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RipariaNews

Spring 1995

Newsletter of the Coyote Creek Riparian Station

Volume 10, No. 1

Stream Inventory Milestone

by Michael Rigney

It all started with what seemed to be a simple question that nobody could answer. How much riparian habitat was left in Santa Clara County? The chance to answer that question came in 1992 when the U.S. Environmental Protection Agency funded a series of "demonstration projects" to develop innovative techniques in watershed conservation. CCRS proposed a novel approach to gather information on the state of riparian resources in Santa Clara County. This unique approach would use trained volunteers to collect field data on a variety of different habitat measurements. Our project was one of only nine that were funded through a special appropriation from Congress. Armed with this initial funding we approached the Santa Clara Valley

Water District for additional funding. And the rest, as they say, is history.

We are now in our third year of what will ultimately be a five to ten year program to survey and document riparian habitat on every major river and stream in the county. The report on our first stream surveyed, San Francisquito Creek in Palo Alto, is being published soon and teams of volunteers are currently finishing work on the upper tributaries of the Guadalupe River. What's more, the process we began in Santa Clara County is spreading to other parts of the Bay Area. Groups of volunteers are starting "riparian stations" in Napa and Sonoma counties. These groups will begin gathering data using protocols we developed at CCRS within the next year.

It's hard to believe that from the tentative beginnings on San Francisquito Creek nearly two years ago, a community-based movement has evolved to insure that the habitat our teams documented, remains intact. In part as a result of our stream inventory, a Coordinated Resource Management Plan is being developed for the San Francisquito Creek watershed. Under the guidance of Debbie

The Heart of The Matter

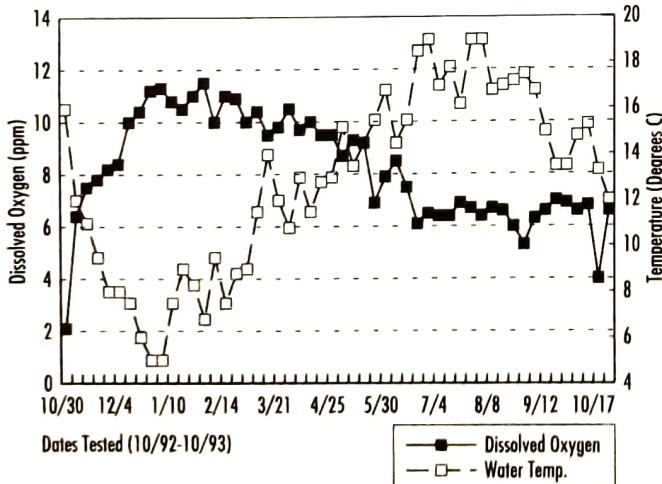
by Chris Fischer

One hundred and forty six citizens spent two thousand, nine hundred and ten hours collecting hundreds of data sheets' worth of information on the wildlife, habitat and pollution impacts on San Francisquito Creek. That's an average of over 20 hours per person! Impressive as these figures are, they do not begin to tell the story.

"What I like best" confided one elderly volunteer last summer, "is the shock on my kids' faces when I tell them what I did last weekend." "My favorite part is learning the names of all the animals and trees!" our youngest recruit tells me. Everyone who has participated has had a different answer to the question "Why?" Yet there is one thing they will all say: "I've never done anything quite like *this* before!" And neither had we!

I enjoy looking back at the frantic, exciting days in early 1993 when CCRS staff members were trying to figure out how to teach people from the ages of eight to eighty how to collect scientifically valid data, in areas not maintained for public use, for a reasonable sum of money and still, somehow, make it *fun*. At the time, it seemed quite a challenge. In hindsight, it feels a bit like a miracle that we ever succeeded.

The very first team was Water Chemistry, who to this day meets at 8 am Sunday mornings to monitor the health of the stream. The entire first year they never missed a week, come rain, fog or heatwave. Two of these original volunteers hold the record for



Water quality data gathered on San Francisquito Creek has helped to establish baseline characteristics for creeks. This figure shows how dissolved oxygen and water temperature are related.

Continued on page 2

Continued on page 4

Director's Note

by Michael Rigney, Executive Director

Recently, I began reading a book by noted conservation author Tim Palmer entitled, *Lifelines: The Case for River Conservation*. This is a marvelous book which brought back for me the essence of why I became involved in river ecosystems and feel so strongly about their protection and restoration. There are so many wonderful, flowing passages in this book which evoke special meanings that it's difficult to pick just one to share with you. The one I have chosen, will hopefully tempt you and others like you who feel rivers and streams are integral to our sense of place and belonging, to venture into these special places. The last paragraph of his section called "Rivers of Life" talks about the "sensation" of a river (something somewhat foreign to most of us who consider ourselves scientists and who deal with empirical data).

"We have planned ineffectively for our rivers partly because they are so difficult to describe in all their glory and promise. Even if we could diagram the networks of lives depending on lives, the descriptions lack the fragrance of springtime cottonwoods, the chilled electricity of a splash on a summer day, the soothing hiss of the riffle in our ears at night. The scents, the sounds, and the light on the water at sunset might best trigger the impulse that a river is worth saving."

It is important to remember that people rarely make totally rational decisions about conservation issues. At some point we recall a magical moment in some stage of our life that conjures up sights, sounds and smells. These lingering memories often tip the scale in favor of making the right choice for the resource.

Some of the people who have been involved in our stream inventory program have told me about the rush of childhood mem-

ories which came flooding back when they first ventured into the creek to do vegetation surveys, or survey fish habitat. These memories had been long suppressed because, as adults, we no longer had time to "play in the creek." Rationally, we all justify the work we are doing as "collecting good data on the stream ecosystem." But deep down in our subconscious, we remember the joy and exhilaration of floating in an inner tube, seeing a large trout dart under a log, or hearing a chorus of frogs on a summer night.

Sometimes it is easy to become so entangled in the daily routine of running an organization that it's difficult to gain perspective. When life seems to revolve around meetings with agencies, writing grant proposals, revising organizational structures, program development, I sometimes forget to look out the window at the creek.

Today I finally tore myself away from my computer terminal and went for a stroll along the creek. After the hard rains in January, the leaves of the willows, elderberries and boxelders were breaking loose. Is it spring already?! The smell of humus in the making was overpowering; the sharp calls of Audubon's Warblers rang out everywhere as their feeding frenzy on newly emerged insects shifted into high gear; and overhead, Black-shouldered Kites were engaged in aerial courtship displays.

I will continue to collect data on the ecology of rivers and streams, because that satisfies the rational part of me and others. **It is truly important work!** But I will continue to take regular walks along the creek because the sights, sounds and smells are what brought me here in the first place.

How about you?

Stream Inventory Milestone

 Continued from page 1

Mytels of the Peninsula Conservation Center, the CRMP (or "crimp" as its generally referred to) is using our data as the basis for determining which habitat features need the most protection. We also hope that the five cities within the San Francisquito Creek watershed will use our habitat data to develop land use policies which will allow this fragile ecosystem to remain an integral part of their communities.

It's also hard to believe the amount of information that we have generated on the characteristics of San Francisquito Creek, its waters, wildlife and habitat. Audubon volunteers observed over 1,710 birds of 98 species during their quarterly counts at the 40 points from the Bay to Searsville Lake. Our vegetation crews counted, identified and measured

979 trees of 34 different species at those same 40 points. Hip wader clad members of our fisheries teams measured pools and riffles to classify habitat for the rare steelhead trout. Clambering up the steep sides of the creek at each point, our dedicated channel profile volunteers used simple techniques to gather channel cross-sections for future determinations of channel changes. Our dedicated water chemistry teams (the first teams to begin work on this project) have gathered two years worth of valuable information on water quality. The habitat mapping and reptile and amphibian survey teams walked the entire length of San Francisquito (sometimes more than once) to assess the quality and type of riparian habitat and to look for elusive frogs, salamanders and turtles. A previously unknown population of the threatened California red-legged frog was discovered by these keen-eyed observers.

After noting that many pollution problems and instances of illegal dumping continue to degrade the habitat quality of San Francisquito Creek and most of the other creeks in Santa Clara County, we developed another program to provide volunteers with the resources to report these problems. Called the StreamKeeper Program, volunteers (many of whom are also stream inventory volunteers) were trained to recognize and report pollution incidents to the proper agencies.

