COYOTE CREEK RIPARIAN STATION

RiparianNews

Newsletter of the Coyote Creek Riparian Station

P.O. BOX 2019 ALVISO, CA 95002 (408)262–9204

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VASCULAR PLANTS OF CCRS

by Jeff Caldwell

Approximately 140 species of vascular plants have been observed within the vicinity of the Coyote Creek Riparian Station. Of that total, 45 (32%) can be considered indigenous to Santa Clara County. Forty-nine families are represented including 28 (57%) native to this area - including 4 which have been planted in the revegetation area. Only 18 native species occur in significant quantities, however, many of these species seem to be increasing in quantity and vigor.

In the revegetation area, the planted California sycamores seem to be doing quite well. Two relatively rainless years have helped spare them from *Anthracnose*. In addition, the valley oaks and California bays are doing well.

It particularly interesting to note the plant succession which has taken place in only 6 years since the orchard (site of the former Standish Ranch) was removed. Some of the dominant native species, common in rich, moist, lowland soils are also deep-rooted, long-lived, colony-forming perennials and compete quite well with the introduced, annual, biennial, or short-lived perennial weeds. A few vigorous colonies of alkalai rye have been established and it appears to spreading. There are also many colonies of Oregon golden aster and Douglas baccharis, a few colonies of California mugwort and one colony of wild licorice which appear to be increasing.

Strategic weeding, mowing or prescribed burning would assist these and other natives in spreading, however, these hardy plants will continue to increase even if left to compete with introduced species. These native perennials are all coming back in the revegetation area as volunteers (although some species such as the California mugwort were planted).

Three species of weeds are of particular concern. These include smilo grass, periwinkle, and hoary cress. In some areas of the riparian corridor where "natural succession" has taken place, smilo grass completely dominates the understory.

Agriculture, bulldozing of streamside levees and flooding have apparently extirpated many native species from the area, resulting in an estimated loss of 65% or more of native floodplain plant species. Many niches in this ecosystem have subsequently been filled by introduced "weeds". The area that encompasses the Coyote Creek Riparian Station has become an "island" of native vegetation in a "sea" of human development and agriculture, devoid of natural vegetation. Native recolonization is, therefore, difficult.

Thus, our efforts to recolonize the area with desirable and presumed pre-settlement species (while controlling less valuable plants) has the potential to create a habitat with a much higher carrying capacity.

I would like to thank Lion Baumgartner, Dean Kelch, Blair Wolf and L. Richard Mewaldt for generously sharing their observations and expertise.

Elinor Spellman tends one of the trees planted by CCRS volunteers in the creekside riparian corridor. Photo by John Delevoryas

Ed. note - - Jeff Caldwell is employed as a revegetation maintenance specialist with Harvey and Stanley Associates. Jeff has considerable experience with native plant restoration projects and has developed native plant lists for the City of Cupertino. We are pleased to publish in the next two issues of RiparianNews *Jeff's annotated plant list for CCRS.*

ANNOTATED PLANT LIST – CCRS

by Jeff Caldwell

Aceraceae. Maple Family.

* Acer negundo ssp. californicum.
California Box Elder. This deciduous tree is common and dominant along the riparian strip. Very typically a riparian and bottomland species.

Anacardiaceae. Sumac Family.

Schinus molle. Peruvian Pepper.
One naturalized tree near the parking area.

Apiaceae. Celery Family.

Conium maculatum. Poison Hemlock.
Common and conspicuous alien weed, especially in moister areas. Biennial.

Foeniculum vulgare. Sweet Fennel.
Frequent as scattered individuals. The native Anise Swallowtail butterfly has adapted to using this perennial weed as a larval host.

Apocynaceae. Dogbane Family.

Vinca major. Periwinkle.
An "escaped exotic", dominates the riparian understory in an area not far from the former Standish ranch house.

Araliaceae. Ginseng Family.

Hedera helix. English Ivy.
Another "escaped exotic" found near a former ranch house. It is choking a tree, but may provide a secure roosting place in foul weather for a few birds.

Asclepiadaceae. Milkweed Family.

