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# RipariaNews

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Newsletter of the Coyote Creek Riparian Station

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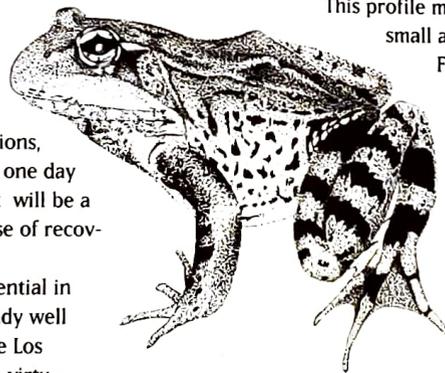
## California Red-legged Frogs in the Santa Clara Valley: An Update.

by Mike Westphal

In May of 1996 the California red-legged frog, *Rana aurora draytonii*, took its place on the Federal endangered species list as a "threatened" species. The listing culminated an intensive effort on the part of many individuals and agencies, including Coyote Creek Riparian Station, to protect the frog and marked the end of the beginning of California's battle to save this beautiful creature from extinction. Now the hard part begins. Achieving the recovery of the frog will be a complex process involving state and federal agencies, homeowners, ranchers, developers, miners, farmers, researchers, and interested citizens, and will have two main objectives: preservation of existing frog populations, and restoration of frog habitat so that frogs may one day return to areas where they have gone extinct. It will be a challenge for all Californians to fulfill the promise of recovery that the Federal action offers.

The Santa Clara Valley holds enormous potential in securing the future of the red-legged frog. Already well underway to becoming an urbanized clone of the Los Angeles basin, where red-legged frogs have gone virtually extinct, the Valley yet contains some remnant frog populations in the surrounding foothills and in a few key lowlands. These populations will be the seed from which healthy populations can be restored. The choices we make here and the success of our efforts will be a model for other rapidly urbanizing areas both here in California and around the world.

Through the extraordinary efforts of its dedicated volunteers Coyote Creek Riparian Station has completed the first stages of a pioneering program to conserve California red-legged frogs in the Santa



*Rana aurora draytonii* by Clayton Anderson

Clara Valley. As of this writing stream volunteers have completed surveys for red-legged frogs in Saratoga Creek, Calero Creek, Los Gatos Creek, Los Alamitos Creek, Los Trancos

Creek, Guadalupe Creek, Ross Creek, Stevens Creek and San Francisquito Creek, which, in combination, represent a significant portion of the riparian habitat on the floor of the Valley. These surveys entailed walking the lengths of each creek in two-person teams, carefully noting frog habitat, documenting all amphibians sighted, and tabulating data. The result is the most comprehensive profile of urban riparian habitat ever attempted within the range of the red-legged frog, and will be the foundation for future restoration efforts.

This profile makes clear the challenges ahead. Except for one small aggregation of juvenile frogs near the top of San Francisquito Creek, no frogs were found in any of the target creeks. While it is possible that a few individual frogs may have been passed over in the course of the surveys, it is highly unlikely that red-legged frogs were abundant in any reach of the creeks surveyed. Research must now focus on the causes for the frog's disappearance from these creeks. What might those causes be? The highly disturbed nature of many reaches of all those creeks, which have fallen victim to channelization, impoundment, and diversion, is an obvious potential cause. The manipulation of the hydrology of those creeks might be a more insidious factor. By position-

ing reservoirs at the heads of the creeks and subjecting the watercourses to unseasonable releases for the purposes of water transport and percolation, we have given non-native predators of frogs, such as sunfish, crayfish, and bullfrogs access to decimate frog populations; chemicals released into percolation ponds to control vegetation may spread into creeks or kill frogs that are attracted to the ponds. Urbanization along the streamcourses encourages frog-specialist, urban-adapted predators such as raccoons and creates opportunities for contaminants and silt to degrade streams.

Further study will help decide which, if any, of these factors are depressing frog populations and how to counter their effects. The good news is that CCRS biologists, with the help of tips from volunteers such as Howard Friedman and Tim Manolis, continue to document and monitor small populations in the upper drainages of the valley, where, pro-

**Meet Mike Westphal Thursday,  
November 7 from 7 to 9 pm for a talk  
and slide show on the red-legged  
frog. See Calendar of Events, back  
page for more information.**

Continued on page 3

## Director's Desk "Lessons and Examples"

Neil Pelkey

Six years ago I began my dissertation research on the impacts of large herbivores on tropical dry forests in India. I worked in a small village called Annakutti which translates elephant's child. It is situated on the Sigur plateau—a hot desolate combination of tropical dry forest and desert thorn jungle. I was interested in the village, because it was dead center in the course of an elephant migration route. The villagers suffered great losses because of their cohabitation with the elephant, yet they neither poached, trapped, or harassed the elephants. Annakuti was the elephant's home too they argued.

I met a small girl there named Sangeetha. She was a typical eight year old in a remote village. She had many chores, a little school, and just enough friends to keep her smile radiant. One hot day in July, she was out in the jungle collecting fuel wood with her friends when she was attacked by one of the hundreds of leopards that roam the plateau looking for an easy meal, a hard meal or any meal at all.