The Coyote Creek Riparian Station has developed these programs to further our goal of understanding and protecting riparian habitat throughout Santa Clara County. Armed with these new tools and a dedicated army of trained volunteers, we have begun to show communities how important their rivers and streams are and how they, as members of the community, can play an important role in resource stewardship. ★

GIS—More than pretty maps

by Michael Rigney

One of the new tools that environmental scientists have at their disposal is a computer-age blend of old fashioned maps and data sheets made possible by today's fast computers. Most of us are fascinated by maps—just ask the National Geographic Society which has one of the largest circulations of any popular magazine. Now we have the capability to link familiar geography with sets of envi-

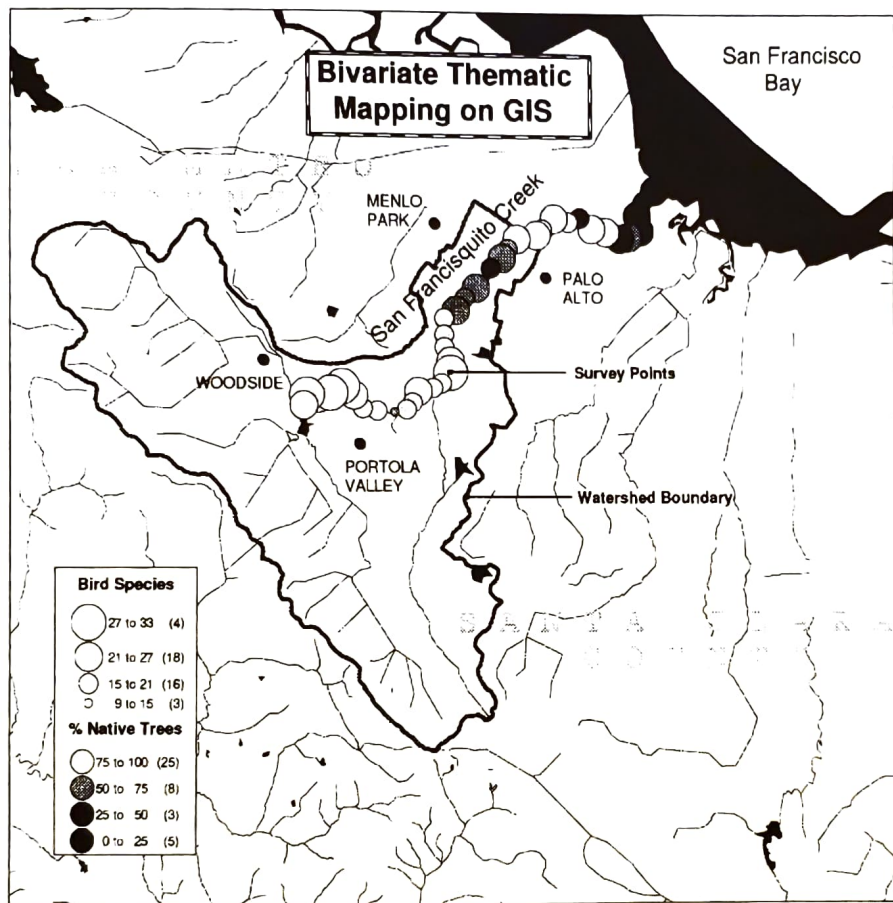
ronmental data. We can begin to see how certain measurements of the world around us relate spatially to others and we can begin to ask questions of the data that relate to our sense to our changing environment.

GIS (which stands for Geographic Information Systems) combines digital forms of maps with data stored in an electronic database. When categories of data are given a geographic reference (either latitude—longitude or some other X/Y coordinate system),

they can be laid over the top of maps of various types just as you would overlay a drawing on acetate over a drawing on paper. Data can include specific information gathered at a series of points or data about an irregularly shaped area or line or combinations of all three. Once these data are joined together in the computer you have the capability of asking rather complex questions of the data in a geographic context. For instance, if a particular creek has a variety of adjacent land uses and we encounter sensitive wildlife habitat along a section of creek, we can outline that area on the computer. We can then plot a certain size buffer zone around the habitat and calculate the types of land uses which would be affected. This type of computer modelling has tremendous applications in both the environmental sciences and in urban planning.

The map shown here shows two different data sets from our stream inventory and how they relate to each other. In this case, the percentage of native trees at each survey point and the number of bird species observed. It is possible to quickly evaluate whether, in a geographic sense, a trend toward a higher complement of native tree species results in greater bird species richness.

The advent of analytical tools such as GIS and its partner GPS (Global Positioning Satellite systems) will enable us to provide data which is both meaningful and easily understandable. It is not enough anymore, to collect and analyze data—someone must be able to use the data to make decisions which will protect our dwindling natural resources. And GIS is becoming an important tool for increasing the impact of our data. ✨



Two New Scientific Publications Just Released by CCRS

Otahal, C. D. 1995. Sexual differences in Wilson's Warbler migration. *Journal of Field Ornithology* 66:60-69.

Otahal, C. D. 1995. Sexual differences in spring migration of Orange-crowned Warblers. *North American Bird Bander* 19:140-146.

Both articles look at the differential migration found among males and females of the respective species and possible fac-

tors which may contribute to this differential migration.


ed. note: Chris Otahal, banding program biologist, has worked diligently on summarizing our extensive banding database. These are some of the first articles to come from his analyses. We hope that many more exciting works will be submitted for publication in the near future. ✨

Nesting Info Needed

Board member Steve Rottenborn is doing research on the nesting habitat of Red-shouldered Hawks in the South Bay and would like any information on locations of sightings, especially nesting sites occupied this year or even in past years. He needs to see these nests before the young fledge, so it would be good to let him know as soon as possible. Steve can be reached at (415) 497-9368.

Chris Fischer is seeking information about Belted Kingfisher nest locations. Call Chris at CCRS (408) 262-9204. ✨

The Heart of the Matter

 Continued from page 1

dedication — over two hundred hours each and counting! Slowly, over the course of the first year, more teams were added — the Bird Census, Fisheries Assessment, Vegetation Survey, Reptile and Amphibian Census, Habitat and Pollution Mapping, and Stream Channel Profiling teams. More volunteers took on individual tasks, such as rain gauging, pollution documentation and reporting, storm drain sleuthing, turtle watching and access reconnaissance.

It is amazing how stoically the volunteers suffered through our early attempts to develop reasonable protocols and training procedures. Agency staffers and local professionals volunteered many hours to help us, but it took us a while to 'get the hang of things.' Rather than becoming discouraged, the troops pitched in to help! Over fifty volunteers participated in a quality assurance and training workshop and helped the staff answer important questions on what worked and what still needed some judicious 'tweaking.'

Stars were born on every team, as we battled poison oak and clouds of mosquitoes,



Community Creek Watch

hunted tirelessly for safe ways down into the stream, and chatted for hours with curious residents who discovered us behind their back fences. And we saw some neat stuff. After serving for two years on the Fisheries team, one of the original volunteers wrote that his favorite thing was: "Being in places I've never been before, places that are so near every day but so private, like San Fran-

cisquito Creek in the Jasper Ridge Biological Preserve — exploring Los Trancos Creek from end to end, making all kinds of discoveries in hidden canyons and exclusive places. Just being there!" Our discoveries included some unexpected treasures, such as hundreds of baby "par" steelhead trout, the nesting location of red-shouldered hawks, artifacts from the Stanford chapel destroyed in the '06 earthquake, and a piece of fossilized skull from a Miocene whale.

