BLUEBIRDS FLY!

California Bluebird Recovery Program's newsletter

—supported by National Audubon Society-California
—an affiliate of the North American Bluebird Society

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

STATE OF THE STATE:

Conditions & nesting vary

As the nesting season closed, preliminary reports from around the State indicate spotty results mostly dependent on weather but some due to changing prey patterns among some predators.

In the Bay Area, **Warren Engstrom**, Contra Costa Co, reports the season got off to a slow start. Early nests in March failed—probably due to cold weather and lack of food. April showed improvement and was better than 1999 but still below the best years in the past. There have been several second attempts but only a few have succeeded.

Don Yoder reports raccoons on a rampage and sprinklers in the golf course soaked several boxes in the early season. Prospects improved in the later season, but production is below expectations.

In San Mateo, **Howard Rathlesberger** is concerned about a high death rate among Violet-green Swallow chicks. At Filoli Gardens he had 22 nests, 89 eggs, 57 hatched but nearly half–26–died. There was no abnormal mortality in other species.

From Santa Clara County, **Dave Cook** reports an increase in House Wren predation and some losses to raccoons at Grant Ranch. Echoing this, **Garth Harwood** says most of his losses at Arastradero Preserve were from raccoons so he has converted to hanging boxes from tree limbs. The good news is that numbers of Chestnut-backed Chickadees, Oak Titmice, and Bewick's Wrens seem likely to exceed last year's figures by a wide margin

Farther south, **Dick Purvis** reports, "The weather has been perfect for bluebirds in Orange County this year.

"Essentially there has been no rain during the nesting season. I had thought that results were much better than last year when there was lots of rain and many young lost because of it. However, after checking my records, I find there's not much difference in results. I've found that 52% of the boxes with nests are having second nests. Likewise, there's little difference in the number of eggs per nest.

"The real news from Orange County is that because of our efforts and some good newspaper publicity, we have recruited many new monitors who are very eager and dedicated to helping the birds."

Jane Morf reports some loss of chicks—probably to House Sparrows—and a larger number of infertile eggs than usual. The number of second attempts is also down from 58% last year to 42% this year.

Also in Orange County, **Peter Wetzel** reports that the early nesters seemed to have poorer results than last year, but if they got their second broods started early enough they did better. Those who started later had many losses to ants. "I have been amazed at how effectively ants can kill and strip even 2-week old chicks and leave naked skeletons in the box within a week."Chalk from China" (made from diatomaceous earth) seems effective in eliminating the ants. With hanging boxes, it's important that they don't swing and hit the foliage where the ants can climb aboard.

continued next column

Another Orange Co reporter, **Bob Franz**, reports occupancy in his 132 box trail is up from 86% last year to 91% this year. He had 3 7-egg clutches this year (1 last year); but fewer 3rd clutches (only 1). "I had one nestbox with a large round indentation....It was obviously caused by a golf ball as you could see the typical dimples inside the dent." And, naturally, it was on a golf course.

Farther north and to the east in El Dorado County, **Wendy Guglieri** successfully added a new trail of 8 boxes located along the road and on several private properties behind a locked gate, just a street away from her own 3 boxes. She wondered if the boxes were up early enough but was rewarded with bluebirds, Ash-throated Flycatchers, and Violet-green Swallows. The bluebirds even had second clutches. Wendy also manages a trail at Camino Heights

continued next page

DOUBLE ISSUE

Spring & Summer combined

For some of us the cavity nesting season is longer than a calendar season and this year it started early and ran late—especially for your editor who experienced the most abundant year in the last 6.

Our apologies for missing the normal Spring issue, but we hope this combination will make up for it.

STATE OF THE STATE:

Golf Course (see the article FOSTERING CHICKS WORKS!).

At Greenstone Country, El Dorado, residents now have 72 boxes on 15 properties and along the equestrian trails monitored by **Chantal Truscelli** and **Candy Perisho**. As usual, the Oak Titmice were the first to start, followed by the Western Blues, then Tree Swallows and Ash-throated Flycatchers. A heavy rain in mid-April followed by a week of cold weather resulted in a few losses of chicks but most faired well and second broods survived the mid-June heat wave. Outdoor cats still take their toll.

Ray DiBasilio manages the 30-box trail in Sierra Vista, El Dorado. More boxes were occupied than in years before, more second clutches, and fewer losses, although near-fledging Tree Swallows succumbed to the mid-June heat.

Just to the south in Sierran foothills in Amador County, **Doris & Bill Allison** have a 40-box trail on their cattle ranch. Cold winds took their toll but occupancy seemed good. (See the article on HEAT! to see how they successfully coped with the record-breaking heat wave in mid-June).

On their 70-box trail along Hwy 124 in Amador, **Hatch & Judy Graham** experienced heavier occupancy than in years past. Also, there seemed to be more 6 egg bluebird clutches than usual. Hatch believes the open March allowed the hens to eat well and build up their fat reserves prior to the nesting season. Many had second clutches. The trail produced, in addition to bluebirds, many Tree Swallows, Oak Titmice, and Ash-throated Flycatchers and a few White-breasted Nuthatches (1st time), and fewer House Wrens than usual.

On the high mountain trails near the Sierran Crest, heavy, late snows seemed to depress the Mountain Chickadee population and the Mountain Bluebirds nested late.

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HAZARDS YOU LEAST EXPECT

Some parks host Easter egg hunts in the Spring. Eggs are hidden in little nest of plastic grass—Easter grass. **Jane Morf** reports a tragic loss. "We found a male chick hanging by his foot outside the box hole. His foot was tangled in a couple of strands of Easter basket grass which was a part of his nest and from which he could not break free. There was blood all around the front where he had struggled to free himself. If only we could have been there to help.

"No Easter grass next year if we can avoid it. We will also let the park ranger know of the loss. It's too much to expect a ban on Easter grass, but at least we'll be more aware."

In more rural areas, blue plastic tarps are widely used around ranches to cover hay, woodpiles, and equipment. As they break down from sunlight, the woven plastic strands are often incorporated in nests by bluebirds. Monitors needn't worry if they are short pieces but long ones can cause the same problem Jane has reported.

A long Emu feather was incorporated into a bluebird nest monitored by **Joyce Theios** in Amador Co. Somehow a chick got it started down her throat. Long slow pulling brought nearly 2 inches out of the chick's craw. The somewhat emaciated bird recovered and fledged.

From Orange, **Dick Purvis** reports, "For the first time in 16 years and thousands of bluebird nests, we had 3 nests with cowbird eggs. **Bob Franz**'s trail had adjacent nestboxes with a cowbird egg in each along with five bluebird eggs in each. Brown-headed Cowbirds are very common here. Sometimes I see large flocks of them yet this is the first instance of them laying in a bluebird nest so it must be a rare occurrence for them to parasitize bluebirds."

Califomia Bluebird Recovery Program

Founded in 1994, supported by National Audubon Society-California and affiliated with the North American Bluebird Society, CBRP is *"for the encouragement and conservation of cavity nesters—especially bluebirds—anywhere in the West."*

CBRP is non-profit, has no paid staff, and is supported entirely by the efforts of volunteers and donations accepted by the Mt.Diablo Audubon Society on CBRP's behalf.

CBRP members had located and reported on 4,600 nestboxes by the end of 1999, with more than 13,000 cavity nesters fledged—nearly half of them western and mountain bluebirds.

CBRP welcomes membership from the public who wish to support its program, and especially seeks those who will place appropriate nestboxes in the proper habitat, faithfully monitor the birds' progress through the nesting season, and report yearly on the results.

CBRP can furnish nestbox plans, a monitoring guide, forms for monitoring and reports, technical advice through a network of county coordinators, and sometimes the nestboxes themselves.

Membership, which includes this quarterly newsletter is available for a donation of $5 or more made payable to "MDAS—Bluebirds" and mailed to CBRP, 2021 Ptarmigan Dr #1, Walnut Creek, CA 94595. Donations are tax-deductible.

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BLUEBIRDS FLY!

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HEAT!

VETERAN BLUEBIRDER'S ADVICE

— Keith Kridler, Texas

I reported that birds can't survive when the temperature of 107°F. persists for more than a few hours. In tests, dark boxes gained 17°F over the air temperature. *Everyone* needs to place a thermometer in an empty box and check it in the middle of the day in full sun.

Then think if you would place a child in a car in the same location and subject them to these temperatures. Heat kills! I have used all white PVC boxes for years and see no rejection by bluebirds or other cavity nesters. I used to paint all birdhouse gourds white also.

Vivian M. Pitzrick gave the perfect answers to high heat: Prop up those tops and get *plenty* of air gap over the top of the nest. If you only have a ¾" hole on each side of your box you have only 0.44 sq.in. of ventilation per side. A ½" air gap 4" long is 2.0 sq. in. per side. In our Texas heat (normally 100°+F) summers I can raise bluebirds in most locations and I use boxes with 5.93 sq. in. of ventilation! And this is not counting the entrance holes.

The type of food supply being fed to the young birds will sometimes determine whether they will survive a major heat wave. If there is an abundance of caterpillars (high in moisture) rather than hard beetles (low moisture) being fed it will help. High heat with adequate moisture in the diet will keep many young from dying of dehydration. This is probably the cause of death in older young rather than the actual heat.

Box temperature varies in different locations, and is dependant on elevation, humidity, air quality, breeze, and sun angle. Test your boxes!

—excerpt from discussion on BLUEBIRD-L, available from Cornell Lab of Ornithology.

"Sunhats" work, too.

Last winter we reported on the cardboard sunshade provided by **Marian Kunkel**, Amador Co, during a heat wave.

On June 14, this year, predictions of temperatures exceeding 105° F in Sacramento prompted **Hatch & Judy Graham** and **Bill & Doris Allison** to do the same on their trails in Western Amador.

Bill used an electric drill and screws to attach cardboard baffles on the western side of their exposed boxes. Hatch used a staple gun and cardboard boxes with four sides and 3 folds to form a sunbonnet on his boxes. A short side hangs down on the east, a lopsided cap extends over the roof, and the long side hangs down from the roof overhang on the west side. The box is deep enough to project over the roof about 6" front and back.

In a couple of cases these were placed on boxes containing nestlings. The parents were somewhat nonplussed by this, fluttering around the entrance then back to the fence to study the new appearance. Finally, first one would enter with food, then the other.

Doris reported the temperature reached 111° in Plymouth that afternoon.

One clutch of 5 20-day old swallows in a nestbox that was shaded in the morning and didn't get a sunhat perished when the sun reached it that afternoon. Even some shaded eggs failed to hatch. One clutch was found with pipping in progress where all the emerging chicks expired.

But surprisingly, most of the chicks in the shaded boxes survived. Hatch says, "Without the sunhats, that heat wave would have been disastrous. As it turned out, this has been the most successful year on our Hwy 124 trail in our 6 years of operation."

Support our sponsors

Founded in 1978, the **North American Bluebird Society** (NABS) is a non-profit organization determined to increase the populations of the three species of bluebirds on this continent. Inasmuch as the populations of these birds have diminished due to the maladroit actions of human beings, as well as natural disasters, the society strives explain the importance of preserving native cavity nesters.

The society works within the bounds of effective conservation to study obstacles impeding bluebird recovery and to promote ideas and actions which might reduce their effect.

Membership is $15. NABS's mailing address is PO Box 74, Darlington, WI 53530.

National Audubon Society

There are local chapters of the **National Audubon Society** (NAS) in all fifty states, Guam, and Latin America. In California there are over fifty local chapters. Chapters have newsletters, monthly programs, and field trips to local areas of interest.

To join NAS, contact your local Audubon Chapter, or call NAS-California at (916) 481-5332. National dues are $20 for new members, and include a bimonthly magazine as well as membership privileges in your local Audubon chapter.

Craig Park Box 19 —*by Jane Morf*

Box 19 was just like any of our other nest boxes. Painted pale gray-blue and measuring about 4.5"x 4.5" x 9", it occupied the eucalyptus tree near the handball courts. My husband, **Woody**, and I have given it the same amount of diligent attention and care as the other 25 boxes on our Western Bluebird trail at Craig Park in Brea, CA. In the 3 years since the box was first hung by bluebirder-par-excellence **Dick Purvis** in 1996, it had seen 3, then 5, and last year 8 chicks fledge. The park bluebird population was seeing a nice, steady growth in all our nestboxes

Then one day we got an urgent call from our friend, **Linda Violett**, who monitors a bluebird trail in Yorba Linda. She had two runts which weren't going to make it in their current nest box, and no other suitable box to which to transfer them on her own trail. Did we have a box of younger chicks which would be the size of her runts? Would we be able to adopt these scrawny kids to give them their only chance at making it?

A quick review of our logbook revealed that we had only one box which had nestlings of the right size to match the runts. But it already had five chicks! This might prove to be a challenge. Would the adoptive parents be capable of raising such a big brood? Linda and I felt that the runts would never make it unless we tried, so we agreed to meet at the park the next day and introduce the runts to their new family.

