



Hallberg Butterfly Gardens

The Pipevine

8687 Oak Grove Road, Sebastopol, CA 95472
(707) 823-3420 www.hallbergbutterflygardens.org

Spring 2015
Issue Number 17

Welcome to Open Gardens Day Sunday, June 28, 2015

By Louise Hallberg

On Open Gardens Day, Sunday, June 28th, we hope to have several host plants for sale: Dutchman's pipevine, fennel, and milkweed, as well as nectar plants; *Scabiosa*, *Verbena bonariensis*. An up-to-date map for self-guided tours will be available at the guest table. It begins at the dragonfly pond then goes by the weather stations where we have not recorded much rain, which is a concern.

Buckeye butterfly on host plant plantain (larval food source)



As of April 12th we have had 28.37 inches. By June 30th we normally have 42.28 inches of rain. From the weather stations we move to the area where the Sonoma State students will show various insects under microscopes for both children and adults.

The next room in the barn will show host plants and the butterfly that uses each plant. It is important that people are aware that weeds are vital for certain butterflies. From there you will go west of the barn and see the stream. The path is very narrow so please be careful. Go down under the arbor to the bird table which will have lists of birds seen, a nest display, and books. From the bird table, go down eighteen steps to the meadow where hopefully you will see butterflies flying and then proceed south where



California Quail, male. All photos by Julie Bennett unless otherwise noted.

there is a table with wildflowers. Docents will be happy to answer questions. You can proceed into the former vegetable garden where we have four species of willow, coyote bush, dogwood, a big live oak, a valley oak and a pine tree which all help butterflies and birds. After that, proceed up the steps and turn to the right at the top of the hill to take the new path out, circling the old barn.

Cross the driveway to take the sidewalk in front of the house. A docent will explain the Dutchman's pipevine, which covers a large area. Caterpillars
Continued on page 3.

Left: Patricia Dervin, Louise Hallberg and Kathy Trafton, Open Gardens Day 2014

Below: Creative Children's activities



Garden News

By Louise Hallberg

In January the camelias were in full bloom, as well as narcissus. Quince and honeysuckle were beginning to bloom. The Dutchman's pipevine blossoms were shaping into little "pipes".

Mustard was seen in the orchard in February for the first time. Also in February at the front of the house the magnolia tree was full of flowers. Lenten rose was blooming and manzanita had Evening Primrose



Annual Plant Sale, held Open Gardens Day. Host plants and Nectar plants available, first come, first served. Sale starts promptly at 10AM, Sunday June 28th 2015.



pink blooms along the road. Catarino pruned the butterfly bushes in March so they would bloom by Open Gardens day in June where the photographers can take pictures of the butterflies getting nectar.

In March the jonquils, daffodils, bridal wreath (which has a long spray of blossoms and is very pretty—a very old plant) *Cheiranthus* and rosemary were blooming.

In April we saw the following in bloom: *Wisteria*, *Abutilon*, *Fremontia*, *Verbena* (low purple), radish, white and colored, horehound, forget-me-not, clover, lavender, and the honeysuckle tree. Later in the month we saw over two-hundred blossoms on the bridal wreath rose at the top of the hill. Double flowering cherry blossoms are falling.

Many butterflies and bees were seen on the blooming horse chestnut tree. We saw red dragonflies at the pond and before that gray and black ones.

The yellow iris has been in bloom in the pond for quite a long time. The foxgloves in the meadow are blooming in pink, whites and yellows.



SRJC Student Intern 2015—Steve Mais

Steve is an agriculture student at SRJC who lives at the SRJC Shone Farm in Forestville. He works at the Farm and has been helping at the Hallberg Butterfly Gardens for a few months. He is hoping to continue his education at Cal Poly San Luis Obispo in the fall to study crop science. He wants to increase biodiversity in agriculture to mimic Hallberg Butterfly Gardens.