The best discovery of all, though, was that it could work. That it *did* work! People from all over the country watched this pilot program to see if we could pull it off, and now they're excitedly using us as a model in their own areas. Meanwhile, we're moving on to new streams here in the Santa Clara valley. Stevens Creek and the Guadalupe River watershed are keeping us busier than ever, and new volunteers are coming on board every day. But once in a while I reminisce about tentatively setting off with the first Fisheries team by the springtime banks of San Francisquito Creek, wondering what we'd find around the first bend. What an adventure we've had! ✨



San Francisquito Creek Community Creek Watch Volunteers

Bird Census

Jane Becker-Haven

Ann Bender
Bob Buell
Karen Cooper
Dave Drake
Bob Elliott
Julianne Frizzell
Leda Beth Gray
Joseph Green
Chip Haven
Kyle Haynes
Bill Kirsher
Celeste Kirsher
Lawrence Kobernus

Winkie Lennihan

Sheila Marron
Chris Pendleton
Red Pendleton
Charles Preuss
Elizabeth Rush
Leonard Rush
Gene Troetschler
Ruth Troetschler
David Weber
Sunia Yang

Fisheries Assessment

Patricia Anderson
Leland Baxter
Monica Bjorkman
Nick Brisbois
Tom Canning
Steve Dillon
Mark Dubro
Leslie Ferguson
Earl Ford
Tom Forrest
Nancy Hardesty

Jim Johnson
Ellen Macneale
Kate Macneale
Mitch Mathew
Scott McCarthy
Evan Parker
Cliff Pierce
Jim Pollock
Charles Preuss
Margaret Roper
Dr. Jerry Smith
Ann Turner
Linda Wagner
Dave Wenrick
Laurie Williams

Reptile and

Amphibian Census

Leland Baxter
Rhett Butler
Anjuli Deb
Annuschka Deb
Steve Fend
Tom Forrest
Joseph Green
Kyle Haynes
Barbara Holden
Gerry Jennings
Mary Kenney
Lawrence Kobernus
Bronwyn Lewis
Mitch Mathew
Scott McCarthy
Tom Moutoux
Lynn Peters
Jim Pollock
Charles Preuss
Tom von Tersch
Saelon Renkes

John Rogers
Rich Seymour
Linda Wagner
Travis Walker
Mike Westphal

Vegetation

Debra Amshoff
Nick Brisbois
Chris Condos
Robert Elliott
Linda Elkind
Tom Forrest
Joseph Green
Leda Beth Gray
Bill Harrington
Al Huber
Jack Kempt
Mitch Mathew
Bert Manriquez
Scott McCarthy
Charles Preuss
Gale Rankin
Stacy Robenson
Matt and Jackson Slavik
Rosanne Specter
Jean Struthers
Sara Timby
David Wenrick

Habitat and

Pollution Mapping

Gary Anwyl
Kevin Cesar
Yi-Mei Chang
Winnie Chu
David Drake
Jeb Eddy
Robert Elliott

Dolly Gallagher
Leda Beth Grey
Shalese Huang
Al Huber
Bill Kent
Lawrence Kobernus
Tom Kopely
Dennis Manikowski
Bert Manriquez
L. Manson
Sheila Marron
Janice Newman
Stacy Robinson
Peggy Ruse
Chloe Silverman
Rosanne Specter
Pat Stroup

Water Chemistry

Monika Bjorkman
Chris Bloxam
Peter Bristol
Lisa Brown
Janet Davis
Dave Elsner
Eleanor Ely
Ellie Insley
Thomas Forrest
Tim Goode
Mike Hogan
Doug Hohbach
Dale Hopkins
Bill Hurley
Jim Johnson
Diana Koin
Clarice Olson
Robin Poskus
Charles Preuss
Theresa Rigney

Stan Souza
Cindy Wilbur

Profilers

Gary Anwyl
Kevin Bentler
Amanda Byer
Noelle Chambers
Yi-Mei Chang
Thomas Christenson
Anna Delroysario
Katherine Delse
Theresa Fo
Romina Milman

Rain Gaugers and Other Heroes

Trish Mulvey
Janet Davis
Don and Marilyn Reissen
Dena Mossar
Dr. Allan Launer
Faculty & Students of Palo Alto High School
Kirk Stoddard
Dave DeSante

StreamKeepers

Larry Aronson
John Arnold
Pat Cain
Jane and Owen David
Deke Descoteaux
Robert Dodge
David Drake
Donna Dueker
Ray Elliott
Donna Eriksson
Leda Beth Gray

Hank Haley
Naomi Hamburger
Stephanie Hart
John Headlee
Barbara Holden
Rufus Jeffris
Bill Kent
Ann Lambrecht
Jason Lee
Ruby and John Lomax
Charlie Martin
Marjorie Martus
Dena Mossar
Tom Moutoux
Marj Ottenberg
Jennipher Paul
Lynn Peters
Cliff Pierce
Jim Pollock
Theresa Rigney
Eugene Spurlock
Chris Thomas
Chuck Thomas
Ann Turner
Glenna Violette
Linda Wagner
Bob Wallace
Tom Warren
Ted Wassam

Bold = Volunteered over 25 hours or one continuous year to project.

Bold Italics = Volunteered over 100 hours to project.



Revegetation Monitoring at CCRS

Bird utilization of a recreated riparian plot

by Maryann Danielson and Rita Colwell

In the winter of 1986-87, CCRS began a ten-year monitoring program to assess the wildlife use of an existing section of riparian habitat and a newly created riparian plot of 4.3 acres adjacent to the riparian corridor. The existing corridor is between 25 and 75 feet wide within the study site and supports trees approximately 35-50 years old, shrubs of several species, and various native and alien herbs and forbs. The revegetation planting was a partial mitigation for loss of riparian habitat in the Lower Coyote Creek Flood Control Project. Plantings included plants typically found in a mid-level flood plain terrace (Fig. 1). The plantings closest to the creek included Western Sycamore, Box Elder, Blue Elderberry, Oregon Ash, and California Bay. Plantings further from the creek in heterogeneous clusters were made up of Valley Oak, Black Walnut, willow sp., Oregon Ash, and Blue Elderberry. Other species planted as individuals or as single species groves were Fremont Cottonwood, White Alder and Coast Live Oak. Three permanent nets for bird monitoring were located across this planted area.

One of the main goals of the mitigation program was the re-creation of wildlife habitat capable of supporting a complement of species equivalent to that which existed prior to the flood control project. To determine whether these goals were being met required an evaluation of both wildlife use and habitat structure.

Two of the most important variables influencing many woodland birds are canopy height and canopy closure. Five years after

planting, the mean percentage of canopy cover in the reveg plot is nearly 80% of that in the riparian corridor. At this time the mean canopy height was still less than 50% of the riparian corridor.

The bird monitoring part of the wildlife assessment program was done using three different monitoring techniques: point count, mist net transect, and breeding bird count. Only results from the mist net transect work is presented here. Three permanent transect nets were set up extending from the riparian corridor across the reveg area and into the overflow channel (see Fig. 1). Each net was made up of eight to ten 12-meter nets placed end-to-end and operated weekly, 5 hours per day, year round. Five additional single nets were operated in the riparian corridor to equal the number of nets in the reveg plot. Each net was numbered individually and each section of the long net was lettered so captured birds were recorded by species for each section of the net, thus providing capture numbers for each study area. Constant net use and time of operation throughout the monitoring period permitted direct comparison of bird numbers and species.

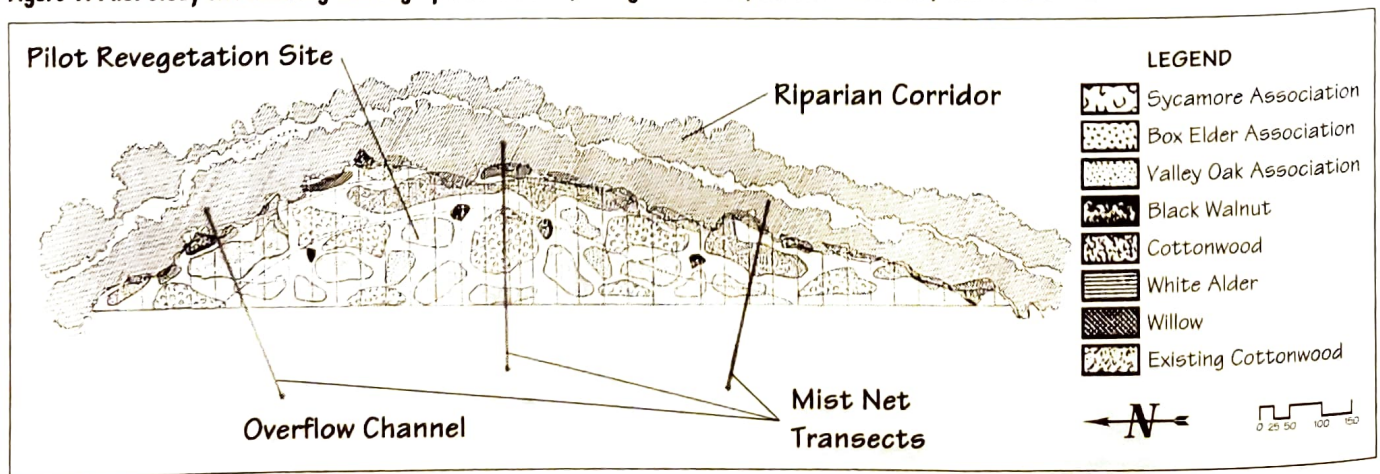
Seven years of data collection have shown that the reveg area is providing good bird habitat, and even better than the existing riparian area. From 1987 to 1994 a total of 12,152 birds were captured in the existing riparian and reveg areas. Except for the 1988-89 and 1989-90 seasons, more birds were captured in the reveg plot than in the riparian corridor. However, in order to better characterize the bird communities utilizing these habitats, it was necessary to compare

the number of species utilizing each area. To statistically adjust for differences in sample size and relative abundance of individuals of each species, we utilized rarefaction curves to show the expected number of species as a function of sample size in each area. The data indicate that after the first year the number of species (species richness) and the distribution of individuals among species (species evenness) were essentially the same in both plots. Species richness for the two plots in 1988-89 is shown in Figure 2. There was also an increasing number of species present in each plot for each successive year. Thus it appears that the revegetation area is performing close to the riparian area with regard to habitat utilization by species, and this utilization occurs very early in the restoration process. The species composition in the two areas has, however, changed over time.

