The Pipevine

21st Open Gardens Day
Sunday, June 17th, 10:00am to 4:00pm

Come to Open Gardens! We will have a plant sale featuring Dutchman’s Pipevine, salvia, beeplant, currants, false indigo, Ninebark, Oregon grape, many specimens propagated from Hallberg Butterfly Gardens. There will be new children’s activities this year in addition to past favorites. We hope for a beautiful day to enjoy the habitat together. Sonoma State University will reappear with their displays so you can get a close look at our neighbors, the arthropods. There will be a bird identification station, presenting nests, specimens, guides and experts to help you learn. Our host plant display will remind us all of what caterpillars eat—and promote keeping some of these ‘weeds’ as friends in your garden. Docents will also be on hand to teach about the butterflies, dragonflies, and help you discover hidden treasures. Refreshments and gifts will also be available.

At last year’s gathering, over fifty volunteers came out to host the crowd of nearly one thousand. We are grateful for the help, enthusiasm and support of the Hallberg Butterfly Gardens’ volunteers and docents: the folks who keep the paths clear, illuminate the life-cycle to children, pot up plants to diversify our neighborhood gardens, serve drinks to the thirsty, and ensure you enjoy your visit to this beautiful nine acre habitat. A thousand thank yous!!

During Open Gardens 2017, visitors watch a pipevine caterpillar, attached to the barn door, shed its final skin, revealing the interior chrysalis from which, months later, a butterfly will emerge. Photo by L. Brorstrom
Moths
by Meghan Peterman

Butterflies of The Night

If we could look back, roughly 190 million years ago, we’d be nearing the end of the Triassic and entering the Jurassic period. While many gigantic, vegetarian Dinosaurs were roaming the lands at this time, we’d also see the beginning of another curious animal. The first in the Order Lepidoptera, the moths. This Order also includes our beloved butterflies which would not be seen in fossil records until a 100 million years later. While butterflies comprise a mere 6 – 11% of Lepidoptera and originally evolved from moths, they have gracefully moved into our hearts while moths themselves have maintained a growing parallel in the rise of disgust and human culture. With less than 1% of ALL insects being considered major pests, let’s take a look at the benefits in the vast majority of the these often outcast ‘butterflies of the night’.

Moths are considered an indicator species, meaning we can receive insight into the health of a habitat by studying their numbers and range. They are sensitive to changes in their surroundings and are a major part of our biodiversity by playing vital roles in the ecosystem. All phases of the moth lifecycle are food for a wide variety of wildlife. Spiders and wasps eat their eggs. Many birds depend upon their caterpillars to feed their young. Unlike butterflies laying eggs in medium-sized clutches or one at a time, moths can lay hundreds of eggs in a single night! Many animals find a rich source of protein in eating moth pupae (the juicy parts inside the cocoon), especially in the winter when food sources are scarce. Adult night-flying moths are a major part of the diet of bats and in some parts of the world, moths are a major food source for people too! Caterpillars are packed with protein and healthy fats.100 grams of these insects provides more than 100 percent of the daily requirement of some vital minerals, such as potassium, calcium, zinc, and iron.

Feeling a little squeamish at the idea of eating a caterpillar? Well, a moth does not need to be ingested directly for us to receive their benefits to our diet. Many adult moths serve us agriculturally as pollinators. When the day pollinators throw in the towel for their diurnal shift, the night pollinators step in. Studies have shown a decline in certain fruit crop production when a decline in night pollination is present.

Their long proboscis and hairy bodies make them fantastic pollinators by picking up extra pollen as they explore each flower.

Though many moths are out at twilight and into the night, there are also many day-flying moths too. The Ornate sheep moth (Hemileuca eglanterina) can be seen flying around cattle fields on the outer edges of Sebastopol from June-August. With their pale pink and orange wings, they are just as beautiful as our beloved butterflies and may be mistaken for one! Other local beauties include the day flying red-shouldered ctenucha moth (Ctenucha rubroscapbus), the night flying Polyphemus moth (Antheraea polyphemus), and the ceanothus moth (Hyalophora euryalus).