Our first step was to remove the nest with its five chicks from its standard-sized Peterson box. We stretched out the nesting material and placed it and the original chicks in a new larger two-hole model that Linda had built. Then we added the two runts and re-hung the box. (All our boxes are the Dick Purvis hanging box style.) We put out some mealworms and moved about 200 feet away to sit and see what would happen.

The challenge was on. First the parents had to accept the new and improved nest box, and then we had to hope they couldn't count.

The process was slow. The parents approached fairly quickly, but with much caution. We watched as they would get close, and then closer. But it seemed like they were never going to go inside. But finally it happened. First one, then the other entered the box. Then they found the mealworms, and began making trips up to the box carrying three or four worms at a time.

Ah, success! Or so we thought. But it wasn't quite a done deal yet. After all the worms were gone, both parents flew over to where we were sitting and landed on a branch just over our heads. They had obviously watched all of our efforts with much curiosity and knew we were responsible for all the changes. They then began to read us the riot act for several minutes. And it was very definite that they were talking to us. We interpreted all their chattering as: "Nice try, but don't you know how hard it is to raise five kids these days, let alone seven? How do you think we're ever going to get all these guys fledged?" I looked at Linda, and she looked at me, and the answer became obvious—**mealworms!**

So for the next two weeks, I went to Box 19 every day bearing a healthy supply of easy pickings—either medium or large mealworms depending on what I could purchase. The parents became quite used to me and seemed to await my arrival. Several times the male would see me coming and fly from across the baseball field to follow my car as I approached the box location. During the second week I brought along my camera and took more than one hundred pictures of the parents as they dropped down from the box and landed within three feet of me to scoop up a mouthful and return to the chicks. I was never able to get any shots of those chicks, but I certainly could hear them.

I'm happy to say that all seven chicks successfully fledged. But I also know that there are those who would say that we never should have interfered by moving the runts or by making food so readily available. But neither Linda nor I could just sit and do nothing. We did what we could to ensure their survival and I really got to know these great little creatures by spending so much up-close time with them. They really do have a personality all their own, and I know I would recognize Box 19's dad in a lineup of a hundred bluebirds.

EPILOGUE

The male and female went on to do a second nesting in their new, bigger box and to lay five more eggs. As we monitored the box, I told them that they would be on their own this time, and I was glad that they hadn't decided to lay seven eggs. (You do know it's okay to talk to birds, don't you?)

We watched as the chicks hatched and we got a good look at them at 10 days. When next we returned, the chicks were 19 days old, and so we only observed the comings and goings of the adults and didn't open the box. As we were leaving to continue monitoring the rest of our trail, the female exited the box and was joined by the male. They both flew after us as we walked, and kept landing close by. It seemed that they wanted to tell us something, but this time we didn't have a clue what they were trying to say. As much as we wanted to go look in the nest box, we didn't want any of the chicks to fledge early, so we reluctantly went on our way.

Box 19

continued

A week later when we returned and lowered Box 19, we found four chicks had fledged, but there was also one chick dead in the box. It had probably been dead about five days. We were unable to determine the cause and who knows if we could have done anything had we investigated on our earlier visit. But maybe, just maybe, next time we'll listen a little harder.

— from Chaparral Naturalist, v 40, no 8
Pomona Valley Audubon Society

COYOTES ARE FOR THE BIRDS

National Wildlife Federation
(Dec-Jan issue)

Might coyotes be good for birds?

That was the question posed by two ecologists who reasoned that the presence of coyotes in a habitat might mean fewer smaller predators such as gray foxes, raccoons, opossums, and outdoor domestic cats. And that's just what **Kevin Crooks** of the University of California, Santa Cruz, and **Michael Soule** of The Wildlife Project in Colorado found when they studied habitat around San Diego. Wherever coyotes roamed, numbers of their smaller prey fell—either because the animals moved away or they ended up as coyote snacks.

Some of the striking statistics from the study, which was published in the journal *Nature*, concerned cats: Every 100 homes bordering the study's habitat fragments of about 50 acres supported an average of 35 outdoor cats. Every year each of those cats brings home an average of 15 birds, 17 lizards and 24 rodents. That means the 100 homes account for 525 known bird deaths from cats every year—and that only includes the birds the felines actually bring home.

FOSTERING CHICKS WORKS!

In El Dorado County, **Wendy Guglieri** has taken over the trail at Camino Heights Golf Course. The course is surrounded by homes and many of the residents feed coarse bird feed that has attracted a large House Sparrow population.

County Coordinator **Hatch Graham** received an urgent call from Wendy. House Sparrows had scalped a Bluebird hen in one of her boxes, 3 chicks were dead and 2 on the ground barely alive. Did he know of any nests of a similar age? He suggested **Bill & Francie Singley**, who coincidentally live only a half-mile from Wendy in Rescue, CA.

They placed the 2 orphans with a clutch of 5—possibly 2 days older. About 3 days later, Hatch arrived to band the Singley's birds. All 7 of the chicks were healthy. In trying to differentiate the foster kids, Hatch found 3 slightly smaller than the rest but couldn't consider them runts. Bill reports all fledged successfully.

And in Orange County, **Linda Violett** reported on the BLUEBIRD-L list about 5 foster chicks—2 native, 3 rescued which she fostered into her boxes.

Later she wrote: "Remember the rescues which were placed in foster nests? The nest which received 3 foster babies fledged yesterday. Spotted only three being fed in nearby trees yesterday after laying down a handful of mealworms.

"But today, they were gathering closely around the hanging nestbox. Three babies huddled together on the tree limb above the nestbox, another sitting directly on the nestbox roof and parents taking mealworms to yet another tree.

"This means all five chicks survived their first critical 24 hours after the fledge. This made all the extra efforts of the rescue worthwhile."

Another case from Kevin Putman: "I visited a box that was due to band; found a House Sparrow nest instead. Pulling the nest out, I felt weight, peeled the sparrow nest off the bluebird nest below and found three bluebird chicks upside down, kicking their feet, cold as ice—stiff, next to dead.

My wife and I have been nursing them back to health with prodigious quantities of mealworms (200 yesterday!). Today I found a perfect foster nest that I will put them in tomorrow. The cold killed 3 of 5 in that nest. Ma bluebird will think they were resurrected tomorrow.

MONITORING NESTBOXES ON GOLF COURSES CAN BE DANGEROUS.

Walter Sakai is professor of biology at Santa Monica College. He is a master bander and a nestbox monitor, as well as a research associate in entomology. He sends this warning:

"I monitor monarch butterfly overwintering sites, and monarchs occasionally use the trees on golf courses to roost. I have had to do a lot of talking to access sites because the GC is fearful of injury from the hooks and slices of weekend duffers. And they take this danger quite seriously. Unlike Tiger Woods, these weekend golfers seem to be aiming for the trees. I have heard "stories" about being beaned, concussions, broken noses, losing an eye, etc. I have even been warned where NOT to park my car so I will not have a golf ball through my window!

"In fact, if I were a bluebird, I would think twice about nesting where errant fairway drives come whistling at you from all directions.

"The one redeeming fact about GC sites may be that they are less prone to vandalism compared to parks, and I bet there are fewer predators."

Sundays in the park with Fernando

by Gale Hale, Riverside, CA.

I recently became aware of how special was the gift that my brother and sister-in-law, **Keith & Anne Hager**, gave me several years ago when I was ill. I think now that it had a subliminal effect on my life as I had not consciously thought about it since I received it. It was a handblown glass Bluebird with this wish:

It is traditional that a bluebird close by will bless you with good health and happiness. I hope this is true. I wish it for you.

When I committed to monitor a Bluebird Trail in Featherly Park in north Orange County in the spring of 1999, I asked my friend **Fernando Ramirez** to help me. I thought he would enjoy it as we had been "birdwatching," I in my backyard and he in the orchards and I knew he respected nature as I do.

Over the course of the next 5 months, during our trips to the park, Fernando and I fell in love. We spent most of the day in the park, cooking over an open fire, eating campfire feasts, observing a variety of birds, and enjoying my grandsons.

This is the second season that Fernando, my grandsons, **Luke & Jared Hales**, and I have monitored 16 boxes in the wilderness park. This year, after becoming more confident about the proper placement of the boxes, we moved several boxes that had been nonproductive last year. Our judgment was validated by having nests in the newly placed boxes almost immediately. As Fernando said, "We like the box there, but we're not the birds." We're beginning to think like bluebirds though.

The season started more slowly this year because we took the boxes in for the winter and did not put them out until late March. Last year the boxes were left in the trees and there were already nests and eggs in some boxes by the last week in March. We have decided to risk damage by woodpeckers and not to take the boxes in this year so they will be available for the "early birds."

We've had one more nest during March and April this year than last year and less invasion by wrens than last year, but more instances in which eggs were dumped out of the boxes onto the ground. We seem to have had more unhatched eggs and fewer eggs in the nest this year. We've fledged 54 blues to date and 6 Ash-throated flycatchers and expect 2-3 pairs to start another brood. Last year we fledged 64 Blues and 4 ATFL by the end of the season. So the season is different this year but yet the same.

Last year we observed fledglings helping the parental pair feed subsequent broods. This was noted in pairs with a high volume of nests and eggs and babies. Last year we had one pair who fledged three broods of 7! The fledglings also dived at us aggressively as some parents do when we take down the boxes. This year we noticed something else we thought unusual. During a very busy day in the park, at least 30 birds, 3-4 pairs and 15+ fledglings, were gathered in a quiet corner in a few trees and on the ground.

Thus far we have had no deaths of live birds in the nest. We have been cognizant of facing boxes away from East-West orientations to avoid direct sunlight and to try to place in shady locations although with good sightlines to grassy lawns. It must be working!

We have had many opportunities to educate adults and children alike about Western Bluebirds and their life cycles and what the **Bluebird Recovery Program** is doing to increase their numbers. The park where we monitor has many large youth camping groups in the summer and many families and retirees. The look of wonder on the faces of both adults and children when we show them nests, eggs, or babies; whatever is inside the box at the time, and point out the adults and fledglings nearby, is worth the time and energy expended. Almost no one has ever seen inside a birdhouse.

People are curious when they see us walking the park with the extension pole and bringing down the boxes and looking inside. We have the added advantage that Fernando, is bilingual and able to converse fluently in Spanish.

I'm glad I've kept the bluebirds close by.

VARIABLE YEAR...

—continued from page 2

From the central valley, **Kevin Putman**, Sutter/Yuba, reported in mid-May: "The recent strange weather has been very rough on quite a few nests; chicks between 6-12 days seem most vulnerable, as in past. Several nests were wiped out completely, others were reduced. Yesterday, I opened a box and found a hen standing at the door on top of 4 dead chicks while the two surviving ones were on the opposite side of the box. I believe she was busy trying to move the dead ones and she was so preoccupied that she didn't notice that the wall slowly became open air as I opened the box. So, I took the opportunity to band her.

"The hen needs to get those cold dead chicks out of the nest cup since they will sap the heat from the survivors if they are touching. I think the hens instinctively know this; they try to get them out of the box but failing that they put them on the rim of the nest, if possible.

"Last weekend's rain killed some, but this weeks cold followed up and killed more. I can't believe this weather: it was in the mid-30s here a couple of mornings ago."

No rain in the South—too much in the North and too cold—then a heat wave in July—a variable year, indeed.

SANTA CLARA CO MONITORS TO MEET

Garth Harwood, County Coordinator for Santa Clara County, has announced that **Carol Hankermeyer** is planning a monitor celebration for sometime in August or September. Most of the monitors in Santa Clara Co are members of the local Audubon Chapter and share duties on some of the larger trails in the County.

CHANCE'S ELEVATOR POLE WITH STANDARD NESTBOX

modified by H. Graham

Bill of Material:

1 5' section ½" EMT pipe
1 4½' section ¾" EMT pipe
1 16d nail
1 standard side-opening nestbox for Western Bluebirds (NABS after Zeleny). Back extension unnecessary.
2 1" deck screws
2 10" pieces black tie wire (baling wire)

Instructions:

1. Affix ½" pipe to back of nestbox with the 2 deck screws (predrill holes in the pipe).
2. Firmly attach ¾" pipe to studded-T fencepost (or wooden post) with wire.
3. Insert smaller pipe into larger pipe about 3".
4. Orient nestbox in proper direction (away from prevailing storms).
5. Drill holes through both pipes with 3/8" bit.
6. Lock two pipes in place with 16d nail.
7. Mark pipes to easily locate matching holes.

To Operate:

1. Remove nail.
2. Slide upper pipe down into lower pipe.
3. Open side-opening box, inspect nest, eggs, & chicks.
4. Close box; record.
5. Raise upper pipe and box until marks are visible.
6. Lock pipes in place with nail.

Eliminate losses with elevated boxes

Most predators gain access to boxes by climbing the fence or tree the box is attached to. Mounting on a 5 ft piece of electrical conduit still allows cats to leap on top of the box.