A comparison of the ten species with the greatest numbers of individuals captured each year shows that in 1987-88, the riparian and reveg areas had six species in common, all ground gleaners. By 1993-94 the two areas had eight species in common, with a mixture of ground gleaners, foliage gleaners, and hawkers. This suggests that the reveg area habitat is approaching that of the riparian area in providing habitat for a diversity of species. In terms of numbers, however, the reveg area is presently 2.5 times more productive than the existing older growth riparian area. This higher productivity may be the result of new growth in the reveg area producing a foliage canopy more attractive to insects and in turn more attractive to birds.

Continued on page 12 

Figure 1. Pilot study site showing existing riparian corridor, revegetation site, mist net transects, and overflow channel.



Uncommon Breeding Birds of the Diablo Range

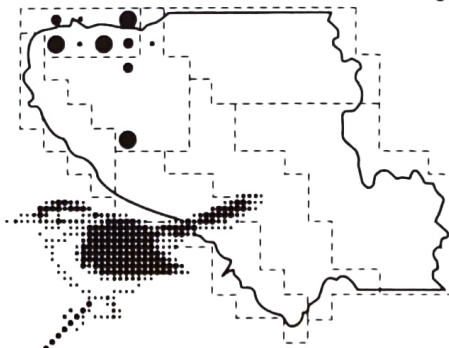
by Michael M. Rogers

Several species of birds that breed in Santa Clara County do so only in the Diablo Range. Many birders make trips to the San Antonio Valley or to Henry Coe State Park expressly in the hope of locating these specialties, which include Prairie Falcon, Greater Roadrunner, Lewis' Woodpecker, Say's Phoebe, Canyon Wren, and Phainopepla among others. During our atlas none of these species was found to be breeding away from the eastern part of the county, and many were not found at all in summer away from the Diablo Range. The distributions of these species were fairly well known prior to the atlas because of their rather limited extent in the county (although the atlas indicated that several of these species were more widespread than formerly believed in the underbirded interior of the Diablo Range—Canyon Wren provides a good example of this, with a remarkable 17 blocks in which breeding was confirmed).

Perhaps more interesting are those species that are uncommon or local breeders in the Diablo Range but that breed elsewhere in the county in far greater numbers. Since these species are common elsewhere in the county, less attention has been paid to their distribution and abundance in the Diablo Range and the data from the atlas provide some of our first concrete information on these subjects.

Several birds that breed in the Santa Cruz Mountains are associated with habitat that cannot be found in the Diablo Range. Species such as Golden-crowned Kinglet, Hermit Thrush, Hermit Warbler, and Pine

Santa Clara County



Breeding Bird Atlas

Siskin were found there only as migrants or wintering birds. Some species manage to breed right up to the Diablo Range and even a short way into its western edge but do not penetrate into its interior. Red-shouldered Hawks were found breeding along the edge of the Diablo Range along Marsh Road near Calaveras Reservoir, at Grant Ranch County Park, and in a few blocks near the western portions of Pacheco Pass Road at the southern edge of the county. Allen's Hummingbirds breed in both Ed Levin and Alum Rock Parks and perhaps in a few other blocks along the western edge of the Diablo Range but birds found in the interior of the Diablo Range are apparently fall migrants (which appear by late June).

The species examined in detail in this column are not Diablo Range "specialties," nor are they species that breed only on its western fringe. They have all been confirmed in several Diablo Range blocks, but never in the large numbers that breed in the Santa

Cruz Mountains (all three species described below have average "abundance codes" of about 2.6 in the Santa Cruz Mountains, suggesting roughly 30 or more breeding pairs per block). The cool, moist coastal forests of the Santa Cruz Mountains are very different from the hot, dry, more open woodland of the interior Diablo Range. Cooler, moister areas in the Diablo Range are confined to high elevations, north and northeast-facing slopes, and the bottoms of deep, steep-sided canyons or "arroyos." The species discussed below are found in exactly such areas. The extent of their occurrence in the Diablo Range was largely unknown prior to the atlas project and our data are the first to document their distributions in this region.

Based on the results of our atlas, the breeding distribution of the Olive-sided Flycatcher is illustrated in Figure 1. As always, large dots denote confirmed breeding and medium and small dots indicate probable and possible breeding, respectively. Immediately apparent is that this flycatcher breeds in virtually every block in the Santa Cruz Mountains. Also apparent is the much more limited breeding distribution in the center of the Diablo Range, the extent of which is fairly well defined by blocks containing elevations above 3000 feet. The three breeding confirmations are from Alum Rock Park (feeding young on 7/8/92 at the remarkably low elevation of 440 feet!—note how this confirmation, the westernmost of the three, is well removed from the rest of the records) and in the general vicinity of Mt. Hamilton (nest building on 5/3/92 and 5/7/89, the former

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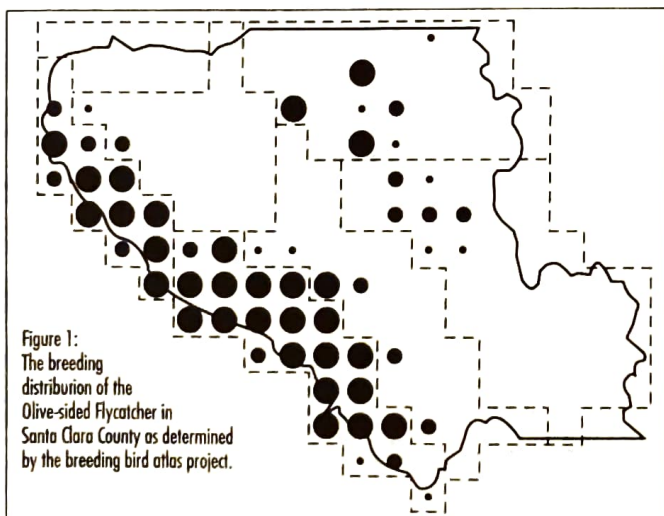


Figure 1:
The breeding
distribution of the
Olive-sided Flycatcher in
Santa Clara County as determined
by the breeding bird atlas project.

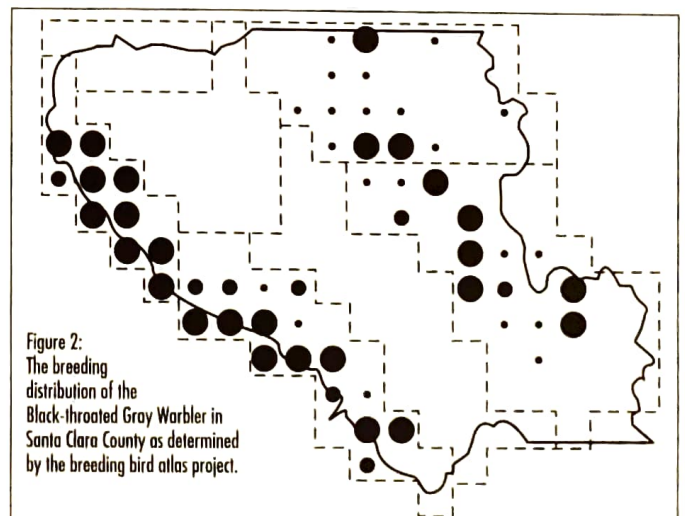


Figure 2:
The breeding
distribution of the
Black-throated Gray Warbler in
Santa Clara County as determined
by the breeding bird atlas project.

