



# BLUEBIRDS FLY!

## California Bluebird Recovery Program Newsletter

For the encouragement and conservation of cavity-nesters — especially bluebirds — anywhere in the West

### Pala & Torrey Pines Students Delve Into Bluebird Nest Data

Adapted from San Diego Supercomputer Center news releases

A devoted team from the Pala Band of Mission Indians and San Diego Supercomputer Center (SDSC) recently worked with the San Diego Audubon Society on a bluebird conservation and data analysis project.

The yearlong project taught students from the Pala Native American Reservation and Torrey Pines High School about bluebirds and their population status in Southern California and also gave them a taste of the scientific process and insights into science/technology career opportunities.

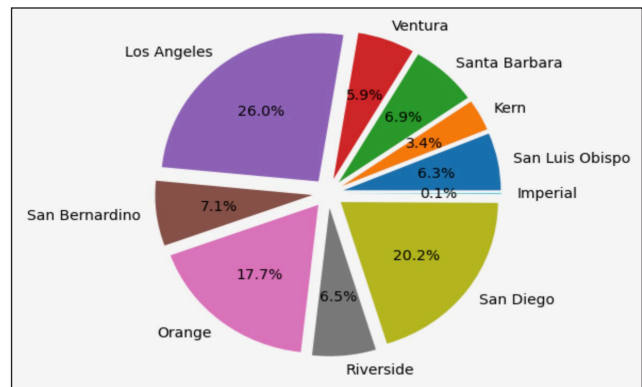
The students' research yielded useful information about Western Bluebird populations in San Diego County.

Located in northern San Diego County, the Pala Band of Mission Indians reservation consists of more than 12,000 acres and is home to a majority of the 918 enrolled members - Cupeño and Luiseño Indians, who consider themselves to be one proud people — Pala.

The bluebird research project was uniquely infused with the Native American cultural concept of reciprocity, which involves recognizing a person's gifts and sharing them with, or receiving them from, others. Those gifts might be "book sense" such as mathe-

tics and language arts or "common sense" such as kindness and respect for all cultures.

The bluebird project was led by Kimberly Mann Bruch, who is a senior writer and ed-



The students found San Diego County was second in Southern California for bluebird sightings

ucator at SDSC. Mann Bruch has been conducting similar outreach projects for over two decades and most recently worked with the Pala community on an after-school data science project about the pH levels of the San Luis Rey River, which runs through the reservation.

After the pH study with the after-school program, said Pala Band Chairman Robert Smith, "The students wanted to learn more about bluebirds and their population status in Southern California. We worked to make that happen through a Western Bluebird data science education project."

Smith has nicknamed Mann Bruch "Kentucky Kim" over the years and said that "We have

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# Students Delve Into Bluebird Nest Data

(Continued from Page 1)

been really happy with the work completed with Kentucky Kim and hope to transition these activities to include even more students."

Smith was honored this spring with an SDSC award for his commitment to higher education opportunities at the annual Pala Cupa Days, which is open to the overall community as a way to share Native American culture with the general public.

"We were very proud to be able to recognize Chairman Smith at Cupa Days," said SDSC Research Data Services Director Christine Kirkpatrick. "He works hard with leadership to ensure that youth in the rural part of the county are given these opportunities. He demonstrates with his time and actions that he genuinely cares about the Pala youth and wants the best for each student. He inspires and teaches our team with his leadership."

Once the Pala students decided on a Western Bluebirds project, Mann Bruch and others teamed up to guide their efforts. Mann Bruch said "it took a village from around the County to make this project a reality."

UC San Diego medical school student Alec Calac, a member of the Pauma Band of Luiseño Indians, introduced Mann Bruch and the Pala community to the San Diego Audubon Society. Next, Lesley Handa, lead ornithologist with the San Diego Audubon Society and San Diego County coordinator for the California Bluebird Recovery Program, provided information about Western Bluebird conservation in the region to the group.