Dick Purvis's box lifter which lets you hang a box from a high limb works well but not everyone has a tree in a suitable place. The elevator pole (above) is an alternative that can be attached to a fence in the open, or placed free-standing. It works.

BLUEBIRDER FLOCK LANDS IN ILLINOIS

The 24th Annual Convention of the **North American Bluebird Society—NABS**—was held June 22-25 in Galena, Jo Daviess County, IL. Total reported registration included 336 individuals from continental US and Canada. Featured speakers were **Don & Lillian Stokes**, nationally acclaimed film makers, writers and publishers on birds and wildlife.

Don Yoder reports, "the combination of good weather, detailed organization of numerous volunteers, and an accommodating locale produced an enjoyable event."

Six Californians were in attendance: **Dave Cook**, Campbell; **Howard & Jean Rathlesberger**, Woodside; **Ann Morris**, Garden Grove; and **Sue & Don Yoder**, Walnut Creek.

A now-standing practice of scheduling a meeting of **NABS**-affiliated state bluebird groups prevailed and included representatives of some 25 organizations. Discussion topics included: Interchange of newsletters among groups and the affirmation of free sharing of contents thereof unless specifically delimited, and with credit being given to the source; a possible joint membership fee plan whereby one fee would afford membership in both the respective State Affiliate (such as **CBRP**) and **NABS**; compilation in national nestbox results of figures submitted by **NABS** members (see **NABS goes electronic**).

WARREN BUTTON, THANKS

We continue to seek to honor box builders who contibute large numbers of boxes for general distribution and are a valuable resource for birders in their area. We want to add **Warren Button**, Walnut Creek, who has built several hundred boxes which have been installed in Contra Costa and other nearby counties.

NABS goes electronic

ENTER ANNUAL REPORT ON THE INTERNET

If you are a member of the **North American Bluebird Society**, you have already received your copy of the *Bluebird* and you know that **NABS** now prefers your annual report entered at its website.

In years past, **California Bluebird Recovery Program** compiled its annual report and sent copies to **NABS**. These were compiled and published in *Bluebird* (formerly *Sialia*).

Bluebird may continue to excerpt from our annual reports but the only records compiled will be those entered at the **NABS** website:

www.bluebirdtrails.org/tbt

In order to submit your report, you must first be a member and enter your membership number and password. Secondly, if you have fewer than 5 nestboxes, you will not be registered.

Once on the site you enter information about each of your boxes. After each nesting attempt, you enter useful information about numbers and dates of eggs, nestlings, and fledgings. These are all compiled and a summary is available for printout.

If you are a **NABS** member and do not have access to a computer (at a library, friend's house, or at home), you may write to **NABS** and request a report form. You may submit this even if you have fewer than 5 boxes. Your mailed report, however, will not be entered into the computer.

To date, on the website, there are only 12 people registered from California representing 444 nestboxes.

If your report to **NABS** is there, *and* is complete, please inform **CBRP** and we will extract it for our report. However, we'd rather have a paper copy.

CBRP still wants your report!

With the announcement that **NABS** is only compiling its report by electronic means, doesn't want trails of less than 5 boxes, and will accept reports from members only, **CBRP** Program Director **Don Yoder** reminds us that we welcome reports from *anyone* with a nestbox in California.

A single nestbox in a backyard, properly tended, is still "effective conservation." We want your report, member or not, though we would appreciate a membership/donation of $5 to defray newsletter costs.

Now is a good time to fill out the report. Take it to your County Coordinator or send it to **CBRP**. The address is on the form.

We still encourage you to all become members of **NABS**, as well. For $15 you get much more than the opportunity to report your nestboxes on the internet.

A note to those of you interested in compiling statistics. **Hatch Graham** has been doing the annual report for several years. The last printed, while comprehensive, was perhaps more detailed than needed for print.

We need a small committee (3 to 5) to compile the annual reports, determine the best format for publication (summary, backup booklet, etc.), analysis methods, report forms, and so forth.

If you are interested in chairing or assisting in this committee, please email Don Yoder with a copy to Hatch Graham. It is desirable that you have equipment to receive reports by fax.

***

The first Annual Report has already arrived from **Ken Morrison** of Jackson, Amador Co.

Thanks, Ken.

California Bluebird Recovery Program **ANNUAL REPORT**

Name:____ **Year:**___________

Mailing Address: ____

Physical Location of Trail (or Name):____

Phone: __________**Email:** _________________________**County:**____________
No. Boxes: 1-Standard:___ ; 2-Larger than Std:___ ; 3-Smaller than Std:___ ; Total:_____
No. Box pairs (2 boxes within 15 feet of each other)**:** ____.

		1st Brood	2nd Brood	3d Brood	Total
Species:	No. Nests with 1 or more eggs:				
	No. Nests hatching 1 or more:				
Box Type No.:	No. Nests fledging 1 or more:				
Banding	No. Eggs laid:				
Adults: Chicks:	No. Chicks hatched:				
	No. Chicks fledged:				
Species:	No. Nests with 1 or more eggs:				
	No. Nests hatching 1 or more:				
Box Type No.:	No. Nests fledging 1 or more:				
Banding	No. Eggs laid:				
Adults: Chicks:	No. Chicks hatched:				
	No. Chicks fledged:				
Species:	No. Nests with 1 or more eggs:				
	No. Nests hatching 1 or more:				
Box Type No.:	No. Nests fledging 1 or more:				
Banding	No. Eggs laid:				
Adults: Chicks:	No. Chicks hatched:				
	No. Chicks fledged:				
Species:	No. Nests with 1 or more eggs:				
	No. Nests hatching 1 or more:				
Box Type No.:	No. Nests fledging 1 or more:				
Banding	No. Eggs laid:				
Adults: Chicks:	No. Chicks hatched:				
	No. Chicks fledged:				
Species:	No. Nests with 1 or more eggs:				
	No. Nests hatching 1 or more:				
Box Type No.:	No. Nests fledging 1 or more:				
Banding	No. Eggs laid:				
Adults: Chicks:	No. Chicks hatched:				
	No. Chicks fledged:				
Species:	No. Nests with 1 or more eggs:				
	No. Nests hatching 1 or more:				
Box Type No.:	No. Nests fledging 1 or more:				
Banding	No. Eggs laid:				
Adults: Chicks:	No. Chicks hatched:				
	No. Chicks fledged:				
Species:	No. Nests with 1 or more eggs:				
	No. Nests hatching 1 or more:				
Box Type No.:	No. Nests fledging 1 or more:				
Banding	No. Eggs laid:				
Adults: Chicks:	No. Chicks hatched:				
	No. Chicks fledged:				
Species:	No. Nests with 1 or more eggs:				
	No. Nests hatching 1 or more:				
Box Type No.:	No. Nests fledging 1 or more:				
Banding	No. Eggs laid:				
Adults: Chicks:	No. Chicks hatched:				
	No. Chicks fledged:				

California Bluebird Recovery Program
ANNUAL REPORT
INSTRUCTIONS

Dear Bluebirder:

Please submit your annual report as soon as you can after the close of the nesting season. The information needed is easily obtainable by tabulating your monitoring records from Form 1— Individual Nestbox Record. If you have trails in more than one County, please use a separate form for each. If you find this form confusing, do the best you can or call your County Coordinator for help. **At the least, fill in the unshaded portions.**

Top of form: Enter your name and the year. If your address is a PO Box or is different from the location of your boxes, please indicate the physical location of your trail as well. Crossroads or landmarks are okay. Tell us about your boxes: **1-Standard** is a NABS Standard or Gilbertson PVC box with a 1½" or 9/16" round hole, a Peterson box, or a Kentucky Slotbox with a 1 3/8" slot. **2-Larger than Std** is a box with a larger hole and, usually, a larger floor than the standard box. Flicker boxes typically have a 2" hole, kestrel boxes have a 3" hole, and Common Barn Owls need a 6" hole. **3-Smaller than Std** is a box with a hole smaller than 1 3/8" and usually has smaller floor and side dimensions. Chickadee boxes are typically 1¼" and wrens are even smaller. Indicate the number of pairs: 2 boxes that are within 15 feet of each other.

First Column: Use a major 6-line row for each **Species**. If you had 5 bluebird nests, they all go on one block. There is room to record 8 species. If you had more than 8 species, please attach another form for the additional species. Show the **Box Type** (1, 2, or 3--see above) used for each species. If you were able to call a bander and you had any **Banding**, indicate the number banded by adults and chicks in this column.

Second Column: This indicates the essential information that will help us analyze effort, fertility, survival, and breeding success; e.g., the No. chicks hatched compared to the No. chicks fledged gives some indication of weather, predation, and perhaps, nestbox placement and safety. Make entries in the brood columns.

Third, Fourth, & Fifth Columns: Enter information for each brood. Many times you will not have second or third broods; in fact, third broods are quite rare unless they are replacements for earlier broods which were aborted. If you have reason to believe a pair moved to a second box for a second brood, so enter.

Sixth Column: Totals, of course, are most important. Your grand total for all species will be calculated when reports are compiled.

This Page: Please give us any observations that you would like to share with other **CBRP**ers in *BLUEBIRDS FLY!* Attach extra sheets if you need more room.

NOTES FROM THE FIELD

Return to: your County Coordinator or mail to **CBRP, 2021 Ptarmigan Dr No.1, Walnut Creek, CA 94595**

GETTING THE LOWDOWN ON BLOWFLIES

Cornell's Nest Box Network (now called **The Birdhouse Network**) conducted a study of paired nestboxes in which old nests were left in place in one box while the other was cleaned out.

In an article in *Birdscope*, **Tracey Kast** reported that the study in 1998-1999 showed no difference in blowfly infestation between cleaned and uncleaned nestboxes. (Kast, T.L.1999. *Birds and Blow Flies, Birdscope v.13 no.4:13-14*)

Your editor fears we may have skewed the results. We had 20 paired boxes in the study. I have never seen a blowfly maggot on any of the birds fledged from my 70-box trail, although I've seen a number in other locations while banding. Most of my reports to Cornell indicated no evidence of blowflies.

Subsequently, I sent 24 nests to **Terry Whitworth**, an entomologist studying Protocalliphora, the blowflies which parasitize birds. Terry's report back to me was that all but 3 were infested with blowflies! And I had thought my boxes were blowfly-free. Obviously, this citizen-scientist lacked the skills to make proper identification and thus my reports to Cornell were in error.

I now believe part of my error was in expecting to see the larvae attached to the legs and thighs of my nestlings. I know now that the larvae (maggots) feed mainly at night and migrate down into the nest in the daytime. I now am noticing the tiny lesions on the legs of some of my nestlings.

Furthermore, the life cycle of the Calliphorids is such that they may not be too numerous or large when the nestlings are small. Thus, they may not usually cause mortality unless the nestling is otherwise weakened by too much heat or cold. A 15-day old nestling is usually pretty strong and it may take that long for the larvae to develop.

Terry Whitworth writes:

"Protocalliphora are calliphorids (blowflies) and like most other flies have an egg, larva, and adult stage. Fly eggs are laid in nests or on nestlings shortly after hatching. Larval development time varies depending on the species of Protocalliphora, but takes 5 to 15 days, after which they pupate. Pupal development takes about 7 to 10 days, after which adults emerge. Protocalliphora can be very hard to identify to species and we prefer to have both pupae and adults, if possible. The best way to do this is to collect the nest shortly after the nestlings fledge."

Whitworth is still interested in receiving nests. Here are his guidelines.

"Nests are needed from a variety of birds including cavity nesters, such as swallows, bluebirds, and chickadees, and open-cup nesters, such as juncos and warblers. Nests not commonly monitored or easily found are especially needed.

"Collect only inactive, used nests, as soon after fledging as possible.

"It is also important that the nest was used by nestlings for most or all of the nestling period so that bird blowflies might also be present. Incomplete nests and nests abandoned early in the nesting attempt will not be helpful.

"It is **not** necessary for you to be able to identify signs of blowflies in the nest. Each nest will be checked for blowflies. Therefore, you should send nests regardless of whether or not you think there are blowflies present."

