



GROWTH AND DEVELOPMENT OF NESTLING BLACK PHOEBES (*Sayornis nigricans*)

by Blair O. Wolf

This article presents the growth and development of a brood of Black Phoebes (*Sayornis nigricans*) nesting near Coyote Creek from the day of hatching to the day that they fledged from the nest.

GENERAL DESCRIPTION AND BIOLOGY

The Black Phoebe (Figure 1) is a locally abundant breeding species at CCRS during the spring and summer, and a common resident the balance of the year. This medium sized (18 gm.) flycatcher has sooty black head, back, and breast with a contrasting white belly. The remiges (flight feathers) and rectrices (tail feathers) are a dark grey and appear translucent in flight. The eye is dark brown, and the legs, feet, and bill are black. When per-

ched the Black Phoebe is rarely motionless, the tail is pumped down and fanned to varying degrees and the head is constantly in motion, moving from side to side and up and down in search of prey. Black Phoebes are most frequently seen foraging near water, flights are typically short and direct. If the prey is missed initially, there is a determined pursuit that usually ends with the audible snap of the bird's bill. The phoebe often forages from a favorite perch, which is commonly just above the nest site. My overall impression is that insect prey rarely escape.

The Black Phoebe nesting requirements are very similar to the Barn Swallow and they directly compete for nest sites. Both species construct an adherent nest from wet mud, dried grasses and other plant or animal matter. The nests are similar in shape and form and, in fact, the phoebe may use an old swallow nest after adding mud and plant material to build up the nest rim and relining the inside. The nest is most often placed under some type of overhang within a few centimeters of the ceiling. Historically, because of its specialized nesting requirements, the Black Phoebe has frequently been limited in abundance by lack of suitable nest sites or materials (availability of mud).

Buildings, bridges and culverts have greatly increased the abundance of breeding phoebes in the county by providing hundreds of potentially suitable nest sites.

NESTLING GROWTH AND DEVELOPMENT (FIGURES 2 & 3)

(Day 1-2) 5 June 1989, 12:00: Two of the five eggs probably hatched yesterday afternoon, and two have hatched sometime this morning; on one of the young the down is still wet and matted, the fifth egg has two pip marks on its large end. The young (Figure 4) are very small (1.8gm) and psilopaedic (nearly naked), with the exception of several medium gray neossopiles (down feathers) along the back (spinal tract), on the top of the head (capital tract), on the dorsal surface of the wings (alar tract) and on the sides of the abdomen (humeral tract). The skin is yellow and the visera are visible through the skin of the abdomen. The closed eyes are large and dark in color. The egg tooth, and mandible are a light yellow. The gape is a



Figure 1. Photograph of an adult Black Phoebe taken at CCRS. Photo by John Delvoryas. All others by B. O. Wolf.

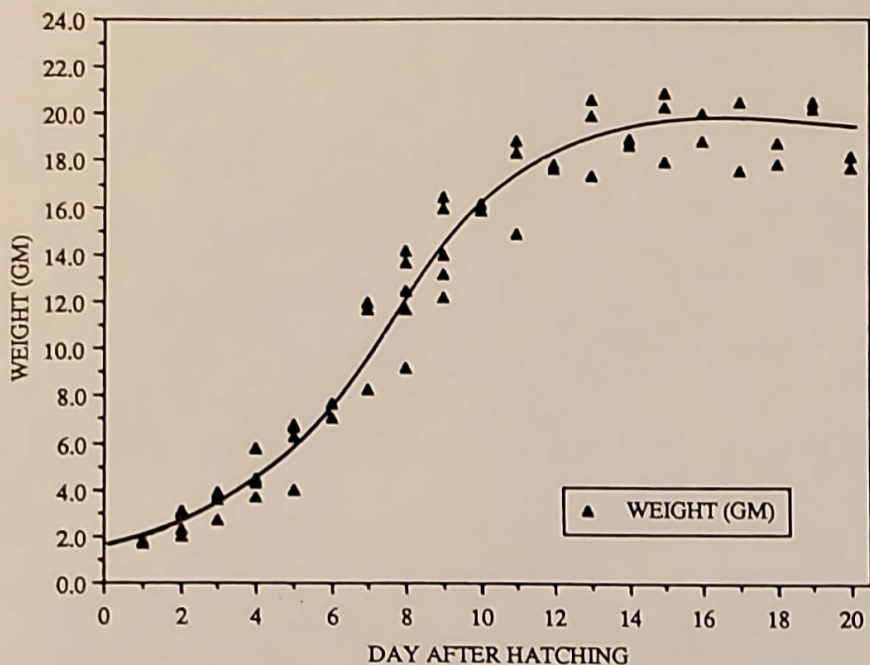


Figure 2. Weight changes of 5 nestlings from nest #6 plotted through 20 days after hatching