Subsequently, Pala middle schooler Amara Sanchez came up with the specific research question: a comparison of Western Bluebird

populations among Southern California counties. Soon a couple of students from Torrey Pines High School (TPHS) - sophomore Sneha Lele and freshman Lily Bruch - caught wind of the activity and asked if they could join the project.

UC San Diego data science student Minchan Kim, of the West Big Data Innovation Hub and the National Science Foundation (NSF) Research Experience for Undergraduates (REU) program, helped the students sort and analyze bluebird data sets from the Cornell Lab of Ornithology. Cornell gave Kim complimentary access to eBird data for Western Bluebird sightings throughout Southern California.

"Although we were a bit intimidated by the large number of recorded sightings - more than 30,000! - we were excited when we finally got it all parsed and realized that San Diego was barely behind Los Angeles for the total number of sightings," Kim said.

"This project gave me a chance to share my love for data filtering and analysis with high school students and I really enjoyed working with eBird as well. They were incredibly helpful in allowing us to use their data tools."

The Pala/TPHS project was created in conjunction with a national program for high schools called DataJam, which is run by Judy Cameron, a professor at the University of Pittsburgh. Cameron and her DataJam program provided the Pala/TPHS team with an opportunity to present their work to a panel of data science professionals and receive feedback.

"We were happy to see the Pala and Torrey Pines students present their data analysis about the bluebirds of Southern California this year," Cameron said. "Being able to expand our work from the East Coast to the West Coast has been very rewarding, and we are eager to see what this team does next in the world of data science and beyond." (Continued on Page 3)

## Pala, Torrey Students

(Continued from Page 2)

In addition to data analysis, the students also took practical steps in support of bluebirds and installed nest boxes on the Pala reservation and near TPHS. Sanchez, Lele and Bruch consulted Audubon ornithologist Handa on box design and locations.

"While we have not seen any bluebirds yet, we are certain they'll come," Lele said. "More important than having a flock of bluebirds visit our birdhouses, this project allowed me to work with students that I otherwise would not have met and I was also able to hone my

data science skills."

Mann Bruch credited much of the team's success to Diana Duro, a Pala elder who translated the students' work into their native language of Cupeño, and taught the team the concept of reciprocity.

"Diana never gives up on us, even when our pronunciation is not the best," Mann Bruch said. "I've been happy to share my love of data science and overall science experiments with the students.

"Yet, while I came here to share academic knowledge with the students, I find myself learning much more from Diana and my friends at Pala."

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## About the California Bluebird Recovery Program

Founder — Don Yoder • Emeritus — Hatch Graham

### Our Mission

Enlist current bluebirders and recruit others who will help reestablish bluebirds to their normal habitat.

- Locate preferred habitat for the placement of nestboxes suitable for bluebirds.
- Secure monitors to care for the boxes and keep systematic records of the development of young birds during the nesting season.
- Record and analyze all annual summaries of nestbox records.
- Provide a forum (newsletter) through which fellow trail monitors can exchange information and secure help with problems.

### Learn More

To learn more about the California Bluebird Recovery Program and other cavity-nester conservation programs, visit these websites:

[www.CBRP.org](http://www.CBRP.org)

[www.nabluebirdssociety.org](http://www.nabluebirdssociety.org)

[www.socalbluebirds.org](http://www.socalbluebirds.org)

[www.sialis.org](http://www.sialis.org)

If you are looking for a mentor, contact any board member at [info@cbrp.org](mailto:info@cbrp.org).

### Please consider supporting our efforts

There is a donation form on the back page of this newsletter and a donation button on the main page of our website. Your contribution is tax-deductible and goes a long way in helping us conserve the bluebird population in California.

## Do We Need a Bluebird Recovery Program?

By Hatch Graham, County Coordinator  
for El Dorado & Amador Counties

I wrote an emotional plea for everyone to join in with us to restore the bluebird to its former abundance which I wanted to send to the local papers. I presented the article to a local group I belong to, the El Dorado Writers' Guild, for their critique. One of the members said, "So how bad off are the bluebirds?"

