

Prepared for Commander Navy Region Southwest

Monitoring Breeding and Migration of Neotropical Migratory Birds at Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 5-Year Summary 2013–17



Open-File Report 2018–1112

Cover:

Top row: Photographs showing black-throated gray warbler (*Setophaga nigrescens*) by A. Houston, Bullock's oriole (*Icterus bullockii*) by K. Hall, white-breasted nuthatch (*Sitta carolinensis*) by S. Howell.

Bottom row: Photographs showing red-breasted sapsucker (*Sphyrapicus ruber*) by S. Howell, fox sparrow (*Passerella iliaca*) by S. Howell, and western kingbird (*Tyrannus verticalis*) by K. Hall.

Monitoring Breeding and Migration of Neotropical Migratory Birds at Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 5-Year Summary, 2013–17

By Suellen Lynn, Katie A. Hall, Melanie C. Madden, and Barbara E. Kus

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**U.S. Department of the Interior
U.S. Geological Survey**

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Conversion Factors

International System of Units to Inch/Pound

Multiply	By	To obtain
Length		
millimeter (mm)	0.03937	inch (in.)
meter (m)	3.281	foot (ft)
kilometer (km)	0.6214	mile (mi)
kilometer (km)	0.5400	mile, nautical (nmi)
meter (m)	1.094	yard (yd)
Area		
hectare (ha)	2.471	acre

Datum

Horizontal coordinate information is referenced to the World Geographic System of 1984 (WGS 84).

Abbreviations

MAPS	Monitoring Avian Productivity and Survivorship
IBP	Institute for Bird Populations
PDT	Pacific Daylight Time
PST	Pacific Standard Time
RTSWS	Remote Training Site, Warner Springs

Monitoring Breeding and Migration of Neotropical Migratory Birds at Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 5-Year Summary, 2013–17

By Suellen Lynn, Katie A. Hall, Melanie Madden, and Barbara E. Kus

Executive Summary

We operated a bird banding station on the Naval Base Coronado, Remote Training Site, Warner Springs (RTSWS), in northeastern San Diego County, California, during the bird breeding season (spring/summer) from 2013 to 2017 and during migration (fall) from 2013 to 2016. The station was established in spring 2013 as part of the Monitoring Avian Productivity and Survivorship (MAPS) program and continued into the fall for the first 4 years as part of a long-term monitoring program for neotropical migratory birds.

We captured 705 individuals of 58 species during the MAPS/breeding season from 2013 to 2017 (12–13 days each year in April through August), 79 percent of which were newly banded during the MAPS season (555), 8 percent of which were recaptures banded in previous years (57), and 13 percent of which we released unbanded (64 hummingbirds and 29 other birds that were released or escaped prior to banding). Sixty individuals were captured more than once within a year during MAPS. Bird capture rate averaged 19 ± 1 captures per 100 net-hours (range 17–20) across 5 years. Annual species richness ranged from 28 (2017) to 42 (2014). The average species richness per day was highest in 2014 (9 ± 3) and lowest in 2016 (6 ± 2). Bushtit (*Psaltriparus minimus*) was the most abundant breeding species captured, followed by Spotted Towhee (*Pipilo maculatus*), Oak Titmouse (*Baeolophus inornatus*), Anna's Hummingbird (*Calypte anna*), House Wren (*Troglodytes aedon*), Ash-throated Flycatcher (*Myiarchus cinerascens*), California Scrub-jay (*Aphelocoma californica*), Bewick's Wren (*Thryomanes bewickii*), Acorn Woodpecker (*Melanerpes formicivorus*), California Towhee (*Melospiza crissalis*), and Western Bluebird (*Sialia mexicana*). Each of these 11 breeding species accounted for at least 5 percent of captures in any 1 year. Fifty-seven percent of known-sex captures were female and 43 percent were male. Thirty-three percent of known-age captures were juveniles. Peaks in number of birds captured were in the first and last weeks of April, and the greatest number of species was captured in early May.

We were able to calculate productivity for 10 species (of the 11 most abundant species) with sufficient captures and recaptures for valid parameter estimation. Of these 10 species, Bushtit had the highest overall productivity as measured by the ratio of juveniles to adults captured, followed by Bewick's Wren and Anna's Hummingbird. There were no clear patterns in annual productivity among species. Across all 10 species, average productivity was highest in 2017 and lowest in 2014. Spotted Towhee, California Scrub-jay, Acorn Woodpecker, and Ash-throated Flycatcher all had low productivity overall. We had sufficient recaptures to analyze survivorship for four species: Bushtit, Spotted Towhee, Oak Titmouse, and House Wren. Bushtits had the highest survivorship rates, followed by Spotted Towhees, Oak Titmice, and House Wrens. Captures of Acorn Woodpeckers, California Scrub-jays, Oak Titmice, Spotted Towhees, and California Towhees decreased significantly and Bushtit captures increased significantly over 5 years.

During fall migration (16–19 days in August through October), we captured 595 individual migratory birds of 44 species, 94 percent of which were newly banded in fall (558), 4 percent of which were recaptures banded in previous years (22), and 3 percent of which we released unbanded (11 hummingbirds and 4 other birds that were released or escaped prior to banding). Twenty-seven individuals were captured more than once within a year in fall. Migratory bird capture rate averaged 22 ± 8 per 100 net-hours (range 12–30) and was highest in 2013 and lowest in 2016. Annual species richness during fall migration ranged from 23 (2016) to 30 (2015). Species richness averaged 5 ± 3 species per day and was highest in 2013 (6 ± 2) and lowest in 2016 (4 ± 2). Spotted Towhees were the most abundant fall migrant captured, followed by Wilson's Warblers (*Cardellina pusilla*), Yellow Warblers (*Setophaga petechia*), Orange-crowned Warblers (*Oreothlypis celata*), White-crowned Sparrows (*Zonotrichia leucophrys*), and Pacific-slope Flycatchers (*Empidonax difficilis*). Forty-two percent of known-sex individuals were female and 58 percent were male. Forty-nine percent of known-age captures were juveniles. The peak number of new species arrived during the fourth week of fall banding, early to mid-September. The highest number of birds and the greatest number of species were captured in September.

First capture dates for eight migratory species were earlier each year they were captured from 2013 to 2016; two species (Costa's Hummingbird, *Calypte costae*, and Ruby-crowned Kinglet, *Regulus calendula*) had correspondingly earlier median capture dates each year. First capture dates for five migratory species were later each year they were captured; two species (Phainopepla, *Phainopepla nitens*, and Fox Sparrow, *Passerella iliaca*) had correspondingly later median capture dates each year.

Introduction

Monitoring Avian Productivity and Survivorship (MAPS; administered by the Institute for Bird Populations [IBP], Point Reyes Station, California) is an international monitoring program that uses bird capture and banding data to compile basic demographic parameters of resident and migratory species, many of which are imperiled regionally and even globally. Age- and sex-specific data on annual survival, reproduction, and recruitment can be gathered and compared across stations to identify population trends for species of interest and can be used to identify proximate factors responsible for trends, specifically negative trends. In turn, information obtained from long-term monitoring of bird populations can be used to guide management activities intended to maintain or reestablish viable populations throughout the species' ranges.

We established a MAPS and migration monitoring station on the Naval Base Coronado, Remote Training Site, Warner Springs (RTSWS), in northeastern San Diego County, California, in 2013. This station was established as part of a long-term monitoring program for neotropical migratory birds for Naval Base Coronado and was operated in a manner consistent with other banding stations participating in an effort to monitor birds worldwide.

Understanding the factors that affect migratory bird populations during all phases of their life cycle is critical to species and ecosystem conservation planning. Bird migration studies are useful because they apply to species that occupy sites across a broad geographic range, and potentially a broad range of habitat types, during the phases of their life cycles. Because migration provides a link between wintering and breeding phases of the annual cycle, migration studies can elucidate the responses of species to diverse pressures affecting any of the phases of their annual cycles, including habitat alteration and loss, diseases, environmental contaminants, and global climate change.

Studying birds during migration can also inform land managers about local factors that affect migratory stopover habitat. High-quality stopover habitat provides abundant resources that allow individuals to reestablish energy reserves within the short timeframe available for completing migration (Skagen and others, 2004). Identifying these stopover sites is the first step in conserving and potentially enhancing habitats that benefit bird populations.

This report summarizes 5 years of station operation from 2013 to 2017. There are five objectives for this project: (1) to calculate capture rates, relative abundance, and trends of various neotropical migratory bird species populations; (2) to estimate survivorship parameters for neotropical migratory bird species; (3) to estimate annual productivity for these species; (4) to augment existing distributional information for "sensitive" avian species; and (5) to document the demographics of neotropical migratory birds passing through the site during their fall southern migration to wintering grounds.

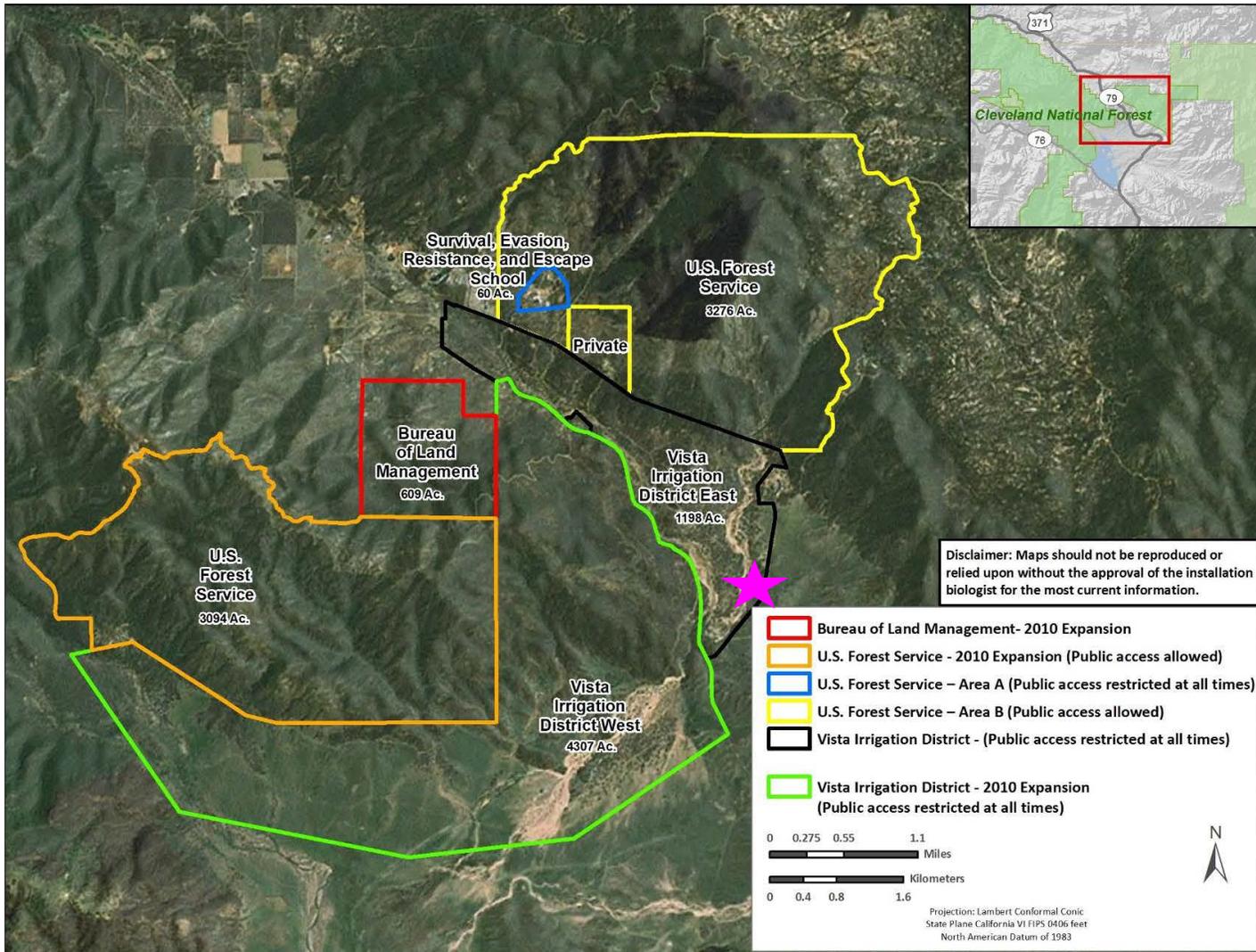
This study was funded by Commander Navy Region Southwest, San Diego, California.

Methods

Bird Banding

We established the Warner Springs bird banding station at Naval Base Coronado, RTSWS, in spring 2013. The base includes approximately 5,052 hectares (ha) on predominantly undeveloped land leased from Cleveland National Forest, Vista Irrigation District, and the Bureau of Land Management (fig. 1). Vegetation at the station is a mix of cottonwood- (*Populus fremontii*) dominated riparian forest, big sagebrush (*Artemisia tridentata*) scrub, and oak (*Quercus* sp.) woodland. Typical woody species include cottonwood, live oak (*Q. agrifolia*), mule fat (*Baccharis salicifolia*), willow (*Salix* sp.), and big sagebrush.

Bird banding at the Warner Springs banding station followed standardized MAPS protocol (DeSante and others, 1993) with modifications for migration (see below). Ten nets were established at the station in April 2013, but because bird capture rates were low, we added three more nets in June 2013 and one additional net in August 2013. The 14 mist-nets were placed 32–550 meters (m) apart and were erected in fixed locations chosen for their potential to capture birds moving through vegetation (fig. 2, table 1). Mist-nets were made of 30-millimeter (mm) black nylon mesh and were 12 m long by 2.6 m high with four trammels (“pockets”) running the length of the net. Nets were suspended from vertical aluminum poles anchored by permanent rebar stakes and covered a vertical area ranging from approximately 0.25 to 2.5 m above the ground. During MAPS, nets were opened within 30 minutes of dawn and remained open for 5 hours, typically closing between 1100 and 1200 Pacific Daylight Time (PDT). During migration, nets were opened within 60 minutes of dawn and remained open for 3 hours, typically closing between 0900 and 1000 Pacific Standard Time (PST). Nets were not operated during inclement weather such as strong wind, rain, extreme heat, or extreme cold. Dates of net operation are detailed in the following section.



Source: Bing Maps Hybrid, © 2010 Microsoft Corporation and its data suppliers, Map contains the most current data to date which may change, and is compiled from a variety of references (See GIS Reference List in original report: Arnold 2017)

Figure 1. Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California (U.S. Navy, 2013). Pink star indicates location of banding station.

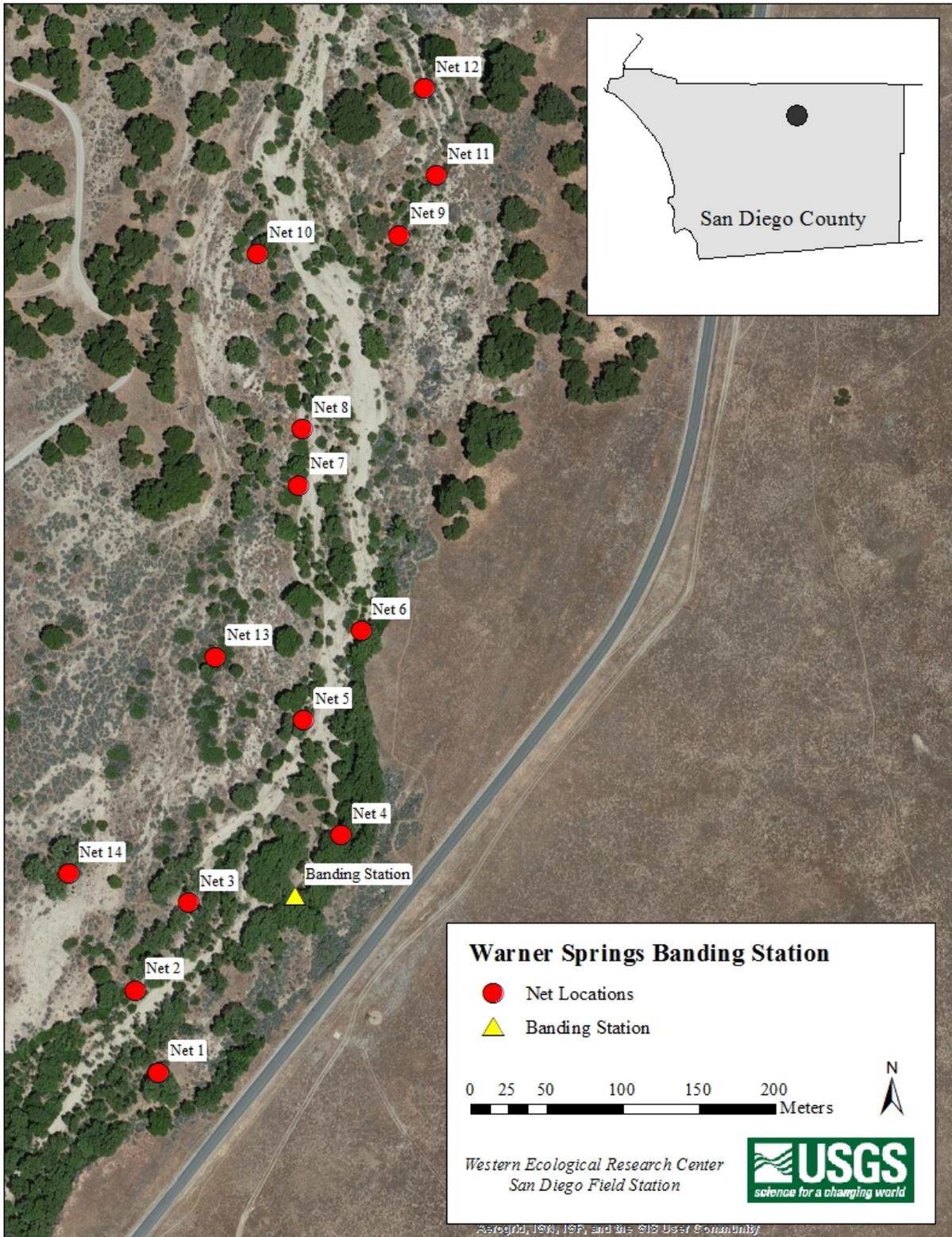


Figure 2. Location of bird banding station, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California.

Table 1. Global Positioning System locations of mist-nets at the bird banding station, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California.

[Coordinates are in World Geodetic System of 1984 (WGS 84)]

Net location No. (see fig. 2)	Longitude	Latitude
1	-116.687782	33.310240
2	-116.687919	33.310646
3	-116.687600	33.311080
4	-116.686703	33.311412
5	-116.686925	33.311980
6	-116.686586	33.312421
7	-116.686953	33.313137
8	-116.686934	33.313416
9	-116.686359	33.314371
10	-116.687197	33.314280
11	-116.686138	33.314665
12	-116.686209	33.315095
13	-116.687447	33.312290
14	-116.688311	33.311221

Nets were checked every 20–40 minutes by observers working circuits. Hummingbirds, upland game birds, and raptors were not banded but were identified to species, age, and sex, when possible, and released immediately at the capture site. Hummingbirds were captured frequently at this station, and in 2014, we started clipping the right fourth rectrix of all hummingbirds captured as a way to temporarily mark them and help determine how many individual hummingbirds were being captured per year. All other birds were removed from nets, held in cloth bags labeled with the net number, and taken to a central processing location where they were banded with federal numbered aluminum bands. Data recorded for each individual caught included age, sex, skull pneumatization, breeding condition, weight, wing chord, fat deposition, feather wear, and molt status, using Pyle (1997) as a reference. Birds were held for 5–60 minutes, depending on the number of birds captured during one net run. Birds showing signs of stress were prioritized for processing and were released with a minimum of data collected (band number, species, and if possible, age and sex). After processing, juveniles, brooding females, and resident birds from the more distant nets were released near the net in which they had been captured, and all other birds were released at the processing station. All species captured and (or) observed at the site were recorded in a daily list, along with any observed breeding behavior, to help determine breeding status and to document species that were present at the station but not captured. Breeding status was determined based on the number and timing of detections and whether breeding behavior was observed (for example, singing, nest building, carrying food, feeding young).

Typically, three to four personnel operated the station. Fieldwork was conducted by the following U.S. Geological Survey employees: Lisa Allen, Thomas Dayton, Patience Falatek, Jonathan Gunther, Katherine Hall, Sarah Harris, Alex Houston, Scarlett Howell, Jennifer Jacobs, Angela Johnson, Michael Lester, Suellen Lynn, Melanie Madden, Brandon Miller, Austin Parker, Ryan Pottinger, Devin Taylor, Michelle Treadwell, Charlie Vettes, Anne Winters, and Benjamin Zyla. The following volunteers provided assistance: Armando Aispuro, Arlene Arnold (U.S. Navy), Tiffany Shepherd (U.S. Navy), Erica Harris, Kim Roth, Jessica Looney, and Cassie Swindle.

Banding Schedule

Because we were interested in examining both breeding and migratory activity at the Warner Springs Banding Station, we operated mist-nets during two seasons: (1) MAPS (breeding, 2013–17) and (2) fall (migration, 2013–16).

During MAPS, the banding station was operated 1 day during every 10-day period between April 1 and August 9, following standard MAPS protocol (13 days each year, except for 2016 when weather limited banding operation to 12 days). In fall, the station was typically operated 2–3 days per week from August 15 through October 15 (16–19 days per year). Military training usually occurred at the site from Friday afternoon through Monday morning, which restricted our access for fall banding to Tuesday through Friday mornings. There were a few weeks when additional military activity or inclement weather prevented or further restricted our access. In 2013, our fall banding schedule was interrupted by the federal government furlough, and no banding occurred between September 26 and October 23, our last banding day. Our fall banding schedule was dynamic, in an attempt to maximize the capture of neotropical migrants while keeping project costs to a minimum. We began our week of banding on Tuesdays. If the capture rate for migrants was high on Tuesday (at least eight migrants), we continued banding on Wednesday; if capture rate was low, we resumed banding on Thursday. We followed this pattern for every day of banding, which meant we banded for a minimum of 2 days (either Tuesday/Wednesday or Tuesday/Thursday) and a maximum of 3 days (Tuesday/Wednesday/Thursday or Tuesday/Thursday/Friday) each week, weather and military training schedules permitting.

Data Analysis

All banding data were entered into MAPSPROG, the IBP data entry program, for verification and error checking, which included cross-checking against previous years' data. Finalized MAPSPROG data were submitted to IBP and analyzed as described below.

Bird captures were quantified by species, age, sex, and number of captures for each year. We used the total number of captures (including newly banded birds, birds that were captured but not banded, and previously banded birds, or “recaptures”) to create a list of captured species and a total count of captures per species for the site. We intentionally did not band hummingbirds because they are difficult to band and recapture and would require a concentrated effort beyond the scope of a MAPS station. However, as described above, we trimmed a small section of the right fourth rectrix of each captured hummingbird upon initial capture to ascertain if an individual was new or a recapture within the same year. The total number of individuals captured in each year included only newly banded birds, first time recaptures of birds banded at the sites in previous years, and birds that were not banded.

We calculated annual capture rates for each species by dividing the total number of individuals captured (described above) by the total number of hours nets were open at the banding station (net-hours) and multiplying this number by 100. Captures per 100 net-hours is a standard unit of measurement used for bird banding analyses. Calculating capture rates in this manner allows us to account for the discrepancy in the number of banding hours each day and to make between-year comparisons.

Additionally, we used the total number of individuals to calculate relative species abundance (the proportion of all individuals represented by a particular species), sex and age ratios (to determine the structure of breeding and migrating populations), productivity (see below), adult survivorship (see below), and first and median arrival dates for each species during migration. First and median arrival dates were intended to track potential changes in the timing of migration associated with climate change.

During the fall, we restricted our analyses to neotropical migratory birds (species that were not resident breeders at Warner Springs), with the exception of two species (see below). Neotropical migratory species were defined as those covered under the Migratory Bird Treaty Act of 1918 (U.S. Fish and Wildlife Service, 1998). Migratory birds were then categorized as resident or migrant, according to behavior, breeding condition, and breeding status records for the site (not for the region as a whole). Based on this categorization, neotropical migratory species that were captured during migration and were not known to breed at the site, such as Orange-crowned Warbler (*Oreothlypis celata*), were considered migrants even though they may breed nearby and be year-round residents for the region. Only non-breeding, neotropical migratory species were included in our analyses of fall migration, except for Lark Sparrow (*Chondestes grammacus*) and Spotted Towhee (*Pipilo maculatus*), two neotropical migratory species that were known to breed at this site but were captured in much higher numbers during fall banding than during MAPS banding. The rationale for including these breeding species was to evaluate the importance of this site for them in the fall, possibly for post-breeding dispersal or as a stopover location for migrating individuals, and to examine whether this site may be more important to these species in the fall than during the breeding season.

We calculated indices of productivity and survivorship for each year for a subset of bird species with sufficient captures and recaptures for valid parameter estimation. For productivity, we analyzed data collected for Anna's Hummingbird (*Calypte anna*), Acorn Woodpecker (*Melanerpes formicivorus*), Ash-throated Flycatcher (*Myiarchus cinerascens*), California Scrub-jay (*Aphelocoma californica*), Oak Titmouse, (*Baeolophus inornatus*), Bushtit (*Psaltriparus minimus*), Bewick's Wren (*Thryomanes bewickii*), House Wren (*Troglodytes aedon*), Spotted Towhee, and California Towhee (*Melospiza crissalis*). We only had sufficient recaptures to analyze survivorship for Bushtit, House Wren, Oak Titmouse, and Spotted Towhee. Productivity was calculated as the number of juvenile captures (hatching-year) divided by the number of adult captures (after-hatching-year) to control for fluctuations in adult population size.

We calculated annual survivorship in Program MARK (White and Burnham, 1999). We estimated only adult survivorship because the number of first-year captures was not large enough for meaningful analysis. For MARK analyses, we created encounter histories for each of the selected species based on whether or not an individual was captured at the station within a particular year. Multiple captures of individuals within a year were counted as a single encounter. We assumed constant recapture probability because we expended a constant effort each year.

We used an information-theoretic approach (Akaike's information criteria, or AIC; Burnham and Anderson, 2002) to evaluate support for models that tested the effect of year on survivorship. We used logistic regression with a logit link to build models. First, we generated a constant survival model to serve as a reference. We then modeled year (annual variation) and evaluated support for the model in relation to the constant survival model. Criteria for better supported models included lower AIC than other models, $\Delta\text{AIC} < 2$, and AIC weight > 0.05 .

Results

Monitoring Avian Productivity and Survivorship

Overview of Captures

We had a total of 783 captures of 58 species in 4,224:10 net-hours during the 2013–17 breeding seasons (tables 2, 4, 11–15 at back of report). Of these, 555 were newly banded during the MAPS season, 57 were recaptures originally banded in earlier years (table 4), and 93 were released unbanded (64 hummingbirds and 29 additional birds that escaped prior to banding or were released without banding; tables 6–10 at back of report), for a total of 705 individuals captured. Ninety percent of banded individuals (552/612; 50 species) were captured only once within a year during the MAPS season, 8 percent (50/612; 16 species) were captured twice, 1 percent (6/612; 4 species) were captured three times, and <1 percent (4/612; 2 species) were captured four times (tables 6–10). One hummingbird with a clipped tail feather was recaptured once during the breeding season. The total number of banded individuals per capture incidence does not include three banded individuals that were recaptured and escaped prior to recording the band number, thus making it impossible to determine whether these individuals had been captured multiple times that year. However, it does include one banded Spotted Towhee that was recaptured in 2016 and escaped prior to recording the band number because it was the first of this species captured that year and therefore could not have been banded earlier in the year. Additional species were observed at the Warner Springs Banding Station, but not captured (table 3 at back of report).

Capture Rates

Annual capture rate averaged 19 ± 1 per 100 net-hours and ranged from 17 (2016) to 20 (2014) captures per 100 net-hours for all nets combined (tables 11–15 at back of report). Annual capture rate by net ranged from 6 ± 5 captures per 100 net-hours (net 5) to 38 ± 8 captures per 100 net-hours (net 14). Capture rates for these nets were relatively consistent across years. Capture rates for most other nets varied widely by year. In particular, nets 1 and 12 had low capture rates (2–11 captures per 100 net-hours) for the first 4 years, then jumped to 28 and 38 captures per 100 net-hours, respectively, in 2017. Net 4 had over 30 captures per 100 net-hours in 2013, 2014, and 2017, but only 3–5 captures per 100 net-hours for 2015 and 2016.

Average captures per day were highest at the beginning of the season, with peaks in the first and last weeks of April (15 captures per day) and lowest in the first week of June and first week of August (9 captures per day) (tables 16–20 at back of report). The peak in early April was mainly resident breeders that were naïve to the nets. The peak in late April corresponded with influxes of spring migrant warblers and Warbling Vireos (*Vireo gilvus*). A secondary peak in captures per day occurred during the last week of July, driven by captures of Bushtits (flock of seven) and Spotted Towhees.

Species Richness

The number of species captured per day ranged from 1 to 14 (tables 16–20). Species richness among captures ranged from an average of 6 ± 2 per day (2016) to 9 ± 3 per day (2014). Species richness among captures was highest in early May and lowest in early June.