The 2001 North American Bluebird Society Summer Conference will be held in Columbus, Ohio, June 21-24. Events will be at the Airport Radisson Hotel in Columbus. For more information contact Doug LeVasseur by email at emdlev@clover.net

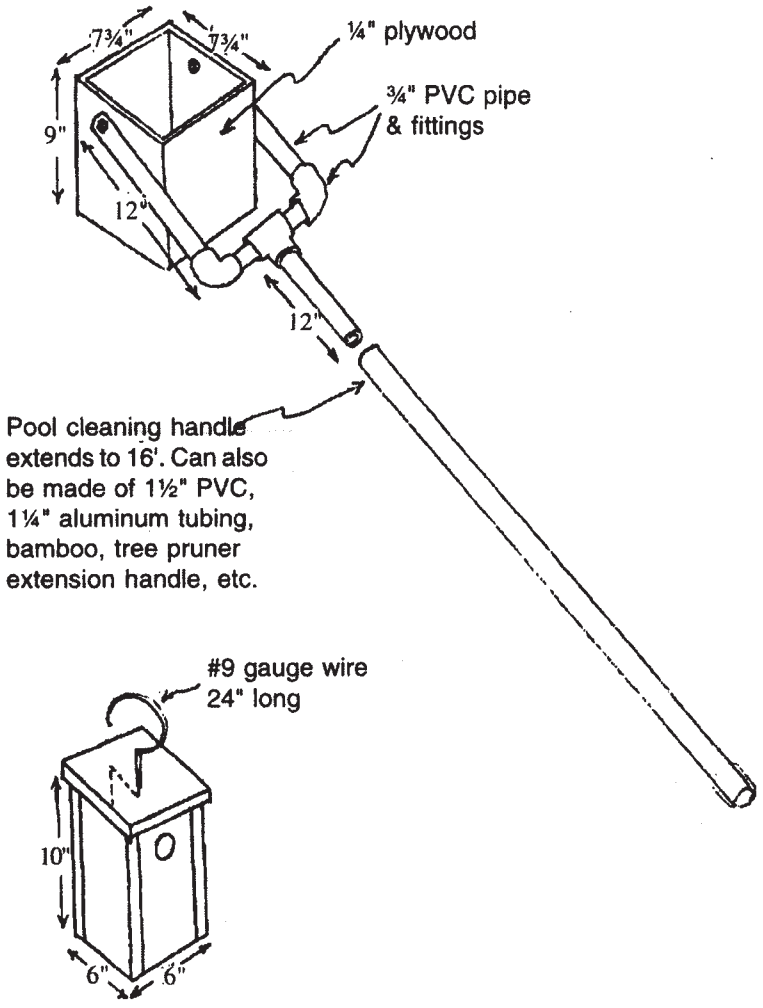
GUIDELINES FOR COLLECTING BIRD NESTS FOR PROTOCALLIPHORA

- I like to use 1-gallon zip lock bags and put each nest in a separate bag.
- Write on the bag: nest number, bird species, and any other relevant data.
- You can also write only the nest number on the bag and give me a separate sheet with other data.
- Please include state, county and the nearest town where the nest was collected.
- Small insects like mites and fleas will crawl from poorly sealed bags, so make sure they are closed tightly. If there are lots of bugs, put them in a big garbage bag, and seal it also.
- If you decide to include a note in each bag, write in pencil or waterproof ink or data may be lost in a wet bag.
- Do not put the bag in the freezer, since this will kill larvae and pupae.
- Keep bags you are saving to send in a cool, dry location, out of the sun.
- Nests that failed early will not be parasitized so please don't send those.
- If you keep the bags for a while to send several at once, adult flies will emerge in the bag. You will hear them buzzing, but don't worry as long as they can't escape.
- When shipping bags, don't worry about padding nests when you send them. The nests provide their own padding. If you have many nests to send and shipping costs are a concern, contact me for help with your shipping costs.

I am interested in any nests you find, even if nestlings have long since fledged, because pupal cases will remain in infested nests and I can ID them.

Terry Whitworth, PhD
Entomologist
3707 96th St East
Tacoma, WA 98446
Phone 253-531-7925
email: WPCTWBUG@aol.com

PURVIS'S HANGING NESTBOX & BOX LIFTER



HANGING NESTBOX

ORANGE COUNTY MONITORS MEET

On April 1, 2000, the **Bluebird Monitors of Orange County** held a potluck on the grounds of the First Congregational Church in Anaheim.

The meeting was the first in several years and was organized by **Gale Hale** and **Dick Purvis**, in order to have the opportunity to meet the other monitors and share information and experiences.

It was well attended by approximately 30-35 people including some new recruits as guests. Round tables decorated with blooming orchids, African violets, and Amaryllis, bird houses, ceramic rabbits, colored eggs, and crates of lemons were set under giant avocado trees.

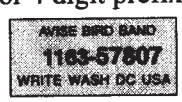
The program consisted of an impressive lifter demonstration by Dick Purvis, using an extension pole, a technique he has developed enabling the boxes to be placed higher in the trees for greater safety. Dick also treated the attendees to his slide show after lunch. During this part of the program, the monitors introduced themselves and shared anecdotal experiences. Gale Hall was especially proud of her grandsons **Jared** and **Luke**, ages 8 and 6, who spoke eloquently and fearlessly to the group of their experiences and shared what they had learned in the past year. They have become very knowledgable and love to go with Gale and Fernando to "do the birds" every week and see what surprises they find in the boxes.

Dick Purvis says the following new monitors this year, **Darla Priest, Joe Lapoint, Lara Lagos, Lorri Mushok, Christine Mukai, Susan Bulger**, and **Debbie Noyes**, are all doing a great job! "I would like to express a special note of thanks to **Sharon O'Brien** who was doing a marvelous job but had to quit because of a serious health problem."

BE ON THE LOOKOUT FOR BANDED BIRDS THEY REPRESENT IMPORTANT INFORMATION

With more and more birds being banded, it's possible you will come upon a banded bird that has died in a box in the winter; has flown into a window, or has been hit by a car. You may actually be able to pick a hen up in the late stages of incubation or when she is brooding newborn chicks.

Carefully record the band number. It will consist of a 3 or 4 digit prefix with a larger 5 digit suffix, such as:



Report the band number to your nearest bird bander or call it in. The USGS-Bird Banding Lab has established a toll-free number: **1-800-327-BAND** (2263). You keep the band. You'll be sent a certificate and information about the bird—when and where it was banded, its age, and the bander's name.

Banding dispersal studies showing results

Bird banding has many purposes. With regard to cavity nesting birds, it can provide information on survival, movements, longevity, and can be used as a comparison with birds having and using natural cavities. In urban situations, or in areas where natural populations have been depleted, it can show whether or not manmade cavities (nestboxes) can help to reestablish habitat.

Many birders wonder if the same bird is returning to their nestbox year after year. This is generally called site fidelity or the fancy term philopatry.

Almost the only way to positively verify whether or not the bird is the same one is through banding.

In order to gain enough data to have returns or recaptures, many hundreds of birds must be banded. Banding studies have established that only 20% of Tree Swallow nestlings survive their first year. And the subsequent mortality is approximately 50% per year. On that basis if 100 swallow chicks are banded, only 20 will be back the next year and only 10 of them will be hens. And they must be captured as adults to read their bands.

This is why banders want to know when your birds are incubating their eggs, what hatching date you estimate, so they can visit the box to capture the hen when she is fully committed to her eggs or brooding her newborns.

To carry the example further: if the hens aren't captured the first year, there will only be 5 of them the second year, 2 or 3 the third year, 1 or 2 the fourth, possibly 1 the fifth. This is why a 6 year-old bird is rare and anything older remarkable.

To make the situation worse, not all birds have site fidelity. Many young birds may seek a new area. If there is no bander or skillful monitor to read the band, the record is lost.

This is why our cavity nester dispersal study continues to seek subpermittees to band in areas of nestbox concentrations.

Walter Sakai is a master bander from Santa Monica in LA Co. He has been banding for a number of years and monitors and bands in nestbox trails in the San Fernando Valley in Granada Hills and Sylmar, and in Riverside Co in the San Jacinto Mtns at the UC James Reserve and in Garner Valley. Walt bands many other birds besides cavity nesters. He's a leading bander of Wren-tits, California Thrashers, and other chaparral birds.

Steve Simmons, master bander from Merced, is California's leading bander of Wood Ducks and Barn Owls. He is wood shop instructor at Merced High. On retirement, he intends to establish a large bluebird trail on cattle range in Merced Co.

In Ventura Co, our County Coordinator, **Jan Wasserman**, is California's leading bander of Tree Swallows, surpassed in the West only by banders in Alberta and Colorado. Jan's habitat along the Santa Clara River and around gravel pits and sewage ponds doesn't lend itself to Western Bluebirds but her reestablishment of the swallows in Ventura has been a conservation milestone.

Although a master bander for over 50 years, **Hatch Graham** doesn't claim the experience of some of the others. For many years he was inactive, but he has been banding again in earnest since establishing bluebird trails in El Dorado, Alpine, and Amador Counties in 1995. His total for Ash-throated Flycatchers is usually among the leaders in the West.

Records kept by the Western Bird Banding Association list numbers by the master banders and don't credit the banding by subpermittees—those working under the direction of the master permittees.

Steve's subs include **Bob Cherny**, Sacramento Co; **Doug Fister**, Merced; **Jody Gallaway**, Butte Co; **Jim Barker**, San Joaquin/Calaveras. Of his team, Steve banded nearly all of the Barn Owls and over half of the rest. By 7/16, they had as a group, banded:

36 American Kestrel
566 Barn Owl
23 Western Screech Owl
247 Wood Duck
872 TOTAL

Walt only reported his cavity-nesters and mentioned that he had neck surgery and missed the second half of the season.

37 House Wren
10 Oak Titmouse
5 Mountain Chickadee
149 Western Bluebird
201 TOTAL

Jan's subs are **Deb Burns, Ginnie Bottorff, Carolyn Wingate, Jim Wingate, Linda O'Neill,** and **Christine Mukai**. Jan apologized late in the season for not banding 1000 swallows. Her total:

983 Tree Swallow
983 TOTAL

Hatch reports his subs include **Dee Warenycia**, Placer Co; **Kevin Putman**, Sutter/Yuba; **Lee Franks & Howard Rathlesberger**, San Mateo; **Janet King**, Mendocino; and **Susan Yasuda**, El Dorado. Hatch, by enlisting monitors with productive trails to call him, then by devoting at least a day per week to visiting their boxes, has banded 1222 birds so far this season. The totals to date for him and his team are:

70 Ash-throated Flycatcher
6 Bewick's Wren
56 Chestnut-backed Chickadee
12 House Wren
19 Mountain Bluebird
20 Mountain Chickadee
4 Nuttall's Woodpecker
209 Oak Titmouse
366 Tree Swallow
109 Violet-green Swallow
66 White-breasted Nuthatch
1656 Western Bluebird
2593

Please be aware; there are thousands of banded birds out there.

Controlling the Male House Sparrow

by Don Grussing

In preparing this issue, the editors asked County Coordinators for suggestions. **Lesa McDonald-Chan**, *Placer Co, recommended we remind monitors of the evils of House Sparrows. Throughout this issue you will read of House Sparrows killing other cavity nesters. This article from 1983 is àpropo today.*

There is a quirk in the male House Sparrow's behavior. Bird lovers should be aware of it for it is this behavior that allows the sparrow to compete so successfully with other cavity nesting birds. This quirk, which belongs to the male alone, is the fact that the pairbond (whatever it is that ties the male to the female) is weak. The bond that seems to be stronger is his attachment to a chosen nesting site. If you'll forgive the anthropomorphism, the sparrow falls in love with his house, not his mate.

When one understands that, one also realizes that the commonly recommended means of sparrow control (removing the nest and eggs) will not deter the male. The lack of success in using this method often frustrates people who are trying to attract bluebirds and other cavity nesting species.

This bonding behavior is not usually typical of native bird species. If a bluebird or a chickadee nest containing eggs is disturbed or vandalized, the pair usually leaves the area. The same seems to be true for Tree Swallows and other cavity nesting species, though I have not witnessed their nest destruction and subsequent behavior often.

Once I saw a chickadee's nest destroyed by mice. I evicted the mice and cleaned out the remaining material hoping the chickadees would rebuild. They left. I also had occasion to watch the last moments of bluebird nest destruction by a red squirrel. I cleaned the nest out of the box, broken eggs and all, but the bluebirds did not return.

Conversely, I've had male bluebirds adopt my yard and surrounding land as their territory and protect it vigorously until they attracted a female, but if the male showed the female the available boxes and she did not accept any, the pair moved on, seemingly without a moment's remorse.

Compare that action to that of the male House Sparrow. Once he has adopted a box, it is difficult to deter him. If the nest is destroyed while it is being constructed, he will continue to rebuild it (for he is the one who does much of the work). If the nesting material is removed from the box daily the female may leave, though often she will stay and sometimes lay her eggs in an unfinished nest; however, once the eggs are laid and the nest and eggs then removed, the female will desert the site. Unfortunately, her leaving does not free the nesting box for the native species.

The male House Sparrow will continue to treat the box as his territory. He may continue to haul in nesting material. Although he may stop nest building except for an occasional piece of grass or straw, he will still sit on or near the box and sing his "chic-rup" song to attempt to attract a mate. He will also defend the box against competing species and will defend other boxes in the vicinity. Most often this means he will discourage bluebirds or Tree Swallows from attempting to build a nest. If these species are successful in nest building, the male House Sparrow will often enter the nesting box and drop the eggs to the ground, destroy them in the nest, or even kill fledglings or brooding adults.

Sparrow control efforts must be expanded from the obstruction of the nest building phase if you want to provide nesting opportunities for bluebirds and other native cavity nesting species. That can mean trapping the male sparrow in the box or, alternatively, making life so difficult for him that he will leave.