* Aschepias fascicularis. Narrowleaf Milkweed. A container specimen was recently planted. It is host for larval Monarch butterfly. Perennial, makes colonies.

Asteraceae. Sunflower Family.

* Achillea borealis. Yarrow.
Appearing in planting cups in the revegetation area. May have been mixed with other seeds. Quite adaptable, native over a large area. May naturalize at the Station.

* Artemisia californica. California Sagebrush. Occasional along the riparian strip; a few volunteers in disturbed areas. This native shrub is extremely adaptable, most competitive in dry, sunny areas, but also appearing in shady and even quite moist areas,

* Artemisia douglasiana. California Mugwort. Native rhizomatous perennial, forming colonies, especially along the riparian strip and appears to be increasing. A favorite nesting plant for some small birds. Planted in the revegetation area and volunteer colonies are also being encouraged. A nitrophile -- loves nitrogen-rich soil.

California Mugwort found growing in the riparian corridor. Photo by David Johnson

Chrysanthemum sp.? Foliage seen in revegetation area.

Cirsium vulgare. Bull Thistle.
Common biennial in the overflow channel.

Conyza canadensis. Horseweed.
Tall summer annual. Common and abundant this year in the overflow channel. Have observed ripe seedheads thouroughly infested with hemiptera along Calabazas Creek.

Gnaphalium luteo-album. Weedy Cudweed.
A few specimens of this annual noticed in the road.

* Helenium puberulum. Rosilla.
Biennial or short-lived perennial which may bloom the first year. Occasional and increasing in sunny areas along the riparian strip, with volunteers thriving in the revegetated area.

* Hemizonia pungens ssp. maritima. Common Spikeweed. Annual. A few found along the road between Standish Dam and salt marsh; said to be frequent in lowlands near the Bay.

Lactuca serriola. Prickly Lettuce.
Common annual in the overflow channel, occasional to frequent in the revegetation area.

* Aster exilis. Slim Aster. An annual, one specimen was seen creekside near salt marsh; volunteers abundantly in moist, disturbed soils.

* Baccharis douglasii. Salt Marsh Baccharis. A dark green almost woody perennial native, making colonies in the overflow channel, in the revegetated area, and along the riparian strip. An experimental planting at De Anza College, Cupertino, quickly spread into a large colony. Likes rich, slightly moist soil, as the mugwort. White summer flowers very attractive to insects. Appears to be increasing, a natural dominant for this lowland area.

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* Baccharis pilularis ssp. consanguinea. Coyote Brush. Common and increasing native shrub. Blooms late, provides seeds in the winter season.

* Baccharis viminea. Mule Fat. A group of this native shrub can be seen in a sunnier area of the riparian strip downstream from the headquarters.

Carduus pycnocepalus. Italian Thistle. Alien annual. Frequent on disturbed ground of future overflow channel.

Centaurea melitensis. Napa Thistle. Alien annual. Occasional, especially in drier areas of poorer soil.

Centaurea solstitialis. Yellow Star Thistle. Alien annual. Occasional to frequent in sunny areas.

* Chrysopsis oregona var. scaberrima. Oregon Golden Aster. Perhaps our most abundant native perennial plant, forming colonies everywhere and increasing. Typical of dry streambeds. Blooms in late summer and fall, attracting butterflies and other insects.

* Matricaria matricarioides. Pineapple Weed. Rare annual along trails. Favors hard-packed soil, edges of paths.

Picris echioides. Bristly Ox Tongue. Very common and abundant alien annual or biennial.

Silybum marianum. Milk Thistle. Large and conspicuous annual or biennial. Occasional, especially in revegetated area.

Sonchus asper. Prickly Sow Thistle. Annual. Occasional.

Sonchus oleraceus. Common Sow Thistle. Annual. Frequent, especially in revegetation area.

Xanthium spinosum. Spiny Clotbur. Cosmopolitan annual weed. One specimen seen near parking area; destroyed.

Xanthium strumarium. Cocklebur. Cosmopolitan annual weed. Seeds are water-deposited and the plant typically appears in areas that have been flooded. Abundant following 1986 flood; rare this year, mostly in irrigated area.

