THE KENTUCKY COLONELS 'KERNEL'

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KENTUCKY NUT GROWERS ASSOCIATION SPRING MEETING CANCELLED

The Spring meeting of the Kentucky Nut Growers Association planned for late April 2020 in Grayson Co., KY, has been cancelled due to the COVID-19 outbreak. Please be on the lookout in the Fall newsletter for information on the Fall KNGA meeting in October 2020. The location and date of the fall meeting are to be determined. For more information, contact Ken LaVere, KNGA President, 270-369-8764. We hope you are staying safe and healthy at home during this time. This is a good time to spend time outdoors in your garden and orchard enjoying nature.

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IDENTIFYING NUT TREE INSECT PESTS

Compiled from Guide to Insect Pests of Woody Plants http://www.uky.edu/Ag/Entomology/treepestguide/treeintro.html

By: Lee Townsend and Jonathan Larson, University of Kentucky Department of Entomology

Pecan and Hickory (Carya spp.); and Walnut (Juglans spp.)

Leaf Feeders

The **Leaf crumpler** larva is around an inch long, with a green-grey color with purple markings at each segment. The adult is a small moth with brown and white stripes along its wings. The caterpillars build web tubes on twigs which incorporate leaf fragments as they feed. The tube can be 1.5-2 inches long by the time the caterpillar is mature. Damage and nests are at their peak in July and August. *Photo* © 2018 John van der Linden, bugguide.net, used with permission



Fall webworms are small hairy white caterpillars that live communally in thin silken webs at the ends of branches. They may leave the tent to feed individually as they get larger. While the webbing is unsightly, feeding damage is usually limited to limbs around the tent. Large established trees are not seriously affected by small to moderate infestations. The larval stage feeds for 4 to 8 weeks and may be found on a variety of hardwoods. The first generation occurs in late May and early June, the second generation is usually larger and active from July through September. *Photo by Milan Zubrik, Forest Research Institute - Slovakia, Bugwood.org*



Walnut caterpillars are black and covered with long gray to white hairs. Clusters of eggs are laid on leaves in June so there can be groups of caterpillars on a tree. They feed mainly during June and July and can defoliate small to medium-sized trees. Two or more years of heavy foliage loss can severely stress or kill trees. Mature larvae drop to the ground and wander in search of a place to pupate and transform to the adult or moth stage. There can be two generations during a season. These insects will feed on black walnut, Persian walnut, butternut, hickory, and pecan. *Photo: Ward Upham, Kansas State University, Bugwood.org*



The caterpillar stage of the **Hickory tussock moth** feeds from July to September. Similar to other tussock moths, the hickory tussock has a hairy appearance and is black and white in color. They begin by feeding in groups before moving apart to find leaves. This caterpillar does pose a "stinging" hazard as contact with the hairs may induce a rash on susceptible people. *Photo: John Ghent, Bugwood.org*



Hickory horned devils are impressive pea green to blue green caterpillars that are 4 to 5 inches long when full grown. They have two pairs of yellow to orange curved horns just behind the head and paired rows of spines down the back. These caterpillars will lash around when disturbed but are not dangerous. HHD are present from July to September. They spend the winter as pupae in the soil. These caterpillars eat a lot of leaf tissue but only pose a threat to small trees. They are rarely numerous enough to defoliate medium to large trees.



HHD can feed on butternut, ash, sweet gum, and persimmon. *Photo: Daniel Herms, The Ohio State University, Bugwood.org*

At its largest, the **Redhumped caterpillar** is 1-1.5 inches long. The head and first abdominal segment are red, the rest of the body is yellow with black and white stripes. Black tubercles extend from the back. These caterpillars initially feed as a group on a single leaf, skeletonizing it, and use a collective warning display to ward off predators. As they grow, they will spread out as individuals and consume entire leaves. Mature larvae overwinter in the soil and pupate in the spring. Adults fly from June till July and caterpillars feed July to September. *Photo* © 2006 *Tom Murray*



Fall cankerworm is a looper caterpillar that can vary from light green with yellow stripes to green with a dark stripe down the back. Over-wintering masses of about 100 eggs hatch in later April or early May; small caterpillars chew small holes in young leaves at branch tips. Larger loopers leave only the midrib and major veins. Fall cankerworms are about an inch long when full grown. Mature larvae descend from trees on silk threads to pupate in the soil. They emerge as adults during periods of freezing temperatures to mate and lay eggs on host plants. There is one generation each year. *Photo: A. Steven Munson, USDA Forest Service, Bugwood.org*