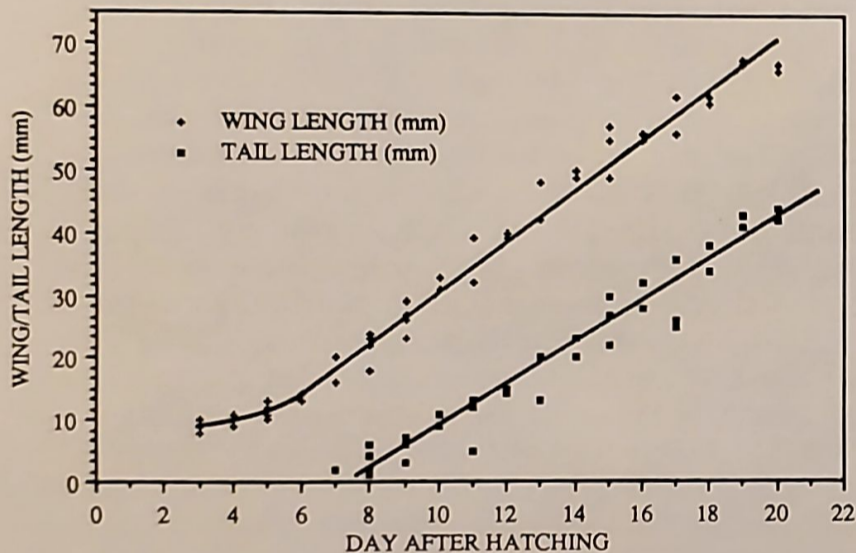


Figure 3. Wing length and tail length of nestlings from nest #6 plotted against days after hatching.



Figure 4. Newly hatched Black Phoebe.

bright yellow-orange and the young bird lifts its head, gapes, and peeps when disturbed. The feet and legs are small, but the claws are sharp and well developed; the phoebe instinctively grasps at the nest lining. At this point the young are considered poikilothermic or having a body temperature which follows environmental temperature.

(Day 4-5), 8 June 1989, 18:00: The largest nestling is almost four times the weight (6.7 gm., Wing Length [WL] 11 mm) it was when it hatched. The skin has turned a more pinkish color. The eyes are closed, but larger and the legs have also grown. The feather tracts are all well defined and pigmented; the primaries are just starting to erupt from the papillae (1 mm). The tail has not yet started to erupt.

(Day 7-8) 10 June 1989, 12:00: The nestlings (Figure 5) are now about six times (11-12 gm., WL 22 mm) their hatching weight. All feather tracts have erupted and pin feathers are several millimeters long on all of the body tracts. The remiges (primaries, secondaries, flight feathers) are growing well (5-6 mm), but are still in the sheath and the rectrices (tail feathers) are just starting to erupt from the papillae. The eyes are just partially open. The legs and claws are becoming pigmented a dark pinkish gray, the back of the tarsus is still yellow. The upper mandible is taking on some black pigment in the center, but is still yellow.



Figure 5. One week old Black Phoebe.

low around the tip and edges.

(Day 11-12) 15 June 1989, 11:30: The nestlings are now ten times (18 gm, WL 40 mm) their hatching weight. Body feathers continue to grow and are well out of the sheath, providing heat retaining insulation. The remiges continue to grow and are half way out of their sheaths. The rectrices are quite long (14 mm) now and have just started to lose the sheaths. The eyes are approximately open half way, but young are not alert and are very quiet. The legs are a pinkish gray and the claws are turning black. The bill is more extensively black, but the edges are still light yellow.

(Day 15-16) 19 June 1989, 18:00: The nestlings weight (Figure 6) (18-19 gm, WL 55 mm) has leveled off at

about 11 times hatching weight. Body feathers are almost completely out of their feather sheaths and the young are heavily infested by some type of arthropod (mite?). The



Figure 6. Two week old Black Phoebe.

remiges continue to grow and the sheaths continue to shorten. Wing length is about 60% of adult wing length and one young bird when allowed to fly from a height of 1 meter flew 1.5 meters in a horizontal direction before landing. The rectrices continue to grow (28mm) and are at about 35-40% of adult length. The legs are of adult size, but are a dark pinkish gray in color. The bill has elongated some and is black with the light yellow edges. The young phoebe is much more alert and often may struggle and try to escape.

(Day 19-20) 23 June 1989, 1130: The weight of the nestlings (Figure 7) has started to decrease (18.0gm, WL67mm) and their wing length is approximately 80% of the adult wing length. The body feathers are almost completely out of the sheaths and no down remains on their



Figure 7. Black Phoebe nestling nearly three weeks old.

heads. All of the black feathers have rusty brown tips. The primary coverts have wide rusty brown tips. The feet and legs are still a dark gray. The claws are black, as is the bill

except around its edges. The youngest of the phoebes fell from the nest sometime between today and the last observation, it was found dead in the mud below the nest. One of the young birds escaped during processing and flew to a Willow 40 meters to the Northeast of the nest site. The young Black Phoebe was very capable of sustained flight and the flight was well coordinated. The rest of the young fledged that afternoon or early the next morning.

DISCUSSION

The growth and subsequent maturation of the young Black Phoebe is similar to that of most passerines. As an altricial (helpless, with poorly developed senses, thermoregulatory, and locomotor systems) species, the Black Phoebe nestling must be cared for totally by the parent to survive. This allows the majority of the nestlings energy to be devoted to growth and development. Figure #3 plots changes in weight against nestling age, and some explanation of the shape of this curve is in order. The nestling starts out life in the nest at approximately 9% of the adult body mass. As can be seen during the first five days the increase in body mass per day is accelerating, and during this period the metabolic rate of the nestling per gram of body mass is below that of the adult (Ricklefs 1974). From about Day 5 to Day 10 or 11 is the period of maximal growth rate and maximum increase in body mass, which increases from approximately (6 gm.) 33% of adult mass to approximately (18-19gm) 100% of adult body mass. This is a period when metabolic rate of the nestling per gram of body mass is significantly higher than that of the adult. Maintenance requirements are exceeded by the energy requirements for production of new tissues (Ricklefs 1974) As the nestling approaches adult weight it's metabolic rate also decreases to that approximating the adult's. The last portion of the curve where body weight peaks out above adult weight and then decreases is often explained as "baby" fat. In passerines this may sometimes be the case, but commonly this is recognized as a period where the integument "drys" up and loses some of its water. This is accompanied by the maturation of the feathers and the drying of the quills resulting in the observed reduction in weight near fledging (Ricklefs 1974). In Figure 3 we see the the growth of the flight feathers (remiges) and tail feathers (rectrices). Both of these plots are linear for the most part, with the exception of the primary feather growth before day 5 or 6 when metabolic rate is still below that of adult. After the rectrices have erupted from the papillae the growth rates of the wing and tail feathers are essentially the same. These data demonstrate one of the many adaptive strategies found within the reproductive biology of birds as well a providing an interesting look at one of our more attractive local species.

