**Pests in this issue:**
Asian citrus psyllid
Asian longhorned beetle
Emerald ash borer
European gypsy moth
Hemlock woolly adelgid
Spotted lanternfly

New pest: exotic horntail snail found in Florida, page 4

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**Working together to promote healthy plants**

The United Nations General Assembly named 2020 the International Year of Plant Health (IYPH). The year has marked a global effort to raise awareness about the importance of plant health and that plant health is directly linked to our health, sustainable agriculture and strong economies.

The [IYPH website](http://www.fao.org/plant-health-2020/about/en/) offers tips to support plant health and inspirational stories from individuals around the world working to protect plants. The [IYPH 2020 brochure](http://www.fao.org/plant-health-2020/about/en/) provides an overview of the Food and Agriculture Organization's (FAO) work with countries and partners addressing plant health.

[USDA-APHIS’ Plant Protection and Quarantine (PPQ)](http://www.fao.org/plant-health-2020/about/en/) safeguards U.S. agriculture and natural resources against the entry, establishment, and spread of significant pests, and facilitates the safe trade of agricultural products. Your participation in the First Detector program supports their efforts.

As the year draws to a close, let’s review some ways pests move around and best practices we can put into action to support plant protection efforts...

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**WE ALL HAVE A ROLE TO PLAY**

We all need to respect plant health regulations that have been put in place to protect agriculture, forestry and the environment.

- Be careful when taking plants and plant products with you when you travel as they may spread plant pests and diseases.
- Be cautious when ordering plants and plant products online or through postal services as small packages can easily bypass regular phytosanitary controls.

FIRST DETECTOR
commitment

1. Get involved and stay engaged
   • Know the pests in your state and how to report
   • Be aware of pests in your region and know how they spread
   • Stay up to date on new and emerging threats
   • Contact your diagnostic lab with questions about suspect symptoms

2. Support plant biosecurity efforts

3. Spread the word

BEST PRACTICES
to promote plant health

• Don’t bring plants, plant parts, and perishable food items across borders
• Clean boots, gear and equipment after spending time outdoors
• Buy plants responsibly at reputable nurseries and garden centers, as well as online
• Buy and burn local firewood

pathway noun
the means and routes by which invasive species are introduced into new environments

Pathways can generally be classified as either natural or man-made. Man-made pathways can be further classified as intentional or unintentional. Learn more at the National Invasive Species Information Center.

Review natural and man-made pathways for First Detector target pests on their individual pest pages. The USDA’s Hungry Pests site offers information on how invasive pests spread and what you can do to prevent the unintentional spread of pests.

INTERNATIONAL YEAR OF PLANT HEALTH | KEY MESSAGES

Make trading in plants and plant products safe by complying with international plant health standards.

Be careful when bringing plants and plant products across borders.

Strengthen monitoring and early warning systems to protect plants and plant health.

Read more about IYPH key messages.
First Detector target pests* are some of the most threatening plant pests and pathogens known to exist in the U.S. today. If you see symptoms or signs described here, use our reporting form to report.

* These pests were selected based upon USDA national priorities and may not be reflective of the most significant threats in your region.

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**Asian citrus psyllid (ACP)**

If you own citrus trees, keep on the lookout for ACP, the vector of Huanglongbing (HLB) or citrus greening.

ACP are tiny and affix themselves at a 45° angle to the leaf surface to feed (1). Yellowish orange nymphs feed on new flush and excrete white, waxy strings (2). Learn more about ACP at the [FD HLB page](http://www.firstdetector.org/target-pests/).

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**European gypsy moth (EGM)**

While spending time outdoors this winter be on the lookout for EGM egg masses. EGM eggs are covered with fuzzy, buff-colored hairs (7) and can be found on plants and other surfaces (8).

Moving and live where EGM is present? Carefully look over equipment and items stored outdoors and remove any egg masses before transporting. More photos and partner links at [FD EGM](http://www.firstdetector.org/target-pests/).

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**Asian longhorned beetle (ALB)**

On ALB host trees, look for exit holes (3&4) and oviposition sites. Egg sites vary in appearance depending on host and age. More photos and resources at [FD ALB page](http://www.firstdetector.org/target-pests/).

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**Emerald ash borer (EAB)**

Trees highly infested with EAB often have woodpecker damage known as blonding (5) which may be easier to notice than other EAB signs and symptoms. If you find woodpecker damage, look more closely for exit holes and signs of insect activity. EAB have D-shaped exit holes (6). More photos and resources at [FD EAB page](http://www.firstdetector.org/target-pests/).

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**Hemlock woolly adelgid (HWA)**

HWA broke dormancy in early fall and have begun to feed, grow and produce wool (9). From now through spring monitor hemlocks for HWA and their characteristic white woolly coverings at the base of needles (10).

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**Spotted lanternfly (SLF)**

SLF females deposit eggs on host plants, non-host plants and other outdoor materials and items. SLF eggs are arranged in vertical rows and typically covered with a putty-like substance (11).

Appearance of covering changes with time and will start to look like dry mud. Exposed eggs look like seeds (12). Learn more at [FD SLF](http://www.firstdetector.org/target-pests/).

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Learn more [www.firstdetector.org/target-pests](http://www.firstdetector.org/target-pests)

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**Knowledge check**

What other pest sign can be seen in photo 11?
New snail pest identified in Florida

On September 30, 2020, the first presence of the invasive horntail snail (*Macrochlamys indica*) was confirmed by the Florida Department of Agriculture and Consumer Services (FDACS) in Miami-Dade County, Florida. Read the [FDACS official pest report](https://www.fdam.gov/pestreport/MACROCHLAMYS_INDICA). For more information, visit [FDACS.gov/horntailsnail](https://www.fdam.gov/pestreport/MACROCHLAMYS_INDICA), or call 1-888-397-1517. The FDACS produced a [pest alert](https://www.fdam.gov/pestreport/MACROCHLAMYS_INDICA) including diagnostic photos.

A significant pest in India, the horntail snail feeds on crops including lettuce, beans and yams. Not only is the snail a threat to Florida’s agriculture, it poses a health risk to humans. As with many other snails in Florida’s inventory, horntail snails have the potential to carry rat lung worm, which can cause meningitis, an inflammation of the brain and spinal cord membranes.

The horntail snail gets its name from a fleshy protrusion located on the tip of its tail. Additionally, when relaxed this species has a flap of flesh that extends over or around its shell. Native Floridian snails do not have this flap. The shell measures about the size of a dime, is amber colored and delicate. Identification of snails is difficult and there are many similar looking native species. If you have questions or concerns, about snails and slugs contact your state’s [NPDN diagnostic lab](https://www.firstdetector.org).

Awareness is key to controlling the spread of invasive pests, so careful observation is recommended for those who import plants.