

## *Plant Health Care Recommendations for American Holly*

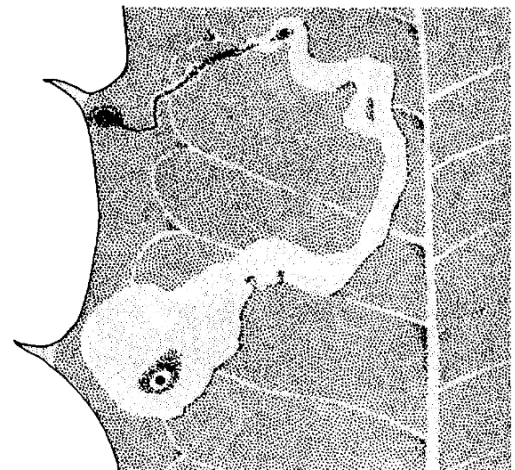
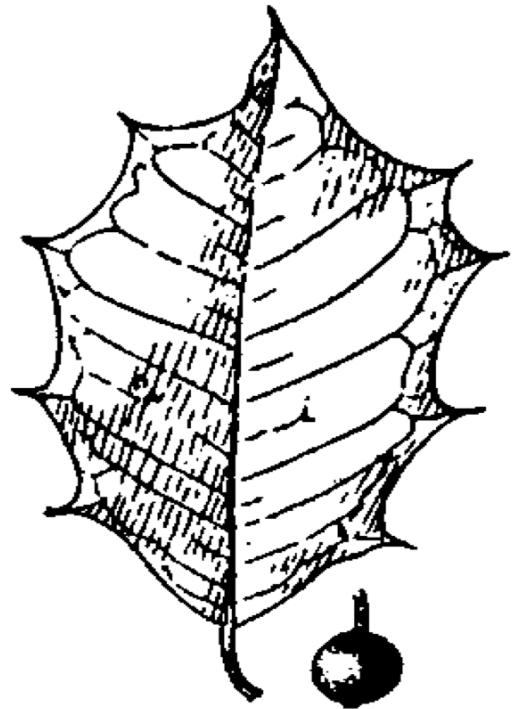
American holly (*Ilex opaca*) are a group of small growing trees or shrubs which provide year-round glossy green foliage. They can be used effectively as foundation, border or accent plantings. With more than 1000 varieties of American holly are listed, a wide variety of flowering fruiting and leaf characteristics are available. To encourage fruiting, one male should be planted for every 2 or 3 females.

Holly grows well in acid, moist, well drained soils. In soils with poor drainage or excess irrigation they will have very short life expectancies. In alkaline soil, iron deficiency occurs causing yellowing between the leaf veins and poor growth.

Most holly varieties are tolerant of cold winter temperatures. However, if they are grown in sites exposed to winter winds, they can easily be defoliated. Buds are seldom injured allowing new leaves to develop in spring. Two other factors may effect winter hardiness. Late summer or fall shearing will eliminate many buds which are essential for the onset of dormancy. Root feeding nematodes can also reduce winter hardiness resulting in branch dieback and decline.

Nematodes are small microscopic, wormlike organisms which can do serious damage to groups or individual hollies. By feeding on roots they disrupt the uptake of water and nutrients. This results in slower growth and greater susceptibility to disease, insects and winter injury.

Holly leafminer (*Phytomyza ilicis*) creates yellow or brown serpentine mines or blotches on leaves by



Holly leafminer

eating its way through the middle of the leaf blade. Scale insects attack the stem, sucking out sap thus reducing plant growth and vitality. Whiteflies attack holly leaves sucking the sap and excreting honeydew. When black sooty mold fungi grow on the honeydew, the leaves take on a dark, dirty appearance. Whiteflies are more common on hollies which have been sheared. Mites can be damaging particularly on Japanese holly.

While holly is susceptible to several leaf diseases, the more common and more damaging diseases are root, root collar and stem invaders. Root rots include *Phytophthora*, and black root rot (*Chadara elegans*). *Phytophthora* occurs when soils are poorly drained or over watered. Stem cankers form when the plant is stressed and infection occurs.

### **Recommended Monitoring for American holly**

<b>Timing</b>	<b>Treatment</b>
Winter	Prune to remove dead, dying, and diseased limbs and to correct structural problems.
Late winter	Apply horticultural oil to reduce populations of overwintering insects. Collect soil sample for nutrient and pH analysis.
Late spring	Inspect for winter injury, remove dead branches. Treat for holly leafminer. Treat soil nutrient and pH problems. If plants are declining, collect soil samples for nematode analysis, and root samples for <i>Phytophthora</i> .
Early summer	Monitor for soil moisture, scale insects, and whitefly. Treat as needed. Treat soil nematode and root rot if needed.
Mid summer	Monitor for soil moisture, scale insects, whitefly, root rot and nutrient deficiencies. Treat as needed.
Late summer	Monitor for soil moisture, scale insects, whitefly, root rot and nutrient deficiencies. Treat as needed.
Fall	Protect from winter winds with burlap wraps or other means. Soil applied systemic insecticides may be used in the fall to reduce the next years infestation of leafminer, scale and whitefly.