HBG Garden Tours 1999 to 2014		
Year	Visitors	School/Children's Tours
2014	1,407	465
2013	1,891	417
2012	2,120	424
2011	2,358	489
2010	2,503	494
2009	1,884	679
2008	2,020	538
2007	1,620	493
2006	1,539	596
2005	1,573	818
2004	1,743	927
2003	1,872	912
2002	2,264	902
2001	3,239	1,290
2000	2,464	822
1999	2,505	845
Total	31,111	10,694

Welcome to Open Gardens Day

Continued from page 1.

may be seen on this plant that has been in the area since the early 1920's. Follow the path around south of the house to arrive at the old first pond in which goldfish have been placed. Docents will answer questions about the pipevine swallowtail butterfly or the plant. As you continue look up at the huge black oak that is probably two-hundred and fifty years old.

Follow the path and cross a little bridge where a small *Catalpa* tree, started from a cutting from the tree out front because this unusual tree has no seedpods. Come out to the path by the orchard and you will see the list of butterflies seen and photographed today. You may want to stop and take pictures if the butterflies are nectaring on the butterfly bushes. Notice the big strawberry tree to the right of the arbor, which was planted in April 1990 when we started the Butterfly Gardens on the north side of the house. Butterflies and birds like the strawberry tree. As you proceed you will see the cedar Lebanon tree, started from a cutting of the tree Luther Burbank was buried under. It was eventually cut down because of disease. You will see quite a few ferns on the right hand side as you approach the book table where cards, magnets, books and shirts are available. Close by are drinks in case it is hot and you are thirsty.

Farther on are two long tables, which are almost always filled with children making butterfly crafts to take home. There is also a table where origami paper butterflies can be made.

Visitors are asked to sign in and are then oriented within the Gardens by Kathy Oetinger. Maps and docents are available to help enrich your visit.

It is hoped we have nice weather on June 28th like last year when it was a pleasant day with 83 degrees. Thirteen butterflies were sighted and Kathy Biggs, the dragonfly lady, was happy seeing six dragonflies species including a black saddlebags seen for the first time. Thirty-two species of birds were seen, and they are listed, along with the dragonflies, directly to the right.

When we examined the guest books we were surprised to find so many different cities, counties and states. The year before, most of the guests were from Sonoma County and almost every town was represented, but not so this year. We were happy to have Bob help in the usual place at the front with the Dutchman's pipevine.

Last year we received more than two-hundred extra caterpillars from Jean Pacheco in the Bodega area. She released a great many in our backyard because she ran out of food for her caterpillars.

The sixty volunteers were kept busy all day and their help is greatly appreciated. We could not entertain all the visitors on Open Gardens Day without their dedicated help.

Butterfly Sightings (13 species)

Acmon Blue, Anise Swallowtail, Cabbage White, California Dogface, Common Buckeye, Common Checkered Skipper, Echo Blue (Spring Azure), Lorquin's Admiral, Monarch, Painted Lady, Pale Swallowtail, Pipevine Swallowtail, Western Tiger Swallowtail

Dragonfly Sightings (6 species)

Black Saddlebags (female); first-time sighting, Blue Dasher (male), Cardinal Meadowhawk (male & female), Darner species, Flame Skimmer (male & female), Pacific Forktail (male)

Bird Sightings (32 species)

Acorn Woodpecker, American Crow, American Robin, Anna's Hummingbird, Black-headed Grosbeak, Brown Creeper, Bushtit, California Quail, California Towhee, Chestnut-back Chickadee, Downy Woodpecker, Eurasian Collared Dove, European Starling, Great Horned Owl, House Finch, Lesser Goldfinch, Mourning Dove, Northern Mockingbird, Northern Oriole, Nuttall's Woodpecker, Oak Titmouse, Pacific Slope Flycatcher, Red Tailed Hawk, Song sparrow, Spotted Towhee, Swallow (Violet green or Tea), Turkey Vulture, Vaux Swift, Warbling Vireo, Western Scrub Jay, Western Wood Peewee, White-breasted Nuthatch



Butterflies in the Garden

By Louise Hallberg

On August 19th 2014, Catarino found six monarch eggs on a milkweed plant by the stream. A few days later he was to bring them in and they were all gone. A kind person brought a milkweed with two big monarch caterpillars (and the little one died), and I did have two chrysalises and released two monarchs. I was able to show visitors the beautiful chrysalises. I released them October 12th and the 19th.

