Sunday, June 26, 2016

Come to Open Gardens Day

By Louise Hallberg

With good weather you will see butterflies, maybe Pipevine Swallowtail, Anise, Tiger, West Coast Lady and others and you may see dragonflies by the pond and hear about them from the Dragonfly Lady.

As you arrive you will see the plant sale with plants clearly labeled and assistants nearby to answer questions. There will be host plants; Dutchman’s Pipevine, milkweed and nectar plants; scabiosa, evening primrose and others. An up-to-date map for self-guided tours will be available at the guest table. The tour begins at the dragonfly pond then goes by the weather stations where we have recorded more rain. As of April 11th, we have had 37.23 inches. Sonoma State students with their insect display and microscopes provide an up close look at a variety of exciting insects. The plant display teaches us that certain weeds are vital for certain butterflies.

From the barn you continue past the stream, where the path is narrow so please be careful. Down under the arbor is the bird table, with nests, specimens and docents to help with questions. Proceed down the 18 steps to the meadow where you will hopefully see butterflies flying and continue on to the wildflower table. 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. When you get to the top of the steps and turn right to take the new path south of the old barn.

Cross the driveway to the front of the house to see the Dutchman’s pipevine plant and the large caterpillars it feeds. Docents will be present to explain the intertwined relationship of this host plant with the Pipevine Swallowtail. Continue through the thick old garden to explore the over quarter acre of Dutchman’s Pipevine, all surrounding the house, shaded by giant Magnolia, Black Oak and Buckeye trees. The path will take you to the north garden, where a butterfly station will be set, and we will track what has been seen. The orchard adjacent is home to the old apple trees, where butterflies nectar on the many apple blossoms each spring. Complete your tour with a stop by the craft table, a refreshing drink, and a shady place to make children’s art. Enjoy! Our sixty volunteers make it possible for us to entertain and educate neighbors and visitors from far away places. For those who need it, a shuttle service is available to and from parked cars.

Cross the driveway to the front of the house to see the Dutchman’s pipevine plant and the large caterpillars it feeds. Docents will be present to explain the intertwined relationship of this host plant with the Pipevine Swallowtail.
Garden News
By Gay Bishop Brorstrom

With the generous rainfall totals recorded at the Hallberg weather station, April flowers are abundant in the Gardens. In the front of the house, roses and iris are in bloom along with the apple blossom rose and fragrant climbing cashmere bouquet rose. Long stemmed white and pink ixia is in bloom. Near the trellis several passion vines have been planted to lure gulf fritillary butterflies to the Gardens.

Near the weather station, the pink, double blossoming cherry tree flowers, now gone, were spectacular a month ago. Nearby, purple salvia is in bloom along with foxglove. Near the old workshop area, the red horse chestnut tree and its volunteer saplings are in flower attracting carpenter bees whose buzzing is almost deafening.

Louise’s favorite honeysuckle tree, past flowering, is now sporting small wax-like bright tangerine colored berries. On the north side of the house, long tapered wisteria blooms scent the air. Overhead, various colored camellias persist after a month long show. In the shaded understory, tiny fringedcups, a native wildflower, line the edge of the sidewalk.

On the south side of the house, the large spicebush tree is budding, next to the white flowering Carpenteria. By the pond in the back of the house, bright orange caria blossoms can be seen climbing through the surrounding foliage.

At the top of the steps leading to the meadow, the sugarbush tree had unusual clusters of white and brown blossoms earlier in the winter. Now the Carpenteria is in bloom nearby, along with many kinds of salvias down the hillside with red and white hot lips salvia being especially eye-catching.

Stream-side, two pink hawthorne trees are showy and under them, tall, robust white columbines predominate. Rosemary thrives and is in bloom throughout the Gardens as well as rattlesnake grass which is attractive as it moves in the wind despite its scary sounding name.

Spring has sprung and is more joyous than ever after the prolonged drought.

Local Ladies Mary Ann Beiter and friends enjoy the services and smiles of Open Gardens Day. Photo by L. Brorstrom.

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Activity Statistics 2015
(Number of guests shown in parentheses)

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2015 Open Gardens Day
By Louise Hallberg

The butterflies, birds and dragonflies seen are listed to the right. Visitors enjoyed seeing the rain totals for the last 100 years, the Sonoma State insect exhibit, and our host and nectar plant display. Guests enjoyed the stream, the docents at the bird station, also seeing and learning about the local wildflowers.