Relative Species Abundance

Bushtit was the most abundant breeding MAPS species captured over 5 years with 108 individuals captured (1.3–4.5 total captures per 100 net-hours) (tables 4, 6–10, 16–20; figs. 3–7 at back of report). The second most abundant breeding species was Spotted Towhee with 42 individuals captured (0.2–2.3 captures per 100 net-hours). Additional breeding species accounting for at least 5 percent of all individuals captured in any 1 year include Oak Titmouse (40 individuals, 0.7–1.7 captures per 100 net-hours), Anna’s Hummingbird (37 individuals, 0.4–1.2 captures per 100 net-hours), House Wren (36 individuals, 0.3–2.3 captures per 100 net-hours), Ash-throated Flycatcher (28 individuals, 0.3–1.7 captures per 100 net-hours), California Scrub-jay (26 individuals, 0.2–1.1 captures per 100 net-hours), Bewick’s Wren (25 individuals, 0.4–1.6 captures per 100 net-hours), Acorn Woodpecker (17 individuals, 0–1.6 captures per 100 net-hours), California Towhee (14 individuals, 0–0.9 captures per 100 net-hours), and Western Bluebird (*Sialia mexicana*; 11 individuals, 0–1.1 captures per 100 net-hours). Together, these 11 species account for 54 percent (384/706) of all individuals captured across 5 years.

Age and Sex Structure

Fifty-seven percent (225/394) of known-sex captures were female and 43 percent (169/394) were male (tables 21–25 at back of report). Juveniles comprised 33 percent (230/690) of the known-age population. The proportion of juveniles of known-age captured varied annually, with the lowest proportion of juveniles captured in 2014 (0.20) and the highest proportion of juveniles captured in 2017 (0.51). Juveniles of 22 breeding species were captured, with Bushtit contributing 39 percent (82/210), Bewick’s Wren and Anna’s Hummingbird each contributing 9 percent (18/210), Oak Titmouse contributing 8 percent (17/210), and House Wren contributing 6 percent (13/210) of the juvenile captures. Together, these five species accounted for 64 percent (148/230) of all hatching-year individuals captured during MAPS.

Productivity

Annual productivity varied by species and by year. Productivity for seven species (Anna’s Hummingbird, Acorn Woodpecker, California Scrub-jay, Oak Titmouse, Bewick’s Wren, House Wren, and Spotted Towhee) increased from 2013 to 2014 but then productivity for three of these species (Acorn Woodpecker, California Scrub-jay, and Spotted Towhee) decreased, two (Anna’s Hummingbird and House Wren) increased, and two (Oak Titmouse and Bewick’s Wren) remained the same from 2014 to 2015 (fig. 8 at back of report). Average productivity across all species was lowest in 2014 (0.8 juveniles per adult captured) and highest in 2017 (1.7 juveniles per adult captured). Bushtits had the highest overall productivity (4.3 juveniles per adult), followed by Bewick’s Wrens (2.8 juveniles per adult) and Anna’s Hummingbirds (1.5 juveniles per adult). This calculation excluded 2015 for Bewick’s Wrens and 2016 for Acorn Woodpeckers and California Towhees because no adults were captured and therefore productivity could not be calculated for those years. Spotted Towhees, California Scrub-jays, Acorn Woodpeckers, and Ash-throated Flycatchers had the lowest productivity, with < 0.1–0.4 juveniles per adult captured throughout the 5 years of banding.

Survivorship

Models with constant survivorship across years were better supported than models with variation in survivorship by year for all species (table 26 at back of report). Bushtits had the highest annual survivorship (67 percent), followed by Spotted Towhees (54 percent), Oak Titmice (43 percent), and House Wrens (18 percent) (fig. 9 at back of report).

Population Trends

Population size of adult resident bird species, as measured by the number of adult individuals captured per 100 net-hours, significantly decreased for five of the most abundant species captured during MAPS activities (Acorn Woodpecker, California Scrub-jay, Oak Titmouse, Spotted Towhee, and California Towhee) and significantly increased for one species (Bushtit) over the 5 years of the banding project (tables 16–20; fig. 10 at back of report).

Fall Migration

Overview of Captures

We had a total of 627 migrant captures of 44 species in 2,979 net-hours during the fall from 2013 to 2016 (tables 27, 32–35 at back of report). Of these, 558 were newly banded during the fall, 22 were recaptures from previous years or from the MAPS season, and 14 were released unbanded (10 hummingbirds and 4 other birds that escaped prior to banding or were released without banding; tables 27–31 at back of report), for a total of 594 individuals captured. Ninety-five percent of banded individuals (553/580; 39 species) were captured only once during fall migration, 4 percent (23/580; 8 species) were captured twice, 1 percent (3/580; 3 species) were captured three times, and <1 percent (1/580; 1 species) were captured four times (tables 28–31). One hummingbird with a clipped tail feather was recaptured during migration. Additional species were observed during migration netting, but were not captured (table 3).

Capture Rates

The overall fall capture rate averaged 22 ± 8 per 100 net-hours for all nets combined (range 12–30 captures per 100 net-hours; tables 32–35). The average capture rate during fall migration was highest in 2013, followed by 2014, and lowest in 2016. Average capture rates by net ranged from 9 to 48 captures per 100 net-hours with net 14 the most productive and net 9 the least productive. Capture rates for all years were low in mid-August, increased to a peak in mid- to late September, then trailed off in October, except for 2015 (tables 36–39 at back of report). In 2015, capture rates peaked for a second time in early October, corresponding to an influx of White-crowned Sparrows (*Zonotrichia leucophrys*).

Species Richness

The number of fall migrant species captured per day ranged from 0 to 11 (tables 36–39). Species richness among captures varied by year but generally increased in early September and stayed moderate to high through late September or early October. Overall species richness for fall averaged 5 ± 3 species per day, with the highest species richness in 2013 (6 ± 2) and the lowest in 2016 (4 ± 2).

Relative Species Abundance

Spotted Towhee was the most abundant fall migrant species across all 4 years, accounting for 22 percent of all migrant captures (138/627, 0.8–9.4 individual captures per 100 net-hours; tables 27, 36–39; figs. 11–14 at back of report). The second most abundant species was Wilson’s Warbler (*Cardellina pusilla*), comprising 15 percent of all migrants (95/627, 1.1–6.6 captures per 100 net-hours). Yellow Warbler (*Setophaga petechia*) was the third most abundant species, comprising 9 percent of all migrants (56/627, 1.0–3.6 captures per 100 net-hours). Three additional species, Orange-crowned Warbler (8 percent, 51/627, 0.6–2.3 captures per 100 net-hours), White-crowned Sparrow (8 percent, 52/627, 0.5–4.2 captures per 100 net-hours), and Pacific-slope Flycatcher (*Empidonax difficilis*, 5 percent, 32/627, 0.3–2.8 captures per 100 net-hours), each accounted for at least 5 percent of all individuals captured. Together, these six species accounted for 68 percent (424/627) of all fall migrant individuals captured.

Age and Sex Structure

Forty-two percent (150/359) of known-sex captures during migration were female and 58 percent (209/359) were male (tables 40–43 at back of report). Juveniles comprised 49 percent (254/520) of the known-age population. Juveniles of 35 species were captured, with Yellow Warbler and Wilson’s Warbler each contributing 15 percent (38/254 and 37/254, respectively), followed by Spotted Towhee and Pacific-slope Flycatcher (11 percent, 28/254 and 27/254, respectively) and White-crowned Sparrow and Orange-crowned Warbler (6 percent, 16/254 and 14/254, respectively). Together, these six species accounted for 63 percent (160/254) of all hatching-year individuals captured during fall.

Arrival Dates

On average, the peak number of new species arriving (captured) per day across all 4 years occurred during the fourth week of banding, in early to mid-September (figs. 15–18 at back of report). Exceptions occurred in 2013 when the peak number of new migrant species arrived during the second week of banding (late August) and 2015, which also had a peak during the second-to-last week of banding (early October). The earliest species to arrive were Least Bell’s Vireo (*Vireo bellii pusillus*; August 15, 2013), Orange-crowned Warbler (August 15, 2014), Wilson’s Warbler (August 15, 2014), and Costa’s Hummingbird (*Calypte costae*; August 18, 2016). The latest new species to arrive were Ruby-crowned Kinglet (*Regulus calendula*; October 23, 2013; October 10, 2014), Audubon’s Warbler (*Setophaga coronata auduboni*; October 10, 2014), Oregon Junco (*Junco hyemalis oregonus*; October 10, 2014), Sharp-shinned Hawk (*Accipiter striatus*; October 15, 2015), and Red-breasted Sapsucker (*Sphyrapicus ruber*; October 13, 2016; table 44 at back of report).

First capture dates for eight migratory species (Costa’s Hummingbird, Western Wood-pewee [*Contopus sordidulus*], Ruby-crowned Kinglet, Nashville Warbler [*Oreothlypis ruficapilla*], Audubon’s Warbler, Brewer’s Sparrow [*Spizella breweri*], Black-throated Sparrow [*Amphispiza bilineata*], and Oregon Junco) were progressively earlier over 4 years (table 44). For two of these species, Costa’s Hummingbird and Ruby-crowned Kinglet, median arrival dates were also earlier each year from 2013 to 2016. The remaining six species were not captured enough times to calculate median arrival dates for multiple years. When we examined dates these eight species were first observed at the banding station (either seen or captured), three of the eight species (Nashville Warbler, Brewer’s Sparrow, and Black-throated Sparrow) were detected at the banding station earlier each year from 2013 to 2016.

First capture dates for five species (Red-breasted Sapsucker, Phainopepla [*Phainopepla nitens*], MacGillivray's Warbler [*Geothlypis tolmiei*], Fox Sparrow [*Passerella iliaca*], and House Finch [*Carpodacus mexicanus*]) were progressively later each year (table 44). For two of these species, Phainopepla and Fox Sparrow, median arrival dates were later each year they were captured from 2013 to 2016.

Discussion

Our monitoring results from 2013 to 2017 indicate that the RTSWS banding station provides breeding habitat for 37 species (24 captured and 13 observed only) and migratory stopover or wintering habitat for 79 migratory species (49 captured and 30 observed only). In addition, RTSWS provides important breeding habitat for species of conservation concern, including Nuttall's Woodpecker (*Picoides nuttallii*), Oak Titmouse, California Thrasher (*Toxostoma redivivum*), and Lawrence's Goldfinch (*Spinus lawrencei*), and migratory stopover habitat for species of conservation concern including Costa's Hummingbird, Rufous Hummingbird (*Selasphorus rufus*), Allen's Hummingbird (*Selasphorus sasin*), Loggerhead Shrike (*Lanius ludovicianus*), Yellow Warbler, Wilson's Warbler, Yellow-breasted Chat (*Icteria virens*), Brewer's Sparrow, and Bell's Sparrow (*Artemisospiza belli*) (U.S. Fish and Wildlife Service, 2008; Partners in Flight Science Committee, 2012; California Department of Fish and Wildlife, 2017).

Naval Base Coronado, Remote Training Site, Warner Springs also provides stopover or dispersal habitat for two State and Federally listed species, Least Bell's Vireo and Willow Flycatcher (*Empidonax traillii*). Willow Flycatchers were captured and banded 4 of the 5 years, for a total of 12 individuals. None of these were identified to subspecies, although the Southwestern Willow Flycatcher (*E. t. extimus*) subspecies breeds along the San Luis Rey River just downstream of Lake Henshaw, 10.5 kilometers (km) southwest of the banding station (Howell and Kus, 2015). Two suspected migrant Willow Flycatchers were detected at the banding station during focused Least Bell's Vireo surveys conducted by the U.S. Navy in May 2015 (Arnold, 2015), but the RTSWS banding station lacks the surface water preferred by breeding Willow Flycatchers. Two Least Bell's Vireos were captured at RTSWS—one was captured twice in August 2013 and a second was captured in May 2016. Both were given unique color band combinations in addition to the standard metal federal band for visual identification on the breeding and wintering grounds. Singing male Least Bell's Vireos were also detected in May and June 2014 but were not captured. Focused surveys for Least Bell's Vireo and Southwestern Willow Flycatcher were conducted on a portion of RTSWS on Forest Service lands north of the MAPS station by USGS in 2014, but none were detected (Howell and Kus, 2014). Focused surveys for Least Bell's Vireo were conducted by the U.S. Navy throughout riparian habitat on RTSWS in 2015, 2016, and 2017 (Arnold, 2015, 2016, 2017). A suspected breeding pair of Least Bell's Vireos was detected approximately 1 km downstream of the banding station in 2015, and a pair with three dependent juveniles was detected there in 2017. Least Bell's Vireos could potentially breed at the RTSWS banding station, although the riparian habitat was drier and sparser at the banding station than where the breeding vireos were detected downstream, and therefore, habitat at the banding station may not be ideal for this species.

The average capture rate during the breeding season was relatively stable from year to year, with peaks corresponding to an influx of migrant species when banding days coincided with peak migration days in the spring. In general, however, bird capture rates during the breeding season at the Warner Springs banding station were low. The average capture rate at RTSWS (19 captures per 100 net-hours) was well below capture rates at other banding stations in other habitats in San Diego County, which ranged from 42 to 91 captures per 100 net-hours from 2013 to 2016 (Madden and others, 2014; Allen and Kus, 2014, 2015; Lynn and others, 2015; Hall and Kus, 2016; Lynn and Kus, 2017). Many of the bird species that we observed and did not capture, or captured only rarely, were species with behaviors that were not compatible with the standard mist-netting configuration. These species included raptors, woodpeckers, nuthatches, crows and ravens, and flycatchers, which tended to forage high in the canopy or close to tall, woody trees rather than moving through the lower foliage where mist-nets were located. Additionally, the size of the mesh on our mist-nets is also designed to catch smaller birds, such as warblers and sparrows, which were poorly represented among breeding species at the banding station. Finally, the riparian habitat at RTSWS may have been too isolated, dry, or sparse to attract the abundance and diversity of bird species captured at more productive banding stations.

Capture rates for migrant species during fall migration (22 per 100 net-hours) was higher than for all species during MAPS banding and varied by year. Many migrant species tend to forage on the ground or in low vegetation (sparrows, warblers) and thus were more likely to be caught in our mist-nets. The annual variation in migrant capture rate may be a result of missing migratory peaks during days we were not banding, may be evidence of decreasing populations, or may be a response of migrants to changing conditions at the banding station. However, the number and diversity of both migratory and resident species captured during fall migration emphasize the importance of Warner Springs as both stopover and post-breeding dispersal habitat.

In 2013, we observed a higher capture rate for Lark Sparrows and Spotted Towhees during the fall than during MAPS banding. Both of these species breed at RTSWS, but the fall captures were >80 percent adults, likely immigrants from outside populations. In fall 2014, we began identifying Spotted Towhee to subspecies to distinguish between the resident and migratory individuals and better understand their demography at RTSWS. We identified two subspecies, *P. m. megalonyx* (locally breeding) and *P. m. montanus* (migratory) at Warner Springs. Of the towhees, we were able to identify two subspecies—70 percent were *P. m. megalonyx* and 30 percent were *P. m. montanus*—thus verifying that Warner Springs is valuable to both residents and migrants in the fall. Only one subspecies of Lark Sparrow (*C. g. strigatus*) is present in the western United States, so we were not able to distinguish between breeding and migratory populations of this species.

Five years is the minimum number of consecutive years necessary to obtain reliable productivity indices and survivorship estimates according to the MAPS program (DeSante and others, 2011). As a demonstration of the benefit of increasing the number of banding years, we doubled the number of species for which we could calculate survivorship with the addition of 1 year of data (two species with sufficient sample size after 4 years, four species with sufficient sample size after 5 years). However, considering that 5 years is a minimum, the significance found in our analyses should be interpreted cautiously when drawing overall conclusions. Nevertheless, several of the species we examined showed consistent decreasing population trends using 4 years as well as 5 years of banding data. One of these, Spotted Towhee, also had low productivity throughout the 5 years of banding. Capture rates of immigrant Spotted Towhees declined each year during fall banding as well, decreasing 89 percent from 2013 to 2016 (7 captures per 100 net-hours to 1 capture per 100 net-hours), suggesting that a decrease in the Spotted Towhee population may not be confined to our banding station but also includes populations that disperse to RTSWS in the fall. Alternatively, migratory populations may have shifted their fall routes, using different stopover and wintering habitat and avoiding RTSWS. While the RTSWS appeared well-vegetated in the spring, we noted a progressive senescence in mature trees and a drier, more sparsely foliated understory each fall through 2016, likely a result of drought conditions in San Diego County. San Diego County experienced a drought between 2012 and 2015, with precipitation for each bio-year (July 1–June 30) from July 2011 to June 2015 totaling 38–61 percent of average precipitation between 2005 and 2011 (Weather Company, LLC, 2017). Low precipitation compromises primary productivity and arthropod abundance and consequently the wildlife (birds) that depends on them. Rainfall during the 2015–16 and 2016–17 bio-years was 18 and 15 percent above the 2005–11 average, respectively, and we detected an increase in adult capture rates for five species and an increase in breeding productivity for four species from 2016 to 2017. However, the long-term effects of drought are unlikely to be eliminated immediately with the resumption of normal rainfall accumulation, so general bird breeding productivity and population size may take several years to recover.

Because of low capture rates during the MAPS season, calculations of productivity, survivorship, and population trends were somewhat inconclusive for other bird species that bred at RTSWS. Productivity was relatively high for Bushtits, Anna's Hummingbirds, and Bewick's Wrens, primarily driven by high capture rates of juveniles from 2015 through 2017, likely a response to unseasonably high rainfall in May and July 2015 and an increase in annual rainfall in 2016 and 2017. All three of these species had a subsequent increase in population in 2016, and Anna's Hummingbird and Bushtit also had increases in 2017. Of these three species, we could only calculate adult survivorship for Bushtits, which had an average survivorship of 67 percent. As described above, capture rates for many species were low because the habits of the species were not necessarily compatible with mist-netting configuration. Bushtit are mid-canopy foliage gleaners, and they forage in flocks that move between clumps of vegetation at about mist-net height. Therefore, it is not surprising that we were able to capture a sufficient sample of Bushtits for productivity and survivorship analyses. However, other species (particularly warblers) also move between vegetation clumps gleaning from foliage, although generally not in flocks except during migration. If these species were as abundant as Bushtits, we would expect to see capture rates similar to Bushtits.

Although continued monitoring including more years of average rainfall may determine if breeding bird capture rates at Warner Springs are attributed to weather, climate change, or some other factor(s), the general low capture rate during the breeding season (MAPS season) suggests that efforts to understand long-term breeding bird population trends may best be directed toward a more productive banding station than the current location at RTSWS. An understanding of demographics of bird populations at RTSWS may be better achieved with alternate survey techniques, such as point counts or area searches that would have a better chance of accumulating sufficient observations for valid analytical conclusions.

One of the potential effects of climate change on migratory species is the timing of migration. As temperatures increase, the period of time during which more northerly zones are suitable for breeding should increase. Migratory species could potentially take advantage of this by migrating north earlier in the season and remaining on their breeding grounds longer before migrating south. Alternatively, migratory species may shift their breeding grounds northward or higher in elevation to remain within their preferred climate for breeding. In either case, we would expect migrants to arrive earlier in the spring and later in the fall in our region.

Although capture rates during fall migration were higher than during the MAPS season, we were still only able to draw limited conclusions regarding migrant trends at RTSWS. Of the 49 migratory species captured during fall banding, only 13 had trends in first capture dates, and only 8 of these trends were supported by additional data, including median capture dates and first detection dates (captured or just observed). Five species (Costa's Hummingbird, Ruby-crowned Kinglet, Nashville Warbler, Brewer's Sparrow, and Black-throated Sparrow) arrived earlier each year from 2013 to 2016 based on first capture dates and either median capture dates or first detection dates. Four of these five species were captured only 2 or 3 out of the 4 years, and only two to five individuals of each species were captured throughout the 4 years. Only Ruby-crowned Kinglet had earlier first capture and median capture rates for each of the 4 years of banding, and this species had progressively earlier detection dates from 2013 to 2015, but then was detected later again in 2016.

Three species (Phainopepla, MacGillivray's Warbler, and Fox Sparrow) arrived later each year from 2013 to 2016, based on first capture dates and either median capture dates or first detection dates. Two of these three species each were only captured in 2 out of the 4 years with only five captures of each species throughout the 4 years of banding. Phainopepla was detected much more frequently than it was captured (detected all 4 years but only captured in 2 years; five individuals). First detections of this species at the banding station were on August 19 and 20 for 3 out of the 4 years.

Continued banding activities at RTSWS may help elucidate trends in migrant arrival dates by increasing the probability of capturing cryptic migrant species. However, observational methods such as point counts or area counts may prove to be more accurate means of collecting arrival and abundance data for most migrant and breeding species.

References Cited

- Allen, K.S., and Kus, B.E., 2014, Neotropical migratory bird monitoring study at Marine Corps Base Camp Pendleton, California; 2013 annual data summary: Prepared for Assistant Chief of Staff, Environmental Security, Marine Corps Base Camp Pendleton.
- Allen, K.S., and Kus, B.E., 2015, Neotropical migratory bird monitoring study at Marine Corps Base Camp Pendleton, California; 2015 annual data summary: Prepared for Assistant Chief of Staff, Environmental Security, Marine Corps Base Camp Pendleton.
- Arnold, A., 2015, Least Bell's Vireo presence/absence surveys at Remote Training Site Warner Springs, California in 2015: Prepared for Recovery Permit Coordinator, Carlsbad Fish and Wildlife Office, Carlsbad, Calif.
- Arnold, A., 2016, Least Bell's Vireo presence/absence surveys at Remote Training Site Warner Springs, California in 2016: Prepared for Recovery Permit Coordinator, Carlsbad Fish and Wildlife Office, Carlsbad, Calif.
- Arnold, A., 2017, Least Bell's Vireo presence/absence surveys at Remote Training Site Warner Springs, California in 2017: Prepared for Recovery Permit Coordinator, Carlsbad Fish and Wildlife Office, Carlsbad, Calif.
- Burnham, K.P., and Anderson, D.R., 2002, Model selection and multimodel inference: A practical information-theoretic approach (2d ed.): New York, Springer-Verlag, 488 p.

- California Department of Fish and Wildlife, 2017, Special animals list: Natural Diversity Database, Periodic publication, 65 p., accessed October 2017 at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406&inline>.
- DeSante, D.F., Williams, O.E., and Burton, K.M., 1993, The Monitoring Avian Productivity and Survivorship (MAPS) program: overview and progress, *in* Finch, D.M., and Stangel, P.W., eds., Status and management of neotropical migratory birds: General Technical Report RM-229, Fort Collins, Colo., U.S. Dept. of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station, p. 208–222.
- DeSante, D.F., Burton, K.M., Velez, P., Froehlich, D., and Kaschube, D., 2011, MAPS manual: Instructions for the establishment and operation of constant-effort bird-banding stations as part of the Monitoring Avian Productivity and Survivorship (MAPS) Program: Unpublished manuscript available from Institute for Bird Populations, Box 1346, Point Reyes Station, CA 94956.
- Hall, K.A., and Kus, B.E., 2016, Neotropical migratory bird monitoring study at Marine Corps Base Camp Pendleton, California; 2016 Annual Data Summary: Prepared for Assistant Chief of Staff, Environmental Security, Marine Corps Base Camp Pendleton.
- Howell, S.L., and Kus, B.E., 2014, Status of the Least Bell’s Vireo and Southwestern Willow Flycatcher at Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, in 2014: Prepared for Commander Navy Region Southwest, San Diego, Calif.
- Howell, S.L., and Kus, B.E., 2015, The status of the Southwestern Willow Flycatcher at select sites along the San Luis Rey River in 2015, California: Prepared for San Diego Association of Governments, San Diego, Calif.
- Lynn, S., Madden, M., Houston, A., and Kus, B.E., 2015, Monitoring avian productivity and survivorship (MAPS) 5-year summary, Naval Outlying Landing Field, Imperial Beach, southwestern San Diego County, California, 2009–13: U.S. Geological Survey Open-File Report 2015–1035, 58 p., <https://dx.doi.org/10.3133/ofr20151035>.
- Lynn, S. and Kus, B.E., 2017, Monitoring Breeding and Migration of Neotropical Migratory Birds at Point Loma, San Diego County, California, 5-Year Summary 2011–15: U.S. Geological Survey Open-File Report 2017–1042, 119 p., <https://dx.doi.org/10.3133/ofr20171042>.
- Madden, M.C., Allen, K.S., and Kus, B.E., 2014, Neotropical migratory bird monitoring study at Marine Corps Base Camp Pendleton, California; 2014 Annual Data Summary: Prepared for Assistant Chief of Staff, Environmental Security, Marine Corps Base Camp Pendleton.
- Partners in Flight Science Committee, 2012, Species Assessment Database, version 2012: Bird Conservancy of the Rockies web page, accessed November 7, 2014, at <http://rmbo.org/pifassessment>.
- Pyle, P., 1997, Identification guide to North American birds, Part 1: Columbidae to Ploceidae: Bolinas, Calif., Slate Creek Press, 732 p.
- Skagen, S.K., Melcher, C.P., and Hazelwood, R., 2004, Migration stopover ecology of Western avian populations: a Southwestern migration workshop: U.S. Geological Survey Open-File Report 2004–1452, 28 p.
- Weather Company, LLC, 2017, Historic weather data for Ramona, California: Weather Underground web page, accessed October 31, 2017, at <https://www.wunderground.com/history/airport/KRNM>.
- White, G.C., and Burnham, K.P., 1999, Program MARK: survival estimation from populations of marked animals: Bird Study, v. 46 [Supplement], p. 120–139.
- U.S. Fish and Wildlife Service, 1998, Migratory bird treaty act of 1918, amended 1998: Digest of Federal Resource Laws of Interest to the U.S. Fish and Wildlife Service, accessed at <https://www.fws.gov/laws/lawsdigest/migtrea.html>.
- U.S. Fish and Wildlife Service, 2008, Birds of conservation concern 2008: U.S. Fish and Wildlife Service, Division of Migratory Bird Management, 85 p., <https://www.fws.gov/migratorybirds/pdf/grants/BirdsofConservationConcern2008.pdf>.

U.S. Navy, 2013, Final Integrated Natural Resources Management Plan, Naval Base Coronado, California: Commander, Navy Installations Command, 580 p., accessed at https://www.cnrc.navy.mil/content/dam/cnrc/cnrcsw/NAVFACSW%20Environmental%20Core/NBC_INRMP_signed.pdf.

Table 2. Species captured at Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2013–17.

