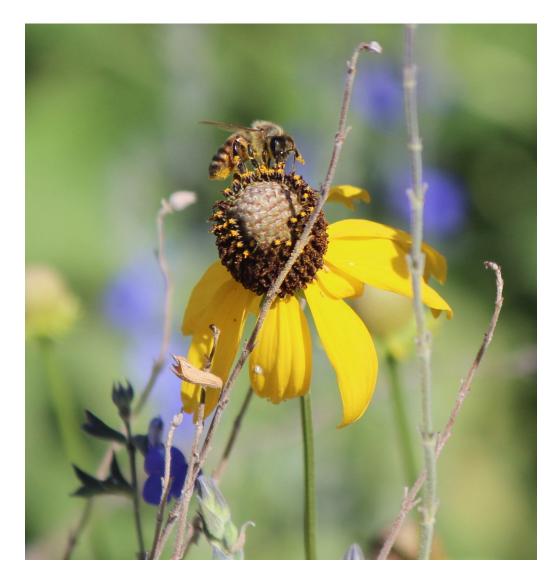
Häagen-Dazs Honey Bee Haven 2016 Annual Report

University of California Department of Entomology and Nematology

December 2016



Häagen-Dazs Honey Bee Haven Annual Report University of California Department of Entomology and Nematology Prepared by Christine Casey, Program Representative, December 2016

The past year has been one of growth and change at the Haven. We began 2016 in a precarious financial position but end with funding secure. Visitor programs continue to diversify and grow in size, while slight easing of the drought left our plants in better shape than the past few years.

One significant change has been the move into research. In order to provide my salary support, it was necessary to apply for research grants. Funded work includes an investigation of ornamental plant use by pollinators. This information will build on previous work in this area and results will enhance our outreach and education programs.

SUPPORT

Financial

The Haven continues to rely on grants and donations for our funding. A breakdown of FY2016 expenses is given in Appendix I. As is appropriate for our mission, over half – 57% – of expenses were for plant material and educational programs. Grants that will cover my salary have been secured from the USDA-NIFA Specialty Crops Research Initiative and the California Department of Food and Agriculture's (CDFA) Specialty Crops Block Grant Program. The USDA grant, "Protecting Pollinators with Economically Feasible and Environmentally Sound Ornamental Horticulture" is a five-year research project to look at bee preference for common ornamental plants as well as the fate of systemic insecticides in these plants' pollen and nectar. Haven scientists are part of a nationwide team working on this project.

The CDFA grant, "The *ART* of the specialty crops-pollinator connection: *A*wareness, *R*elevance, and *T*raining" is a 2.5 year project that focuses on the link between healthy plants, healthy bees, and healthy people. This funding will allow us to offer more on-site programs and to expand our outreach to include teacher training about pollinators and to provide videos of bee activity and other educational programs to schools that are too far to visit in person. We also plan to install a children's garden in the Haven to coincide with this project.

Special thanks go to the UC Davis College of Agriculture and Environmental Sciences for bridge funding that provided support before grant funds were available.

Receipt of these grants represents an exciting expansion of our outreach programs as well as a move into research, broadening the scope of the work we do at the Haven. These grants will also provide funding to hire undergraduate assistants. We continue to rely on individual donations to support garden operating expenses. Tremendous thanks go to all individuals and organizations that support the Haven!

Volunteers

The Haven volunteer team continues to grow, with work taking place weekly on Tuesday mornings and monthly on the second Saturday. Volunteers contributed 278 hours of garden maintenance and 68 hours of outreach in 2016. Several UC Davis service organizations and corporate volunteer groups helped at the Haven for the first time in 2016. We look forward to expanding these collaborations in 2017.

PLANTINGS

Major replanting was completed in late 2015 and early 2016. As of this fall, many of our shorter-lived ceanothus are starting to decline and are being replaced. Additional California native plant species have

been added this fall, as well as more varieties of reliable bee plants like lavender. Plant resources on our web site and blog continue to be updated to reflect these changes and make it easier for visitors to plan their own bee gardens. For example, the plant list is available in both PDF and sortable Excel versions.

Our water storage tank and booster pump system worked well this summer. We have also added a compost bin (built by volunteers) to the Haven to handle some of our green waste on site. Portions of the garden soil were amended with composted cow manure this fall. Our soil is low in organic material and by adding this over time we hope to improve its water-holding capacity.

