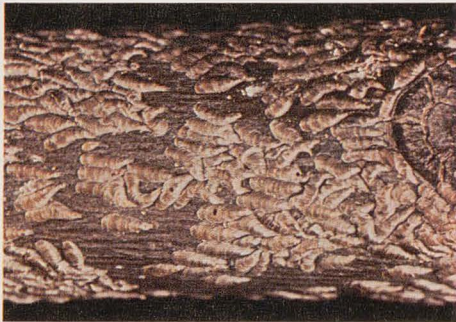


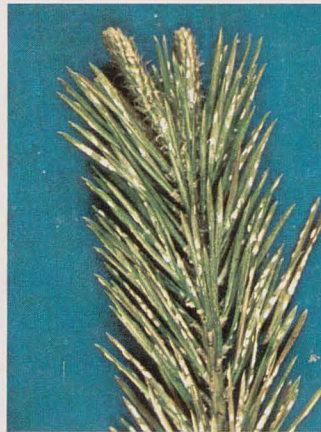


COMMON TREE AND SHRUB PESTS

For safe and effective use of insecticides, always identify the problem correctly.



1. Oystershell scale



5. Pine needle scale



8. Elm leaf beetle and larvae



2. Maple bladder gall



6. Bagworm



9. Eastern tent caterpillar



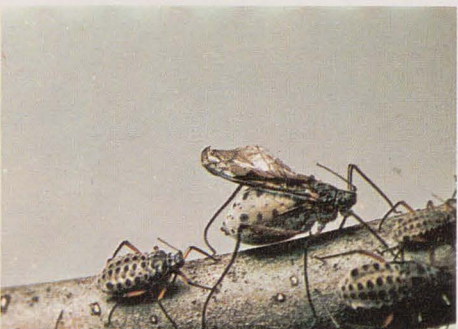
3. Flatheaded borer



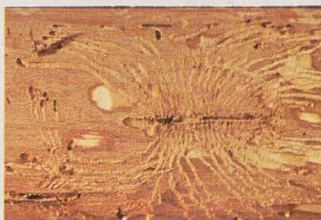
7. Smaller European elm bark beetle and galleries



10. Yellow-necked caterpillar



4. Aphid



11. Spruce mite injury



COMMON TREE AND SHRUB PESTS

1. **OYSTERSHELL SCALE**, *Lepidosaphes ulmi* (Linnaeus). The oystershell scale attacks lilac, poplar, dogwood, ash, cotoneaster, and fruit trees. Mature scales are found firmly attached to the branches (pictured). Scales feed by sucking sap and may eventually kill the host trees. Young scales or "crawlers" wander over the plant before attaching to the branches. The crawlers are active in June and July.

2. **MAPLE BLADDER GALL**, *Vasates quadripedes* (Shimer). The maple bladder galls appear as small, wart-like growths on the upper surface of the leaves of young silver or soft maple (pictured). These are caused by mites that overwinter in the buds and attack the leaves as soon as these buds break in the spring. Although affected leaves may be distorted, the galls seldom injure healthy, well-established trees.

3. **FLATHEADED BORER**, *Chrysobothris femorata* (Olivier). The flatheaded borer attacks many fruit and shade trees, but usually only trees in a weakened, injured, or unscaled condition. Silver maple is especially susceptible. The borers burrow beneath the bark into the cambium and sapwood (pictured). If left unchecked, borers may eventually girdle and kill the host. Damaged areas in the trunk may be discolored and slightly sunken.

4. **APHID**, *Several species*. Aphids attack fruit trees, shade trees, ornamental evergreens, deciduous ornamentals and many types of shrubs weakening the host by sucking plant sap, causing curled or twisted leaves and twigs, and malformed flowers. Some species carry virus diseases from infected to healthy plants. All types secrete "honeydew," which attracts wasps, flies, and ants; stains objects; and encourages growths of an unsightly sooty mold. Aphids are small, soft-bodied, winged or wingless, and vary in color from green to shades of red, black, or brown (pictured). Aphids cluster on new growth or the underside of leaves, but some species work underground.

