

# 2012

## The Polly Hill Arboretum

Year in Review



**Autumn Splendor at the Arboretum**

## Living Collection Statistics

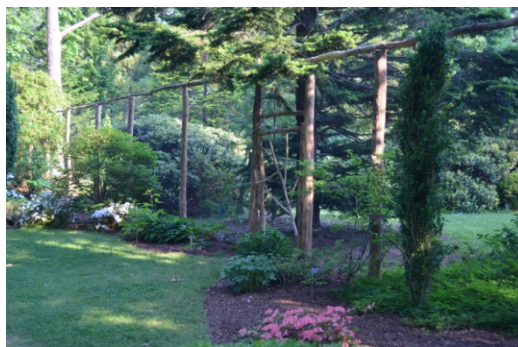
The Arboretum continues to increase the scientific value and genetic diversity of its living collection through the acquisition of well-documented plants and seeds of known wild origin. The living collection (as of 10/11/2012) contains 1,534 taxa represented by plants from 117 families and 338 genera. These numbers reflect 57 new accessions (2012) of seeds, plants, and cuttings of which 47% are of documented wild origin. Noteworthy among the 2012 accessions were wild-collected seeds of several Japanese and Chinese *Rhododendron*; *Magnolia* 'Daphne'; the recently described *Parrotia subaequalis*; *Rostrinucula dependens* and the pink-flowered *Stewartia rostrata* 'Pink Satin'.



283 plants representing 160 accessions have been removed from the collection this year, so far. Following the thorough curation of the Conifer Rows carried out by collections and grounds manager, Tom Clark, and 2011 collections management intern, Alyssa Janilla, 42 plants were deaccessioned from this densely planted area. Plants removed from the grounds alleviate overcrowding and improve the health and aesthetic value of the collection. This necessary work will continue through the fall and winter of 2012-2013. Some of the spaces created by the removal of select plants open new spaces for plantings; once again, this year has been a busy planting season with more than 250 plants from the Littlefield Nursery and greenhouse finding new homes in the permanent living collection.

## Play Pen Reconstruction

In December 2011 the Stanley Smith Horticultural Trust awarded PHA a \$14,600 grant for the reconstruction of the fence and gates of Polly's Play Pen, a cherished feature at PHA. Built in the early 1970s to protect many of Polly's most valuable plants from deer, the structure was becoming dilapidated. Tucker Hubbell and Ben Clark of Rising Sun Construction, along with help from PHA staff, rebuilt the fence and gates surrounding the 87m by 11m enclosure.



## Belgium Trip

From May 9-14, Tom Clark, Sandy Clark, and Karin Stanley traveled with nine ardent PHA supporters to several superb public and private arboreta and gardens in northern Belgium. Prior to the tour, Tom and Sandy had the opportunity to visit many of the same gardens, to tour and enjoy the diverse collections, and to meet with curatorial and horticultural staff. For Tom it was a great experience to interact with colleagues and to learn from them more about the practices and collections of these institutions.

## Dogwood Allée



In September, PHA contracted with Bartlett Tree Experts to invigorate and improve the health of the southern two-thirds of the Dogwood Allée. This work involved air-spading a large area of the root zone, fertilization, incorporation of organic matter into the soil, and mulching. Similar work was performed on the northern third in October 2010, which proved to be very beneficial to the overall health of the trees. Arboretum staff will continue to monitor and maintain the health and vigor of all 26 kousa dogwoods (*Cornus kousa*) that create this iconic Arboretum feature.

## Fireplace Oak

In January PHA arborist/senior horticulturist, Steve Masterson, observed a large split in the trunk of this majestic black oak (*Quercus velutina*). This island native has a commanding presence over the fireplace and frames the vista along a main path near the Far Barn. Given the tree's prominence, the Arboretum invested in the long-term health and structural integrity of the specimen by performing extensive pruning, cabling the canopy, bolting the massive trunk, and, again, contracted with Bartlett to air-spade the root zone and amend the soil around the tree.