GARDEN VISITORS

The garden is open daily from dawn to dusk for self-guided tours. We average five to 10 daily self-guided visitors, with visitors arriving throughout the day. Although there is a peak in the spring, the garden is utilized year-round.

GARDEN OUTREACH PROGRAMS

Bee gardening classes

New this year at the Haven were classes for the public about bee gardening. We offered two classes – an advanced class that focused on bee biology and identification and a basic class that emphasized plants for the bee garden. Feedback on both was positive; details are in Appendix II. Revenue from both classes was used to support the garden. The basic class was offered in both the spring and fall but we did not reach sufficient registration to offer the class in the fall.

Events and guided tours

In addition to public events, guided tours are given from mid-March to mid-October. In 2016, 1052 visitors attended events and tours at the garden; the affiliation of visitors is shown in Appendix III. Visitor numbers were down slightly from 2015, which I attribute to poor weather on the day of several open houses. We will also try holding more 2017 events on Saturdays rather than Friday evenings to improve accessibility and attendance.

Off-site events

The Haven also participated in a number of off-site programs in 2016; we reached 1242 visitors via these programs. This is an increase from 2015, which I attribute to our attending more programs this year, along with more visitors at our displays. Program details are listed in Appendix III.

Media coverage

The garden was covered in print and blogs in 2016. Links to each are given in Appendix III.

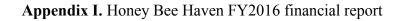
VIRTUAL HONEY BEE HAVEN

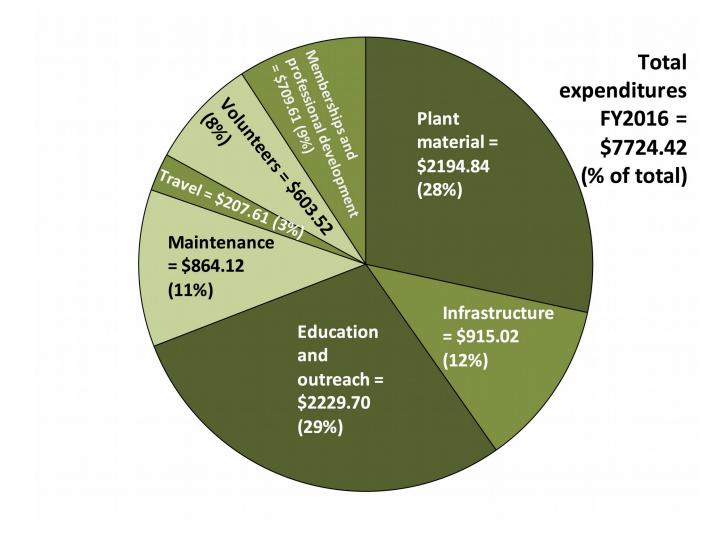
Social media

Our <u>Facebook page</u>, <u>Bee Gardener blog</u>, <u>Twitter</u>, and <u>Flickr</u> accounts are updated regularly and serve as additional sources of bee gardening information. A new <u>California Specialty Crops-Bee Connection</u> <u>blog</u> and <u>Facebook page</u> related to our California Department of Food and Agriculture Specialty Crops grant came online in late 2016. The table in Appendix IV provides a list of blog post titles and page views. Popular topics include drought and bee gardens and articles that describe individual plant species or groups.

Web resources

The <u>garden web page</u> is updated regularly and serves as another source of information for bee gardeners. It is also the online portal for garden tour reservation.





In addition to salary, we spent \$7724.42 to run the Haven in FY2016. The categories cover expenses as follows:

Plant material: All plants and seeds used in the garden

Garden infrastructure: Construction and maintenance of garden facilities including fencing, raised beds, and pathways

Education and outreach: Handouts, signs, and other display materials

Garden maintenance: Tools, soil amendments, and other supplies needed to maintain the garden.

Travel: Travel to offsite events and to purchase plants and supplies

Volunteers: Refreshments and safety supplies for volunteers

Memberships and professional development: American Public Gardens Association membership, fees and travel costs associated with training for garden staff

Appendix II. 2016 Bee Gardening Classes at the Honey Bee Haven



Learn about these amazing animals and what we can do to conserve and appreciate them in our gardens. This is an advanced class and assumes a basic knowledge of bees and gardening. Topics include:

- · Biology and foraging behavior of honey bees and native bees
- How to plan and design a bee garden based on bee biology
- Field work: how to trap and observe bees for close observation and identification
- Lab work: bee morphology and identification of common urban bees

Enrollment limited to 20. Registration fee of \$90 includes light breakfast, lunch, and a course notebook. We will use *California Bees and Blooms* as our class textbook. Copies will be available for purchase at registration.