Mouse traps placed in or near a box will sometimes be successful in causing sparrows to vacate an area. Somehow sparrows are able to trip a mouse trap without being seriously injured, but it does frighten them. (Mouse traps should only be used when a box can be watched so that other birds are not harmed.)

I've seen male House Sparrows frightened so badly by mouse traps that they would not enter a box as long as the sprung trap remained inside. In one instance, the bird eventually moved on and a wren built a nest over the trap and successfully raised a brood. More often, though, a sparrow still will retain his bond with the box. Without ever entering it (because of the trap) he will sit on the roof or on a nearby perch, attract a mate and have her do the nest building.

Using this method of control means you've been able to frighten a sparrow as well as slow the reproductive process, but it still does not free the box for the more desirable species.

One of the best ways to solve this problem is to eliminate the male sparrow as soon as he begins showing signs of being bonded to a nesting box. This requires an aggressive control program. Where it is legal, shooting the male sparrow is one possibility. (It is legal to kill House Sparrows, discharging firearms may not be.) Trapping is perhaps the safest control method. Use a trap which retains the male sparrow inside the box so that it can be captured and removed to an area many miles away: The **Huber** trap which has been described in this publication (*Sialia*

continued next page

Controlling *conclusion*

4:20) is one means of capturing territorial male sparrows.

Sometimes baited sparrow traps will enable you to catch the targeted male. The Trio sparrow trap seems to work a bit better for this purpose than the Havahart trap because it can be more easily pole mounted. It is harder to attract sparrows to baited traps during the nesting season than during the winter because during warmer weather their energy requirements are low and food is abundant.

A year-round program of sparrow control to regulate local populations will reduce the likelihood that any sparrow will fall in love with your bluebird box. One man in Indiana started a sparrow control program 10 years ago and trapped over 1,200 sparrows the first year. He reported that in 1982 he was able to catch only 14! Meanwhile, his martin colonies are full and a small bluebird trail is doing well.

The author feels that trapped sparrows should be destroyed since moving them only causes problems elsewhere. However, if you cannot do that, you should take the birds a minimum of 10 miles (25 miles would be better) from the box to which they are attracted before releasing them. Remember, a sparrow flies fast enough so that if he gets his bearings he can be back at the beloved box almost as quickly as you can if you take him fewer than 10 miles.

Whether you have a single nesting box in your yard or hundreds of boxes on a trail, sparrow control can mean an enormous difference in your success in attracting bluebirds and other native cavity nesting species. Don't let male House Sparrows usurp your nesting boxes.

***

Reprinted from Sialia, spring 1983

Sparrow problems at the nursery

Susan Yasuda is a wildlife biologist for the Eldorado National Forest and Cavity Dependent Species Program Coordinator for all the National Forests in California. She has two major nestbox trails in mid-elevations of the Sierra and is establishing a trail for Flammulated Owls on the higher timbered ridges.

She writes: "We had a variety of problems at the [Placerville Forest Service tree] nursery trail this summer. The late winter storm with the freezing temperatures wiped out a bunch of our nests with eggs and young. However, the birds tried again and a few originals managed to pull off young.

Next came the House Sparrows which were really bad. Normally we have two or three nesting attempts and that's all they do. This year they were on all parts of the trail, weaving bluebird feathers into their nest attempts, building on top of bluebird nests with eggs and I'm not sure if they were responsible for some of the dead adults we found.

One nest (second clutch) finally gave us some white bluebird eggs on the trail along with the usual blue. When we came to check a few days later, a house sparrow had built on top of it. We eliminate the house sparrow nests as we find them but if this happens next year, we may have to start trapping house sparrows.

Still have some eggs and new nests [in mid-July] but haven't seen the bluebirds this week and last though there's sign of activity in the boxes. Could be because a family of kestrels has taken up foraging in the area these last two weeks.

Now the interesting part for you—banded a male bluebird on 5/19/00 along with its nest mates. This nest had very attentive parents. The young were banded in box 11. Last Friday, I went out to do cleanup and check up on which boxes still have activity. In box 13 (down the same fence row as 11), was a fledged male bluebird from box 11. Just dead a few days, as the maggots hadn't done much damage. Bird appeared in good condition otherwise and was lying at the base of the box, adjacent to the door, and under the opening. Not sure what he died from (no bleeding from the mouth, etc). Since the weather was warm the last few days he couldn't have been dead more than about 2-4 days based on the maggots so figure he survived for almost two months after fledging. He was just a few days from fledging when he was banded.

Our other trail had no activity. The titmouse must have found alternate housing as she brought her family around one day. Flammulated owl boxes still have no occupancy though it may take two years for them to take over so next summer hopefully they will be using them.

CBRP HONORED BY SUPPORT FROM NSCAR–CA

California Bluebird Recovery Program has just received a contribution of $500 from **California State Society–National Society of Children of the American Revolution.** This organization of young people, with headquarters in San Diego, CA, has been working for nearly a year to raise funds for support of the Bluebird Program in California.

We are most grateful for this direct support and congratulate the many participants for broadening their knowledge in their study of the "Jewels of Blue."

The program has been guided by the group's 1999 President, **Heather Casey**, Aptos, CA. We thank them all.

News from the bird banders

Earlier in this issue we told you of some of the accomplishments of our California bird banders but said nothing about their recaptures. Other banders have had significant returns and recaptures as well. Here are some results from *North American Bird Bander* v.5, no 1, Jan-Mar 2000:

Tree Swallow banded as a nestling (L-U) by **Grahame Booth** near Calgary, AB on 10 Jul 96 recaptured as Third Year-Female (TY-F) in nestbox near Three Hills, AB on 23 May 98, about 90 km from banding site.

Oak Titmouse banded as U-U(Unknown age or sex) by **Barbara Peck & Bob Yutzy** near Redding, CA on 26 Sep 87 recaptured there on 14 Nov 92. At least 5 years old.

House Wren banded as AHY-U (After Hatching Year, Unknown sex) by **Ross Dickson** in Calgary, AB on 21 July 92. Recaptured there on 5 Jul 98—at least 7 years old.

Western Bluebird banded as L-U by **Marcella Bishop** in western MT on 18 May 95. Found dead at Hamilton, MT on 1 Apr 96–at least 100 km from banding site.

Western Bluebird banded as L-F by **Elsie Eltzroth** near Corvallis, OR on 11 Apr 94. Recaptured while incubating at Chehalem Mtn, Portland, OR on 19 Jun 96, about 110 km N of banding site.

Mountain Bluebird. Several recaptures reported in Alberta and Minnesota at distances of 205 km, 205 km, 125 km, 870 km, 242 km, 800 km, and 105 km.

House Sparrow banded as HY-U by **Elliott McClure** at Camarillo, CA on 3 Jul 90. Recovered there on 25 Sep 97. At least 7 years old.

And here are some from direct communication with our own banders:

Western Bluebird banded 1999 as a nestling in Box 3, Cañada College in San Mateo by **Lee Franks** recaptured in Box 2 in 2000 about 100 yds away.

Western Bluebird banded as L-U 17 May 98 by **Dee Warenycia** at Woodcreek Golf Course found dead on 13 May 00 at Hewlett-Packard. 3 years old.

Western Bluebird banded 29 June 97 as L-M by **Hatch Graham** at Chaw'Se State Park found dead in nestbox where fledged on 23 April 2000. 3-4 years old (may have died before 1st of the year).

Western Bluebird banded 22 May 98 as AHY-F by **Hatch Graham** in nestbox near Jackson, CA recaptured incubating in nestbox as ASY-F near El Dorado, CA on 7 May 99, a distance of 34 km.

Western Bluebird banded 21 July 99 as L-U by **Hatch Graham** near Mt Aukum, CA recaptured as AHY-F incubating in nestbox near Somerset, CA, a distance of 4.7 km.

Tree Swallow banded at Dry Creek Bridge, Amador Co, on 26 May 99 as L-U, by **Hatch Graham**. Recaptured as SY-F incubating by **Doris Allison**, at 4 Bar A Ranch, Plymouth on 27 Jun 00, up Dry Creek about 6.3 km.

Tree Swallow banded at Saticoy Diversion Basin, Ventura Co, in 1993 as L-U by **Jan Wasserman**. Recaptured in box 20 ft away in 1994, and recaptured every year including 2000 in the same box. 7 years old.

Tree Swallow, an offspring of the above, banded as L-U by **Jan Wasserman** in 1995, recaptured 14 Jun 00 in nestbox at San Joaquin Marsh in Orange Co. by **Christine Mukai**. Approximately 150 km S.

Tree Swallow, banded as L-U by **Jan Wasserman** in 19 Jun 98 at Saticoy Diversion Basin, recaptured by **Peter Wetzel** 11 May 00 as TY-F brooding 4 chicks and 1 egg in nestbox in Santiago Hills Park, Orange Co.

HOW MANY BOXES?

—by Hatch Graham

When I asked my subpermittees for the totals to date and mentioned that I had over 1200 banded, **Howard Rathlesberger** responded, "We're amazed at your banding count—how many boxes does that cover?"

A good question. Let me explain. When, as County Coordinator in El Dorado and Amador Counties, I recruit monitors, I always tell them of my desire to band their birds. I ask them to let me know when eggs appear and we try to work out the estimated hatching date.

In addition to monitoring my major trail of 70 boxes, I devote every Friday (at least) each week for what I call my banding circuit. It's determined by who has called, the window of opportunity (chicks between 5 and 14 days, or hens in the last week of incubation or the 1st few days of brooding young. I try to lay out, like a paper route, the most expeditious way of getting to everyone. Usually, I settle on El Dorado one week and Amador the next. Necessarily, this means missing some who have called, which I always regret. When choices have to be made volume is the top priority. I have to choose the monitor with several nests over one with only one.

Most of my circuits are over 100 miles (thankfully, tax-deductible). I've been late for dinner on more than one Friday.

So, how many nestboxes? Let me tell you of the number banded, whose boxes, and how many birds. I hope this will be instructive, but, in any case, I want to acknowledge all of those monitors who have graciously given me access to their property, told me which boxes to check, and contributed to what I hope is a positive addition to scientific understanding of the cavity nesters in our area.

4/7-**Judy** & I check our 70-box trail on Hwy 124 near Dry Creek Bridge, Amador Co: 1 Oak Titmouse (OATI) hen incubating, 1 Western Bluebird

—see PRIMER next page

PRIMER: HOW TO BAND A THOUSAND BIRDS OR MORE: HAVE FRIENDS

—from page 16

(WEBL) hen.

4/18-Hwy 124: 1 WEBL hen.

4/19-Somerset: Grizzly Flat Rd, **Lee & Ed Jackson**, (3-box trail): 1 OATI hen; Sandridge Rd, **Carol Wilburn** (5-bx tr): 2 OATI hens; , Placerville, Greenstone Country: **Chantal Truscelli** (13-bx tr), 1 White-breasted Nuthatch (WBNU) hen; **Pam Harris & Ed Oliveras** (3-bx tr): 1 WEBL hen; **Jane & Tom Sartoris** (4-bx tr): 1 WEBL hen; **Candy Perisho** (5-bx tr): 1 WEBL hen; **Dick & Jan Day** (4-bx tr): 1 WEBL hen.

4/21- Somerset: **Jackson**'s: 1 WEBL hen; El Dorado, Sierra Vista: **Ray DiBasilio**, (30-bx tr) 7 WEBL hens; Placerville, Thompson Hill **Julie Ellis**, (6-bx tr) 1 (OATI) hen; Greenstone Country: **George & Jill Engelmann**, (8-bx tr) 1 WEBL hen; **Chantel Truscelli** (3-bx tr, home) 1 WEBL hen.

4/23: Pine Grove, Amador Co, **Chaw'Se Indian Grinding Rocks State Historical Pk**, (12-bx tr): 1 WBNU hen, 1 WEBL hen; Somerset, White Feather Way, **Gordon Poer**, (6-bx tr) 3 OATI hens.

4/26: Hwy124: 28 OATI chicks (4 bx), 2 TRES hens, 1 WEBL hen; Plymouth, Amador Co, Plymouth, **Doris & Bill Allison**'s 4-Bar-A Ranch (40-bx tr): 5 WEBL chicks, 1 hen.

4/28: Amador Co: Irish Hill, Ione, **Glenda Glass** (14-bx tr) 1 WEBL hen, 10 chicks (3 bx); Mt Echo Rd, Ione, **Dianne McCleery**, (8-bx tr) 11 WEBL chicks, 2 hens, (4 bx); Sutter Hill, **Joyce Theios**, (5-bx tr) 5 WEBL chicks; Buena Vista, **Sharon May & Mary Lambert** (6-bx tr) 1 Tree Swallow (TRES) hen, House Sparrow problem; Lake Amador, **Isla Exline** (10-bx tr) 2 WEBL hens, 14 chicks (6 bx).