## Curation and Plant Records



Throughout the summer and fall Tom Clark and collections management intern Jaime Morin completed an inventory and assessment of all 461 individual plants in the cultivated areas of the West Field surrounding a large meadow. Senescence, overcrowding, and redundancy in this area have lessened the aesthetic value and the overall health of the collection. Another aspect of the project involved reconciling PHA's plant records database with what actually exists in this large and diverse part of the collection.

Similar to the work carried out in the Play Pen in 2010 and the Conifer Rows in 2011, the results of this work will inform decisions to deaccession plants found to be in poor health, lacking vigor, crowded, or contributing little to the fulfillment of PHA's mission. After a collaborative review by collections staff, the removal of these plants will occur during the fall and winter. Part of this area borders the woodland currently under development as a new garden area. A great deal of consideration will be given to the cultural and aesthetic interface of the two areas.

## **Collections Expansion Garden**

During the winter of 2011-2012, further progress was made on the development of the Collections Expansion Garden. Work focused on the clearing of undesirable understory vegetation and the removal of many dead, unhealthy, and hazardous trees.



In early October 2012 PHA staff assessed the condition of all remaining trees in the site and marked each one either to be kept or removed.

Work to remove undesirable vegetation will be ongoing through the coming winter.

Through the summer PHA staff discussed this new area with landscape architect Michael VanValkenburgh. Michael has been involved with PHA since the late 1990s; he developed a master site plan for the Arboretum and designed the visitor entrance and parking area. His involvement in this project is on a *pro bono* basis and PHA is fortunate to have his expertise as we begin to consider visitor access to the site and the flow of visitors through the site.

## **Collections Staff and Interns**

On March 5, PHA welcomed Ian Jochems as a full-time horticulturist. He is a recent graduate of Colorado State University with a bachelor of science in environmental horticulture. He has extensive practical experience in all aspects of landscape maintenance, design and construction as well as broad experience in general horticulture. He has already attained his Massachusetts pesticide applicator license and will soon be an International Society of Arboriculture certified arborist. He has proven to be a hard-working and capable horticulturist and a valuable addition to the living collections team.

Also on March 5, Jaime Morin began a nine-month collections management internship. She is a recent graduate of Clemson University with a bachelor of science in environmental horticulture. While at Clemson she worked at the South Carolina Botanical Garden and in 2010 completed an internship at the Arnold Arboretum. During her time at PHA she was integral to several curatorial projects as well as to the maintenance of the living collection. She recently secured a full-time job as the assistant curator at the New York Botanical Garden.

PHA has employed summer horticulture interns since it opened to the public in 1998. This year we welcomed Julie Jones and Keelan Weiss. Julie is currently finishing her BS degree at the University of Tennessee. Keelan Weiss completed in May her BS degree at the State University of New York, Cobleskill. Both women learned a great deal during their internships and look forward to continuing their careers in horticulture.

Thomas Clark  
Collections and Grounds Manager

## Education, Membership, and Community Outreach

This year PHA membership remained stable at 650 members. As we approach our 15th anniversary, we are increasingly visible in the community and recognized as the source for plant information.

This year our plant sale center had one of our best seasons yet. More people have learned they can trust PHA to provide healthy plants chosen for adaptability to the Island's soils and climate. Our Schedule of Events, filled with tours, talks, and workshops based on sharing knowledge about plants, was also very successful.



Our many programs for 2012 included tree bark identification, butterfly gardening, tours of our magnolia and Ericaceae collections, and the important role of native and non-native pollinators. We provided hands-on experiences in plant science through workshops on the ecology of bogs, seed propagation, and the identification of grasses, sedges, and rushes. Through collaboration with Bartlett Tree Experts we offered an important program informing the public of a devastating outbreak of a cynipid gall wasp infestation affecting the health of our native black oak trees.

Our evening lecture series was once again sponsored by local nurseries. Speakers included author Nancy Ross Hugo who spoke about her book *Seeing Trees*; Bill

Thomas shared experiences from Chanticleer Gardens where he is executive director; garden consultant and designer Patrick Cullina explored new plant varieties in the marketplace; Cormac Collier of the Nantucket Land Council discussed land conservation on Nantucket; and conservation biologist Dr. Richard Primack spoke on local effects of climate change.