"Well-uh, the Eastern Bluebirds were in a great decline and the bluebird trails in the east really helped."

"So how bad off are the Western Bluebirds? I think it would really help your article if you said they were down 10%, or 20%, or whatever."

"Good point," I agreed.

Next day, I called Bob Barnes, National Audubon's Western Regional Coordinator for Birds in Balance. "How bad off are the Western Bluebirds, Bob?"

"Well, we don't keep too many statistics here in the Regional Office in Sacramento. But I can give you some leads on who might know. Here, call Geoff LeBaron, he's the Christmas Bird Count editor of Audubon Field Notes." He gave me his New York number.

I called Geoff and asked him if the Christmas Bird Counts or anything else could give us a clue. Well, it turns out that most of the Notes' information is turned over to what once was the Fish & Wildlife Service and long before that the U.S. Biological Survey, and is now the National Biological Service (NBS), headquartered at Patuxent Environment Science Center in Laurel, Maryland just outside Washington, D.C. He told me to call Sam Droege, Data Analysis Leader at NBS.

**This article first  
appeared in Blue-  
birds Fly! in 1995**

I hit it lucky. Sam was in his office, answering his phone. He listened to my question then asked me if I was on the Internet. I gave him my excuses: modem blew out my phone line, I never replaced it, someday ... Well, he had his computer up, the CBC was on their own system. He read me the information which wasn't all current - missing the last six years. "How about the Breeding Bird Survey?" he asked.

"Sure," I replied. He gave me a play-by-play as he went into the Internet: now he was on the World Wide Web, here's ornithology population dynamics, bird censuses, U.S. Breeding Bird Survey.

"Okay, here's what we have for Western Bluebird. Total population 1966 to 1994: minus 0.7 percent per year - but that's not significant: the Mountain Bluebird samples were too small to be significant.

"Now here are the breakdowns for 1980 to 1994. Total Western Bluebirds: minus 1.6 per year; significant. Western Bluebirds in California: minus 1.9 percent per year; significant." Sam concluded by giving me names and numbers of others who might provide more assistance. I thanked him and told him it was nice to call a government agency and get such immediate help and information. "That's what we're here for," Sam replied.

So, now, what have we got? These small percentages don't sound like much. But wait - that's Per Year. Let's see, 1.9% per year for 15 years is 28.5% in a decade and half, unless my Pentium chip is acting up. Now the 1.3% doesn't seem like as much, but since 1966 that would be a 39% decline!

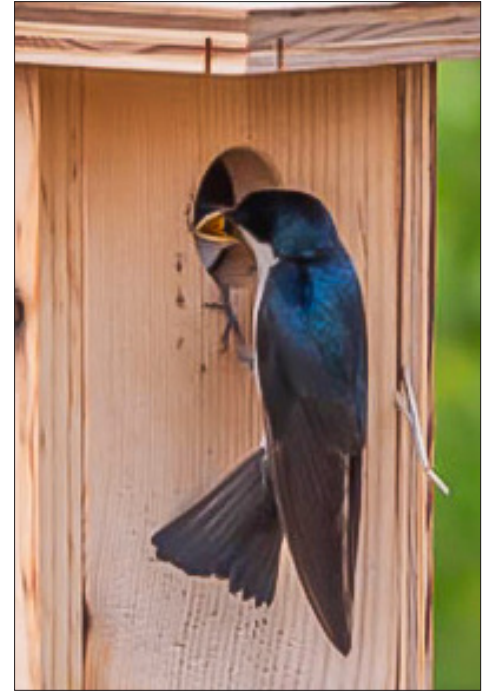
Am I really interpreting this right? And what is the Breeding Bird Survey? The

(Continued on Page 5)

## Field Report:

Kime Smith,  
Contra Costa County

This is my second year managing a Bluebird box trail in the Walnut Creek Open Space. I have seven Xboxes (from a plan in Audubon Birdhouse book), and this year added two Gilwood Slot boxes. All are mounted using the Gilbertson pole system within fenced-in areas. Things here in Walnut Creek seem to have been delayed about a month from last year.