4/30: Somerset: Grizzly Flat Rd, **Bette & Jesse Sprayberry** (6-bx tr), 7 OATI chicks.

5/3: Hwy 124, 22 WEBL chicks (5 bx), 15 TRES chicks (3 bx), 8 OATI chicks (1 bx); **Allison**'s 5 WEBL chicks; Pine Grove: **Ed Gower** (3-bx tr) 8 OATI chicks; Jackson, **Al Jones** (5-bx tr), 5 WEBL, 5 OATI chicks.

5/5: El Dorado Co: Somerset, **Carol Wilburn**, Sandridge Rd, 4 OATI chicks; **Roger & Doreen Rothlisberger** (4-bx tr) 5 WEBL chicks; **Gordon Poer**, 13 OATI chicks (2 bx), Placerville: **Julie Ellis**, 6 OATI chicks; Greenstone: **Truscelli**'s trail, 6 OATI chicks, 9 WEBL chicks (3 bx); **Truscelli** (home), 6 WEBL chicks; **Bob Coldwell** (3-bx tr) 7 OATI chicks; **Karen & Bruce James** (5-bx tr) 6 WEBL chicks; Rescue: Deer Valley Rd, **Wendy Guglieri** (11-bx tr) 6 WEBL chicks, 1 Ash-throated Flycatcher (ATFL) hen; **Bill & Fran Singley** (8-bx tr) 2 WEBL chicks; Lottie Ln, **Beverly & Robt Jordan** (7-bx tr) 2 OATI chicks; El Dorado Hills, off Bass Lake Rd : **E Gail King, MD** (2-bx tr) 4 WEBL chicks.

5/10: Hwy 124: 32 WEBL chicks (7 bx), 3 hens; **Allison**'s 7 WEBL chicks (2 bx); Jackson: off Hwy 88, **Richard Colby** (15-bx tr) 6 WEBL chicks, 6 OATI chicks, 14 WBNU chicks; El Dorado Co, Mt Aukum, Mt Aukum Rd, **Adele D'Agostini** (4-bx tr) 10 OATI chicks (2 bx).

5/11: **Allison** 22 WEBL chicks (5 bx); **Chaw'Se** 1 hen, 10 WEBL chicks, 7 WBNU chicks.

5/12: Greenstone: **Suzanne & Wes Hagstrom** (4-bx tr) 2 WEBL hens; **Sartoris** 5 WEBL chicks, 1 ATFL hen; **Helen & Chris Sibley** (3-box trail) 5 WEBL chicks; **Day** 11 WEBL chicks; El Dorado Hills: Diablo Trail, **Annemiek Storm & Ed Means** (4-bx tr) 6 WEBL chicks.

5/14: Somerset, **Bluebird Haven Iris Gardens**, Fairplay Rd: **Eric, Mary & John Hess** (13-bx tr) 7 OATI chicks.

5/17: Hwy 124, 1 hen, 4 TRES chicks, 1 hen, 30 WEBL chicks (6 bx); **Allison** 10 WEBL chicks (3 bx).

5/19: Somerset, Grizzly Flat Ct: **Evie & Kurt Davis** (5-bx tr) 1 WEBL hen; Amador Co: **Glass** 8 WEBL chicks (3 bx); **McCleery** 5 TRES chicks, 14 WEBL chicks (3 bx); **Jones** 7 WEBL chicks (2 bx); El Dorado Co: E China Hill Rd, **Ed & Sandy Augusta** (3-bx tr) 4 WEBL chicks; **Di Basilio** 31 WEBL chicks (6 bx).

5/20: El Dorado Co: **Singley** 7 WEBL chicks; **Guglieri** 6 WEBL chicks; Greenstone: **Wm H Barlow** (4-bx tr) 7 WEBL chicks (2 bx).

5/24: Hwy 124: 11 TRES chicks (2 bx), 17 WEBL chicks (3 bx).

5/26: El Dorado Co: **Sprayberry** 5 WEBL chicks; **Poer** 6 WEBL chicks; Nashville Trail: **Katie Bolger** (6-bx tr) 6 WEBL chicks; Greenstone: **James** 5 WEBL chicks; **Hagstrom** 1 TRES hen, 10 WEBL chicks (2 bx); **Perisho** 7 OATI chicks.

5/31: Hwy 124: 7 HOWR chicks, 9 TRES chicks (2 bx), 4 ATFL chicks; **Allison** 14 TRES chicks (3 bx), 7 WEBL chicks.

6/2: Amador Co, Pine Grove: Bowman Rd, **Chuck & Karin Lowrie** (4-bx tr) 6 OATI chicks; **Chaw'Se** 17 WEBL chicks (3 bx); **Colby** 4 ATFL chicks, 5 WEBL chicks; El Dorado Co: **Di Basilio** 10 WEBL chicks (2 bx); Ralston Way, **Pam & Mike Aronson** (4-bx tr) 6 WEBL chicks.

6/4: Somerset: Snowbird Ln: **Maria Martin** (4-bx tr) 4 WEBL chicks.

6/5: **Truscelli** 6 TRES chicks; **Storm** 5 WEBL chicks.

6/7: Hwy 124: 1 hen, 5 TRES chicks, 10 WEBL chicks (2 bx); **Wilburn** 2 OATI chicks.

6/9: **Glass** 8 TRES chicks, 5 ATFL chicks; **Hagstrom** 6 TRES chicks; **Bolger** 3 OATI chicks; Observatory Ridge: **Fred Pilot, Vaughn & Terri Hintze** (4-bx tr) 5 ATFL chicks; **Martin** 5 ATFL chicks.

6/14: Hwy 124: 1 hen, 11 TRES chicks (2 bx), 11 ATFL chicks (2 bx).

6/15: **D'Agostini** 5 WEBL chicks.

6/16: **Di Basilio** 1 TRES chick, 5 WEBL chicks; Greenstone: **Sartoris** 9 WEBL chicks (2 bx); **Ligia Moran** (3-bx tr) 6 WEBL chicks.

6/21: Hwy 124: 1 hen, 8 TRES chicks (2 bx), 19 WEBL chicks (4 bx); **Allison** 7 TRES chicks, 12 WEBL (3 bx).

6/23: **Chaw'Se**: 6 WEBL chicks; **Di Basilio** 14 WEBL chicks (3 bx); **Day** 4 WEBL chicks; **Truscelli** 13 WEBL chicks, 5 ATFL chicks; **Rothlisberger** 6 WEBL chicks.

—next page

PRIMER:

6/28: Hwy 124: 5 HOWR chicks, 23 TRES chicks (6 bx), 12 WEBL chicks (4 bx); **Allison** 5 WEBL chicks (2 bx); El Dorado Co: Somerset, Mt Aukum Rd: **Ellen & Bob Longworth** (6-bx tr) 6 TRES chicks, 5 WEBL chicks.

6/29: Alpine Co: Hwy 88, Caples Lake Overlook (10-bx tr): 5 Mountain Bluebird (MOBL) chicks.

6/30: **Hess** 4 WEBL chicks; **Allison** 5 TRES chicks, 23 WEBL chicks (5 bx).

7/5: Hwy 124: 9 TRES chicks (2 bx), 5 ATFL chicks, 23 WEBL chicks(5 bx); **Allison** 4 TRES chicks, 9 WEBL chicks (2 bx).

7/6: El Dorado Co: Schneider Cow Camp, 9000 ft: (40-bx tr) 4 MOBL chicks, 13 Mountain Chickadee (MOCH) chicks (2 bx).

7/12: Hwy 124: 16 WEBL chicks (4 bx), 2 TRES chicks; **Allison** 20 TRES chicks (6 bx), 4 ATFL chicks, 5 WEBL chicks; **Gower** 1 WEBL chick; **Jones** 4 WEBL chicks (2 bx), 3 boxes fledging.

7/13: Schneider Cow Camp: 6 MOCH chicks, 4 MOBL chicks.

7/14: **Poer** 4 WEBL chicks.

7/19: Hwy 124: 4 WEBL chicks; Caples Lk Overlook: 4 MOBL chicks.

7/21: **Di Basilio** 13 WEBL chicks (4 bx), 4 TRES chicks; **Guglieri** 4 WEBL chicks.

I hope these statistics will be valuable to some of the monitors who called me but weren't able to accompany me and really didn't know till now how many of their birds I banded.

Some of the seemingly small clutches were because I arrived after half of the birds had fledged.

Again, my thanks to all of the monitors who called and my apologies to those I missed. In years past, I've been called and didn't show up. It wasn't for lack of commitment. Don't give up. Call again next year.

Those of you in counties where there are banders ought to call them. Not all of the banders can make the schedule I do, but they'll try.

In banding, numbers count. The more banded the greater our results.

Count 'em up, Howard. How many boxes?

Spotlight on our cavity-nesters

Flammulated Owl

Otus flammeolus

This tiny owl with a deep voice is common in the pine forests of the Western United States and Mexico. Very little is known of the "flam," however. What is known is that it is insectivorous, feeding mostly on moths and beetles, and is highly migratory.

Its habitat is mainly open ponderosa pine forests, often with dense reproduction, oaks, or a brushy understory. They may also be in other dry mountain coniferous forests including aspen stands. Its winter range is unknown.

The flam nests in natural cavities, but especially old woodpecker holes. They seem to prefer Pileated Woodpecker holes over those of the Northern Flicker. There is often high competition for nesting sites; flams occupied a bluebird nest with 5 eggs in New Mexico, and a nest of a Northern Flicker in Colorado. A Flammulated Owl was observed chasing a Northern Saw-whet Owl away from a newly erected nestbox in British Columbia. No nest structure is built.

The characteristics of natural cavities give a clue as to the location and size of box that might be appropriate. Studies in New Mexico and Oregon show the cavities are found between 5 and 10 meters (16-32 ft) high in the trees; the cavity depth was about 21 cm (8¼"); the entry hole 6.5cm (2⅝"); and the floor about 15cm (6") across.

The flam has a low reproductive rate, having only one clutch of 3 or 4 eggs per year. Its low rate is the major concern for this species though it is relatively abundant at present.

The female incubates, the male feeds her. Eggs are white with a faint creamy tint, about 31mm (1¼") long and oval. The eggs are laid over a period of 4-5 days. Incubation commences after the 2nd egg and before the 3rd and continues for 21 to 24 days. Two days are required for the pipping.

Baby birds emerge with eyes closed and covered with white down, 1½" long. Hen will brood for about 12 days after hatching while being fed by the male. After 12 days, both male and female feed. Flight feathers are only slightly over half of full length at fledging.

The fledglings jump or crawl from the nest, separate into 2 groups and climb the branches of small trees in the understory. One parent tends each group.

The owlets' flight feathers are not fully grown until 25 days after fledging at which time they begin foraging and flying on their own and are less dependent on their parents.

The owls' site fidelity appears to be strong. Pairs are known to return to the same cavity year after year. Known longevity records are 7 years for a female and 8 years for a male, but too little study has been done to consider these final. Most researchers believe they may live much longer.

There has been some management activity within the last few years including studies and assessments in the Southwest Region of the Forest Service. This year, 100 nestboxes have been placed along ridgetops on the El Dorado National Forest to determine whether or not they can be attracted and to help evaluate the effect of fuelbreaks on their populations .

Apparently the flams don't nest as readily in boxes as screech-owls, but occasionally do. Time will tell.

REFERENCE:

McCallum, D.A.1994. Flammulated Owl (*Otus flammeolus). In* Birds of North America, No. 93. Phil, The Academy of Natural Sciences, Wash DC, The American Ornithologists' Union.

Swallows need to spread their wings

Have you ever peered into a small nestbox at a large brood of swallows and asked yourself, "How do they grow so well in such a small cavity?" In fact, they might not be growing well at all. Read *The Role of Cavity Size in the Evolution of Clutch Size in Tree Swallows* by Laurie M. Stewart and Raleigh J. Robertson in *The Auk* (Spring 1999), and you might feel compelled to campaign for larger nestboxes.

Only a part of the study compared the growth of swallow nestlings in different box sizes but it is worthy of note.

Two box sizes were used: the small-box had a floor area of 13 square inches (3.6"x 3.6"); the large-box an area of 25 sq in (5¼"x 5¼").

Within four days of hatching, nestlings from large families were transferred to join smaller broods until all nests held six nestlings. Researchers recorded nestlings' growth periodically 3 ways: Nestlings were weighed, the tarsus (the bone above the foot) was measured, and the ninth primary wing feather was measured.

The first two measurements showed no significant difference based on box size.

However, the wing measurement was highly significant. The ninth is the first flight feather on the front edge of a swallow's wing. Its length is a growth indicator for all wing feathers; and it gauges a bird's readiness for flight.

Early measurements of the wing feather showed no differences, however measurements on day 15 showed the flight feathers of small-box families were significantly shorter that those raised in large-boxes.

