

RUTGERS GARDENS  
NEW BRUNSWICK, NJ    USDA HARDINESS ZONE 6B

2016 arrived amid a range of conditions. Temperatures at Rutgers Gardens in January ranged from a high of 65 °F (18.3 °C) to a low of 9 °F (-12.8 °C). Statewide temperatures were just below average, with slightly above-average precipitation that included record-breaking snow in various locations; we received almost 27" (68.6 cm) on January 23 to 24. February also featured fluctuating temperatures, but below normal snowfall. Our yearly lows occurred with 2 °F (-16.7°C) overnight on the 14<sup>th</sup>, then a high of 18 °F (7.8°C) and low of 3 °F (-16.1 °C ) on February 15. This concluded the fifth mildest New Jersey winter on record since 1895. March was mild and dry, with several days reaching into the 70s and even 80s at Rutgers Gardens. Across the state, precipitation was more than 2" (5.08 cm) below normal, and our last bit of snow in New Brunswick arrived on the 21<sup>st</sup>. Dry conditions continued in April, with 1.72" (4.37 cm) below normal statewide precipitation. Despite 11 days above 70 °F (21.1°C) at Rutgers, statewide temperatures were actually slightly below normal. With rain each of the first nine days, May started cool and damp, although Rutgers Gardens reached temperatures of 90 to 91 °F (32.2 to 32.8 °C) the last four days of the month. Statewide, the monthly mean temperature was just a bit below average, while precipitation was more than 1" (2.54 cm) above average—although nearly 3" (7.62 cm) below normal for the spring season. By the end of a dry June, Middlesex County was considered in "moderate drought." We had very warm temperatures—into the upper 80 °F (30 °C) range—from June 19 to 30, reaching to 90 °F (32.2 °C) and 91° (32.8 °C) on June 20 and 21, respectively. In July, Rutgers Gardens saw 16 days in the 90s, reaching our yearly high of 98 °F (36.7 °C) on the 24<sup>th</sup>. Still, statewide rainfall was more than 2" (5.08 cm) over the normal average. Of the more than 7" (17.78 cm) of rain we received, nearly half was on July 31 when more than 3.5" (8.89 cm) fell, continuing into the next day. Above average temperatures continued into August—the second warmest in New Jersey since 1895—which was dry, but offset by the heavy rains in July. Warm weather persisted into September, with a statewide temperature mean 4.3 °F (2.39 °C) above normal. Rutgers Gardens experienced six days above 90 °F (32.2 °C). Although rainfall was below average, our area remained only "abnormally dry." The warmth continued to the end of the month, when nights finally started dropping into the 40 °F (4.4 °C) range. October was stereotypically variable. Our most significant rain on the 9 to

10 was associated with a weakening Hurricane Matthew, although the remainder of the month continued with below normal precipitation and a statewide average more than 1" (2.5 cm) below normal. October 26 was our first freeze of the fall, dipping to 30 °F (-1.1 °C) overnight, and to 32 °F (0 °C) again on the 29<sup>th</sup>. Temperatures were still cooling slowly in November, and we saw a small amount of snow, mixed with rain, on the 20<sup>th</sup>. Drought conditions across the state continued to be a concern; however, heavy rainfall on the 30<sup>th</sup> provided some replenishment here at Rutgers Gardens. Overall, 2016 was ranked the sixth warmest fall season on record. The December statewide mean temperature was just 1.2 °F (0.67 °C) above norm. Despite several rain events—including a continuation from November 30—New Jersey was still 0.48" (1.2 cm) below average. The monthly snowfall averaged 2" (5.08 cm) statewide (only half of the normal average), and Rutgers Gardens was exactly on par, receiving 2" (5.08 cm) on December 17. While the 16<sup>th</sup> and 17<sup>th</sup> did not reach above freezing, most of the month was mild, with an average high of about 48 °F (8.89 °C).

During the year, we continued extensive removal of vines from many of the trees in our collection. Ongoing efforts have been underway to assess the condition and appraise the hundreds of hollies at Rutgers Gardens, to truly evaluate and improve the historical and aesthetic value of our collection. Originally, most of these trees were planted for breeding and evaluation purposes so for decades they were allowed to grow "naturally," without the pruning and special care that might be given to specimens planted solely for display. While many are quite beautiful, some suffer from multiple leaders, excessive suckering, and crowded spacing—often compounded by their mature sizes. As such, a number of unsightly, historically insignificant, and duplicate varieties have been slated for removal to make the collection more attractive, more physically accessible, and a bit easier to maintain.

It is very gratifying to examine some of our impressive holly specimens in detail. During our evaluation work, measurements were taken of many of the more impressive trees. Among the largest measured are *I. opaca* 'Mae', 'Reeve East', and 'American Wreath', all with a diameter at breast height (DBH) over 17" (43.18 cm). Another 'Mae' specimen has a DBH of 19.85" (50.42 cm). Despite the dry conditions throughout much of the summer and fall, the berry show was again very impressive. Even well into the following spring many trees still retain a good quantity of fruit, including 'Mrs. Santa'—a perennial favorite of ours—which still sported many berries into March.

Our holly collection began as an evaluation of varieties (many planted as early as the 1940s), and became the foundation of Dr. Elwin Orton's American Holly (*I. opaca*) breeding program in the 1950s. The original planting, together with some of Dr. Orton's recent selections (including 'Dan Fenton', 'Jersey Princess', 'Jersey Delight', and 'Jersey Knight'), make up one of the largest American Holly collections in the United States. In addition, our collection includes a wide range of other *Ilex* species and hybrids, including noteworthy specimens of *I. opaca* (such as 'Galyean Gold' and 'Boyce Thompson Xanthocarpa'), *I. perado* (Madeira Holly), *I. × altaclerensis* 'James G. Esson', and other interesting hybrids. Also represented are numerous English Hollies (*I. aquifolium*), Chinese Hollies (*I. purpurea* and *I. cornuta*), Japanese Hollies (*I. crenata*), Inkberry Hollies (*I. glabra*), and well over 50 deciduous hollies (including *I. decidua*, *I. montana*, *I. serrata*, *I. verticillata*, and others).

In 2016, Rutgers Gardens not only celebrated its 100-year anniversary in May. We were also the honored recipients of the Horticultural Landmark Award from the American Society for Horticultural Science. The official botanic garden for Rutgers University, Rutgers Gardens encompasses nearly 180 acres of maintained and natural areas, featuring not only gardens, but providing numerous programs for community, faculty, and students to enjoy. Our regular annual events and features include the Spring Flower Fair (Mother's Day weekend), Summer Fest, Solstice Jazz and Wine event, the Gardens Party (featuring presentation of the national Hamilton Award), Fall Festival, display and vegetable gardens, undergraduate internships, and youth programs. Among our many gardens and collections that draw tens of thousands of visitors each year, our historic Holly Collection remains a focal point on many walks and tours on the grounds.

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Rutgers Gardens— *Where the Future of Horticulture Is Grounded in Our Past* <http://rutgersgardens.rutgers.edu/>