LITERATURE CITED

Ricklefs, R. E. 1974. Energetics of reproduction in birds, p. 152-297. In R. A. Paynter (ed.). *Avian Energetics*. Publ Nuttall Ornith. Club, Cambridge, Mass.

MY EXPERIENCE OF CCRS

by Alberta Anaclerio

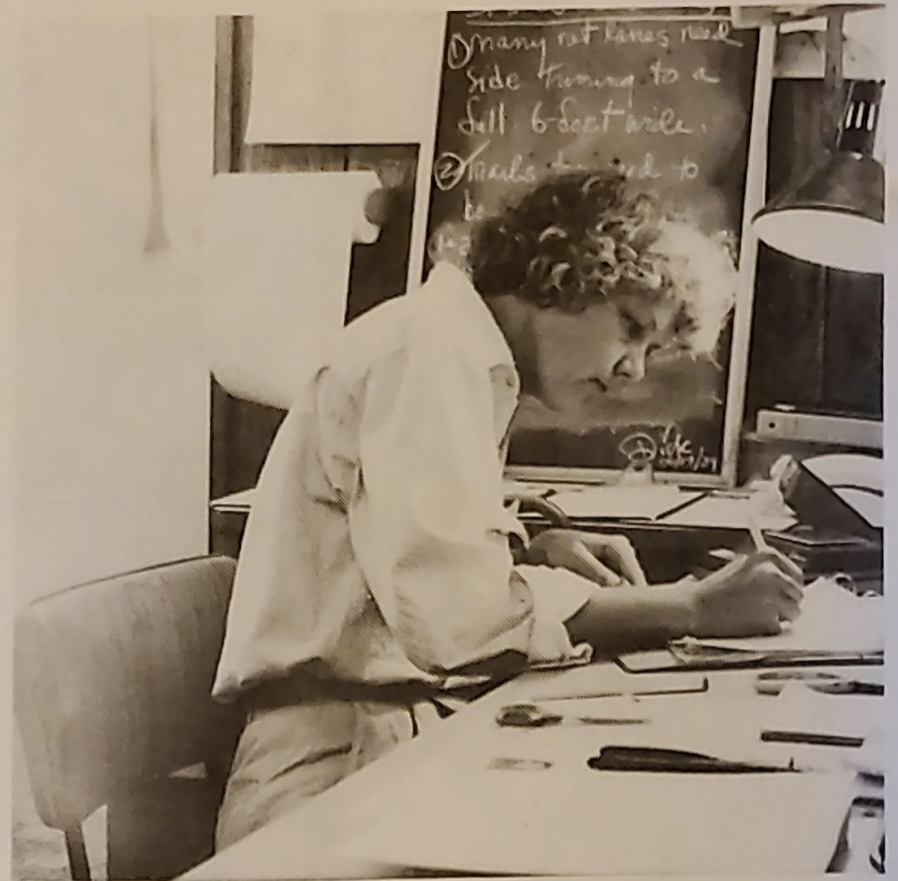
I came to Coyote Creek Riparian Station in search of more wholeness. I saw the field trip announcement in the "Avocet" and felt an immediate sense of excitement and curiosity. I am a born bird watcher and carry a deep concern for Earth's ecology. It seems obvious to me that the planetary "body" is a reflection of the individual body; that the condition of imbalance, the need for energy management, wise resource development, and conservation is a corollary to our own inner need for balance and harmony. So, I was eager to meet the people who are about this work!

My first day of banding was one of wonder and awe. As I drove out Zanker Road I felt such a sense of spaciousness; the openness of the terrain and vastness of the sky enticing mind and body to an equal expansiveness. A deep sense of well-being filled me as furrowed fields radiated gentle rhythmic waves and the vitality of purple pulsed through the powdered blue of emerging cabbages. I couldn't help but reflect on the ease and the contrasting "dis-ease" associated with the congestion and commotion of the concrete conglomeration called Silicon Valley.

We were greeted at the parking lot by our guide, Allen Royer, and were soon on our way to the magical mystery tour! Allen pointed out two Burrowing Owls who blinked at us with unperturbed patience as we wended our way along the labyrinth of levees toward the trailer. We had barely arrived when the far door of the trailer silently swung open and a woman emerged with outstretched arms and hands gently cupped. The back-lighting created a dream-like image silhouetted against the pale silent sky. I watched breathlessly as a flutter of life emerged from her palms and a dove flew into the hush of morning. There was an inexpressible beauty captured in that simple moment. Something timeless and soulful had been enacted.