This summer Erin McKeon, a master's candidate in public garden leadership at Cornell University, served as our first Development and Outreach Intern. Erin merged with the PHA team naturally and experienced how the outward-facing side of leading a public garden is essential to gaining support from the public and insuring the organization is integral to its community. Over her 13-week internship she worked on a variety of projects including a planned giving program, increasing PHA's social media presence, and research on mobile garden tour and website options. Erin also assisted with the educational programs, membership development, and publicity.

## Youth Education

Our youth education program continues to grow. Coordinator Betsy Dripps reports that students and teachers believe we offer the best fieldtrip of the school year. Betsy and her assistant continue to work with the schools to meet curriculum requirements for grades pre-school through middle-school. We are now serving over 550 students each fall and spring.

This summer we added a junior explorer pack to our popular Family Explorer Backpacks. These portable kits contain the tools necessary to explore the natural world on our grounds. They were an immediate success with local families and first-time visitors.



## Arboretum Tours

After the success of our garden tour of the Delaware Valley in May of 2011, we decided to host a few more. We have found these tours are an effective and enjoyable way to connect with our members and fellow public garden and land conservation colleagues. They have been profitable as well!



Last May 12 people visited Belgium (left) on an Arboretum hosted garden tour. Gardens included Bokrijk Arboretum, Arboretum Provinciaal Domein Het Leen, National Botanic Garden of Belgium, Kalmthout, and Hemelrijk. The highlight of the trip was our welcome lunch with Philippe de Spoelberch and tour of Herkenrode and our visit the following day to tour Arboretum Wespelaar with Koen Camelbeke.

In July we hosted a daylong tour of the gardens of Martha's Vineyard (right). A group of 26 visited four private gardens with a break for lunch at PHA. This local garden tour was very successful and we plan on repeating this popular tour in the future. In September 10 participants traveled to our island neighbor Nantucket. The trip included visits to private gardens and conservation lands and featured a tour of the historic street trees of Nantucket led by staff of the Nantucket Land Council. One highlight was the tupelo forest in Squam Swamp.



## ArbNet Level IV Accreditation

We are pleased to announce ArbNet has awarded us the highest level (IV) of accreditation through the Morton Register of Arboreta. The purpose of the Register is to identify all of the organizations that collect and display trees, shrubs, and other woody plants for the benefit of the public, science, and conservation. ArbNet is sponsored and coordinated by the Morton Arboretum in cooperation with the American Public Gardens Association and Botanic Gardens Conservation International.

Karin Stanley, Education and Outreach Administrator

## Plant Conservation and Scientific Inquiry

### Cynipid Wasp Study

This past season the Arboretum received numerous calls with concerns about the widespread outbreak of a serious insect pest, the crypt gall wasp, *Bassettia ceropteroides*. The tiny insect (right) exclusively attacks the outer branches of black oak, *Quercus velutina*. Successive attacks result in tree mortality.



The Arboretum has a small group of trees that show signs of infestation, but thus far no trees that have been heavily infested. Arboretum volunteer Greg Palermo has headed up an island-wide survey of oaks in an attempt to track both the distribution of the pest and severity of infestation.



At this time the wasp has been found in every island town and seems to appear not just on older declining trees as previously thought. It also appears in young to middle-aged trees. The symptoms are dead branches on the outer extremities of the trees (left).



The signs of infestation include swollen twigs with tiny pinhole perforations where the insect has emerged. (right)

PHA hosted a lecture by Dr. Neil Hendrickson, PhD Forestry of the Bartlett Tree Research Laboratories, this past summer. Island commercial arborists and concerned homeowners attended the event and information was shared about the wasp and possible treatment options. At this point little is known about the insect, its lifecycle, or its control.



The Arboretum agreed to have an experimental systemic pesticide treatment performed by Bartlett Tree Co. (left) on our largest black oak. We are hopeful that with monitoring and good cultural care our trees will continue healthy lives in our collections.

Plans for future surveys of the pest this upcoming year have been established. The wasp has multiple lifecycles and potential to cause the widespread loss of black oak, a major component of our Island forest.