Betulaceae. Birch Family.

* Alnus rhombifolia. White Alder. Deciduous tree planted in revegetation area. Goldfinches and pine siskins seek the seeds in winter.

Boraginaceae. Borage Family.

* Heliotropium curassavicum var. oculatum. Salt Heliotrope. Herbaceus perennial. Several found along the edge of road near the parking lot. Its flowers are very attractive to small butterflies such as the pygmy blue and thistle crescent.

Brassicaceae. Mustard Family

Brassica campestris. Field Mustard. Annual. Frequent in sunny irrigated area.

Brassica geniculata. Summer Mustard. Biennial or perennial; common to abundant in the overflow channel.

Cardaria draba. Hoary Cress. Rhizomatous perennial, agressive colony-former. Large colony north along creek trail.

Lepidium latifolium. Dittander. A tall perennial species, along the roads and in the revegetation area and salt marsh; native to European salt marshes.

Raphanus sativus. Wild Radish. Common to abundant annual in the overflow channel.

Sisymbrium irio. London-Rocket. A few of this annual were seen growing in the access road.

Sisymbrium officinale. Hedge-Mustard. Infrequent annual.

Buxaceae. Box Family.

Buxus sp. Box. Two specimens persist from cultivation near outhouse.

Cactaceae. Cactus Family.

Opuntia sp. Probably Opuntia megacanthus. Tuna. A clump persists from cultivation; near outhouse.

Caprifoliaceae. Honeysuckle Family.

* Sambucus mexicana. Blue Elderberry. Common small tree along the riparian strip. Important food and nesting plant for birds.

Caryophyllaceae. Pink Family.

Spergula arvensis. Spurry. Annual; a few in the overflow channel.

Casuarinaceae. Beefwood Family.

Casuarina sp. Australian Pine. Two trees persist from cultivation.

Chenopodiaceae. Saltbush Family.

* Atriplex patula ssp. hastata. Fat Hen. Annual; becomes increasingly common to abundant as you approach the Bay. Host for larval Pygmy Blue butterfly.

Atriplex semibaccata. Australian Saltbush. Found on higher ground in salt marsh areas.

Bassia hyssopifolia. Echinopsilon. Annual roadside weed, near sludge hill with Burrowing Owl nests.

Beta vulgaris. Garden Beet. Common biennial; conspicuous in sunny areas.

Chenopodium sp. Goosefoot. Perennial, seen mostly along roads.

* Salicornia virginica. Pickleweed. Perennial; frequent in low places as you approach the bay.

Salsola pestifera. Russian Thistle. Annual; occasional, mostly along roads.

Convolvulaceae. Morning-Glory Family.

* Calystegia occidentalis. Western Morning-Glory. Rare perennial, about three have been seen in the riparian strip and revegetation area.

Convolvulus arvensis. Field Bindweed. Common to abundant perennial in the overflow channel.

Dicondra repens. Dichondra. Perennial; a few seen in revegetation area.

Cyperaceae. Sedge Family.

* Cyperus eragrostis. Tall Cyperus. Perennial; seen occasionally in the riparian strip; volunteering in the irrigation flood cells of the revegetation plot.

* Scirpus acutus. Common Tule. Perennial; occasional on creekside gravel bars.

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* Scirpus microcarpus. Small-fruited Bulrush. A few of this perennial seen in a moist depression in the riparian strip.

Dipsacaceae. Teasel Family.
Dipsacus fullonum. Fuller's Teasel. Rare biennial seen in riparian strip and revegetation area. Swallowtail butterflies visit for nectar.

Equisetaceae. Horsetail Family.
* Equisetum hymemale var. affine. Common Scouring Rush. There is a colony of this perennial in the riparian strip at 9150 meters.

Euphorbiaceae. Spurge Family.
Euphorbia lathyris. Gopher Plant. Persists from cultivation around former ranch buildings.

Fabaceae. Pea Family.
* Glycyrrhiza lepidota var. glutinosa. Wild Licorice. Rhizomatous perennial. One strong colony in overflow channel near the revegetation plot, a colony in the plot with two others beginning (in irrigation flood cells) and another north along the riparian trail in a moist sunny area. Deep rooted. This plant has proven useful in midwest restoration work.