The 1994 Fall Season

by Bill Bousman

For the fall season, August through November, we banded every day in the months of August to October, excepting Sep 20, and then changed to our winter schedule in November and banded on 15 of 30 days. Using the Summary Board new capture data I have tabulated the passage dates of our more common fall migrants in Table 1 below. I include July dates in computing percentiles and this sometimes skews the dates slightly because some post-breeding dispersants are lumped with the migrants, but the median passage dates provide a good measure of when birds are migrating through and the 10th and 90th percentile dates indicate the span of their passage.

The top five migrants this fall were **Pacific-slope Flycatcher, Swainson's Thrush, Willow Flycatcher, Wilson's Warbler, and Orange-crowned Warbler. Yellow Warbler**, normally our second most common fall migrant, was banded in dismal numbers and fell to sixth place. In the past eight years we have banded this species more frequently in the fall ($m = 145$) than the spring ($m = 23$), but this year our fall total was less than the 40 we banded in the spring for the first time in the years we have run our banding program.

Willow Flycatcher was banded in record numbers this fall with the total exceeding our previous fall high of 52 in 1992. In a typical year we band about 30 birds during the fall. **House Wren** was also banded in



unusually high numbers, a trend noted in the summer as well. By the end of the season we had banded 17 birds where normally we net only four.

In looking at the new capture data for our more common migrants this year many showed a similar and, therefore, curious pattern. This pattern showed a strong spring migration with the number banded higher than in most years, but the fall passage was below normal. This pattern was seen for **Rufous Hummingbird, Swainson's Thrush, Warbling Vireo, Orange-crowned Warbler, Yellow Warbler, and Wilson's Warbler**. This list includes species like **Swainson's Thrush**, which is more common in the spring as well as species like **Yellow Warbler** which is more typically banded in the fall. Perhaps there is no message here except that avian populations will always fluctuate in numbers and although we may feel we can describe their major migration corridors the ones that are actually used will vary as well. What we can

see from one banding station is only a very small view of a very large picture.

Among the common species we did encounter a few of the rarer migrants to add spice to our banding. On Oct 20 we banded a **Gray Flycatcher**, the first we've had in the fall at the station. A **Solitary Vireo** was banded on Aug 11. Two **Black-throated Gray Warblers** were captured, one on Oct 10 and the other on

Oct 18. Two **Hermit Warblers** were banded as well, with one netted on Sep 14 and the second on Nov 30 at the end of the period. An **American Redstart** captured on Oct 20 was the third for the station while an **Ovenbird** banded on Sep 18 is the second station record. (A September 1992 banded bird was captured in Santa Clara and released along the creek.) We banded two **MacGillivray's Warblers**, one on Sep 5 and the other on Sep 16. A **Yellow-breasted Chat** was captured on Aug 31 and a **Chipping Sparrow** on Sep 22 to round out these special birds.

The departure dates for our resident birds and the arrival dates of our wintering species are shown in Table 2. The departure dates for **Allen's Hummingbird** and

Continued on page 12

Table 2. Arrival and Departure Dates for Fall 1994

Species	Arrival Date	Departure Date	Comments
BCHU		29 Sep	
ALHU		8 Aug	early departure
WIWR	16 Aug		
GCKI	8 Oct		high numbers
RCKI	28 Sep		high numbers
HETH	12 Sep		
VATH	13 Oct		early build-up
MYWA	28 Sep		low numbers
AUWA	19 Sep		low numbers
TOWA	19 Sep		
BHGR		17 Aug	early departure
SASP	6 Sep		low numbers
FOSP	7 Sep		
LISP	6 Sep		
GCSP	23 Sep		
PSWS	10 Sep		above normal
GWCS	14 Sep		above normal
DEJU	7 Oct		
BUOR		3 Aug	
ALHU	Allen's Hummingbird		
AUWA	Audubon's Yellow-rumped Warbler		
BCHU	Black-chinned Hummingbird		
BHGR	Brown-headed Grosbeak		
BUOR	Bullock's Oriole		
DEJU	Dark-eyed Junco		
FOSP	Fox Sparrow		
GCKI	Golden-crowned Kinglet		
GCSP	Golden-crowned Sparrow		
GWCS	Gambel's White-crowned Sparrow		
HETH	Hermit Thrush		
LISP	Lincoln's Sparrow		
MYWA	Myrtle Yellow-rumped Warbler		
PSWS	Puget Sound White-crowned Sparrow		
RCKI	Ruby-crowned Kinglet		
SAVS	Savannah Sparrow		
TOWA	Townsend's Sparrow		
VATH	Varied Thrush		
WIWR	Winter Wren		

Table 1. Fall 1994 Migration - New Capture Data

Species	No.	First	10th %	50th %	90th %	Last
RUHU	15	Aug 1	Aug 5	Aug 18	Sep 1	Sep 10
WEWP	5	Aug 17	—	Sep 3	—	Sep 19
WIFL	57	Aug 17	Aug 29	Sep 6	Sep 18	Sep 26
WEFL	606	Jul 6	Aug 10	Sep 4	Sep 22	Oct 19
ATFL	4	Aug 3	—	Aug 16	—	Aug 27
HOWR	17	Jul 2	Jul 5	Aug 3	Sep 30	Oct 27
SWTH	67	Jul 3	Sep 8	Sep 24	Oct 10	Oct 26
WAVI	16	Jul 3	Jul 5	Sep 7	Oct 2	Oct 10
OCWA	32	Jul 9	Aug 19	Sep 21	Oct 11	Nov 24
YWAR	30	Sep 2	Sep 10	Sep 16	Oct 1	Oct 18
WIWA	33	Aug 8	Aug 21	Sep 12	Oct 8	Nov 19
WETA	7	Sep 6	—	Sep 12	—	Oct 3
ATFL	Ash-throated Flycatcher		WEFL		Western Flycatcher	
HOWR	House Wren		WETA		Western Tanager	
OCWA	Orange-crowned Warbler		WIFL		Willow Flycatcher	
RUHU	Rufous Hummingbird		WIWA		Wilson's Warbler	
SWTH	Swainson's Thrush		WWPE		Western Wood-Pewee	
WAVI	Warbling Vireo		YWAR		Yellow Warbler	

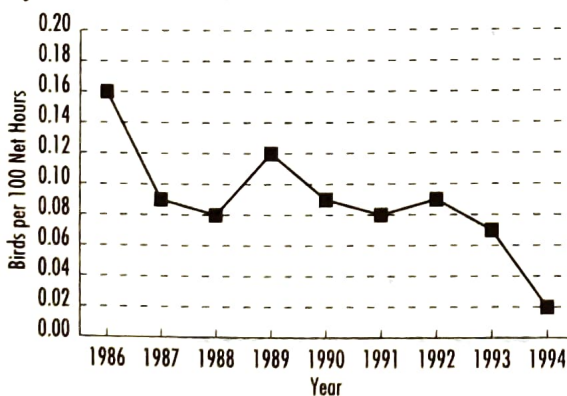
The 1994 Bird Banding Summary

by Rita R. Colwell and Bruce J. Katano

The banding program at Coyote Creek Riparian Station (CCRS) has completed its ninth year of constant effort mist-netting. The summary for 1994, illustrated in Table 1, on pages 10-11, shows a year fairly consistent in capture numbers with 1993. However, comparing fluctuations in bird banding capture numbers from year to year does not give an accurate picture of population trends. By comparing how many birds were captured to how many hours the mist nets were opened (birds per net hour), and plotting this value for several years, long-term trends begin to appear. Several banding stations across the United States have been using constant effort mist-netting for many years. Manomet Bird Observatory in eastern Massachusetts and Powdermill Nature Reserve in western Pennsylvania have documented significant bird population declines in several species of landbirds. In the west, Point Reyes Bird Observatory (PRBO) in Marin has detected similar declines in analysis of their mist-netting data. By plotting birds captured per 100 net hours for the nine years at CCRS, we can examine and compare trends for several species of birds.

Figure 1 shows a nine year declining trend for the neotropical migrant Black-headed Grosbeak. This species' population breeds primarily near riparian habitats, although woodlands with some openings, or "edges," are also used. In *The Marin County Breeding Bird Atlas*, the species account states a total reproductive failure in 1986 that was documented by PRBO's banding data. CCRS' banding data for this species show significant decreases between 1986-1987 and again in 1993-1994.

