

THE DAWES ARBORETUM

Newark, OH USDA Hardiness Zone 5b

Central Ohio withstood yet another unseasonably cold winter during 2015. This included below zero temperature readings from early January to early March. Our coldest recorded temperature occurred on February 24, 2016, when it dropped to -16.1 °F (-26.7 °C). However, temperatures as cold as -30 °F (-34.4 °C) were unofficially recorded in some Ohio counties. Unseasonably high temperatures were also recorded during January and February as the mercury reached nearly 60 °F (15.6 °C) on January 4 [59 °F (15 °C)] and February 8 [56.4 °F (13.6 °C)]. Strong northwesterly winds predominated at times between January and March, with wind speeds in excess of 30 mph (48.3 kph). Our rainfall total for the year was an above average 35.37 " (89.9 cm), with most of our rainfall, 22.37 " (56.8 cm), recorded from March through July.

The combination of widely divergent temperatures and strong northwesterly winds proved to be a lethal blow to many broadleaf evergreens including American holly (*Ilex opaca*). Consequently, numerous holly taxa were removed as the result of cold temperature injury in 2015. The list is as follows:

D2011-0528 <i>I. × attenuata</i> ‘Sunny Foster’	Dead
D2011-0528 <i>I. × attenuata</i> ‘Sunny Foster’	Dead
D2005-0756 <i>I. × meserveae</i> ‘Mondo’ Little Rascal®	Removed
D2005-0756 <i>I. × meserveae</i> ‘Mondo’ Little Rascal®	Removed
D2005-0756 <i>I. × meserveae</i> ‘Mondo’ Little Rascal®	Removed
D2005-0756 <i>I. × meserveae</i> ‘Mondo’ Little Rascal®	Removed
D2002-0207 <i>I. aquifolium</i> ‘Angustifolia’	Removed
D1993-0616 <i>I. colchica</i>	Removed
D2005-0786 <i>I. cornuta</i>	Removed
D2000-1317 <i>I. crenata</i> ‘Hatfield’	Removed
D2005-0763 <i>I. crenata</i> ‘Lemon Gem’	Removed
D1998-1225 <i>I. opaca</i> ‘Autumn Wine’	Removed
D1998-1230 <i>I. opaca</i> ‘Dunn No. 2’	Removed
D2002-0755 <i>I. opaca</i> ‘Hoagland’	Removed
D2001-1400 <i>I. opaca</i> ‘Judy Kay’	Removed
D1999-1841 <i>I. opaca</i> ‘Millville’	Removed
D1992-0662 <i>I. opaca</i> ‘Nelson West’	Removed
D2008-0220 <i>I. opaca</i> ‘Portia Orton’	Removed
D2001-1021 <i>I. verticillata</i> ‘Aquinnah’	Removed
D2006-0250 <i>I. verticillata</i> ‘Kennebago’	Removed

D1992-0529 *I. verticillata* 'Shortcake'

Removed

In addition to those taxa removed from the collections, many other taxa suffered severe cambial damage or top dieback rendering their status problematical. The list of moderate to severely injured hollies is as follows:

I. opaca 'Angelica' (D1998-01178.002)

I. opaca 'Brown #5' (D1999-01835.001)

I. opaca 'Cave Hill #3' (D1998-1219.001)

I. opaca 'Goldie' (D1985-0023.001)

I. opaca 'Mary P. Turner' (D2005-0748.002)

In some cases, severely injured hollies can be salvaged by removing the top growth allowing basal sprouts to form a new leader. In other cases, we may conserve the taxon through cutting propagation in late fall or early winter.

Root girdling issues have evolved as one of the most limiting factors in the health of American holly, and an increasingly high percentage of specimens at Holly Hill are displaying symptoms of this disorder which can be manifested by excessive basal sprouting, leaning, dieback and asymmetrical growth. Of late we have been growing this species exclusively in containers designed to eliminate this problem, and we hope for better field results in the future.

Five new hollies were added to the collection in 2015. They included one specimen each of *I. opaca* 'Margaret Moran' and *I.* 'HL 10-90' Christmas Jewel® and three plants of *I. glabra* 'Tin Mine'.

By 2017 we should be in position to field test additional wild collected accessions of *I. ambigua* (Georgia holly) from Wilcox County, Alabama, and Georgetown County, S. Carolina; *I. amelanchier* (sarvis holly) from Washington County, Alabama; and *Nemopanthus collinus* (Appalachian mountain-holly) from Randolph County, West Virginia.

We currently have two accessions of wild collected seed of *I. laevigata* (smooth winterberry) from Maryland and North Carolina stratifying in our cooler but germination has not been forthcoming on either seed lot. This exceptional winterberry has attractive brightly colored orange-red fruit and superior fall color (golden-yellow) to our native winterberry (*I. verticillata*). If any member of the Holly Society of America has female plants of documented origin that they are willing to donate to the Arboretum, we would certainly be in debt to that individual. We now have just two male plants in the collection.

To conclude on a positive note, I would like to highlight two outstanding cultivars of American holly. Lady Blakeford American holly (*I. opaca*

'Lady Blakeford') was registered by H. G. Mattoon in 1959 from a specimen found near Blakeford, PA. We received our plant as cuttings from the late Theodore Klein in 1998. This plant now stands 18' (5.5 m) high by 6.1' (1.86 m) wide and is a female selection with yellow fruit. However, if this plant never fruited, it would still be a worthy addition for small landscapes because of its beautiful fastigiate form and rock solid hardiness.

Grace Orchard American holly (*I. opaca* 'Grace Orchard') is one of the many seedlings reared by the late Orlando S. Pride who harvested seed from native plants near Buckhannon, WV. Selections from these seedlings have since become known as The Grace Hybrid group. We received our plant from The Orlando S. Pride Nurseries, Butler, PA, as cuttings in 1998. Today, Grace Orchard stands 16.4' (5.0 m) high by 11.8' (3.6 m) wide with a superior branching habit and clean, light-green to yellow-green leaves. Our plant grows well on one of the highest and most exposed portions of the Arboretum's property and has withstood many days of subzero temperatures without a trace of injury. Grace Orchard American holly bears a traditional red drupe.

Respectively submitted, Richard A. Larson, Nursery Manager
<http://dawesarb.org>