Lotus corniculatus. Bird's Foot Trefoil. Uncommon perennial; in the revegetation plot.

Medicago polymorpha. Common Bur Clover. Annual; a few seen on the south edge of the revegetation plot.

Melilotus albus. White Sweet Clover. Alien perennial; abundant and conspicuous in the revegetation plot and adjacent overflow channel. One of the most troublesome weeds in midwest prairie restoration.

Melilotus indicus. Indian Melilot. Occasional along the road, especially at the south end of the revegetation plot. Alien annual.

Fagaceae. Beech Family.
* Quercus agrifolia. Coast Live Oak. There is a fine old specimen of this native tree in the field near station headquarters. Two younger specimens are in the riparian strip along the trail northward. Some are coming along in the revegetation plot. Oaks have excellent wildlife value.
* Quercus lobata. Valley Oak. Deciduous tree; some planted in the revegetation plot are doing well. Largest oak in North America.

Frankeniaceae. Frankenia Family.
* Frankenia grandifolia. Alkali Heath. This low subshrub becomes frequent in low sunny areas as you approach the Bay.

Fumariaceae. Fumitory Family.
Fumaria officinalis. Common Fumitory. Annual; one specimen seen in planting cup in revegetation plot. Sometimes abundant and conspicuous along urban streamways in Santa Clara Valley.

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Wild Licorice - plant with nearly spent flowers above; close-up of leaf at right.
Photo by David Johnson

Geraniaceae. Geranium Family.
Erodium sp. Filaree.
Some of this annual in overflow channel.
Geranium dissectum. Cut-leaved Geranium. A clump of this annual seen along the edge of the riparian strip at 9150 meters.

Juglandaceae. Walnut Family.
* Juglans hindsii. California Black Walnut. Naturalized in the riparian strip and being used in the revegetation area.
Juglans regia. English Walnut.
A few to be found in the riparian strip.

Juncaginaceae. Arrow Grass Family.
* Triglochin maritima. Seaside Arrow Grass. Perennial; one plant found in a low moist sunny place north on the riparian trail.

Lamiaceae. Mint Family.
Marrubium vulgare. Common Hoarhound. Perennial; seen occasionally.
* Mentha arvensis var. lanata. Stoloniferous perennial, somewhat cosmopolitan. One has volunteered in the revegetation plot.

Lauraceae. Laurel Family.
* Umbellularia californica. California Bay. Evergreen tree; planted in revegetation plot.

Liliaceae. Lily Family.
Asparagus officinalis. Garden Asparagus. Cultured; one seen in the revegetation plot and another north along the road.

Malvaceae. Mallow.
Malva nicaeensis. Bull Mallow. Annual; occasional in overflow channel and revegetation area.
Malva parviflora. Cheeseweed. On spoils near Burrowing Owl colony.
* Sida leprosa var. hederacea. Alkali Mallow. Perennial, most noticeable in summer. Becomes frequent in sunny places as one approaches the Bay. Very deep rooted.

Moraceae. Mulberry Family.
Ficus carica. Fig.
One specimen at about 9875 meter mark at the foot of the levee.

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HERON SUFFERS FROM GLUTTONY

By Blair O. Wolf

The Great Blue Heron (*Ardea herodias*) is a bird known for it's propensity of attacking almost any mammal, bird, fish, or invertebrate that stands a remote chance of being subdued (Bayer 1979; Bent 1926; Palmer 1962). The list of prey species for this bird is extensive and the heron's ability to capture large, and unwieldy prey has on more than one occasion led to the demise of the heron concerned. Frogs (Langdale 1897), carp (Ryder 1950), bullheads (Bent 1926), and snakes (Cottam 1938) have been implicated in heron deaths. Here I report two cases of Great Blue Heron mortality involving pacific lamprey (*Lampetra tridentata*).