Instructors:

Christine Casey, Ph.D., Häagen-Dazs Honey Bee Haven Elina Niño, Ph.D., UCD Entomology and Nematology Robbin Thorp, Ph.D., UCD Entomology and Nematology



To register: https://registration.ucdavis.edu/Item/Details/211

The Häagen-Dazs Honey Bee Haven UC Davis Dept. of Entomology and Nematology **Planting the Bee Garden** October 1, 2016 • 8:00am to 11am



Learn about the amazing bees and what we can do to conserve and appreciate them in our gardens. Topics include:

- Preparing to install a bee garden
- · Elements of a successful bee garden
- How bees use plants and what makes a good bee plant
- · Classroom and field review of the Haven's "Top 50" plants

Enrollment limited to 25. Registration fee of \$30 includes light breakfast and snacks.

Instructor:

Christine Casey, Ph.D., Häagen-Dazs Honey Bee Haven

To register: https://registration.ucdavis.edu/Item/Details/260

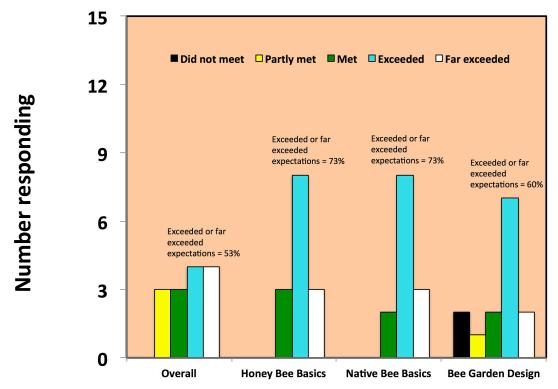
Advanced Bee Gardening

- Intended for the advanced bee watcher
- Detailed information about the biology of honey bees ('Honey Bee Basics') and solitary bees ('Solitary Bee Basics')
- Emphasis on bee monitoring and identification
- Biology of how bees select and use host plants ('Bee Garden Design')
- Feedback for each of the three sections in quantified in the graphs on the next page

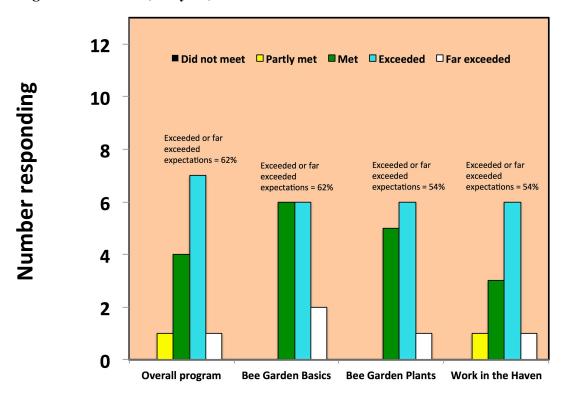
Planting the Bee Garden

- Intended for gardeners interested in planting for bees
- Brief information about gardening basics
- Overview of the resources bees obtain from plants ('Bee Garden Basics')
- Detailed look at 50 plants for bees ('Bee Garden Plants' and 'Work in the Haven')
- Offered in both spring and fall but there was insufficient enrollment in the fall class and it was cancelled
- Feedback for each of the three sections in quantified in the graphs on the next page

Advanced Bee Gardening, March 5, 2016:



Planting the Bee Garden, May 14, 2016:



Appendix III. Honey Bee Haven guided tours, offsite events, and media coverage in 2016

Affiliation of garden event and guided tour participants

Beekeeper	26
Garden club	12
International	88
K-12	184
Master Gardener volunteers	45
Public	494
Teachers	53
UCD employees	40
UCD undergraduates	110
TOTAL	1052

Attendance at classes and off-site lectures and public events featuring the Haven and bee gardening