It was very fortunate that the new chip path south of the barn was complete so visitors could leave the meadow without meeting those coming to the meadow as the path is very narrow next to the barn. After seeing the Dutchman’s Pipevine in front of the house, guests went to the north garden and got to see and take butterfly pictures before proceeding to the sales table where books, magnets, card and shirts were for sale. Cold drinks were enjoyed near the children’s art tables. Children were busy making caterpillars and butterflies to take home. Some walked back while some waited for a shuttle ride. All said to have an enjoyable time. The plant volunteers worked hard and sold almost all the sale plants. This year it is hoped more host plants will be available. 2015 Open Gardens was so successful with more than one thousand visitors (twice as many as 2014) because so many volunteers donated so many hours. When tallying guest from California counties it was noted that Sonoma County was listed 404 times with one or more visitors from 22 towns. Fourteen other counties were listed 45 times with one or more visitors from 23 cities. Those counties include Alameda, Contra Costa, Humboldt, Lake, Los Angeles, Marin, Napa, Placer, Sacramento, San Francisco, San Mateo, Santa Clara, Stanislaus and Yolo. Five visitors came from four states: Florida, Maine, Nevada and Ohio. Four visitors came from four countries: Canada, Puerto Rico, Italy and the United Kingdom.

**Butterfly Sightings** (13 species)
- Anise Swallowtail
- Cabbage White
- Common Buckeye
- Common Checkered Skipper
- Monarch
- Mournful Duskywing
- Orange Sulphur
- Pipevine Swallowtail
- Spring Azure (Echo Blue)
- Umber Skipper
- Western Tail-Blue
- Western Tiger Swallowtail
- Unidentified? ‘Lady’ Vanessa

**Dragonfly Sightings** (3 species)
- Blue Dasher
- Cardinal Meadowhawk
- Flame Skimmer

**Bird Sightings** (20 species)
- Acorn Woodpecker
- Anna’s Hummingbird
- Black-headed Grosbeak
- Brown Creeper
- Bushtit
- California Quail
- Chestnut-backed Chickadee
- Dark-eyed Junco
- Downy Woodpecker
- European Starling
- House Finch
- Northern Mockingbird
- Nuttall’s Woodpecker
- Osprey
- Pacific-slope Flycatcher
- Red-shouldered Hawk
- Spotted Towhee
- Turkey Vulture
- Vaux Swift
- Western Scrub Jay

Kathi Jacobs (right) with her daughter, Lindsey and granddaughter Isabella von May. Jan Lee (standing, left) volunteers to help with creations. Photo by L. Brorstrom.
Pipevine Swallowtail Butterflies 2015-16

It was exciting when the first Pipevine Swallowtail Butterfly was seen on February 12, 2016. Last year it was not seen until the 21st of February. Soon people were saying they were seeing many every day and a tour leader thought there were 50 flying and I kept asking, are you seeing eggs? Not until March 18th were eggs found compared to March 5th, 2015 with a later first butterfly hatch maybe due to weather.

The first eggs found this year were destroyed maybe by spiders.

Eventually more were found and first caterpillars were seen on April 15th by our Oak Grove class tour.

In 2015 the first caterpillars were seen March 22nd. We wonder how many there will be and survive being eaten to enter chrysalids and emerge next year. Many years ago we saw more than 180 chrysalids on fences, branches, the house, etc. This last year I saw only several and wonder where they were hiding. Last year and this year we were surprised to see the Pipevine almost everyday through October and in 2015, they flew eleven days in November. In some past years we saw very few after July, I guess we do not know what to expect with less rainfall and climate changes.

We are grateful we still see the Pipevine although there were a few years there were not many.

Sad Monarch Experience 2015

On July 30th the first monarch eggs were seen on the meadow milkweed and on August 3rd Catarino brought in the small caterpillars. By August 20th he had brought in a total of six to eat on the little milkweed plants. August 22nd three were in chrysalis. Between September 3rd and 28th, ten monarchs were released. Between October 12th and 21st Catarino continued to bring in caterpillars and milkweed but we started to run out of food. By December 15th, eighteen Monarchs emerged, they had been caterpillars longer than usual and were in the chrysalis longer then normal all during very cold weather. They emerged with deformed wings and died. The lesson we learn is that caterpillars should NOT be brought in after September or early October because the weather is too cold, they should be left on the plant. Did climate change keep the Monarch here too long?