Allen was a proverbial treasure trove of information and anecdotes. Once in the trailer, amidst subtle traces of mothballs and the comfortable clutter of tools, books, and banding paraphernalia, we were introduced to the proper procedure for entering information about captured birds. Those who were working explained the phenomena of brood patches (graded on a scale of 0 to 4), fat deposits (a scale of 0-1-2-3) and cloacal protuberances (graded on a scale of: Oh?, Ah, and WOW!). Banding, recording, clipping the tip of a tail feather, and weighing mark the completion of the ritual prior to release. The involvement and caring of the volunteers evidenced the quality and depth of their dedication.

We then started south to do our first net check. As we walked along the creek the pungent aroma of moist soil and mugwort mingled with the spicy scent of wild anise and a haunting enchantment filled the air. Cottonwood leaves flashed in the breeze that delicately lilted the songs of Wilson's Warbler, Bewick's Wren and Yellowthroat. I became aware of new seedlings, part of the revegetation



Volunteer Rita Colwell amidst the "comfortable clutter of tools, books, and banding paraphernalia". Photo by David Johnson.

project I was told. We passed plant after plant tenderly tied for support and carefully surrounded by plastic. It was poignant reminder of the fragility of life's web, and a touching statement about the commitment to revitalizing Coyote Creek.

Once back at the trailer, we began to more actively participate in the actual process of bird banding. Again and again I was struck with a renewed sense of the miraculous; the variety of form, the exhaustless variation of color, shape, design and proportion. And, when Allen urged me to hold a Savannah Sparrow to my ear, I held my breath knowing something special awaited...the sound of a tiny heart throbbing at fever pitch. In that hearing, I would never be the same. A knowing beyond ornithological identification and scientific tabulation had been established. It was a knowing based in direct experience of a new relationship, a relationship forged heart to heart.

The tangible treasure of the day was yet to come. We made a second net run, this time heading upstream. On the way we passed beneath the majestic live oak just north-east of the trailer. Once beneath the full canopy of its magnificence Allen said abruptly, "Stop! Look up." I did and was immediately impacted by a presence so primordial and powerful that for the briefest moment, time stood still, then catapulted onward as I fumbled with binoculars, strained for a better look, and exchanged hushed exclamations with my companions - a Great Horned Owl perched less than twenty feet overhead. Eventually Allen moved on. I reluctantly followed, only to be surprised with the gift of an owl pellet. I was ecstatic! (and the subject of much envy once back at the trailer). When I share this prize with my non-birder friends they are convinced I've gone off the deep end, but then some folks will never understand!

I joined CCRS and am now a regular volunteer. Each week is a new adventure of fascinating facts, fun and fellowship. In this time of ecological crisis it seems to me that

the powerful draw of restoration work is the need to restore ourselves and our sense of place in the whole, our need to redefine our relationship to the Earth and each other. I found the wholeness I came for, and I invite you, if you aren't already directly involved, to discover the greening of your soul that awaits you at Coyote Creek Riparian Station.

OFF THE WALL - THE 1989 SPRING SEASON

by Bill Bousman

I have looked at the Summary Board for the months of March, April, and May and included the first six days of June in my examination as well. The Station was operational about two days out of three during March, but after 27 March there was coverage every day throughout the remainder of the period. Unless otherwise noted, all of the data here are for new captures. The table below shows new capture data for species that are largely migrants at Coyote Creek. The top five migrants in rank order are: Swainson's Thrush (SWTH), Wilson's Warbler (WIWA), Rufous Hummingbird (RUHU), Yellow Warbler (YEWA), and Orange-crowned Warbler (OCWA). These five species constitute about 80% of the migrants at Coyote Creek this spring. The Swainson's Thrush is down from 213 at this point last year, but the three warbler species are all up an average of 300%! However, the Station converted from 36 mm mesh mist nets this past winter to the smaller 30 mm mesh and this probably contributed to the increase in numbers of smaller birds. It also shows that we must be careful in how we interpret number changes. There may well be factors we are unaware of that influence our perception of population changes.

Spring 1989 Migrants - New Capture Data

Species	No.	First	10th %	50th %	90th %	Last
BCHU	15	18 Apr	18 Apr	1 May	30 May	4 Jun
CAHU	3	9 Apr	-	12 Apr	-	24 Apr
RUHU	98	26 Mar	31 Mar	10 Apr	21 Apr	5 Jun
ALHU	22	15 Feb	16 Feb	19 Mar	1 Apr	8 Apr
WIFL	7	14 Apr	-	1 Jun	-	5 Jun
WEFL	38	18 Mar	23 Mar	9 May	1 Jun	5 Jun
ATFL	7	30 Apr	-	22 May	-	5 Jun
SWTH	170	28 Apr	8 May	20 May	30 May	5 Jun
WAVI	5	28 Apr	-	25 May	-	28 May
OCWA	58	9 Mar	23 Mar	24 Apr	1 May	3 May
YEWA	60	4 May	19 May	24 May	31 May	5 Jun
MGWA	3	9 Apr	-	9 Apr	-	21 Apr
WIWA	119	17 Mar	15 Apr	1 May	24 May	1 Jun
BHGR	9	18 Apr	-	2 May	-	2 Jun

Another problem that confounds the Summary Board data is the possibility of resident birds being netted and grouped here as migrants. This is particularly a problem with spring data when local juveniles leave the nest and start to wander. The Station's records keep track of the age classes of all birds that are banded, so these records will identify juvenile dispersal. The problem is only with the Summary Board and this column. In some cases the effect

of juvenile dispersal is apparent at the Summary Board level. As an example, Allen's Hummingbird (ALHU), one of our earliest migrants, shows one to six birds per week through the first week in April and then there is a gap of two weeks and then the birds show up again. I have assumed here that the second group of nineteen birds are all dispersing and I have not included them in the table. But without going back to the original banding records I cannot be sure that there are not some dispersals in the first group. I have treated Orange-crowned Warbler records in the same way.