This year we saw the first Pipevine Swallowtail butterfly flying on Feb 22, 2015; and then almost every day after that. On March 11, Mere saw the first eggs; later Catarino and Mere said something happened and the eggs were not good. On March 22nd the first caterpillar was seen. Butterflies were seen flying over the Dutchman's pipevine frequently so there probably were more

and more eggs. As of April 19th we have not seen any chrysalis although Catarino saw a big caterpillar on the Dutchman's pipevine near the weather station. Everyone says they are seeing a lot of pipevine swallowtails flying. We should have more because we had extra caterpillars released here last year.

On February 24th we saw the first anise swallowtail butterfly, and off and on we saw it. We saw the first eggs on March 9th. Catarino brought in eleven eggs on fennel to keep in the cage because they disappear fast when left outside. We brought in a few more and have been showing visitors these caterpillars.

We have had more visitors this year in April than ever before probably because of the warm weather and tourists passing through. Beginning on April 12th we had visitors from Mexico, Orange County, New York City, and France.

Butterfly sightings have included west coast lady, pipevine swallowtail, anise swallowtail, tiger swallowtail, cabbage white, and skippers because of the warm weather. The butterflies were



Monarch Male

nectaring early on the mustard blossoms in the orchards. They were also on wild radish in the meadow, the horse chestnut, honeysuckle, butterfly bush, manzanita, lavender, rosemary, lilac, *Cheiranthus* and hawthorn.

People who have bought plants at the Gardens quite a few years ago now have small Dutchman's pipevines and lots of caterpillars because they have butterflies laying lots of eggs. Pat Muscat had five-hundred caterpillars on her small vines and has been releasing some at many different locations in Sonoma County where the vine grows. She has taken a few branches from here to feed what she has at her house.

Sarah Brown discovered where the chrysalises were this year (springtime). They were found on the *Clematis* vine along the trellis at the top of the house that was nine feet above the ground.

MONARCH RELEASES		
Year	Releases	Tachinid Fly Losses
1997	108	n/a
1998	53	80
1999	18	11
2000	82	5
2001	12	n/a
2002	22	4
2003	28	2
2004	51	20
2005	7	7
2006	57	3
2007	3	n/a
2008	24	3
2009	0	18*
2010	2	2*
2011	0	0
2012	0	0
2013	19	0
2014	0	0

*Due to late hatch, too cold (not tachinid flies).

