John Hubbard has been studying Calico scale for three years in Dr. Dan Potter’s Turf and Ornamental Laboratory. In that time, she has made several interesting discoveries about this insect. First, unlike most other scales, oils do not seem to be very effective at controlling this pest. This is true of both the summer oils and dormant oils. Jamee said that oils will give some control in the spring when the crawlers first hatch but the rate is low. The best products that she has found are Talstar (and other pyrethroids) and Orthene. Sevin also provides good control but caution needs to be taken when using sevin because it is extremely toxic to bees. Control is easier when the crawlers are small but control measures can be effective until the crawlers move off the leaves in the fall. The key to good control is getting the insecticide to the underside of the leaf where the crawlers are feeding.

### Calico Scale Management
Jamee Hubbard, Ph.D. student, Univ. of Kentucky

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**Purple loosestrife found along Kentucky roadides**
- Purple loosestrife

**Final ruling on Daylily rust**
- Final ruling

**Sticky traps: A useful tool for pest scouting programs**
- Sticky traps

**Spruce spider mite**
- Spruce spider mite

**Juniper webworm**
- Juniper webworm

**Pales weevil**
- Pales weevil

**Emerald ash borer found in Ohio, Again**
- Emerald ash borer found

**Shore flies**
- Shore flies

**Charting Asian longhorned beetles’ roaming habits**
- Charting Asian longhorned beetles

**Seasonal Appearance of Pests—September**
- Seasonal appearance

**Changes in Japanese beetle regulations for Montana &**
- Changes in Japanese beetle regulations

**Gypsy moth trapping summary**
- Gypsy moth trapping

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### Calico scale life cycle
- Calico scale life cycle

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**Flagging damage on white pine caused by Pales weevil**
- Flagging damage

**Pales weevil damage on white pine**
- Pales weevil damage

**Juniper webworm larva**
- Juniper webworm larva
Purple Loosestrife Found Along Kentucky Roadsides

This summer purple loosestrife has been spotted along several drainage ditches in Shelby county. It can easily be spotted by its dense stands of purple flowers. Plans are underway to release a leaf feeding beetle in the spring of 2004 for biological control. This beetle only feeds on the leaves of purple loosestrife, robbing the plant of its ability to photosynthesize and store up reserves. After several years of feeding, plants exhibit stress in the form of shorter plant height and lower seed production.

If you see suspicious plants in your area, please let us know either by phone (859) 257-5838 or email: joe.collins@uky.edu / carl.harper@uky.edu

This information is from the Iowa Department of Natural Resources:

Purple loosestrife (Lythrum salicaria) is a wetland plant from Europe and Asia. It was introduced into the east coast of North America in the 1800s. First spreading along roads, canals, and drainage ditches, then later distributed as an ornamental garden plant, this exotic plant species is in 40 states and in all Canadian border providences. Purple loosestrife invades marshes and lakeshores, replacing cattails and other wetland plants. In some locations, natural cattail marshes have been completely overtaken by loosestrife. The plant forms dense, impenetrable stands that are unsuitable as cover, food, or nesting sites for a wide range of native wetland animals including ducks, geese, rails, bitterns, muskrats, frogs, toads, and turtles. Many rare and endangered wetlands plants and animals are also at risk.

Purple loosestrife thrives on disturbed, moist soils, often invading after some type of construction activity. Eradicating an established stand is difficult because of the enormous number of seeds the plant produces, often over 2 million seeds from a single adult plant annually. The plant is also able to resprout from its extensive underground root network, and from broken stems that fall onto the ground or in the water.

A major reason for purple loosestrife’s expansion is a lack of effective predators in North America. Several European insects that attack only purple loosestrife can provide long-term biological control of the plant in North America.

Description

Purple loosestrife is an herbaceous perennial characterized by long showy spikes of magenta flowers. Usually under 4 feet in height, the plant may reach up to 10 feet tall in nutrient-rich habitats. Purple loosestrife has flowers with 5 to 7 petals which occur in dense clusters on terminal spikes and which bloom from June to September. The leaves are usually opposite or in whorls of 3, lance-shaped, and without teeth. The plant is a member of the loosestrife family (Lythraceae) and may be confused with other members of that family, particularly with the native winged loosestrife (Lythrum alatum), which is rare in Virginia. Winged loosestrife, however, is generally smaller in height, averaging about 2 feet, has alternate leaves on the upper portion of the stem, and has fewer, more widely-spaced flowers. Purple loosestrife is virtually indistinguishable from another Eurasian species, Lythrum virgatum, and its cultivars.