Composing a Moonlight Garden

Many plants flower exclusively at night while others also wait until evening to release their scents. Night bloomers share a few common traits; soft in color, summer blooms and fragrant. White flowers, especially when lit by a lunar

"Luna"

Once again Spring has brought new life to the garden. This year it includes the birth of a baby girl to Evan and Meghan Peterman. Luna Pearl Peterman was born April 6th, 2018 at 7:21am, weighing 9 lbs 12 oz.
Moths
Continued from page 2.
glow, stand out at night while colors recede into the dark. The fragrance is a predominant guiding factor for night pollinators to find the flower’s sweet nectar. Though the diversity of night pollinators is less than their day flying friends, the night dwellers often have a reliable schedule in which to witness their devoted nectaring appointments.

A male sheep moth (Hemileuca eglanterina)
The offspring of this moth in the photograph are currently being raised at Hallberg Butterfly Gardens!

Many moths are crepuscular, meaning they feed at twilight. Such a lovely time of day to wind down and witness their activity. One of the most beloved group of crepuscular moths are commonly called the ‘hummingbird moths’ or ‘hawk moths’ (family Sphingidae). A well known local species, the white-lined sphinx moth (Hyles lineata), nectars on many flowers of the primrose family (Primulaceae).

By creating a Lunar oasis you are supporting the evening pollinators while participating in a timeless tradition. Ancient Persians grew Jasmine (Jasminum polyanthum) in their night gardens, while Chinese favored the fragrance of sweet olive (Osmanthus spp) during evening meditation. There was even a moonlight garden attached to the Taj Mahal in India. During the late 19th century, interests in moonlight gardening began to rise in the west. A rewarding garden to escape the heat of the day as well as captivating the profound senses of smell, touch, and hearing that are heightened at night.

Profile of a pollinator’s moon garden:

White or dull colors
Blooms open late afternoon or night
Flowers are often have white or dull colors with strong scents
Ample nectar producers, with nectar deeply hidden, such as morning glory, tobacco, yucca, and gardenia.

Plants to get started:

Angel’s trumpets - (Datura discolor and innoxia) - USDA zones 9 to 11
Double-flowered tuberose - (Polianthes tuberosa) - USDA zones 9 to 11
Night phlox - (Zaluzianskya capensis) - USDA zones 9 to 11
Jasmine tobacco - (Nicotiana alata) - USDA zones 7 to 11
Evening primrose - (Oenothera elate) - USDA zones 6 to 9
Flowering tobacco - (Nicotiana alata) - USDA zones 10 to 11
Lilacs - (Syringia vulgaris) - USDA zones 5 to 9
Hydrangeas - (Hydrangea macrophylla) - USDA zones 6 to 10
Rhododendrons - (Azalea) - USDA zones 7 to 11
Impatiens - (Impatiens walleriana) - USDA zones 9 to 12
Sweet Alyssum - (Lobularia maritima) - USDA zones 7 to 10
Dianthus - (Dianthus barbatus) - USDA zones 4 to 10
Camellia - (Camellia japonica ‘Alba Plena’) - USDA zones 5 to 10
Honeysuckle - (Lonicera spp) - USDA zones 4 to 9
New Weather Station
by Gay Bishop Brorstrom

Weather statistics were first collected at Hallberg’s in 1930 by Louise’s father, Alfred until he died in 1962. Louise took over the task from her father. Although as an apple grower, he kept records for his own information, Louise became an official weather recorder for the U.S. Government in 1968 with the government installing official temperature and rain-measuring equipment for her use. Louise faithfully recorded the temperature and rainfall every morning at 8:00 for 50 years and reported it to the local newspaper every Monday and to the National Oceanic and Atmospheric Administration (NOAA) on a monthly basis.

Louise was presented many awards from the Department of Commerce for her record-keeping service, and in 2008 received the Thomas Jefferson Award for 40 years service. When the task became too difficult for her in her nineties, others on staff took over reporting from what is one of the nation’s oldest weather stations in continuous use.

To complete the task of weather keeping required physically going out to the wooden station, rain or shine, at 8 A.M., reading the high and low temperatures on several thermometers, recording the data in a monthly book provided by the U.S. Department of Commerce, NOAA and National Weather Service. Notes were made regarding fog. Rain was measured by inserting a metal stick into a copper canister which was then emptied of accumulated water. Each week the revolving metal cylinder recording time and temperature was removed from the station, a new graph sheet installed, the movable gears rewound by hand, and a drop of red ink added into the ancient marking needle.