A Tree Swallow parent feeds a chick. Photos by Kime Smith

## Bluebird Recovery Program

(Continued from Page 4)

next morning, I called one of the numbers Sam had given me - Bruce Peterjohn, Breeding Bird Survey, NBS.

After telling him about my call to Sam, I asked, "Just what is the BBS?"

"Well, first, let's make sure we're talking about the same statistics." Bruce soon confirmed that Sam's data was correct, except that the BBS was established in 1966 but didn't get started in California until 1968, so the decline was 1.3% per year for 28 rather than 30 years. Same decline per year, though.

How accurate? Bruce told me the 95% confidence level, a statistical measure, was -2.8% to +0.2%. That's very tight, if I remember anything about statistics, and any error was more likely a greater decline than less.

"So," I repeated, "tell me about the BBS."

Here's what he told me. The survey is nationwide. There are about 220 randomly selected

survey routes in California. Each route runs for 24.5 miles along roads. The samples are taken in the early morning at half-mile intervals resulting in 50 stops per survey route. At the half-mile stop, a highly trained birder observes and listens for exactly 3 minutes, recording every bird seen or heard within a quarter-mile radius.

The routes are run once each year in June. Based on the statistical plan of the surveys, the BBS should provide accurate trend data provided enough of the target species is encountered.

The Western Bluebird has been counted enough to be statistically significant; the Mountain Bluebird has not.

Do we need a "recovery" program? The Western Bluebird has declined 36.4% in the last 28 years and 28.5% in the last 15. The decline is accelerating. The answer is yes, we do. Let's get with it, folks! ■

## From the Director's Chair

This has been a wonderful birding season for me. I have several feeders around my house and attract 10 or more species. Also, I had six White-breasted Nuthatches fledge from a very old box, and the next day a pair of Western Bluebirds took over. So, now there are six hatchlings just about to fledge. Hope you are having the same kind of success with your boxes.

You can enter results into our online spreadsheet at any time - you do not have to wait till the end of the season. Forms for recording your weekly visits are available on our website at: <https://www.cbrp.org/resources/>.

The spreadsheet is located at: <https://docs.google.com/spreadsheets/d/1AIJqtNLppQJip1VJJwGnAjKN5FMnh59aR0pTLII6HbG/edit?usp=sharing>.

Brief instructions are on the first few rows of the spreadsheet and detailed instructions are available at: <https://www.cbrp.org/data-collection-end-of-season/>.

Annual Reports and the Newsletters are available in full color for viewing and/or downloading on our web site. Annual Reports are available at <http://www.cbrp.org/annual-reports/> and Newsletters are available at <http://www.cbrp.org/newsletters/>.



Thank you to the many monitors who contributed pictures and articles for this newsletter, and to those of you who made donations to CBRP in 2023 (see the donor list elsewhere in this issue). Donations can be made on our web site or by mail. These donations go toward assisting in the purchase of nest box material for new and updated trails.

Special thanks to our wonderful editor, Sylvia Wright, for the diligence and skill she displays in creating these newsletters.

I want to encourage monitors to contribute to and participate in Cornell University's NestWatch Program using their web site or the bulk upload template (see link below) so as to preserve the nesting data you collect and to make that data available to researchers around the world. It is never too late to contribute your data to NestWatch.

The link to the NestWatch web site is: <http://www.nestwatch.org/>

The link to the bulk upload documentation is: <https://goo.gl/PqHXiX>

The link to the bulk upload template is: <https://goo.gl/6eQA9f>. Send the completed template to me and I will make the arrangements with NestWatch. ■

**Dick Blaine - [dick@theblaines.net](mailto:dick@theblaines.net)**  
CBRP Web site - [CBRP.org](http://www.cbrp.org)



### Field Report: Melissa Mercier, Nevada County

Of my four boxes, two have Western Bluebird nests with eggs!



## Can You Name That Bird?

We received so many egg and nest photos for this issue, we're making a quiz. How many can you ID correctly? We'll help you out by providing the location. Answers are on Page 12.