The two adult men in the foraging party ran away—once the leopard had the child, hope was lost. The Indian leopard is a 135 pound feline that can kill a grown man with a single paw swipe. In any case, it was her fate—her karma—to meet this end. Her young friends however took fate into their own hands and grabbed rocks

and sticks and drove the leopard away. They carried her mauled and bleeding body to her mother who wrapped Sangeetha in a blanket. She then carried Sangeetha sixteen miles to the Baptist Mission Hospital in Mavanhalla. The bus comes to Annakuti once a week if it comes at all, and no one in Annakuti has motorized transport.

The new doctor at the mission hospital disinfected and stitched Sangeetha's wounds. He gave her one of the few shots of penicillin he had left—a hospital administrator had recently absconded with most of the medicines and all of the hospital's money. The young doctor then told the mother that there was nothing more he could do. He told the mother to take her back to Annakuti so she could die in her own home. And he told her mother she certainly would die.

Upon Sangeetha's return, the village shaman came to the house and said, "See what I have been telling you. The vellakara (white-man's) medicine is no good. They cannot save her, but I can save her". A few incantations later, he rubbed some buffalo dung on the top of the doorway to her house and declared that she would live. Annakuti's shaman is a drunkard and a bit of a fool. No one took him seriously.

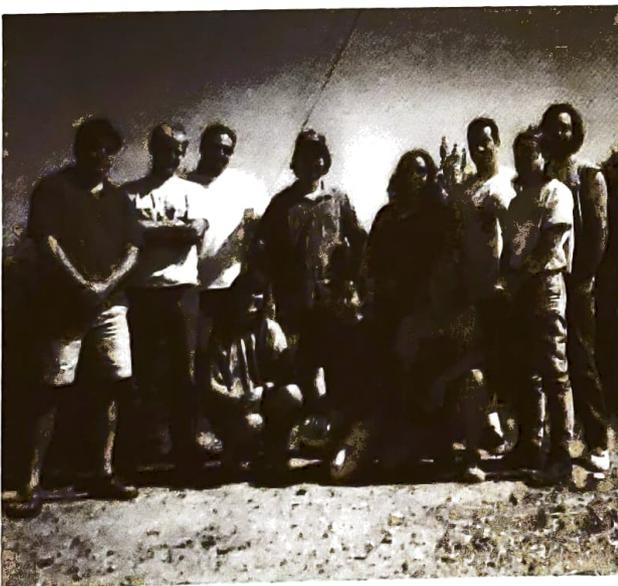
Sangeetha lived!

### STREAMSIDE PLANTING GUIDE NOW AVAILABLE

Finally! For homeowners who live next to creeks and worry about loosing their property to erosion or who want to enhance their local creeks, the *Streamside Planting Guide for San Mateo and Santa Clara County Streams* is now available. The Streamside Planting Guide provides information on over twenty-four native trees, shrubs and perennial herbs to plant in creekside backyards and streambanks including Valley and Coast Live Oaks, Coffeeberry,

Elderberry, Wild Rose, and Red-flowering Current. The illustrated booklet provides guidelines for protecting the property owner's streambank, information on where to find local plants, plant maintenance, and the kinds of wildlife that benefit from each particular plant.

To receive a copy of the guide, please send five dollars to: Streamside Planting Guide, CCRS, P.O. Box 1027 Alviso, CA 95002.



CCRS Staff: (clockwise) Neil Pelkey, Charles Preuss, Steve Morris, Rich Seymour, Karen Cotter, Al Jaramillo, Chris Otahal, Jill Bernhard, Chris Fisher, Diana Kodama, and Cyndi Brinkhurst.

Coyote Creek Riparian Station is a community supported non-partisan, non-profit organization devoted to research, restoration, management, and education regarding riparian habitat. With the help of many dedicated members and volunteers, the Station collects biological data, analyzes, and disseminates information to local, state, and federal agencies as well as the public. Our goals are to advance understanding of these complex ecosystems, provide a sound basis for environmental education and promote informed decision-making.

The Coyote Creek Riparian Station (CCRS) began in 1982 as a field station for the study of migratory land birds and was part of the San Francisco Bay Bird Observatory. Under the direction of Dr. L. Richard Mewaldt, Professor of Zoology at San Jose State University, the Station became a non-profit research institution in 1986. The Station gains much support both with time and money from its 500+ members.

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.

RipariaNews is published quarterly for the information of our memberships; the personnel of the cooperating federal, state, and local agencies; and other organizations and individuals concerned with the flora and fauna of riparian and wetland habitats.

You can reach us at: Coyote Creek Riparian Station, P.O. Box 1027, Alviso-Milpitas Road, Alviso, CA 95002; (408) 262-9204; email address [ccrs@best.com](mailto:ccrs@best.com). Letters to the editor are welcome.

# Santa Clara County Breeding Bird Atlas

## Writing the Species Accounts

by Michael M. Rogers

It has been three years since the last field work was done for our county breeding bird atlas. The database review is now essentially complete and the final stage of assembling the atlas, writing up the results of all our hard work, is underway. This is a daunting task, requiring detailed species accounts for roughly 170 species of birds as well as extensive introductory material describing the physical characteristics of the county and the methodology used for gathering and presenting the data.