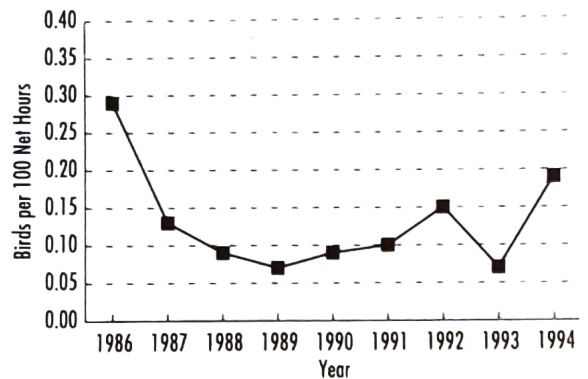
Figure 1. Black-headed Grosbeak Nine Year Trend



The Willow Flycatcher, another neotropical migrant, was listed as a species of Special Concern 1986. This listing was based on severe population declines in parts of the United States. The nine year trend for the flycatcher at CCRS (Figure 2) shows a steady decline, even though 1994 was a banner year in terms of total number captured for any year at the station. This species breeds in North America and winters in Mexico to Panama. Destruction of its breeding riparian habitat and tropical deforestation in its wintering area has probably jeopardized the Willow Flycatcher.

CCRS' banding data for the Swainson's Thrush show an overall decline in capture rates for the nine years (Figure 3). During the breeding season, this bird is distributed in many areas throughout the North American continent. It winters from central Mexico into South America south to Peru, Paraguay, and Brazil. This thrush is found in riparian forests and woodland habitats, where water and dense vegetation are life requisites. The North American Breeding Bird Survey, started in 1966, was established to collect long-term population data on breeding birds. These surveys are conducted during the peak of the nesting season and follow a consistent methodology. The California Breeding Bird Survey shows the Swainson's Thrush as declining at a rate of 42% from 1966 to 1989.

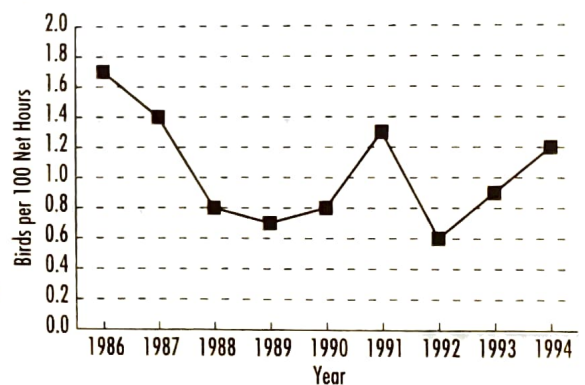
Figure 2. Willow Flycatcher Nine Year Trend



By monitoring bird populations long term, bird banding sites and breeding bird censuses across the United States are documenting songbird declines. The causes for these declines are many and complex: habitat loss or fragmentation, environmental contamination, increased cowbird parasitism, declines in insect populations. The challenge is to reverse the downward trend of their populations. It provides an opportunity for all of us to work together to stem the decline of their numbers and diversity.

Banding Summary Table 1 on page 10 and 11

Figure 3. Swainson's Thrush Nine Year Trend



References:

- Ehrlich, P. R., 1992, *Birds in Jeopardy*, Stanford University Press.
- Hagan, J.M., T.L. Lloyd-Evans, J.L. Atwood, and D.S. Wood. 1989. Long-term changes in migratory landbirds in the northeastern United States: Evidence from migration capture data in J.M. Hagan and D.W. Johnston (eds.), 1992. *Ecology and Conservation of Neotropical Migrant Landbirds*. Smithsonian Institution Press.
- Peterjohn, B. G., 1994. The North American Breeding Bird Survey. *Birding*, Vol. XXVI.
- Point Reyes Bird Observatory, 1993, *On Behalf of Songbirds*.
- Shuford, D., 1993, *The Marin County Breeding Bird Atlas*, Bushtit Press.
- United States Department of Agriculture/Forest Service, 1994, *Neotropical Migratory Bird Reference Book*.

Table 1: Coyote Creek Riparian Station Bird Banding Summary for 1994

Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Sharp-shinned Hawk	1										1		2
Red-tailed Hawk				1									1
Merlin			1										1
Killdeer				1									1
American Avocet						25							25
Mourning Dove	1		2	4	6	11	9	5					38
Long-eared Owl	1												1
Black-chinned Hummingbird				4	3	7	8	10	7				39
Anna's Hummingbird	4	5	4	13	18	6	45	47	32	17	3	7	201
Calliope Hummingbird					1								1
Rufous Hummingbird			7	52	9	2		13	2				85
Allen's Hummingbird		1	7	9	13	15	11	1		1			57
Downy Woodpecker				1	1	11	1		2	1			17
Red-shafted Flicker				1						4	3	5	13
Nuttall's Woodpecker	1			1			1		1				4
Western Wood Pewee					2			2	3				7
Olive-sided Flycatcher				1									1
Gray Flycatcher					1					1			2
Willow Flycatcher						1		19	38				58
Hammond's Flycatcher				2									2
Dusky Flycatcher				1									1
Western Flycatcher			1	15	33	6	11	244	320	30			660
Ash-throated Flycatcher					3	2		4					9
Black Phoebe	1		1	4	13	26	14	9	7	4	1	1	81
Violet-green Swallow			1										1
Tree Swallow			1	1									2
Northern Rough-winged Swallow				1									1
Barn Swallow					1			1					2
Scrub Jay								1		1			2
Chestnut-backed Chickadee			1	1	22	9	2		6	2			43
Common Bushitit	8	4	4	17	41	21	13	3	9	10	16	8	154
Brown Creeper						1				2			3
Bewick's Wren					1	2		1	1	3			8
House Wren				1			8	6	3	1			19
Winter Wren			1	2				1	1		1	1	7
Golden-crowned Kinglet										13	4		17
Ruby-crowned Kinglet	2	1	10	4	1				1	60	39	13	131
Swainson's Thrush				6	277	12	1	2	36	32			366
Hermit Thrush	10	14	11	47	9	1	1		25	189	40	17	364
American Robin		1	3	4	4	3	4					2	21
Varied Thrush		1								6	6	3	16
Northern Mockingbird			1	1	3	5	38	12	6	5			71
Cedar Waxwing				1									1
Loggerhead Shrike						1	3	3	1	1			9
European Starling	1	1			15	8	4						29
Warbling Vireo				3	17	1	3	3	7	3			37
Orange-crowned Warbler		1	4	61	50		3	4	14	10	1		148
Yellow Warbler					39	1			26	4			70
Myrtle Warbler			9	5					2	8	1		25
Audubon's Warbler	1	3	53	20					11	48	15	3	154
Black-throated Gray Warbler				1						2			3
Hermit Warbler											1		1
Townsend's Warbler					1				2	1			4
American Redstart										1			1
Ovenbird									1				1
MacGillivray's Warbler				1	2				2				5
Common Yellowthroat			11	51	5	3	7	7	16	5			105
Wilson's Warbler			3	25	154			11	21	7	1		222
Yellow-breasted Chat					1			1					2

Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Western Tanager					1				6	1			8
Black-headed Grosbeak					3		3	1					7
Lazuli Bunting					2		2						4
Spotted Towhee							1			3			4
Brown Towhee		1		2		8	11	7	1	1	1		32
Savannah Sparrow									4	1	2		7
Fox Sparrow	3	1	6	1					25	53	37	9	135
Song Sparrow	1		2	12	74	94	43	22	13	7	1	1	270
Lincoln's Sparrow	7	4	21	30					51	40	10	3	166
Swamp Sparrow				1	1								2
Chipping Sparrow					1				1				2
White-throated Sparrow			1	3			1			2	2		9
Golden-crowned Sparrow	13	16	40	43	3				8	116	54	17	310
Puget Sound White-crowned Sparrow	5	6	35	9					90	178	24	5	352
Gambel's White-crowned Sparrow	5	1	19	23					61	116	26	4	255
Oregon Junco			2	2			1	1		16	1		23
Red-winged Blackbird				6	8	4							18
Brewer's Blackbird						3							3
Brown-headed Cowbird			3	8	7	5	3						26
Bullock's Oriole				4	6	47	17	1					75
Purple Finch												1	1
House Finch	5	18	3		6	126	247	250	56	11	13	14	749
Lesser Goldfinch	1				4	6	2						13
American Goldfinch			52	143	36	17	21	29	11	6	1		316
House Sparrow					1	2	2						5
New bandings	71	79	320	650	899	492	541	721	930	1022	305	114	6144
Cumulative	71	150	470	1120	2019	2511	3052	3773	4703	5725	6030	6144	
Species banded	18	17	31	49	43	33	32	31	41	43	27	18	
Cumulative	18	23	39	57	72	77	78	79	82	83	83	84	84
Recaptures	229	211	405	483	358	312	239	241	313	550	387	320	
Cumulative	229	440	845	1328	1686	1998	2237	2478	2791	3178	3565	3885	3885
Days of operation	17	17	31	30	31	17	18	31	30	31	15	16	284