[Species in italics are non-breeding migrants or transients. Special status: CC, Partners in Flight Species of Conservation Concern (U.S. Fish and Wildlife Service, 2008; Partners in Flight Science Committee, 2012; California Department of Fish and Wildlife, 2017); FC, Federal Species of Conservation Concern; FE, Federally listed as Endangered; SC, California State Species of Concern; SE, California State listed as Endangered. Season detected: B, Monitoring Avian Productivity and Survivorship (breeding season), F, fall (migratory season). Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

Alpha code	Common name	Scientific name	Special status	Season detected
SSHA ¹	Sharp-shinned Hawk	<i>Accipiter striatus</i>		F
CAQU	California Quail	<i>Callipepla californica</i>		B, F
MODO ¹	Mourning Dove	<i>Zenaida macroura</i>		B, F
BCHU ¹	Black-chinned Hummingbird	<i>Archilochus alexandri</i>		B, F
ANHU ¹	Anna's Hummingbird	<i>Calypte anna</i>		B, F
COHU ¹	Costa's Hummingbird	<i>Calypte costae</i>	FC	B, F
CAHU ¹	Calliope Hummingbird	<i>Stellula calliope</i>		B
RUHU ¹	Rufous Hummingbird	<i>Selasphorus rufus</i>	CC, FC	B
ALHU ¹	Allen's Hummingbird	<i>Selasphorus sasin</i>	CC, FC	B, F
ACWO ¹	Acorn Woodpecker	<i>Melanerpes formicivorus</i>		B, F
RNSA ¹	Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>		F
RBSA ¹	Red-breasted Sapsucker	<i>Sphyrapicus ruber</i>		F
NUWO ¹	Nuttall's Woodpecker	<i>Picoides nuttallii</i>	FC	B, F
DOWO ¹	Downy Woodpecker	<i>Picoides pubescens</i>		B, F
RSFL ¹	Red-shafted Flicker	<i>Colaptes auratus cafer</i>		B, F
WEWP ¹	Western Wood-Pewee	<i>Contopus sordidulus</i>		B, F
WIFL ¹	Willow Flycatcher	<i>Empidonax traillii</i>	FC, SE	B, F
HAFL ¹	Hammond's Flycatcher	<i>Empidonax hammondii</i>		B
GRFL ¹	Gray Flycatcher	<i>Empidonax wrightii</i>		B, F
DUFL ¹	Dusky Flycatcher	<i>Empidonax oberholseri</i>		F
PSFL ¹	Pacific-slope Flycatcher	<i>Empidonax difficilis</i>		B, F
ATFL ¹	Ash-throated Flycatcher	<i>Myiarchus cinerascens</i>		B, F
WEKI ¹	Western Kingbird	<i>Tyrannus verticalis</i>		B
LBVI ¹	Least Bell's Vireo	<i>Vireo bellii pusillus</i>	CC, FE, SE	B, F
HUVI ¹	Hutton's Vireo	<i>Vireo huttoni</i>		B, F
WAVI ¹	Warbling Vireo	<i>Vireo gilvus</i>		B, F
CASJ ¹	California Scrub-Jay	<i>Aphelocoma californica</i>		B, F
OATI ¹	Oak Titmouse	<i>Baeolophus inornatus</i>	CC, FC	B, F
BUSH ¹	Bushtit	<i>Psaltriparus minimus</i>		B, F
WBNU ¹	White-breasted Nuthatch	<i>Sitta carolinensis</i>		B, F
BEWR ¹	Bewick's Wren	<i>Thryomanes bewickii</i>		B, F
HOWR ¹	House Wren	<i>Troglodytes aedon</i>		B, F
RCKI ¹	Ruby-crowned Kinglet	<i>Regulus calendula</i>		B, F
WEBL ¹	Western Bluebird	<i>Sialia mexicana</i>		B, F
SWTH ¹	Swainson's Thrush	<i>Catharus ustulatus</i>		B, F
HETH ¹	Hermit Thrush	<i>Catharus guttatus</i>		B, F

Alpha code	Common name	Scientific name	Special status	Season detected
WREN	Wrentit	<i>Chamaea fasciata</i>	CC	B
NOMO ¹	Northern Mockingbird	<i>Mimus polyglottos</i>		F
CATH ¹	California Thrasher	<i>Toxostoma redivivum</i>	CC	B, F
EUST	European Starling	<i>Sturnus vulgaris</i>		B, F
PHAI ¹	Phainopepla	<i>Phainopepla nitens</i>		F
OCWA ¹	Orange-crowned Warbler	<i>Oreothlypis celata</i>		B, F
NAWA ¹	Nashville Warbler	<i>Oreothlypis ruficapilla</i>		B, F
Yewa ¹	Yellow Warbler	<i>Setophaga petechia</i>	FC, SC	B, F
AUWA ¹	Audubon's Warbler	<i>Setophaga coronata auduboni</i>		B, F
BTYW ¹	Black-throated Gray Warbler	<i>Setophaga nigrescens</i>		F
BLPW ¹	Blackpoll Warbler	<i>Setophaga striata</i>		F
MGWA ¹	MacGillivray's Warbler	<i>Geothlypis tolmiei</i>		B, F
COYE ¹	Common Yellowthroat	<i>Geothlypis trichas</i>		B, F
WIWA ¹	Wilson's Warbler	<i>Cardellina pusilla</i>	CC	B, F
YBCH ¹	Yellow-breasted Chat	<i>Icteria virens</i>	SC	F
WETA ¹	Western Tanager	<i>Piranga ludoviciana</i>		B, F
GTTO ¹	Green-tailed Towhee	<i>Pipilo chlorurus</i>		F
SPTO ¹	Spotted Towhee	<i>Pipilo maculatus</i>		B, F
CALT ¹	California Towhee	<i>Melospiza crissalis</i>		B, F
CHSP ¹	Chipping Sparrow	<i>Spizella passerina</i>		F
BRSP ¹	Brewer's Sparrow	<i>Spizella breweri</i>	CC	B, F
LASP ¹	Lark Sparrow	<i>Chondestes grammacus</i>		B, F
BTSP ¹	Black-throated Sparrow	<i>Amphispiza bilineata</i>		B, F
BESP ¹	Bell's Sparrow	<i>Artemisospiza belli</i>	SC	B
FOSP ¹	Fox Sparrow	<i>Passerella iliaca</i>		F
SOSP ¹	Song Sparrow	<i>Melospiza melodia</i>		B, F
LISP ¹	Lincoln's Sparrow	<i>Melospiza lincolnii</i>		B, F
WCSP ¹	White-crowned Sparrow	<i>Zonotrichia leucophrys</i>		B, F
GCSP ¹	Golden-crowned Sparrow	<i>Zonotrichia atricapilla</i>		B
ORJU ¹	Oregon Junco	<i>Junco hyemalis oregonus</i>		B, F
BHGR ¹	Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>		B, F
BUOR ¹	Bullock's Oriole	<i>Icterus bullockii</i>		B, F
PUFI ¹	Purple Finch	<i>Carpodacus purpureus</i>		F
HOFI ¹	House Finch	<i>Carpodacus mexicanus</i>		B, F
LEGO ¹	Lesser Goldfinch	<i>Spinus psaltria</i>		B, F
LAZB ¹	Lazuli Bunting	<i>Passerina amoena</i>		F

¹Protected species under the Migratory Bird Treaty Act of 1918.

Table 3. Species observed but not captured at Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2013–17.

[Species in italics are non-breeding migrants or transients. Special status: CC, Partners in Flight Species of Conservation Concern (U.S. Fish and Wildlife Service, 2008; Partners in Flight Science Committee, 2012; California Department of Fish and Wildlife, 2017); FC, Federal Species of Conservation Concern; FE, Federally listed as Endangered; SC, California State Species of Concern; SE, California State listed as Endangered. Season detected: B, Monitoring Avian Productivity and Survivorship (breeding season), F, fall (migratory season). Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

Alpha code	Common name	Scientific name	Special status	Season detected
TUVU ¹	Turkey Vulture	<i>Cathartes aura</i>		B
MALL ¹	Mallard	<i>Anas platyrhynchos</i>		B, F
COHA ¹	Cooper's Hawk	<i>Accipiter cooperii</i>		B, F
RSHA ¹	Red-shouldered Hawk	<i>Buteo lineatus</i>		B, F
RTHA ¹	Red-tailed Hawk	<i>Buteo jamaicensis</i>		B, F
GOEA ¹	Golden Eagle	<i>Aquila chrysaetos</i>		B
AMKE ¹	American Kestrel	<i>Falco sparverius</i>		B, F
INPE	Indian Peafowl	<i>Pavo cristatus</i>		B, F
WITU ¹	Wild Turkey	<i>Meleagris gallopavo</i>		B, F
KILL ¹	Killdeer	<i>Charadrius vociferus</i>		F
BTPI ¹	Band-tailed Pigeon	<i>Patagioenas fasciata</i>		B, F
EUCD	Eurasian Collared-Dove	<i>Streptopelia decaocto</i>		B, F
WWDO ¹	White-winged Dove	<i>Zenaida asiatica</i>		F
COGD ¹	Common Ground-Dove	<i>Columbina passerina</i>		F
GRRO ¹	Greater Roadrunner	<i>Geococcyx californianus</i>		B
BANO ¹	Barn Owl	<i>Tyto alba</i>		B
WESO ¹	Western Screech-Owl	<i>Megascops kennicottii</i>		B, F
GHOW ¹	Great Horned Owl	<i>Bubo virginianus</i>		B, F
LENI ¹	Lesser Nighthawk	<i>Chordeiles acutipennis</i>		B, F
HAWO ¹	Hairy Woodpecker	<i>Picoides villosus</i>		F
BLPH ¹	Black Phoebe	<i>Sayornis nigricans</i>		F
SAPH ¹	Say's Phoebe	<i>Sayornis saya</i>		B, F
LOSH ¹	Loggerhead Shrike	<i>Lanius ludovicianus</i>	CC, FC	F
CAVI ¹	Cassin's Vireo	<i>Vireo cassinii</i>		B
STJA ¹	Steller's Jay	<i>Cyanocitta stelleri</i>		F
AMCR ¹	American Crow	<i>Corvus brachyrhynchos</i>		B, F
CORA ¹	Common Raven	<i>Corvus corax</i>		B, F
BARS ¹	Barn Swallow	<i>Hirundo rustica</i>		F
MOCH ¹	Mountain Chickadee	<i>Poecile gambeli</i>		F
BGGN ¹	Blue-gray Gnatcatcher	<i>Poliophtila caerulea</i>		B, F
BTGN ¹	Black-tailed Gnatcatcher	<i>Poliophtila melanura</i>		B
TOSO ¹	Townsend's Solitaire	<i>Myadestes townsendi</i>		F
CEDW ¹	Cedar Waxwing	<i>Bombycilla cedrorum</i>		F
TOWA ¹	Townsend's Warbler	<i>Setophaga townsendi</i>		F
HEWA ¹	Hermit Warbler	<i>Setophaga occidentalis</i>		F
CLSW ¹	Cliff Swallow	<i>Petrochelidon pyrrhonota</i>		B
SAVS ¹	Savannah Sparrow	<i>Passerculus sandwichensis</i>		F

Alpha code	Common name	Scientific name	Special status	Season detected
<i>BLGR</i> ¹	Blue Grosbeak	<i>Passerina caerulea</i>		B, F
<i>WEME</i> ¹	Western Meadowlark	<i>Sturnella neglecta</i>		B, F
<i>BHCO</i> ¹	Brown-headed Cowbird	<i>Molothrus ater</i>		B, F
<i>HOOR</i> ¹	Hooded Oriole	<i>Icterus cucullatus</i>		B, F
<i>LAGO</i> ¹	Lawrence's Goldfinch	<i>Spinus lawrencei</i>	CC, FC	B, F
<i>AMGO</i> ¹	American Goldfinch	<i>Spinus tristis</i>		B, F
<i>AMRO</i> ¹	American Robin	<i>Turdus migratorius</i>		B, F

¹Protected species under the Migratory Bird Treaty Act of 1918.

Table 4. Number of birds captured and banded, during Monitoring Avian Productivity and Survivorship, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, 2013–17.

[See tables 2 and 3 for bird species codes. Species in italics are non-breeding neotropical migrants. Includes multiple captures of some individuals. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

Species	Total captures						Total number of individuals captured						New individuals banded					
	Year					Total	Year					Total	Year					Total
	2013	2014	2015	2016	2017		2013	2014	2015	2016	2017		2013	2014	2015	2016	2017	
CAQU	0	1	1	3	1	6	0	1	1	3	1	6	0	0	0	0	0	0
MODO	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0
<i>BCHU</i>	1	1	0	4	1	7	1	1	0	4	1	7	0	0	0	0	0	0
ANHU	9	9	6	3	10	37	9	9	6	3	9	36	0	0	0	0	0	0
COHU	1	2	8	1	0	12	1	2	8	1	0	12	0	0	0	0	0	0
CAHU	0	0	1	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0
<i>RUHU</i>	0	1	3	0	0	4	0	1	3	0	0	4	0	0	0	0	0	0
<i>ALHU</i>	1	1	1	0	1	4	1	1	1	0	1	4	0	0	0	0	0	0
ACWO	12	3	2	0	1	18	11	3	2	0	1	17	11	3	2	0	1	17
NUWO	5	2	4	3	3	17	3	2	3	3	3	14	3	2	2	2	2	11
DOWO	1	2	0	3	0	6	1	1	0	2	0	4	1	1	0	2	0	4
RSFL	2	0	1	0	3	6	1	0	1	0	3	5	1	0	1	0	3	5
<i>WEWP</i>	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1
<i>WIFL</i>	0	1	1	0	0	2	0	1	1	0	0	2	0	1	1	0	0	2
<i>HAFL</i>	0	2	0	0	0	2	0	2	0	0	0	2	0	2	0	0	0	2
<i>GRFL</i>	1	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	0	1
<i>PSFL</i>	0	3	5	1	0	9	0	3	5	1	0	9	0	3	5	1	0	9
ATFL	8	3	6	11	4	32	8	3	6	9	2	28	8	2	4	8	2	24
WEKI	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0	1	0	1
<i>LBVI</i>	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0	1	0	1
HUVI	0	0	0	0	2	2	0	0	0	0	1	1	0	0	0	0	1	1
<i>WAVI</i>	1	4	13	2	0	20	1	4	13	2	0	20	1	4	13	2	0	20
CASJ	8	7	2	4	5	26	8	7	2	4	5	26	8	6	0	4	4	22
OATI	11	6	8	13	11	49	8	6	6	9	11	40	8	1	4	7	7	27
BUSH	12	12	32	23	40	119	12	9	30	21	36	108	11	8	24	18	32	93
WBNU	3	7	2	1	4	17	3	6	2	1	4	16	2	3	0	1	2	8

Species	Total captures						Total number of individuals captured						New individuals banded					
	Year						Year						Year					
	2013	2014	2015	2016	2017	Total	2013	2014	2015	2016	2017	Total	2013	2014	2015	2016	2017	Total
BEWR	3	5	7	12	10	37	3	4	4	7	7	25	3	3	4	5	5	20
HOWR	12	12	3	4	20	51	9	8	2	4	13	36	7	5	1	4	12	29
RCKI	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1
WEBL	0	3	0	0	10	13	0	3	0	0	8	11	0	3	0	0	8	11
SWTH	1	1	3	1	0	6	1	1	3	1	0	6	1	1	3	1	0	6
HETH	0	2	0	0	0	2	0	2	0	0	0	2	0	2	0	0	0	2
WREN	4	1	0	0	0	5	4	1	0	0	0	5	3	1	0	0	0	4
CATH	2	0	1	5	3	11	2	0	1	4	3	10	2	0	1	2	3	8
EUST	0	1	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0
OCWA	3	18	1	1	0	23	3	18	1	1	0	23	3	18	1	1	0	23
NAWA	1	4	1	0	0	6	1	4	1	0	0	6	1	4	1	0	0	6
YEWA	2	3	5	2	1	13	2	3	5	2	1	13	2	3	5	2	1	13
AUWA	0	2	3	0	12	17	0	2	3	0	12	17	0	2	3	0	12	17
MGWA	1	1	1	0	0	3	1	1	1	0	0	3	1	1	1	0	0	3
COYE	1	0	0	0	2	3	1	0	0	0	2	3	1	0	0	0	2	3
WIWA	4	17	14	15	4	54	4	17	14	15	4	54	4	16	14	15	4	53
WETA	1	2	0	0	0	3	1	2	0	0	0	3	1	2	0	0	0	3
SPTO	17	19	10	3	2	51	13	17	7	3	2	42	12	13	4	0	1	30
CALT	8	4	2	0	2	16	6	4	2	0	2	14	6	2	2	0	2	12
BRSP	1	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	0	1
LASP	0	0	0	4	0	4	0	0	0	4	0	4	0	0	0	4	0	4
BTSP	0	1	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0	1
BESP	0	1	0	0	1	2	0	1	0	0	1	2	0	1	0	0	1	2
SOSP	0	2	0	1	1	4	0	2	0	1	1	4	0	2	0	1	1	4
LISP	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	0	1	1
WCSP	2	3	7	3	4	19	2	3	7	3	4	19	2	3	7	3	4	19
GCSP	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1
ORJU	0	2	0	0	0	2	0	2	0	0	0	2	0	2	0	0	0	2
BHGR	1	1	2	2	3	9	1	1	2	2	3	9	1	1	2	2	3	9
BUOR	5	7	4	3	0	19	5	5	3	3	0	16	5	4	3	3	0	15
HOFI	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1

Species	Total captures						Total number of individuals captured						New individuals banded					
	Year						Year						Year					
	2013	2014	2015	2016	2017	Total	2013	2014	2015	2016	2017	Total	2013	2014	2015	2016	2017	Total
LEGO	0	2	0	0	0	2	0	2	0	0	0	2	0	2	0	0	0	2
Total	145	181	164	131	162	783	129	167	151	116	142	705	111	128	112	90	114	555

Table 5. Number of birds recaptured during Monitoring Avian Productivity and Survivorship, Warner Springs, San Diego County, California, 2013–17.

[See tables 2 and 3 for bird species codes. Species in italics are non-breeding neotropical migrants. Includes multiple captures of some individuals. Recaptures originally banded during previous banding activities at Warner Springs, all seasons. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

Species code	Recaptured individuals 2014		Recaptured individuals 2015			Recaptured individuals, 2016				Recaptured individuals, 2017			
	Year originally banded		Year originally banded			Year originally banded				Year originally banded			
	2013	Total	2013	2014	Total	2013	2014	2015	Total	2014	2015	2016	Total
NUWO	0	0	0	1	1	1	0	0	1	0	0	1	1
ATFL	1	1	1	1	2	0	0	1	1	0	0	0	0
CASJ	1	1	1	1	2	0	0	0	0	1	0	0	1
OATI	5	5	1	1	2	0	0	2	2	0	3	1	4
BUSH	1	1	3	1	4	0	1	0	1	0	0	0	0
WBNU	3	3	1	1	2	0	0	0	0	0	0	2	2
BEWR	0	0	0	0	0	0	0	1	1	0	1	0	1
HOWR	3	3	1	0	1	0	0	0	0	0	0	0	0
CATH	0	0	0	0	0	1	0	0	1	0	0	0	0
SPTO	4	4	1	2	3	0	1	0	2	1	0	0	1
CALT	2	2	0	0	0	0	0	0	0	0	0	0	0
BUOR	1	1	0	0	0	0	0	0	0	0	0	0	0
Total	21	21	9	8	17	2	2	4	9	2	4	4	10

Table 6. Capture frequency of individuals during Monitoring Avian Productivity and Survivorship, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2013.

[See tables 2 and 3 for bird species codes. Species in italics are non-breeding neotropical migrants. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

Species	Number of individuals per capture incidence			Total number of individuals		
	(banded birds only)			Banded birds	Unbanded birds	All birds
	1 capture	2 captures	3 captures			
<i>BCHU</i>	0	0	0	0	1	1
<i>ANHU</i>	0	0	0	0	9	9
<i>COHU</i>	0	0	0	0	1	1
<i>ALHU</i>	0	0	0	0	1	1
<i>ACWO</i>	10	1	0	11	0	11
<i>NUWO</i>	1	2	0	3	0	3
<i>DOWO</i>	1	0	0	1	0	1
<i>RSFL</i>	0	1	0	1	0	1
<i>GRFL</i>	1	0	0	1	0	1
<i>ATFL</i>	8	0	0	8	0	8
<i>WAVI</i>	1	0	0	1	0	1
<i>CASJ</i>	0	0	0	8	0	8
<i>OATI</i>	6	1	1	8	0	8
<i>BUSH</i>	11	0	0	11	1	12
<i>WBNU</i>	2	0	0	2	1	3
<i>BEWR</i>	3	0	0	3	0	3
<i>HOWR</i>	5	1	1	7	2	9
<i>SWTH</i>	1	0	0	1	0	1
<i>WREN</i>	3	0	0	3	1	4
<i>CATH</i>	2	0	0	2	0	2
<i>OCWA</i>	3	0	0	3	0	3
<i>NAWA</i>	1	0	0	1	0	1
<i>YEWA</i>	2	0	0	2	0	2
<i>MGWA</i>	1	0	0	1	0	1
<i>COYE</i>	1	0	0	1	0	1
<i>WIWA</i>	4	0	0	4	0	4
<i>WETA</i>	1	0	0	1	0	1
<i>SPTO</i>	9	2	1	12	1	13
<i>CALT</i>	4	2	0	6	0	6
<i>BRSP</i>	1	0	0	1	0	1
<i>WCSP</i>	2	0	0	2	0	2
<i>BHGR</i>	1	0	0	1	0	1
<i>BUOR</i>	5	0	0	5	0	5
Total	98	10	3	111	18	129

Table 7. Capture frequency of individuals during Monitoring Avian Productivity and Survivorship, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2014.

[See tables 2 and 3 for bird species codes. Species in italics are non-breeding neotropical migrants. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

Species	Number of individuals per capture incidence (banded birds only)			Total number of individuals		
	1 capture	2 captures	3 captures	Banded birds	Unbanded birds	All birds
CAQU	0	0	0	0	1	1
<i>BCHU</i>	0	0	0	0	1	1
ANHU	0	0	0	0	9	9
<i>COHU</i>	0	0	0	0	2	2
<i>RUHU</i>	0	0	0	0	1	1
<i>ALHU</i>	0	0	0	0	1	1
ACWO	3	0	0	3	0	3
<i>NUWO</i>	2	0	0	2	0	2
<i>DOWO</i>	0	1	0	1	0	1
WIFL	1	0	0	1	0	1
HAFL	2	0	0	2	0	2
<i>PSFL</i>	3	0	0	3	0	3
ATFL	3	0	0	3	0	3
<i>WAVI</i>	4	0	0	4	0	4
CASJ	7	0	0	7	0	7
OATI	6	0	0	6	0	6
BUSH	7	2	0	9 ¹	0	9 ¹
WBNU	5	1	0	6	0	6
BEWR	2	1	0	3	1	4
HOWR	5	2	1	8	0	8
WEBL	3	0	0	3	0	3
<i>SWTH</i>	1	0	0	1	0	1
<i>HETH</i>	2	0	0	2	0	2
<i>WREN</i>	1	0	0	1	0	1
EUST	0	0	0	0	1	1
OCWA	18	0	0	18	0	18
<i>NAWA</i>	4	0	0	4	0	4
<i>YEWA</i>	3	0	0	3	0	3
<i>AUWA</i>	2	0	0	2	0	2
<i>MGWA</i>	1	0	0	1	0	1
<i>WIWA</i>	16	0	0	16	1	17
<i>WETA</i>	2	0	0	2	0	2
SPTO	15	2	0	17	0	17
CALT	4	0	0	4	0	4
<i>BTSP</i>	1	0	0	1	0	1
<i>BESP</i>	1	0	0	1	0	1
<i>SOSP</i>	2	0	0	2	0	2
<i>WCSP</i>	3	0	0	3	0	3

Species	Number of individuals per capture incidence (banded birds only)			Total number of individuals		
	1 capture	2 captures	3 captures	Banded birds	Unbanded birds	All birds
<i>ORJU</i>	2	0	0	2	0	2
BHGR	1	0	0	1	0	1
BUOR	3	2	0	5	0	5
LEGO	2	0	0	2	0	2
Total	137	11	1	149¹	18	167¹

¹Does not include one banded BUSH that was recaptured and escaped before recording the band number.

Table 8. Capture frequency of individuals during Monitoring Avian Productivity and Survivorship, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2015.

[See tables 2 and 3 for bird species codes. Species in italics are non-breeding neotropical migrants. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

Species	Number of individuals per capture incidence (banded birds only)			Total number of individuals		
	1 capture	2 captures	4 captures	Banded	Unbanded birds	All birds
CAQU	0	0	0	0	1	1
ANHU	0	0	0	0	6	6
<i>COHU</i>	0	0	0	0	8	8
<i>CAHU</i>	0	0	0	0	1	1
<i>RUHU</i>	0	0	0	0	3	3
<i>ALHU</i>	0	0	0	0	1	1
ACWO	2	0	0	2	0	2
NUWO	2	1	0	3	0	3
RSFL	1	0	0	1	0	1
<i>WEWP</i>	1	0	0	1	0	1
<i>WIFL</i>	1	0	0	1	0	1
<i>PSFL</i>	5	0	0	5	0	5
ATFL	6	0	0	6	0	6
WAVI	13	0	0	13	0	13
CASJ	2	0	0	2	0	2
OATI	5	1	0	6 ¹	0	6 ¹
BUSH	26	2	0	28	2	30
WBNU	2	0	0	2	0	2
BEWR	3	0	1	4	0	4
HOWR	1	1	0	2	0	2
<i>RCKI</i>	1	0	0	1	0	1
<i>SWTH</i>	3	0	0	3	0	3
CATH	1	0	0	1	0	1
OCWA	1	0	0	1	0	1
NAWA	1	0	0	1	0	1
YEWA	5	0	0	5	0	5
AUWA	3	0	0	3	0	3
MGWA	1	0	0	1	0	1
WIWA	14	0	0	14	0	14
SPTO	4	3	0	7	0	7
CALT	2	0	0	2	0	2
WCSP	7	0	0	7	0	7
GCSP	1	0	0	1	0	1
BHGR	2	0	0	2	0	2
BUOR	2	1	0	3	0	3
<i>HOFI</i>	1	0	0	1	0	1
Total	119	9	1	129¹	22	151¹

¹Does not include one banded OATI that was recaptured and escaped before recording the band number.

Table 9. Capture frequency of individuals during Monitoring Avian Productivity and Survivorship, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2016.

[See tables 2 and 3 for bird species codes. Species in italics are non-breeding neotropical migrants. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

Species	Number of individuals per capture incidence				Total number of individuals		
	(Banded birds only)				Banded birds	Unbanded birds	All birds
	1 capture	2 captures	3 captures	4 captures			
CAQU	0	0	0	0	0	3	3
MODO	0	0	0	0	0	1	1
<i>BCHU</i>	0	0	0	0	0	4	4
ANHU	0	0	0	0	0	3	3
<i>COHU</i>	0	0	0	0	0	1	1
NUWO	3	0	0	0	3	0	3
DOWO	1	1	0	0	2	0	2
<i>PSFL</i>	1	0	0	0	1	0	1
ATFL	7	2	0	0	9	0	9
WEKI	1	0	0	0	1	0	1
<i>LBVI</i>	1	0	0	0	1	0	1
<i>WAVI</i>	2	0	0	0	2	0	2
CASJ	4	0	0	0	4	0	4
OATI	5	4	0	0	9	0	9
BUSH	17	2	0	0	19	2	21
WBNU	1	0	0	0	1	0	1
BEWR	4	0	1	1	6	1	7
HOWR	4	0	0	0	4	0	4
<i>SWTH</i>	1	0	0	0	1	0	1
CATH	2	1	0	0	3	1	4
OCWA	1	0	0	0	1	0	1
YEWA	2	0	0	0	2	0	2
<i>WIWA</i>	15	0	0	0	15	0	15
SPTO	2 ¹	0	0	0	2 ¹	1	3 ¹
LASP	4	0	0	0	4	0	4
SOSP	1	0	0	0	1	0	1
WCSP	3	0	0	0	3	0	3
BHGR	2	0	0	0	2	0	2
BUOR	3	0	0	0	3	0	3
Total	87¹	10	1	1	99¹	17	116¹

¹Includes one banded SPTO that was recaptured and escaped before recording the band number because it was the first capture of this species this year.

Table 10. Capture frequency of individuals during Monitoring Avian Productivity and Survivorship, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2017.

[See tables 2 and 3 for bird species codes. Species in italics are non-breeding neotropical migrants. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

Species	Number of individuals per capture incidence				Total number of individuals		
	(Banded birds only)				Banded birds	Unbanded birds	All birds
	1 capture	2 captures	3 captures	4 captures			
CAQU	0	0	0	0	0	1	1
<i>BCHU</i>	0	0	0	0	0	1	1
ANHU	0	0	0	0	0	9	9
<i>ALHU</i>	0	0	0	0	0	1	1
ACWO	1	0	0	0	1	0	1
NUWO	3	0	0	0	3	0	3
RSFL	3	0	0	0	3	0	3
ATFL	0	2	0	0	2	0	2
HUVI	0	1	0	0	1	0	1
CASJ	5	0	0	0	5	0	5
OATI	11	0	0	0	11	0	11
BUSH	29	3	0	0	32 ¹	4	36
WBNU	4	0	0	0	4	0	4
BEWR	4	1	1	0	6	1	7
HOWR	9	1	0	2	12	1	13
WEBL	6	2	0	0	8	0	8
CATH	3	0	0	0	3	0	3
YEWA	1	0	0	0	1	0	1
AUWA	12	0	0	0	12	0	12
COYE	2	0	0	0	2	0	2
WIWA	4	0	0	0	4	0	4
SPTO	2	0	0	0	2	0	2
CALT	2	0	0	0	2	0	2
SAGS	1	0	0	0	1	0	1
SOSP	1	0	0	0	1	0	1
<i>LISP</i>	1	0	0	0	1	0	1
<i>WCSP</i>	4	0	0	0	4	0	4
BHGR	3	0	0	0	3	0	3
Total	111	10	1	2	124	18	142

¹Does not include one banded BUSH that was recaptured and escaped before recording the band number.

Table 11. Capture rate by net and date during Monitoring Avian Productivity and Survivorship, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2013.