The Editorial Committee is responsible for designing and organizing the layout of the atlas. Currently the committee is concentrating on defining the format to be used for species accounts. It has met three times and its members have drafted preliminary species accounts for eight of our breeding bird species. The insight gained during the preparation of these accounts will be used to fine-tune the species account "template" and the contents of the information packet that will be distributed to species account authors.

Many helpful resources will be made available to account authors. To write a species account requires both an in-depth examination of the atlas database to determine the current status of the bird under consideration and a knowledge of the literature regarding the historical status of the species in the county. Materials to help account authors in both these areas have been developed for distribution.

Bill Bousman has written several post-processing programs that reorganize the atlas data in many different ways to facilitate its interpretation. In addition to "atlas maps" of the type that have been presented in this column before, additional maps showing actual breeding confirmation locations and the "abundance codes" for each block (when that information exists) are included in the information packet distributed to account authors. The database entries for the species are also included, sorted in different ways, including by block, by confirmation date, and by elevation. The phenology, or timing of breeding, discussed in the last Bird Atlas column is also included, along with dates for various percentiles of each form of breeding confirmation. Any actions of the review committee are included as well, along with a brief explanation of

any modification of database records made by the committee. All this material is accompanied by a detailed explanation of how to interpret it.

Several people have made an extensive literature search in order to glean historical information on the birds of Santa Clara County from many sources. This information has been compiled into several files available to account authors at both the CCRS and Santa Clara Valley Audubon Society libraries as well as on disk for those with computers. Steve Rottenborn has searched through references dating from Price's list of birds on the Stanford campus (1898) and Van Denburgh's list of Santa Clara County birds (1899) through county records described in the *Avocet* and its predecessors up until 1979. Extracts from the county notebooks since that time are provided by Bill Bousman. Rosalie Lefkowitz and Bill Bousman have also extracted all Santa Clara County records (and much nearby county information) from back issues of *Audubon Field Notes* and *American Birds*, dating from 1947 to the present. Phyllis Browning has compiled all references to Santa Clara County birdlife that have appeared in the ornithological journal "The Condor". With all this information readily available, one can quickly find out most of what has been published about our local breeding birds.

To further help understand historical population trends within the county, Bill Bousman has also supplied data from both the summer and Christmas bird counts, along with statistical information relating to the degree of confidence with which one can infer population trends. The Palo Alto summer count data, while limited to only 16 years and to an area at the extreme northwest of the county, pertains directly to our breeding birds. The Christmas count data is available from three count circles (Palo Alto, San Jose, and Mt. Hamilton) over a longer period of time and can also provide insight for our resident species.

Perhaps one of the most interesting, although time-consuming, parts of putting together a species account is getting in touch with the original field observers (where this is possible) and gathering further details about a species' habitat requirements, nesting circumstances, abundance levels, or other information. The experiences of our field workers are much more vast than what can be reported on field

cards and such information can greatly enhance the quality of the written accounts!

After gathering and absorbing all the information described above comes the daunting task of eloquently putting it all down on paper in accordance with the "species account template" without exceeding the 800-word limit, which ensures that each account will fit on a single page in the atlas. Most of the draft accounts to date have, at least initially, far exceeded this word limit; there is no dearth of available information. After generating such a draft, account authors will work directly with members of the editorial committee to ensure uniformity of format, content, and style, as well as to obtain feedback on the information in the account.

Much work remains to be done prior to the publication of the atlas. If you think your skills would contribute to this process then contact Bill Bousman at 415-322-5282 or at [bousman@neptune.arc.nasa.gov](mailto:bousman@neptune.arc.nasa.gov). 🐦

### California red-legged frogs

Continued from page 1

tected from the multiple impacts of water use in the lower elevations, red-legged frogs still eke out a tenuous existence. Ongoing surveys of this nature are a vital counterpart to the volunteer stream surveys, for they identify the populations in each drainage from which frogs will emigrate to inhabit the creeks once they have been restored.

Coyote Creek Riparian Station is actively seeking out productive partnerships with municipal, State and Federal agencies and other public organizations to bring the California red-legged frog back to Santa Clara Valley. Support from Valley residents will be crucial to this effort. With all that the Station has accomplished to welcome the California red-legged frog back to its shady streamside home, there is still much work to do. 🐸



Wild Rose – From *Streamside Planting Guide*

# The 1996 Spring Season

Bill Bouzman

Spring can start fairly early if you're an **Allen's Hummingbird** arriving in February and ends late for **Swainson's Thrushes** and **Yellow Warblers** passing through in early June. I have included data from the Summary Board for the first six months of the year, but the focus of this column is the spring passage. This spring we banded on 21 days in March, 28 days in April, 30 days in May, and 19 days in June. In Table 1 below, I tabulated the passage dates of our regular spring migrants using new captures data taken from the Summary Board. The temporal data, that is the passage dates for these species, is not strongly affected by the number of net-hours we put in, but the absolute numbers will be affected by these net-hours and it must be remembered that these are unnormalized data.