Enter the meadow, wildlife and habitat await



STATISTICS: Butterfly Species Sightings in 2014

Family Name	Common Name	Latin Name	First Date Seen	Last Date Seen
PAPILIONIDAE				
	Pipevine Swallowtail	<i>Battus philenor</i>	February 19	November 24
	Anise Swallowtail	<i>Papilio zelicaon</i>	March 15	October 16
	Western Tiger Swallowtail	<i>Papilio rutulus</i>	May 1	October 4
	Pale Swallowtail	<i>Papilo eurymedon</i>	April 18	April 18
PIERIDAE				
	Mustard (Veined) White	<i>Pieris napi</i>	February 19	July 12
	Cabbage White	<i>Pieris rapae</i>	February 25	November 30
	Orange Sulfur (Alfalfa)	<i>Colias eurytheme</i>	March 7	November 30
	California Dogface	<i>Colias eurydice</i>	March 17	October 10
LYCAENIDAE				
	Purplish Copper	<i>Lycaena helloides</i>	May 3	October 10
	Great Purple Hairstreak	<i>Atlides Halesus</i>	August 1	September 28
	Gray (Common) Hairstreak	<i>Strymon melinus</i>	September 28	September 28
	Spring Azure (Echo Blue)	<i>Celastrina ladon</i>	March 13	September 7
	Acmon Blue	<i>Plebejus acmon</i>	May 1	October 22
NYMPHALIDAE				
	Field Crescent	<i>Phyciodes campestris</i>	May 28	November 15
	Mylitta Crescent	<i>Phyciodes mylitta</i>	March 10	November 10
	Mourning Cloak	<i>Nymphalis antiopa</i>	February 16	October 26
	Painted Lady	<i>Vanessa cardui</i>	May 14	October 30
	West Coast Lady	<i>Vanessa annabella</i>	April 16	November 15
	Red Admiral	<i>Vanessa atalanta</i>	May 19	September 4
	Common Buckeye	<i>Junonia coenia</i>	May 13	November 10
	Lorquin's Admiral	<i>Limenitis lorquini</i>	April 18	September 13
	California Sister	<i>Adelpha bredowii</i>	June 17	August 15
	California Common Ringlet	<i>Coenonympha tullia, calif.</i>	October 1	November 10
	Variable Checkerspot	<i>Cercyonis pegala</i>	June 2	June 2
	Satyr Comma (Anglewing)	<i>Polygonia satyrus</i>	January 12	February 19
	Monarch	<i>Danaus plexippus</i>	March 11	October 26
HESPERIIDAE				
	Mournful Duskywing	<i>Erynnis tristis</i>	March 7	November 15
	Common Checkered-Skipper	<i>Pyrgus communis</i>	March 19	November 9
	Fiery Skipper	<i>Hylephila phyleus</i>	October 26	November 9
	Sachem Skipper	<i>Atalopedes campestris</i>	October 3	October 3
	Woodland Skipper	<i>Ochlodes sylvanoides</i>	May 21	September 19
	Umber Skipper	<i>Poanes melane</i>	May 4	November 5
	Unidentified Skipper	<i>unknown</i>	April 18	November 15

year	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14
# of species sighted	27	26	31	33	21	35	28	33	32	30	32	32	36	38	27	32	32	38	36	33	27	30	33

Fifty-nine of California's 236 native butterfly species are commonly seen in the San Francisco Bay Area. A total of 54 different species have been catalogued visiting at Hallberg Butterfly Gardens over the last 23 years...some just once, or only rarely, and some establishing populations in our enhanced habitat.

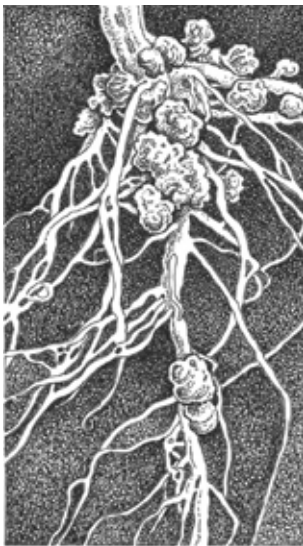
Garden Allies: Soil Microbes

Mysterious soil organisms facilitate nutrient uptake by plants

By Frederique Lavoipierre

This story first appeared in the Fall 2013 issue of Pacific Horticulture www.pacifichorticulture.org.

In our last three forays into the under-world of the garden, our subject was decomposers: those organisms that break down organic matter and build the gardener's most precious resource, the soil that supports virtually all plant life. As we conclude our discussion of the soil foodweb, we explore rhizobia bacteria, actinomycetes, and mycorrhizae.

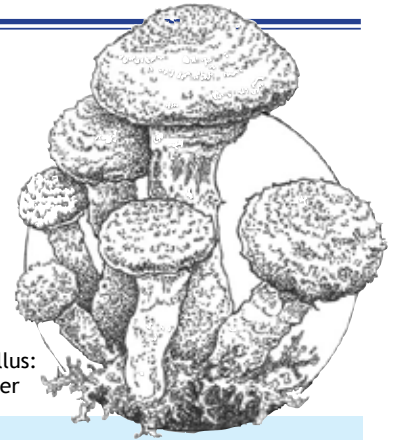


Root nodules on legume.
Illus: Craig Latker

Certain bacteria and fungi form obligate mutualistic relationships with plants and are essential for optimal plant growth. Many plants can't grow at all without their largely unseen partners, which facilitate nutrient uptake,

while the mutualistic partner also derives essential sustenance. These partners provide nutrients such as nitrogen, phosphorus, and iron in an available form. Nitrogen gas (N₂), for example, makes up 79 percent of our atmosphere, and nitrogen is an essential component in DNA, proteins, and chlorophyll molecules. For nitrogen to be available to plants, however, it must first be converted, or "fixed" to a form that can be taken up by roots. In nature, this process is primarily accomplished by soil microbes and fungi converting N₂ into ammonium (NH₄⁺), nitrate (NO₃⁻) and nitrite (NO₂⁻). Lightning also fixes atmospheric nitrogen into a usable form for plants.