Habitat requirements:

Loosestrife tolerates a wide range of environmental conditions. It favors fluctuating water levels and other conditions often associated with disturbed sites. It is shade intolerant and is apparently unable to invade saline wetlands. Reed canary grass and Japanese millet will compete with loosestrife.

Likely means of spread:

Seeds escape from gardens and nurseries into wetlands, lakes, and rivers. Once in aquatic systems, seeds are easily spread by moving water and wetland animals.

Final Ruling on Daylily Rust

From the USDA—Deputy Administrator

Daylily rust, Puccinia hemerocallidis, was initially detected in the southeastern United States (AL, FL, GA, SC) in August 2000. As of January 2003, daylily rust was detected in 25 states (AL, AR, CA, CO, CT, DE, FL, GA, HI, IN, KY, LA, MD, MI, MN, MS, NJ, NC, OH, OR, PA, SC, TN, VA, and WI).

Several “New Pest Advisory Group” (NPAG) conference calls were convened, involving Federal, State and university representatives. The following points were noted:

- Most of the foliage that may exhibit symptoms of infection is removed from the daylily tubers before shipment to the US, making it difficult to detect the fungus at ports-of-entry.
- It has been difficult to prevent the natural spread of daylily rust due to the number of airborne spores and short incubation period.
- Interstate movement of many susceptible daylily species, Patrinia species, and Hosta species is common practice. Daylilies are popular among hobbyists, and their movement is generally not regulated.
- Few states have an effective quarantine in place. Many states that have daylily rust are not actively monitoring or applying mandatory control measures.
- There appear to be reasonably effective control measures (i.e., roguing and fungicides) used by producers.

After reviewing all available information, we have determined that daylily rust is established and widespread in the US. A Federal quarantine is not a viable strategy to prevent further spread of the disease. Therefore, daylilies will not be prohibited from entering the US when daylily rust is detected at ports of entry, nor will a domestic quarantine be promulgated.
Sticky Traps: A Useful Tool for Pest Scouting Programs
Ohio State Fact Sheet HYG-1033-98
Dr. Claudio Pasion & Dr. Richard Lindquist

A very useful, often overlooked tool for early detection and management of pest populations in greenhouses are the so called "yellow sticky cards." While all greenhouse growers know of their existence, some still do not use them because they do not know how to handle the information these traps provide. The following fact sheet starts out with general information that will help growers take advantage of this easy to use tool. Next, the fact sheet gives an example of data collected from the cards, what it means, and how to understand it. We encourage owners/managers to use this information when training workers to become scouts.

Sticky traps will catch pests and beneficials. Certain sticky traps will attract and catch pest insects such as winged aphids, whiteflies, thrips, leafminers, fungus gnats, and shore flies. Beneficial insects such as the whitefly parasitoid, Encarsia formosa, will also be caught at times. There will be many other species as well, but most of them are of no concern to greenhouse growers. The primary task is to recognize the problem insects.

Sticky trap color. Traps that reflect certain wavelengths of yellow or blue are most often used. White or red traps are also effective for some insects. Most studies show that blue traps are better at capturing western flower thrips and shore flies, so if these insects are the only problems, go ahead and use blue traps. However, we suggest that yellow traps be used in a monitoring program that will include whiteflies and fungus gnats.

Number of traps needed. The number of traps needed depends on the main target pest. For example, for western flower thrips, you can get a fairly good idea of activity with one trap per 10,000 square feet. However, for a reasonably accurate picture of whitefly activity, you may need one trap per 1,000 square feet. For leafminers, the number of traps required is somewhere in between the above figures. You need to determine your main pest(s) and then check with your county or state extension specialist.