On January 10, 1988 at 0700 officer B. Tarbet (USFWS) found a dead Great Blue Heron lying in the vegetation next to a slough, near the community of Alviso, California. Officer Tarbet collected the heron and brought it to Coyote Creek Riparian Station (CCRS) for examination. A cursory examination revealed no obvious external injuries, but the tail of a partially ingested pacific lamprey protruded several centimeters from the bill of the heron. A similar incident occurred on January 30, 1988 when Chris Cutler and I, while opening mist nets at CCRS, found a second dead Great Blue Heron on a trail 20 meters from Coyote Creek. The tail of a lamprey was clearly visible, protruding from the heron's bill (Figure 1).

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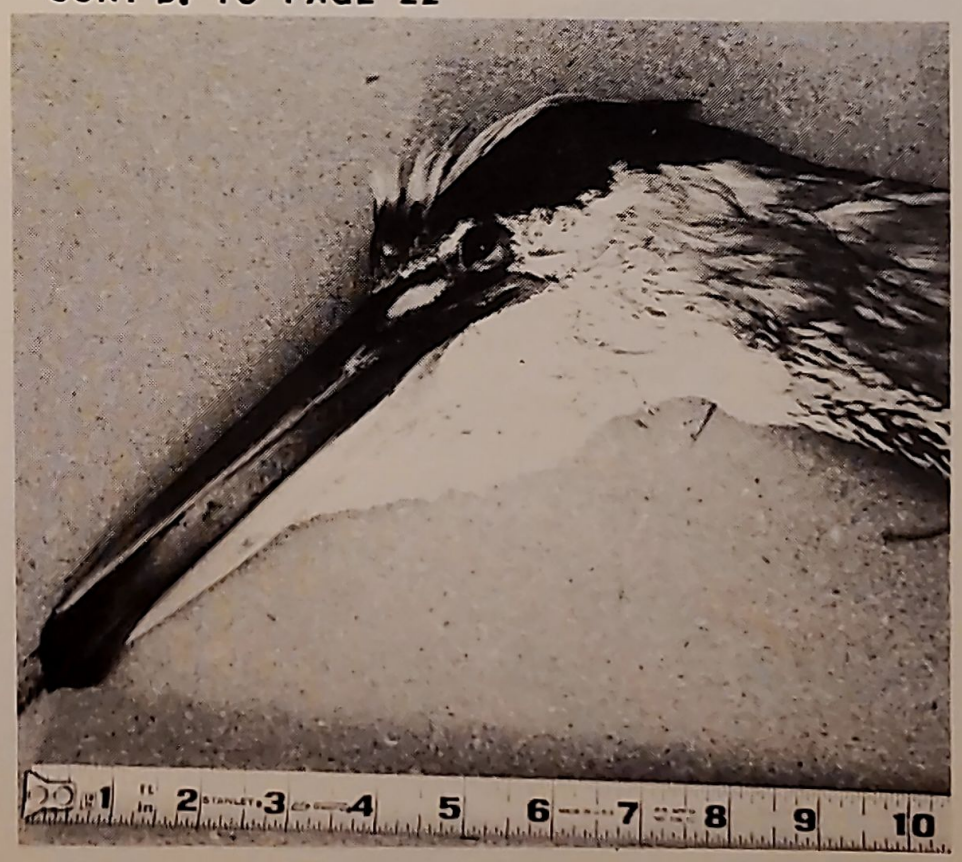

Figure 1. *Great Blue Heron with a Pacific Lamprey protruding from its bill.* Photo by L. Richard Mewaldt

On both occasions the lamprey were removed from the heron's throat and examined by Stephanie Jones. The lamprey found in the heron on January 10 measured 61.9 cm in total length (Pacific lampreys may attain a maximum total length of approximately 76 cm), with a greatest body circumference of 13.6 cm and body diameter of 4.3 cm. This lamprey weighed approximately 510 gm. Fourteen stab wounds (three through the body) were found in the head and gill region. The second lamprey (January 30) measured 57.6 cm total length with a greatest body circumference and diameter of 13.4 cm and 4.3 cm respectively. This lamprey's weight was approximately 410 gm. Sixteen stab wounds were found in the head and gill region of this lamprey. Both lamprey were adults and were probably awaiting the spawning run up stream later in the spring.

