active in that region's birding scene. From 1975 to 1979, he co-authored 16 seasonal reports for the Middle Pacific Coast Region of *American Birds*, outlasting five of his co-authors in sequence (Am. Birds 29[3]–33[5]). During that time Jon strengthened his affiliation with Point Reyes Bird Observatory via bird banding at Palomarin, volunteering on the Farallones in fall migration in 1975, and co-leading birding trips to southeast Arizona with Rich Stallcup in 1975 and 1976; he remained a research associate of PRBO for many years thereafter. Jon led birding tours as far afield as the Antarctic, but as with other bird pursuits his teaching likewise was focused in northern California. Jon was among the first to teach classes on bird identification (<http://creagrus.home.montereybay.com/CAwhoJW.html>), and he taught ornithology at the College of Marin or Santa Rosa Junior College for 14 years. Jon was a co-founder, with Rich Stallcup, of the Point Reyes Christmas Bird Count in 1970, insightfully replacing the Drake's Bay and Tomales CBCs but capturing portions of both and additional turf to form a circle that has consistently had one of the highest species and field-participant totals north of the United States–Mexican border.

After high school Jon worked 20 summers as a fire lookout for the U.S. Forest Service, first in Oregon and later in California. He was remembered as one of the best, sometimes arousing envy among fellow lookouts at being the first to detect a distant fire, one well outside his area. He spent a dozen summers atop Duncan Peak near Robinson Flat in the Tahoe National Forest on the west slope of the Sierra Nevada, and this location became a major attractant for birders in Jon's large circle of friends. Within this circle, Jon—along with Rich Stallcup, his dear friend for 46 years—was seen as somewhat of a shaman, having the ability to occasionally enter a trance-like state of mind. Perhaps drawing on his time in Montana, Jon took to bestowing Native American-inspired names when the circumstances accompanying a gathering of friends sufficiently inspired him. Jon took the name Lone Bear, and some of the others he named included Apache Kid, Bright Doe, Prairie Flower, Running Water, Short Bull, Singing Lizard, White Bear (later Cloud Bear), and Young Lightfoot. The "Tribe" was a tight group of birders who shared a world view and spiritual connection. They frequently camped at Robinson Flat, birded during the day, and partied at the Duncan Peak Lookout at night. A member of his tribe reckoned one of the most amazing experiences of his life was sleeping beneath the lookout while Jon played his flute as Hermit Thrushes sang. In 1977 Jon left the lookout and things changed, as it was harder to stay connected as folks started drifting down their respective life paths, though they remained connected in spirit.

Jon's time at Duncan Peak garnered him considerable expertise with the Sierran avifauna and spurred his intense interest in owls. One day Jon found an injured Flammulated Owl on the road and nursed it back to health. Observing that the owl was terrified of the mice he tried to feed it, Jon noted its small feet and speculated it must eat moths, which the owl subsequently devoured with vigor when fed. In 1971 he shared his knowhow of locating and actually seeing a Flammulated Owl in an article in *Birding* (3:205–208), and later summarized what was known of the species' distribution in California (W. Birds 5:25–44, 1974). Both of these influential articles remain practical and useful to this day. In addition to various scientific articles, Jon later penned very insightful and highly personal memorials for two of his closest friends and birding companions, Cliff Lyons (W. Birds 43:192, 2012) and Rich Stallcup (W. Birds 44:155–157, 2013).

It is not clear how or exactly when Jon's interest in the Great Gray Owl began, but in 1979, with support from the California Department of Fish and Game, he

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spent 70 days in the field and many more in museums and libraries, trying to better understand the species' status and distribution in California. Among Jon's Great Gray Owl sightings that year were two in places he would come to know well: Yosemite National Park and Ackerson Meadow along the edge of the park on the road to Hetch Hetchy. Jon's first recommendation in his report was that the state place the owl on its endangered species list, and in 1980 it did so.

Jon studied the biology and ecology of the Great Gray Owl at Ackerson Meadow and various spots in Yosemite steadily from 1980 to 1989 and continued to gather data on the species on a sporadic basis thereafter. He completed his M.A. thesis on the Great Gray Owl, receiving his degree in ecology and systematic biology from San Francisco State University in 1986. In recognition of his breadth of knowledge and dedication to the conservation of the species, the 2016 conservation strategy for the Great Gray Owl in California (www.birdpop.org/docs/pubs/IBPConservationStrategyVersion1.0.pdf) was dedicated to Jon posthumously. Jon was also a prodigious taker of field notes, which he typed after returning from the field. Jon left behind 27 large loose-leaf notebooks filled with field notes and about a dozen personal journals. His contribution of knowledge was a pervasive influence in the descriptions of avifaunal patterns in coniferous forests of the Sierra Nevada in Gaines's (1988) *Birds of Yosemite and the East Slope*. After his main tenure as a Great Gray Owl biologist, Jon worked for various environmental consulting firms, and from 1998 up to the time of his death he was the principal wildlife biologist for Jon Winter & Associates.