[MAPS periods were established by the Institute for Bird Populations for program-wide consistency. In San Diego, banding began 3 periods early to encompass the earlier breeding season that occurs at southern latitudes. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

MAPS period	Date		Net													Totals by date
			1	2	3	4	5	6	7	8	9	10	11	12	13	
-3	4/5/2013	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	0:00	0:00	0:00	50:00
		Captures	0	0	1	1	0	2	2	0	0	3	0	0	0	9
		Captures per net-hour	0.00	0.00	0.20	0.20	0.00	0.40	0.40	0.00	0.00	0.60	--	--	--	0.18
-2	4/12/2013	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	0:00	0:00	0:00	50:00
		Captures	0	1	0	1	0	1	5	3	1	1	0	0	0	13
		Captures per net-hour	0.00	0.20	0.00	0.20	0.00	0.20	1.00	0.60	0.20	0.20	--	--	--	0.26
-1	4/26/2013	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	0:00	0:00	0:00	50:00
		Captures	0	2	1	4	1	0	0	2	4	0	0	0	0	14
		Captures per net-hour	0.00	0.40	0.20	0.80	0.20	0.00	0.00	0.40	0.80	0.00	--	--	--	0.28
1	5/3/2013	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	0:00	0:00	0:00	50:00
		Captures	2	0	0	6	1	2	0	4	1	1	0	0	0	17
		Captures per net-hour	0.40	0.00	0.00	1.20	0.20	0.40	0.00	0.80	0.20	0.20	--	--	--	0.34
2	5/17/2013	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	0:00	0:00	0:00	50:00
		Captures	0	0	0	0	0	2	2	3	0	0	0	0	0	7
		Captures per net-hour	0.00	0.00	0.00	0.00	0.00	0.40	0.40	0.60	0.00	0.00	--	--	--	0.14
3	5/24/2013	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	0:00	0:00	0:00	50:00
		Captures	0	0	2	1	2	4	3	1	2	0	0	0	0	15
		Captures per net-hour	0.00	0.00	0.40	0.20	0.40	0.80	0.60	0.20	0.40	0.00	--	--	--	0.30
4	6/7/2013	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	65:00
		Captures	0	1	5	0	1	0	2	1	1	0	1	1	2	15
		Captures per net-hour	0.00	0.20	1.00	0.00	0.20	0.00	0.40	0.20	0.20	0.00	0.20	0.20	0.40	0.23
5	6/14/2013	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	65:00
		Captures	0	2	1	1	0	0	0	0	3	0	0	0	0	7
		Captures per net-hour	0.00	0.40	0.20	0.20	0.00	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00	0.11

MAPS period	Date		Net													Totals by date
			1	2	3	4	5	6	7	8	9	10	11	12	13	
6	6/21/2013	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	65:00
		Captures	0	0	0	4	0	0	2	1	3	1	0	1	0	12
		Captures per net-hour	0.00	0.00	0.00	0.80	0.00	0.00	0.40	0.20	0.60	0.20	0.00	0.20	0.00	0.18
7	7/4/2013	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	65:00	
		Captures	0	1	0	3	0	1	0	8	0	0	0	0	1	14
		Captures per net-hour	0.00	0.20	0.00	0.60	0.00	0.20	0.00	1.60	0.00	0.00	0.00	0.00	0.20	0.22
8	7/12/2013	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	65:00	
		Captures	2	1	2	0	0	2	0	0	1	0	0	0	1	9
		Captures per net-hour	0.40	0.20	0.40	0.00	0.00	0.40	0.00	0.00	0.20	0.00	0.00	0.00	0.20	0.14
9	7/26/2013	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	65:00	
		Captures	1	1	0	0	0	1	0	0	0	1	0	0	1	5
		Captures per net-hour	0.20	0.20	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.20	0.00	0.00	0.20	0.08
10	8/2/2013	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	65:00	
		Captures	1	3	0	0	0	0	0	2	1	0	0	0	1	8
		Captures per net-hour	0.20	0.60	0.00	0.00	0.00	0.00	0.00	0.40	0.20	0.00	0.00	0.00	0.20	0.12
Totals by net		Net-hours	65:0	65:00	65:0	35:0	35:0	35:0	755:00							
		Captures	6	12	12	21	5	15	16	25	17	7	1	2	6	145
		Captures per net-hour	0.09	0.18	0.18	0.32	0.08	0.23	0.25	0.38	0.26	0.11	0.03	0.06	0.17	0.19

Table 12. Capture rate by net and date during Monitoring Avian Productivity and Survivorship, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2014.

[MAPS periods were established by the Institute for Bird Populations for program-wide consistency. In San Diego, banding began 3 periods early to encompass the earlier breeding season that occurs at southern latitudes. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

MAPS period	Date	Net														Totals by date	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14		
-3	4/4/2014	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	50:00
		Captures	0	1	4	2	3	0	2	2	1	2	1	0	5	2	25
		Captures per net-hour	0.00	0.20	0.80	0.40	0.60	0.00	0.40	0.40	0.20	0.40	0.20	0.00	1.00	0.40	0.50
-2	4/11/2014	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	50:00
		Captures	0	4	1	2	0	3	1	1	1	2	2	0	5	6	28
		Captures per net-hour	0.00	0.80	0.20	0.40	0.00	0.60	0.20	0.20	0.20	0.40	0.40	0.00	1.00	1.20	0.56
-1	4/25/2014	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	50:00
		Captures	0	1	0	3	0	1	1	1	2	0	0	1	2	1	13
		Captures per net-hour	0.00	0.20	0.00	0.60	0.00	0.20	0.20	0.20	0.40	0.00	0.00	0.20	0.40	0.20	0.26
1	5/2/2014	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	50:00
		Captures	1	0	2	1	1	0	1	0	1	0	0	0	3	0	10
		Captures per net-hour	0.20	0.00	0.40	0.20	0.20	0.00	0.20	0.00	0.20	0.00	0.00	0.00	0.60	0.00	0.20
2	5/16/2014	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	50:00
		Captures	0	1	0	1	2	2	1	1	9	1	1	1	2	3	25
		Captures per net-hour	0.00	0.20	0.00	0.20	0.40	0.40	0.20	0.20	1.80	0.20	0.20	0.20	0.40	0.60	1.06
3	5/23/2014	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	50:00
		Captures	0	0	0	3	0	1	2	0	1	0	0	0	1	2	10
		Captures per net-hour	0.00	0.00	0.00	0.60	0.00	0.20	0.40	0.00	0.20	0.00	0.00	0.00	0.20	0.40	0.20
4	6/6/2014	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	50:00
		Captures	0	1	0	0	0	0	1	0	3	1	1	1	0	0	8
		Captures per net-hour	0.00	0.20	0.00	0.00	0.00	0.00	0.20	0.00	0.60	0.20	0.20	0.20	0.00	0.00	0.16
5	6/13/2014	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	50:00
		Captures	0	0	1	0	0	1	2	1	1	0	0	1	0	1	8
		Captures per net-hour	0.00	0.00	0.20	0.00	0.00	0.20	0.40	0.20	0.20	0.00	0.00	0.20	0.00	0.20	0.16

MAPS period	Date	Net														Totals by date	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14		
6	6/20/2014	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	50:00
		Captures	1	0	0	3	0	1	0	0	1	0	0	0	0	1	7
		Captures per net-hour	0.20	0.00	0.00	0.60	0.00	0.20	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.20
7	7/1/2014	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	50:00
		Captures	0	0	0	1	1	0	0	1	0	0	0	1	2	0	6
		Captures per net-hour	0.00	0.00	0.00	0.20	0.20	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.20	0.40	0.00
8	7/11/2014	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	50:00
		Captures	0	0	0	0	0	0	0	0	1	3	2	0	1	1	8
		Captures per net-hour	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.60	0.40	0.00	0.20	0.20
9	7/25/2014	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	3:40	5:00	4:30	50:00
		Captures	1	0	2	7	1	1	4	1	1	0	1	0	0	5	24
		Captures per net-hour	0.20	0.00	0.40	1.40	0.20	0.20	0.80	0.20	0.20	0.00	0.20	0.00	0.00	0.00	1.11
10	8/1/2014	Net-hours	4:30	4:30	4:20	4:30	4:30	4:30	4:30	4:30	4:30	4:30	4:30	4:30	4:30	4:30	44:50
		Captures	0	1	2	0	1	0	1	0	0	0	0	0	1	3	9
		Captures per net-hour	0.00	0.22	0.46	0.00	0.22	0.00	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.67
Totals by net	Net-hours	64:30	64:30	64:20	64:30	63:10	64:30	64:00	901:00								
	Captures	3	9	12	23	9	10	16	8	22	9	8	5	22	25	181	
Totals by net	Captures per net-hour	0.05	0.14	0.19	0.36	0.14	0.16	0.25	0.12	0.34	0.14	0.12	0.08	0.34	0.39	0.20	

Table 13. Capture rate by net and date during Monitoring Avian Productivity and Survivorship, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2015.

[MAPS periods were established by the Institute for Bird Populations for program-wide consistency. In San Diego, banding began 3 periods early to encompass the earlier breeding season that occurs at southern latitudes. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

MAPS period	Date		Net													Totals by date	
			1	2	3	4	5	6	7	8	9	10	11	12	13		14
		Net-hours	4:30	4:30	4:30	4:30	4:30	4:30	4:30	4:30	4:30	4:30	4:30	4:30	4:30	4:30	63:00
		Captures	0	1	1	0	1	1	1	1	0	0	0	0	2	1	9
-3	4/3/2015	Captures per net-hour	0.00	0.22	0.22	0.00	0.22	0.22	0.22	0.22	0.00	0.00	1.00	2.00	3.00	4.00	0.14
		Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	70:00
		Captures	0	0	1	0	0	1	7	1	0	0	1	0	1	3	15
-2	4/17/2015	Captures per net-hour	0.00	0.00	0.20	0.00	0.00	0.20	1.40	0.20	0.00	0.00	0.20	0.00	0.20	0.60	0.21
		Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	70:00
		Captures	0	5	3	0	0	2	0	1	0	0	0	0	5	12	28
-1	4/24/2015	Captures per net-hour	0.00	1.00	0.60	0.00	0.00	0.40	0.00	0.20	0.00	0.00	0.00	0.00	1.00	2.40	0.40
		Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	70:00
		Captures	0	1	3	1	0	2	0	1	1	3	0	0	2	3	17
1	5/1/2015	Captures per net-hour	0.00	0.20	0.60	0.20	0.00	0.40	0.00	0.20	0.20	0.60	0.00	0.00	0.40	0.60	0.24
		Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	70:00
		Captures	0	0	2	1	0	1	1	0	1	0	1	2	0	4	13
2	5/19/2015	Captures per net-hour	0.00	0.00	0.40	0.20	0.00	0.20	0.20	0.00	0.20	0.00	0.20	0.40	0.00	0.80	0.19
		Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	70:00
		Captures	0	1	2	0	0	0	0	0	1	0	1	1	0	1	7
3	5/29/2015	Captures per net-hour	0.00	0.20	0.40	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.20	0.20	0.00	0.20	0.10
		Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	70:00
		Captures	0	0	0	0	0	0	0	0	12	0	0	0	0	1	13
4	6/5/2015	Captures per net-hour	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.40	0.00	0.00	0.00	0.00	0.20	0.19
		Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	70:00
		Captures	0	1	0	0	0	0	6	0	0	0	0	0	0	0	7
5	6/12/2015	Captures per net-hour	0.00	0.20	0.00	0.00	0.00	0.00	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10

MAPS period	Date	Net														Totals by date	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14		
6	6/26/2015	Net-hours	5:30	5:30	5:30	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:30	72:00	
		Captures	0	0	4	0	0	4	1	3	0	0	0	1	4	1	18
		Captures per net-hour	0.00	0.00	0.73	0.00	0.00	0.80	0.20	0.60	0.00	0.00	0.00	0.20	0.80	0.18	0.25
7	7/2/2015	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	70:00	
		Captures	1	0	0	0	0	1	1	0	0	3	0	1	1	1	9
		Captures per net-hour	0.20	0.00	0.00	0.00	0.00	0.20	0.20	0.00	0.00	0.60	0.00	0.20	0.20	0.20	0.13
8	7/17/2015	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	70:00	
		Captures	0	0	0	0	0	0	2	1	1	6	0	0	1	0	11
		Captures per net-hour	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.20	0.20	1.20	0.00	0.00	0.20	0.00	0.16
9	7/24/2015	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	70:00	
		Captures	0	1	1	0	1	0	0	1	1	1	0	1	1	3	11
		Captures per net-hour	0.00	0.20	0.20	0.00	0.20	0.00	0.00	0.20	0.20	0.20	0.00	0.20	0.20	0.60	0.16
10	7/31/2015	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	70:00	
		Captures	0	0	1	0	0	0	1	0	0	2	1	0	1	0	6
		Captures per net-hour	0.00	0.00	0.20	0.00	0.00	0.00	0.20	0.00	0.00	0.40	0.20	0.00	0.20	0.00	0.09
Totals by net	Net-hours	65:00	65:00	65:00	64:30	65:00	905:00										
	Captures	1	10	18	2	2	12	20	9	5	27	4	6	18	30	164	
Totals by net	Captures per net-hour	0.02	0.15	0.28	0.03	0.03	0.19	0.31	0.14	0.08	0.42	0.06	0.09	0.28	0.46	0.18	

Table 14. Capture rate by net and date during Monitoring Avian Productivity and Survivorship, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2016.

[MAPS periods were established by the Institute for Bird Populations for program-wide consistency. In San Diego, banding began 3 periods early to encompass the earlier breeding season that occurs at southern latitudes. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

MAPS period	Date	Net														Totals by date
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	
	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	70:00
	Captures	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
-2	4/15/2016 Captures per net-hour	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.01
	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	70:00
	Captures	0	0	0	0	0	0	3	0	0	0	0	2	3	2	10
-1	4/22/2016 Captures per net-hour	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00	0.40	0.60	0.40	0.14
	Net-hours	2:30	2:30	2:30	2:30	2:30	2:30	2:30	2:30	2:30	2:30	2:30	2:30	2:30	2:30	35:00
	Captures	0	0	1	0	0	3	2	2	0	1	0	1	2	5	20¹
1	5/6/2016 Captures per net-hour	0.00	0.00	0.40	0.00	0.00	1.20	0.80	0.80	0.00	0.40	0.00	0.40	0.80	2.00	0.57
	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	70:00
	Captures	0	0	0	0	0	0	2	1	1	0	1	0	1	2	8
2	5/12/2016 Captures per net-hour	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.20	0.20	0.00	0.20	0.00	0.20	0.40	0.11
	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	70:00
	Captures	1	0	2	1	0	4	2	3	0	1	1	0	2	0	17
3	5/27/2016 Captures per net-hour	0.20	0.00	0.40	0.20	0.00	0.80	0.40	0.60	0.00	0.20	0.20	0.00	0.40	0.00	0.24
	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	70:00
	Captures	0	1	0	0	0	0	0	1	0	1	0	1	1	2	7
4	6/3/2016 Captures per net-hour	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.20	0.00	0.20	0.20	0.40	0.10
	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	70:00
	Captures	0	0	0	0	0	1	0	0	6	0	3	0	1	3	14
5	6/17/2016 Captures per net-hour	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	1.20	0.00	0.60	0.00	0.20	0.60	0.20
	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	4:40	5:00	5:00	69:40
	Captures	0	2	1	0	0	2	0	0	2	2	0	0	2	2	13
6	6/23/2016 Captures per net-hour	0.00	0.40	0.20	0.00	0.00	0.40	0.00	0.00	0.40	0.40	0.00	0.00	0.40	0.40	0.19

MAPS period	Date	Net														Totals by date	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14		
		Net-hours	3:30	3:30	3:30	3:30	3:30	3:30	3:30	3:30	3:30	3:30	3:30	3:30	3:30	3:30	49:00
		Captures	1	0	1	2	0	0	2	1	0	0	1	0	1	1	10
7	7/1/2016	Captures per net-hour	0.29	0.00	0.29	0.57	0.00	0.00	0.57	0.29	0.00	0.00	0.29	0.00	0.29	0.29	0.20
		Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	70:00
		Captures	0	0	0	0	0	1	2	0	0	0	0	1	1	0	5
8	7/14/2016	Captures per net-hour	0.00	0.00	0.00	0.00	0.00	0.20	0.40	0.00	0.00	0.00	0.00	0.20	0.20	0.00	0.07
		Net-hours	4:10	4:10	4:10	4:10	4:10	4:10	4:10	4:10	4:10	4:10	4:10	4:10	4:10	4:10	58:20
		Captures	0	0	0	0	0	0	4	0	1	1	4	1	0	2	13
9	7/22/2016	Captures per net-hour	0.00	0.00	0.00	0.00	0.00	0.00	0.96	0.00	0.24	0.24	0.96	0.24	0.00	0.48	0.22
		Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	70:00
		Captures	0	0	0	0	0	6	0	0	0	0	0	0	3	4	13
10	8/5/2016	Captures per net-hour	0.00	0.00	0.00	0.00	0.00	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.80	0.19
		Net-Hours	55:10	54:50	55:10	55:10	55:10	772:00									
		Captures	2	3	5	3	0	17	17	8	10	7	10	6	17	23	131¹
		Totals by net Captures per net-hour	0.04	0.05	0.09	0.05	0.00	0.31	0.31	0.15	0.18	0.13	0.18	0.11	0.31	0.42	0.17

¹Three birds captured but no net recorded.

Table 15. Capture rate by net and date during Monitoring Avian Productivity and Survivorship, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2017.

[MAPS periods were established by the Institute for Bird Populations for program-wide consistency. In San Diego, banding began 3 periods early to encompass the earlier breeding season that occurs at southern latitudes. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

MAPS period	Date	Net														Totals by date	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14		
-3	4/5/2017	Net-hours	5:00	5:00	5:00	5:10	5:10	5:10	5:10	5:10	5:10	5:10	5:10	5:10	5:00	71:40	
		Captures	3	5	0	3	0	0	0	0	0	1	3	1	0	2	18
		Captures per net-hour	0.60	1.00	0.00	0.58	0.00	0.00	0.00	0.00	0.00	0.19	0.58	0.19	0.00	0.40	0.25
-2	4/12/2017	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	70:00	
		Captures	3	0	0	0	0	0	1	2	0	0	0	5	0	2	13
		Captures per net-hour	0.60	0.00	0.00	0.00	0.00	0.00	0.20	0.40	0.00	0.00	0.00	1.00	0.00	0.40	0.19
-1	4/28/2017	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	70:00	
		Captures	0	1	1	0	0	0	0	0	0	0	0	8	0	0	10
		Captures per net-hour	0.00	0.20	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.60	0.00	0.00	0.14
1	5/3/2017	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	70:00	
		Captures	0	2	0	0	0	0	0	0	0	0	1	0	1	0	4
		Captures per net-hour	0.00	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.20	0.00	0.06
2	5/17/2017	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	70:00	
		Captures	0	1	0	0	1	0	0	1	0	1	0	0	0	1	5
		Captures per net-hour	0.00	0.20	0.00	0.00	0.20	0.00	0.00	0.20	0.00	0.20	0.00	0.00	0.00	0.20	0.76
3	5/30/2017	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	70:00	
		Captures	0	4	0	3	0	2	1	1	1	3	0	3	0	1	19
		Captures per net-hour	0.00	0.80	0.00	0.60	0.00	0.40	0.20	0.20	0.20	0.60	0.00	0.60	0.00	0.20	0.27
4	6/7/2017	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	70:00	
		Captures	2	0	0	0	0	0	0	0	1	0	0	0	0	1	4
		Captures per net-hour	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.20	0.06
5	6/16/2017	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	70:00	
		Captures	1	2	0	1	1	3	2	0	0	3	0	1	0	0	14
		Captures per net-hour	0.20	0.40	0.00	0.20	0.20	0.60	0.40	0.00	0.00	0.60	0.00	0.20	0.00	0.00	0.20

MAPS period	Date	Net														Totals by date	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14		
6	6/21/2017	Net-hours	3:50	3:50	3:50	4:30	4:30	4:30	4:30	4:30	4:30	4:30	4:30	4:30	3:30	60:00	
		Captures	5	1	0	1	0	0	2	1	0	0	0	3	0	1	14
		Captures per net-hour	1.30	0.26	0.00	0.22	0.00	0.00	0.44	0.22	0.00	0.00	0.00	0.67	0.00	0.29	0.55
7	7/6/2017	Net-hours	5:00	5:00	4:20	5:00	5:00	4:20	4:20	4:20	4:20	4:20	4:20	4:20	5:00	5:00	64:40
		Captures	1	2	1	3	0	0	0	1	0	1	0	0	0	7	16
		Captures per net-hour	0.20	0.40	0.23	0.60	0.00	0.00	0.00	0.23	0.00	0.23	0.00	0.00	0.00	1.40	0.25
8	7/12/2017	Net-hours	5:00	5:00	3:50	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	68:50
		Captures	2	1	0	7	0	3	1	4	1	1	0	1	0	1	22
		Captures per net-hour	0.40	0.20	0.00	1.40	0.00	0.60	0.20	0.80	0.20	0.20	0.00	0.20	0.00	0.20	0.32
9	7/26/2017	Net-hours	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	4:10	4:20	5:00	4:30	5:00	5:00	68:00
		Captures	0	0	0	4	0	6	0	0	0	3	0	1	0	0	14
		Captures per net-hour	0.00	0.00	0.00	0.80	0.00	1.20	0.00	0.00	0.00	0.69	0.00	0.22	0.00	0.00	0.21
10	8/9/2017	Net-hours	5:00	5:00	4:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	5:00	4:30	4:30	68:00
		Captures	1	0	0	2	0	0	0	0	1	2	1	1	0	1	9
		Captures per net-hour	0.20	0.00	0.00	0.40	0.00	0.00	0.00	0.00	0.20	0.40	0.20	0.20	0.00	0.22	0.13
Net-hours		63:50	63:50	61:00	64:40	64:40	64:00	64:00	64:00	63:10	63:20	64:00	63:30	64:10	63:00	891:10	
Captures		18	19	2	24	2	14	7	10	4	15	5	24	1	17	162	
Totals by net		0.28	0.30	0.03	0.37	0.03	0.22	0.11	0.16	0.06	0.24	0.08	0.38	0.02	0.27	0.18	

Table 16. Number of captures by date during Monitoring Avian Productivity and Survivorship, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2013.

[See tables 2 and 3 for bird species codes. Species in italics are non-breeding neotropical migrants. Includes multiple captures for some individuals. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

Species	MAPS Period													Total	Captures per 100 net-hours (755:00 total net-hours)
	-3	-2	-1	1	2	3	4	5	6	7	8	9	10		
	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date		
	4-05-2013	4-12-2013	4-26-2013	5-03-2013	5-17-2013	5-24-2013	6-07-2013	6-14-2013	6-21-2013	7-04-2013	7-12-2013	7-26-2013	8-02-2013		
<i>BCHU</i>	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.13
<i>ANHU</i>	0	0	1	1	1	2	4	0	0	0	0	0	0	9	1.19
<i>COHU</i>	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.13
<i>ALHU</i>	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.13
<i>ACWO</i>	1	0	0	1	1	3	0	0	4	1	1	0	0	12	1.59
<i>NUWO</i>	0	0	0	0	0	0	0	0	0	0	0	2	3	5	0.66
<i>DOWO</i>	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0.13
<i>RSFL</i>	0	1	0	1	0	0	0	0	0	0	0	0	0	2	0.26
<i>GRFL</i>	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.13
<i>ATFL</i>	0	2	1	1	1	0	1	1	0	0	1	0	0	8	1.06
<i>WAVI</i>	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.13
<i>CASJ</i>	3	1	0	1	0	0	0	0	0	1	2	0	0	8	1.06
<i>OATI</i>	0	2	2	3	0	0	0	1	1	0	1	0	1	11	1.46
<i>BUSH</i>	0	0	0	0	0	2	1	0	0	8	0	0	1	12	1.59
<i>WBNU</i>	0	0	0	0	0	0	1	0	0	0	1	0	1	3	0.40
<i>BEWR</i>	0	0	0	0	0	0	2	0	0	0	1	0	0	3	0.40
<i>HOWR</i>	2	3	0	1	0	1	1	3	1	0	0	0	0	12	1.59
<i>SWTH</i>	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.13
<i>WREN</i>	0	0	0	0	0	0	0	0	3	1	0	0	0	4	0.53
<i>CATH</i>	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0.26
<i>OCWA</i>	0	0	1	1	0	0	0	0	0	0	0	0	1	3	0.40
<i>NAWA</i>	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.13
<i>YEWA</i>	0	0	1	0	0	1	0	0	0	0	0	0	0	2	0.26
<i>MGWA</i>	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.13
<i>COYE</i>	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.13
<i>WIWA</i>	0	0	1	1	2	0	0	0	0	0	0	0	0	4	0.53
<i>WETA</i>	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.13
<i>SPTO</i>	1	1	4	1	0	3	3	0	2	1	0	1	0	17	2.25
<i>CALT</i>	0	0	0	1	0	1	1	1	0	2	1	1	0	8	1.06

Species	MAPS Period													Total	Captures per 100 net-hours (755:00 total net-hours)
	-3	-2	-1	1	2	3	4	5	6	7	8	9	10		
	4-05-2013	4-12-2013	4-26-2013	5-03-2013	5-17-2013	5-24-2013	6-07-2013	6-14-2013	6-21-2013	7-04-2013	7-12-2013	7-26-2013	8-02-2013		
<i>BRSP</i>	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.13
<i>WCSP</i>	1	1	0	0	0	0	0	0	0	0	0	0	0	2	0.26
<i>BHGR</i>	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.13
<i>BUOR</i>	0	0	0	4	0	0	0	1	0	0	0	0	0	5	0.66
Captures per day	9	13	1	17	7	15	15	7	12	14	9	5	8	145	19.21
Total species	6	9	1	12	6	8	9	5	6	6	8	4	6	33	4.37

Table 17. Number of captures by date during Monitoring Avian Productivity and Survivorship, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2014.

[See tables 2 and 3 for bird species codes. Species in italics are non-breeding neotropical migrants. Includes multiple captures for some individuals. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

Species	MAPS period													Total	Captures per 100 net-hours (total 901:00 net-hours)
	-3	-2	-1	1	2	3	4	5	6	7	8	9	10		
	Date														
	4-04-2014	4-11-2014	4-25-2014	5-02-2014	5-16-2014	5-23-2014	6-06-2014	6-13-2014	6-20-2014	7-01-2014	7-11-2014	7-25-2014	8-01-2014		
CAQU	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.11
BCHU	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.11
ANHU	1	0	0	0	3	0	1	1	0	0	1	1	1	9	1.00
COHU	0	0	0	0	1	0	0	0	1	0	0	0	0	2	0.22
RUHU	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.11
ALHU	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.11
ACWO	0	0	0	0	1	0	0	0	0	0	0	1	1	3	0.33
NUWO	0	0	0	1	0	0	0	0	0	0	0	0	1	2	0.22
DOWO	0	0	0	0	0	0	0	1	0	0	1	0	0	2	0.22
WIFL	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.11
HAFL	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0.22
PSFL	0	0	0	0	1	1	0	0	0	0	0	1	0	3	0.33
ATFL	0	0	0	0	0	1	0	0	1	0	0	1	0	3	0.33
WAVI	0	1	0	0	0	1	0	0	0	0	0	1	1	4	0.44
CASJ	1	1	0	1	0	0	0	1	1	2	0	0	0	7	0.78
OATI	0	1	0	0	1	1	0	0	0	1	1	1	0	6	0.67
BUSH	1	0	0	0	0	0	2	1	0	0	1	7	0	12	1.33
WBNU	0	0	2	0	1	1	1	1	0	0	0	1	0	7	0.78
BEWR	0	0	0	0	0	0	0	0	0	0	1	2	2	5	0.55
HOWR	1	5	0	1	1	1	1	0	1	0	0	1	0	12	1.33
WEBL	0	0	0	0	2	0	0	0	1	0	0	0	0	3	0.33
SWTH	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.11
HETH	1	1	0	0	0	0	0	0	0	0	0	0	0	2	0.22
WREN	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.11
EUST	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.11
OCWA	6	11	1	0	0	0	0	0	0	0	0	0	0	18	2.00
NAWA	1	3	0	0	0	0	0	0	0	0	0	0	0	4	0.44
YEWA	0	0	0	0	1	2	0	0	0	0	0	0	0	3	0.33
AUWA	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0.22
MGWA	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.11
WIWA	1	0	5	4	7	0	0	0	0	0	0	0	0	17	1.89
WETA	0	0	1	0	0	0	0	0	0	0	0	1	0	2	0.22
SPTO	5	0	1	0	1	1	2	1	1	2	1	4	0	19	2.11
CALT	0	1	0	1	0	0	0	0	0	0	0	0	2	4	0.44
BTSP	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.11
BESP	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0.11
SOSP	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0.22
WCSP	0	1	0	2	0	0	0	0	0	0	0	0	0	3	0.33
ORJU	1	1	0	0	0	0	0	0	0	0	0	0	0	2	0.22

Species	MAPS period													Total	Captures per 100 net-hours (total 901:00 net-hours)
	-3	-2	-1	1	2	3	4	5	6	7	8	9	10		
	Date														
	4-04-2014	4-11-2014	4-25-2014	5-02-2014	5-16-2014	5-23-2014	6-06-2014	6-13-2014	6-20-2014	7-01-2014	7-11-2014	7-25-2014	8-01-2014		
BHGR	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.11
BUOR	0	1	2	0	3	0	1	0	0	0	0	0	0	7	0.78
LEGO	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0.22
Captures per day	25	28	13	10	25	10	8	8	7	6	8	24	9	181	20.09
Total species	13	12	7	6	14	9	6	8	7	4	8	14	7	42	4.66

Table 18. Number of captures by date during Monitoring Avian Productivity and Survivorship, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2015.