The nitrogen-fixing cyanobacteria (formerly known as blue-green algae) are among the first colonizers of bare land such as volcanic flows and glacial moraines, and are known as pioneer species. They create a hospitable environment for plants that succeed them; some are known to form mutualistic relationships with a few plant species. The Rhizobium bacteria associated with most leguminous plants are well-known to gardeners. Pull up peas and beans for instance, and the roots, if well



Armillaria ostoyae. Illus: Craig Latker

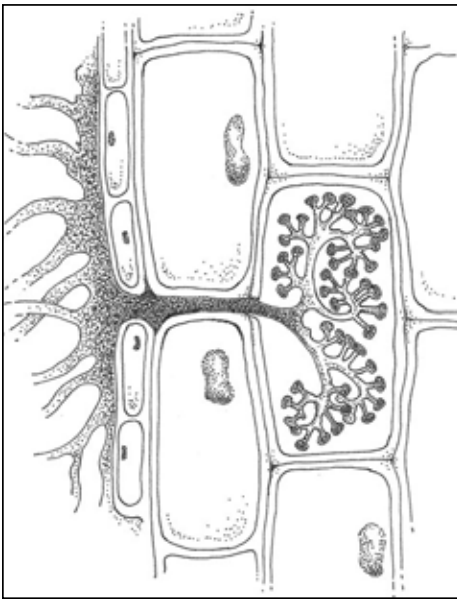
Frederique Lavoipierre is Education Program manager at Santa Barbara Botanic Garden. She also teaches classes and workshops on many aspects of sustainable landscaping, including ecological principles, habitat gardens, beneficial insects, soil ecology, fresh-water ecology, and aquatic invertebrates.

inoculated with bacteria, will be covered with pale pinkish nodules. In order for the nitrogen contained in the nodules to become available in the soil, the roots must decompose. For many years, I have increased the fertility and tilth of my vegetable garden with a fall crop of fava beans. When the fava beans begin to flower, I simply cut the plants down at ground level, bury the tops in the compost pile, and leave the fibrous root system to decompose in place (saving a few plants to harvest the delicious flowers and beans). No tilling necessary! Other bacteria also fix nitrogen, but live *Continued on next page*

Mushrooms found at Hallberg Butterfly Gardens winter 2014-15.
Special thanks to Bob Stewart of West Coast Lady Press for identifications.

- 1 False chanterelles with their decurrent gills, not primitive as in the real chanterelle
 - 2 *Cortinarius* sp.
 - 3 *Agaricus* sp.
 - 4 *Agaricus xanthoderma* because it has stained yellow on the cap and the bottom of the stalk
 - 5 *Cortinarius* sp.
 - 6 *Hyphaloma (Naematoloma) aurantiaca* will have purple brown spores
- Photos by Gay Bishop





Endomycorrhiza. Illus: Craig Latker

free in the soil, not in plant roots.

Some members of another group of microbes, the actinomycetes, are also capable of fixing nitrogen. One group of actin-zomycetes produces antibiotics such as strep-tomycin, while a different group is responsible for the earthy odor of forest humus and well-made compost. The third group includes Frankia species that form large clusters of nitrogen-fixing nodules on the roots of some non-leguminous plants, including some species of ceanothus, bayberry (*Morella californica*), alder (*Alnus* spp.) and mountain mahogany (*Cercocarpus* spp.). Plants that fix nitrogen in partnership with actinomycetes are known as actinorhizal plants; there are over 200 plant species in eight families.