**Table 1. Spring 1996 - New Capture Data**

Species	No.	First	10th %	50th %	90th %	Last
RUHU10	29	Mar	29 Mar	15 Apr	24 May	17 Jun
PSFL	18	8 Apr	12 Apr	18 May	22 Jun	29 Jun
SWTH	131	29 Apr	10 May	20 May	31 May	29 Jun
OCWA	35	18 Feb	3 Apr	29 Apr	17 May	28 May
YWAR	41	1 May	12 May	21 May	2 Jun	7 Jun
WIWA	68	3 Apr	24 Apr	12 May	26 May	5 Jun
LABU	6	29 Apr	-	12 May	-	22 May

Our five most common migrants this spring, in rank order, were **Swainson's Thrush** (SWTH), **Wilson's Warbler** (WIWA), **Yellow Warbler** (YWAR), **Orange-crowned Warbler** (OCWA), and **Pacific-slope Flycatcher** (PSFL). Except for **Yellow Warbler**, each of these species came through in quite low numbers compared to unnormalized data from previous years. Last spring, as an example, the top five migrants totaled 771 birds compared to this



years 293 and the 1995 **Swainson's Thrush** total alone was 347 birds (see Figure 1)! So you take the fat with the lean and this year was lean. Each of these common migrants showed typical passage dates except for **Wilson's Warbler** which came through about four days late.

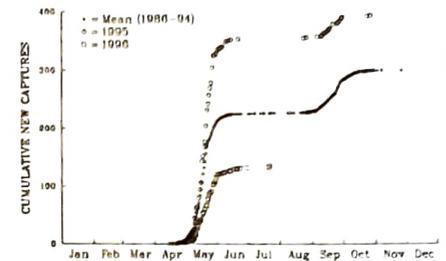
**Rufous Hummingbird** (RUHU) had a lackluster passage and, for the second year, failed to make the top five. A surprising six **Lazuli Buntings** (LABU), a species we usually don't see as a spring migrant, caused me to add them to the table. After last year's 17 **Warbling Vireos** it was surprising to see none captured this year. Some of the more common migrants in the county don't appear to use our riparian corridor so we don't always see them here in the spring. Among these we banded a **Western Wood-Pewee** on 5/24, an **Ash-throated Flycatcher** on 4/28, and a **Western Tanager** on 5/29. Among our rarer migrants were a **Nashville Warbler** on 4/17 and a **MacGillivray's Warbler** on 5/12.

Arrival dates for our summer resident species and departure dates for the wintering species are shown in Table 2.

**Table 2. Arrival and Departure Dates for Spring 1996**

Species	Arrival Date	Departure Date
Black-chinned Hummingbird	14 Apr	
Allen's Hummingbird	3 Mar	
Ruby-crowned Kinglet		15 Apr
Hermit Thrush		10 May
Yellow-rumped (Myrtle) Warbler		6 Apr
Yellow-rumped (Audubon's) Warbler		11 Apr
Black-headed Grosbeak	20 Apr	
Fox Sparrow		17 Apr
Lincoln's Sparrow		30 Apr
Golden-crowned Sparrow		3 May
White-cr. (Puget Sound) Sparrow		19 Apr
White-cr. (Gambel's) Sparrow		26 Apr
Bullock's Oriole	24 Apr	

**Black-chinned Hummingbirds** and **Black-headed Grosbeaks** showed up a bit early this spring, while **Allen's Hummingbirds** and **Bullock's Oriole** were a little later than normal. Our banding data show that some of our spring captures are of migrating birds rather than just wintering birds and both **Audubon's Warbler** and **Lincoln's Sparrow** showed a strong passage this spring along the creek. A **Townsend's Warbler** on 5/10 is one we don't see often along this corridor.



**Figure 1.** Cumulative new captures of Swainson's Thrush comparing the 1995 and 1996 migration to the mean of new capture data for 1986-94.

## Transitions

Continued from page 7

### Cyndi Brinkhurst

Can you say – Saskatoon, Saskatchewan? Based out of this city, Cyndi, our new Riparian Outreach Specialist, worked for 6 years as an Aquatic Biologist. Most of the work she did was in Northern Saskatchewan on pristine lakes and streams that were just starting to feel the pressures of increased access, fishing activities, and industries like Uranium and Gold mines and wood pulp mills. Cyndi was very fortunate to have worked in areas that only a handful of people have ever seen. Her recent move to Santa Clara County was quite a change. At first, Cyndi did not understand how the

creeks got in such bad shape. Were these even creeks that we were driving over or just man-made concrete ditches? Cyndi wanted to work on streams and/or lakes but were there any around Santa Clara, and whom could she work with? The Volunteer Exchange referred her to CCRS, where she became a volunteer and was introduced to South Bay creeks.

### Heather Maynard

Heather Maynard is CCRS's new office manager. Heather was born and raised in Mountain View and spent five years in the exciting world of Mortgage Banking. She quit for a while to raise her two sons, Justin and Aaron. After the boys were old enough, Heather decided to re-enter the work place. After receiving several work offers, Heather chose CCRS's job offer. Her reason, to work

towards a better environment so that her children will have a better world in which to live.

### Diane Kodama

Diane Kodama joined CCRS the summer of 1994 as a volunteer for the Community Creek Watch Program. Having been born and raised in San Jose, she jumped at the chance to explore the local creeks for reptiles and amphibians. During 1995, Diane became an office intern for the Community Creek Watch Program. After spending this past summer in the Anza Borrego Desert on a Flat-tailed Horned Lizard project, she is back at the Station as a staff member for the Avian Research Program. Diane is also, with the help of Mike Westphal, finishing her Senior Thesis on Red-legged frogs for a B.S. in Conservation Biology at SJSU.