5. **PINE NEEDLE SCALE**, *Phenacaspis pinifoliae* (Fitch). This small, elongated, white scale attacks most types of needled evergreens but is especially common on mugho pine. Like the oystershell scale, the pine needle scale sucks sap. Heavy populations weaken the host and may kill it. This scale may have two generations a year with the young scales or "crawlers" present in late May and again in late July or August.

6. **BAGWORM**, *Thyridopteryx ephemeraeformis* (Haworth). The bagworm does not survive the winter in Minnesota, but may be brought in on southern-grown nursery stock. This destructive caterpillar attacks both evergreen and deciduous plants; the most common being firs, junipers, pines, spruces, black locust, and maples. Starting in June, bagworms begin feeding on the foliage, spinning a bag of thread and leaf bits as they feed and grow. Defoliation is apparent by August and is often fatal to evergreens. The caterpillar crawls part way out of the bag to feed (pictured) but retreats inside if disturbed. In late August or September, the mature worm attaches the bag to a branch or other object and changes into the adult stage. Eggs are contained in the overwintering bags.

7. **SMALLER EUROPEAN ELM BARK BEETLE**, *Scolytus multistriatus* (Marsham). This small, dark brown beetle is the principal carrier of Dutch elm disease. The larvae feed beneath the bark of dead or dying elms, creating galleries for overwintering (pictured). In spring, about the time lilacs bloom, adult beetles emerge covered with the Dutch elm disease fungus spores. Beetles immediately migrate to healthy trees and feed at the twig crotches (pictured), and thus may deposit the disease spores.

8. **ELM LEAF BEETLE**, *Galerucella luteola* (Muller). The elm leaf beetle, not known to occur in Minnesota, attacks all elm species, but prefers Chinese elm. Both larvae and adults feed on the underside of the leaves giving leaves a "skeletonized" appearance (pictured). Heavily infested leaves turn brown as if scorched by fire. Adult beetles overwinter in protected sites and can be a household pest in fall and spring. Starting about mid-May, the beetles deposit yellow eggs on the underside of elm leaves. In a week eggs hatch and the new larvae feed until early July, then crawl or drop to the base of the tree to pupate. Adults emerge in about 10 days, feed on the leaves, and lay eggs for a second generation.

9. **EASTERN TENT CATERPILLAR**, *Malacosoma americanum* (Fabricius). The tent caterpillar is a leaf-feeding pest of numerous fruit trees and deciduous ornamentals. It is common on apple, wild cherry, and plum. It overwinters in the egg stage. Eggs are deposited in bands around the twigs. As leaves emerge in spring, the eggs hatch and larvae feed on the leaves. At night and during bad weather larvae cluster on the silken tent (pictured). When the host plant is defoliated, caterpillars wander about and may invade homes. This insect shouldn't be confused with the Forest Tent Caterpillar.

10. **YELLOW-NECKED CATERPILLAR**, *Datana ministra* (Drury). The yellow-necked caterpillar is found on many fruit trees and ornamentals, especially oak. It feeds in large colonies (pictured) on the leaves causing greatest damage in July and August. Young caterpillars skeletonize the foliage leaving only the veins and upper surface. The older ones eat all of the leaf but the mid-rib.

11. **SPRUCE MITE**, *Oligonychus ununguis* (Jacot). This tiny, spider-like pest is common to needled evergreens, including spruce, arbor vitae, hemlock, juniper, and some pines. It damages the needles, causing the plant to turn white, yellow, or brown. Damage occurs in early spring and usually starts at the bottom of the plant, progressing upward and outward. Close examination will reveal round, brownish eggs and an almost invisible webbing over the leaves and branches (pictured). Other species of mites attack deciduous plants.

Current Control Information

The information and color illustrations presented here are designed to help you correctly identify some trees and shrub pests. These pests and the problems they cause do not change, but the methods of dealing with them do. Contact your local county agent or state extension entomologists for current methods of control.