Mode of sticky trap deployment. The basic suggestion has been to hang or place traps vertically, at or slightly below the tops of crops. This works well for most species, but horizontal traps will be more effective in trapping silverleaf whiteflies early in a poinsettia crop. Also, fungus gnats and shore fly trapping is much more effective on horizontal traps—at least until the crop canopy fills in. These traps may be placed face up on bench or potting mix surfaces. Hang or place vertical traps facing the same direction(s), such as east-west. Place traps where they will be most efficient. For western flower thrips, place traps facing all four directions among the most favored plants for thrips infestation, not the most virus-susceptible crop. Place traps around crop perimeters as well as within the crop. In addition to traps, certain petunia cultivars will detect thrips injury and whether the thrips are carrying the viruses causing Impatiens Necrotic Spot Virus (INSV) and Tomato Spotted Wilt Virus (TSWV) before most other crops show symptoms.

Learning pest I.D. Pictorial guides, experience, and attending workshops and grower meetings are helpful and necessary. This may not be easy at first, because many pests are quite small. Get some kind of magnification equipment—a hand lens is a good start. With experience you will become acquainted with the major pest groups and will be able to easily identify them. If you are not sure, send samples to your nearest pest diagnostic clinic. Be certain to wrap the sticky traps in clear plastic wrap before sending.

Sticky traps as a control method. Traps can control some pests or at least slow the rate of increase of pests such as whiteflies, if you have sufficient trap surface area in the crop and begin before pest numbers get out of hand. Some growers use strips of sticky yellow tape, from 4 to 12 inches wide, strung among plants to accomplish this. There is very little information of a scientific nature here, except for some studies on greenhouse whiteflies on greenhouse tomatoes in Canada. However, a number of growers have observed whitefly numbers were lowered by using yellow tape. Always use sticky traps combined with other techniques. Do not rely on this method alone.

No silver bullets. Sticky traps alone cannot adequately detect all of the most serious pests. Traps will only capture winged aphids, which often do not appear until numbers are very high. Whiteflies start out in scattered areas within a crop, and traps may not be placed in these areas. The numbers of thrips caught on traps may not be related to numbers on plants. Further, the thrips on the traps may not even be pests of the crop(s) being produced. Spider mites and caterpillars (or moths) are not generally caught on traps. Most use sticky traps along with regular (at least weekly) plant inspections, and get suspected pests identified.

Sticky traps examination. If you want a picture of population trends, examine traps weekly. If you want to see a "snapshot" of pest activity at the moment, place traps in the greenhouse for a few hours once or twice each week. The important matter is to be consistent. Be careful about deploying traps just prior to using some pyrethroid insecticides. These insecticides can cause an increase in insect activity, leading to misleading conclusions about insecticide effectiveness and pest populations. Insect count can be facilitated by using sticky traps with a background grid. The grid becomes especially useful when there are many insects on the card.

Counting the Pests. Depending on your objectives, you can count all of the pests on each trap, those on a one-inch vertical strip on each trap, or place pest numbers in categories, depending on estimated numbers. For example, categories could be none, few, some, too many. You will have to establish these levels depending on the pest crop and season. The numbers of western flower thrips that can be tolerated will be higher if INSV is not a problem. Do what you can accomplish consistently.
Insect counts (a hypothetical example). Periodically (once a week would be ideal), the sticky cards should be inspected and the stuck insect-pests counted. Numbers should be written down in forms such as the one shown in Table 1. This form is used to collect information from one card.

In this hypothetical example, we are dealing with card "1" located in section "A-1." The card was placed on the date of 1-1-98. On that date, all numbers are zero because the first observation takes place when the card is first placed. One week later, the scout counted 2 fungus gnats and 3 thrips. The other two cards in section A-1 gave similar results: nothing to worry about. On 1-15-98, the scout detects 32 fungus gnats and 4 thrips. The scout considered that the fungus gnats level was too high and ordered a control treatment in section A-1 (the treatment is indicated in Table 1 by a check mark). The 1-23-98 inspection indicated that there were 32 fungus gnats and 6 thrips. The lack of increase in the number of fungus gnats on the card may be interpreted as a successful treatment. The number of thrips grew slightly because the product used has no effect on this pest. That day, the scout decided to replace that card because it was too complicated to count 38 insects (32 + 6) in addition to other nonpest insects. The scout changed the card on 1-25-98. The following inspection yielded only two thrips. The scout concluded that the fungus gnat problem had been controlled and the thrips population was low and did not warrant treatment.