# Notes from the Field

By Al Jaramillo

The army of birders has grown in the last decade to the point where even the average person is now aware that this is one of the fastest growing leisure activities in the continent. Lagging far behind in numbers but probably growing at an even quicker rate are the legions of butterfly watchers, armed with close focusing binoculars that enable them to identify even the tricky species in the field. A large number of the new school of butterfly observers are actually bird people rather than bug people! Birders have realized that the same enjoyment given to them by the birds is available from butterflies, particularly during those hot summer days when the birds are nowhere to be seen. More and more birders are catching the butterfly "bug" and it doesn't appear to be slowing down. If you are into butterflies, a big day is the 4th of July butterfly count, a "butterflyer's" counterpart to the birder's Christmas Bird Count, and who wouldn't argue that its a much more reasonable time of year to spend a day in the field. Well, allow me to let you in on a little secret. I think that there is a upcoming, new natural history pastime on the horizon, one so underground that even the birders turned butterfly-watchers haven't turned their fancy to it, yet. Dragonflies! Yes, dragonflies and their smaller relatives the damselflies which together make up the Odonata insect order. Think about it, these are relatively large and obvious creatures that fly around all your favorite birding spots and can rival even the most colorful warbler in beauty. There are rare ones and common ones and some species even migrate, just like birds. Sometimes they get lost and wind up where they are not supposed to be - vagrant dragonflies. Can you imagine the day the rare bird alert will actually be a rare creature alert, including the list of rare dragonflies observed that week? Well, it all sounds kind of fantastic but it actually does occur in Britain where dragonfly watchers are as crazy about them as you may be about birds. Well, the only stumbling block here is that we don't yet have a field guide to figure out the identity of these amazing insects. However, a book is being produced at this moment which will make dragonfly identification a much easier task, until then this great hobby is going to remain obscure here in California. But to get you prepared for the eventual dragonfly revolution, let me give you a CCRS odonate primer. California is home to approximately 100 species of Odonata, dragonflies and damselflies, affectionately called "Odes" by the Cape Cod odonate watchers, one of the coun-

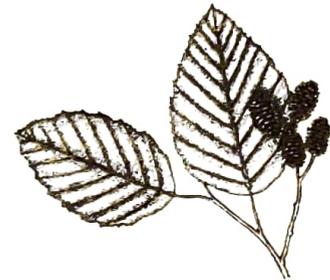
try's hotspots of dragonfly watching activity. Dragonflies tend to be larger and more obvious than damselflies, when perched dragonflies hold their wings spread open, perpendicular to the body, while damselflies hold them closed over the back, or only partially spread. Given a good look you will notice that the fore wings and hind wings of a damselfly are of the same shape, while on dragonflies the hind wing is much wider than the fore wing. At CCRS I have observed 13 species of Odes, of which 11 are dragonflies and two are damselflies. Needless to say, the list will grow but it will take more time to figure out which species occur here and to confirm the identifications. Let me describe some of the more common or noticeable species.

Darners (*Family Aeschnidae*) are the largest of our dragonflies, their common name stems from the fact that their long abdomens reminded people of a darning needle. Our two most common darners are the **Green Darner** (*Anax junius*) and the **Blue-eyed Darner** (*Aeshna multicolor*). Green Darners have a bright green thorax (the part of the body the wings and legs join to) and a baby blue abdomen. The Green Darner is one of the continent's migratory dragonflies. At the famous Cape May hawk watch in New Jersey, the locals have begun to also keep numbers of Green Darners they observe beaming southward. Blue-eyed Darners are largely blue, but it is distributed as stripes or spots throughout the body. The dark thorax has two blue stripes on the sides and the dark abdomen is spotted throughout with blue. The diagnostic feature is this species' blue eyes, actually quite easy to see when you finally get your binoculars trained on one of them.

Another family of dragonflies is the skimmers (*Family Libellulidae*), typically this group is found near water perching on an exposed branch, defending their territory from any invaders. Our most spectacular skimmer is the **Flame Skimmer** (*Libellula saturata*), it is an understatement to say that this species is red. A pugnacious 3 inch long crimson-red skimmer is almost surely a Flame Skimmer. Given a close look you may notice that even its wings are tinged red. As I mentioned, most skimmers are usually found defending territories at a pond or stream, however a few are much more mobile. The **Black-mantled Glider** (*Tramea lacerata*) is more akin to a swift or swallow, in that it ranges widely hunting small insects on the wing and is seldom observed perching. Almost always, you will see this species in flight. Lucky for the dragonfly-watcher, this species' most distinctive feature is noticeable when flying. The Black-mantled Glider appears

almost entirely black, but the clear wings have a large rounded black patch at the base of the hind wings. This patch is noticeable from a long distance using binoculars; look for this species almost anywhere flying swiftly overhead. Here at CCRS we have begun to keep track of the dragonflies observed on site. At this time we are not undertaking a formal research project on the local dragonflies, but you never know what may be in store for the future. Researchers in Texas are experimenting on the use of dragonflies as indices of water quality. You see, all dragonflies and damselflies begin their life in water. As larvae, they are voracious predators of aquatic insects. However, while in the water they have specific requirements in terms of temperature, oxygen concentration, turbidity (clarity of the water), and type of bottom in the stream or pond, among other things. Perhaps as knowledge of the ecology of these insects increases they will become one of our measuring sticks of riparian habitat health. That's fine with me, as apart from what they have to offer academically, they are just plain fun to look at!