Coyote Creek Riparian Station would like to thank the following volunteers for their involvement in the 1994 bird banding program:

Vicki Silvas-Young	Zona Walcott	Bruce Katano	Neil Multack
Marian Fricano	Les Chibana	Jan Hintermeister	Marilyn Scott
Rita Colwell	Kay Loughman	Jenn Barg	Virginia Langdon-Lassagne
Arleen Feng	Helen Green	Clyde Morris	Barry Langdon-Lassagne
Hildie Spautz	Chris Garcia	Joelle Buffa	Kristin Shields
Rosalie Lefkowitz	Marty Sidor	Marcelino Madrigal	Benita Terry
Lynn Cropper	Dorothy Johnson	Lisa Sagasser	Karlene Stoker
Mike Cropper	Gerry Ellis	Charles Preuss	Bob Stitt
Susan Sandstrom	Maryann Danielson	Elaine Hatfield	Ann Klosterman
Chris Otahal	Lisa Brown	Lisa Lacabanne	Susan Alves
Irene Beardsley	Bob Elliott	Yeng Fang	
Joyce Bartlett	Connie Garrett	Del Miles	
Tom Goodier	Chris Fischer	Karen Hoyt	

New Library Collection

Anyone visiting the station over the past few months may have noticed dozens of boxes of books appearing in the library. Many thanks to long time member, bird and wildlife enthusiast Polly Thomas, who donated over 300 hundred books to the Mewalt Memorial Library as she was moving from her North Berkeley home to Pacific Grove. Thanks also to our steadfast volunteer librarian, Elsie Richey, who has catalogued and shelved this collection. Members are welcome to come and browse through the many beautiful nature art and photography books as well as informative textbooks. 🌿

Volunteer Opportunities

Members and volunteers

you can help keep our programs going.

Many corporations want to concentrate their philanthropy on non-profit organizations that their employees are involved in. Please find out if the company you work for has a giving program. Donations of funding, equipment or supplies are all welcome and needed. Call Elizabeth Sawyer at CCRS for details.

Spring Cleaning

The Station needs to get rid of some non-native plant species so that native riparian plants have room to grow and our native birds get more of their favorite food. The "nasties"

that need to be removed include Russian Thistle, Poison Hemlock and the Giant Reed. The thistle and hemlock need to be removed in early April before they go to seed. Call Karen at the Station, (408) 262-9204, if you are interested. You can join a Saturday morning work crew, or come out and pull roots on your own when you're feeling particularly cranky.

Do You Have a Knack for Architectural Drawings?

CCRS is dreaming of an educational center for students to learn about riparian ecosystems and we need a blueprint to begin the realization of our dreams. Please call Karen at the office, (408) 262-9204, if you have the time and talent.

Newsletter Editor Needed

Grant Hoyt has stepped down as the *RipariaNews* Editor, and we desperately need someone to fill his shoes. If you would like to help with coordinating the writers, writing articles yourself, and editing the Newsletter, please let us know. Call Karen Cotter at (408) 262-9204. 🌿

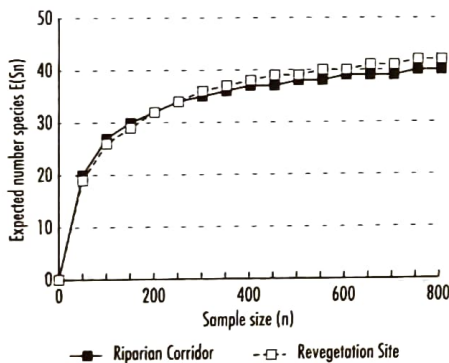
Revegetation Monitoring at CCRS

Continued from page 6

The importance of the reveg area to selected species is described below:

1. The Bushtit is a resident breeding species. Its numbers were extremely low in both the riparian and reveg areas during the construction work in the overflow channel in 1989-

Figure 2. Species Richness 1988-1989



90. Since that time the Bushtit population has steadily increased, with over 80% of Bushtit captures now being made in the reveg area.

2. Wilson's Warblers, neotropical migrants found at CCRS only in migration, show a marked increase in the number of birds utilizing the reveg area. In 1993-94 over 70% of Wilson's Warblers captured were in the reveg area.

3. The Western (Pacific-slope) Flycatcher, another neotropical migrant that passes through CCRS in large numbers during migration, also prefers the reveg area. Figure 3 shows an increasing high capture rate in the

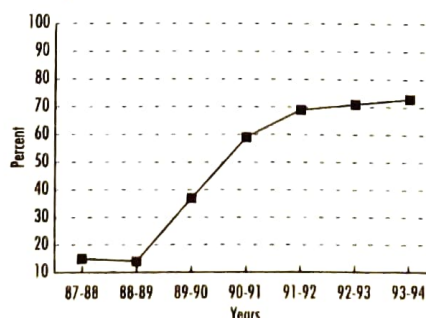
reveg plot for this species. The Western Flycatcher represents a different feeding guild than the Bushtit or Wilson's Warbler and also has different habitat requisites.

4. Swainson's Thrush, a more secretive neotropical migrant and recognized riparian dweller, is also increasing its numbers in the reveg area, but more slowly than other species. It is the only species in the list of individual species numbers that prefers the riparian area over the reveg area.

In summary, after reviewing seven years' data of a ten-year monitoring project, we found that the revegetation site was utilized almost immediately by an array of bird species, and within a scant few years supported high bird numbers and high species richness. Both neotropical migrants and resident species appear to benefit from revegetation sites.

This paper was presented at the Western Bird Banders Conference in Ashland, Oregon, September 16-18, 1994. 🌿

Figure 3. Western Flycatcher Captures in Revegetation Site



The 1994 Fall Season

Continued from page 8

Black-headed Grosbeak were quite early: Allen's normally departs on Aug 29 and Black-headed Grosbeak on Sep 13. It was a good fall for a couple of species we don't see every year in quantity. The first **Golden-crowned Kinglets** were netted on Oct 8 and the 17 we had banded by the end of the period were our best since 1988 when we captured 19. **Varied Thrush** showed up early and their numbers built rapidly and then fizzled. Of our normal wintering birds arrival dates were mostly typical. However, there was some remarkable changes in numbers for a few species. **Ruby-crowned Kinglets** had one of their best years ever. We banded 97 birds by Nov 30 where 45 is more typical in most years. On the downside, both **Myrtle** and **Audubon's Warblers** were reduced in numbers with Nov 30 totals of 11 and 62 compared to more typical counts of 38 and 198, respectively.

It was a good fall for **White-throated Sparrows** with birds banded on Oct 26 and 30, and Nov 12 and 16. 🌿

Uncommon Breeding Birds of the Diablo Range

Continued from page 7

at 3250 feet elevation). Unlike many blocks in the Santa Cruz Mountains, none of the Diablo Range blocks has more than a single breeding confirmation for this species, indicative of its much more uncommon status in this part of the county.