The herons were examined by Bruce Katano and me in an attempt to determine the cause of death. Both herons appeared healthy at the time of death with each bird having moderate deposits of fat in the furcula region. The first heron, collected January 10 was an "after hatching year" (AHY) bird of undetermined sex, with a wing length of 47.6 cm and weighing 3 kg. The January 30 bird was also an AHY bird of undetermined sex. The wing measured 45 cm and the bird weighed 2.55 kg.

The proximal portion of the neck was dissected to examine the heron's esophagus in the area where the lamprey's head was lodged. Copious amounts of blood came out with the lamprey (January 30) during it's removal from the heron's throat and we wanted to check the possibility that the lamprey inflicted wounds in this area. No wounds were found in either heron's esophagus and the surrounding blood vessels all appeared intact. A small amount of what looked like scar tissue (approximately 3 cm long and 1 cm wide) was found in the esophagus of the heron collected on January 30. From our examination it appeared that the head of the lamprey had lodged just anterior to the beginning of the proventriculus in both instances (Figure 2). Measurements of the area where the esophagus enters the body cavity (dorsal-ventral measurement of esophagus 5 cm) would indicate no potential problems as far as further ingestion was concerned. We concluded that from the number and location of the stab wounds in the lamprey, and examination of the heron's esophagus that the lamprey were dead prior to ingestion and did not wound the herons.

Further examination revealed that because of the position of the glottis, approximately 20 cm from the tip of the lower mandible, attached to the floor of the heron's mouth, in all likelihood the lamprey's body obstructed the airway and thus caused the heron to suffocate. The diameter of the lamprey and it's position over the heron's glottis indicates this scenario (Figure 1).

These incidents are a direct result of the prey's unusual length which, when combined with it's medium diameter produced these adverse results. Why the herons were not able to move the lamprey past the glottis and into the proventriculus is open to speculation. Perhaps it took too much time to swallow the lampreys, or the heron's tongue became ineffective in aiding in further ingestion.

These incidents when added to previously published reports strongly suggest that attempted ingestion by Great Blue Herons of large or otherwise unmanageable prey, and subsequent death may be an important factor when considering adult mortality and population dynamics of this and similar species.

Acknowledgments

I thank Deanna M. Domeier, Dr. Robert Hassur, Stephanie Jones, Bruce Katano, Dr. L. Richard Mewaldt, Michael Rigney, and Allen Royer.

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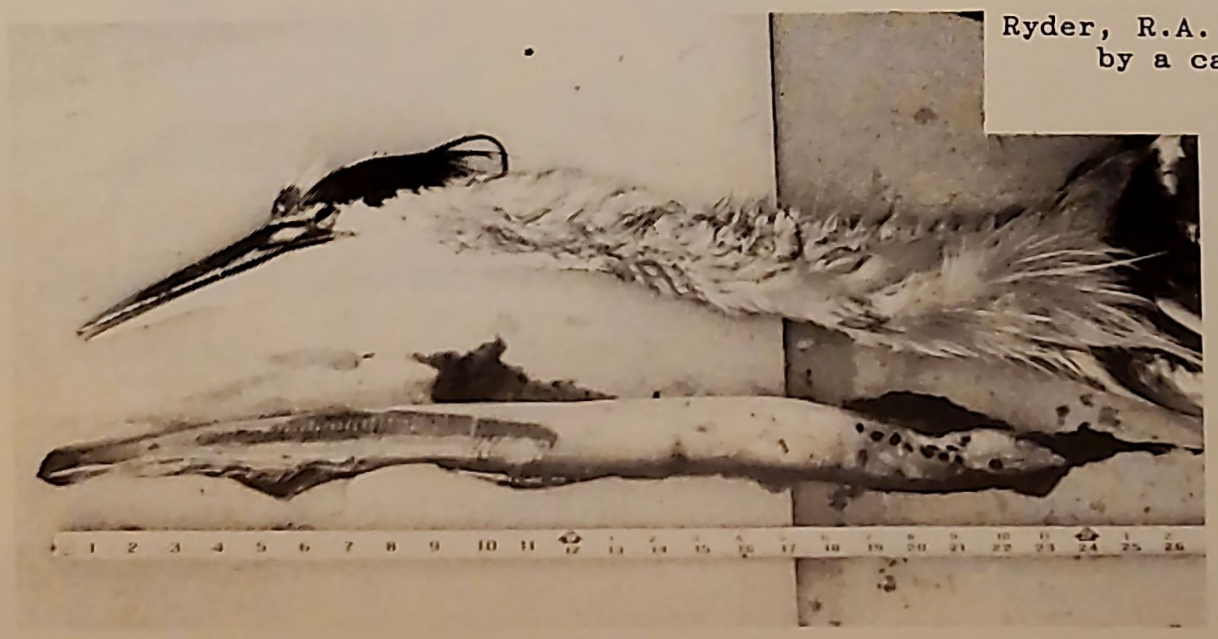