## Professional Plant Identification Classes

PHA research associate Melissa Cullina returned this past September to teach a class on the identification of grasses and grasslike plants. These rigorous classes are popular with Island naturalists as well as professional conservationists, and island land managers. The grass family is renowned for its worldwide diversity and notable for the difficulty in identifying its complex and small floral parts. The class was conducted in two parts—an indoor lecture and lab presentation—followed by outdoor fieldtrips to see grasses in their native habitats.



Participants were able to use the extensive reference book collection that reside in the Stephen A. Spongberg Library. The class also benefited by the use of a digital microscope that projected magnified images (left) detailing key features of this diverse group of plants.

## Island Bee Survey Continues



More than 400 native bee species (of 4,000 nationwide) occur in New England. It is estimated that as many as 200 species of native bees may occur on Martha's Vineyard alone. Until now no formal inventory has been undertaken.

The Arboretum in collaboration with Smithsonian entomologist Dr. Paul Goldstein set numerous traps to collect bees that were later sent to entomologists for identification. In total the volunteers set up over 100 sites on-island; the Arboretum had three collection sites. Thus far the project has collected over 15,000 samples and 171 native bee species have been identified.

This summer PHA hosted a workshop titled *Nature's Partners: Pollinators, Plants, and You*. The program was held at the Far Barn in collaboration with the Nature Conservancy and the Island Grown Initiative. The lecture detailed the outcomes of the study and provided land management options to homeowners and farmers to preserve and enhance the presence of native pollinators in the landscape. There is great concern and interest in the "pollinator crisis" which is a local, regional, and international in its scope.





## Arboretum Herbarium is Growing!

This past year was one of growth in our dried, pressed, and preserved plant collections (individually called herbarium voucher specimens). Land managers from the Nature Conservancy, Sheriff's Meadow Foundation, and the MV Landbank Commission made significant contributions to our collections. All of the documented plants contribute to the Flora of Martha's Vineyard project and our ConServator database. In addition to these collections, voucher specimens were made from cultivated collections from the Arboretum. These are used to verify the identity of species or cultivated varieties, and contribute to the curatorial documentation of our collections.



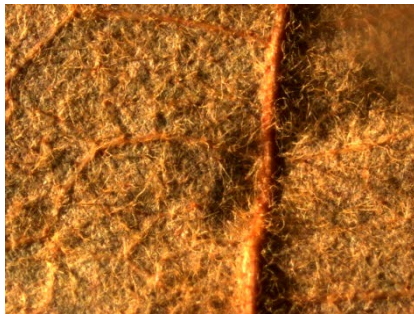
Harvard University curatorial assistant Melinda Peters (left) presented a workshop on the art and science of creating herbaria voucher specimens. Work will continue during the winter months to label a backlog of plants that have not yet been mounted. Specimens are kept in insect-proof cabinets and are periodically monitored for insect pests, mold, and mildew. The Cowbarn serves as a temporary space for herbarium storage at this time.

## Mystery Oak Investigated

Executive director Tim Boland continues to collect and document oak hybrids on the Island and is looking into the validity of a rare native oak, *Quercus prinoides* var. *rufescens*. Through a cooperative arrangement with the Arnold Arboretum he was able to use a high magnification digital microscope to take pictures of the original type specimen of the variety originally collected by Alfred Rehder in 1907 (right). One key identifying features of this variety are the rusty red trichomes found on the underside (abaxial side) of the leaf.



Specimens of *Quercus prinoides* and the variety *rufescens* were compared and showed marked differences in their trichome color and surface appearance. Future plans involve collecting more samples for verification and looking into DNA sampling to determine if this possible varietal form is indeed unique from the species.



*Quercus prinoides* var. *rufescens* type



*Quercus prinoides*

## Magnolia Society International (MSI) 2012 Meeting



Tim Boland attended the annual meeting of the MSI this past spring. Tim serves on the board of the Magnolia Society and is also the cultivar registration authority for the society. The meeting was hosted by the Quarryhill Botanical Garden in Sonoma, California. The PHA has partnered with Quarryhill on two collection trips to Japan in 2005 and 2007.