Contact **Al Jaramillo** at the station if you are interested in information on butterfly and dragonfly clubs or the 4th of July butterfly count. ✨



White Alder - From *Streamside Planting Guide*

## Creek Currents

Continued from page 6 ✨

cern or a pollution incident. You can help us to collect biological data by reporting rare or endangered wildlife, logging all wildlife or collecting rainfall data. Just imagine how great the creeks of Santa Clara Co. would be if I could recruit one person from every block to be a Creek Watcher.

Creeks like Saratoga Creek are too important to lose. Many of you have described the changes you have seen over the last 10 years, together we must all act now and become educated about what each one of us can do to help. I encourage you to become a Creek Watcher today! ✨

# Creek Currents

## Clean Creek Tips: The New Smog Law

I never thought that I, Head StreamKeeper, would ever be labeled a Gross Polluter, but thanks to the Magnificent Mazda, I am just that. After angrily snarling at the mechanic who told me that the Mazda needed a new carburetor (\$700) since my old one was now emitting twice the maximum allowable emissions, I set off to complain about my fate and avoid the inevitable, a mighty big bill.

But what does being a Gross Polluter mean other than paying a large repair bill? What does the new law mean to what is important to us here at the Station - the health of the creeks and South San Francisco Bay.

The San Francisco Estuary Institute located in Richmond, has been studying contaminants in the San Francisco Bay and their effect on estuarine life. One of these contaminants is polycyclic aromatic hydrocarbons (PAHs). In some parts of the estuary, concentrations of PAH are high enough to raise concern over possible adverse effects on aquatic organisms and human health. When PAHs enter the Estuary they accumulate in sediments and organisms at the bottom of the food web, eventually working their way up the food chain. Jay Davis, a scientist with the San Francisco Estuary Institute noted in an article of SFEI's Regional Monitoring News (Summer 1996) that important sources of PAHs found in the Estuary are crude and refined petroleum products and the smoke and soot generated by the combustion of gasoline and other petroleum products. Water, sediment, and bivalve samples collected from the Estuary consistently show a fingerprint from pyrogenic (formed from combustion) PAHs. Vehicle exhaust containing PAHs reach the estuary in two mechanisms. PAHs can be deposited directly onto the surface of waterways from contaminated rain or through deposition of dust particles. More importantly, PAHs that settle on streets and parking lots are carried into creeks and the bay in very large quantities with stormwater runoff during the rainy season.

Polycyclic aromatic hydrocarbons can affect survival, growth, metabolism, reproduction, immune function, and photosynthesis of aquatic organisms. Benthic (bottom dwelling) invertebrates are the most at-risk since PAH's accumulate in the sediment and do not break down. In addition, PAH's pose a human health risk. Some PAHs are the

most potent carcinogens known and because of this people should minimize the number of bottom fish eaten that have been taken from South San Francisco Bay.

Will the new Smog Law help reduce the amount of PAHs in our creeks and the bay? After lead was removed from gasoline there was a significant drop in the amount of lead found in our local waters. Hopefully, by reducing the emissions from our automobiles, we will see a reduction in the amount of PAHs in our waters. Maybe, for the health of our aquatic wildlife and for ourselves, the price tag associated with the new smog law is worth it.

Final bill for the Mazda, \$186. Carburetor checked out, it was the computer thingamajig that tells the carburetor what to do. Whew!

## StreamKeepers Cleaning -Up!



John Muir High students to the rescue!

As part of California Coastal Clean-up Day, the Santa Clara County Area cleaned up twenty four creek and shoreline sites. In the southern half of the county alone, over 700 volunteers removed over 34,000 pounds of trash from eleven sites. StreamKeepers sponsored the Roosevelt Park site along Coyote Creek. With the help of students from John Muir High School's Environmental Club, the Roosevelt Community Action Team, and other volunteers, 80 bags of garbage were picked up and 16 shopping carts were hauled out of the creek. In addition, the high schools students assisted in removing over 6 truckloads of old logs that had created a massive log jam and fish barrier in the creek. Thanks especially to three CCRS members who always show up to help us clean creeks: **Mark Sutherland**, and his son, **Scott**, and **Linda Littrell**. And thanks so much to everyone else who helped.

## Outreach Outings

Hi, I'm Cyndi Brinkhurst, the Riparian Outreach Specialist. My mission is to meet

with streamside residents to provide information on riparian conservation, increase recognition and understanding of CCRS's goals and activities, recruit new members and volunteers, and act as a critical contact point for community leaders and citizens.

