

Monitoring Avian Productivity and Survivorship (MAPS) in the North Basin Reserve in 2008.

Julia Camp
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EXECUTIVE SUMMARY

ICF Jones & Stokes biologists volunteered their time to establish and operate a MAPS station in 2008 on one of the tracts in the Conservancy's North Basin Reserve. Mist nets were operated from May 25th to August 3rd, and resulted in the capture of 254 birds and 29 species.

INTRODUCTION

The Monitoring Avian Productivity and Survivorship (MAPS) program is a nation-wide, cooperative effort among public agencies, private organizations, and bird banders to collect long-term data about breeding bird populations. This is accomplished through a "constant-effort mist netting" program in which birds are caught in a series of very fine nets called mist nets. The nets are set up in a series at each MAPS station. More than 500 MAPS stations have been set up across North America. The mist nets are operated according to strict protocols to ensure that the information obtained is comparable between areas, habitat, and years. Important information provided by each station includes the size of the adult population, the annual survivorship of adults during a given breeding season as well as between breeding seasons, and the number of young produced each year.

In 2008, ICF Jones & Stokes biologists Julia Camp and Doug Leslie and a handful of local bird enthusiasts volunteered their time to establish and operate a MAPS station on one of the Conservancy's North Basin Reserve tracts.

MAPS guidelines require the standardized operation of a series of at least ten nets at permanent locations on only one day during each of six to ten consecutive ten-day periods between May and August. The ICF Jones & Stokes MAPS station is comprised of twelve mist nets – each approximately 12-meter long - that were placed approximately 50 to 75 meters apart in the different habitat

types found at the site. MAPS stations in the Central Valley must begin operation in period 2, which begins on May 11th. High temperatures and strong winds, which make for unsafe bird banding conditions, delayed the first day of operation of the ICF Jones & Stokes MAPS station until May 25th. The last day of banding occurred on August 3rd.

RESULTS OF MONITORING

Under the watchful care of federal bird banding master permit holder Julia Camp, 10 dedicated volunteers assisted in the capture of 254 birds of 29 species (Table 1). This included 189 birds that were captured and banded for the first time and 35 birds that were recaptured after having been captured and banded earlier in the year. Another 30 birds were captured but released without banding. Some species, such as California quail and Anna's hummingbird, require special training and permits to band, so the species, age, and sex of these individuals was recorded and then the birds were released. House sparrows are not native to North America, so they were also released after determining age and sex of the individual. A handful of unbanded birds escaped while being removed from a net, which occasionally happens.

TABLE 1. Number of species and individuals captured during operation of the ICF Jones & Stokes MAPS station in the North Basin Reserve in 2008.

SPECIES	NUMBER OF CAPTURES	SPECIES	NUMBER OF CAPTURES
California quail (<i>Callipepla californica</i>)	9	Western bluebird (<i>Sialia mexicana</i>)	5
Anna's hummingbird (<i>Calypte anna</i>)	8	American robin (<i>Turdus migratorius</i>)	4
Nuttall's woodpecker (<i>Picoides nuttallii</i>)	10	Wilson's warbler (<i>Wilsonia pusilla</i>)	1
Downy woodpecker (<i>Picoides pubescens</i>)	4	Common yellowthroat (<i>Geothlypis trichas</i>)	2
Western wood-pewee (<i>Contopus sordidulus</i>)	7	California towhee (<i>Pipilo crissalis</i>)	8
Hammond's flycatcher (<i>Empidonax hammondi</i>)	1	Spotted towhee (<i>Pipilo maculatus</i>)	17
Pacific-sloped flycatcher (<i>Empidonax difficilis</i>)	1	Song sparrow (<i>Melospiza melodia</i>)	20
Black phoebe (<i>Sayornis nigricans</i>)	6	Lazuli bunting (<i>Passerina amoena</i>)	1
Ash-throated flycatcher (<i>Myiarchus cinerascens</i>)	1	Red-winged blackbird (<i>Agelaius phoeniceus</i>)	2
Western kingbird (<i>Tyrannus verticalis</i>)	6	Brown-headed cowbird (<i>Molothrus ater</i>)	16
Warbling vireo (<i>Vireo gilvus</i>)	1	Bullock's oriole (<i>Icterus bullockii</i>)	17
Western scrub-jay (<i>Aphelocoma californica</i>)	1	House finch (<i>Carpodacus mexicanus</i>)	32
Bushtit (<i>Psaltiriparus minimus</i>)	37	American goldfinch (<i>Carduelis tristis</i>)	1
House wren (<i>Troglodytes aedon</i>)	19	House Sparrow (<i>Passer domesticus</i>)	2
Bewick's wren (<i>Thryomanes bewickii</i>)	14		
Total Number of Captures: 254			

Twenty of the species captured at the banding station are year-round residents in the Basin, including Nuttall's woodpecker, bushtit, house wren, spotted towhee, and song sparrow. The remaining nine species are neotropical migrants, or birds that breed in northern latitudes but spend the winter at southern latitudes. Five of the neotropical migratory species captured in 2008 are species that breed in the Basin: western wood-pewee, ash-throated flycatcher, western kingbird, lazuli bunting, and Bullock's oriole. The remaining four species were migrating through the Basin on route to their breeding or wintering grounds. These species are warbling vireo, Hammond's flycatcher, Pacific-sloped flycatcher, and Wilson's warbler.

Another element of the MAPS Program is recording information about the bird species observed at a site. This includes all birds seen and heard vocalizing, with special attention given to behaviors that suggest an active nest nearby, such as birds with nesting material, food, and the sound of young birds begging for food. A total of 59 bird species were detected in 2008. Bird species observed nesting at the site that were not captured included wild turkey, red-tailed hawk, tree swallow, and black-headed grosbeak. Two species covered by the Natomas Basin Habitat Conservation Plan, white-faced ibis and Swainson's hawk, were observed flying over the site while operating the station.

BIOGRAPHY

Julia Camp, the primary author of this paper, is a wildlife biologist who has worked with and studied birds for over 14 years. She is a member of the NBC biological monitoring team and has been monitoring bird populations in the Basin for the last 2 years.

Doug Leslie is a wildlife biologist with over 20 years of experience working with birds. Doug is the project manager for the NBC biological monitoring team and has been overseeing monitoring efforts in the Natomas Basin since 2004.

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