The meeting included a post conference tour of the Strybing Arboretum at the San Francisco Botanical Garden in Golden Gate Park. This renowned collection of magnolias established in 1937 was recently named a national magnolia collection by the North American Plant Collections Consortium (NAPCC). The mild temperate location of the garden in a Mediterranean climate provides the perfect conditions for plants from Central America and the Himalayan regions of Asia. A highlight was the peak bloom of the sweet michelia, *Magnolia doltsopa*.



## International Oak Society 2012 Meeting



Tim Boland attended the triennial meeting of the International Oak Society this past October in Bordeaux, France. The three-day meeting brought together oak experts from 18 different countries. The subject matter ranged from genetics, taxonomy, and horticulture to the effect of climate change on natural oak ecosystems. The proceedings included a post conference tour of French oak forests (left), some managed for

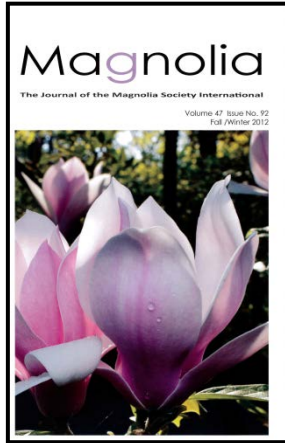
over 500 years for firewood production.

The tour also featured several visits to arboreta with specialized oak collections from around the world. As a result of the mild climate, many of the arboreta contain oaks from the warm temperate areas of Asia and outstanding collections of Mexican oaks. A highlight of the tour was a visit to Arboretum de la Bergerette in southwest France (right).



Timothy M. Boland, Executive Director

## Arboretum Publications

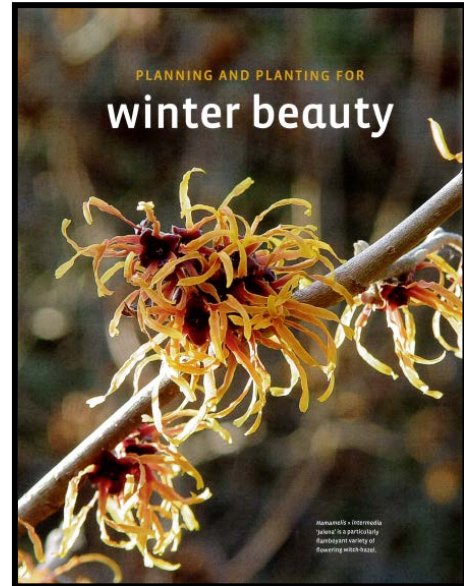


### “New Cultivar Registrations, 2012”

*Magnolia Society International*, the journal of the Magnolia Society International. Fall/Winter 2012, Issue No. 92

By Timothy M. Boland, Executive Director.

“Planning and Planting for Winter Beauty.” *Martha’s Vineyard Magazine*, Fall-Winter 2012-2013. By Timothy M. Boland, Executive Director.



Eleven articles appeared over the summer in the opinion section of the *Vineyard Gazette*. Most of the articles featured plants at the Arboretum or native to the Island. By Timothy M. Boland, Executive Director.

## Staff Presentations

**Stewartia in Cultivation.** American Rhododendron Society, Connecticut Chapter. Windsor, Connecticut. Thomas Clark, Collections Manager. January 3, 2012

**Preserving Local Ecotypes: One Seed, One Arboretum, One Island at a Time.** Ecological Landscape Symposium, co-sponsored by the Connecticut College Arboretum and the Morris Arboretum of the University of Pennsylvania. Connecticut College, New London, CT. Timothy M. Boland, Executive Director. January 17 and 18, 2012.

**A Life with Trees.** Martha's Vineyard Center for Living. Supportive Day Program. Kelly House, Edgartown, MA. Timothy M. Boland, Executive Director. January 30, 2012.

**Polly Hill's Dream, Our Arboretum.** The Neighborhood Convention. First Congregational Church, West Tisbury, MA. Timothy M. Boland, Executive Director. April 3, 2012.