Since July, I have been working in Saratoga, meeting Saratoga Creek residents. This creek has some very precious natural areas full of wildlife, including deer and trout (even a bobcat has been reported). I also have a great brochure on "Saratoga Creek" to offer the residents. I am asking residents questions about their creek. I will then be able to convey how the community feels about their creek to all agencies involved. The results thus far are very positive; Saratogans want to nurture and protect their creek. Their opinion -- keep it clean, free from sewage and pollution, natural, flowing, a non-fire hazard and continue dead tree and branch removal.

I met 383 residents and 84 became members and Creek Watchers between July 23 and Sept. 10. Two Saratoga Creek problems have been reported to me since my inception. One was due to the power outage of August 10. The creek between Cox and Prospect was going dry and fish were scurrying for pools. Water on this part of Saratoga Creek currently flows from a turnout on the Stevens Creek Pipeline (originating at the Vasona pumping station in Los Gatos) at Hwy. 85. When there is a power outage, the pumping station water pumps are affected too. The second incident was reported by myself. I witnessed foamy, chemical smelling water flowing from an outfall at Lannoy and Herriman. This was probably due to someone dumping their pool further up the hill. The fire department, police, Saratoga Public Works department and I were unable to track down the source. People need to know that it's illegal and unnecessary to dump anything down the storm drains or directly into the creek. **RAIN ONLY IN THE STORM DRAIN.** Fluids entering storm drains do not receive any treatment, they go directly to the nearest creek, polluting it and eventually the bay. Options do exist. Call Cyndi at (408) 262-9204.

More Creek Watchers are required. As a Creek Watcher, you will be informed about what is beneficial and detrimental for your creek, what wildlife might be found in your creek, and who to call to report a con-

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# Volunteering Has Its Rewards

## Volunteer Opportunities

### Station Maintenance

The Station could use some on-site help for general maintenance around the offices. We need someone with a hitch on their car or truck to pick up our water supply, repair equipment, paint, water plants, etc. If you would like to help us out about twice a month, please call Heather at (408) 262-9204.

### Bird Banding

Fall migration is on the way. Join us as we follow Yellowthroats, thrushes, and the flycatchers on their journey south. The bird banding program requires a commitment of two to four mornings a month for a minimum of one year. Good eyesight and nimble fingers are vital. Call Diane Kodama at (408) 262-9204 for more information on this exciting program.

### Native Planting

Join Elinor Spellman and her restoration team in planting and maintaining native riparian trees out here at the station. Give Elinor a call at (408) 279-1884.

### Artists need to donate line drawings of creek themes.

We need sketches of fish, insects, amphibians, reptiles, creek scenes, riparian birds, and people enjoying the creek. Call Karen at (408) 262-9204 if you would like to donate any artwork or could work with CCRS staff on specific projects.

### Become a Coyote Creek StreamKeeper

StreamKeeper is doing outreach within the Coyote Creek Watershed. If you know a homeowner, business owner, or school teacher who would like StreamKeeper to come out and present our slide show and talk on creek pollution, give Karen a call at the office.

### Data Entry

The Stream Inventory Program could still use your help putting their data into the Paradox Data Base. Give Charles a call at (408) 262-9204 if you would like to volunteer days, evenings or even weekends.

### Mammal Slides

We have lots of slides of birds – but very few of mammals. If you have any slides

of close-up shots of local mammals, please call Karen.

## Volunteer Thank yous

**Melissa Andres** is beginning her fourth year at Pacific Union College near Napa, where she is a biology major. During September, she helped out at the Station with weed control and watering at our upland restoration site. She also gathered ripened seed-heads from on-site colonies of Baccharis and western aster. The seeds will be broadcast this fall in the restoration areas.

**Mark Agan** has completed his multi-faceted internships and will be sorely missed at the Station. With the Community Creek Watch program, he has been a dedicated volunteer with the Invertebrate and Vegetation Survey teams and has acquired the status of data entry guru. Mark has also been involved with the Station's native plant restoration work including weed-control and watering at restoration sites, and cultivating, mulching and additional plantings in the planter bed next to the trailer. Looks much better out our windows, Mark.

Thanks to **Jeff Siddlesteel** for making new business cards for the staff. Rather than handing out hand cut and crooked business cards with disappearing ink, the staff now has business cards with the new CCRS logo in four colors and straight edges.

The entire CCRS staff would like to extend a heartfelt "Thank You" to volunteer extraordinaire **Cyndi Brinkhurst**. Cyndi has dedicated over 400 hours of her time to such worthy causes as organizing CCRS's participation in the Human Race, helping to train and supervise Community Creek Watch volunteers, and developing community outreach strategies for the Station. The Human Race effort netted over \$1400, and inspired staff and volunteers alike. In recognition of her outstanding dedication to the Station as well as her demonstrated ability to organize and motivate the community, CCRS is currently working with Cyndi to develop a permanent "Riparian Outreach" program.

Without such dedicated and talented volunteers, CCRS staff would be "up a creek".

## Donation Thank yous

**Janet Davis** donated her hip waders that she used while volunteering for Community Creek Watch's inventory on San

Francisquito Creek. It will be a big help to other volunteers that can't afford to buy their own. Thank you so much.

## Thank You

A big hearty thank you goes out to **Pam Peterson** who has been indispensable these past couple of months while we've been without a full time office manager. Thanks Pam, we don't know what we would have done without your help and expertise.