Figure 2. *Great Blue Heron and Pacific Lamprey it attempted to swallow.* Photo by L. Richard Mewaldt

CCRS ANNUAL MEETING

Coyote Creek Riparian Station will hold its second Annual Meeting on Saturday 17 September 1988 at the San Francisco Bay National Wildlife Refuge Environmental Education Center, Alviso, California (please call CCRS or Dick Mewaldt [408 258-7491] if you need directions). All Members, guests, and other persons interested in the activities of CCRS are invited to attend.

Active Members will convene for a short business meeting at 0930. The General Membership Meeting will begin at 1000 with introductions and then a summary of the business meeting by Secretary Elsie Richey. The Agenda will include President Rigney's Report to the Membership, and short reports by Biologist Blair Wolf, Santa Clara County Breeding Bird Atlas Coordinator Bill Bousman, Bird-Banding Report Coordinator Max Lincoln, CCRS Revegetation Team Leader Elinor Spellman, Manager Dick Mewaldt, and possibly other project leaders. As time permits, prior to 1200, Dick Mewaldt will present pictorial Hi-Lites of the past year.

By 1230 we shall have reconvened at our CCRS Field Station on Coyote Creek. There we will have lunch provided by the CCRS Board of Directors. Open for inspection and/or guided tours will be new and improved equipment and facilities, the pilot Riparian Revegetation Project, the Wildlife Monitoring Projects, and our Riparian Trail. Those who wish will be able to view progress on the major earth-moving phase of the SCVWD flood control and wildlife habitat restoration project on the northerly portion of our research area. We anticipate completion of the afternoon program by 1530.

CAVITY—NESTERS' DELIGHT

To accelerate recolonization of our riparian habitat along Coyote Creek by hole nesting birds, Max Lincoln and helpers installed more than thirty nest boxes in early 1987 (RiparianNews 2 (2):5). In the following October issue Max reported on their use in the spring of 1987 by Tree Swallows.

Thanks to the persuasion of George Honore of San Jose and the construction skills of John Marcott of Millbrae and Tony of Ravetto of Sunnyvale, we now have 35 more nest boxes. Built to Western Bluebird specifications, these will effectively fill available habitat on our Coyote Creek research area. They also provided the material for the boxes and the posts for installation. Watch for a status report later this year.

NEW WEATHER STATION

In May we installed a recording hygrothermograph in our new weather instrument shelter adjacent to our field laboratory. Active Member Derek Currall of Palo Alto built the new instrument shelter (Fig. 1) from scratch. It has the standard louvered sides, double roof, drop louvered door, ventilation slots in its floor, sturdy stand, and glossy white paint. Derek is applying these same skills in the construction of two additional shelters, each built to the same specifications.

We shall install one of these identical shelters in each of: (1) the existing streamside riparian strip; (2) the pilot revegetation plot installed in early 1987 for the Santa Clara Valley Water District by Harvey and Stanley Associates (Delevoryas, RiparianNews 2 (1):6) destined to become mid-terrace riparian habitat; and (3) the future overflow channel, now a ruderal area (Wolf, RiparianNews 3 (2):9-11), but which will be maintained as an herb enriched grassland.