The central or median migration dates vary from 19 March for Allen's Hummingbird to 1 June for the Willow Flycatcher (WIFL), a span of ten weeks. This shows a more protracted migration than was evident last fall when the equivalent span was about five weeks. In many cases the individual species come through quite rapidly. Eighty percent of the Yellow Warblers came through in just a 12-day period.

I continue to find the number of Black-chinned Hummingbirds (BCHU) at the Station amazing. We are supposedly at the edge of their range. Where are these birds breeding? Are they all local? Over the same time span shown in the table the Station banded 38 resident Anna's Hummingbirds (ANHU). If they are all local then one bird out of three should be a black-chinned Hummingbird! We know some are nesting here because we have found recently-fledged birds locally, but most of these birds must be migrants moving north to some (as yet) unknown breeding area. Five species of hummingbirds at the Station in one spring is pretty spectacular, but what of the 18 Rufous Hummingbirds banded on 5 April?

We have better flycatcher numbers in the fall than the spring. Olive-sided Flycatchers captured on 25 and 29 May were the first records for the Station. Other flycatchers in low numbers were Western Wood-Pewee (23 May), Hammond's Flycatcher (12 May), and Western Kingbird (24 May [2] and 29 May). Another bird that puzzles me is the Willow Flycatcher. This is a bird that has had a disastrous last half century, being extirpated from former breeding areas throughout the state. The conventional wisdom is that the only migrant birds we have are those breeding in the Sierra that migrate through our area in the first week of June. But what of the single 14 April bird? Is this a remnant of some lost population?

Swainson's Thrush is one of our latest migrants. Last year's data show the migration extending through the third week in June. The median date of last year's 229 captures was 18 May, two days earlier than this year's. With the rest of the June data this year's median date will probably slip a day or more in addition.

Orange-crowned, Yellow, and Wilson's Warblers all came through in good numbers. The median date for Wilson's last year was 10 May (total of 98 birds) which shows the migration was really quite a bit earlier. Some of our rarer warblers were: Nashville (7 April and 7 May), Black-throated Gray (four on 5 April), Townsend's (17 May), and the three MacGillivray's noted in the table. We had eight MacGillivray's last year.

For the most exciting records of the spring we have to go to the Emberizids. On 23 May a female Indigo Bunting was captured and carefully identified. She was captured again on 26 May. Then on 24 May an adult Green-tailed Towhee in wonderful, fresh plumage was caught - a real treat. Both of these birds represent fifth county records.

Some last dates for our departing winter-resident species: Winter Wren (11 March), Golden-crowned Kinglet (3 April), Ruby-crowned Kinglet (14 April), Hermit Thrush (3 May), Yellow-rumped (Myrtle) Warbler (17 April), Yellow-rumped (Audubon's) Warbler (28 April), Fox Sparrow (3 May, a recap.), Lincoln's Sparrow (4 May), Golden-crowned Sparrow (22 April, a recap.), White-crowned (Puget Sound) Sparrow (27 April), and White-crowned (Gambel's) Sparrow (2 May).

IBM BLUEBIRD TRAIL SUCCESSFUL

By L. Richard Mewaldt

On 3 April of this year, in a cooperative venture with International Business Machine's Almaden Research Center (ARC), we installed 20 Bluebird nest boxes on a ridge overlooking the Almaden and Santa Clara Valleys. To our collective delight 6 of the nest boxes had produced 4 or 5 young birds each by the middle of June. This brief account is the forerunner of a series of reports on what we learn from this fascinating project.

Michael Rigney made initial arrangements for the project with ARC's Allyn Erickson in March. On 3 April, with our advice, a skilled crew from the Center's Maintenance Department installed 20 4X4 inch redwood posts at 50-meter intervals along a fence line on the ridge. They then mounted the 20 nest boxes, which had been produced for CCRS by George Honore and friends, each with its base 1.5 meters above the ground and with its opening facing southeast (Figure 1). Since then, at intervals of 10



Figure 1. Nest box #20. Five Western Bluebirds were banded and ultimately fledged from this nest box. Photo by L. R. Mewaldt.

to 12 days, we toured the trail and inspected the nest boxes for their contents. As the young birds reached appropriate age, we banded them with U. S. Fish and Wildlife Service bands and recorded relevant data. No fewer than 4 persons from IBM and 5 from CCRS have participated -- usually two or three at a time.