## Donations Needed!

The Company you work for may have a corporate giving program where they donate used office equipment. Ask your company if they would like to donate a **copier, computers, digitizers, printers**, or even **old binders** and **office supplies** to CCRS. In particular we are looking for a **386 or 486 (or better) IBM compatible computer** and a **PC printer** that can withstand large printing jobs, can do duplex printing, and has a high dpi. We also need a **copy machine** that can copy on both sides as well as sort. And of course, a **color copier** would be even more lovely.

CCRS could also use the following donations:

<b>paper cutter</b>	<b>dissecting scope</b>
<b>shovels</b>	<b>trowels</b>
<b>clippers</b>	<b>pruning shears and saws</b>
<b>loppers</b>	<b>carvass bags</b>
<b>waders</b>	

Don't throw that old computer chip away, recycle it with a donation to CCRS. Call Neil or Charles at the office.

**486 or better motherboards**  
**32 pin RAM IDE hard drives**  
**VGA Monitors etc.**

## Transitions

### Dave Johnston

Dave Johnston, our Station Manager for the last year, has decided that the pressure to finish his Ph.D. thesis on bats was conflicting with his duties at the station. After receiving a scholarship from York University, the thesis won out. Dave helped us with our Santa Clara Valley Water District contracts for Saratoga, helped create the first South Bay Watershed festival in Saratoga and the beginnings of our outreach to schools and creek curriculums. Thanks so much for all your help Dave.

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# Calendar of Events

## Fall Talk: "Threatened" - Now What? Thursday, November 7 7:30 - 9:30 pm

A presentation on the status of the recently Federally listed California red-legged frog by Mike Westphal, Amphibian and Reptile Biologist. Please note, Mike's talk will be at Audubon's McClellan Ranch Road, 22221 McClellan Road in Cupertino.

A \$5.00 donation is requested.

## A selection of local Christmas Bird Counts and their compilers are:

Dec. 20, 96 Palo Alto CBC, Garth Harwood 408-252-3747  
Dec. 21, 96 Crystal Springs (San Mateo) CBC, Al DeMartini 415-345-6988  
Dec. 22, 96 Oakland CBC, Joelle Buffa 510-658-8449  
Dec. 22, 96 San Jose CBC, Ann Verdi 408-377-8018  
Dec. 22, 96 Hayward/Fremont CBC, Phil Gordon 510-538-3550

## Winter Talk: Blackbirds, Cowbirds and Conservation. Thursday, February 6, 7-9 pm

Station ornithologist Al Jaramillo presents the wide world of Blackbirds and their kin. Come explore the cowbird controversy -- are they to blame for songbird declines? The Winter talk will be held at the Cupertino Library Community Room at 10400 Torre Ave. in Cupertino.

A \$5.00 donation is requested.

### Board of Directors

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Cyndi Brinkhurst, Riparian Outreach Specialist  
Karen Cotter, StreamKeeper Director, RipariaNews Editor  
Steve Morris, StreamKeeper Associate  
Mike Westphal, Herpetology Coordinator  
Rich Seymour, Herpetology Research Associate  
Elinor Spellman, Restoration Coordinator (volunteer)  
Pam Peterson, Administrative Associate (volunteer)

### 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.

### New Members

Vladimir Aleksic  
Sue, Cassie, Kelly & Stan Bac  
Rick Bartlett  
Jill & Randy Billings  
George Bing  
Connie Boeddeker  
Curtis Brown  
Rollin & Virginia Buckman  
Marjorie and Marco Buenrostro  
Kim and Gabe Buller  
Karen, David, Steven Burse  
Marilyn & Howard Callahan  
Roy Carlson  
Pete and June Cartwright  
Jan, Conor, Caitlin Clarke  
Harold Clay  
Elsie Cochrane  
Jim Cox  
Leslie Davis  
Richard DeVilbiss  
Laura, David & Megan Devere  
Laurel, Earle, & Craigie Dickerson  
Scott Duncan  
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Mike Feighner  
Stella Findley  
Dylan Foust  
Pam, Jillian & Katelyn Fox  
Mary Godwin  
Robert Grabar  
Gay Grant  
David, Beth, Gabriel Guido  
Dianne Guisinger  
William Hansen  
Lucy Hathaway  
Selma Hemiup  
Jim, Pam, Michael, Andrew Henry  
Leslie & Mark Hernandez  
Jane Hiatt  
Bob Hoerger  
Steven Hsung  
Tom Hughes  
Robert Jakob  
T.T. and Ellen Judge  
Nancy & Larry Kessler  
David Kimball  
Joann Kirkpatrick  
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Lisa Kutter  
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Judy & Phil Livengood  
Kathryn, Meagan & David Mandell  
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Gayle Rohner  
Joel Rothman

Christine & Sara Sak  
Susan, Lee Ann, Dana, & Bob Salutric  
Jennifer Short  
Cathy Stokes  
Judy & Hernal Surrette  
David Sutphin  
Norma Sutter  
Irene Thompson  
Ray-Young Tsao  
Rahnea & Franz Vaiarello  
Caitlin, Dylan, Roel & Megan van Kriekan  
Anissa Varnell  
Bonnie Vellis-Kelly  
Brenda, Ross, Shelton & Genna Virden  
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