Since birds from both groups had identical nestling periods—the small-box group did not stay in their nests longer to allow feathers to catch up—they fledged with shorter wings. The researchers concluded:

"Because Tree Swallows are aerial feeders, wing length is undoubtedly important in determining postfledging survival. Nestlings that fledge with shorter wings could have a reduced ability to feed, especially during the postfledging period. Although this difference in wing length would decrease with time, shortened wings at fledging time could affect the long-term survival of young Tree Swallows."

Since small boxes result in shorter wings, understanding nestling behavior might give a clue to the reason. R.R. Cohen discusses young birds growth and development thus: "Nestlings typically active, frequently shifting positions, from about 3 d[ays] of age; remain in nest cup until feathered and they outgrow cup. During last week in nest, move about entire cavity, with much exercising by rapid flutter of wings for about three s[econds] at a time during last 3 to 4 d[ays] in cavity."

Movement and exercise are a prerequisite for proper growth. Small cavities constrain movement, while large cavities allow activity.

Large cavities have another advantage. On hot days, feathered, warm-blooded nestlings climb out of the nest cup and occupy other portions of the nest to avoid warm siblings. This is an easy task in 5" x 5" boxes, less so in 4" x 5" cavities, and impossible in smaller styles. One might argue that many natural cavities in trees are smaller than four inches. Yes, but a nestling in a natural cavity can cling to a wall in any direction from the nest cup to exercise its wings with ease, an act made impossible by smooth vertical walls in man-made nestboxes.

If your nestboxes have small floors, Tree Swallows may adjust by laying smaller clutches, and possibly their young will grow as well as those raised in larger boxes. But, nestlings in broods of six and greater, although less common in small cavities, will have the odds against them—their wings may not grow properly.

Many conservationists manage large and productive trails using the smaller nestbox styles.

It's our duty as amateur wildlife managers to practice what is best for our trail birds based on the most reliable information.

After reading the study cited in this piece, it's clear the Tree Swallow is better served with larger nest cavities. Or, a box with at least one dimension that allows them to spread their wings.

REFERENCES;

Tuttle, Dick.1999. When are nest boxes too small? *In* Bluebird Monitor, v12 no3:8-9. Ohio Bluebird Society.

Stewart, Laurie M. and R. J. Robertson. 1999. The role of cavity size in the evolution of clutch size in Tree Swallows. *In* The Auk 116(2):553-556.

Robertson, R. J., Stutchbury, B. J. , and R. R. Cohn. 1992. Tree Swallow. *In* The Birds of North America, No.11 (A.Poole, P. Stettenheim, and F. Gill, Eds.). Phila: The Academy of Natural Sciences; Washington, DC: The American Ornithologists' Union.

PRECUT NESTBOX PARTS AVAILABLE FREE

Warren Button needs to empty his garage. He has 75-100 nestboxes precut but unassembled. He lives in Rossmoor, Walnut Creek. Call him at 925-937-4041.

CAVITY NESTERS & OTHER BIRDS ON THE INTERNET

Major websites of interest to bluebirders include the site of the **North American Bluebird Society—NABS** which can be found at:

www.nabluebirdsociety.org

Another is sponsored by **Cornell's Lab of Ornithology** at:

www.birds.cornell.edu/birdhouse

The key information learned from the Bluebird-L list (see below) has been compiled as a Reference Guide by **Haleya Priest** at:

www.crosswinds.net/~bluebirdguideor

www.bluebird.htmlplanet.com

Jim McLochlin's website features the Best of the Bluebird-List. Find it at:

www.members.aol.com/jimmcl

The **Bird Banding Laboratory**'s site is: www.pwrc.usgs.gov/bbl

The American Bird Conservancy is:

www.abcbirds.org

Check **Chris Otahal**'s site at:

www.my.freeway.com/birdstudies/

Several discussion lists focus on bluebirds and other cavity nesters. Some feature birds in general. Here are a few important ones:

• **BIRDCHAT**: General discussion of North American birds and bird watching.

subscription:
listserv@listserv.arizona.edu
message: subscribe BIRDCHAT Your Name

• **BIRDWEST**: Transcription of rare bird alerts for the western U.S. and Canada.

subscription:
listserv@listserv.arizona.edu
message: subscribe BIRDWEST Your Name

• **BIRDBAND**: Discussion of bird banding with periodic postings from USGS–Bird Banding Laboratory.

subscription:
listserv@listserv.arizona.edu
message: subscribe BIRDBAND Your Name

• **BIRDFEEDER**: Discussion of backyard bird watching.

subscription: email
birdfeederrequest@userhomexom
message: subscribe

• **BLUEBIRD-L**: An email group for bluebirders and persons interested in cavity nesters.

subscription: listproc@cornell.edu
message: SUBSCRIBE BLUEBIRD-L Your Name

• **CAVNET**: Scientific discussion list on cavity-nesting birds. References to technical books and journals.

subscription:
listserv@uvvm.uvic.ca
message: subscribe CAVNET Your Name

• **TITNET**: Scientific discussion list for Parids (Chickadees) and other cavity nesters.

subscription:
listserver@relay.doit.wisc.edu
message:
subscribe TitNet Your Name

• **WILDGARDEN**: Discussion about attracting birds, bees, butterflies, bats, frogs, toads, and other wildlife through the use of plant life as well as ponds, organic methods of gardening, seeds, native plants, birdhouses, feeders, birdbaths, compost, and planting techniques.

subscription:
wildgardenrequest@userhome.com
message: SUBSCRIBE

To enter your annual nestbox data with NABS or Cornell, there is an annual membership fee of $15.

Is your nestbox a swallow trap?

by Dick Tuttle

Swallows need large boxes for large families. A floor size of twenty square inches is still debatable, twenty-five square inches is best. Nearly one percent of nests fledge eight, over three percent produce seven, and one fourth raise six, another quarter fledge five.

Also, beware of swallow traps disguised as nest boxes. The inside panel under the entrance must have toe-holds, not for nestlings, but for adult swallows roosting during cold spring weather. Studies have shown that swallows waste away quickly and die within several days when inclement weather grounds insects. Even when weak, swallows in a roughened natural cavity can use their small legs and feet to climb like bats to the entrance, and glide for a life-sustaining insect hunt. After cold weather warms, starving swallows can emerge from nestboxes only if they have toe-holds!

Starvation is never pretty. If the panel below the entrance is smooth, a swallow is forced to use the flap-and-grab technique, burning valuable energy with each unsuccessful attempt to reach the entrance. Green and white feces cake the belly and tail feathers of trapped victims.

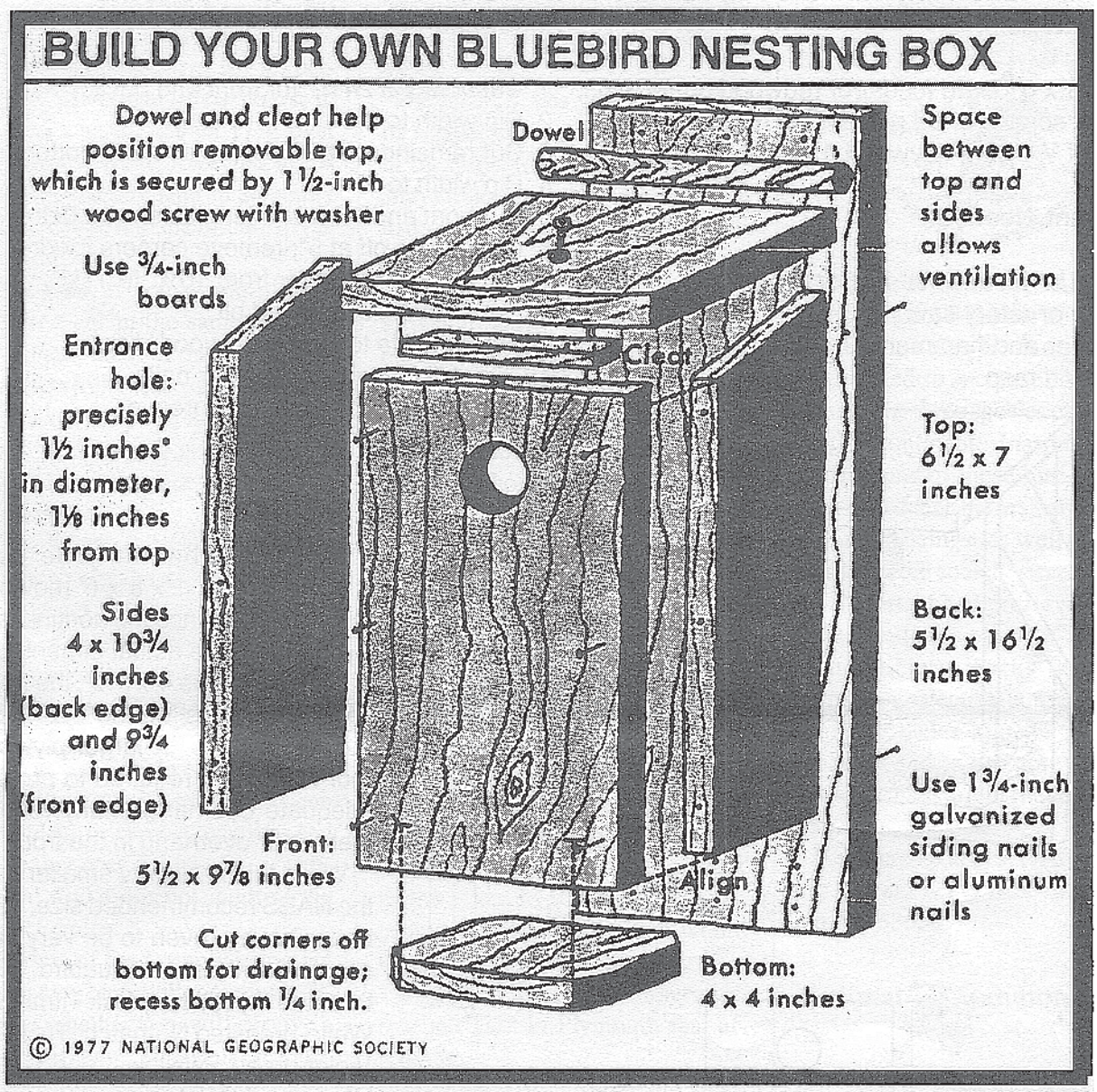
Rough-sawn cedar might not be rough enough for toe-holds. Saw blade kerfs and hardware cloth make good toe-holds. Use scissors and a staple gun to retro-fit boxes in the field with Gutter-Guard, a plastic mesh that screens leaves away from roof gutters.

If a swallow corpse shows severe head trauma, you can blame a sparrow. But you might be responsible for starved swallows if you fail to identify a "swallow trap" disguised as a bluebird nestbox. (I found two boxes made by different manufacturers that displayed the "NABS Approved" stickers– both lacked toe-holds. NABS has been notified and they are addressing the problem.)

***Dick Tuttle** has provided nestboxes for Tree Swallows and other cavity nesters since 1983. He is a member of **Ohio Bluebird Society**.*

DON YODER'S FAVORITE—

The old original—in use for 25 years



The top opening box depicted here was first described in Lawrence Zeleny's book *The Bluebird—How you can help its fight for survival,* published in 1976.

It has long been one of the favorites of many bluebird monitors.

In his book Zeleny wrote:

"It is worth taking a little extra care in fitting the top to the top-opening nesting box shown... The proper positioning of the cleat on the underside of the top board is especially important. It should be taken care of before the top is screwed in place and before the bottom board is attached to the box. The top is held in place with the left hand and the cleat is held against the insides of the front and top boards with the right hand (which should be passed through the open bottom of the box). The top board is then carefully pushed out with the right hand and the cleat grasped and held in position with the thumb of the left hand. The position of the cleat on the top board is then marked with a pencil. Before the cleat is nailed to the top board it should be moved 1/16" toward the rear of the board to allow for expansion (which may occur in humid weather or when latex paint is applied). Note that the length of the cleat is 1/16" less than the inside of the box. This is to allow for expansion and to prevent binding."

"Plans for a top-opening nesting box.

Use 1 3/4" galvanized siding nails or aluminum nails, 1 1/4" for dowel.

Drill 3/32" holes in dowel for easy nailing.

With top in place, hold cleat in exact position for nailing by reaching through bottom of box before bottom board is attached.

Cut 3/8" off each corner of bottom board as shown."