**Magnificent Magnolias.** Martha's Vineyard Center for Living. Supportive Day Program. Kelly House, Edgartown, MA. Timothy M. Boland, Executive Director. June 11, 2012.

**Know Your Arboretum.** Free lecture to membership outlining current programming and plans at the Arboretum. The Polly Hill Arboretum. Timothy M. Boland, Thomas E. Clark, and Karin Stanley. June 22, 2012.

**The American Stewartias: Ecology, Cultivation and Conservation.** Horticultural Society of Maryland, Cylburn Arboretum, Baltimore, MD. Timothy M. Boland, Executive Director. September 11, 2012.

**Native Pollinators at the Polly Hill Arboretum:** Designing Meadows Workshop. Chatham Conservation Commission, Chatham, MA. Timothy M. Boland, Executive Director. October 13, 2012.

## Staff Tours

New England Wildflower Society tour - July 23, 2012

Arnold Arboretum Staff and Student picnic and tour - August 9, 2012

Alexander Buzel from Hamilton College Arboretum tour - August 13, 2012

Museum of Fine Arts Board Director and Executive Committee tour - August 14, 2012

Mary M. B. Wakefield Charitable Trust - Director and staff visit to learn more about PHA organization - October 1, 2012

Thornton Burgess Society tour - October 10, 2012

Harvard Business School Executive Education, class reunion tour - October 10, 2012

## Board News

This past year saw the retirement of two longstanding board members and two one-term members, all contributed support and effort to accomplishing our mission. We thank all of these past board members for their active service, support, and advocacy on our behalf.

Peter Norris joined the board in 2003 and his influence has made a lasting impact. Peter and his wife, Amy Rugel, established an endowment in support of our youth education program (right). Peter served on the finance committee as treasurer for many years and alongside Frank Smith as co-chair of our capital campaign in 2007.



Dr. Frank Rees Smith (left) joined our board in 2006 and brought a passion and appreciation for the history of the land that he eloquently shared as a tour guide. He also helped plant the popular Homestead Border. Frank is passionate about plant conservation and worked collecting native seeds and encouraging the establishment of our native plant production program, MV Wildtype.

William (Bill) Hambrecht joined the PHA board in 2009. He was an admirer and friend of Polly Hill before we became a public institution. He and his wife, Sally, have a beautiful garden on Lake Tashmoo in Vineyard Haven filled with dozens of plants from the Arboretum. Bill also found time with his daughter Amy to volunteer on our grounds crew.

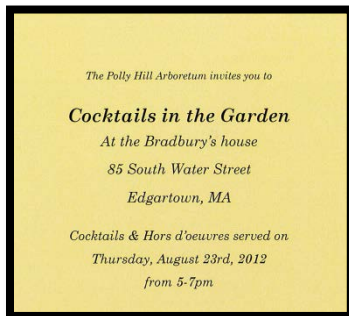
Kimbrough Towles also joined the board in 2009. A West Chop resident and the niece of longtime board chairman Bob Doran and his wife, Happy, she served on the finance committee during a tumultuous economic time period and guided us with great expertise.

## Arboretum Events Celebrate our Mission



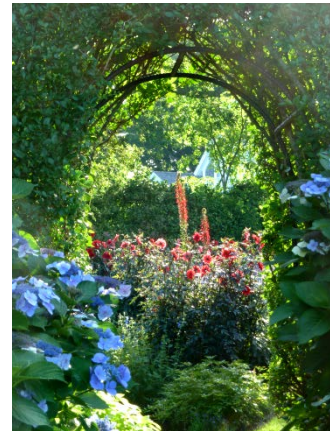
Two special events occurred this past summer with gatherings of old and new supporters of the Arboretum, delicious food, inspirational words, and beautiful settings. We look forward to more special events next year!

On August 7 we celebrated with a spectacular, creative dinner produced by local chef and farmer Chris Fischer. After years spent cooking in top restaurant kitchens (New York City's Babbo, London's River Cafe), Chris now grows vegetables on Beetlebung Farm, his family's Martha's Vineyard farm, in the nearby town of Chilmark. In the Arboretum's atmospheric Far Barn, Chris and his talented crew served up a farm-to-table dinner we will all remember for quite some time. The guest list included longtime supporters and many new guests.



