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12 February 2009:

OXFORD HILLS -- In late December, it is not unusual to hear a song that begins, "Chestnuts roasting on an open fire . . ."

That song is particularly nostalgic in the U.S., because there are no more American chestnut trees. Chestnut blight killed them all. Every last one.

Now ash trees are in danger from a beetle called the emerald ash borer, which so far has killed 40 million trees, mostly in the Midwest.

Maine may have a secret weapon that will help protect our ash trees. It's a non-stinging ground wasp, *Cerceris fumipennis*, that thinks the emerald ash borer is delicious.

These wasps have been found in about a dozen towns throughout the state, and possibly in a dozen or so more.

According to Colleen Teerling, an entomologist with the Maine Forest Service, Harrison has a colony of these special wasps at the RADAR sports fields. Poland may have a colony on the playground at Poland Elementary, and Norway may have one on the playground at the Guy E. Rowe School.

Teerling said that *Cerceris fumipennis* likes hard-packed dirt.

"We've found them mostly in baseball fields. We've also found some in unused sand pits and gravel pits in the places where people were doing all the partying and driving around with their cars and their ATVs. Those are the places where we find them," she said.

This type of wasp, she explained, doesn't have much interaction with humans.

"They don't interfere. Certainly at the schools, they don't interfere at all," she said.

"Often, nobody even notices that they're there. The ones that we've found on school grounds and playgrounds and baseball fields in the summer were in spots nobody was using much at the time.

"After the summer, the wasps stay underground. The adults die off. They are underground and there's nothing to see until next July.

"Potentially, I suppose people might worry about them if they saw a lot of wasps flying around, because they are black and yellow and they buzz. They look like they could be a stinging wasp, but they don't sting."

Why does Teerling think there could be *Cerceris* wasps at Guy E. Rowe School? As she drives about the state, she stops and looks at hard-packed dirt surfaces. On the 20th of August she was on her way home from Fryeburg and stopped at Guy E. Rowe to take a quick look at the playground.

There were no wasps flying around because it was too late in the season, but she did find a couple of holes about the diameter of a pencil with a small mound of loose dirt around each hole — they looked a lot like the *Cerceris*' underground nest.

Teerling plans to come back this summer to see if the holes belong to *Cerceris* wasps.

The wasps themselves are a half to three-quarters of an inch long with dark, smoky wings. They have three large cream-yellow spots on their face and one cream-yellow band on their body.

*Cerceris fumipennis* wasps are the only natural enemy in this country to the emerald ash borer.

The emerald ash borer is a exotic beetle, *Agrilus planipennis* Fairmaire, that was discovered in southeastern Michigan near Detroit in the summer of 2002.

The adult beetles nibble on ash foliage, but cause little damage. It's the larvae, the worm-like immature stage of the beetle, that is the killer, according to the Michigan Department of Agriculture.

Adults are roughly three-eighths to five-eighths of an inch long. They have metallic green wing covers and a coppery red or purple abdomen.

Mid-May to Mid-August, the adults lay eggs on ash bark.

May to August, the eggs hatch and the larvae tunnel into the tree.

August to October, the larvae feed under the bark, creating S-shaped, zig-zag trails. They feed on the inner bark, disrupting the tree's ability to transport water and nutrients.

May to June, new adults emerge from D-shaped exit holes and fly off in search of other ash trees to lay eggs on.

Harrison's code enforcement officer, John Wentworth, recently told selectmen there how dangerous the emerald ash borer is.

"If you went on line and typed in emerald ash borer, you'd find that this is a serious problem. It has the potential to wipe out the white ash in this area," Wentworth said.

Teerling agrees.

"This insect has the ability to destroy all of our ash trees," she said. "We are very concerned about it.

"The emerald ash bore is a native of Asia. Other than *Cerceris* wasps, it has no predators or parasites here. That's a big problem. Also the trees have no resistance.

"In its native [lands], the borer doesn't kill all the trees. In fact, it doesn't kill trees that often. But here, it kills 100 percent. It kills every tree it attacks."

Something similar happened to the American chestnut. Around 1900, chestnut blight was accidentally introduced into this country from Japan or China, either in imported chestnut lumber or in imported chestnut trees.

Though Japanese and some Chinese chestnuts are resistant to the fungus, the American chestnut was not, never having encountered it before. The blight swept through the U.S. and by 1940, every mature American chestnut in the country had been killed.

The chestnut story may have a happy ending. The root system of the American chestnut is fairly resistant to the blight, so many small American chestnut trees still exist as shoots from root bases. These "living stumps" grow enough shoots to produce seeds before being killed by the blight. This has allowed the genetic material of the American chestnut to survive and be used to develop a new variety of chestnut that is resistant to the blight.

The situation with American ash trees is different. When the emerald ash bore kills them, it kills them dead.

*Cerceris fumipennis* wasps can't eat enough ash borers to check the population, and they can't save infected trees, but there is something they can do.

"What *Cerceris fumipennis* is good for is providing bio-surveillance for the ash borer," Teerling said. "These wasps are very, very good at finding emerald ash borers.