[See tables 2 and 3 for bird species codes. Species in italics are non-breeding neotropical migrants. Includes multiple captures of some individuals. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

Species	MAPS period													Total	Captures per 100 net-hours (total 905:00 net-hours)
	-3	-2	-1	1	2	3	4	5	6	7	8	9	10		
	Date														
	4-03-2015	4-17-2015	4-24-2015	5-01-2015	5-19-2015	5-29-2015	6-05-2015	6-12-2015	6-26-2015	7-02-2015	7-17-2015	7-24-2015	7-31-2015		
CAQU	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.11
ANHU	0	1	0	0	0	3	1	0	0	0	0	1	0	6	0.66
<i>COHU</i>	0	0	0	1	0	0	0	0	1	3	1	1	1	8	0.88
CAHU	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0.11
<i>RUHU</i>	1	1	0	1	0	0	0	0	0	0	0	0	0	3	0.33
<i>ALHU</i>	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0.11
ACWO	0	0	0	1	0	0	0	0	1	0	0	0	0	2	0.22
NUWO	0	0	0	0	0	0	0	0	1	0	2	1	0	4	0.44
RSFL	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.11
<i>WEWP</i>	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.11
<i>WIFL</i>	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.11
<i>PSFL</i>	0	0	1	1	1	0	0	0	0	0	1	1	0	5	0.55
ATFL	0	2	0	0	0	0	0	0	1	1	0	2	0	6	0.66
WAVI	0	0	12	1	0	0	0	0	0	0	0	0	0	13	1.44
CASJ	0	0	0	0	1	0	0	0	0	1	0	0	0	2	0.22
OATI	0	1	0	0	0	1	1	0	2	2	0	0	1	8	0.88
BUSH	1	0	0	0	0	0	10	6	8	0	6	0	1	32	3.54
WBNU	0	0	0	0	1	0	0	0	0	0	0	1	0	2	0.22
BEWR	0	0	0	0	0	0	0	0	3	0	1	1	2	7	0.77
HOWR	0	0	0	0	0	0	1	0	1	0	0	1	0	3	0.33
<i>RCKI</i>	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.11
<i>SWTH</i>	0	0	0	0	3	0	0	0	0	0	0	0	0	3	0.33
CATH	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.11
OCWA	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.11
NAWA	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.11
YEWA	0	0	2	0	3	0	0	0	0	0	0	0	0	5	0.55
AUWA	0	2	0	1	0	0	0	0	0	0	0	0	0	3	0.33
MGWA	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.11
WIWA	0	0	7	6	1	0	0	0	0	0	0	0	0	14	1.55
SPTO	1	2	1	1	1	1	0	1	0	0	0	1	1	10	1.10
CALT	0	0	0	1	0	0	0	0	0	1	0	0	0	2	0.22
WCSP	4	2	0	1	0	0	0	0	0	0	0	0	0	7	0.77
GCSP	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.11
BHGR	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0.22

Species	MAPS period													Total	Captures per 100 net-hours (total 905:00 net-hours)
	-3	-2	-1	1	2	3	4	5	6	7	8	9	10		
	Date														
	4-03-2015	4-17-2015	4-24-2015	5-01-2015	5-19-2015	5-29-2015	6-05-2015	6-12-2015	6-26-2015	7-02-2015	7-17-2015	7-24-2015	7-31-2015		
BUOR	1	1	0	0	1	1	0	0	0	0	0	0	0	4	0.44
HOFI	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.11
Captures per day	9	15	28	17	13	7	13	7	18	9	11	11	6	164	18.12
Total species	6	10	10	12	9	5	4	2	8	6	5	10	5	36	3.98

Table 19. Number of captures by date during Monitoring Avian Productivity and Survivorship, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2016.

[See tables 2 and 3 for bird species codes. Species in italics are non-breeding neotropical migrants. Includes multiple captures of some individuals. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

Species	MAPS period												Total	Captures per 100 net-hours (772:00 net-hours)
	-2	-1	1	2	3	4	5	6	7	8	9	10		
	Date													
	4-15-2016	4-22-2016	5-06-2016	5-12-2016	5-27-2016	6-03-2016	6-17-2016	6-23-2016	7-01-2016	7-14-2016	7-22-2016	8-05-2016		
<i>CAQU</i>	0	0	0	0	3	0	0	0	0	0	0	0	3	0.39
<i>MODO</i>	0	0	0	0	0	0	1	0	0	0	0	0	1	0.13
<i>BCHU</i>	0	0	0	3	0	0	0	0	0	1	0	0	4	0.52
<i>ANHU</i>	0	0	0	0	0	0	0	3	0	0	0	0	3	0.39
<i>COHU</i>	0	0	0	0	0	0	1	0	0	0	0	0	1	0.13
<i>NUWO</i>	0	0	0	0	0	0	0	2	0	0	0	1	2	0.26
<i>DOWO</i>	0	0	0	0	0	0	2	1	0	0	0	0	3	0.39
<i>PSFL</i>	0	0	1	0	0	0	0	0	0	0	0	0	1	0.13
<i>ATFL</i>	1	0	1	0	0	1	1	0	6	1	0	0	11	1.42
<i>WEKI</i>	0	0	0	0	0	0	0	0	1	0	0	0	1	0.13
<i>LBVI</i>	0	0	0	1	0	0	0	0	0	0	0	0	1	0.13
<i>WAVI</i>	0	0	2	0	0	0	0	0	0	0	0	0	2	0.26
<i>CASJ</i>	0	0	0	0	2	0	1	1	0	0	0	0	4	0.52
<i>OATI</i>	0	0	0	1	0	1	4	1	1	1	4	0	9	1.17
<i>BUSH</i>	0	2	0	0	6	0	0	0	0	0	7	8	8	1.04
<i>WBNU</i>	0	0	0	0	1	0	0	0	0	0	0	0	1	0.13
<i>BEWR</i>	0	2	1	1	0	2	1	2	1	1	0	1	11	1.42
<i>HOWR</i>	0	0	0	0	1	0	1	2	0	0	0	0	4	0.52
<i>SWTH</i>	0	0	1	0	0	0	0	0	0	0	0	0	1	0.13
<i>CATH</i>	0	0	0	0	1	2	1	0	0	1	0	0	5	0.65
<i>OCWA</i>	0	1	0	0	0	0	0	0	0	0	0	0	1	0.13
<i>YEWA</i>	0	0	2	0	0	0	0	0	0	0	0	0	2	0.26
<i>WIWA</i>	0	3	11	1	0	0	0	0	0	0	0	0	15	1.94
<i>SPTO</i>	0	0	1	0	1	0	0	1	0	0	0	0	3	0.39
<i>LASP</i>	0	0	0	0	0	0	0	0	1	0	0	3	1	0.13
<i>SOSP</i>	0	0	0	0	0	1	0	0	0	0	0	0	1	0.13
<i>WCSP</i>	0	2	0	1	0	0	0	0	0	0	0	0	3	0.39
<i>BHGR</i>	0	0	0	0	0	0	0	0	0	0	2	0	0	0.00
<i>BUOR</i>	0	0	0	0	2	0	1	0	0	0	0	0	3	0.39
Captures per day	1	10	20	8	17	7	14	13	10	5	13	13	131	16.97
Total species	1	5	8	6	8	5	10	8	5	5	3	4	28	3.63

Table 20. Number of captures by date during Monitoring Avian Productivity and Survivorship, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2017.

[See tables 2 and 3 for bird species codes. Species in italics are non-breeding neotropical migrants. Includes multiple captures of some individuals. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

Species	MAPS period													Total	Captures per 100 net-hours (891:10 net-hours)
	-3	-2	-1	1	2	3	4	5	6	7	8	9	10		
	Date														
	4/05/2017	4/12/2017	4/28/2017	5/03/2017	5/17/2017	5/30/2017	6/07/2017	6/16/2017	6/21/2017	7/06/2017	7/12/2017	7/26/2017	8/09/2017		
CAQU	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.11
<i>BCHU</i>	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.11
ANHU	0	1	0	0	0	1	3	0	2	1	0	2	0	10	1.12
<i>ALHU</i>	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.11
ACWO	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0.11
NUWO	0	0	0	0	0	0	0	2	0	0	1	0	0	3	0.34
RSFL	2	0	0	0	0	0	0	0	1	0	0	0	0	3	0.34
ATFL	0	0	0	0	2	0	0	1	0	0	1	0	0	4	0.45
HUVI	0	0	0	0	0	0	0	0	1	1	0	0	0	2	0.22
CASJ	0	0	0	1	1	2	0	1	0	0	0	0	0	5	0.56
OATI	0	1	0	0	0	3	0	0	1	4	1	1	0	11	1.23
BUSH	0	0	5	1	0	5	0	0	5	1	13	7	3	40	4.49
WBNU	0	0	0	0	0	2	0	0	0	0	0	2	0	4	0.45
BEWR	0	0	0	0	0	0	0	1	1	4	2	0	2	10	1.12
HOWR	2	0	0	0	1	5	0	4	1	3	1	2	1	20	2.24
WEBL	0	1	2	0	0	0	0	2	2	2	1	0	0	10	1.12
CATH	0	0	0	1	0	0	0	1	0	0	1	0	0	3	0.34
YEWA	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.11
AUWA	8	4	0	0	0	0	0	0	0	0	0	0	0	12	1.35
COYE	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0.22
WIWA	0	2	2	0	0	0	0	0	0	0	0	0	0	4	0.45
SPTO	1	0	0	0	0	0	1	0	0	0	0	0	0	2	0.22
CALT	1	0	0	0	0	0	0	0	0	0	0	0	1	2	0.22
<i>BESP</i>	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.11
<i>SOSP</i>	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.11
<i>LISP</i>	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.11
<i>WCSP</i>	2	2	0	0	0	0	0	0	0	0	0	0	0	4	0.45
BHGR	0	0	0	1	0	0	0	2	0	0	0	0	0	3	0.34
Captures per day	18	13	10	4	5	19	4	14	14	16	22	14	9	117	13.13
Total species	8	7	4	4	4	7	2	8	8	7	9	5	6	28	3.14

Table 21. Sex and age of individuals (banded and unbanded) captured during Monitoring Avian Productivity and Survivorship, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2013.

[See tables 2 and 3 for bird species codes. Species in italics are non-breeding neotropical migrants. Age: HY=hatching-year, AHY=after-hatching-year, SY=second-year, ASY=after-second-year, TY=third year, ATY=after-third-year, I=indeterminable age. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

Species	Female						Female total	Male						Male total	Unknown sex					Unknown total	Species total
	Age							Age							Age						
	HY	AHY	SY	ASY	TY	ATY		HY	AHY	SY	ASY	TY	ATY		HY	AHY	SY	ASY	I		
<i>BCHU</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
<i>ANHU</i>	1	3	0	0	0	0	4	3	2	0	0	0	0	5	0	0	0	0	0	0	9
<i>COHU</i>	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<i>ALHU</i>	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<i>ACWO</i>	0	1	1	0	1	1	4	0	1	0	0	1	4	6	1	0	0	0	0	1	11
<i>NUWO</i>	0	0	0	0	0	0	0	2	0	0	1	0	0	3	0	0	0	0	0	0	3
<i>DOWO</i>	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	1
<i>RSFL</i>	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<i>GRFL</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
<i>ATFL</i>	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	1	1	4	0	6	8
<i>WAVI</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
<i>CASJ</i>	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	4	0	3	0	7	8
<i>OATI</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6	1	0	0	8	8
<i>BUSH</i>	6	0	0	0	0	0	6	0	2	0	0	0	0	2	3	0	0	0	1	4	12
<i>WBNU</i>	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	1	3
<i>BEWR</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	3	3
<i>HOWR</i>	0	2	0	0	0	0	2	0	1	0	0	0	0	1	1	5	0	0	0	6	9
<i>SWTH</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
<i>WREN</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	1	4	4
<i>CATH</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	2
<i>OCWA</i>	0	2	0	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
<i>NAWA</i>	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1
<i>YEWA</i>	0	0	1	0	0	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	2
<i>MGWA</i>	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1
<i>COYE</i>	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<i>WIWA</i>	0	1	0	1	0	0	2	0	0	0	2	0	0	2	0	0	0	0	0	0	4
<i>WETA</i>	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1

Species	Female						Female total	Male						Male total	Unknown sex					Unknown total	Species total
	Age							Age							Age						
	HY	AHY	SY	ASY	TY	ATY		HY	AHY	SY	ASY	TY	ATY		HY	AHY	SY	ASY	I		
SPTO	0	1	2	2	0	0	5	0	3	1	3	0	0	7	1	0	0	0	0	1	13
CALT	0	0	0	0	0	0	0	0	1	0	0	0	0	1	4	1	0	0	0	5	6
BRSP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1
WCSP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2	2
BHGR	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
BUOR	0	0	1	2	0	0	3	0	0	2	0	0	0	2	0	0	0	0	0	0	5
Total	7	16	7	8	1	1	40	6	10	3	10	1	4	34	16	21	5	9	4	55	129

Table 22. Sex and age of individuals (banded and unbanded) captured during Monitoring Avian Productivity and Survivorship, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2014.

[See tables 2 and 3 for bird species codes. Species in italics are non-breeding neotropical migrants. Age: HY=hatching-year, AHY=after-hatching-year, SY=second-year, ASY=after-second-year, TY=third year, ATY=after-third-year, I=indeterminable age. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

Species	Female					Female total	Male					Male total	Unknown sex					Unknown total	Species total
	Age						Age						Age						
	HY	AHY	SY	ASY	ATY		HY	AHY	SY	ASY	I		HY	AHY	SY	ASY	I		
CAQU	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1
<i>BCHU</i>	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1
ANHU	2	2	0	0	0	4	3	1	1	0	5	0	0	0	0	0	0	0	9
<i>COHU</i>	0	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	2
<i>RUHU</i>	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1
<i>ALHU</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	
ACWO	0	0	0	1	0	1	0	1	0	0	1	1	0	0	0	0	1	3	
NUWO	0	0	0	0	1	1	1	0	0	0	1	0	0	0	0	0	0	2	
DOWO	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	
<i>WIFL</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	
<i>HAFI</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2	
<i>PSFL</i>	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	3	3	
<i>ATFL</i>	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	3	3	
<i>WAVI</i>	0	0	0	0	0	0	0	0	0	0	0	0	3	0	1	0	4	4	
CASJ	0	1	0	1	0	2	0	0	0	0	0	2	1	1	1	0	5	7	
OATI	0	0	0	0	0	0	0	0	0	0	0	1	0	2	3	0	6	6	
BUSH	2	2	0	0	0	4	0	2	0	0	2	3	0	0	0	0	3	9	
WBNU	0	0	0	3	0	3	0	0	0	3	3	0	0	0	0	0	0	6	
BEWR	0	1	0	0	0	1	0	0	0	0	0	3	0	0	0	0	3	4	
HOWR	0	1	0	0	0	1	0	1	0	1	2	1	2	0	2	0	5	8	
WEBL	0	0	0	1	0	1	0	0	0	1	1	1	0	0	0	0	1	3	
<i>SWTH</i>	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	
<i>HETH</i>	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	2	
<i>WREN</i>	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	
EUST	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	
OCWA	0	0	1	6	0	7	0	0	3	5	8	0	0	0	3	0	3	18	
NAWA	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	4	
YEWA	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	

Species	Female					Female total	Male					Male total	Unknown sex					Unknown total	Species total	
	Age						Age						Age							
	HY	AHY	SY	ASY	ATY		HY	AHY	SY	ASY	HY		AHY	SY	ASY	I				
AUWA	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
MGWA	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
WIWA	0	3	5	2	0	10	0	0	4	1	5	0	0	0	1	1	2	2	17	
WETA	0	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	2
SPTO	1	3	0	3	0	7	0	1	1	4	6	4	0	0	0	0	4	4	17	
CALT	0	0	0	0	0	0	0	0	0	0	0	1	2	0	1	0	4	4	4	
BTSP	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
BESP	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	1	
SOSP	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	2	
WCSP	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	3	3	
ORJU	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
BHGR	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
BUOR	0	0	0	3	0	3	0	0	0	2	2	0	0	0	0	0	0	0	0	5
LEGO	0	0	0	1	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	2
Total	5	14	12	25	1	57	6	9	9	23	47	22	16	6	17	2	63	63	167	

Table 23. Sex and age of individuals (banded and unbanded) captured during Monitoring Avian Productivity and Survivorship, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2015.

[See tables 2 and 3 for bird species codes. Species in italics are non-breeding neotropical migrants. Age: HY=hatching-year, AHY=after-hatching-year, SY=second-year, ASY=after-second-year, ATY=after-third-year, I=indeterminable age. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

Species	Female							Female total	Male				Male total	Unknown sex				Unknown total	Species total
	Age						Age				Age								
	HY	AHY	SY	ASY	ATY	I	HY		AHY	SY	ASY	HY		AHY	SY	ASY			
CAQU	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
ANHU	1	1	0	0	0	1	3	3	0	0	0	3	0	0	0	0	0	0	6
<i>COHU</i>	3	1	0	0	0	0	4	3	1	0	0	4	0	0	0	0	0	0	8
<i>CAHU</i>	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
<i>RUHU</i>	0	1	0	0	0	0	1	0	2	0	0	2	0	0	0	0	0	0	3
<i>ALHU</i>	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
ACWO	0	1	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	2
NUWO	0	0	1	1	0	0	2	1	0	0	0	1	0	0	0	0	0	0	3
RSFL	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1
<i>WEWP</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
<i>WIFL</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
<i>PSFL</i>	0	1	0	0	0	0	1	0	0	0	0	0	0	2	2	0	0	4	5
<i>ATFL</i>	0	0	0	1	0	0	1	0	1	0	0	1	0	1	1	2	0	4	6
<i>WAVI</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	9	0	13	13
CASJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	2
OATI	0	0	0	0	0	0	0	0	0	0	0	0	1	3	1	1	0	6	6
BUSH	17	0	0	3	0	1	21	0	1	0	0	1	8	0	0	0	0	8	30
WBNU	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	2
BEWR	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	4
HOWR	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2	2
<i>RCKI</i>	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
<i>SWTH</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3
CATH	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
OCWA	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
NAWA	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
YEWA	0	0	2	1	0	0	3	0	0	0	2	2	0	0	0	0	0	0	5
AUWA	0	1	0	1	0	0	2	0	0	1	0	1	0	0	0	0	0	0	3
MGWA	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1

Species	Female						Female total	Male				Male total	Unknown sex				Unknown total	Species total	
	Age							Age					Age						
	HY	AHY	SY	ASY	ATY	I		HY	AHY	SY	ASY		HY	AHY	SY	ASY			
WIWA	0	2	1	1	0	0	4	0	0	3	7	10	0	0	0	0	0	0	14
SPTO	1	0	0	3	0	0	4	0	0	0	3	3	0	0	0	0	0	0	7
CALT	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	1	2
WCSP	0	0	0	0	0	0	0	0	0	0	0	0	0	3	4	0	0	7	7
GCSP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
BHGR	0	0	0	1	0	0	1	0	0	0	1	1	0	0	0	0	0	0	2
BUOR	0	0	0	1	0	0	1	0	0	0	2	2	0	0	0	0	0	0	3
HOFI	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Total	22	13	4	13	2	2	56	7	6	5	17	35	17	17	12	14	60	151	

Table 24. Sex and age of individuals (banded and unbanded) captured during Monitoring Avian Productivity and Survivorship, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2016.

[See tables 2 and 3 for bird species codes. Species in italics are non-breeding neotropical migrants. Age: HY=hatching-year, AHY=after-hatching-year, SY=second-year, ASY=after-second-year, ATY=after-third-year, I=indeterminable age. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

Species	Female					Female total	Male					Male total	Unknown sex					Unknown total	Species total
	Age				Age					Age									
	HY	AHY	SY	ASY	HY		AHY	SY	ASY	ATY	HY		AHY	SY	ASY	I			
CAQU	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	
MOD0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	
<i>BCHU</i>	0	1	0	0	1	0	0	0	0	0	0	3	0	0	0	0	3	4	
ANHU	0	2	0	0	2	1	0	0	0	0	1	0	0	0	0	0	0	3	
<i>COHU</i>	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1	
NUWO	0	0	0	0	0	2	0	0	0	1	3	0	0	0	0	0	0	3	
DOWO	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	
<i>PSFL</i>	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	
ATFL	0	1	2	1	4	0	0	0	1	0	1	1	2	0	1	0	4	9	
WEKI	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	
<i>LBVI</i>	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	
<i>WAVI</i>	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2	
CASJ	0	0	0	0	0	0	0	0	0	0	0	2	1	0	1	0	4	4	
OATI	0	0	0	0	0	0	0	0	0	0	0	7	0	2	0	0	9	9	
BUSH	8	2	0	1	11	0	1	0	0	0	1	7	0	0	0	2	9	21	
WBNU	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	
BEWR	0	2	0	0	2	0	0	0	0	0	0	4	0	1	0	0	5	7	
HOWR	0	1	0	0	1	0	0	0	0	0	0	2	1	0	0	0	3	4	
<i>SWTH</i>	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	
CATH	0	0	0	0	0	0	0	0	0	0	0	2	1	0	1	0	4	4	
OCWA	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	
YEWA	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	2	
<i>WIWA</i>	0	6	0	0	6	0	3	0	3	0	6	0	3	0	0	0	3	15	
SPTO	0	1	0	0	1	0	1	0	1	0	2	0	0	0	0	0	0	3	
LASP	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	4	
SOSP	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	
<i>WCSP</i>	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3	
BHGR	0	0	0	1	1	0	0	0	1	0	1	0	0	0	0	0	0	2	

Species	Female				Female total	Male					Male total	Unknown sex					Unknown total	Species total
	Age					Age						Age						
	HY	AHY	SY	ASY		HY	AHY	SY	ASY	ATY		HY	AHY	SY	ASY	I		
BUOR	0	1	0	0	1	1	0	1	0	0	2	0	0	0	0	0	0	3
Total	8	17	3	3	31	5	8	1	7	1	22	38	17	3	3	2	63	116

Table 25. Sex and age of individuals (banded and unbanded) captured during Monitoring Avian Productivity and Survivorship, Warner Springs, San Diego County, California, 2017.

[See tables 2 and 3 for bird species codes. Species in italics are non-breeding neotropical migrants. Age: HY=hatching-year, AHY=after-hatching-year, SY=second-year, ASY=after-second-year, ATY=after-third-year, I=indeterminable age. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

Species	Female						Male						Unknown sex					Species total		
	Age					Female Total	Age					Male Total	Age						Unknown total	
	HY	AHY	SY	ASY	ATY		HY	AHY	SY	ASY	ATY		HY	AHY	SY	ASY	I			
CAQU	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<i>BCHU</i>	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1
ANHU	3	4	0	0	0	7	1	1	0	0	0	2	0	0	0	0	0	0	0	9
<i>ALHU</i>	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1
ACWO	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
NUWO	0	0	0	0	0	0	2	0	1	0	0	3	0	0	0	0	0	0	0	3
RSFL	1	0	0	0	1	2	0	0	0	0	1	1	0	0	0	0	0	0	0	3
ATFL	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
HUVI	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1
CASJ	0	0	0	2	0	2	0	0	0	0	0	0	2	0	0	1	0	3	5	
OATI	0	0	0	1	0	1	0	0	0	0	0	0	7	0	1	2	0	10	11	
BUSH	9	3	0	0	0	12	0	2	0	0	0	2	19	0	0	0	3	22	36	
WBNU	0	0	0	0	0	0	2	0	0	2	0	4	0	0	0	0	0	0	4	
BEWR	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	1	1	7	7	
HOWR	0	1	0	0	0	1	0	0	0	0	0	0	8	3	0	0	1	12	13	
WEBL	0	1	0	0	0	1	0	0	1	1	0	2	5	0	0	0	0	5	8	
CATH	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	3	3	
YEWA	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	
AUWA	0	2	1	2	0	5	0	4	1	2	0	7	0	0	0	0	0	0	12	
COYE	0	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	
WIWA	0	0	0	2	0	2	0	0	1	1	0	2	0	0	0	0	0	0	4	
SPTO	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0	2	
CALT	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	1	2	
SAGS	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	
SOSP	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	
<i>LISP</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	
WCSP	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	0	4	4	
BHGR	1	0	0	0	0	1	0	0	1	1	0	2	0	0	0	0	0	0	3	

Species	Female					Female Total	Male					Male Total	Unknown sex					Unknown total	Species total
	Age						Age						Age						
	HY	AHY	SY	ASY	ATY		HY	AHY	SY	ASY	ATY		HY	AHY	SY	ASY	I		
Total	14	12	3	11	1	41	6	10	5	9	1	31	51	5	5	4	5	70	142

Table 26. Logistic regression models for the effect of year on survivorship for four resident bird species captured during Monitoring Avian Productivity and Survivorship, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California 2013–17.

[Models are ranked from best to worst based on Akaike’s information criteria for small samples (AICC), Δ AICC, and Akaike weights (w). AICC is based on $-2 \times \log_e$ likelihood (L) and the number of parameters (K) in the model. Parameter estimates (β), standard error (SE), odds ratios and 95 percent confidence intervals (CI) for the best supported model explaining adult survivorship. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

a. Oak Titmouse

Model	Deviance	# Parameters	AICC	Δ AICC	AICC Weight
Constant survivorship	9.4	3	42.8	0	0.94
Year effect	6.0	6	48.2	5.5	0.06

b. Bushtit

Model	Deviance	# Parameters	AICC	Δ AICC	AICC Weight
Constant survivorship	9.2	3	26.7	0	0.75
Year effect	4.4	6	28.6	2.2	0.25

c. House Wren

Model	Deviance	# Parameters	AICC	Δ AICC	AICC Weight
Constant survivorship	4.7	3	23.3	0	0.99
Year effect	3.0	6	32.1	8.9	0.01

d. Spotted Towhee

Model	Deviance	# Parameters	AICC	Δ AICC	AICC Weight
Constant survivorship	8.5	3	50.7	0	0.98
Year effect	8.1	6	58.4	7.7	0.02

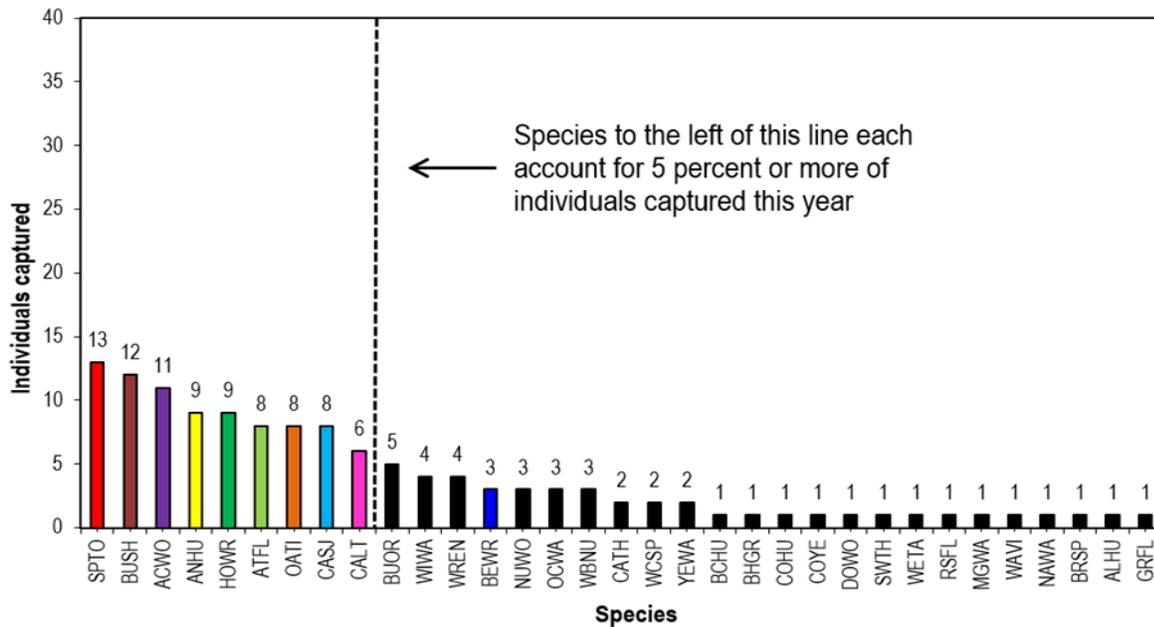


Figure 3. Number of individuals captured per species during Monitoring Avian Productivity and Survivorship, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2013. Colored bars represent the 11 most commonly captured resident species from 2013 to 2017. See tables 2 and 3 for bird species codes. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>.

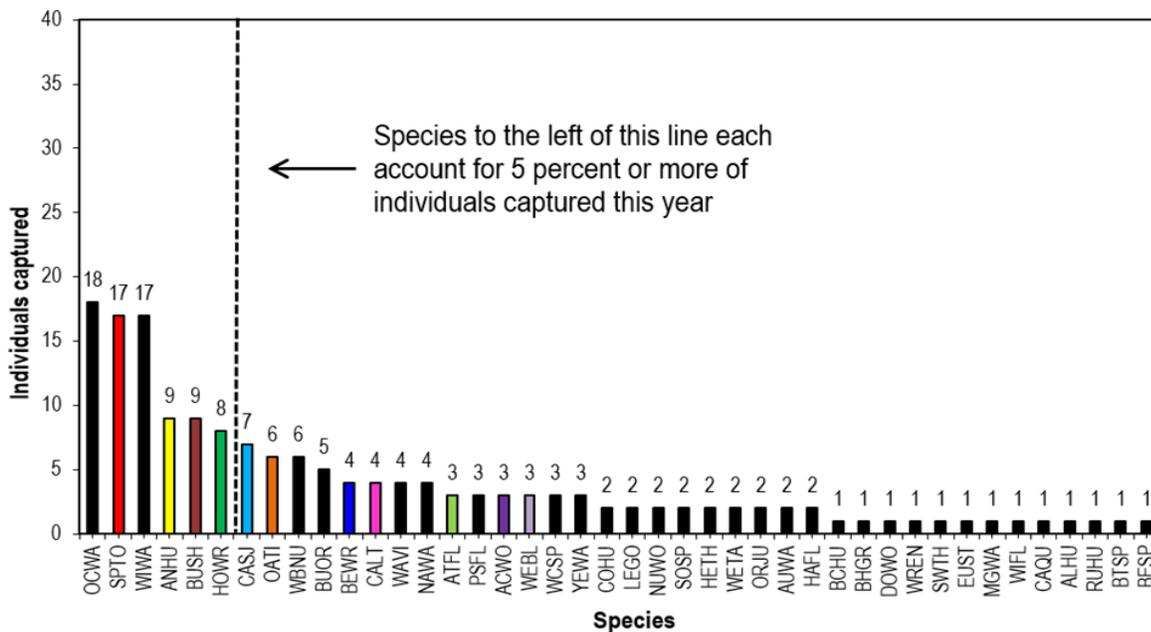


Figure 4. Number of individuals captured per species during Monitoring Avian Productivity and Survivorship, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2014. Colored bars represent the 11 most commonly captured resident species from 2013 to 2017. See tables 2 and 3 for bird species codes. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>.