On August 23, Arboretum advocate and keen gardener Jane Bradbury hosted a wonderful cocktail party in her Edgartown garden. Jane invited many of her friends and neighbors to introduce them to our programs.

The evening also included Arboretum supporters who have always wanted an opportunity to tour Jane's creative and beautiful plantings that include many Polly Hill plants. Jane gave an inspired speech recounting her first meeting with Polly Hill and her sincere appreciation for the Arboretum and its programs. The beautiful setting made for a very special evening.



## **THE CORPORATION AND BOARD OF DIRECTORS – The Polly Hill Arboretum**

Rachel Smith Alternative

Timothy M. Boland

*Ex-Officio*

William R. Hambrecht

Pamela Kohlberg

Peter Norris

Claire Sawyers

E. Douglas Sederholm

Lydia Hill Slaby

*Treasurer*

Frank R. Smith

Joan Margot Smith

*President & Chairman*

Philippe de Spoelberch

Kimbrough Towles

Susan H. Wasserman

### **HONORARY BOARD MEMBERS**

Robert W. Doran

Lisina M. Hoch

Stephen A. Sponberg

### **RESEARCH ASSOCIATES**

Melissa Dow Cullina

Dr. David Foster

Eric Hsu

Shigeto Tsukie

**The mission of the Polly Hill Arboretum is to perpetuate the experimental tradition in horticulture established by Polly Hill by sharing knowledge of plants and scientific procedure through educational programs, research, plant conservation, and exploration. The Arboretum seeks to preserve its meadows and woodlands, to promote an understanding of its collections, and to encourage their utilization for scholarship, observation, and the enjoyment of all.**

### **PHA STAFF**

Timothy M. Boland

*Executive Director*

Tom Clark

*Collections & Grounds Manager*

Barbara Conroy

*Administrative & Financial Officer*

Betsy Dripps

*Youth Education Coordinator*

Ian Jochems

*Horticulturist*

Stephen Masterson

*Senior Horticulturist/Arborist*

Karin Stanley

*Education & Outreach Administrator*

Nancy Weaver

*Volunteer Coordinator & Plant Recorder*

Polly Hill Arboretum  
Projected 2013 Budget

	<b>Total</b>
<b>Revenue</b>	
<i>Total donations Major</i>	\$ 463,050
<i>Total Donations Other</i>	\$ 47,880
<i>Memberships</i>	\$ 71,400
<i>Other Revenue (includes VC)</i>	\$ 66,675
<i>Interest</i>	\$ 25,200
<i>Endowment support</i>	\$ 324,792
<b>Total Revenue</b>	<b>\$ 998,997</b>
<b>Personnel Expenses</b>	
<i>Salaries</i>	\$ 516,179
<i>Interns</i>	\$ 10,000
<i>Payroll Tax, Benefits</i>	\$ 166,907
<b>Sub-total Personnel</b>	<b>\$ 693,086</b>
<b>Non-personnel Expenses</b>	
<i>Advertising</i>	\$ 20,475
<i>Computer</i>	\$ 15,372
<i>Education</i>	\$ 11,970
<i>Employee Education</i>	\$ 6,300
<i>Events</i>	\$ 8,400
<i>Greenhouse</i>	\$ 17,976
<i>Grounds, Maintenance, Equip</i>	\$ 47,119
<i>Insurance</i>	\$ 48,408
<i>Miscellaneous</i>	\$ 1,260
<i>Postage/Shipping</i>	\$ 2,373
<i>Printing/Publications</i>	\$ 19,950
<i>Professional Fees</i>	\$ 28,602
<i>Supplies/Custodian/Exterminator</i>	\$ 10,106
<i>Telephone/Internet/Alarm</i>	\$ 6,968
<i>Travel</i>	\$ 6,300
<i>Utilities</i>	\$ 17,551
<i>VC Inventory</i>	\$ 8,925
<b>Sub-total Expenses</b>	<b>\$ 278,055</b>
<b>Total Expenses</b>	<b>\$ 971,141</b>