Having a form or table for each card has a disadvantage: the scout has to carry around a lot of forms during each inspection. The advantage is that trends are seen immediately without having to plot the results. An alternative form is shown in Table 2. Insect counts presented in Table 1 (sticky card 1 in section A-1) are shown in Table 2 along with insect counts from the other two cards in that section. Note that trends are not clearly visible in this form.

These two forms are just examples that should allow growers to start their scouting process. They are not meant to be THE insect count forms. Each scout should redesign the forms according to his/her preferences.

In order to be successful, the scouting program should be the responsibility of one employee. The best formula for failure is when the owner or head grower takes this responsibility on his/her own: there is always something more urgent to do...

### Table 1. Insect counts for "Card 1" located in section "A-1." Observations were made during a 1 month period

<table>
<thead>
<tr>
<th>STICKY CARD INSECT COUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Section:</strong> A-1</td>
</tr>
<tr>
<td><strong>Card number:</strong> 1</td>
</tr>
<tr>
<td><strong>Date placed</strong></td>
</tr>
<tr>
<td>1-1-98</td>
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<td><strong>&quot;</strong></td>
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<td><strong>&quot;</strong></td>
</tr>
<tr>
<td>1-25-98</td>
</tr>
</tbody>
</table>

### Table 2. Insect counts for the three cards located in section "A-1." Observations were made during a one-month period

<table>
<thead>
<tr>
<th>YELLOW STICKY CARD INSECT COUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Section</strong></td>
</tr>
<tr>
<td>A-1</td>
</tr>
<tr>
<td>A-1</td>
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<tr>
<td>A-1</td>
</tr>
</tbody>
</table>
Spruce Spider Mite
Virginia Tech, Virginia Cooperative Extension Publication 444-235

Distribution and Hosts
Spruce spider mites are widely distributed throughout the temperate regions of the United States and Canada. Plants attacked include spruce, arborvitae, juniper, hemlock, pine, Douglas-fir, Fraser fir, and larch.

Description of Damage
Mites suck on the older needles of trees, causing fine stippling that increases in intensity until foliage is chlorotic and bleached in appearance. Severely infested foliage becomes yellowish or brownish and many needles drop. Damage is most severe in lower crowns of large trees. Seedlings and small trees are often killed, and in some cases, large trees are killed. The mites spin a webbing of fine silk around twigs and needles that becomes more abundant as the season progresses.

Damage is most severe during the spring and fall. Although mite populations build up highest in cool weather, hot dry weather predisposes trees to attack.

Identification
Mites are not insects. Adults have eight legs and are extremely small (0.58 mm long). Their bodies are dark green to almost black with a pale streak on the middle of the back. Females have a more oval abdomen than males. Eggs, yellow to reddish-brown in color, are spherical, 0.2 mm in diameter, with a spike that anchors them to the webbing. Eggs hatch into six-legged larvae that turn from pink to green after feeding. Larvae grow into eight-legged nymphs (0.3-0.4 mm long) that resemble the adults.

Control
To identify whether mites are present, hold a sheet of white paper beneath some foliage and shake the foliage sharply. If the plant is infested, mites will begin to crawl on the paper. The presence of a few mites is no concern; however, if dozens appear on the paper, reduce the mite population before serious damage occurs.

Maintaining healthy vigorous plants is an important preventive measure for keeping mite populations low. Predacious mites, lady beetles, thrips, and true bugs aid in keeping populations low. Also, avoid growing susceptible plants near hot pavement.

When high populations are predicted, spray with miticides in the spring by early May and/or early fall. Systemic insecticides are effective against mites and insects. Insecticidal soap is also registered for mites. Misuse of pesticides can be very costly if natural enemies of the mites are killed. This often results in dramatic increases in mite populations.

Juniper Webworm
NC State University Center for Integrated Pest Management

DESCRIPTION
Adult - The juniper webworm is a small, brown moth (6 to 7 mm) with white wing margins. It is rarely noticed when flying unless it is disturbed.

Egg - The whitish, pinkish, or dark reddish-orange egg is 0.5 mm by 0.3 mm. It is subcylindrical with rounded ends. The surface has many longitudinal, waxy lines.