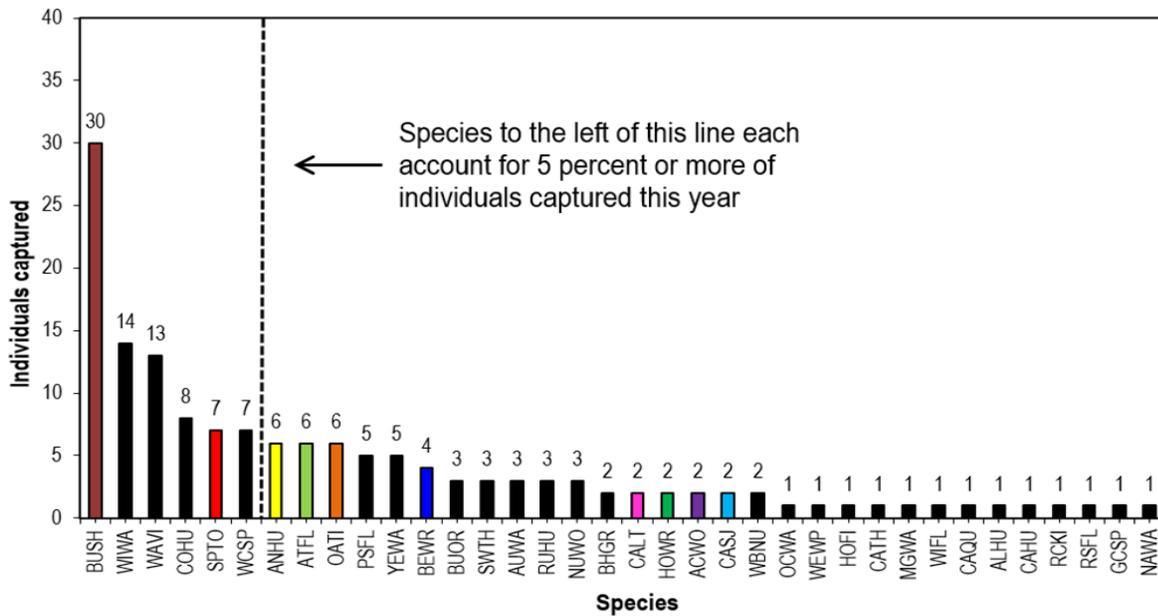


Figure 5. Number of individuals captured per species during Monitoring Avian Productivity and Survivorship, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2015. Colored bars represent the 11 most commonly captured resident species from 2013 to 2017. See tables 2 and 3 for bird species codes. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>.

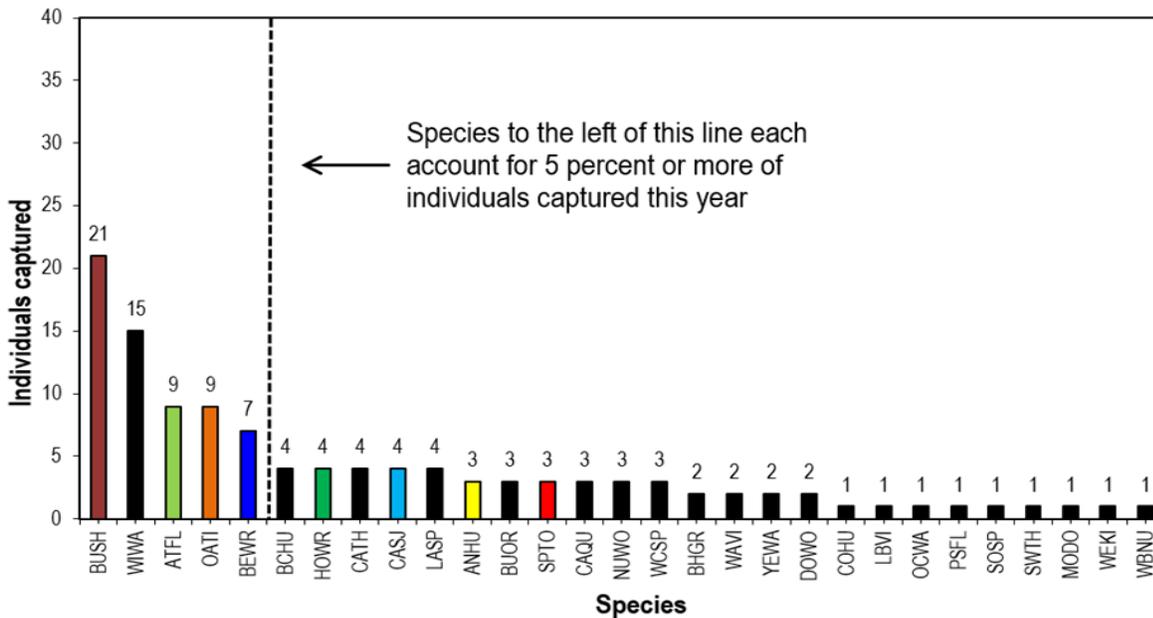


Figure 6. Number of individuals captured per species during Monitoring Avian Productivity and Survivorship, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2016. Colored bars represent the 11 most commonly captured resident species from 2013 to 2017. See tables 2 and 3 for bird species codes. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>.

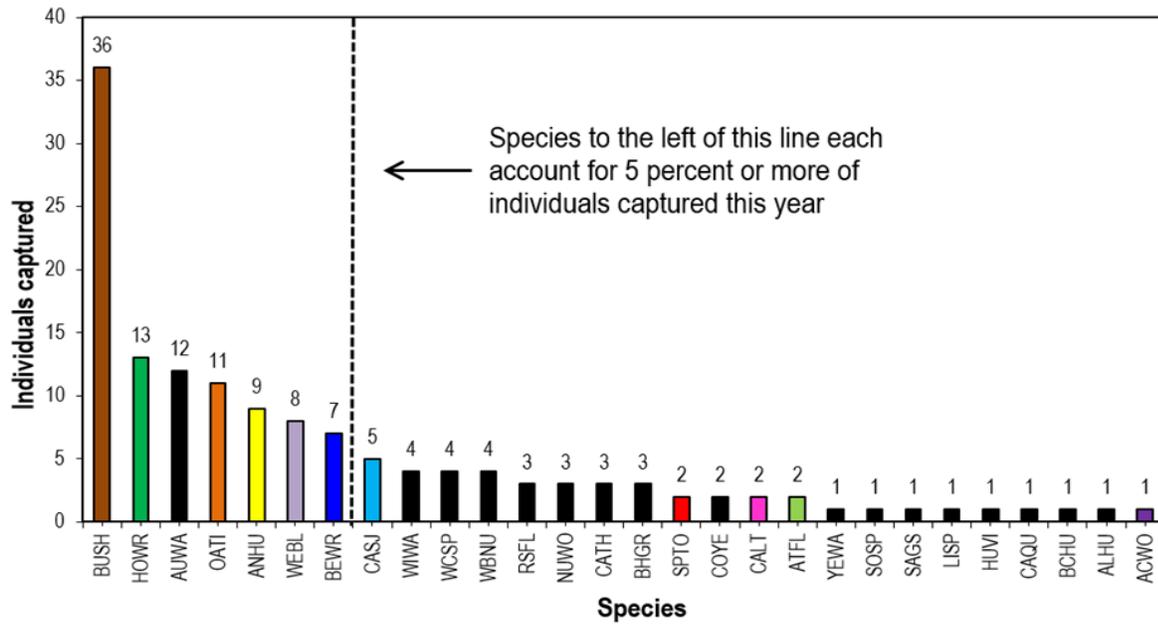


Figure 7. Number of individuals captured per species during Monitoring Avian Productivity and Survivorship, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2017. Colored bars represent the 11 most commonly captured resident species from 2013 to 2017. See tables 2 and 3 for bird species codes. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>.

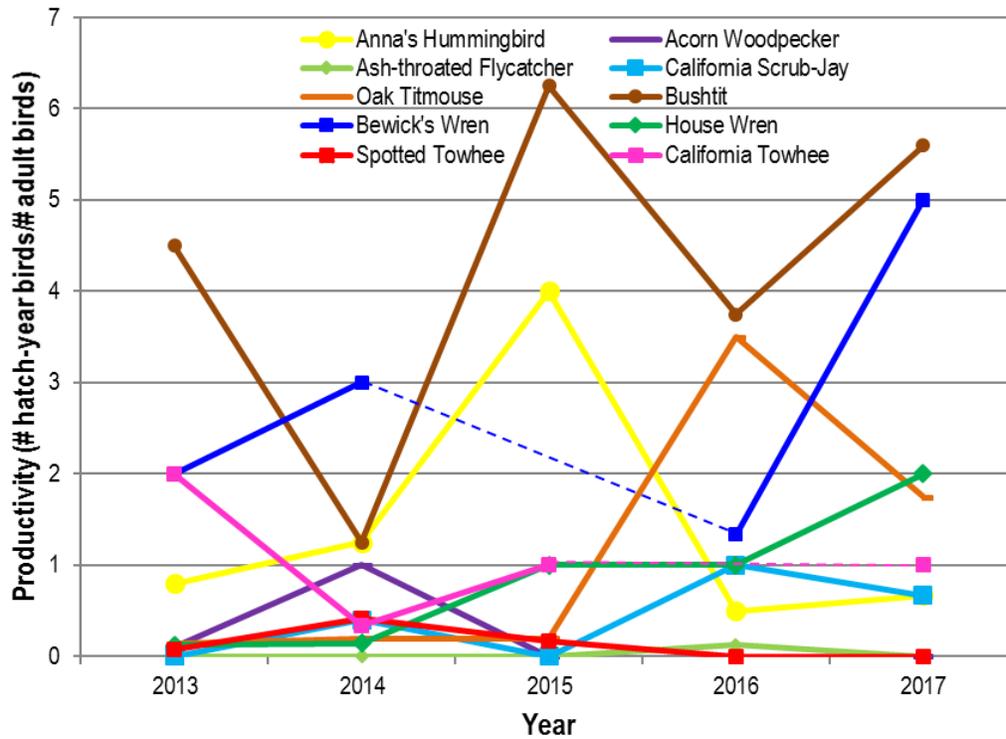


Figure 8. Annual productivity for the ten most commonly captured resident species during Monitoring Avian Productivity and Survivorship, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2013–17. Dotted lines connect missing years when productivity was not calculated because no adults were captured of this species this year. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>.

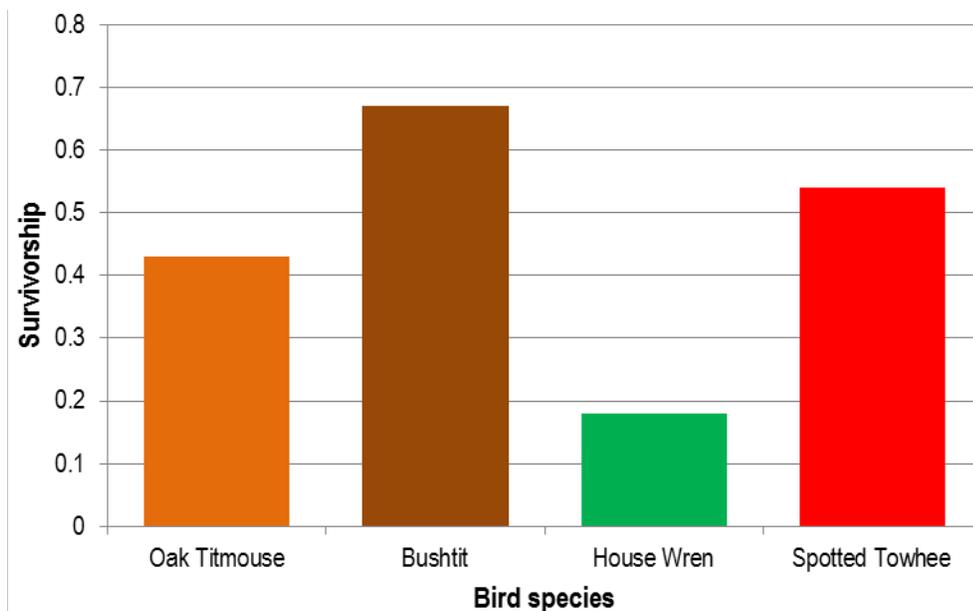


Figure 9. Adult survivorship calculated with Program MARK for four commonly captured resident species during Monitoring Avian Productivity and Survivorship, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2013–17. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>.

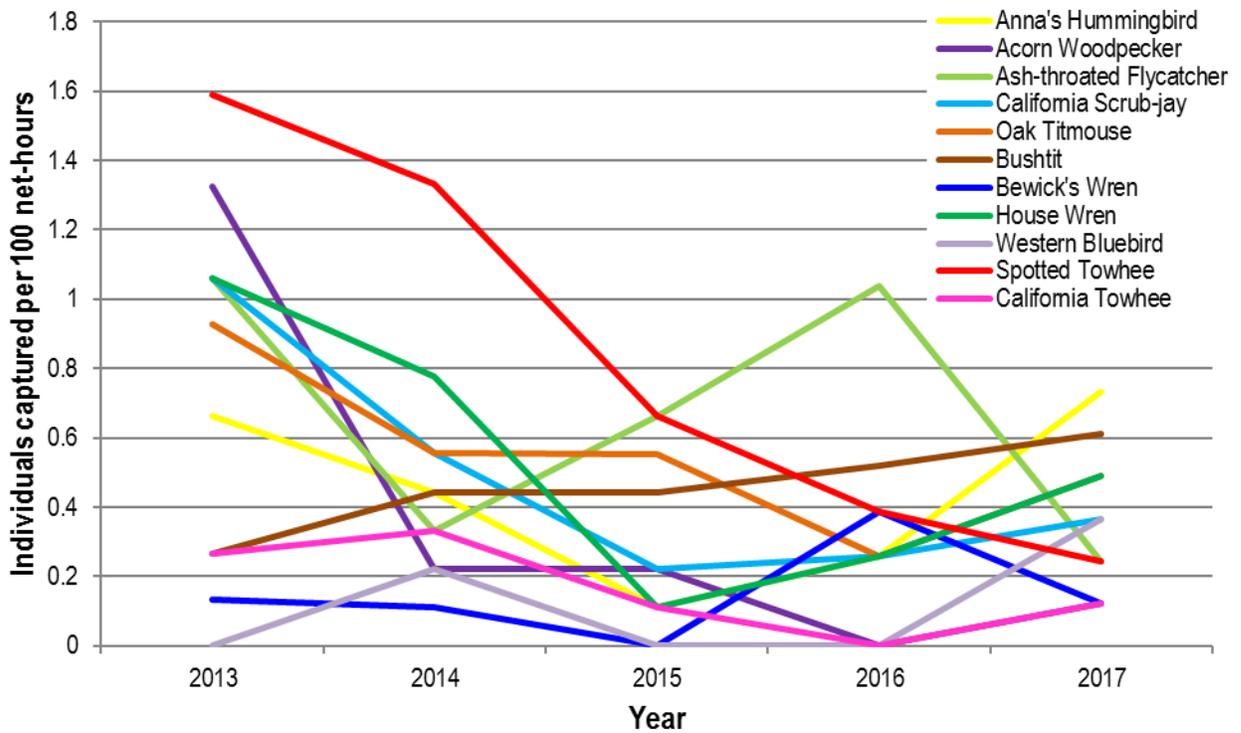


Figure 10. Adult annual capture rate (individuals captured per 100 net-hours) of the 11 most commonly captured resident species during Monitoring Avian Productivity and Survivorship, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2013–17. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>.

Table 27. Number of migrant birds captured and banded during fall migration, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2013–16.

[See tables 2 and 3 for bird species codes. Includes multiple captures of some individuals. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

Species	Total captures					Total number of individuals captured					New individuals banded					Recapture year / Year originally banded					
	Year				Total	Year				Total	Year				Total	2014	2015	2016		Total	
	2013	2014	2015	2016		2013	2014	2015	2016		2013	2014	2015	2016		2013	2013	2014	2013		2015
SSHA	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
BCHU	2	1	2	1	6	2	1	2	1	6	0	0	0	0	0	0	0	0	0	0	0
COHU	0	0	2	2	4	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0
RUHU	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
RNSA	0	3	0	0	3	0	3	0	0	3	0	3	0	0	3	0	0	0	0	0	0
RBSA	0	1	0	1	2	0	1	0	1	2	0	1	0	1	2	0	0	0	0	0	0
WEWP	0	1	1	0	2	0	1	1	0	2	0	1	1	0	2	0	0	0	0	0	0
WIFL	3	4	1	2	10	3	4	1	2	10	3	4	1	2	10	0	0	0	0	0	0
GRFL	0	0	0	1	1	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0	0
DUFL	1	0	0	0	1	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0
PSFL	22	5	2	3	32	21	5	2	3	31	21	5	2	3	31	0	0	0	0	0	0
LBVI	2	0	0	0	2	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0
WAVI	3	1	2	3	9	2	1	2	3	8	2	1	2	3	8	0	0	0	0	0	0
RCKI	4	2	4	2	12	4	2	4	2	12	4	2	4	2	12	0	0	0	0	0	0
SWTH	1	1	8	0	10	1	1	8	0	10	1	1	8	0	10	0	0	0	0	0	0
HETH	2	0	0	0	2	2	0	0	0	2	2	0	0	0	2	0	0	0	0	0	0
WREN	1	0	0	0	1	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0
NOMO	0	0	0	1	1	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0	0
PHAI	3	0	2	0	5	3	0	2	0	5	3	0	2	0	5	0	0	0	0	0	0
OCWA	18	17	5	11	51	17	16	5	11	49	17	15	5	11	48	1	0	0	0	0	1
NAWA	1	3	1	0	5	1	3	1	0	5	1	3	1	0	5	0	0	0	0	0	0
YEWA	28	7	11	10	56	28	7	11	10	56	28	7	11	10	56	0	0	0	0	0	0
AUWA	0	1	8	1	10	0	1	8	1	10	0	1	8	1	10	0	0	0	0	0	0
BTYW	1	1	2	1	5	1	1	2	1	5	1	1	2	1	5	0	0	0	0	0	0
BLPW	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0
MGWA	4	1	0	0	5	4	1	0	0	5	4	1	0	0	5	0	0	0	0	0	0
COYE	3	5	6	5	19	3	5	6	5	19	3	5	6	5	19	0	0	0	0	0	0
WIWA	51	22	15	7	95	49	22	14	7	92	47	22	14	7	90	0	0	0	0	0	0

Species	Total captures					Total number of individuals captured					New individuals banded					Recapture year / Year originally banded						
	Year				Total	Year				Total	Year				Total	2014		2015		2016		Total
	2013	2014	2015	2016		2013	2014	2015	2016		2013	2014	2015	2016		2013	2013	2014	2013	2015		
YBCH	9	1	4	1	15	5	1	2	1	9	5	1	2	1	9	0	0	0	0	0	0	
WETA	4	6	3	3	16	4	6	3	3	16	4	6	3	3	16	0	0	0	0	0	0	
GTTO	1	0	1	0	2	1	0	1	0	2	1	0	1	0	2	0	0	0	0	0	0	
SPTO	52	69	12	5	138	44	64	11	5	124	40	54	9	4	107	8	1	0	1	0	17 ¹	
CHSP	0	0	1	0	1	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	0	
BRSP	0	1	1	0	2	0	1	1	0	2	0	1	1	0	2	0	0	0	0	0	0	
LASP	9	4	1	4	18	9	4	1	4	18	8	4	1	3	16	0	0	0	0	0	1 ²	
BTSP	0	1	1	0	2	0	1	1	0	2	0	1	1	0	2	0	0	0	0	0	0	
FOSP	0	3	0	2	5	0	3	0	2	5	0	3	0	2	5	0	0	0	0	0	0	
SOSP	0	0	2	0	2	0	0	2	0	2	0	0	2	0	2	0	0	0	0	0	0	
LISP	3	3	1	5	12	3	3	1	5	12	3	3	1	5	12	0	0	0	0	0	0	
WCSP	4	5	34	9	52	4	4	31	9	48	4	4	29	8	45	0	1	1	0	1	3	
ORJU	0	1	3	0	4	0	1	3	0	4	0	1	3	0	4	0	0	0	0	0	0	
LAZB	0	0	0	1	1	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0	0	
PUFI	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	
HOFI	1	0	3	0	4	1	0	3	0	4	1	0	3	0	4	0	0	0	0	0	0	
Total	234	172	140	81	627	216	165	132	81	594	206	153	124	75	558	9	2	1	1	1	22^{1,2}	

¹Seven SPTO were originally banded during MAP, then recaptured the same year in the fall.

²One LASP was originally banded during MAPS, then recaptured in the fall.

Table 28. Capture frequency of migrant individuals during fall migration, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2013.

[See tables 2 and 3 for bird species codes. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

Species	Number of individuals per capture incidence (banded birds only)				Total number of individuals		
	1 capture	2 captures	3 captures	4 captures	Banded birds	Unbanded birds	All birds
BCHU	0	0	0	0	0	2	2
RUHU	0	0	0	0	0	1	1
WIFL	3	0	0	0	3	0	3
DUFL	1	0	0	0	1	0	1
PSFL	20	1	0	0	21	0	21
LBVI	0	1	0	0	1	0	1
WAVI	1	1	0	0	2	0	2
RCKI	4	0	0	0	4	0	4
SWTH	1	0	0	0	1	0	1
HETH	2	0	0	0	2	0	2
WREN	1	0	0	0	1	0	1
PHAI	3	0	0	0	3	0	3
OCWA	16	1	0	0	17	0	17
NAWA	1	0	0	0	1	0	1
YEWA	28	0	0	0	28	0	28
BTYW	1	0	0	0	1	0	1
MGWA	4	0	0	0	4	0	4
COYE	3	0	0	0	3	0	3
WIWA	46	0	1	0	47	2	49
YBCH	3	1	0	1	5	0	5
WETA	4	0	0	0	4	0	4
GTTO	1	0	0	0	1	0	1
SPTO	37	6	1	0	44	0	44
LASP	8	0	0	0	8	1	9
LISP	3	0	0	0	3	0	3
WCSP	4	0	0	0	4	0	4
HOFI	1	0	0	0	1	0	1
Total	196	11	2	1	210	6	216

Table 29. Capture frequency of migrant individuals during fall migration, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2014.

[See tables 2 and 3 for bird species codes. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

Species	Number of Individuals per capture incidence (banded birds only)		Total number of individuals		
	1 capture	2 captures	Banded birds	Unbanded birds	All birds
BCHU	0	0	0	1	1
RNSA	3	0	3	0	3
RBSA	1	0	1	0	1
WEWP	1	0	1	0	1
WIFL	4	0	4	0	4
PSFL	5	0	5	0	5
WAVI	1	0	1	0	1
RCKI	2	0	2	0	2
SWTH	1	0	1	0	1
OCWA	15	1	16	0	16
NAWA	3	0	3	0	3
YEWA	7	0	7	0	7
AUWA	1	0	1	0	1
BTYW	1	0	1	0	1
BLPW	1	0	1	0	1
MGWA	1	0	1	0	1
COYE	5	0	5	0	5
WIWA	22	0	22	0	22
YBCH	1	0	1	0	1
WETA	6	0	6	0	6
SPTO	59	5	64	0	64
BRSP	1	0	1	0	1
LASP	4	0	4	0	4
BTSP	1	0	1	0	1
FOSP	3	0	3	0	3
LISP	3	0	3	0	3
WCSP	3	1	4	0	4
ORJU	1	0	1	0	1
PUFI	1	0	1	0	1
Total	157	7	164	1	165

Table 30. Capture frequency of migrant individuals during fall migration, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2015.

[See tables 2 and 3 for bird species codes. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

Species	Number of individuals per capture incidence (banded birds only)			Total number of individuals		
	1 capture	2 captures	3 captures	Banded birds	Unbanded birds	All birds
SSHA	0	0	0	0	1	1
BCHU	0	0	0	0	2	2
COHU	0	0	0	0	1	1
WEWP	1	0	0	1	0	1
WIFL	1	0	0	1	0	1
PSFL	2	0	0	2	0	2
WAVI	2	0	0	2	0	2
RCKI	4	0	0	4	0	4
SWTH	8	0	0	8	0	8
PHAI	2	0	0	2	0	2
OCWA	5	0	0	5	0	5
NAWA	1	0	0	1	0	1
YEWA	11	0	0	11	0	11
AUWA	8	0	0	8	0	8
BTYW	2	0	0	2	0	2
COYE	6	0	0	6	0	6
WIWA	13	1	0	14	0	14
YBCH	1	0	1	2	0	2
WETA	3	0	0	3	0	3
GTTO	1	0	0	1	0	1
SPTO	10	1	0	11	0	11
CHSP	1	0	0	1	0	1
BRSP	1	0	0	1	0	1
LASP	1	0	0	1	0	1
BTSP	1	0	0	1	0	1
SOSP	2	0	0	2	0	2
LISP	1	0	0	1	0	1
WCSP	28	3	0	31	0	31
ORJU	3	0	0	3	0	3
HOFI	3	0	0	3	0	3
Total	122	5	1	128	4	132

Table 31. Capture frequency of individual migrants during fall migration, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2016.

[See tables 2 and 3 for bird species codes. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

Species	Number of individuals per capture incidence (banded birds only)	Total number of individuals		
	1 capture	Banded birds	Unbanded birds	All birds
BCHU	0	0	1	1
COHU	0	0	2	2
RBSA	1	1	0	1
WIFL	2	2	0	2
GRFL	1	1	0	1
PSFL	3	3	0	3
WAVI	3	3	0	3
RCKI	2	2	0	2
NOMO	1	1	0	1
OCWA	11	11	0	11
YEWA	10	10	0	10
AUWA	1	1	0	1
BTYW	1	1	0	1
COYE	5	5	0	5
WIWA	7	7	0	7
YBCH	1	1	0	1
WETA	3	3	0	3
SPTO	5	5	0	5
LASP	4	4	0	4
FOSP	2	2	0	2
LISP	5	5	0	5
WCSP	9	9	0	9
LAZB	1	1	0	1
Total	78	78	3	81

Table 32. Capture rate by net and date during fall migration, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2013.

[Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

Banding Day	Date		Net														Totals by date
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	
1	8/15/13	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	1:10	40:10
		Captures	0	0	0	0	0	0	0	0	0	1	0	1	0	1	3
		Captures per net-hour	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.33	0.00	0.86
2	8/20/13	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00
		Captures	1	0	0	1	0	0	0	1	0	0	0	1	1	1	6
		Captures per net-hour	0.33	0.00	0.00	0.33	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.33	0.33	0.33
3	8/22/13	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00
		Captures	0	0	0	0	0	0	0	0	0	0	0	1	1	2	4
		Captures per net-hour	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.33	0.67
4	8/27/13	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00
		Captures	1	1	0	0	1	0	2	1	1	0	0	0	2	1	10
		Captures per net-hour	0.33	0.33	0.00	0.00	0.33	0.00	0.67	0.33	0.33	0.00	0.00	0.00	0.00	0.67	0.33
5	8/28/13	Net-hours	3:30	3:30	3:30	3:30	3:30	3:30	3:30	3:30	3:30	3:30	3:30	3:30	3:30	3:30	49:00
		Captures	1	0	2	2	0	0	1	2	1	0	3	0	2	3	17
		Captures per net-hour	0.29	0.00	0.57	0.57	0.00	0.00	0.29	0.57	0.29	0.00	0.86	0.00	0.57	0.86	0.35
6	8/29/13	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00
		Captures	0	0	0	0	0	1	2	2	0	0	0	1	2	0	8
		Captures per net-hour	0.00	0.00	0.00	0.00	0.00	0.33	0.67	0.67	0.00	0.00	0.00	0.00	0.33	0.67	0.00
7	9/3/13	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00
		Captures	1	3	1	0	0	0	1	0	0	1	1	0	1	2	11
		Captures per net-hour	0.33	1.00	0.33	0.00	0.00	0.00	0.33	0.00	0.00	0.33	0.33	0.00	0.33	0.67	0.26
8	9/5/13	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00
		Captures	0	0	0	2	0	2	0	0	0	0	1	1	1	0	7
		Captures per net-hour	0.00	0.00	0.00	0.67	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.33	0.33	0.33	0.00
9	9/10/13	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00
		Captures	0	0	4	1	0	0	0	2	1	1	0	1	0	1	11
		Captures per net-hour	0.00	0.00	1.33	0.33	0.00	0.00	0.00	0.67	0.33	0.33	0.00	0.33	0.00	0.33	0.26

Banding Day	Date		Net														Totals by date
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	
10	9/12/13	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00
		Captures	1	0	0	1	0	1	5	1	0	1	1	0	1	2	14
		Captures per net-hour	0.33	0.00	0.00	0.33	0.00	0.33	1.67	0.33	0.00	0.33	0.33	0.00	0.33	0.67	0.33
11	9/17/13	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00	
		Captures	0	1	1	5	0	0	0	0	1	0	0	1	5	2	16
		Captures per net-hour	0.00	0.33	0.33	1.67	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.33	1.67	0.67	0.38
12	9/18/13	Net-hours	6:20	6:20	6:20	6:20	5:50	5:50	4:20	4:50	4:20	4:50	4:50	4:20	4:20	73:10	
		Captures	2	3	4	7	3	9	3	5	1	0	1	1	4	0	43
		Captures per net-hour	0.32	0.47	0.63	1.11	0.51	1.54	0.69	1.03	0.23	0.00	0.21	0.23	0.92	0.00	0.59
13	9/19/13	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00	
		Captures	0	1	0	1	0	2	0	0	0	1	1	1	3	1	11
		Captures per net-hour	0.00	0.33	0.00	0.33	0.00	0.67	0.00	0.00	0.00	0.33	0.33	0.33	1.00	0.33	0.26
14	9/24/13	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00	
		Captures	1	1	2	3	0	0	0	0	0	2	2	0	4	3	18
		Captures per net-hour	0.33	0.33	0.67	1.00	0.00	0.00	0.00	0.00	0.00	0.67	0.67	0.00	1.33	1.00	0.43
15	9/26/13	Net-hours	6:00	6:00	6:00	6:00	6:00	4:30	3:10	3:10	3:10	3:10	3:10	3:10	6:00	6:00	65:30
		Captures	1	3	4	4	0	4	2	1	0	0	1	2	2	6	30
		Captures per net-hour	0.17	0.50	0.67	0.67	0.00	0.89	0.63	0.32	0.00	0.00	0.32	0.63	0.33	1.00	0.46
16	9/27/13	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00	
		Captures	2	1	0	0	0	0	1	0	0	1	1	0	0	1	7
		Captures per net-hour	0.67	0.33	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.33	0.33	0.00	0.00	0.33	0.17
17	10/23/13	Net-hours	3:10	3:10	3:10	3:10	3:10	3:10	3:10	3:10	3:10	3:10	3:10	3:10	3:10	44:20	
		Captures	1	1	1	0	1	2	3	1	0	1	1	1	5	0	18
		Captures per net-hour	0.32	0.32	0.32	0.00	0.32	0.63	0.95	0.32	0.00	0.32	0.32	0.32	1.58	0.00	0.41
Totals by net	Net-hours	58:00	58:00	58:00	58:00	57:30	56:00	53:10	53:40	53:10	53:40	53:40	53:10	56:00	54:10	776:10	
	Captures	12	15	19	27	5	21	20	16	5	9	13	12	34	26	234	
Totals by net	Captures per net-hour	0.21	0.26	0.33	0.47	0.09	0.38	0.38	0.30	0.09	0.17	0.24	0.23	0.61	0.48	0.30	

Table 33. Capture rate by net and date during fall migration, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2014.

[Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

Banding day	Date		Net														Totals by date
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	
1	8/15/14	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	30:00
		Captures	0	0	1	1	0	0	1	1	1	0	0	0	0	0	5
		Captures per net-hour	0.00	0.00	0.33	0.33	0.00	0.00	0.33	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.17
2	8/19/14	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	30:00
		Captures	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
		Captures per net-hour	0.00	0.00	0.00	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
3	8/21/14	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	30:00
		Captures	1	0	0	1	1	0	0	0	0	0	1	0	0	0	4
		Captures per net-hour	0.33	0.00	0.00	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.13
4	8/26/14	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	30:00
		Captures	1	0	0	0	0	2	0	0	1	0	0	1	0	2	7
		Captures per net-hour	0.33	0.00	0.00	0.00	0.00	0.67	0.00	0.00	0.33	0.00	0.00	0.33	0.00	0.67	0.23
5	8/28/14	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	30:00
		Captures	0	0	1	0	0	1	1	0	0	0	0	0	0	0	3
		Captures per net-hour	0.00	0.00	0.33	0.00	0.00	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.77
6	9/10/14	Net-hours	4:30	4:30	4:30	4:30	4:30	4:30	4:30	4:30	4:30	4:30	4:30	4:30	4:30	4:30	45:00
		Captures	1	2	2	0	3	2	1	3	2	0	2	0	1	4	23
		Captures per net-hour	0.22	0.44	0.44	0.00	0.67	0.44	0.22	0.67	0.44	0.00	0.44	0.00	0.22	0.89	0.51
7	9/16/14	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	30:00
		Captures	1	2	0	1	0	0	0	0	1	1	1	1	3	0	11
		Captures per net-hour	0.33	0.67	0.00	0.33	0.00	0.00	0.00	0.00	0.33	0.33	0.33	0.33	1.00	0.00	0.37
8	9/18/14	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	30:00
		Captures	0	1	3	0	0	0	0	1	0	1	0	1	1	0	8
		Captures per net-hour	0.00	0.33	1.00	0.00	0.00	0.00	0.00	0.33	0.00	0.33	0.00	0.33	0.33	0.00	0.27
9	9/23/14	Net-hours	3:50	3:50	3:50	3:50	3:50	3:50	3:50	3:50	3:50	3:50	3:50	3:20	3:50	3:50	38:20
		Captures	0	1	6	1	1	4	0	1	2	1	1	0	4	4	26
		Captures per net-hour	0.00	0.26	1.57	0.26	0.26	1.04	0.00	0.26	0.52	0.26	0.26	0.00	1.20	1.04	0.86
10	9/24/14	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	30:00
		Captures	1	0	1	1	0	2	1	0	0	1	0	0	2	1	10
		Captures per net-hour	0.33	0.00	0.33	0.33	0.00	0.67	0.33	0.00	0.00	0.33	0.00	0.00	0.67	0.33	0.33

Banding		Net														Totals by date	
day	Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	date	
11	9/30/14	Net-hours	3:50	3:50	3:50	3:50	3:50	3:50	3:20	3:50	3:50	3:50	3:50	3:20	3:50	3:50	37:50
		Captures	0	0	2	2	2	4	1	1	1	1	0	1	0	6	21
		Captures per net-hour	0.00	0.00	0.52	0.52	0.52	1.04	0.30	0.26	0.26	0.26	0.00	0.30	0.00	1.57	0.56
12	10/1/14	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	30:00
		Captures	0	0	0	0	1	1	0	0	1	0	0	0	1	3	7
		Captures per net-hour	0.00	0.00	0.00	0.00	0.33	0.33	0.00	0.00	0.33	0.00	0.00	0.00	0.33	1.00	0.23
13	10/7/14	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	30:00
		Captures	0	1	0	0	0	2	2	2	1	0	0	2	1	2	13
		Captures per net-hour	0.00	0.33	0.00	0.00	0.00	0.67	0.67	0.67	0.33	0.00	0.00	0.67	0.33	0.67	0.43
14	10/9/14	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	30:00
		Captures	2	0	3	0	2	0	1	0	1	2	1	0	0	2	14
		Captures per net-hour	0.67	0.00	1.00	0.00	0.67	0.00	0.33	0.00	0.33	0.67	0.33	0.00	0.00	0.67	0.47
15	10/10/14	Net-hours	6:00	6:00	6:00	6:00	6:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	6:00	6:00	45:00
		Captures	0	0	0	0	1	2	0	0	0	1	1	1	1	2	9
		Captures per net-hour	0.00	0.00	0.00	0.00	0.17	0.67	0.00	0.00	0.00	0.33	0.33	0.33	0.17	0.33	0.20
16	10/15/14	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	30:00
		Captures	1	0	0	0	1	0	0	0	0	1	1	2	3	0	9
		Captures per net-hour	0.33	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.33	0.33	0.67	1.00	0.00	0.30
Totals by net		Net-hours	54:10	54:10	54:10	54:10	54:10	51:10	50:40	51:10	51:10	51:10	51:10	50:40	53:40	54:10	735:50
		Captures	8	7	19	7	14	20	8	9	11	9	8	9	17	26	172
		Captures per net-hour	0.15	0.13	0.35	0.13	0.26	0.39	0.16	0.18	0.21	0.18	0.16	0.18	0.32	0.48	0.23

Table 34. Capture rate of migrant species by net and date during fall migration, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2015.

[Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

Banding day	Date		Net														Totals by date
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	
1	8/19/15	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00
		Captures	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Captures per net-hour	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	8/21/15	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00
		Captures	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Captures per net-hour	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	8/25/15	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00
		Captures	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
		Captures per net-hour	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.02
4	8/27/15	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00
		Captures	2	0	1	0	0	0	0	0	0	0	0	0	0	0	3
		Captures per net-hour	0.67	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
5	9/1/15	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00
		Captures	0	3	0	0	2	0	0	0	0	0	0	0	1	0	6
		Captures per net-hour	0.00	1.00	0.00	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.14
6	9/3/15	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00
		Captures	0	0	1	0	0	0	0	1	0	1	1	0	1	1	6
		Captures per net-hour	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.33	0.00	0.33	0.33	0.00	0.33	0.33	0.14
7	9/8/15	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00
		Captures	0	0	0	0	0	0	0	0	0	0	0	0	2	2	4
		Captures per net-hour	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.67	0.10
8	9/10/15	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00
		Captures	0	0	1	0	0	0	0	0	1	0	1	0	3	4	10
		Captures per net-hour	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.33	0.00	1.00	1.33	0.24
9	9/16/15	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00
		Captures	0	0	0	1	0	0	2	2	1	0	0	0	2	1	9
		Captures per net-hour	0.00	0.00	0.00	0.33	0.00	0.00	0.67	0.67	0.33	0.00	0.00	0.00	0.67	0.33	0.21
10	9/18/15	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00
		Captures	0	2	0	0	0	0	0	0	0	1	0	0	0	1	4
		Captures per net-hour	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.33	0.10

Banding day	Date		Net														Totals by date
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	
11	9/23/15	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00
		Captures	0	0	1	0	0	1	2	1	0	0	0	0	1	3	9
		Captures per net-hour	0.00	0.00	0.33	0.00	0.00	0.33	0.67	0.33	0.00	0.00	0.00	0.00	0.33	1.00	0.21
12	9/25/15	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00
		Captures	0	0	0	1	0	1	1	3	0	1	0	0	1	3	11
		Captures per net-hour	0.00	0.00	0.00	0.33	0.00	0.33	0.33	1.00	0.00	0.33	0.00	0.00	0.33	1.00	0.26
13	9/29/15	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00
		Captures	0	2	4	0	0	2	2	0	1	1	0	0	0	3	15
		Captures per net-hour	0.00	0.67	1.33	0.00	0.00	0.67	0.67	0.00	0.33	0.33	0.00	0.00	0.00	1.00	0.36
14	9/30/15	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00
		Captures	1	2	0	0	0	1	0	0	0	2	0	0	2	1	9
		Captures per net-hour	0.33	0.67	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.67	0.00	0.00	0.67	0.33	0.21
15	10/6/15	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00
		Captures	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3
		Captures per net-hour	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.67	0.07
16	10/8/15	Net-hours	3:50	3:50	3:50	3:50	3:50	3:50	3:50	3:50	3:50	3:50	3:50	3:50	3:50	3:50	53:40
		Captures	1	2	0	1	0	1	2	5	1	3	2	0	1	3	22
		Captures per net-hour	0.26	0.52	0.00	0.26	0.00	0.26	0.52	1.30	0.26	0.78	0.52	0.00	0.26	0.78	0.41
17	10/9/15	Net-hours	2:00	3:00	3:00	2:00	3:00	3:00	3:00	3:00	3:00	2:30	2:30	2:30	3:00	2:30	38:00
		Captures	0	0	0	0	0	1	0	1	0	0	0	0	6	1	9
		Captures per net-hour	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.33	0.00	0.00	0.00	0.00	2.00	0.40	0.24
18	10/14/15	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00
		Captures	1	1	0	4	0	1	5	1	0	0	0	0	0	1	14
		Captures per net-hour	0.33	0.33	0.00	1.33	0.00	0.33	1.67	0.33	0.00	0.00	0.00	0.00	0.00	0.33	0.33
19	10/15/15	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00
		Captures	0	0	1	1	0	1	0	1	0	0	0	0	1	0	5
		Captures per net-hour	0.00	0.00	0.33	0.33	0.00	0.33	0.00	0.33	0.00	0.00	0.00	0.00	0.33	0.00	0.12
Totals by net		Net-hours	56:50	57:50	57:50	56:50	57:50	57:50	57:50	57:50	57:20	57:20	57:20	57:50	57:20	805:40	
		Captures	5	12	9	8	2	9	14	15	4	9	4	0	22	140	
		Captures per net-hour	0.09	0.21	0.16	0.14	0.03	0.16	0.24	0.26	0.07	0.16	0.07	0.00	0.38	0.47	0.17

Table 35. Capture rate of migrant species by net and date during fall migration, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2016.

[Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

Banding day	Date		Net														Totals by date
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	
1	8/18/16	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	0:22	0:22	0:22	0:22	31:30
		Captures	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
		Captures per net-hour	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.03
2	8/19/16	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00
		Captures	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
		Captures per net-hour	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.33	0.00
3	8/23/16	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00
		Captures	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
		Captures per net-hour	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	9/1/16	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00
		Captures	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
		Captures per net-hour	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.00
5	9/2/16	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00
		Captures	0	0	0	0	0	1	0	0	0	0	0	0	0	1	2
		Captures per net-hour	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
6	9/6/16	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00
		Captures	2	0	0	0	0	1	0	0	0	0	0	0	1	2	6
		Captures per net-hour	0.67	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.67
7	9/8/16	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00
		Captures	0	1	0	0	0	0	0	0	0	0	0	1	0	3	5
		Captures per net-hour	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00	1.00
8	9/15/16	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00
		Captures	2	1	0	1	0	3	1	0	0	3	0	0	1	3	15
		Captures per net-hour	0.67	0.33	0.00	0.33	0.00	1.00	0.33	0.00	0.00	1.00	0.00	0.00	0.33	1.00	0.36
9	9/16/16	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00
		Captures	0	2	0	0	0	1	0	0	0	3	0	0	0	3	9
		Captures per net-hour	0.00	0.67	0.00	0.00	0.00	0.33	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	0.21
10	9/22/16	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00
		Captures	0	0	2	0	0	0	0	2	0	0	1	0	1	1	7
		Captures per net-hour	0.00	0.00	0.67	0.00	0.00	0.00	0.00	0.67	0.00	0.00	0.33	0.00	0.33	0.33	0.17

Banding day	Date		Net														Totals by date
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	
11	9/29/16	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00
		Captures	0	0	0	1	2	0	0	0	0	1	0	0	3	0	7
		Captures per net-hour	0.00	0.00	0.00	0.33	0.67	0.00	0.00	0.00	0.00	0.33	0.00	0.00	1.00	0.00	0.17
12	9/30/16	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00	
		Captures	0	0	0	0	1	0	1	2	0	0	0	0	2	3	9
		Captures per net-hour	0.00	0.00	0.00	0.00	0.33	0.00	0.33	0.67	0.00	0.00	0.00	0.00	0.67	1.00	0.21
13	10/4/16	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00	
		Captures	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
		Captures per net-hour	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.05
14	10/6/16	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00	
		Captures	0	0	0	0	0	0	1	0	0	0	0	0	0	1	2
		Captures per net-hour	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.05
15	10/11/16	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00	
		Captures	2	0	0	0	0	0	2	1	0	0	0	0	1	0	6
		Captures per net-hour	0.67	0.00	0.00	0.00	0.00	0.00	0.67	0.33	0.00	0.00	0.00	0.00	0.33	0.00	0.14
16	10/13/16	Net-hours	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	3:00	42:00	
		Captures	0	1	0	1	0	1	0	0	0	0	0	0	0	3	6
		Captures per net-hour	0.00	0.33	0.00	0.33	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.14
		Net-hours	48:00	45:22	45:22	45:22	45:22	661:30									
		Captures	8	5	2	3	3	7	5	5	0	8	1	2	10	22	81
Totals by net		Captures per net-hour	0.17	0.10	0.04	0.06	0.06	0.15	0.10	0.10	0.00	0.17	0.02	0.04	0.22	0.48	0.12

Table 36. Number of migrant species captures by date during fall migration, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2013.

[See tables 2 and 3 for bird species codes. Includes multiple captures for some individuals. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

Species	Banding day																	Total	Captures per 100 net-hours (776:10 total net-hours)
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17		
	Date																		
	8-15-2013	8-20-2013	8-22-2013	8-27-2013	8-28-2013	8-29-2013	9-03-2013	9-05-2013	9-10-2013	9-12-2013	9-17-2013	9-18-2013	9-19-2013	9-24-2013	9-26-2013	9-27-2013	10-23-2013		
BCHU	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	0.26
RUHU	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.13
WIFL	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	3	0.39
DUFL	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.13
PSFL	0	1	0	1	1	1	1	1	0	2	1	0	1	0	10	2	0	22	2.84
LBVI	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.26
WAVI	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	3	0.39
RCKI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	0.52
SWTH	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.13
HETH	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	0.26
WREN	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.13
PHAI	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3	0.39
OCWA	0	0	0	2	2	0	1	0	1	0	0	7	1	1	2	1	0	18	2.32
NAWA	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.13
YEWA	0	0	1	0	2	0	0	0	0	1	3	16	1	0	4	0	0	28	3.61
BTYW	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.13
MGWA	0	0	0	0	0	1	0	0	2	0	0	1	0	0	0	0	0	4	0.52
COYE	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	3	0.39
WIWA	0	2	0	2	3	1	2	3	4	3	5	12	1	3	8	0	2	51	6.57
YBCH	0	0	0	2	1	1	0	1	0	1	0	0	1	1	1	0	0	9	1.16
WETA	0	0	0	1	2	0	0	0	1	0	0	0	0	0	0	0	0	4	0.52
GTTO	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.13
SPTO	2	2	2	1	4	2	4	2	2	5	3	3	3	6	3	3	5	52	6.70
LASP	0	1	0	0	0	0	1	0	0	0	0	2	0	1	1	0	3	9	1.16

Species	Banding day																	Total	Captures per 100 net-hours (776:10 total net-hours)
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17		
	Date																		
	8-15-2013	8-20-2013	8-22-2013	8-27-2013	8-28-2013	8-29-2013	9-03-2013	9-05-2013	9-10-2013	9-12-2013	9-17-2013	9-18-2013	9-19-2013	9-24-2013	9-26-2013	9-27-2013	10-23-2013		
LISP	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	3	0.39
WCSP	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	3	4	0.52
HOFI	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.13
Captures per day	3	6	4	10	17	8	11	7	11	14	16	43	11	18	30	7	18	234	30.15
Total species	2	4	3	7	9	7	6	4	6	7	6	8	9	10	8	4	6	27	3.48

Table 37. Number of migrant captures by date during fall migration, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2014.

[See tables 2 and 3 for bird species codes. Includes multiple captures for some individuals. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

Species	MAPS period																Total	Captures per 100 net-hours (total 735:50 net-hours)
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
	Date																	
	8-15-2014	8-19-2014	8-21-2014	8-26-2014	8-28-2014	9-10-2014	9-16-2014	9-18-2014	9-23-2014	9-24-2014	9-30-2014	10-01-2014	10-07-2014	10-09-2014	10-10-2014	10-15-2014		
BCHU	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.14
RNSA	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	3	0.41
RBSA	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.14
WEWP	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0.14
WIFL	0	0	1	0	1	2	0	0	0	0	0	0	0	0	0	0	4	0.54
PSFL	0	0	0	0	0	0	1	2	1	0	0	0	1	0	0	0	5	0.68
WAVI	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.14
RCKI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0.27
SWTH	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.14
OCWA	2	0	0	2	0	3	0	1	2	1	5	1	0	0	0	0	17	2.31
NAWA	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	3	0.41
YEWA	0	0	0	0	0	3	1	0	0	1	2	0	0	0	0	0	7	0.95
AUWA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.14
BTYW	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.14
BLPW	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.14
MGWA	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.14
COYE	0	0	0	0	0	0	0	0	0	1	1	2	1	0	0	0	5	0.68
WIWA	2	2	1	1	0	3	2	1	7	0	2	0	1	0	0	0	22	2.99
YBCH	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.14
WETA	0	0	0	1	0	2	0	0	2	0	1	0	0	0	0	0	6	0.82
SPTO	1	0	1	2	2	5	4	4	10	3	4	3	9	10	5	6	69	9.38
BRSP	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.14
LASP	0	0	0	0	0	1	2	0	1	0	0	0	0	0	0	0	4	0.54
BTSP	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.14
FOSP	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0	0	3	0.41

Species	MAPS period																Total	Captures per 100 net-hours (total 735:50 net-hours)
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
	Date																	
	8-15-2014	8-19-2014	8-21-2014	8-26-2014	8-28-2014	9-10-2014	9-16-2014	9-18-2014	9-23-2014	9-24-2014	9-30-2014	10-01-2014	10-07-2014	10-09-2014	10-10-2014	10-15-2014		
LISP	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	3	0.41
WCSP	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	2	5	0.68
ORJU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.14
PUFI	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.14
Captures per day	5	2	4	7	3	23	11	8	26	10	21	7	13	14	9	9	172	23.37
Total species	3	1	4	5	2	11	6	4	9	7	11	4	5	3	5	3	29	3.94

Table 38. Number of migrant species captures by date during fall migration, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2015.

[See tables 2 and 3 for bird species codes. Includes multiple captures of some individuals. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

Species	Banding day																			Total	Captures per 100 net-hours (total 805:40 net-hours)
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
	8-19-2015	8-21-2015	8-25-2015	8-27-2015	9-01-2015	9-03-2015	9-08-2015	9-10-2015	9-16-2015	9-18-2015	9-23-2015	9-25-2015	9-29-2015	9-30-2015	10-06-2015	10-08-2015	10-09-2015	10-14-2015	10-15-2015		
SSHA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.12
BCHU	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.25
COHU	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2	0.25
WEWP	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.12
WIFL	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.12
PSFL	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.25
WAVI	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0.25
RCKI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	4	0.50
SWTH	0	0	0	0	0	0	1	0	5	2	0	0	0	0	0	0	0	0	0	8	0.99
PHAI	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2	0.25
OCWA	0	0	0	0	0	0	0	1	0	0	0	1	2	0	0	1	0	0	0	5	0.62
NAWA	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.12
YEWA	0	0	0	1	0	0	0	1	0	0	1	2	1	3	1	0	1	0	0	11	1.36
AUWA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	2	8	0.99
BTYW	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	2	0.25
COYE	0	0	0	0	1	0	0	0	0	0	2	0	2	1	0	0	0	0	0	6	0.74
WIWA	0	0	0	1	2	1	1	1	1	1	0	1	4	2	0	0	0	0	0	15	1.86
YBCH	0	0	0	0	0	1	1	1	0	0	0	1	0	0	0	0	0	0	0	4	0.50
WETA	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	3	0.37
GTTO	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.12
SPTO	0	0	1	0	0	1	0	0	0	1	2	2	1	1	0	2	0	1	0	12	1.49
CHSP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.12
BRSP	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.12
LASP	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.12
BTSP	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.12

Species	Banding day																			Total	Captures per 100 net-hours (total 805:40 net-hours)
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
	Date																				
	8-19-2015	8-21-2015	8-25-2015	8-27-2015	9-01-2015	9-03-2015	9-08-2015	9-10-2015	9-16-2015	9-18-2015	9-23-2015	9-25-2015	9-29-2015	9-30-2015	10-06-2015	10-08-2015	10-09-2015	10-14-2015	10-15-2015		
SOSP	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0.25
LISP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.12
WCSP	0	0	0	0	0	0	0	0	0	0	2	2	3	2	2	8	7	6	2	34	4.22
ORJU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0.37
HOFI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0.37
Captures per day	0	0	1	3	6	6	4	10	9	4	9	11	15	9	3	22	9	14	5	140	17.37
Total species	0	0	1	3	5	5	4	9	5	3	5	8	8	5	2	9	3	4	3	30	3.72

Table 39. Number of migrant captures by date during fall migration, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2016.

[See tables 2 and 3 for bird species codes. Includes multiple captures of some individuals. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

Species	Banding Day																Total	Captures per 100 net-hours (661:00 net- hours)
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
	8-18-2016	8-19-2016	8-23-2016	9-01-2016	9-02-2016	9-06-2016	9-08-2016	9-15-2016	9-16-2016	9-22-2016	9-29-2016	9-30-2016	10-04-2016	10-06-2016	10-11-2016	10-13-2016		
BCHU	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.15
COHU	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.30
RBSA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.15
WIFL	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2	0.30
GRFL	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.15
PSFL	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	3	0.45
WAVI	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	3	0.45
RCKI	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2	0.30
NOMO	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.15
OCWA	0	0	0	0	0	0	1	3	3	0	2	0	0	0	2	0	11	1.66
YEWA	0	0	0	1	0	2	1	5	0	1	0	0	0	0	0	0	10	1.51
AUWA	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.15
BTYW	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0.15
COYE	0	0	0	0	0	1	0	0	2	0	1	0	0	0	1	0	5	0.76
WIWA	0	0	0	0	0	1	2	1	0	2	0	1	0	0	0	0	7	1.06
YBCH	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.15
WETA	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0	3	0.45
SPTO	0	1	0	0	0	0	0	3	0	0	0	1	0	0	0	0	5	0.76
LASP	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	2	4	0.61
FOSP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0.30
LISP	0	0	0	0	0	0	0	0	0	1	2	1	0	0	0	1	5	0.76
WCSP	0	0	0	0	0	0	0	1	0	0	1	4	1	0	1	1	9	1.36
LAZB	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.15
Captures per day	1	2	1	1	2	6	5	15	9	7	7	9	2	2	6	6	81	12.25
Total species	1	2	1	1	2	5	4	7	5	6	5	6	2	2	4	5	23	3.48

Table 40. Sex and age of individuals (banded and unbanded) captured during fall migration, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2013.

[See tables 2 and 3 for bird species codes. Species in italics are non-breeding neotropical migrants. Age: HY=hatching-year, AHY=after-hatching-year, SY=second-year, ASY=after-second-year, I=indeterminable age. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

Species	Female				Male				Unknown sex				Species total		
	Age				Female total	Age			Male total	Age				Unknown total	
	HY	AHY	SY	I		HY	AHY	ASY		I	HY	AHY			I
BCHU	1	0	0	1	2	0	0	0	0	0	0	0	0	0	2
RUHU	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1
WIFL	0	0	0	0	0	0	0	0	0	0	2	1	0	3	3
DUFL	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
PSFL	0	0	0	0	0	0	0	0	0	0	20	1	0	21	21
LBVI	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
WAVI	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
RCKI	0	3	0	0	3	0	1	0	0	1	0	0	0	0	4
SWTH	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
HETH	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
WREN	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
PHAI	0	1	0	0	1	1	0	0	0	1	1	0	0	1	3
OCWA	1	1	0	0	2	4	6	0	1	11	0	0	4	4	17
NAWA	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
YEWA	3	3	0	0	6	3	4	0	0	7	12	1	2	15	28
BTYW	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1
MGWA	1	3	0	0	4	0	0	0	0	0	0	0	0	0	4
COYE	0	1	0	0	1	0	2	0	0	2	0	0	0	0	3
WIWA	7	8	0	3	18	10	16	0	0	26	0	3	2	5	49
YBCH	1	1	0	0	2	0	0	0	0	0	3	0	0	3	5
WETA	2	0	0	0	2	2	0	0	0	2	0	0	0	0	4
GTTO	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
SPTO	4	11	1	2	18	2	17	2	5	26	0	0	0	0	44
LASP	0	0	0	0	0	0	0	0	0	0	1	7	1	9	9
LISP	0	0	0	0	0	0	0	0	0	0	2	1	0	3	3
WCSP	0	0	0	0	0	0	0	0	0	0	1	3	0	4	4
HOFI	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1
Total	20	33	1	6	60	24	47	2	6	79	48	19	10	77	216

Table 41. Sex and age of migrant individuals (banded and unbanded) captured during fall migration, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2014.