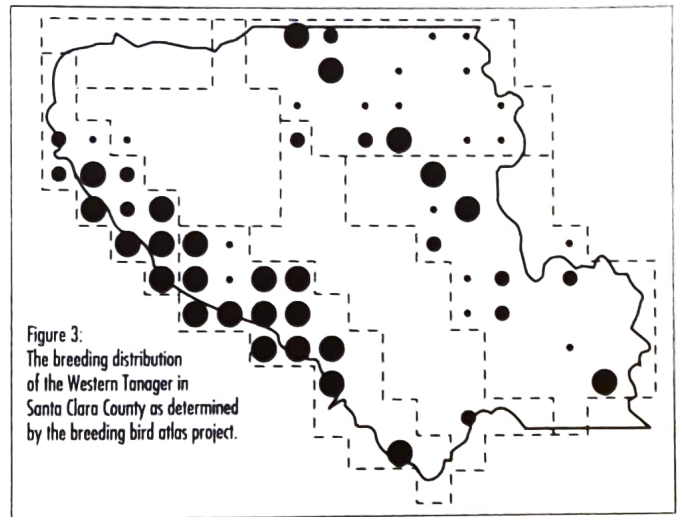
Figure 2 contains a similar breeding distribution map for the Black-throated Gray Warbler. Again breeding confirmations appear with considerable regularity throughout most of the Santa Cruz Mountains but are more sporadic in the Diablo Range, where this species is much less likely to be encountered as a breeding bird. This species is clearly more widespread than the flycatcher, with several breeding confirmations further south in Henry Coe State Park and further north to the Alameda County line. Elevations at which breeding has been confirmed in the Diablo Range are typically about 2000 feet, although birds have been found carrying food for young as low as 920 feet. It is hard to pinpoint the habitat requirements of this species, but it prefers mixed woodland, often on north or northeast facing slopes.

The breeding distribution of the Western Tanager is shown in Figure 3. There is a marked similarity between the distribution of this species and that of the Black-throated Gray Warbler, with several confirmations coming from the same Diablo Range blocks and several records coming from the same locations within many blocks. Like the warbler, breeding is more widespread and expected in the Santa Cruz Mountains. Many Diablo Range records are from pine or mixed woodland at about 3000 feet elevation, but others are from lower elevations, including some in the Arroyo Hondo east of Calaveras Reservoir between 860 and 1050 feet. Additionally there is an historical breeding record at 900 feet elevation from Alum Rock Park in 1935. These low-elevation breeding records may not be the norm, however. In three years of coverage in Arroyo Hondo tanagers were found at these low elevations: only during 1993. Did our prolonged drought prior to this limit this bird's distribution? Interestingly the Monterey atlas, which completed field work in 1992, did not find any confirmations of breeding below 1800 feet.

All of these species are much more widespread and abundant as migrants in the Diablo Range than they are as breeding birds.

Given our incomplete understanding of the breeding distribution of these species prior to the atlas, many atlasers may have entered migrants onto their field cards, feeling that they may have been possible breeding birds. Thus the actual breeding ranges of these species may be even more limited than those shown in the figures. It will be a difficult job for the review committee to sort through these records and decide which ones warrant inclusion in our final published atlas. Ultimately the decision will be based on the date of the record (most migrants have moved through by the end of May) and any habitat or elevation information that can be gleaned from the atlas.

As results from other county atlases are obtained, a more complete picture of the distribution of these species away from the immediate coast will emerge. Already the Alameda County atlas is finding similar patterns of distribution for these species in their portion of the Diablo Range. As with our atlas, most of the Monterey atlas records for these species are also from coastal areas, although all three have isolated records from the vicinity of Fremont Peak in the interior Gabilan Range. Curiously no records were found for the Diablo Range in eastern Monterey



County. In fact the Olive-sided Flycatcher account contains the statement that this species "shuns the hot, dry interior, including extensive Digger Pine foothill woodlands as well as ridge-top stands of Coulter Pines in the southern Diablo Range." Several of our Diablo Range records of apparent breeding birds were found in this latter habitat.

Our knowledge of the distributions of the three species discussed above, as well as that of other species, is now greatly increased thanks to the data gathered for our atlas. With this information as a baseline it is now possible to monitor the range expansions and contractions of our breeding birds, which in turn will help us save them for future generations. Next time you find yourself birding in the Diablo Range look for the "uncommon breeding birds" in addition to chasing after the "specialties" that can't be found elsewhere in the county! ✨

International Migratory Bird Day

May 13, 1995 at the Coyote Creek Riparian Station 9 am-2 pm

After the long, wet winter, it's exciting to see the warblers, thrushes and other migrant songbirds stop over in our creeks and at our feeders on their way to the summer breeding grounds. Each year these birds journey from Canada and the U.S. to Mexico and Central and South America and back. Their survival depends on the goodwill and cooperation of the nations of the Americas! Join CCRS and the Santa Clara Valley



Audubon Society in a celebration of these harbingers of spring on International Migratory Bird Day. The festivities will include birdwatching walks, a native plants sale, childrens' activities, tours of the revegetation sites, and presentations on work being done in Mexico and Canada to better understand our well-traveled friends. Spanish speaking volunteers are needed to help docent for the event! Please call Chris Fischer for more details. ✨

Calendar of Events

Tuesday Talks

Our informal monthly get-togethers will continue through the spring. Come join us at McClellan Ranch in Cupertino on the second Tuesday of each month. We meet from 7:00 to 9:00 p.m. in the Audubon Offices at 22221 McClellan Road. Call Chris Fischer for more information or to suggest topics for future dates (408) 262-9204.

April 11, 1995:

Local Streams Update

Santa Clara Valley Water District staff will present an update on the condition of our local streams after the record rains. How has the flooding affected the revegetation work and other important habitat in our creeks?

Thursday, May 4: Special Time and Place!!

The State of the Creek

CCRS Staff will present the findings of the two-year-long Stream Inventory work done by volunteers on San Francisquito Creek. Meet at the Palo Alto City Council Chambers, first floor at 250 Hamilton Ave. in Palo Alto on Thursday, May 4th from 7 to 9 pm.

Tuesday, June 13, 1995:

Name That Tree!

CCRS staff will conduct a native plant identification walk along the banks of Stevens Creek. Learn about the habitat value of the shrubs and trees, and maybe plant a tree or two for good measure. Dress for the field!

Other Events

Saturday, April 15:

Spring Bird Calls

Take a walk with experienced birders and refresh your birding-by-ear skills. Strongly recommended for Inventory Bird Censusers! 7 to 10 am, McClellan Ranch, Cupertino.

Saturday, April 22:

Come Celebrate Earth Day with CCRS

Coyote Creek Riparian Station will be cleaning up a section of the Guadalupe River near the San Jose Airport, from 9:30 am to 2:00 pm. Pitch in and help for Earth Day and for our creeks! Call Karen at the Station, (408) 262-9204 to sign-up.

Saturday, May 13:

International Migratory Bird Day

Come celebrate Spring at CCRS with SCVAS and the CNPS. Bring a friend!

Stream Inventory Trainings

Reptiles and Amphibians	Training April 8
Habitat/Pollution Mapping	Training April 29
Vegetation Survey	Training June 17
Profiling Survey	Training May 27

Call Chris Fischer at (408) 262-9204 for more information.

Many thanks to our outgoing newsletter editor, **Grant Hoyt**, for his splendid service to CCRS over the past two years. He has done a marvelous job of translating our jotted notes into readable copy. Grant continues to support CCRS, but the demands of editing the Santa Clara Valley Audubon Society newsletter, *The Avocet*, have become too great for him to continue as our editor. We wish Grant all the best and continued success with SCVAS.

Many thanks also to **Rita Colwell**. Long our stalwart banding data guru, she has decided to focus her attention on Rufus Hummingbird research. Rita, one of CCRS's original employees, has made the important and difficult process of submitting our data to the Banding Laboratory a lot easier. She continues to be a regular bander on our Wednesday crew. Look forward to exciting articles on her research in later issues of *RipariaNews*. Again, many thanks to Grant and Rita for all their help!

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Office Interns

Steve Morris	Dianne Kodama
Jill Bernhard	Janelle Johnson

CCRS Membership

Member	\$25 annually
Senior or Student	\$15 annually
Family	\$35 annually
Supporting	\$50 annually
Sustaining	\$100 annually
Corporate	\$500 annually
Life	\$600*
Patron	\$3,000*

* Life and Patron categories can be single payments or 4 quarterly installments.

Life membership payments and 10% of all other membership payments and general contributions go toward long-term support of CCRS activities. We acknowledge memorial contributions in *RipariaNews*. We welcome bequests including those of real property.

Coyote Creek Riparian Station (CCRS) is a nonprofit California membership corporation with United States and California tax exempt status. CCRS is dedicated to research on and the restoration of riparian and wetland habitats.

CCRS operates in cooperation with the Santa Clara Valley Water District, San Jose/Santa Clara Water Pollution Control Plant, U.S. Fish and Wildlife Service, California Department of Fish and Game, and the San Francisco Bay National Wildlife Refuge.

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