STANDARD NESTBOX DESIGN FOR WESTERN BLUEBIRDS

based on an original NABS design developed by Larry Zeleny

Bill of Materials:

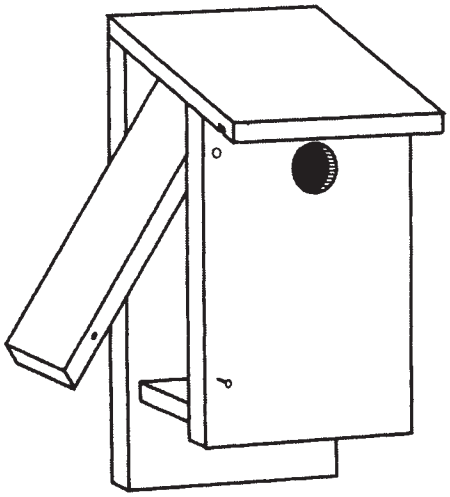
1 pc 1"x 8"x 6' board (cedar or redwood preferred)
1½" deck screws or 6d galvanized nails
1 scrap of 5/8" or 3/4" plywood 9"x 9" square (roof)

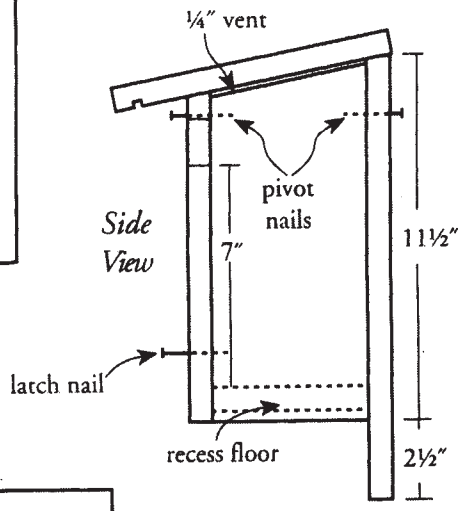
Equipment Needed:

drill with 1½" bit and 3/32" bit (for predrilling)
table saw or rotary saw
screwdriver and hammer
round wood rasp

Instructions:

1. Cut board at 24¾" for front and back
2. Rip width to 6½"
3. Cut remainder at 29" for 2 sides and bottom
4. Rip width to 5"
5. Cut front and back into lengths shown below
6. Cut bottom off at 5"; remove corners for drain
7. Cut 2 sides at 82° (or from 10¼" to 11¼")
8. Drill entry hole with 1½" bit
9. Enlarge hole to 1 9/16" with wood rasp*
10. Predrill holes for screws or nails
11. Score front of roof for drip groove
12. Assemble

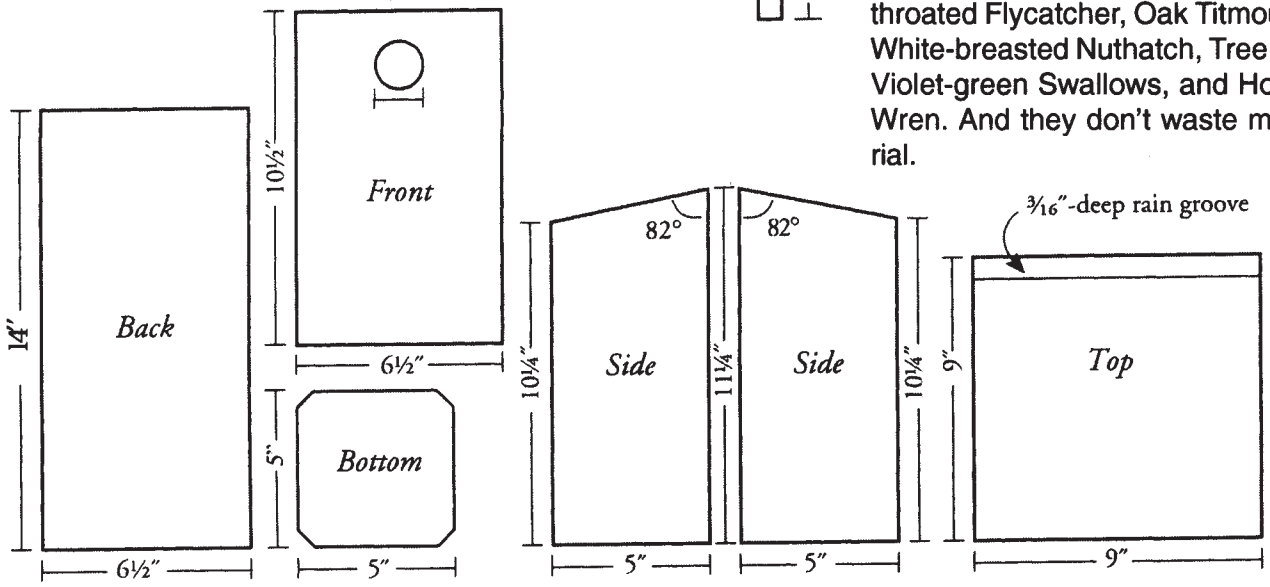




Comments:

A suitable box may be constructed from a 1"x 6"x 6' redwood fence board. Since the nominal sizing is scant, the actual dimensions of the floor will be 4"x 5½"; the front, back, and sides will be 5½" —requiring no trim. A larger plywood roof will still be required to provide adequate overhang. Many recommend a 5" overhang in the front.

While this is slightly smaller than the NABS recommended size, such boxes have proven to be very successful for Western Bluebird, Ash-throated Flycatcher, Oak Titmouse, White-breasted Nuthatch, Tree and Violet-green Swallows, and House Wren. And they don't waste material.



*if use by Mountain Bluebird is anticipated.

Call your coordinator if you need help—

Are you having problems identifying your birds? Are you having problems with wasps, blowflies, mites? Have your nestlings been abandoned. Are your nestboxes being invaded by House Sparrows? Your County Coordinators can give you advice and assistance, or have resources they can call on to help. Keep in touch.

COUNTY	COORDINATOR	STREET	CITY/STATE/ZIP	PHONE VOX	PHONE FAX	EMAIL
Alameda	Ann Kositsky	1090 Miller Ave	Berkeley, CA 94708	(510) 527-5091		ajpa@pacbell.net
	Raymond A. Fontaine	P.O. Box 92	Livermore, CA 94551	(510) 447-0213		
Amador	Penny Brown	20624 Parkside Dr	Pine Grove, CA 95665	(209) 296-3849		penny@cdepot.net
Butte	Emily Harbison	3536 Butte Campus Dr	Oroville, CA 95965	(530) 895-2449		deb@cin.butte.cc.ca
Calaveras	La Verne Hagel	466 Thompson Lane	Copperopolis, CA 95228	(209) 785-2363		
Contra Costa	Shirley&Warren Engstrom	232 Tharp Drive	Moraga, CA 94556	(925) 376-4695		wlese@juno.com
	Oscar Enstrom	21 Manti Terrace	Alamo, CA 94507	(925) 837-8392		bigo@lanset.com
El Dorado & Amador	Hatch Graham	P.O. Box 39	Somerset, CA 95684	(530) 621-1833	(530) 621-3939	birdsfly@innercite.com
Georgetown Divide	Viola Sampert	5655 Hollow Ln	Greenwood, CA 95635	(530) 333-0318		
Lake	Jeannette Knight	PO Box 152	Cobb, CA 95426-0152	(707) 928-5250		
Lassen	Edward Bertotti	470 413 Wingfield	Susanville, CA 96130	(530) 257-3774		
	Mike Magnuson	PO Box 767	Chester, CA 96020	(530) 258-2141		
	Tom Rickman	PO Box 2017	Susanville, CA 96130	(530) 257-2151		
Los Angeles	Doug Martin	13066 Shenley Street	Sylmar, CA 91342	(818) 367-8967		
Madera	William Rihn	PO Box 1648	Coarsegold, CA 93614	(209) 683-3052		
Marin	Ruth Beckner	15 Portola Avenue	San Rafael, CA 94903	(415) 479-9542		
	Meryl Sundove	37 Greenwood Bch Rd	Tiburon, CA 94920	(415) 388-2524	(415) 388-0717	
Mariposa	Lawrence Punte	9443 Banderilla Dr	LaGrange, CA 95329	(209) 852-2559		
Modoc	Charles Welch	PO Box 825	Alturas, CA 96101	(530) 233-4534		
Napa & Sonoma	David Graves	1500 Los Carneros Ave	Napa, CA 94559	(707) 257-0843		
Nevada	Lorry Hukill	15954 Wolf Mtn Rd.	Grass Valley, CA 95949	(530) 477-7165		
	Richard Nickel	107 Bawden Ave	Grass Valley, CA 95945	(530) 273-2600		
Orange	Dick Purvis	936 S Siet Place	Anaheim, CA 92806	(714) 776-8878		Dickersly@aol.com
Placer	Lesa Chan	9720 Oak Leaf Way	Granite Bay, CA 95746	(916) 791-4529		habitat@jps.net
Plumas	Patricia Johnson	PO Box 767	Chester, CA 96020	(530) 258-2141		
Riverside	Melissa Browning	10154 Beaumont Ave	Cherry Valley, CA 92223	(909)845-9266		
San Bernardino	Glen Chappell	1923 Abbie Way	Upland, CA 91784	(909) 981-1996		Chappell@CHS.Chaffey.K12.CA.US
San Diego	Rosemary Fey	PO Box 1245	Borrego Spgs, CA 92004	(619) 767-5810		
San Joaquin	Thomas Hoffman	10122 E Woodbridge Rd	Acampo, CA 95220	(209) 369-8578		thoffman@lodinet.com
San Luis Obispo	Judith Burkhardt	8560 El Corte	Atascadero, CA 93422	(805) 466-3272		burkhardtpaul@thegrid.net 3.
San Mateo	Howard Rathlesberger	230 Ridgeway	Woodside, CA 94062	(650) 367-1296	(650) 369-4788	Rathlesberger@email.msn.com
Santa Barbara	Richard Willey	4172 Vanguard Dr	Lompoc CA 93436	(805)733-5383		willey@utech.net
Santa Clara	Garth Harwood & SCVAS	5901 Pescadero Crk Rd	Pescadero CA 94060	(650) 879-0724		GarthHar@aol.com
Santa Cruz	Nanda Currant	530 Amigo Road	Soquel, CA 95073	(408) 462-3703		hearth@cruzio.com
Sonoma (see Napa)						
Sutter & Yuba	Kevin A. Putman	2884 Coy Dr	Yuba City, CA 95993	(530) 755-1480		dputman@syix.com
Tehama	Pete Flower	331 Oak Street	Red Bluff, CA 96080	(530) 527-0392		
Tulare	Peter C. Morrison, MD.	325 So. Willis	Visalia, CA 93291	(209) 733-1154		
Ventura	Jan Wasserman	1158 Beechwood St	Camarillo, CA 93010	(805) 987-3928		bandlady@west.net
Yuba (see Sutter)						
All Other Counties	Don Yoder	2021 Ptarmigan #1	Walnut Creek, CA 94595	(925) 937-5974	(925) 935-4480	cbrp@value.net

Find out more about your birds—have them banded

When you have determined your estimated hatching date, call a bander if one is near. Schedule permitting, the bander may be able to band the adult incubating the eggs and/or the nestlings a week or so after they pip from the eggs. Banding helps us learn about the site fidelity of the adults, the dispersal of the chicks, longevity, and other elements of population dynamics.

Amador & southern El Dorado	Hatch Graham	(530) 621-1833	birdsfly@innercite.com
El Dorado	Susan Yasuda	(530) 644-2324	syasuda@fs.fed.us
Northern El Dorado	Dave Delongchamp	(530) 333-2304	selkaijen@jps.net
Los Angeles	Walter Sakai	(310) 434-4702	sakai_walter@smc.edu
Placer & northern Sacramento	Dee Warenycia	(916) 786-5056	warbler5@aol.com
San Francisco Peninsula	Lee Franks	(650) 592-7733	funseekers2@juno.com
San Francisco Peninsula	Howard Rathlesberger	(650) 367-1296	Rathlesberger@email.msn.com
Solano & Yolo	Melanie Truan	(530) 750-3825	mltruan@ucdavis.edu
Sutter & Yuba	Kevin Putman	(530) 755-1480	dputman@syix.com
Ventura	Jan Wasserman	(805) 987-3928	bandlady@west.net

Anyone desiring to band who can commit 2 or 3 days per week is encouraged to contact Hatch Graham.

Do Sterile Eggs Pose a Hazard?

Dr. R. H. Dykes
Prince George, B.C.

I am a physician, farmer and bird enthusiast. Whilst making rounds last year of my nestboxes, I noticed a clutch of nestlings with one egg amongst them. I quickly removed the egg from the house as, in my experience, it could be a "time bomb" ready to go off.

These infertile eggs act as a medium for incubation of various types of viruses and bacteria. E-coli, strep, and staph come to mind. If the nestlings break an infected egg and the yolk spills into the nest, the resulting infection could be lethal to the nestlings.

I suggest that all sterile eggs be carefully removed from a nest.

from Bluebird Monitor, OBS

ThePoets Corner~

CAVITY NESTERS

On the video, six outstretched mouths
beg insects from thin air.

The hotel's granted us
this crampy space for five
exhibit tables, programs, pamphlets,
90 birders milling in and out,
leaving their breath behind.

On the video,
six bluebirds set to fledge
clutch the nest-edge, totter,
take the air.

The AC doesn't reach this far
into the hotel's gullet.
This space breathes for itself,
an atmosphere that clings.

We gasp for air and fan our cheeks
with flyers. On the video,
a blue sky's full of wings.

TG

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