Dragonflies

Although we have dragonfly books we have not learned the identification of some of the various colored ones that we have seen such as the grey and black, another one medium blue and one day there were three small ones at the dragonfly pond. One was seen in the meadow with a white body and black lines. Near the stream a black dragonfly was seen. The common red one is often seen on the stick protruding over the dragonfly pond. Hopefully time will allow us to learn more about these pretty insects.

Newly emerged Pipevine swallowtail, with chrysalis case left behind. (L. Brorstrom)

MONARCH RELEASES

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<tr>
<td>2015</td>
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*Due to late hatch, too cold (not tachinid flies).
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 24 years...some just once, or only rarely, and some establishing populations in our enhanced habitat.

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<td>Western Tiger Swallowtail</td>
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Garden Allies: Soil Microorganisms
By Frederique Lavoipierre

Soil Microbes:
Life Beneath Our Feet
The air into which plants extend their stems, leaves, flowers, and fruits is a virtual desert compared to the soil in which their roots seek anchorage, water, and nourishment. Just about every available surface under our feet is covered with life; even the thin film of water that coats soil particles and lines pores in the soil harbors microscopic organisms that swim in those minute spaces. Without living organisms, soil would be merely crushed rock. It is the interactions between microorganisms and mineral components, fueled by sunlight and chemical reactions, that break down rock and gradually convert it into soil. The number of organisms found in soil boggles the imagination: a mere gram may contain a billion bacteria and 200 meters of fungal hyphae!

Decomposition
Charles Darwin, well known for his theory of evolution by natural selection, is also recognized as the founder of soil ecology; but it was Louis Pasteur who first demonstrated that organic material was decomposed by bacteria, not as a result of chemical reaction. Bacteria are an essential part of the soil food web, breaking down organic matter, converting inorganic matter into organic forms, and serving as food for other organisms. All the kingdoms of life are involved in the decomposition of organic matter, which makes nutrients available to plants (and ultimately animals), but only bacteria are able to make all the essential elements available. In addition to bacteria, slime molds, protozoans, lichens, a variety of fungi, and other, more obscure organisms, have important roles in decomposing organic matter and building soil.

Building Soil
Begin with bare rock—the Hawaiian Islands, for instance. The first organisms to colonize land newly created by lava flows must be able to provide their own nutrients by means of light or chemical energy. Cyanobacteria (blue-green algae), the first colonizers, are able to photosynthesize; some are able to “fix” atmospheric nitrogen, making it available to plants. Lichens (an alliance between fungi and algae) are also early colonizers, providing their own nutrients; they also produce unusual acids that help break down rock. Eventually, as a thin layer of soil develops on the lava, higher plants begin to move in; many of the first have a nitrogen-fixing capability. As a more complex flora develops, organic materials are broken down and contribute to soil formation. Organic matter improves water-holding capacity, buffers pH, and provides nutrients. Humus represents organic matter that is resistant to continued decomposition; it becomes highly stable, and functions in many soil chemical reactions. Humus contributes to soil a crumbly, spongy texture, and a rich, dark color (resembling seventy percent dark chocolate).

Soil Food Web
The soil food web is now recognized to influence biodiversity and interactions above the soil surface, and scientists are increasingly paying attention to what is happening beneath our feet. The organisms that facilitate the process of breaking down organic materials are called decomposers, scavengers, detritivores, saprophages, or recyclers. Whatever we call them, a succession of these abundant organisms breaks down organic materials, and contributes to soil fertility. Larger organisms, such as worms, move the soil around, creating pores and aggregates of soil particles. In turn, a wide variety of predators, parasites, and pathogens regulate the populations of soil organisms. The same organisms that break down organic material are building soil. The axiom “feed your soil,” it turns out, is truly the crux of successful gardening, and the “black gold” produced by the backyard compost pile is a gardener’s treasure house.

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.
Strange Organisms

In addition to the roles of predator, parasite, and herbivore, examples of soil food web roles include fungivores (feed on fungi), coprophages (feed on dung), and the bacterial and fungal partners (such as mycorrhizae) that assist in nutrient and water uptake by plant roots (to be explored in a future article). Many strange and wonderful organisms, visible only with a microscope, inhabit the soil. Archaea were once thought to occur only in extreme environments such as hot springs and saline soils, but have now been found in association with roots in more ordinary environments. Eubacteria (true bacteria) are found principally around plant roots, where they find a nutrient source in root exudates and dead cells. Actinomycetes contribute the wonderful “earthy” smell of freshly turned soil, and are a source of antibiotics such as streptomycin, tetracycline, and actinomycin. In the soil food web, antibiotics regulate bacteria. The sugar fungi (in the fungal phylum Zygomycota) include the first fungi to attack dead leaves. Slime molds help to break down leaves and wood by engulfing food in their path. Protozoans patrol the film of water in soil pores, also regulating the bacterial community. Other organisms, such as oomycetes (water molds), chytrids, and hypochytrids, are members of the soil food web.