Larva - The larva is a small, whitish to light-brown worm (0.5 to 15 mm) with reddish-brown stripes (Color Plate 3Y).

Pupa - The light or dark reddish-brown pupa is almost as long as the adult (5.5 mm).

BIOLOGY
Distribution - The juniper webworm was first reported on juniper in Europe in 1775. It also occurs in northern Asia except Siberia, the eastern and mid-western United States, California, Oregon, and Idaho. Southern areas of Canada adjacent to infested areas in the United States are infested as well.

Host Plants - Irish juniper is the preferred host, although Chinese juniper, red cedar, and Juniperus communis varieties aurea, horizontalis, depressa, hibernica, suecia, and squamata meyeri are also infested. Juniperus procumbens and J. squamata are infested only occasionally.

Damage - The leaf-mining by newly hatched larvae is inconsequential. The feeding of larger worms in the fall and following spring may seriously damage ornamental junipers. Large masses of dead needles appear, and the shrubs look unthrifty. Small shrubs may be completely webbed (Color Plate 3Y).

Life History - Juniper webworms overwinter as partially to nearly grown worms inside webbed masses of foliage. Adult emergence occurs from May to July, peaking in June. Males live about 12 days; females, about 14. After mating, females lay from 50 to 200 eggs singly at the base of new needles in the axil. About 10 days later, tiny larvae hatch, puncture the leaf surface, and feed as leafminers, causing the leaves to turn brown. The mined leaf is used as a protective retreat from which the tiny worm emerges to feed on fresh foliage. A tiny, white web is soon formed around the infested leaf. As the worm grows, the web expands to encompass dead leaves. Silken tubes are then constructed in which the worms retreat when not feeding. The worms mature throughout the summer, fall, and winter. By the following spring, they feed gregariously and form a community web. Considerable amounts of foliage may be spun together, and small trees may be completely webbed. The worms pupate inside whitish silken cases, and new adults appear in about 14 days to continue the infestation.

There is one generation per year. Braconid and ichneumonid wasps parasitize the larval and pupal stages of juniper webworms.

CONTROL
Where practical, the webbed masses should be pruned and burned. For specific chemical controls, see the current state extension service recommendations.
Pales Weevil
Eric Day, Manager, Insect Identification Laboratory, Virginia Tech Univ.
Publication 444-229

Plants Attacked
Pales weevil feeds on all pines within its range. It will also feed, although to a lesser extent, on Douglas-fir, fir, hemlock, juniper, larch, northern white-cedar, and spruce.

Description of Damage
During the months of June through August look for the following symptoms: 1) Dead seedlings or dead shoot tips on larger trees. These are sometimes called flags because the dead tan twig contrasts with the green tree. 2) Pitch or resin bleeding on twigs, shoots, and at the base of flagged shoots. Adult pales weevils feed on the stem bark of new growth and pitch oozes from the wound. This pitch will callous over and appear as a white patch on the bark. If the damage is severe enough, the twig will die. The adults are involved in the transmission of Procerum root disease. The larval stage, which is not considered a pest, feeds mostly on the bases of dead or dying trees or on stumps.

Identification
The adult is a small reddish-brown to black weevil about 1/3 of an inch in length. It has a line of scales ranging in color from orange to yellowish-white on its head, and patches of similar scales on its elytra (wing covers). The larva is pale creamy white and C-shaped in appearance. It has a dark head and no legs. The pales weevil, *Hylobius pales* (Herbst), is in the family Curculionidae, order Coleoptera.

Scouting Tips
The best way to scout for the adults is to spread a sheet under the tree after dark and shake the tree: the weevils will drop down. To look for the larvae, take a knife and cut back the bark on stumps or on the base of dead trees. The larvae make galleries that run mostly with the grain of the wood. Full grown larvae and pupae can be found in chip cocoons under the bark, which are small depressions filled with slivers of wood.

Life History
Female weevils are drawn to the smell of resin on fresh cut stumps and on damaged and recently dead pine trees. The time they are actively seeking these sites is in the spring between March and June. Once located on a suitable host they lay their eggs on the roots. The larvae feed downward in long tunnels, but work their way to the outer bark above the soil surface to pupate. The new adults emerge in mid-August and mid-September and feed on shoots and twigs. Eventually they seek a site to overwinter, usually in litter below the tree, and emerge in the spring to start the cycle again.