Daily statistics were transferred onto a monthly form. Rain amounts were added up, the document copied and the original sent to the National Weather Service in Monterey, California.

In February 2018, the Gardens decided to continue this long-held responsibility but with a new twist. It was time to join the age of technology. Steve Anderson from NOAA came from Monterey to install our new Davis Instruments wireless solar and battery powered weather station. It consists of a console unit and an integrated sensor suite that includes a rain collector with self-emptying bucket, temperature and humidity sensors and an anemometer measuring wind speed. The sensor suite is housed inside a radiation shield, protecting the sensors against solar radiation and additional sources of reflected and/or radiated heat. This high-tech Wireless Weather Station will track highs and lows for almost all weather variables for the past 24 days, months or years.

The Davis weather station transmits weather data to the indoor console wirelessly and then sends the weather data out to the internet from here. Search ‘Graton, 95444’ at wunderground.com and you’ll see ‘Hallberg Butterfly Garden’s Weather Station’ information.

The new instrument records many more parameters than the former equipment and makes it possible to retrieve data from far afield. This allows us, should we choose, to access data from anywhere in the world. Monthly and weekly reports still need human intervention to compile and report. For those of us few Luddites still kicking and complaining about the new-fangled world we live in, we must admit the new Davis device is a true miracle. During your next visit to the Gardens, be sure to check out our new gizmo-gadget installed next to the old white wooden weather station.
Continuing Louise's Legacy
by Don Mahoney

It has now been over a year since Louise Hallberg passed away at the age of 100. The Butterfly Garden she founded is doing well and has entered a new but continuing phase of its existence. The tradition of Open Gardens lives on. Last years Open Gardens day in June 2017 was very successful, helped in part by great weather and many hard working and dedicated volunteers. Louise would have been very pleased. The 78 degree day brought out a large crowd, some of whom came to honor Louise and others who came for the first time just to learn about butterflies. The children's crafts tables were as busy as ever. A memorial table to Louise was even visited by several butterflies. Open Gardens this year on June 17th promises to be even better as more plantings have been made and some areas have been renovated.

With the cooperation of Louise's family, who manage the adjoining property, a new security gate has been installed at the main entrance to help protect the property when no one is present. Access to tours and visits is easy by calling ahead and making an appointment, which was a policy initiated by Louise several years ago anyway.

We now have a young couple living in the house, helping manage tours and doing garden maintenance. Meghan Ewing has trained as a lepidopterist and is currently researching native moths that spin silk. She is currently serving as Curator of Living Collections. She is raising some just as Louise was proficient at raising butterflies. Her partner, Evan Peterman works as a horticulturist at a local winery and is proficient in organic practices. Their skills and enthusiasm are adding greatly to the gardens. With their daily presence and also the help of docent tour guides, we are continuing the practice of tracking daily butterfly populations. Our records are becoming a valuable long term study of butterfly populations in Sonoma County.

Another long term tradition started by Louise's parents is continuing with the establishment of a new weather station with daily records available online.

The Butterfly Gardens have a bright future ahead of them and we are attempting to make necessary changes and plantings slowly and methodically, as every change that is made has potential impacts on the resident moths and butterflies that live there. The garden’s goal is to provide habitat for as many creatures as possible, from the smallest to the largest, all hopefully in an ecological balance. Please support the Gardens by coming to Open Gardens Day, by donating funds and by volunteering whenever possible. It is only through public support that the Gardens will continue to exist and grow.

Docent Allison Parmelee, with daughter Sielya Parkinson (right) and Emily Rojas proudly cleared our historic stone bench.

Observations at Open Gardens
Photo by Holly Link
Above: Plants sale, first come, first served. Sunday, June 17th 10:00 am.

Photo by Holly Link

Above: Pipevine plant with pipevine eggs

Left: Pipevine Swallowtail caterpillar

Docent and Volunteer Extraordinaire Maureen Pape shares time with a slumbering Pipevine Swallowtail.

