

Fumigants & Pheromones

Digital Newsletter Delivered by Insects Limited, Inc.

Issue 156

Fighting an Uphill Battle with Indian Meal Moth



Tom Mueller
Vice President of Insects Limited

Remote monitoring is making great strides as more and more people are experiencing the benefits these devices provide and seeing a receiving return on their investment. Recently, one food distribution customer was able to see just how well the **SightTrap**, the industry's only remote pheromone monitor for stored product insects, works.

I would like to start this story by saying the national food safety program manager is not on site but is an ideal customer to work with when it comes to managing stored product insects.

He has actively looked for ways to educate himself, improve his knowledge and experience, and is open to the best options for solving stored product insect problems. Therefore, we have worked together closely for the last few months. There is no doubt he will take this recent experience and do what he can to improve the situation.

Because this customer has insisted his pest control provide detailed reporting of their traditional pheromone trends, we were able to work with him to narrow the biggest problem area in the facility down to two isles. This allowed us to take a targeted approach toward remote **SightTrap** monitoring. After a quick site inspection, we setup their three SightTraps in such a way as to triangulate this problem isle. Our SightTraps were positioned on a Tuesday. We gathered two days' worth of images and data from the SightTraps and returned on Friday to reposition the SightTraps to narrow in on the infestation.



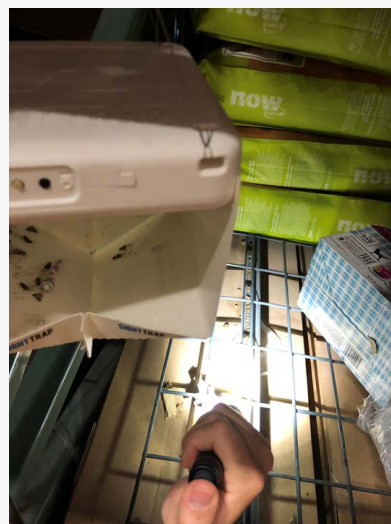
Remote and Automated Pheromone Monitoring

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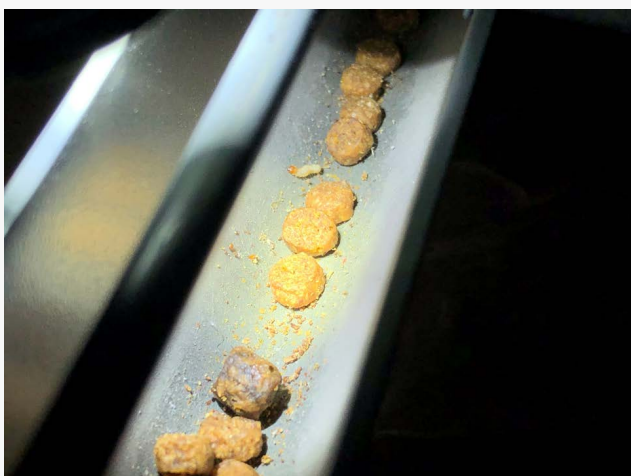
Over those two days, SightTrap 1 had caught two insects, SightTrap 2 had caught four insects, and SightTrap 3 had caught 11 insects. Our plan was to move SightTrap 1 closer to SightTrap 3 so we could create a smaller area in question. Ultimately, we did not need to even do that. Because the SightTraps told us the problem area, and we made our way directly to that site without having to inspect any other traditional pheromones throughout the facility. Within one minute of being at the SightTrap we found evidence of 3 different live stored product insects as well as rodent droppings. Problem solved, right? Wrong, and I will explain why.

As we entered the isle with the issue and approached the **SightTrap** we noticed the facility's pest control provider had already passed the area in question and not noticed the infestation. Cue obnoxious baseball umpire...Steeerrriiiiike one!



He had the traditional pheromone devices open on his cart and was counting the insects in them, which is important, but when you have hundreds of pheromone traps and thousands of insects to count it leaves little time for inspection. Something worth noting is there has been a black mating disruption device hanging less than six inches from our pheromone trap. The technician was asked when the MD devices were hung, and the answer was Wednesday. Even with the black MD device near our trap, we were still catching Indian meal moth each day.

Strike two. Also, during our inspection, the contracted cleaning crew had already passed the location of infestation and not cleaned it. To be fair, it is not in their contract to clean in the cubbies on the racking system, but there is no one who is designated to take on this responsibility.



The experience we had at this site was summarized and reported to the national food safety program manager as well as the facility manager. We also gave suggestions regarding measures that could be taken to alleviate this problem isle of the infestation and utilize the **SightTraps** to quickly confirm successful pest management. They could then move the SightTraps to the next problem area and repeat the process of identifying and solving insect problems quickly.

Strike three occurs when the facility manager's long response to our suggestions is received. It can be summed up into one quote from the response. ***"I do not have time to be chasing around Indian meal moths."***

We solved the mystery of the hidden infestation and were back out of the door within thirty minutes of being on site. These devices can do great things for pest management programs, but they are just a tool and not a miracle worker. Any one of these three "strikes" can keep the problem from being solved, but all three together make it impossible.

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Pests of Historic Houses and/or Homes with History



Pat Kelley
President of Insects Limited

Whether or not you happen to work at a public historic house or you simply live in a house that has a lot of history behind it, chances are you are going to encounter similar pest issues in any older dwelling.