During the summers he spent studying Great Gray Owls in the Sierra, Jon lived in an old ranch house in Ackerson Meadow where he often hosted birding friends. The meadow was dear to Jon's heart, and he was always willing to lead trips or give talks to extol its virtues in hopes that one day it might be added to the park. Jon's wish was realized, posthumously, in September 2016 when The Trust for Public Land, which had purchased the Ackerson Ranch, donated this biologically rich 400-acre meadow to Yosemite National Park.

Although he will be well remembered as an ornithologist, birder, and conservationist, Jon was also a renaissance man with keen interests in jazz, physics, Zen, meditation, photography, and martial arts (being a holder of a third-degree black belt in Tae Kwon Do). A consummate conversationalist, as a mentor he was always willing to share his broad knowledge. As one of his tribe, Raven, described him in a post to Jon's obituary webpage: "Jon Winter was a leader of our tribe, a group of birders/naturalists in the 1970s, maybe 20 in all, who traversed the western states, land and sea, had great, mystical caravans that represented the beginnings of the environmental movement.... He was at once a soulful jazz musician, mystic native sage, grumpy old bear, and joyful, caring friend." These are sentiments we are sure are shared and will be long remembered by many.

W. David Shuford and David E. Quady

FEATURED PHOTO

FIRST RECORD OF MELANISM IN A *MYIARCHUS* FLYCATCHER

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On 25 May 2008, I observed an aberrantly plumaged Brown-crested Flycatcher (*Myiarchus tyrannulus*) at the China Ranch Date Farm near Tecopa, in southeastern Inyo County, California (35° 48' N, 116° 11' W). Apart from rufous flight and tail feathers, this bird was almost entirely brownish-black—see photo on the outside back cover of this issue of *Western Birds*.

Although it was oddly plumaged, I identified this relatively large flycatcher with a disproportionately large head, bushy crest, heavy bill, and long tail as a *Myiarchus* flycatcher. Furthermore, the bird appeared to be a Brown-crested Flycatcher, because of its larger size and heavier bill relative to the Ash-throated Flycatcher (*M. cinerascens*), the only other *Myiarchus* flycatcher that nests at this location. This individual called several times, giving what has been described as the “vibrato whistle” (Cardiff and Ditmann 2000).

This aberrantly plumaged bird was paired with a normally plumaged Brown-crested Flycatcher and engaged in nest building. I initially encountered the melanistic bird as it was collecting nesting material, and then as it perched out in the open on shrubs and on a tractor. The nesting material appeared to consist of dried grasses, forbs, and twigs. Upon returning to the canopy of the adjacent dense riparian thicket, the melanistic flycatcher interacted with a normally plumaged Brown-crested Flycatcher, engaging in chases and calling. During the interaction with the other bird, I heard one of the birds sing several several short “THREE-for-you” phrases, a component of the dawn song. I interpreted the behavior that I observed as courtship chases (Cardiff and Ditmann 2000, Tweit and Tweit 2002), suggesting these birds were potentially a breeding pair. *Myiarchus* flycatchers sing various components of their dawn songs as part of pair-bond maintenance (Miller and Lanyon 2014). The pair remained close to one another within a small area (~0.1 acre) during the entire time of my observation; however, I was not able to locate their nest cavity.

The only parts of this bird's plumage that appeared normally pigmented were those that are typically rufous, namely, the remiges and rectrices. The rest of the plumage, including the normally gray face and breast and yellow belly, were brownish black. Typical rufous pigmentation was present in the primaries, which could be seen on the folded wing. Wingbars were absent, as the tips of the wing coverts lacked their usual buff color, and the tips were instead the same brownish-black as the rest of the bird. The rectrices were a normal rust color, but the feather edgings were darker than usual, appearing blackish brown instead of a grayish brown. The bill and legs were a typical black color, and the brown coloration of the irides did not appear to be abnormal. In flight, the underside of the bird appeared entirely brownish-black, except for the aforementioned rufous.

