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INSECT PESTS OF HOLLY

by

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Holly Scale, *Aspidiotus britannicus* Newstead.

Infestations of this scale on holly ruins decorative value for Christmas trade. The scale also attacks English laurel and box as well as holly.

Control Suggestions - Most satisfactory is an oil emulsion spray at strength of 3 gallons of oil to 97 gallons of water. Oil specifications recommended are: Viscosity of 75 seconds Saybolt and sulfonation test not less than 85. These specifications are to be found in commercial "summer" oil emulsions. Spray applied in early spring shortly before buds open. While all of the foliage should be sprayed, special effort should be made to hit lower part of tree where most scales are found and upon both sides of leaves.

Appearance of Holly Scales: Female scale cover is round or slightly oval and about 3/32 inch in diameter, while male is oval and about same length but little more than 1/2 as wide. In color they are brown with a faint yellow cast.

Soft Brown Scale, *Coccus hesperidum* Linn.

This scale occasionally heavily infests holly but may be distinguished by its greater size and lack of the protective scale covering.

Control Suggestions - Same as for holly scale.

Oblique-banded Leaf-roller, *Archips rosaceana* (Harris).

Has caused severe damage in Oregon by webbing leaves together and feeding within this protection.

Control Suggestions - A spring spray as suggested for Holly scale assists in control. In cases of severe infestation spray with lead arsonate at rate of 3 lbs. to 100 gallons of water or apply a dust of lead arsenate 1 lb. to 9 lbs. of hydrated lime during late July to kill newly-hatched worms.

Appearance of Worms: The larvae reach a length of about 1 inch at maturity; are green with pale spots at base of body hairs, and have brown or black heads. When disturbed, they wriggle violently and may fall to the ground or suspend themselves by a silken thread.

Holly Bud Meth, *Rhopobota naevana* (Huber) var. *ilicifoliana*.

A major pest of holly in British Columbia. Reared from holly in Oregon in 1935.

Injury is similar to that of Oblique-banded Leaf-roller.

Control Suggestions: A spray should be applied in spring when new terminal leaves start to grow before newly-hatched larvae web leaves. Two sprays about 10 days apart are necessary.

Spray formula

Water 3 gallons
Nicotine Sulfate
40% 1 ounce
Whale Oil Soap . . . 4 ounces
Lead Arsenate 3 ounces

As larvae usually pupate in the debris under the trees, this material should be raked and burned in early July before moths emerge.

Appearance of Worms: The young worms are first greenish-white with a black head but darken as they grow, becoming a dull grey-green with a jet black head at maturity. Mature worms are about ½ inch long never becoming as large as the Oblique-banded Leaf-Roller, though they behave similarly when disturbed.

Holly Leaf Miner, Phytomyza ilicicola Loew.

This insect has also been reported to occur in Oregon. Damage is caused by mining within the leaf resulting in winding deadened areas.

Control Suggestions: No control for maggots within the leaves has been developed. Dusting the holly trees during the flight period of the adult flies is suggested with a 2% nicotine-lime dust which may be secured commercially or mixed as follows:

Hydrated lime 10 lbs. - screen to prevent lumps.
Nicotine Sulfate (40%) 1/2 lb. or 1/2 pint.

Mix in a tight barrel mounted to allow turning or simply by rolling on ground for 5 minutes. Smooth stones may be used to facilitate mixing.

This dust should be applied at weekly intervals through May and until the middle of June.

Appearance of Injury: Damage just noticeable in August and consists of a red spot or linear mine. Later the mines become larger and are deadened.