Allyn Erickson reported that Western Bluebirds were seen inspecting at least one nest box the day (3 April) they were installed. When visited on 14 April, 3 boxes contained nests, one of which (# 017) already held a Bluebird egg. A review of our findings in the 6 occupied nest boxes follows:

Box 001:

04/14 Empty
04/27 Mammal hair 2 cm deep -- perhaps weathered mammal scats of owl pellets
05/08 5 eggs with brown speckles - Ash-throated Flycatcher - an adult was observed nearby
05/19 5 eggs - warm to touch
05/31 Band 4 young ATFL - 1 infertile egg.
06/15 Empty

Box 006 :

04/14 8 cm grass - no bowl formed yet
04/27 Bowl formed
05/08 5 Western Bluebird eggs - warm
05/19 5 eggs - warm to touch
05/31 Band 4 young WEBL - 1 addled egg - both adults were in close attendance
06/15 Empty

Box 013 :

04/14 Empty
04/27 Empty
05/08 3-4 cm mammal hair from pellets
05/19 2/3 cm grass on top of mammal hair
05/31 4 white eggs - lots of feathers
06/15 4, 2-3 day old young Violet-green Swallows - hand-caught and banded both adults on nest

Box 017:

04/14 1 Western Bluebird egg in nest with fine fiber lining
04/27 5 WEBL eggs - warm to touch
05/08 5 young banded
05/19 5 young still in nest - weighed
05/31 Nest empty
06/15 Empty

Box 018:

04/14 20-25 pieces of grass
04/27 Same
05/08 4-5 cm mammal hair
05/19 5 Ash-throated Flycatcher eggs - warm
05/31 4 ATFL young banded - 1 addled egg
06/15 Empty

Box 020:

04/14 Nest complete - no eggs
04/27 5 Western Bluebird eggs - warm to touch
05/08 5 young WEBL banded
05/19 4 young weighed - one dead
05/31 Nest empty
06/15 Empty

It is gratifying that 6 of the 20 boxes were used by three different species to bring off broods of 4 or 5 young each. This surprises us because of the relatively late date (3 April) of nest box installation. Perhaps we should seek what this means in the way of possible relationships among population levels of these species, competing species, and available natural cavities in the trees on the ridge.

Participants of record included Allyn Erickson, David Hildebrand, Gary Keller, Dieter Thiel, and other staffers from IBM, as well as Michael Rigney, Dick Mewaldt, Frances Mewaldt, Blair Wolf, and Paul Noble from CCRS.

KESTREL NEST BOXES

By Blair O. Wolf

New member Dr. Thomas Blagooyen of San Jose State University recently provided CCRS with six American Kestrel nest boxes for placement at the Station. Several of these have already been mounted in trees within our research area and one has been installed at IBM's Almaden Research facility in the Santa Teresa foothills. We have plans to install several more at CCRS and possibly another six at IBM. It is hoped that the boxes will attract not only American Kestrels, but also Saw-whet Owls and Western Screech-Owls as well. CCRS thanks Tom for his donation of these fine nest boxes.



Biologist Blair Wolf assists Dr. Thomas Blagooyen in the installation of one of the American Kestrel nest boxes. Photo by L. R. Mewaldt.

DOROTHY HUNT ELECTED PATRON

By L. Richard Mewaldt

Life Member Dorothy B. Hunt of Pacific Grove, California was elected Coyote Creek Riparian Station's first Patron by the Board of Directors at its April meeting. Her several substantial monetary contributions included one of five thousand dollars in 1987. That grant made it possible for CCRS to maintain cash flow when we brought aboard our first employee (Biologist Blair Wolf) on our first Santa Clara Valley Water District contract. Others of her contributions have made it possible for us to purchase needed equipment and have bolstered our Endowment Fund, which has now grown to \$23,555.



CCRS Patron Dorothy Hunt (right) and CCRS Life Member Dr. Evelyn Hart Case on a visit to PRBO -- in June of 1975. Photo by Dick Mewaldt

For more than 25 years Dorothy Hunt has been a staunch supporter of bird research, especially studies in which bird banding is used. As Secretary of the Northern Division of the Western Bird Banding Association she wrote in the minutes of the meeting of 17 January 1965:

"The President [Bruce Swinehart] then asked for a report from the Ad Hoc committee on the feasibility of a bird observatory at Point Reyes. Dr. Mewaldt, who had previously given each member a copy of a draft of a Grant Proposal for submission to the National Park Service, discussed the committee's work in behalf of the project. . . . [He] pointed out it [Point Reyes] is not a gentle area, but has unique value both aesthetically and scientifically and could become known for its avifauna."

Since 1965, Dorothy has contributed generously to Point Reyes Bird Observatory and more recently to our younger Coyote Creek Riparian Station. She has been and is continuously active in several hands-on projects.

As participant in PRBO's beached bird survey she was the first, in July of 1980, to bring attention to the unusual mortality of California Murres and other sea birds on Monterey Bay beaches (PRBO Newsletter 55). This led

Burr Heneman, in the following months and years, to seek successfully new regulations (e.g. PRBO Newsletter 63) on gill net fishing in the shallow waters off the central California coast.

For several years she worked in the Pajaro Dunes area on PRBO's Snowy Plover project with Jane and John Warriner and of course Gary Page and Lynn Stenzel. Not resting on her laurels, Dorothy is now in her ninth year as a Docent at the Point Lobos Reserve State Park where she leads field trips and answers the never ending questions of visitors.

Dorothy Hunt, we salute you for what your seemingly boundless and well directed energy has accomplished and for your fiscal generosity. You bring joy to the lives of many.

BLEITZ WILDLIFE FOUNDATION GRANT

We are most pleased to report receipt of a grant of \$9,200 from the Bleitz Wildlife Foundation, of Los Angeles, California, to establish and make functional our Bird Banding Records Center. We are indeed grateful to Mr. Ed Harrison, President of the Foundation and his Board of Trustees.

With this grant we have purchased a computer, and the essential accessories, especially designed for storage and retrieval of the broad spectrum of data we collect at our CCRS Research and Bird Monitoring Station. The computer is especially adapted for our bird banding data base, **The Bander**, designed for us by BC Software of San Jose. We have begun the arduous task of bringing into our data base the many thousands of records dating back to 1982.