"If you have a wasp colony and somebody is looking at it two or three days during the summer, that's the best way to find the ash borer."

The Maine Forest Service is looking for volunteers to help survey what the wasps in Harrison are eating. Teerling explained how this is done.

"What we would do is give the volunteers a little plastic cover with a hole punched in it that they would place over the nest home. These things nest in the ground. The hole is just big enough for the wasps to fly out — no problem. But when she comes back carrying her beetle, she can't fit into her nest. She won't let go of the beetle, but it's too big for her to get it into the hole.

"Our volunteers will have nets and they will scoop her up, steal the prey away from her — this is easy because she doesn't sting — and collect the prey. This would be done for two or three afternoons during the month of July.

"If we collect 50 prey from a site, and if emerald ash borers are not among those 50 beetles that are brought in, then we are fairly safe in saying there's no emerald ash borer in that area."

If the emerald ash borer is found, the infestation has to be contained. This is done by cutting down infested trees, then chipping them so that the emerald ash borer can't emerge and fly to neighboring trees.

People are the biggest spreaders of the emerald ash borer, according to Teerling,

"If a tree is dying in somebody's yard, they might chop it down and cut it into firewood. When they go camping, they'll take that firewood with them. Then the beetle comes out hundreds of miles away in another forest, and all of a sudden, we've got a new infestation. That's how 75 percent of the new infestations occur.

"Because Maine is a very popular camping destination and people have second homes here, we think Maine is at really high risk. People come in, bringing their fire wood with them. We want to encourage people not to move their firewood. We're starting a public campaign to try to raise awareness of that issue."

In Harrison, town manager Brad Plante is asking for volunteers to help check on the wasps there.

"[The Maine Forest Service is] going to run a survey up at RADAR," he said. "We're going to need some help. We need people to come forward and volunteer to be collectors.

"This would be a great project for Boy Scouts or Girl Scouts.

"If there are any groups or individuals who are interested in being involved, I have the information to pass onto them."

The phone number of the Harrison town office is 583-2241.

Teerling said that if there are people willing to help with surveys in Poland or Norway — or, for that matter, one in Fryeburg — to contact her at 207 287-3096 or email her at

colleen.teerling@maine.gov.

*26 February 2009:*

HARRISON — Right now, the non-stinging wasps who have made their home at the RADR athletic field in Harrison are living underground and won't come out until early July.

When they do come out and start to look for food, two people, Dan Schorr, who is a Harrison selectman, and Mary Tremblay, secretary to Harrison's town manager, will be there to greet them.

Not just greet them, but wrestle their food away from them.

Schorr and Tremblay will be helping the Maine Forest Service determine if the wasps — scientific name *Cerceris fumipennis* — have found any emerald ash borers to eat.

This particular breed of wasp is very good at finding emerald ash borers, if there are any in the area.

The reason the forest service wants to know if the borer is around, is because the green beetle kills ash trees. More than 40,000,000 ash trees — mostly in the Midwest — have died after being infested with the pest. Maine doesn't want the same thing to happen here.

Tremblay explained how she got involved.

"Dan [Schorr] had mentioned that he'd thought about it and figured he'd do it. He was going to contact Colleen Teerling [an entomologist with the Maine Forest Service] and let her know he was willing to give her a hand with the survey.

"When he stopped in and told me he was going to do it, I said, 'You know what? I could do that.'"

To survey what the wasps at the RADR fields are eating, Schorr and Tremblay will place a piece of plastic over the entrance to the underground wasps' nest. The plastic will have a hole in it large enough for the wasps to get out, but too small for them to get back in carrying a snack.

When a wasp returns with a meal, it will be captured in a small net, its food taken from it, then the wasp will be released to go hunt again. The meal, whatever it is, will be placed in a container and mailed to the Maine Forest Service for analysis.

Schorr and Tremblay will collect 50 meals to send in. If there are no emerald ash borers in that number, probably there are none in this area.

If there are some in the samples, however, the Forest Service will try to locate the ash borer, so the infected trees can be felled and chipped, preventing the infestation from spreading.

Tremblay said she doesn't like spiders and doesn't like ticks, but the wasps won't bother her, "so long as they really are non-stinging."

The only part of the process that Tremblay is uneasy about is the fact that she will be taking food away from the wasps.

"I feel bad. I really do.

"I'm making sure the birds have enough food in the winter. I make peanut butter sticks with seeds on them and so on.

"Now I have to steal food from wasps. But it's for a good cause."

Tremblay doesn't think handling the wasps' food will bother her.

"I used to help my mom on rose bush plants when I was young. They had Japanese beetles like crazy. I used to have to collect those off the rose bushes and get rid of them — so I can do this."

The Maine Forest Service thinks there may be nest of *Cerceris fumipennis* wasps on the playground at Poland Elementary School and on the playground at the Guy E. Rowe School. They will look in July to be certain.

If there are *Cerceris fumipennis* wasps at those locations, the forest service will be looking for volunteers to do a survey there like the one Schorr and Tremblay will be doing at the RADR fields in Harrison.

[Permalink](#) for "Cerceris fumipennis" Posted 01 Jun 2009