Twenty years ago, most gardeners had never heard the word “mycorrhizae,”

although they were first documented in 1885 by a German scientist, Albert Bernhard Frank, in a simple experiment comparing pines grown in sterile soil to pines grown in forest humus. Mycorrhizae are fungi that have a mutualistic relationship with plants; the fungi use sugars produced by the plant, while they increase availability of water and of several nutrients, most notably phosphorus, to the plant. Ectomy-corrhizae are associated with conifers and hardwoods, and grow in a web surrounding the roots of their host. The fruiting bodies are the familiar mushrooms of our woodland hikes—fungi such as *Boletus*, *Cantharellus*, and *Morchella*. Ectomycorrhizae are specialists on certain species of plants; any mushroom forager knows that their favorite mushrooms are only found in association with specific tree species.

Endomycorrhizae, on the other hand, are generalists, and the same species of fungus may be found on many species of plants. The fungal hyphae of endomycorrhizae penetrate into the cell walls of the hosts. The longer we study mycorrhizal relationships, the more we discover how ubiquitous mycorrhizae seem to be. Perennials, softwood trees, shrubs, and many vegetables have been discovered to be associated with endomycorrhizae, with the notable exception of all species of the large mustard family. Some plants may host dozens of species, and include both types of mycorrhizae

Mycorrhizae are reputed to add from 700 to 1,000 times the effective surface

Hallberg Butterfly Gardens
 18th annual
Open Gardens Celebration



Sunday, June 28, 2015
 10 am to 4 pm

www.hallbergbutterflygardens.org
 (707) 823-3420
 501 (c)3 non-profit #91-1767178
FREE! No Reservations Required

area to roots, greatly increasing the ability to take up water and nutrients. Unless the soil in your garden is highly impoverished, adding purchased mycorrhizae may be unnecessary as endomycorrhizae native to the soil should be present. In a new garden with poor soil, or added to a sterile potting mix, mycorrhizae can make a difference to success.

It has long been my practice, when planting native shrubs in my garden, to gather a handful or two of humus from the nearby woods and use it to inoculate the planting area. A walk in the woods is never in vain, and it is always rewarding to pull the aromatic bundle from my pocket and add it to my garden.

See more at: <http://www.pacifichorticulture.org/articles/garden-allies-soil-microbes/#sthash.Ery8E6GZ.dpuf>





Alexandria and daughter Sage at the children's activity tables, Open Gardens 2014.

Birds in the Garden

By Louise Hallberg

This year more chickadees were seen, five at once on the bird feeder. They could not wait sometimes for the sunflower seeds and flew right to the bench where feeders were being filled. So nice. Also seen were titmice, nuthatches, juncos, golden-crown sparrows (Gay saw a white-throated sparrow and a fox sparrow) and quail (20 or more were

frequently counted). The quail have so many predators but we try to keep shrubs and Himalayan blackberries here and there to help them. Flocks of bushtits pass through now and then. Scrub jays come to the feeders and carry off five or six seeds at a time. Stellar jays are more frequently seen than before and they screech loudly. There were fewer California towhees because stray cats wander through. Eurasian collared doves come to the deck for seeds. The great horned owls are heard and seen off and on, sometimes in eucalyptus, redwood, or oak trees and at times, close over the house.

In April on the blossoming horse chestnut tree, Catarino saw five hummingbird birds getting nectar at the same time.

I might mention that I usually eat lunch outside on the deck and often hear the quail stopping by under the big spice bush for sunflower seeds thrown there for them. Gay hikes in many places in Sonoma County and has never seen such a large spicebush shrub. In April it shows buds and has pretty red flowers and a different seed pod. Visitors enjoy breaking a leaf and smelling the spicy odor.

Juncos and robins have used the little bird bath by the waterfalls of the dragonfly pond. Lots of birds enjoy spray from the waterfall and bird pond. Woodpeckers are heard on the telephone poles and the oak and the eucalyptus tree. Red-tail hawks nest in the eucalyptus. Vultures frequently fly over. On Open Gardens Day, thirty-two species of birds were seen and are listed on page three.