Control
The key to pales weevil control has two main components and in most cases these will be all that is necessary. 1.) The removal of old stumps and dead trees, as these are the weevil's breeding sites. 2.) If stumps are left in the field, then drench stumps and surrounding soil with a registered insecticide between early- April and mid-May. Currently recommended in the Virginia Pest Management Guides are lindane or Asana XL, which need to be mixed with kerosene. Dursban mixed with water is also recommended. Only stumps cut since the previous year need be treated. Stumps older than two years do not need to be treated. One possibility of control, if stumps must be left in the field, is to leave a whorl of live pest free branches on the stump. These stumps are unattractive to weevils. Another method for control is to delay replanting until two years after harvest, but this may cause problems if there are nearby plantings with fresh stumps. Pales weevils can fly and may come to your planting from a distance, depending on wind direction and availability of other host trees. Additional control may be needed in the following situations:

If flagging is observed in August or September, treat for adult weevils feeding in the trees (do not use kerosene mixture when treating live trees). Damage to new plantings can be controlled by dipping seedlings in an Imidan root dip.

Remarks
Pales weevil belongs to a group of weevils called pine reproduction weevils. These weevils feed at the base of pines and on branches of live pine trees. This group includes the pales weevil, deoadar weevil, pitcheating weevil, and the pine root collar weevil. The pitcheating weevil is found to the south of Virginia and the pine root collar weevil is found to the north; neither is considered a pest in Virginia.

Emerald Ash Borer Found In Ohio, Again
From the USDA, Animal Plant & Health Inspection Unit

Emerald Ash Borer - Live emerald ash borer (EAB) adults were discovered on trees in a small garden center in Hicksville, in western Defiance County, OH. USDA identifier James Zablotny confirmed the specimens as EAB on August 12, 2003. Additional sites in the area have been found including an implement handle maker who reportedly has purchased approximately eight thousand ash logs from Michigan in the previous 12 month period.

The Ohio Department of Agriculture (ODA) NW Ohio EAB survey team has begun a delimiting survey in and around the town of Hicksville. Employees from the EAB project in Brighton, MI will join this group during this week in order to assist with survey activities.

USDA and ODA officials will meet in Hicksville this week to view the infestation and discuss eradication plans for this area.
If the Asian longhorned beetle (ALB) continues its advance, this invasive pest may potentially alter the makeup of North American hardwood forests. Losses to lumber, maple syrup and tourism industries--dependent on healthy hardwood trees--could reach $670 billion.

Now Michael T. Smith, an Agricultural Research Service entomologist at the Beneficial Insects Introduction Research Unit in Newark, Del., has generated new dispersal data that predicts how far the beetle might spread once it begins to invade an area. This formidable pest was first found in the United States in 1996, a stowaway amidst wooden crates from China. Since then, it's been invading hardwood trees in the East, leaving an indelible mark on New York City and Chicago parks. More than 7,500 trees have succumbed to the pest. Its ravenous larvae feed inside trees, weakening them and disrupting vital nutrient flow.

Determining ALB presence has depended solely upon visual surveys. For this, crews climb host trees--like maple and elm--in search of beetle activity. They scan for small markings where eggs are laid under the bark and for dime-sized holes indicating an adult beetle has exited the tree. Just as it sounds, locating these subtle signs of ALB infestation is time-consuming and costly.

Beetle surveys and the methods used to establish quarantine boundaries have been missing something. That important piece of the ALB puzzle is an increased understanding of the beetle itself--more specifically, how it moves in the environment.

Realizing this, Smith and colleagues conducted the first ALB dispersal research in the beetle's home territory of Gansu Province, China. They marked and released almost 40,000 beetles, collected from nature, and tracked their movements. Their finding? The beetles fly much longer distances than originally thought--even females carrying eggs.

This new dispersal data could be used to establish more reliable survey and quarantine boundaries, increasing the chances of successful eradication. ARS is the USDA's chief scientific research agency.