**1** In Nevada County, Sylvia Wright had this speckled egg, above, in this nest, left.



**3**



**4**



**2**

Bottom 3 photos, clockwise from left:  
**2.** In Mendocino County, Marybeth & Michael Arago had clutches of 5 and 6 of these speckled tan eggs. **3.** In Contra Costa County, Kime Smith had these ivory-colored eggs in a feathery nest. **4.** In Napa County, Kelly Pepper had 3 boxes with unusually large clutches of 6 of these blue eggs.

### CBRP Donors Jan - June 2023 • \$2,970

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 Mendocino Coast Audubon  
 Eric Fromer  
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Alameda County  
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 Safari West / Georgette Howington  
 Safari West / Mike Azevedo

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# Weather's Effects on Cavity Nesters

By Dan Airola and Peter Stine  
Sacramento County

We monitored nest boxes in 2021 and 2022 in an open field within the American River Parkway in Sacramento County. Different weather conditions in each year allowed us to evaluate the effects of temperature and rainfall on box occupancy, nest success, and productivity. Conditions were hotter and drier than average in 2021, while 2022 had cooler, wetter conditions approaching long-term averages.

Tree Swallows, Western Bluebirds, and Ash-throated Flycatchers used boxes. Twenty-two of 23 boxes available in 2021 were occupied (96%), and all 25 boxes available in 2022 were occupied. More nesting pairs and nesting attempts occurred in 2022 than in 2021, with the largest proportional increase in the numbers of Ash-throated Flycatcher pairs (from one to four pairs). Nesting was delayed and extended later in 2022.

Nesting success (% of nesting attempts fledging young) and productivity (# young per nesting attempt and per nesting pair) also increased during second nesting attempts in 2022 for the swallow and bluebird (Figure 1, Page 9). The delay in nesting by swallows and bluebirds in 2022 appears to have allowed the later-arriving Ash-throated Flycatcher to occupy more boxes that year (3 vs. 1). Average productivity (young per nesting attempt) in the two years apparently was low compared to other sites for the swallow (3.1, 3.3) and bluebird (1.8, 1.8), but not the flycatcher (4.0 and 3.0).

We were not able to definitively determine the causes of nesting failures. A fire caused some nestling loss, but one fallen box whose pole was burned was re-erected

and fledged young. Nest predation was low. We believe that low productivity resulted from either heat stress, predation on adults, or adult abandonment. Based on study results, we have repainted boxes white to reduce heat gain and will mow grass cover to protect boxes from fire.



Peter Stine checks boxes in River Bend Park, Sacramento. Photo by Dan Airola

This year's (2023) wet and cool conditions provide a counterpart to the previous drought and normal years. We observed a delay in nesting activity of 5 to 6 weeks, compared to the normal 2022 year. So far, we have many more swallow nests than last year (27 vs. 18) but fewer bluebird nests (10 vs. 17). I suspect this is due to overwinter mortality of bluebirds in the wet, cool winter. Swallows migrate, so escape this. As of June 11, many fledglings are about to fledge. If conditions remain cool,

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# Wet, Cool Weather Delayed 2023 Nesting

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we predict that we will have a high number of second broods and even some third ones. ■

Complete citation: Airola, D.A. and P. Stine. 2023. Songbird use of nest boxes under varied annual weather conditions along the American River in Sacramento, California. *Central Valley Birds* 26:1-17

Accessible at: [https://www.researchgate.net/publication/369907510\\_Songbird\\_Reproductive\\_Success\\_in\\_Nest\\_Boxes\\_under\\_Different\\_Annual\\_Weather\\_Conditions\\_along\\_the\\_American\\_River\\_in\\_Sacramento\\_California](https://www.researchgate.net/publication/369907510_Songbird_Reproductive_Success_in_Nest_Boxes_under_Different_Annual_Weather_Conditions_along_the_American_River_in_Sacramento_California)