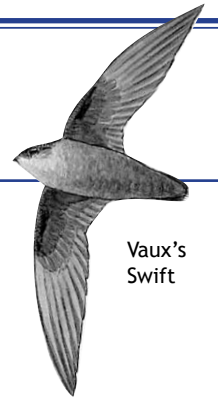
Above Left: Birdwatchers Karen Nagel and Glenda Ross from local Madrone Chapter of The Audubon Society.

Left: Acorn woodpeckers collect and store food for the future. Parents rear their young, joined by close knit kin to form a ten to fifteen member family. Observe them and many other winged wonders with us this Open Gardens Day.



Vaux's Swift Story Update

By Louise Hallberg



Vaux's Swift

Swift Story 2014

There is a mystery about the swifts in 2014 we cannot answer.

On April 19th, we saw two swifts fly into the chimney at 8 PM and for an unknown reason two flew out at 8:15PM.

On April 22nd one flew in at 8:01 PM and out at 8:07 PM.

The pattern continued, seeing none or seeing one of two flying out until May 1st.

From May 1st through May 6th we saw one or two fly out every night. On June 28th the birds were heard in the chimney. The nest was built up seven feet above the unused fireplace and birds were heard until July 14th.

Although birds were heard not often and were not sighted out of chimney, it is hoped a few survived and flew away.

Kathy Spalding and Bill Brumgardt

came and cleared out the fireplace and found all nest, no egg shells, but one little dead bird. A layer of plastic bags, newspapers and paper towels were laid at the bottom of the fireplace in case baby birds fell out of the nest and into the fireplace this year.

Swifts 2015

March 21st – Kathy Spalding let us know swifts had been seen in Marin and Sonoma Counties. We watched for several nights and saw no swifts.

April 11th – We were out at 7:30 PM and very soon saw two swifts drop in right together.

April 12th – Three or four flew in far apart.

Since we have not seen any or only one, we are just watching off and on.

We know they have to make a nest so we hope for good news this year.



Vaux's Swift's nest. Photo by Bill Brumgardt.

Robins

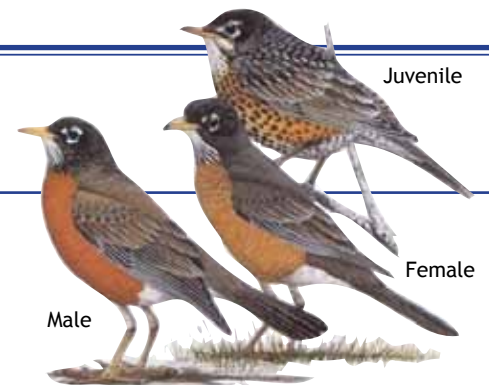
By Louise Hallberg

Robins are known for their early morning chorus. This is when the soil is moist and the robin can get an angle-worm to feed its brood. Here we see them in the orchard and in the past they have come for berries on the Myrtle by the deck and we can watch them through the windows. They also eat fruit and insects. Their song is a series of rising and falling phrases, often continuing a series which is repeated or varies. In the summer they sing vigorously before light and after for one hour before they disperse to feed. Individuals sing through the morning. There is a little water area near the new waterfalls of the remodeled dragonfly pond for the birds and Catarino has seen robins using this which is close to the orchard area where they feed. The male robin is a gray bird with a rusty red breast and nearly black head and tail, a white

chin with black streaks, and white eye ring. Female is similar to male but with a gray head and duller breast.

The female builds a cup nest with help from the male. Robins prefer to build near water, bringing coarse grasses, roots, a few leaves or weed stalks for the foundation of the nest and pellets of mud in their bills for the interior walls which they smush into a bowl shape with fine grasses in the lining. They swaddle the nest to the limb of a tree like an old apple tree.

The early English colonist who had been brought up on "The Tales in the Wood" named the bird after the heroes in that tale. But the American robin is a much larger bird than the European robin. John Burroughs calls this bird, of all our birds, "the most native and democratic." How they dominate birdom



Male

Female

Juvenile

American Robin Facts

- 2-3 broods per year
- 4-7 pale blue eggs
- 12-14 days female incubate
- 14-16 days female & male feed young
- Non-migratory in California

with its strong aggressive personality! His voice rings out strong and clear in the early morning chorus, and more tenderly subdued at twilight. The robin is a joyous vigorous bird of the morning. No bird has such a varied repertoire as the robin.

