

HOYT ARBORETUM

Portland, OR USDA Hardiness Zone 7b–8a

The Hoyt Arboretum is a 187-acre site in Portland Oregon. The Arboretum's *Ilex* collection was established in 1992 and includes several species and cultivars of *Ilex*. Oregon has a long history of foliage production for the holiday season and this tradition is recognized through interpretive signage in the collection. The signage was updated to a new format in 2013.

Because of the invasive nature of *I. aquifolium* in the Pacific Northwest, much of our outreach is targeted towards good, non-weedy replacement *Ilex* species and cultivars for the straight species of *I. aquifolium*. New plants are added regularly, targeting new species with wild collection provenance and with cultivars that have not been grown before, to see if they are adapted to the Portland, Oregon climate.

2013 was mild compared to some locations in the United States; however, for Portland we saw low temperatures of 10 °F (–12.2 °C), which is the lowest temperature recorded for over 20 years. Snow and wind caused a small amount of damage, mainly from large Douglas Fir limbs falling onto collection trees. No plants were lost this winter due to damage or cold.

The Current inventory of 199 plants includes 112 taxa (28 species, 84 cultivars). New plants added in the last 3 years are:

- *I.* 'Coronet'
- *I. aff. fargesii* – Wild collection
- *I. chinensis* – Wild Collection
- *I. crenata* – Cutting from Windcliff Collection
- *I. decidua* 'Sparkleberry'
- *I. glabra* 'Shamrock'
- *I. opaca* 'Winter Sun'
- *I. verticillata* 'Stoplight'
- *I. verticillata* 'Sunset'
- *I. verticillata* × *serrata* 'Apollo'

Two research student-led projects are being conducted in the collection. The first explores plant health through creating a soil environment favorable to mycorrhizal fungi. The collection was sampled and soils tests were used to create three treatment protocols that could be used to enhance soil biology. Roots were stained and photographed to look for the presence or absence of mycorrhiza. The trial is ongoing and no results are currently available.

The second trial is an evaluation of the weed potential of hybrid and cultivars of *I. aquifolium*. Fruits were collected and are being germinated to determine the amount of viable seed. A follow-up portion of this trial is to observe bird feeding habits and if holly berries are being carried off site. Results should be available in 2015.

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