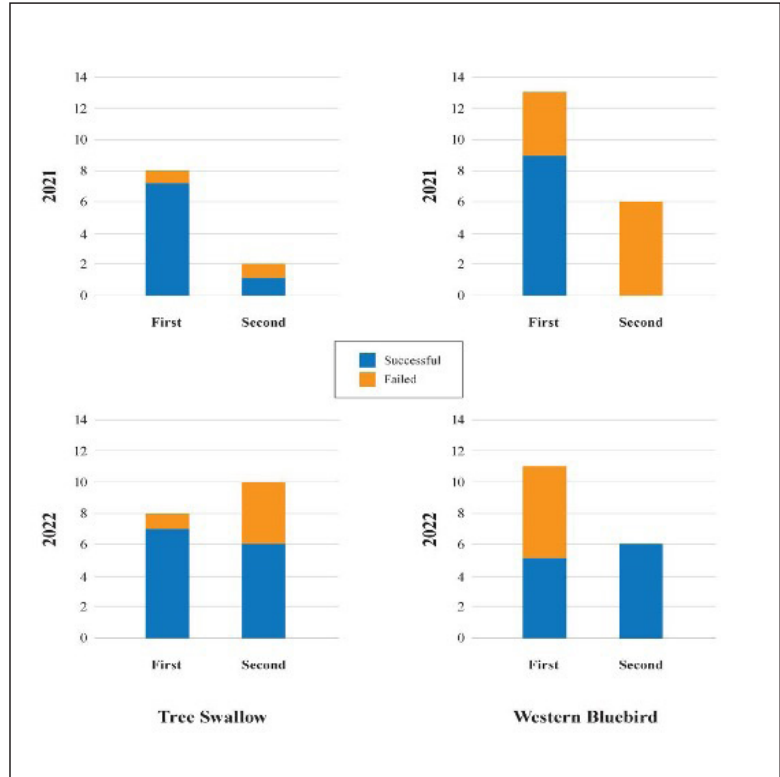


Figure 1

## You Can Help California Bluebirds

Yes, I want to help support Bluebirds in California!  
Please enroll me in the California Bluebird Recovery Program

Here is my donation of:

- \$10 Subscriber    \$15 Supporter    \$25 Contributor    \$35    \$\_\_\_\_\_ Sponsor

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Please make your tax-deductible contribution payable to MDAS BLUEBIRDS and mail to:  
California Bluebird Recovery Program • 23800 Amapolo Ct. V03, Cupertino, CA 95014

Donations can also be made through our website, [CBRP.org](http://CBRP.org)

CBRP is a non-profit project of: North American Bluebird Society  
National Audubon Society - California • Mount Diablo Audubon Society

# Birds Win Girl Scouts' 'Total Respect'

By Daphne Dale  
and Katherina  
Koriabine, Contra  
Costa County

The Silver Award is the highest award for Girl Scout Cadettes, and its purpose is to make the world a better place. Our Troop #30902 has been working to help bluebirds and other secondary cavity-nesting birds. We were very lucky to

have Georgette Howington, Contra Costa County Coordinator for the California Bluebird Recovery Program, as our sponsor.

The first assignment she gave us was to meet her at the Lafayette Reservoir, where there is a 45-nest box trail. After monitoring 13 nests, we were full of appreciation for the volunteers doing this regularly.

Next, we learned to build bird boxes. Georgette advised us to buy our own materials. At first, we didn't realize the benefit of this suggestion. After an hour in Home Depot, we chose the most expensive wood. Thanks to the cashier who pointed out our mistake, we ended up spending another hour and managed to buy the correct supplies.

Another unexpected twist was working with Mike Tischler, a longtime nest box builder, who taught us how to assemble his pre-cut kits and use tools safely. We were proud to assemble our own boxes!

In February, we installed three nest boxes at Sienna Ranch in Lafayette and one at Karina's house in Concord. Karina's box was placed near the front door. We were



surprised when a family of chickadees started to build a nest. We were disappointed that it wasn't bluebirds, but glad when we learned that the chickadee population in our area is not great.