TOTAL	1242
San Diego County beekeepers workshop	36
Roseville Better Gardens Club pollinator gardening lecture	27
Sacramento County Master Gardeners "Harvest Day"	351
Wild Campus open house	176
Bee Gardening Basics class	26
Robert Mondavi Institute Honey and Pollination Center "Keeping Bees Healthy"	25
Sacramento State: Science in the River City teacher training	35
California Native Plant Society "Wildflower Wonders"	211
Advanced Bee Gardening class	20
Yolo Basin Foundation bee gardening lecture	30
Yolo Basin "Duck Days"	305

Media coverage in 2016

Sacramento	
Magazine	http://www.sacmag.com/Sacramento-Magazine/February-2016/Bringing-In-The-Bees/
UCD Her Campus	http://www.hercampus.com/school/ucd/h-agen-dazs-honey-bee-haven-your-next-davis-adventure
UC IPM	http://www2.ipm.ucanr.edu/beeprecaution/
BrambleBerry	https://www.soapqueen.com/bramble-berry-news/saving-honey-bees-can-help/
Palo Alto Online	http://www.paloaltoonline.com/news/2016/08/26/home-front
Comstock's	http://www.comstocksmag.com/web-only/bee-ing-friendly-our-yards

2014 posts

Title	Page views
Drought or Not, Bees Need Water	10771
Buckwheats, June Bee Plant of the Month	7506
Nectar Guides: More Than Meets the (Human) Eye	7458
Celebrate National Pollinator Week 2014 at the Honey Bee Haven	6981
Sunflowers, August Bee Plant of the Month	6738
California Wildflowers, April Bee Garden Plant of the Month	5601
Herbs: a Simple, Easy, Low-Water Bee Garden	5401
Fall is the Season to "Bee" Planting	5369
Salvia, July Bee Plant of the Month	3394
Bees and Drought	3391
Pollinator Workshop Review	2480
Ceanothus, March Bee Garden Plant Of The Month	1992
I've Been Robbed!	1855
Spaced Out	1760
The Five Dollar Bee Garden	1518
Open House at the Haven June 20	1511
Roses, May Bee Garden Plant of the Month	1474
Presidents and Pollinators: the Red, White, and Blue Winter Bee Garden	1343
Thank You Volunteers!	1340
Made in the (Dry) Shade	1146
The Globe Mallows	1146
Thank You Veterans: the Red, White, and Blue Fall Bee Garden	1098
Update on National Public Gardens Day at the Haven May 9	879
Keep it Simple	874
Open House at the Haven October 3	848
Fall Color at the Haven	761
Black and Yellow Friday: Gifts for Bee Gardeners	711
Summer at the Haven	688
National Public Gardens Day at the Haven May 9	674
Bee Photography	613
Thank You, Daughters of the American Revoluation!	577
Horticultural Practices and the Bee Garden	450
Thank You Volunteers!	399
Thank You Volunteers!	383
Bees in Public Art	353
The Cavities You Want To Have	344
Welcome to The Bee Gardener	290

Title	Page views
Honey Bee Haven Fifth Anniversary Open House Saturday May 2	1306
Replacing Your Lawn: Bees Need More Than Rocks and Cactus	1286
Best Winter Annuals for Bees	1192
Bees and Trees	1175
Spanish Lavender, April Bee Plant of the Month	1047
Manzanita, January Bee Plant of the Month	1040
2015 Events at the Häagen-Dazs Honey Bee Haven	924
Currants, February Bee Plant of the Month	915
Plant Ideas: The Formal Bee Garden	814
More Than Bees: California Native Ants at the Haven	788
Plant List and Design for a Medium-Water Bee Garden	716
National Pollinator Week Open House June 19	708
The Nine Dollar Bee Garden	693
Honey Bee Haven Fall Open House: IPM in the Bee Garden	679
Getting the Bee Garden Ready for Winter	631

2016 posts

Title	Page views
Helping Veterans and Bees	925
Plant Pairings for the Bee Garden	605
Five Great Reasons to Add Flannel Bush to Your Bee Garden	581
Fall is for Planting: Six Hard-to-Find Bee Plants That Are Worth the Chase	505
Campus Book Project Discussion: Bees and Climate Change	386
Five Great Asters for the Fall Bee Garden	220

Ten most popular posts

Title	Page views
Drought or Not, Bees Need Water	10771
Buckwheats, June Bee Plant of the Month	7506
Nectar Guides: More Than Meets the (Human) Eye	7458
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