Our new Bird Banding Records Center is in operation. Mr. Craig Kuziel has begun the task of entering 1982 data and is preparing materials to train and schedule the volunteers who will help him enter the substantial backlog of data. In our best CCRS tradition, we anticipate these people will then be the cadre for the volunteer group which will from then onward keep current the entry of data as they come from our CCRS Bird Banding operations and other research activities.

FUND APPEAL FALLS SHORT

We promised to share with you the results of our plea for help, in the fall of 1988, to make up for an unforeseen short- fall in our 1988-89 staff budget. We have attained 79% of our goal -- \$5535 of the \$7000 we need -- as of the middle of June. The CCRS Staff and Board of Directors are most grateful to those 64 people who made 76 contributions.

SFBBO MONTHLY MEETINGS

We bring to your attention the fine programs arranged by San Francisco Bay Bird Observatory for its monthly meetings. They are usually held the first Thursday of each month at the San Francisco Bay National Wildlife Refuge Environmental Education Center in Alviso. The Observatory allots time at each meeting for CCRS newsbriefs and announcements.

August 3

Brenda Johnson - Univ. Calif. - Davis

Topic: Burrowing Owls

Janis Taylor - Save B.O.T.H.

Topic: Update on Burrowing Owl Colony at Mission College.

(The August 3 meeting only will be held at SFBBO headquarters at the intersection of Elizabeth and Hope Streets in Alviso.)

September 7

Jill Hedgecock - Rain Forest Action Network

Topic: Birds of the American tropical rain forest and problems they are encountering because of deforestation.

October 5

Clark Blake - Research Geologist, U. S. Geological Survey

Topic: Geology of the South Bay and surrounding territory.

November 2

David Suddijan

Topic: Santa Cruz County Breeding Bird Atlas.

MEMBERSHIP AND CONTRIBUTIONS

At press time, our paid-up Membership was approximately 225. Our roll includes Life Members Evelyn Hart Case, Marilyn & Russel Fowler, Jane & Francis Goraj, Dorothy B. Hunt, David B. Johnson, Frances L. Mewaldt, L. Richard Mewaldt, Vi Nisonger, Alfred Schmitz, Jack L. Wallace, Bob & Diane Garcia, John Delevoryas, and Viola L. Anderson.

Those Members of CCRS who in the past year made monetary contributions in addition to their basic membership were Walter C. Avery, Peggy Brown, Phyllis Browning, Robert Buell, Jeffrey A. Caldwell, Roy S. Cameron, Dr. Evelyn H. Case, Dr. Howard L. Cogswell, Robert G. Clement, Charles Coston, Maryann Danielson, John Delevoryas, Deanna Domeier, Steve & Elwyn Dorman, Ronald R. Duke, Dick Elliott, Shawneen E. Finnegan, Kevin & Maureen Foerster, Bob & Diane Garcia, Phil & Pat Gordon, Phil Hand, Chip & Jane Becker Haven,

Gloria G. Heller, Harriet Hill, Rick Hopkins & Lisa Sinizer, Grant & Karen Hoyt, Dorothy B. Hunt, Patricia Jacobson, Hugh J. Judd, Bruce Katano, Gerard J. Kettmann, Beryl H. Kilgore, James R. King, William Kirsher, Keith R. Kraft, Rosalie C. Lefkowitz, Dr. Max Lincoln, Katharine Loughman, John & Betty MacDonald, Michael Mammoser, Syndie Meyer, Dick and Fran Mewaldt, James G. Miguelgorry, David M. Moyles, M. S. Niver, Paul Noble, Joan Priest, Drs John & Carol Ralph, David C. Regnery, Hawkeye J. Rondeau, Neal & Dixie Royer, Alfred Schmitz, Milton L. Seibert, Dr. Howard S. Shellhammer, Elinor Spellman, Mark E. Sutherland, Otis Swisher, Hazel I. Tilden, Ruth Troetschler, Jerry Waldorf, Jack L. Wallace, Don Weden, Erika M. Wilson, Susanne Wilson, Chris Wolf, Lawrence W. Wolf, Judy Wong, Ellen Yeoman, Lou and Jean Young.

NEW MEMBERS

We welcome 18 new members who joined CCRS in the last three months:

Bryant, Richard	Member
Canedo, Luis	Active Member
Drumm, Mary A.	Active Member
Ferguson, Bridget	Active Member
Folan, Peter	Active Member
Fricano, Marian E.	Active Member
Gothard, Chris	Active Member
Heazlit, Cindy	Member
Kuziel, Craig	Active Member
Lydon, Sean	Active Member
Oliver-Garnett, Kathryn	Active Member
Rooks, Edward	Active Member
Sellers, Dave	Member
Schmoldt, Don	Member
Sinizer, Lisa	Member
Thiel, Dieter K.	Active Member
Wasserman, Jan & Harold	Members

Membership renewals are coming in very well. Some have upgraded their membership category or made an additional contribution.

Life Membership payments and 10% of all other membership payments and general contributions (including some generous contributions from our Life Members) are placed in the CCRS Endowment Fund thereby assuring the future of CCRS.

RECOVERIES OF BANDED BIRDS

We recently received, from the U. S. Bird Banding Laboratory, Laurel, Maryland, the following report of an encounter with a bird processed by CCRS personnel.

Black-crowned Night Heron

Banded 11 Jun 1971 as a nestling on Bair Island near Redwood City by CCRS Member Robert Gill, now of Anchorage, Alaska.