“We know more about the movement of celestial bodies than about the soil underfoot,” Leonardo da Vinci told us long ago, and it is still true today. As we turn our attention to the soils in which our gardens grow, we are discovering a new world to explore and a re-affirmation of the wonders of life that surround us every time we step out our door.


Pacific Horticulture Society | Garden Allies: Soil Microorganisms

Louise Celebrates SRJC’s 100th Anniversary

By Gay Bishop Brorstrom

In preparation for Santa Rosa Junior College’s 100th year celebration next year, Dr Frank Chong, president of the college, met with Louise Hallberg who had worked as Registrar from 1940 to 1975. The two had lunch at the Bordo Culinary Arts Center. Dr. Chong is the fifth president of the college and Louise has worked under the first three and met the last two presidents.

After lunch, Louise was interviewed in Dr. Chong’s office in Bailey Hall about her days at the J.C. Many happy memories were recorded. Next came a lengthy photo shoot in the garden outside the hall.

At Louise’s request, she was taken to Plover Hall to meet the current staff of the Admissions and Records Department. She stood in line and when her turn came, asked if she might have a copy of her student transcript from 1937. The women then came out from behind the counter to have their pictures taken with Louise while another worker went into the vault, found her 1934-7 transcript and returned with a copy for Louise.

It was a long, very happy day for everyone involved.

Photo is from the Santa Rosa Junior College Yearbook, 1944. M. Louden, L. Hallberg, L. Jones, J. Smith, M. Gaddis
Sweet and Easy Butterfly Plants
By Kathy Spalding

So you want your very own butterfly garden, but feel overwhelmed? Are you, like Louise, surrounded by multitudes of hungry deer and gophers or gardening in a perpetual state of drought? Have you admired her expanse of Dutchman’s Pipe and majestic Black Oak wondering if you could wait a century or two? Here are a few great California native plants to get you started. None require doting, skill, or huge outlays of cash. And, as an added bonus, all are valuable to wildlife beyond butterflies and have great botanical interest.

California Bee Plant (*Scrophularia californica*) isn’t fussy beyond wanting some shade. It plays host to Chalcedon Checkerspot and Common Buckeye. The tiny red flowers rely on bees (surprise!), other insects, and hummingbirds. The plant renders caterpillars unpalatable, but Bee Plant makes amends by having tasty seed for birds. But the birds won’t get all the seeds. This self-sowing plant will make sure there will be more Bee Plant next year with little to no effort on your part.

Evening Primrose (*Oenothera spp.*) includes the towering yellow show-stopper that wows visitors during Open Gardens. The flowers attract bees, hummingbirds, and hummingbird moths. Leave the faded flowers and your laziness will be rewarded for the seeds are relished by goldfinches and other birds. Leftover seeds will sprout next year. Hooker’s Evening Primrose (*O. elata ssp. hookeri*) is a native species easily grown from seed.

Fremont’s bush mallow (*Malacothamnus fremontii*) may look soft with its light pink flowers and fuzzy foliage, but is a tough, rugged, fast-growing, long-blooming, hill-conquering, problem area solvin’ so ‘n so, hosting the Painted Lady and West Coast Lady. Trimmed back by deer soon after planting in 2014, ours thrives with no care, outcompeting weeds while feeding the masses.

Ceanothus is a must and come in a variety of forms to suit any need. These beauties range from ground-hugging to treelike. They are resilient plants, however they need to be grown in the right place to realize their true potential. With its many species and hybrids, choosing one might seem like an impossible task, but it is simply a matter of seeing which are available at your local nursery and gently interrogating the staff. (In my experience, chain store nurseries often carry stock unsuited for the area, even in the case of native plants. Your local native plant society can provide great advice and just might have its own nursery or plant sales.) In addition to being the host plant of many butterfly species (Brown Elfin, California Tortoiseshell, Pale Swallowtail, Spring Azure, California Hairstreak, Hedgerow Hairstreak to name a few), this powerhouse provides nectar for butterflies, bees, and other insects, seed for birds, and cover for an array of wildlife.