Yellownecked caterpillars are black caterpillars with thin longitudinal yellow stripes and some fine white hairs. The head is black and a plate just behind the head is yellow-orange. Eggs are laid in clusters of about 100 so there may be many individuals on a single tree. YNC caterpillars feed for about 4 weeks and tend to remain together. Mature larvae are about 2 inches long. Most of the damage is done in August and September. These caterpillars also feed on oak and other hardwoods. YNC overwinters in the soil as pupae. Photo: *Gerald J. Lenhard, Louisiana State Univ., Bugwood.org*



Sap Feeders

Leafhoppers are small, active insects that live on the underside of the leaves. They use sucking mouthparts to feed on plant sap. Usually large numbers are present by the time the injury is obvious. Heavily damaged leaves may drop early but this insect usually does not cause serious problems. Photo: *Whitney Cranshaw, Colorado State U., Bugwood.org*



Giant bark aphid is the largest aphid in North America. This sap feeder can live on several tree species. Winged forms disperse from tree to tree. Wingless aphids occur in large colonies. These aphids produce a large amount of sticky liquid waste, honeydew, which drips onto objects below. Feeding by large numbers of these aphids can damage or kill small twigs. They are eaten by lady beetles and other predators. Photo: *Herbert A. 'Joe' Pase III, Texas A&M Forest Service, Bugwood.org*

Spittlebugs are small, sap-feeding insects that live in white, foamy masses resembling spit on buds, tender shoots, or nutlets. The liquid provides a high humidity environment and may give protection from natural enemies. Spittlebug adults, which resemble light brown leafhoppers, are active about mid-May. Photo: *Bill Ravlin, Michigan State University, Bugwood.org*

Cottony cushion scale is an invasive scale species that can be found feeding on the sap of numerous species of plants. Adult females are orange-brown but coated with white wax and will have a long, fluted egg sac attached to the body. This can contain up to 1,000 eggs. After hatching, the nymphs (which are red with dark antennae and legs) will seek a suitable space for feeding. Nymphal feeding on leaves can cause extensive damage and honeydew/black sooty mold will accumulate as the population builds. Photo: *Sturgis McKeever, Georgia Southern University, Bugwood.org*



Greedy scale are small armored scales that create a conical shaped cover. As they grow and shed their old exoskeleton, it is incorporated into the wax that makes up the shield. Eventually this results in a characteristic off-center nipple or dot on the outer coating. There are often concurrent overlapping generations on plants. *United States National Collection of Scale Insects Photographs, USDA Agricultural Research Service, Bugwood.org*



Walnut lace bugs feed on black walnut trees by sucking sap from leaves. They typically feed on the undersides of leaves and cause discoloration. Leaves will have yellow stippling and lace bug frass resembles droplets of motor oil. They feed throughout the summer and damage is most noticeable by autumn. They are 1/8 to 1/3 inch long and their wings and thorax have a lacy, doily-like appearance. Photo: *Whitney Cranshaw, Colorado State University, Bugwood.org*



Walnut scales are 1/8 inch long nearly circular, flat scales that are gray with a reddish brown spot. Crawlers are active in mid-June and in late August to early September in Kentucky. Photo: *Raymond Gill, California Department of Food and Agriculture, Bugwood.org*

Oystershell scales are about 1/10 inch long and resemble crusty accumulations of oyster shells on the bark. Their drab, bark-like appearance makes them easy to overlook, even on close inspection. Heavy infestations can kill twigs or branches. This scale overwinters in the egg stage under the waxy covering of the female. The eggs hatch and the crawlers are active from late May to early June. Photo: *Whitney Cranshaw, Colorado State University, Bugwood.org*



Borers

Twig pruners are the larvae of small beetles that tunnel in twigs and small branches. Female beetles lay their eggs about the time of bud break in the spring. Eggs are laid in small holes which are chewed into the bark. The larvae that hatch from these eggs bore into and tunnel toward the base of twigs. In late summer, they chew concentric circles outward toward the bark then move toward the tip. The twig eventually snaps and falls to the ground. The larva pupates in the fallen twig and emerges as an adult in the spring. Collecting and destroying fallen twigs



can help to reduce infestations. Photo: James Solomon, USDA Forest Service, Bugwood.org

Hickory shoot curculio larvae are legless grubs that develop in the new shoots. During bud break, females will lay their eggs new the base of leaf axils. After hatching, the larvae will develop over the summer before emerging to find overwintering spots. Their damage can induce early leaf drop and flagging throughout the branches of infested trees. Photo: *James Solomon, USDA Forest Service, Bugwood.org*



Galls

The **pecan phylloxera** is an aphid-like insect that produces galls on new pecan growth.