[See tables 2 and 3 for bird species codes. Species in italics are non-breeding neotropical migrants. Age: HY=hatching-year, AHY=after-hatching-year, ASY=after-second-year, I=indeterminable age. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

Species	Female				Female total	Male				Male total	Unknown sex			Unknown total	Species total
	Age					Age					Age				
	HY	AHY	ASY	I	HY	AHY	ASY	I	HY	AHY	I	total	total		
BCHU	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
RNSA	0	1	0	0	1	0	2	0	0	2	0	0	0	0	3
RBSA	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
WEWP	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
WIFL	0	0	0	0	0	0	0	0	0	0	3	1	0	4	4
PSFL	0	0	0	0	0	0	0	0	0	0	5	0	0	5	5
WAVI	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
RCKI	0	0	0	0	0	0	1	0	0	1	0	0	1	1	2
SWTH	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
OCWA	2	0	1	3	6	1	0	0	3	4	1	0	5	6	16
NAWA	0	1	0	0	1	1	0	0	1	2	0	0	0	0	3
YEWA	0	0	0	0	0	2	3	0	0	5	2	0	0	2	7
AUWA	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1
BTYW	1	0	0	0	1	0	0	0	0	0	0	0	0	0	1
BLPW	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1
MGWA	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
COYE	0	0	0	1	1	0	1	0	3	4	0	0	0	0	5
WIWA	1	1	0	0	2	9	1	0	4	14	4	0	2	6	22
YBCH	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
WETA	0	2	0	0	2	1	1	0	0	2	2	0	0	2	6
SPTO	11	14	3	2	30	3	26	4	1	34	0	0	0	0	64
BRSP	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
LASP	0	0	0	0	0	0	0	0	0	0	1	3	0	4	4
BTSP	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
FOSP	0	0	0	0	0	0	0	0	0	0	2	1	0	3	3
LISP	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3
WCSP	0	0	0	0	0	0	0	0	0	0	1	3	0	4	4
ORJU	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1
PUFI	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	15	21	4	6	46	18	38	4	12	72	29	10	8	47	165

Table 42. Sex and age of migrant individuals (banded and unbanded) captured during fall migration, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2015.

[See tables 2 and 3 for bird species codes. Species in italics are non-breeding neotropical migrants. Age: HY=hatching-year, AHY=after-hatching-year, ASY=after-second-year, I=indeterminable age. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

Species	Female				Female total	Male				Male total	Unknown sex				Unknown total	Species total
	Age					Age					Age					
	HY	AHY	ASY	I		HY	AHY	I	HY		AHY	ASY	I			
SSHA	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	
BCHU	0	1	0	0	1	1	0	0	1	0	0	0	0	0	2	
COHU	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1	
WEWP	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	
WIFL	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	
PSFL	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2	
WAVI	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2	
RCKI	0	0	0	0	0	0	0	0	0	1	0	0	3	4	4	
SWTH	0	0	0	0	0	0	0	0	0	5	3	0	0	8	8	
PHAI	0	0	0	2	2	0	0	0	0	0	0	0	0	0	2	
OCWA	0	0	0	1	1	3	0	1	4	0	0	0	0	0	5	
NAWA	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	
YEWA	3	1	0	0	4	6	1	0	7	0	0	0	0	0	11	
AUWA	0	3	0	0	3	3	0	0	3	2	0	0	0	2	8	
BTYW	0	0	0	0	0	1	1	0	2	0	0	0	0	0	2	
COYE	0	0	0	0	0	3	1	1	5	1	0	0	0	1	6	
WIWA	1	8	0	0	9	3	2	0	5	0	0	0	0	0	14	
YBCH	0	0	0	0	0	0	1	0	1	1	0	0	0	1	2	
WETA	0	0	0	0	0	2	1	0	3	0	0	0	0	0	3	
GTTO	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	
SPTO	3	3	1	0	7	2	2	0	4	0	0	0	0	0	11	
CHSP	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	
BRSP	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	
LASP	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	
BTSP	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	
SOSP	0	0	0	0	0	0	0	0	0	1	1	0	0	2	2	
LISP	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	
WCSP	0	0	0	0	0	0	0	0	0	12	17	2	0	31	31	
ORJU	0	0	0	0	0	0	0	0	0	1	0	0	2	3	3	
HOFI	0	0	0	0	0	0	0	2	2	0	0	0	1	1	3	
Total	7	17	1	3	28	26	9	4	39	32	25	2	6	65	132	

Table 43. Sex and age of migrant individuals (banded and unbanded) captured during fall migration, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2016.

[See tables 2 and 3 for bird species codes. Age: HY=hatching-year, AHY=after-hatching-year, SY=second-year, ASY=after-second-year, I=indeterminable age. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

Species	Female				Male				Unknown sex					Species total	
	Age			Female total	Age			Male total	Age				Unknown total		
	HY	AHY	I		HY	AHY	ASY		I	HY	AHY	SY			I
BCHU	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
COHU	0	1	1	2	0	0	0	0	0	0	0	0	0	0	2
RBSA	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
WIFL	0	0	0	0	0	0	0	0	0	1	1	0	0	2	2
GRFL	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
PSFL	0	0	0	0	0	0	0	0	0	2	1	0	0	3	3
WAVI	0	0	0	0	0	0	0	0	0	2	1	0	0	3	3
RCKI	0	0	0	0	0	1	0	0	1	0	0	0	1	1	2
NOMO	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
OCWA	1	0	1	2	1	2	0	0	3	0	0	0	6	6	11
YEWA	2	2	0	4	3	1	0	0	4	2	0	0	0	2	10
AUWA	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
BTYW	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
COYE	0	0	0	0	1	0	0	2	3	1	0	0	1	2	5
WIWA	1	2	0	3	1	2	0	0	3	0	0	0	1	1	7
YBCH	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
WETA	0	2	0	2	0	0	0	0	0	1	0	0	0	1	3
SPTO	1	0	0	1	1	1	1	0	3	1	0	0	0	1	5
LASP	0	0	0	0	0	0	0	0	0	2	2	0	0	4	4
FOSP	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
LISP	0	0	0	0	0	0	0	0	0	3	2	0	0	5	5
WCSP	0	0	0	0	0	0	0	0	0	2	6	1	0	9	9
LAZB	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Total	5	9	2	16	8	8	1	2	19	22	14	1	9	46	81

Table 44. First and median capture dates for each migrant species during fall migration, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2013–16.

[See tables 2 and 3 for bird species codes. Median was calculated for species with at least two individuals captured. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>]

Species	First arrival date					Median arrival date				Number of individuals captured			
	2013	2014	2015	2016	Average	2013	2014	2015	2016	2013	2014	2015	2016
SSHA			10/15		10/15							1	
BCHU	9/3	8/21	8/27	9/30	9/5	9/3		8/29		2	1	2	1
COHU			9/8	8/18	8/29			9/9	8/18			2	2
RUHU	9/12				9/12					1			
RNSA		9/24			9/24		10/9				3		
RBSA		10/7		10/13	10/10						1		1
WEWP		9/16	9/10		9/13						1	1	
WIFL	8/28	8/21	9/10	9/2	8/31	8/29	9/3		9/4	3	4	1	2
GRFL				8/23	8/23								1
DUFL	8/27				8/27					1			
PSFL	8/20	9/16	9/3	9/8	9/4	9/26	9/18	9/3	9/16	21	5	2	3
LBVI	8/15				8/15					1			
WAVI	9/18	9/10	9/10	9/15	9/14	9/21		9/10	9/16	2	1	2	3
RCKI	10/23	10/10	10/8	10/6	10/12	10/23	10/12	10/11	10/9	4	2	4	2
SWTH	9/10	8/26	9/8		9/4			9/16		1	1	8	0
HETH	9/24				9/24	10/8				2			
WREN	9/19				9/19					1			
NOMO				9/2	9/2								1
PHAI	9/17		9/25		9/21	9/17		9/27		3		2	
OCWA	8/27	8/15	9/10	9/8	8/31	9/18	9/20	9/29	9/16	17	16	5	11
NAWA	9/17	9/10	9/1		9/9		9/24			1	3	1	
YEWA	8/22	9/10	8/27	9/1	8/31	9/18	9/16	9/29	9/15	28	7	11	10
AUWA		10/10	10/9	9/30	10/7			10/14			1	8	1
BTYW	8/28	9/30	9/16	10/6	9/20			9/27		1	1	2	1
BLPW		9/23			9/23						1		
MGWA	8/29	9/30			9/14	9/10				4	1		
COYE	9/18	9/24	9/1	9/6	9/13	9/19	10/1	9/26	9/16	3	5	6	5
WIWA	8/20	8/15	8/27	9/6	8/25	9/17	9/17	9/17	9/15	49	22	14	7
YBCH	8/27	9/10	9/3	9/22	9/8	9/12		9/14		5	1	2	1
WETA	8/27	8/26	9/23	9/16	9/8	8/28	9/16	9/23	9/22	4	6	3	3
GTTO	9/12		9/16		9/14					1		1	
SPTO	8/15	8/15	8/25	8/19	8/19	9/12	9/30	9/25	9/15	44	64	11	5
CHSP			10/8		10/8							1	
BRSP		9/10	9/1		9/6						1	1	
LASP	8/20	9/10	9/25	9/15	9/10	9/24	9/16		10/6	9	4	1	4
BTSP		9/30	9/16		9/23						1	1	
FOSP		9/23		10/11	10/3		10/9		10/11		3		2
SOSP			9/3		9/3			9/6				2	
LISP	9/19	9/23	10/8	9/22	9/26	9/24	9/24		9/29	3	3	1	5
WCSP	9/24	9/30	9/23	9/15	9/23	10/23	10/5	10/8	9/30	4	4	31	9
ORJU		10/10	10/8		10/9			10/8			1	3	
LAZB				9/6	9/6								1
PUFI		10/1			10/1						1		
HOFI	8/29		10/8		9/18			10/8		1		3	

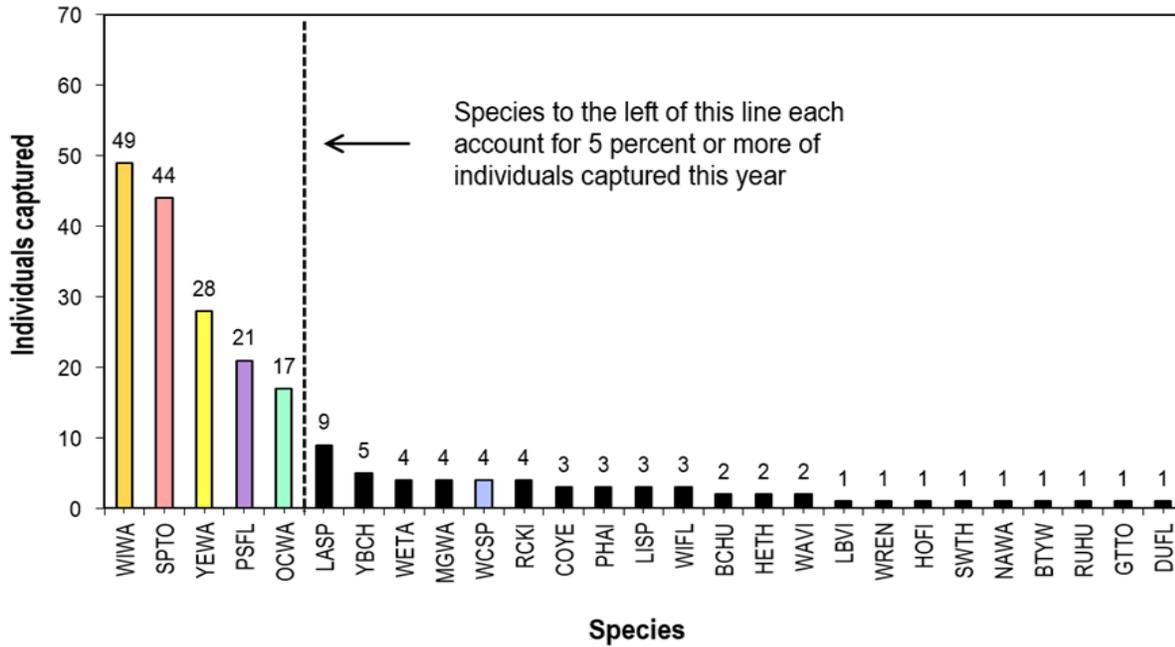


Figure 11. Number of individual migrants captured per species during fall migration, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2013. See tables 2 and 3 for four-letter bird species codes. Colored bars represent the six most commonly captured migrant species from 2013 to 2016. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>.

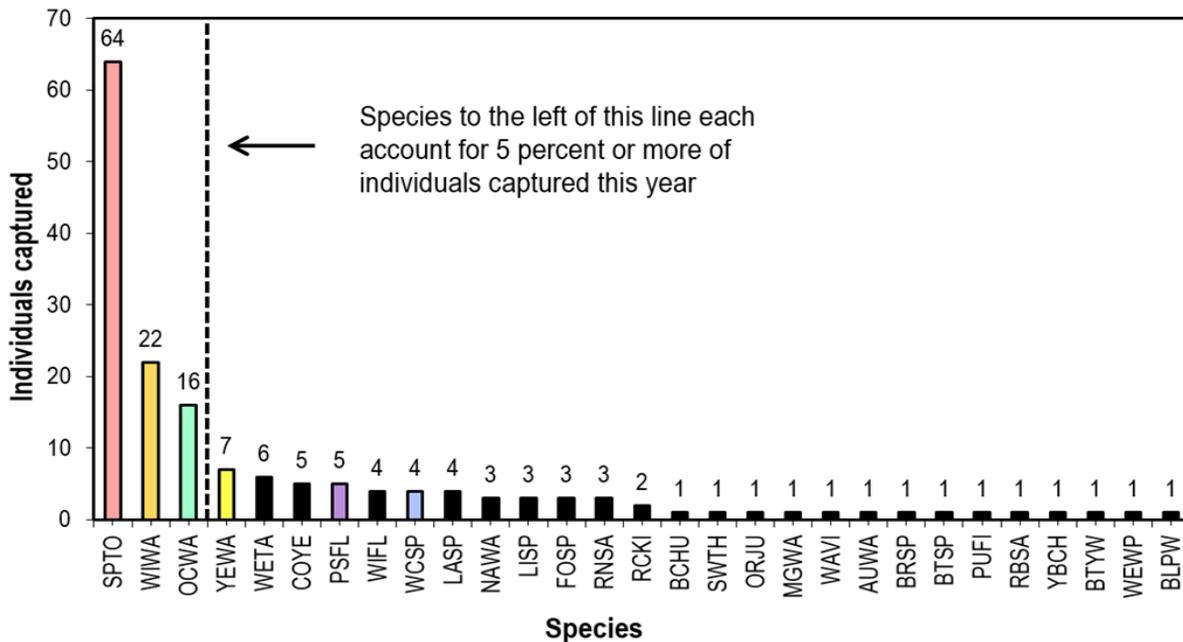


Figure 12. Number of individual migrants captured per species during fall migration, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2014. See tables 2 and 3 for four-letter bird species codes. Colored bars represent the six most commonly captured migrant species from 2013 to 2016. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>.

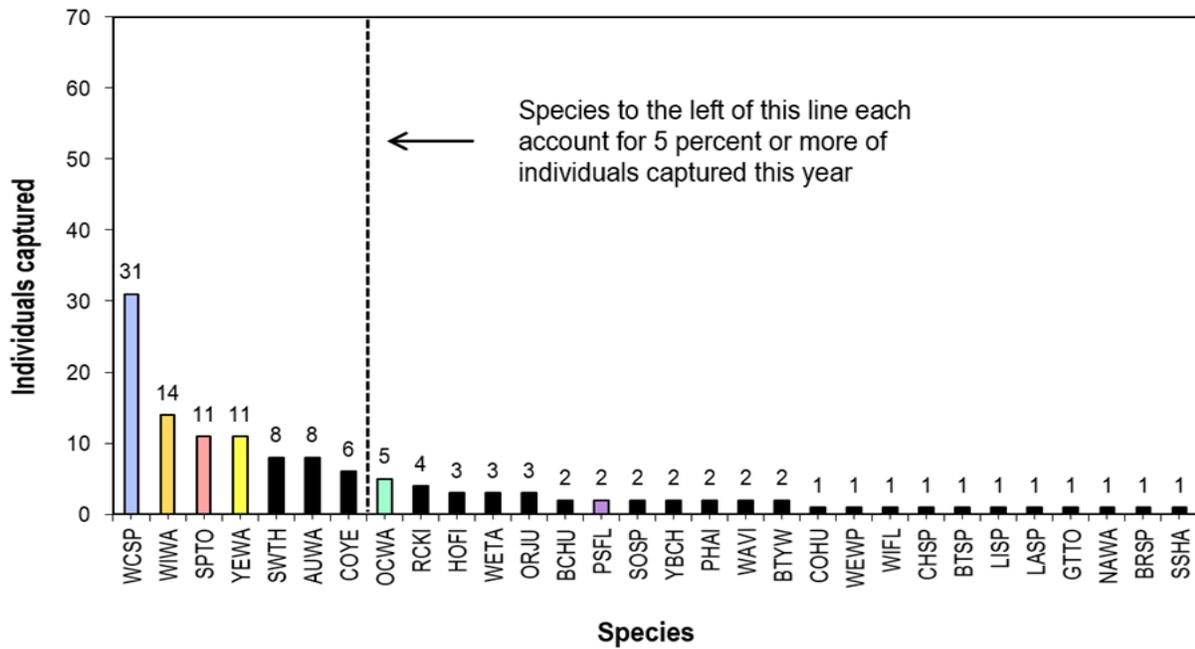


Figure 13. Number of individual migrants captured per species during fall migration, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2015. See tables 2 and 3 for four-letter bird species codes. Colored bars represent the six most commonly captured migrant species from 2013 to 2016. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>.

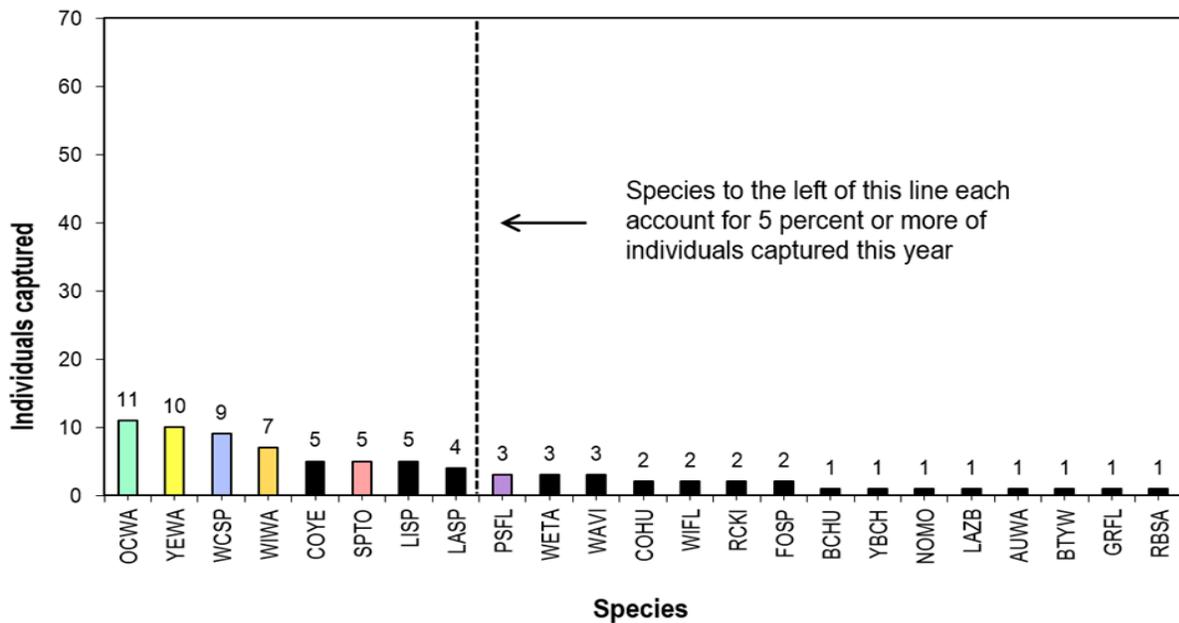


Figure 14. Number of individual migrants captured per species during fall migration, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2016. See tables 2 and 3 for four-letter bird species codes. Colored bars represent the six most commonly captured migrant species from 2013 to 2016. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>.

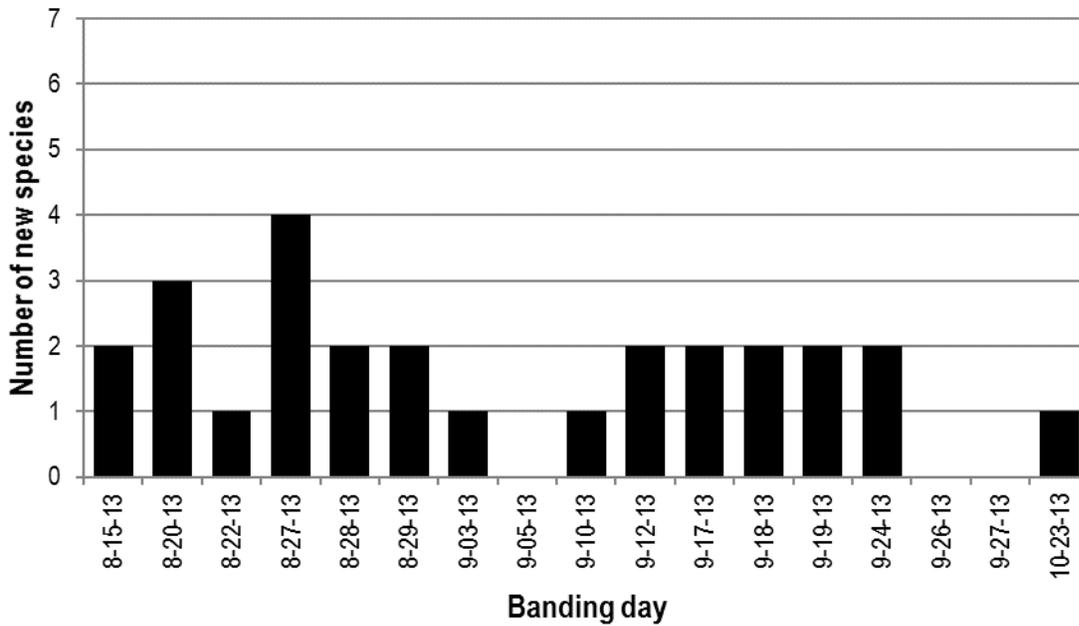


Figure 15. Number of new migrant species arriving per banding day during fall migration, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2013. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>.

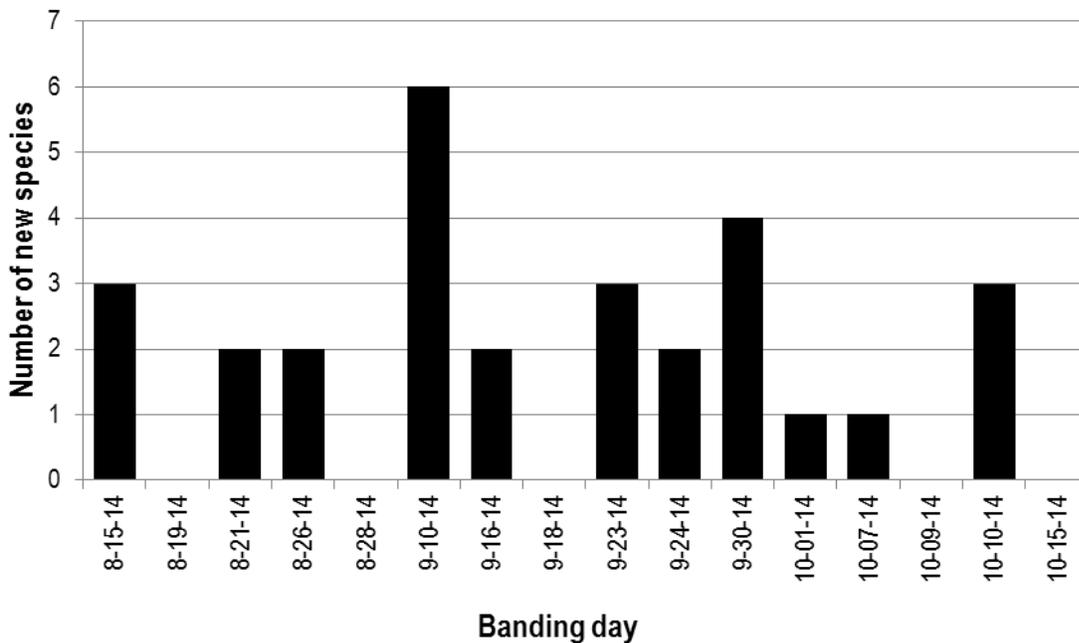


Figure 16. Number of new migrant species arriving per banding day during fall migration, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2014. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>.

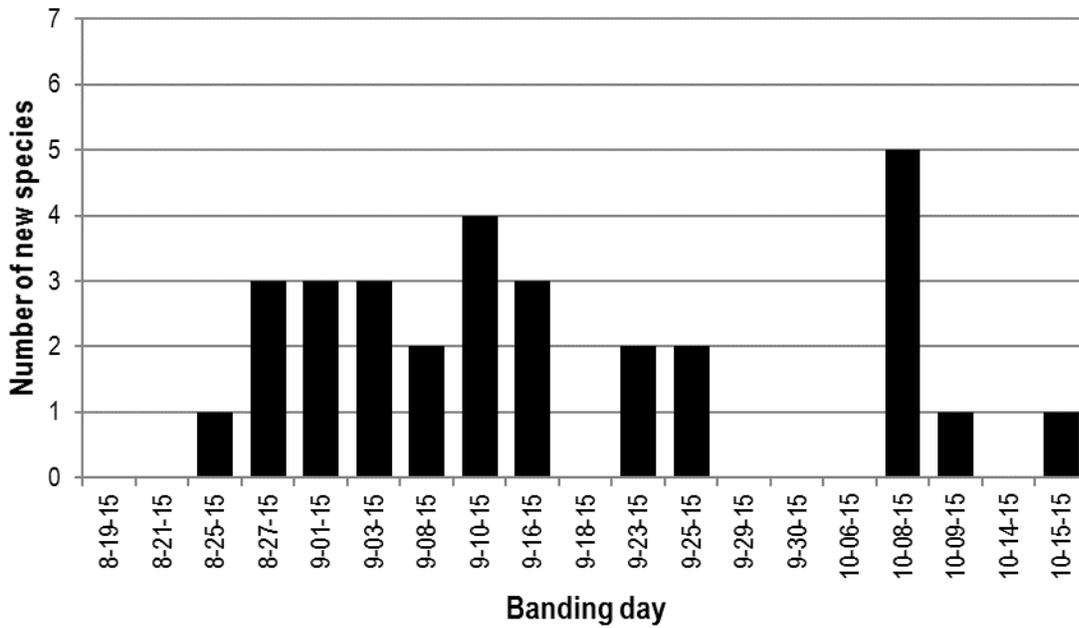


Figure 17. Number of new migrant species arriving per banding day during fall migration, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2015. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>.

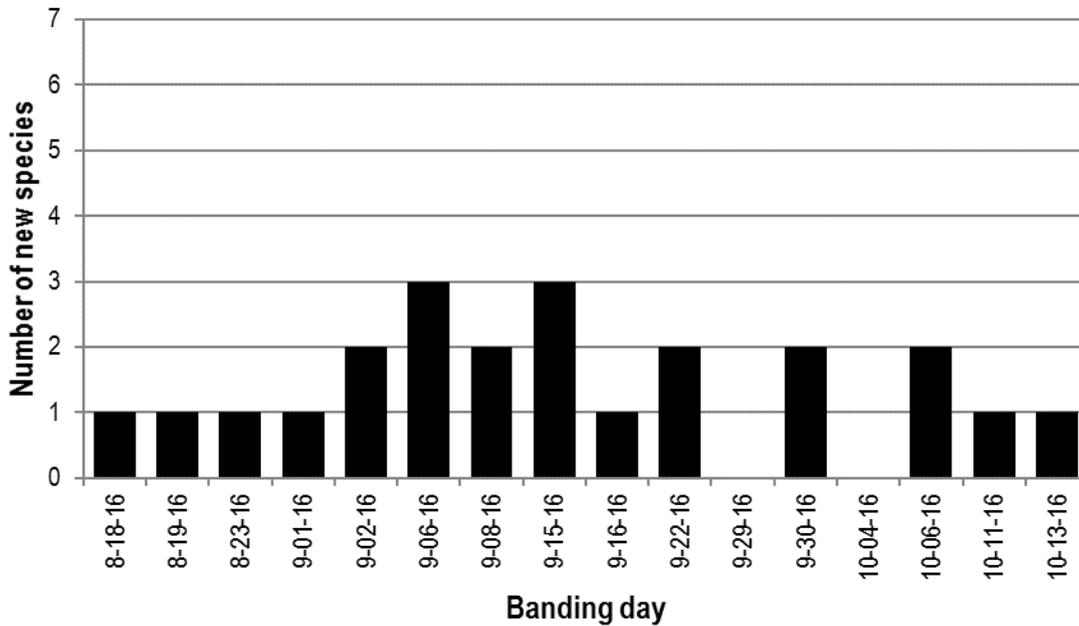


Figure 18. Number of new migrant species arriving per banding day during fall migration, Naval Base Coronado, Remote Training Site, Warner Springs, San Diego County, California, 2016. Data collected by USGS and available from <http://www.pwrc.usgs.gov/bbl>.

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