Ferns in the Hallberg Butterfly Garden

By Wendy A. Born

In early spring Louise had asked me to identify the ferns that were growing in her garden, these were Sword ferns, Coastal Wood fern, Giant Chain fern, some Polypodies, Maidenhair ferns, and



Cretan Brake ferns. After making a list of the ferns I offered to “clean up” some of the ferns, which involves cutting back the old fern fronds and making way for the new growth.

At first Louise was rather shocked at seeing the outcome as it was not a method she had heard of before. Louise has asked me to describe this process of cleaning up the ferns.

Cleaning up ferns basically is the removal of the previous years growth, dead frond bases, and damaged fronds. Debris/fallen leaves can act as a good mulch, but when too thick and covering the fern crown can lead to rotting of this area. The best time to clean up the ferns is before the young new growth is unfurling...when the new growth is tightly curled into the crown, and there is no chance of a heavy frost.

Following this method the dramatic unfurling and expanding of the new growth is aesthetically pleasing and the ferns are again ready for another season of producing young, vigorous fiddleheads.

1 Sword Fern prior to cleaning up, with new growth tightly curled into the crown.

2 Fronds beginning to unfurl.

3 Vigorous new growth.

Ferns in the Garden

North of the Arbor

Pteris cretica (Brake fern)

Polystichum setiferum
(Soft shield fern)

Polystichum munitum (Sword fern)

Rhumora adiantiformis
(Leather leaf fern)

South of the Arbor & by the path

Dryopteris arguta (Coatal Wood fern)

Polypodium calirhiza
(Common polypody)

By back steps by the backdoor

Woodwardia fimbriata
(Giant chain fern)

Polystichum munitum (Sword fern)

Polystichum setiferum
(Soft shield fern)

Across from birdbath, S. of tables

Polypodium glychris (Licorice fern)

Adiantum capillus veneris
(Southern Maidenhair)

Adiantum x tracyi

Blechnum spicant (Deer fern)

Top of hill, left of path to meadow

Polystichum munitum (Sword fern)

Activity Statistics 2014

(Number of guests shown in parentheses)

Month	Total Tours	Groups	Children's Tours	Open Gardens
JAN				
FEB				
MAR				
APR	11	9 (44)		
MAY	39	26 (108)	2 (65)	
JUN	15	13 (89)	13 (292)	(500)
JUL	24	21 (65)	3 (50)	
AUG	10	10 (41)	1 (18)	
SEP	14	14 (62)	1 (17)	
OCT	11	11 (29)		
NOV	1	1 (4)		
DEC				
Total Tours	125	105	20	
Total Guests	(1407)	(442)	(465)	(500)

2014 Friends of the Gardens...

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Redwood Empire Chapter, California Association of Nurseries & Garden Centers
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Hallberg Butterfly Gardens

Thank You!

Private donations are our only significant source of funds to purchase the plants, materials, and labor that create the Hallberg Butterfly Gardens. These individuals and organizations helped sustain our nonprofit during 2014, although all of our contributors (past, present, and future) are deeply appreciated!

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I'm a Friend of the Gardens too!

- I wish to become a Friend of the Gardens
- I wish to renew my Friendship
 - \$250 Pipevine Swallowtail
 - \$150 West Coast Lady
 - \$100 Monarch
 - \$50 Buckeye
 - \$25 Woodland Skipper
 - \$ _____

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DESIGN: Oetinger Design

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Receive your newsletter by email!
Drop us a line at
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**The Gardens are open
April - October,
Wednesday - Sunday,
by Appointment.**

Call 707•823•3420

Hallberg Butterfly Gardens 18th annual Open Gardens Celebration

*Bird & Butterfly Sightings
Children's Activities
Wildflower Display
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& Books for Sale
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**Sunday
June 28, 2015
10 am to 4 pm**

*Free! No reservations needed!
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