

ASK THE EXPERT

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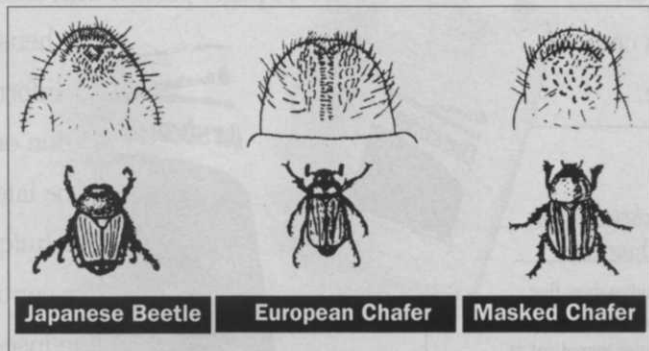


Raster patterns of grubs

Problem: Is there an easy way to identify different white grubs in the lawn, particularly the Japanese beetle, Northern masked and European chafer grubs? (Michigan)

Solution: The best way to distinguish different grubs is to examine the "raster" pattern, which is the arrangement of small hairs on the last body segments. To examine, hold a grub upside-down and observe the arrangement of the raster pattern.

In the case of Japanese beetle larvae, the raster pattern is V-shaped. The Northern masked chafer's raster pattern doesn't



have any specific shape, and the hairs are arranged irregularly. The raster pattern in European chafer grubs is funnel-shaped.

These can be examined with the help of a 10x magnifying lens. Other than the raster pattern features, these grubs are difficult to distinguish. In my opinion, European chafer grubs appear to be more aggressive when holding in our hands than the Northern masked chafer and Japanese beetle larvae.

Making brown junipers green

Problem: Some junipers on our clients' properties are looking pretty bad. Terminal 3/4-inch branches are browning. Some of the twigs have small spots on their needles and others show no spots. They have good watering systems, and we don't think the browning is related to drought. How can this be managed? (Michigan)

Solution: The browning and small specks appear to be related to fungal disease. The small specks are probably the fruiting bodies of the causal fungal agents.

One of the most common fungi is *Phomopsis* sp., the causal agent of twig blight disease on juniper. Like many diseases, this disease establishes on stressed and weakened plants.

These evergreens are also sensitive to winter drying (desiccation). This happens during winter months when soil moisture is frozen and above-ground parts continue to lose moisture during a bright, sunny and windy day. This creates an imbalance in water uptake and causes the exposed tissue to dry out.

If this is observed, consider providing deep watering in late

November and protecting the soil surface with mulch. Also provide wind screens to protect the sensitive plants. Study the plants on-site for any low temperature injury.

Certain species of juniper such as andora are sensitive to winter cold, resulting in basal bark splitting. Small rodents, which may also feed on bark at ground level, can cause extensive damage. These factors can also stress and can partially contribute to overall browning.

As far as fungal disease caused by *Phomopsis*, prune and destroy infected plant parts—where practical—and improve air circulation. Avoid overhead irrigation to prevent the disease's further spread. Applications of fungicides such as mancozeb, Cleary's 3336 or Fungo at two-week intervals is beneficial.

Before using fungicides, make sure the problem is properly identified. *Phomopsis* and *Kabatina* fungi can cause similar symptoms. Reports indicate that there are no known fungicidal remedies for disease caused by *Kabatina* sp.

Antidesiccant sprays

Problem: We are having problems with winter injury on broadleaved and narrowleaved evergreens in our nursery. Would you recommend antidesiccant sprays to protect from winter injury? If so, which product and when is the best time? Any other suggestions would be appreciated. (Colorado)

Solution: Maintaining good-looking healthy evergreen plants through cold winter is a problem with many nurseries growing plants in the ground and/or containers. Although a number of antitranspirant (antidesiccant) products are marketed to protect the plants from winter injury, reports suggest that these products are not every effective.

Research has shown that antidesiccants sprayed in the fall failed to protect plants during most winters. But cultural practices provided at the right time of the year can make a difference in appearance and quality of broad-leaved and narrow-leaved evergreens in open nurseries or landscapes.

This involves deeply watering plants during fall and again before the ground freezes. An application of nitrogen fertilizer after the first frost is also beneficial. Reportedly, this would provide adequate reserve of nitrogen in plant stems, roots and buds to minimize leaf drop due to nitrogen translocating from older leaves to branch terminals. Also, consider mulching 2 to 3 inches deep to protect root surfaces from cold temperatures.

Where feasible, the plants can also be protected by installing a wood or burlap barrier for protection.

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Mail questions to "Ask the Expert," LANDSCAPE MANAGEMENT, 7500 Old Oak Blvd., Cleveland, OH 44130. Please allow two to three months for an answer to appear in the magazine.