Shortly thereafter, I corresponded with Tom and Jo Heindel, *North American Birds* sub-regional editors for Inyo County, regarding my observations. They requested photos of the bird and contacted Steven Cardiff, collections manager at Louisiana State University's Museum of Natural Science, to solicit his opinion. Cardiff suggested the possibility that this bird had been covered with soot from exploring chimneys or exhaust pipes as potential nest locations. To address this possibility, I reviewed photos online of birds covered with soot, many of which had been rescued from chimneys

FEATURED PHOTO

and flue pipes. To appear as it did, the Brown-crested Flycatcher at China Ranch would have needed to be quite heavily covered in soot. The photos I reviewed showed birds with matted feathers and ocular discharge. In contrast, the China Ranch bird appeared healthy, with clean plumage in good condition, evenly colored feathers, and no evidence of lighter or normally colored bases to the body or flight feathers. If this bird had acquired soot or dirt from an exogenous source, I would have expected unevenness in the color of the feathers, as some areas, such as the undersides of the wings, would be much less likely to get dirty. Furthermore, soot might be differentially removed by preening or other activities. Although the role of each sex of the Brown-crested Flycatcher in nest-building is not well understood (Cardiff and Dittmann 2000), if both sexes participate in nest-building, or at least enter the cavity, then the mate would be expected to be soiled to some extent. All areas on the bird that are typically yellow or gray were instead brownish-black, whereas the rufous feathers appeared essentially normal, which also suggests a specific pattern of excess melanin. In conclusion, I saw no evidence that any of the dark coloration was due to soot.

Melanism is a plumage condition resulting from excessive deposition of the pigment melanin. Two types of melanin can be found in birds: eumelanin and phaeomelanin. Eumelanins are responsible for blackish colors, phaeomelanin for reddish brown (Davis 2007, van Grouw 2006). When melanism occurs, the concentration of only one type of melanin is affected (Davis 2007). This Brown-crested Flycatcher exhibited eumelanism, as only areas normally pigmented by eumelanin were affected. The color pattern of this bird reveals that even the yellow underparts, which are colored mainly by carotenoids, also contain eumelanin. The rufous parts of the flight and tail feathers colored by phaeomelanin were unaffected. Melanism has been considered normal in dimorphic or polychromatic species in which dark morphs are known, and abnormal in monochromatic species that do not typically have melanistic plumages (Gross 1965, Clark 1998). Although the causes of melanism are not completely understood, both genetic and nutritional factors have been discovered. In wild polymorphic species including the Snow Goose (*Anser caerulescens*), Parasitic Jaeger (*Stercorarius parasiticus*), and Bananaquit (*Coereba flaveola*), the presence of melanistic morphs has been linked to a genetic mutation that results in increased activation of the melanocortin-1 receptor gene (Mundy 2005, Hosner and Lebbin 2006). Melanism associated with nutritional deficiencies has been documented in chickens fed a diet low in vitamin D (Sage 1962).

Plumage abnormalities involving pigment loss are more frequent than are those involving melanism (Gross 1965, Sage 1962). Although plumage abnormalities do not appear to be widespread or frequent in the tyrant flycatchers (family Tyrannidae), leucism (the complete loss of pigment in some or all feathers) and albinism (complete loss of pigment in all feathers and soft parts) (Hosner and Lebbin 2005, Sage 1962) have been documented in the Alder Flycatcher (*Empidonax alnorum*) (Berger 1956), Black Phoebe (*Sayornis nigricans*) (Wolf 1997), Eastern Phoebe (*S. phoebe*) (Hostetter 1934, Wenner et al. 1984), Say's Phoebe (*S. saya*) (Schukman and Wolf 1998), Ash-throated Flycatcher (Cardiff and Dittmann 2002), Western Kingbird (*Tyrannus verticalis*) (Bennett 1935, Gabrielson 1949), and Scissor-tailed Flycatcher (*T. forficatus*) (Ligon 1964). Records of melanism in tyrant flycatchers include a Tropical Pewee (*Contopus cinereus*) (Smith 2016), Vermilion Flycatcher (*Pyrocephalus rubinus*) (van Grouw and Nolasco 2012, Schmitt 2015), and a Western Kingbird from Colorado (Bantol 1984 in Gamble and Bergin 2012). Thus this Brown-crested Flycatcher represents the first record of melanism in a *Myiarchus* flycatcher.

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FEATURED PHOTO

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Photo by © Daniel Lee Brown, of Sacramento, California:

Purple Martin (*Progne subis*)

Sacramento County, California, 22 July 2010.

In much of its breeding range the Purple Martin now nests principally in nest boxes and gourds set out by people. But in California this habit has not taken root, and the population has spiraled downward. In this issue of *Western Birds* Daniel A. Airola, Stan Kostka, and Corinna Elwood describe the first successful effort in California to establish a Purple Martin colony nesting in boxes. They identify the challenges to sustaining that success, recount experiments that failed, and explore the factors contributing to success and failure. More ambitious efforts are needed if the continuing collapse of California's Purple Martin population is to be halted or reversed.



“Featured Photo” by © Deborah J. House of Bishop, California: melanistic Brown-crested Flycatcher (*Myiarchus tyrannulus*) at China Ranch, Inyo County, California, 25 May 2008. Though this represents the first record of melanism in the genus *Myiarchus*, the existence of several sooty or black species in other genera of flycatchers suggests that melanism like this has played a role in the evolution of the family Tyrannidae.