In the months just ahead we shall be seeking funds (about $5000 - any ideas?) to acquire the instrumentation for these three parallel substations. When acquired and installed, we shall be able to record, study and describe the here-to-fore poorly known microclimatic differences in these three adjacent habitats -- now, and as each matures in the years ahead. LRM

Figure 1. ***New weather station.*** **Photo by David Johnson**

HELP WANTED!!

If you are interested in learning more about our program or taking an active part in our activities, we urge you to let us know. In the Active Member category, we welcome persons wishing to participate as volunteers in our ongoing and planned activities, such as:

Bird capture and banding
Creekside-trail bird censusing
Breeding Bird Atlas (SC County)
Riparian (plant) restoration
Trail and net-lane maintenance
Data entry at our Computer Center
Data analysis
Mammal study and censusing
Herptile study and censusing
Librarian
Raptor banding and biology
Custodial work and maintenance
Manuscript preparation - popular
Manuscript preparation - scientific
Building and repair of live traps
Endowment Fund raising
Bird house repair and management
Hummingbird banding and biology
Botanical inventory
Band inventory and management
Brochure development

Should you wish to participate in one or more of these activities (to become an Active Member), get in touch with Dick Mewaldt, Blair Wolf, any member of the Board, or another of our Active Members.

COYOTE CREEK RIPARIAN STATION

Coyote Creek Riparian Station is a non-profit California membership corporation with United States and California tax exempt status. CCRS is dedicated to research on, and to the restoration and management of riparian and wetland habitats as well as the birds and other animals that live there. CCRS is located on City of San Jose, Department of Water Pollution Control limited-access land along the last two miles of the west bank of Coyote Creek where it meets San Francisco Bay. Coyote Creek Riparian Station operates in cooperation with the Santa Clara Valley Water District, San Jose/Santa Clara Water Pollution Control Plant, Harvey and Stanley Assciates, San Jose State University, U. S. Bird Banding Laboratory, Laurel, MD., San Francisco Bay National Wildlife Refuge, and the California Department of Fish and Game.

Coyote Creek Riparian Station, P.O. Box 2019, Alviso, California 95002 -- (408) 262-9204

NEW MEMBERS

We welcome 29 new members who joined us in the last three months:

Abeles, Ernest R.	Active Member
Adamson, Harry C.	Member
Avery, Walter A.	Active Member
Baker, Lotus H.	Member
Beavers, Sallie	Active Member
Callanan, Ann M.	Member
Cameron, Roy S.	Member
Carlson, Barbara A.	Member
Coston, Charles J.	Member
Dingel, Emmett	Active Member
Domeier, Marlys & Lloyd	Members
Eisner, Alan M.	Member
Finnegan, Shawneen E.	Member
Garrigues, Catherine	Member
Green, Jennifer E.	Member
Illes, Chris	Active Member
Lauterbach, Amy	Member
Lindh, Briana	Member
Mammoser, Michael	Member
Norden, Rod	Active Member
Possingham, Hugh	Member
Royer, Neal & Dixie	Members
Royer, Dr. Robert P.	Member
Santa Clara Valley Aud Soc	Member
Spellman, Elinor	Active Member
Suddjian, David L.	Member
Wolfe, Claire	Member

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

We welcome John B. Delevoryas, Professor of Music at San Jose State University to Life Membership. We have used fine photographs of his in our *RiparíaNews*.

Life Membership payments and 10% of all other membership payments and general contributions (including some generous contributions by our Life Members) help assure the future of CCRS by being placed into our CCRS Endowment Fund.

MEMBERSHIP RATES

Member	$15 annually
Senior or Student	10 annually
Family	20 annually
Supporting	30 annually
Sustaining	75 annually
Corporate	100+ annually
Life	500 single payment*
Patron	5000 single payment*

Life Membership payments and 10% of all other membership payments and general contributions go into the CCRS Endowment Fund now earning about $145 per month. CCRS is a non-profit corporation with U. S. and California tax exempt status. We will acknowledge Memorial contributions in RiparíaNews. We welcome bequests including those of real property.

*Or in 4 or 5 installments