

THE POLLY HILL ARBORETUM

West Tisbury, Martha's Vineyard, Massachusetts USDA Hardiness Zone 7a

The Polly Hill Arboretum (PHA), a Martha's Vineyard horticultural and botanical landmark, was developed by the legendary horticulturist, Polly Hill (1907–2007). Here, in 1958, Polly began an arboretum by sowing a seed, eventually bringing 20 acres (8.1 hectares) under cultivation while preserving an additional 40 acres (16.2 hectares) as native woodland. Established in 1998 as a not-for-profit institution, the Arboretum is devoted to the cultivation and study of plants and the preservation of the character and magic of this tranquil landscape.

The cultivated portion of PHA is comprised primarily of Haven very fine sandy loam (0–3% slopes) and, to a lesser extent, Riverhead sandy loam (0–3% slopes) on the eastern edge of the property. Soil pH on site ranges between 4.1 and 6.5 (mean 5.3). *Ilex glabra*, *I. opaca*, and *I. verticillata* are all indigenous to the Island, though only *I. opaca* is naturally occurring on site at PHA. At the time of this writing (April, 2018), the PHA living collections contain a total of 160 *Ilex* individuals, comprising 105 accessions, and representing 77 unique taxa.

West Tisbury, Massachusetts is classified as USDA hardiness zone 7a (average annual extreme minimum temperature from 0 °F (–17.8 °C) to 5 °F (–15 °C). Overall, PHA experienced a mild and favorable growing season in 2017. PHA reached a low temperature of 1 °F (–17.2 °C), sustained nightly from December 10 through December 20. Average annual rainfall on site is 45" (114.3 cm), and in 2017 we were on par, receiving a total of 44.6" (113.5 cm).

Table 1: Temperature and precipitation summaries for 2017

Month	Temperature			Precipitation
	Max.	Avg.	Min.	
JAN	57 °F 13.9 °C	35.6 °F 2.8 °C	10.4 °F –12.8 °C	5.8" (14.7 cm)
FEB	62.6 °F 17.2 °C	35.6 °F 2.8 °C	15.8 °F –9.4 °C	1.4" (3.6 cm)
MAR	53.6 °F 12.8 °C	33.8 °F 1.1 °C	10.4 °F –12.2 °C	2" (5.1 cm)
APR	77 °F 25.6 °C	50 °F 10.0 °C	26.6 °F –3.9 °C	5.3" (13.7 cm)
MAY	82.4 °F 28.9 °C	53.6 12.8 °C	30.2 °F –1.1 °C	6.9" (17.5 cm)

JUN	89.6 °F 32.8 °C	62.6 °F 17.8 °C	32 °F 0.6 °C	2" (5.1 cm)
JUL	87.8 °F 31.7 °C	69.8 °F 21.1 °C	44.6 °F 7.8 °C	2.5" (6.4 cm)
AUG	82.4 °F 28.9 °C	68.0 °F 20.0 °C	42.8 °F 6.7 °C	4.6" (11.7 cm)
SEP	78.8 °F 26.7 °C	64.4 °F 18.9 °C	35.6 °F 2.8 °C	7.4" (18.8 cm)
OCT	77.0 °F 25.6 °C	57.2 °F 14.4 °C	33.8 °F 1.7 °C	5.1" (13.0 cm)
NOV	68.0 °F 20.0 °C	44.6 °F 7.2 °C	17.6 °F -8.3 °C	0.1" (0.3 cm)
DEC	55.4 °F 13.9 °C	28.4 °F -2.2 °C	1.4 °F -17.2 °C	1.4" (3.6 cm)

PHA added four new accessions of *Ilex* in 2017. Three of these accessions, *I. verticillata*, *I. decidua*, and *I. rotunda* were wild collected. The final accession, *I. 'Homefire'*, was received as the 2017 test holly from the Holly Society of America.

Accession	Taxon	Provenance	Notes
2017-104 ex	<i>I. verticillata</i>	Wild origin	Collected in Hardeman Co. Tennessee as part of 2017 Tennessee and Kentucky expedition
2017-116 ex	<i>I. decidua</i>	Wild origin	Collected in McCracken Co. Kentucky as part of 2017 Tennessee and Kentucky expedition
2017-180*A	<i>I. rotunda</i>	Wild origin	Collected in Hubei province, China in 2015, received by Polly Hill Arboretum in 2017
2017-211*A	<i>I. 'Homefire'</i>	Garden origin	Received as 2017 test holly from the Holly Society of America

Twelve hollies were deaccessioned in 2017, 11 of which were unique taxa. Redesign and lost identity were the primary reasons for deaccessioning, though *I. crenata* f. *watanabeana* was deaccessioned due to concerns regarding its invasive tendencies, and *I. integra* struggled to thrive, likely due to cold damage.

Accession	Taxon	Provenance	Deaccession Reason
1957-004*A	<i>I. aquifolium</i>	Garden origin	Redesign

1978-147*A	<i>I. crenata</i> f. <i>watanabeana</i>	Garden origin	Invasive tendencies
2010-087*A	<i>I. integra</i>	Garden origin	Failure to thrive, likely cold damage
1966-042*C	<i>I. opaca</i>	Garden origin	Redesign
1978-109*A	<i>I. opaca</i>	Garden origin	Redesign
62-012-01*A	<i>I. opaca</i> 'Martha's Vineyard'	Garden origin	Redesign
1980-012*A	<i>I.</i> 'Oriole'	Garden origin	Redesign
58-004-06*A	<i>I. verticillata</i> 'Aquinnah'	Wild origin	Lost Identity
58-004-01*D	<i>I. verticillata</i> 'Bright Horizon'	Wild origin	Lost Identity
58-004-07*A	<i>I. verticillata</i> 'Chickemmoo'	Wild origin	Lost Identity
58-004-03*A	<i>I. verticillata</i> 'Quitsa'	Wild origin	Lost Identity
58-004-04*A	<i>I. verticillata</i> 'Tiasquam'	Wild origin	Lost Identity

Holly of the Year

PHA has three specimens of *I. glabra* on site. One specimen growing in the playpen area, though healthy, is tall and leggy due to crowding between the fence and a large rhododendron, and may be a candidate for deaccessioning or rejuvenation in the future. The other two specimens are planted outside the Visitor's Center are healthy and have a good form.

Future Work

Upcoming work with the holly collection at PHA will include the deaccessioning and removal of *I. crenata* due to concerns from land managers across the Island, who have reported *I. crenata* seedlings aggressively volunteering in natural areas. Additionally, PHA will work to identify an unknown species (*Ilex* sp.) in the collection. This specimen was wild collected in Lao Chai province, Viet Nam in 2016. PHA will also work to record the sex of our non-cultivated holly accessions, which will include photographing the specimens in flower.

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