As of August 18, no adult beetles or trees with active signs of infestation have been found in Illinois this year. If no finds occur this calendar year, this will be two years of negative survey in the satellite areas of Addison, Summit, O'Hare, and Park Ridge. These areas will be eligible to be removed for quarantine. Survey and treatment will continue in the Ravenswood, Kilbourn Park, and Loyola areas.

### Charting Asian Longhorned Beetles’ Roaming Habits

Erin Kendrick-Peabody, USDA, ARS

If the Asian longhorned beetle (ALB) continues its advance, this invasive pest may potentially alter the makeup of North American hardwood forests. Losses to lumber, maple syrup and tourism industries--dependent on healthy hardwood trees--could reach $670 billion.

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### Shore Flies: *Scatella stagnalis*

University of Illinois at Urbana-Champaign
University of Illinois Extension

Shore flies are very small (1/16 to 3/16 inch long) with heavy bodies. Adult shore flies have short antennae, reddish eyes, and dark wings with several clear spots. Shore fly larvae are yellowish or brownish with no obvious head and may be up to 1/4 inch when full grown.

**Life History**

Shore flies have a similar lifecycle as fungus gnats. The adults are stronger fliers. Both adults and larvae feed mainly on algae on the surface of growing media, walls, floors, benches, and pots. Adults rarely consume plant tissue, but may contribute to the spread of soil pathogens.

Damage from shore flies is usually related to their association with the spread of soil pathogens.

**Nonchemical Control**

Reduce the proportion of organic material in your media, eliminate wet areas around germination chambers and floors under benches, reduce algal growth, practice good sanitation, inspect incoming plant material. Monitor adults with yellow sticky cards.

**Chemical Control**

Apply insecticidal soil drenches for control of larvae and foliar sprays for control of adult flies. Microbial insecticides may also provide effective control.

### Seasonal Appearance of Ornamental Pests and Normal Time Frame to Apply Control Measures (for the month of September)

From the University of Tennessee Agricultural Extension Service PB 1589, Frank Hale, University of Tennessee

<table>
<thead>
<tr>
<th>Hosts</th>
<th>Pests</th>
<th>September (early)</th>
<th>September (mid)</th>
<th>September (late through October)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arborvitae</td>
<td>Fletcher scale</td>
<td>Sweet gum</td>
<td>Spruce gall adelgids</td>
<td></td>
</tr>
<tr>
<td>Locust</td>
<td>locust borer</td>
<td>sweet gum pit-making scale</td>
<td>September (late through October)</td>
<td></td>
</tr>
<tr>
<td>Magnolia</td>
<td>magnolia scale</td>
<td>Tulip tree</td>
<td>Juniper webworm</td>
<td></td>
</tr>
<tr>
<td>Maple</td>
<td>cottony maple scale</td>
<td>Tulip tree scale</td>
<td>Pine</td>
<td></td>
</tr>
<tr>
<td>Pine</td>
<td>pine root collar weevil</td>
<td>Sept. (mid)</td>
<td>Pales weevil (adults)</td>
<td></td>
</tr>
</tbody>
</table>
Changes in Japanese Beetle Regulations for Colorado & Montana
From NMPro Weekly Email, August 4, 2003

USDA added Colorado and Montana to its list of states protected from Japanese beetles. These states were previously excluded because their climates were considered inhospitable to the insect. USDA said its finding increasing numbers of Japanese beetles at these states’ nurseries and airports. The new regulations could affect nursery imports from the Eastern U.S. The new rule went into effect July 24.

Results from Kentucky’s Gypsy Moth Trapping - 2003

8,002 gypsy moth traps were set out in 85 counties by the USDA and the Kentucky Division of Forestry. This year, only 12 moths were caught. The counties where moths were caught are Boone, Campbell, Henry, Kenton and Marshall. The areas where moths were caught will be trapped again next year with a higher density of traps to determine if a population of gypsy moths exist there or if it was an accidental introduction of a single moth this year.

In 8 counties of northeast Kentucky, 977 traps were set out as part of the Slow-the-Spread intensive trapping program for gypsy moth. Only 2 moths were caught in this area.

Last Newsletter for 2001
This will be the last newsletter that we will publish this year. The first edition for next year will be in April. As always, if you have any suggestions and or input that you would like to make, please feel free to do so.