Left: Children's craft area, 2017.
Photos by L. Brorstrom
### HBG Garden Tours 1999 to 2017

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### Activity Statistics 2017

(Number of guests shown in parentheses)

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<td>(947)</td>
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<tr>
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<td>1 (1)</td>
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<td>DEC</td>
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<tr>
<td>Totals</td>
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<td>111</td>
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<td>(503)</td>
<td>(947)</td>
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### Show on the Road

by Leah Brorstrom

Meghan Peterman, first introduced in last year’s newsletter, now lives with Evan and their daughter, Luna in the home at Hallberg’s. We were not rushing to fill the home, thinking we’d take the transition slowly, but the opportunity presented itself last summer to have these two new stewards come aboard. After Meghan joined ‘the team’ last year, we began to accept invitations to travel and speak at various facilities. In our half year of working together, Meghan and I have given four talks. We’ve visited after-school programs in Windsor, bringing in host plants and chrysalids. We entertained almost one hundred children at a summer camp at San Miquel Elementary. Meghan put together special displays for a chrysalis/cocoon talk at neighboring Oak Grove’s 4th grade. We presented a slide show, about both butterflies and moths, that we delivered last September to almost ninety members of the Marin Garden Club at the Marin Arts and Garden Center. While we prefer people come to us, this is not always possible, especially as we no longer cater to groups over forty people (except on Open Gardens Day!) We hope to continue to take the show on the road, to all those willing to listen about the importance of diversified habitat and wild areas.

Estrella Phegan educates a guest on the value of host and nectar plants. Photo by Holly Link
2017–2018 Friends of the Gardens...

Donors

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   in memory of Louise
Sandy Baker
Billie Harrington Best
   in memory of Louise
Sandra Bodley
Tom Borowicz
Wendy Born
Janet Bosshard
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Nancy Davidson
   in memory of Louise
Patricia Dervin*
Sheila Mary Dickie
   in honor of Louise
Sheldon Erkila
   in memory of my mother and sister
James and Elizabeth Flack
   in honor of Louise Hallberg and Don Mahoney
Claire Fusco
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   in memory of Hazel Baker
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Denise Horvat
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Dave Barry
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Loretta Bentancourt
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Billie Best
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Sarah Brown
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Patricia Dervin
Cheryl Dilworth
Beth Eastwood
Meghan Ewing
Carlene Ferguson
Jean Ferretti
Leo Garza
Kandis Gilmore
   & SSU Students
Nancy Glazer
Norma Halbersma
Wintriss Huetter
Kathi & Greg Jacobs
Linda & Jerry Johnston
Michael Kambour
Holly Link
Mickey & Donald Marshall
Alexandra McDonald
Don Mahoney

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
- $________

Your gift is tax deductible to the extent allowed by law.
HBG is a 501(c)(3) nonprofit corporation. #91-1767178

Please make checks payable to:
Hallberg Butterfly Gardens, 8687 Oak Grove Road, Sebastopol, CA 95472 (707) 823-3420

Amelia, Nayara and Vivianna enjoy creating at Open Gardens Day. Photo by L. Brorstrom

Pat Muscat
Symon Myers
Karen Nagel
Dexter Nadella
Kathy Oetinger
Maureen Pape
Sielya Parkinson
Allison Parmelee
Gene Pearson
Evan Peterman
Jeannie Powers
Darla Radcliffe
Emily Robinson
Emily Rojas
Glenda Ross
Margaret Rued
Jaynette Shaw
Johnna Schubert
Nanette Simmons
Betsy Skinner
Art Slater
Kirsty & Karen Smith
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Kathy Trafton
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Kris White
& Susan Harris
Linda Widdifield
Timothy Wong

Organizations

Redwood Empire Chapter Nurseries*
   In honor of Louise
Rotary Club of Sebastopol
Shooting Star Propagation Nursery
Sonoma County Gazette
Sonoma West Times and News
The Each Foundation In honor of Kathy Trafton for the weather station at the Gardens

*Major Donors
Hallberg Butterfly Gardens
21st annual
Open Gardens Celebration

Sunday, June 17, 2018
10 am to 4 pm
8687 Oak Grove Avenue, Graton

Bird & Butterfly Sightings, Children’s Activities,
Wildflower Display, Walking Tours, Docents
Handcrafted Items & Books for Sale

Free, No reservations needed
Please park along the street and walk down driveway or wait for the shuttle
Limited wheelchair access ~ Please, no smoking or pets

www.hallbergbutterflygardens.org  (707) 823-3420
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