Manzanita (*Arctostaphylos spp.*) also begs the question: Which one? Ceanothus rules apply. Once in the ground, the right manzanita will pay back your efforts a thousand times over. A nectar plant for butterflies (and other insects as well as hummingbirds), manzanita provides fruit and cover for many species. A gorgeous, effortless must for the wildlife garden, manzanitas range in size from ground covers to trees.

Creambush (*Holodiscus discolor*) truly thrives when its need for some shade and some water until established are met. My motto: When in doubt, plant Creambush. Also known as Ocean Spray, it is the host for Brown Elfin, Lorquin’s Admiral, Pale Swallowtail, and Spring Azure. When in bloom it will be covered in clouds of tiny, white, dangling flowers, proving you with a delightful smell and food for many happy pollinators. Good understory plant, even under oaks, and great wildlife cover.
Vaux’s Swift Story
By Louise Hallberg

We caught sight of the Vaux’s swifts, presumably mating, on April 23rd, 2016. From the sounds of it, they are already moving back into the chimney. On April 24th, Mere saw them drop into the chimney at sundown, and heard the same noises she had heard the day before.

We hope for successful nesting.

Last year the chimney had lots of activity. Swifts were seen dropping in on April 11th, two weeks earlier than the previous year. Varying degrees of activity were seen and heard after this, with the first record of swifts dropping in during the day on May 22nd, which could indicate baby chicks being fed. Noise and chatter continued to accelerate through June until July 12th when the last chatter was heard. Wing movements were heard after this, and it is believed some birds were learning how to fly. But on August 23rd we opened up the fireplace and found three good sized dead swifts. Peter Leveque, retired SRJC biology professor, came to take the birds. He will use them in his lectures and demonstrations. He feels 1) The parents could have been destroyed, 2) Little birds starved, or 3) Little birds fed poisoned food. We hope this year’s swifts will have a successful brood.
Plants Available for Sale

Open Gardens Day
10:00 a.m. Sunday, June 26th, 2016

Achillea millefolium ‘Pink Island Form’
Agastache ‘Rosy Giant’
Asclepias curassavica ‘Silky Deep Red’
(milkweed)
Asclepias speciosa (milkweed)
Aristolochia californica (pipevine)
Baccharis pilularis ‘Pigeon Point’
Caryopteris
Ceanothus cuneatus (flat form)
Ceanothus griseus horizontalis
‘Yankee Point’
Ceanothus × impressus ‘Dark Star’
Ceratostigma willmottianum
Cistus × ralletii
Corethogyne filaginifolia (syn. Lessingia f.)
Dorycnium
Dudleya cymosa
Dudleya farinosa (grey selection)
Echium fastuosum
Epilobium canum ‘Chaparral Silver’
Epilobium c. ‘Everett’s Choice’
Eriogonum fasciculatum ‘Warriner Lytle’
Eriogonum grande rubescens
Eschscholzia californica var. maritima
Gomphocarpus physocarpus
(syn. Asclepias physocarpa)
Isoplexis canariensis
Lavandula angustifolia ‘Hidcote’
Lavandula a. ‘Munstead’
Lavandula stoechas ‘Avonview’
Lavandula s. ‘Marshwood’
Leonotis leonurus
Lepechinia hastata
Marrubium supinum
Nepeta × faassenii
Pallenis maritima
(syn. Asteriscus maritimus)
Phlomis fruticosa
Phlomis lanata
Phlomis russeliana
Rhamnus californica ‘Mound San Bruno’
Rosmarinus officinalis ‘Barbeque’
Salvia apiana x leucophylla ‘Desperado’
Salvia clevelandii Winifred Gilman
Salvia darcyi
Salvia melissodora
Salvia mexicana ‘Limelight’
Silene vulgaris maritima
Verbena lilacina ‘De La Mina’
Verbena bonariensis

Ivy Baker, Sage Fleming, and Lauren Knigge (left to right), local Juniors at Credo High, were the main force in potting up the over 1200 plants donated from Shooting Star Propagation Nursery. Thank you!

Great Horned Owlets, in Black Oak above Hallberg Residence, May 2016.

Toddler and dirt, apple trees and pollinators, natural pairings work best. Photo by L. Brorstrom.

Above: Pipevine Caterpillar.
Photos above by J. Bennett.
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Local Oak Grove students Ava and Liam flutter about at Hallberg’s during Open Gardens Day 2015. Photo by L. Brorstrom.

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