Leaves, twigs and nuts may be affected. They spend the winter as eggs in bark crevices. The eggs

hatch in the spring; the tiny nymphs feed on tender young growth, secreting a substance which stimulates plant tissues to develop into galls. When the nymph matures, eggs are deposited in the gall. Young nymphs develop within the gall. The gall splits in several weeks liberating them. Several generations are produced each year, as long as there is fresh young growth on the tree. Photo: *Jonas Janner Hamann, Universidade Federal de Santa Maria (UFSM), Bugwood.org*



Nut Feeders

The **pecan weevil** is a small beetle with a long snout. It emerges from the ground in late August, about the time nuts begin to harden, usually following a heavy rain. After the nut kernels have hardened, the female uses her long snout to chew a hole in the side of the nut and deposits her egg in little pockets in the nut. Creamy white grubs with reddish brown heads hatch and feed inside the nuts during the fall. They leave the nut in late fall or early winter, fall to the ground, and pupate in the soil. Photo: *Clemson University USDA Cooperative Extension Slide Series*, *bugwood.org*



KNGA ELECTRONIC RESOURCES:

Would you like to receive the KNGA Newsletter electronically? This would enable you to see photos in color, easily follow internet links, and save paper. If you would like to receive the newsletter electronically via email, please send your name and email address to Sheri Crabtree at sheri.crabtree@kysu.edu.

Did you know? The Northern Nut Growers Association has a podcast! Find the NNGA podcast on Soundcloud at https://soundcloud.com/editor-nnga or search for "Editor NNGA" on Soundcloud.

Please check out the **Kentucky Nut Growers Association Facebook Page** at: https://www.facebook.com/Kentucky-Nut-Growers-Association-1599224510355036/

UPCOMING MEETINGS:

Many upcoming meetings and grower workshops have been cancelled or postponed due to COVID-19. Please check with the host for any upcoming meetings.

August 9-12, 2020 Northern Nut Growers Association Annual Meeting: Delaware Valley University, Doylestown, PA. Attention: The Conference Committee is considering postponing the 2020 NNGA Conference. Please stay tuned to nutgrowing.org for more information.

North American Fruit Explorers meeting: **Cancelled**. Previously scheduled for August 14-16 in Santa Rosa, CA.

September 17, 2020 KSU Third Thursday Thing Sustainable Agriculture Workshop. Topic: Horticulture. Please contact Sheri Crabtree at sheri.crabtree@kysu.edu, 502-597-6375 or Shelley Spiggle at shelley.spiggle@kysu.edu, 502-597-6325.

Jan. 4-5, 2021 Kentucky Fruit and Vegetable Conference, Sloan Convention Center, 1021 Wilkinson Trace, Bowling Green, KY 42103. Contact Cindy Finneseth 859-490-0889, info@kyhortcouncil.org

RECIPES

Mother Marsh's Hickory Nut Cake

From "Merry Christmas Cakes," by Marilyn Kluger, The Courier-Journal, 11/17/1993, Louisville, KY, Pp. E1, E4. This cake was sent to Margaret Mitchell (Gone With the Wind) every Christmas since 1936 by her Mother-in-Law.

1/2 lb. butter	1 tbsp. baking powder	1.5 lbs. seedless raisins
2 cups sugar	1 tbsp. ground cinnamon	1 lb. currants
4 cups flour	2.5 tsp. ground nutmeg	1/2 cup milk
6 eggs	2 cups hickory nut kernels	Optional: 1/2 cup Kentucky Bourbon

Preparation: Grease and flour one large bundt cake pan or two large loaf pans (10"x5"x3") and line with wax paper. Preheat oven to 300°F. Cream the butter and sugar together until fluffy. Beat in the eggs, one at a time, and continue beating until well blended. Stir in the flour, baking powder, nutmeg, and cinnamon. (Reserve a small amount of flour mixture to toss with nuts and fruits before adding them to the batter.) Add the flour mixture and milk alternately to the creamed mixture, in about 3 additions. Then gently stir in the floured fruits and nuts. Scrape batter into prepared pans.

Cook: Bake at 300°F for 3.5 hours if using the bundt pan, or 2 to 2.5 hours in the two loaf pans. Insert a toothpick into the center of the cake to verify doneness (it should be dry when removed). Cool cake on a wire rack. Wrap cake in aluminum foil and store in the refrigerator.

Optional: If desired, wrap cake in a cheesecloth that has been soaked in bourbon. This option was added by Mother Marsh's brother, Bob, one Christmas when he baked the cakes instead of Mother Marsh, his sister.

Annual Dues Information

<u>NOTICE:</u> the year listed immediately after your address label indicates the year through which your membership dues are paid. <u>Please note</u> that dates highlighted in pink indicate that your KNGA membership is past due. Please renew your membership. Thanks!



Nolin River Nut Tree Nursery

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FIRST CLASS

MEMBERSHIP APPLICATION KENTUCKY NUT GROWERS ASSOCIATION

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information about joining KNGA, please contact Ken LaVere, 270-369-8764.