While observing the chickadees, we saw a bluebird trying to hijack the box! I had no idea we had bluebirds

in Concord. The chickadees did not give in, and in a couple of days, when the box was opened for the first time, we admired a fluffy nest made of peach and apricot



flowers. In a week, we discovered five tiny ivory eggs. On May 11th, we were thrilled to see five hatchlings among the cozy fluff.

This is when the real action began. The parents worked tirelessly to feed the chicks, but their survival chances were a gamble, considering they needed thousands of caterpillars to grow.

However, as Girl Scouts, we never gave up on these hardworking birds. Georgette sug-

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## Scouts In Contra Costa

(Continued from Page 10)

suggested supplementing our birds' diet with mealworms to help them thrive. We quickly learned two things: Chickadees love mealworms, and we needed way more than the 1,000 worms we had. The chickadee parents visited the nest every 3 minutes, taking a mealworm almost every time.

Who else joined the feast? The bluebird family discovered our feeder and eagerly filled their beaks with worms. Fortunately, both species tolerated each other.

In the following week, over 3,000 mealworms were eaten by both families. We were hopeful that their chances of survival had increased. Thankfully, on day 20, all five fledglings left the nest.

In the meantime, we continued monitoring our three boxes at Sienna Ranch.

Surveying a box in the wild is very different. It took longer for the birds to inhabit the boxes. So far, we have one nest occupied by Tree Swallows.

Working with the California Bluebird Recovery Program helped us understand how much we affect nature. We now have total respect for these hardworking birds and love helping them. ■

## Students In San Diego

(Continued from Page 3)

Lesley Handa said the students' work demonstrated the abundance of nesting habitat in San Diego County.

"We are excited that the group decided to focus on analyzing Western Bluebird data in San Diego County as it is a focal bird species for conservation for the California Bluebird Recovery Program (CBRP) and for the San Diego Audubon Society locally, as a Multiple Species Conservation Plan (MSCP) species.

"This species has multiple conservation challenges that simultaneously affect other bird species dependent on the same resources, such as habitat loss of natural nesting areas from the destruction of tree snags, and harm to insects that are the primary food source from excessive pesticide use," Handa continued.

"Through CBRP, installing Western Bluebird boxes helps to mitigate the loss of natural habitat, provides an opportunity to contribute to community science, and brings attention to this charismatic species for the general public to enjoy!" ■

### CBRP Board Members

**Don Yoder, Founder (Deceased)**

**Dick Blaine**  
Program Director

**Georgette Howington**  
Asst. Program Director

**Mike Azevedo, Member**

**Tricia Jordan, Web Designer / Webmaster**

Contact us at [info@cbrp.org](mailto:info@cbrp.org)

**Sylvia Wright, Newsletter Editor**

This newsletter uses the Comic Sans font for greater accessibility for everyone

# WEBLS

By Bob Franz, Orange County

This is about the Western Bluebird colored so bright blue.  
I vividly remember when I first saw one flash into view.

That they are colorful is an understatement to be sure,  
And their striking orange breast adds to their allure.

As to their living quarters, a large-enough cavity will do,  
Whether it is in a tree, or in a wooden box held together with glue.

Building a nest is the female's job and she does it quite well,  
It is quite round and it kinda looks like an upside-down bell.

Although identified as a songbird, they rarely sing and their notes are few.  
Sibley's describes their call as a short low whistle sounding like pew pew pew.

Many years ago birders reported that fewer and fewer could be found.  
But due to efforts of many Bluebird groups, their numbers are in rebound. ■



**Field Reports:** Western Bluebird nestlings, from Cindy Lockhart, Contra Costa County. Below, a nest box with a view, from Jessica Lucas, a ranger at the Midpeninsula Regional Open Space District in Santa Clara County.



Janna Pauser found this Ash-throated Flycatcher near husband Lee's nest boxes in Santa Clara Co. and hoped it would nest there.

## Quiz Answers

1. House Sparrow ☹️
2. Chestnut-backed Chickadee
3. Tree Swallow
4. Western Bluebird