Found dead 19 Feb 1989 (17 years, 8 months, and 8 days later) at Fort Baker near the Golden Gate Bridge and reported to Allen Fish, Golden Gate Raptor Observatory.

MEMBERSHIPS IN CCRS

Member	\$15 annually
Senior or Student	10 annually
Family	20 annually
Supporting.....	30 annually
Sustaining.....	75 annually
Corporate	100+ annually
Life	500 single payment*
Patron	5,000 single payment*

Life Membership payments and 10% of all other membership payments and general contributions go into the CCRS Endowment Fund now earning about \$175 per month. CCRS is a non-profit corporation with U. S. and California tax exempt status. Five dollars from the dues of each joint CCRS-SCCBB Atlas Member goes to the Atlas program. We acknowledge Memorial contributions in *RipariaNews*. We welcome bequests, including those of real property.

*Or in 4 or 5 installments

HAPPENINGS AT THE STATION

By Michael Rigney

During the last three months we have made tremendous progress in a number of important areas. First, we are well on our way to having a functional office in the "Alviso Headquarters" trailer. This trailer, parked across the street from H.T. Harvey and Associates now accommodates the Office Manager, the Station Manager and the data entry facility. We now also have a telephone, electricity, heating and air conditioning.

We could not have accomplished this without the help of a number of volunteers, most particularly **Craig Kuziel**. Craig, although a new volunteer, has, on many occasions spent every day either at the Station or at the Alviso trailer. He and his wife Kathy helped me install carpeting in the front office and move all the furniture and records from our former office area at Harvey and Associates to the trailer across the street. Craig has also begun to get the back-log of banding data into our new computer. New banding records for 1988 are all entered into the computer (over 6,000 records!!).

Through a grant from the Bleitz Wildlife Foundation, (see related article in this issue) we were able to purchase a new and more powerful computer. For you computer buffs it's an IBM compatible with a 20 mhz. 80386 c.p.u., and an 80 MB fast access hard disk. We hope that when our new pad is built and our new trailer is moved to the Station that this computer will serve as a file server in a networked system which will allow direct data entry as birds are processed. This, however is sometime in the future unless more funding becomes available for additional computer equipment purchase.

As I mentioned in the previous issue, CCRS had applied to the State Water Resources Board for a grant to

conduct additional plantings along Coyote Creek. We heard just within the last few days that our proposal was not picked for funding this year. Although we were disappointed, we all recognized that the competition was intense and the funds were limited. We were encouraged to apply again next year.

Blair Wolf and Stephanie Jones' paper on the Great Blue Herons and lampreys was recently published in the *Codor* making it Publication #1 of CCRS. Congratulations! Hopefully this will be the first in a long series of important research endeavors published by Station volunteers and staff.

We continue to need banders and recorders to maintain regular Station operation. We had to cut back to five days a week in July primarily because we could not find volunteers for Mondays and Tuesdays. If you happen to have mornings open on either of those days Blair and Dick would love hearing from you. We continue to be one of the most productive bird banding operations in the United States surpassed only by the larger bird observatories. Observatories like Point Reyes, Manomet and Long Point also have large staffs and substantial budgets while we depend primarily upon volunteers and donations.

With that in mind, I would like to mention that our Active Members will be receiving a letter in the mail shortly which will explain the benefits and responsibilities of the Active Member category. You will also receive a summary of your activities (as we have recorded in the daily log at the Station) during the past few months. In accordance with our bylaws, we reserve the Active Member status for those individuals who donate their time to the Station on a regular basis. Although we value all of our members, it is the Active Members who keep the data flowing in, the net lanes mowed, mist nets repaired and replaced, and our valuable records in order. We want to make sure that all who share this awesome responsibility share in it somewhat equally. We also feel that it is necessary to let people know what we as an organization expect of our more active members, and we want to make sure they get credit for all their labor. Secondly, we are sending this accounting to make sure we have not forgotten to acknowledge all your collective efforts. Please check to make sure we have properly credited you with the proper number of hours or days which you have spent in your various endeavors.

We are gearing up for an exciting Fall migration. We will try to schedule another training course for late summer or early fall to refresh ourselves on the vagaries of juvenile (especially warblers) and fall plumaged birds. We will let you know when and where this much-sought-after course will take place. Needless to say, we all need help in this area.

Thank you all for your support during the previous months and remember we can always use another good volunteer!!!

COYOTE CREEK RIPARIAN STATION

Coyote Creek Riparian Station is a non-profit California membership corporation with United States and California tax exempt status. CCRS is dedicated to research on, and to the restoration and management of riparian and wetland habitats including the wildlife and other animals that live there. CCRS is located on City of San Jose, Department of Water Pollution Control limited-access land along the last two kilometers of the west bank of Coyote Creek where it meets San Francisco Bay.

Coyote Creek Riparian Station operates in cooperation with the Santa Clara Valley Water District, San Jose/Santa Clara Water Pollution Control Plant, H. T. Harvey & Associates, John Stanley & Associates, San Jose State University, U. S. Bird Banding Laboratory, Laurel, MD., San Francisco Bay National Wildlife Refuge, and the California Department of Fish and Game.

RipariaNews is published quarterly for the information of our CCRS membership, the personnel of the several cooperating federal, state, and local agencies, and for other organizations and individuals concerned with environmental issues. Please let us know of persons or organizations who might benefit from or enjoy our *RipariaNews*.

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