Although fine craftsmanship may have gone into many homes built before the 1950's, certain structural imperfections arise after time that can allow pest entry and harborage. Cracks in the foundation, missing brick mortar, wood decay or damage from animals such as woodpeckers, racoons, chipmunks, and skunks can create pest highways into homes.



The Indiana Governor's Residence, built in 1928 is both a residence and historic house. Photo: P. Kelley

It is interesting to note that an adult rat can fit through a ½ inch gap, a mouse can fit through a ¼ inch gap and many pest insects only require less than a 1 mm gap to enter a structure.

The location of the historic home makes a difference on what types of pest pressures it will undergo and when this may occur. Roof rats, drywood termites, and furniture beetles are prevalent in older homes along coastal areas.

Carpenter bee activity and the eventual wood damage that they inflict can occur in many parts of the world, but in the USA most carpenter bee activity in the southern most states begin as early as February, while the northern most states won't see activity start until the month of April. All carpenter bee activity should subside by October in the US. In general, the more tropical the environment where the home sits, the more pest issues it will likely face.

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Some aspects of the architecture of the home also make it more attractive to pests. Bird nests and wasp nests built along the roof line or beneath soffits are attractive to clothes moths and carpet beetles. If these nests are not removed each year, the insects living off of the dropped feathers in bird nests or the dead insects within the wasp nests will eventually work their way into the interior of the home through the micro gaps in the structure.

Click here for an article on how to best exclude pests from entering: [The Exclusion Conclusion](#)

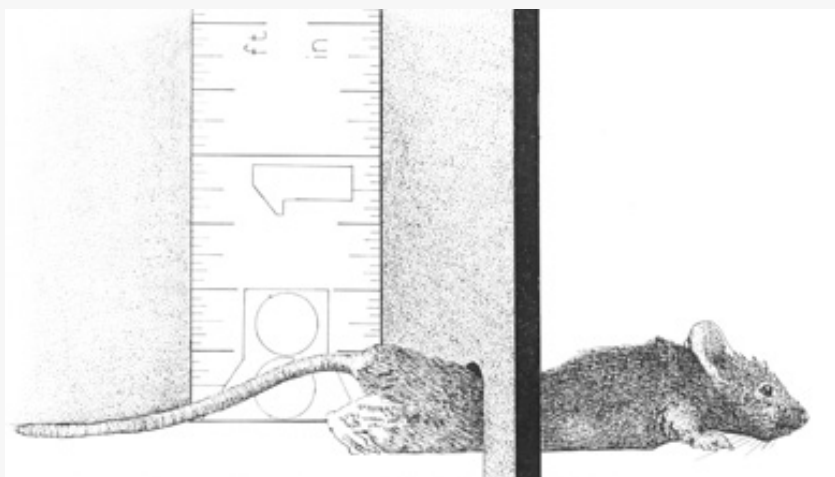


Illustration by J. Crocker, taken from *Rodent Control: A Practical Guide for Pest Management Professionals*, with permission from GIE Media

Other pest highways into these valued homes are “Trojan Horse” pests traveling within re-purposed clothing, vintage furniture, or wool rugs. [Clothes moths](#) and [carpet beetles](#) in particular are notorious for being passed from one location to the next as they live on or within these types of articles.

The table below lists some of the most commonly encountered pests of historic homes.

Common Name	Scientific Name	Pest of:	Areas where commonly found
Furniture Beetles	<i>Anobium punctatum</i>	Wood	These beetles often first infest the wooden joists in high moisture areas like crawlspaces, after which they can move up into furniture.
Carpenter Bees	<i>Xylocopa spp.</i>	Wood	Carpenter bees love to nest in unfinished natural wood on the exterior of any home.
Carpenter Ants	<i>Camponotus pennsylvanicus</i>	Wood	Carpenter ants are attracted to moisture damaged wood around doors and windows or in kitchens and bathrooms.
Termites	<i>Reticulitermes, Incisitermes & Kaloterms sp.</i>	Wood	Termites can attack any wood or books in the house. They can originate from the soil (subterranean termites), fly into the house or can be brought into the home with wooden objects (Drywood termites).
Webbing & Casemaking Clothes Moth	<i>Tineola bisselliella, Tinea pellionella</i>	Fabric & Animal Material	Clothes moths are generally brought into the house with infested wool rugs, furs or clothing. Left undisturbed in attics and beneath furniture, they can be extremely destructive.
Dermestid Beetles	Multiple species; <i>Anthrenus, Attagenus, Trogoderma, Thyrodrias</i>	Fabric & Animal Material	Dermestid beetles can be introduced into homes through infestations of abandoned wasp nests or accumulations of dead insects within the house or wall voids. Exterior gardens with Spirea or other flowering plants are attractive to many species.
Norway Rat	<i>Rattus norvegicus</i>	General	Norway rats prefer to make their nest in soil and will travel inside and to upper floors for food.
House Mouse	<i>Mus domesticus</i>	General	1/4 inch gaps allow entry from outdoors and mice prefer to nest inside the house using anything that they can chew up as nesting material.
Raccoons	<i>Procyon lotor</i>	General	Raccoons notoriously find gaps around chimney flashing or in roof eaves to access attic space.

If you are lucky enough to be associated with a historic residence of any type, either through working in one or living in one, be on the lookout for this list of potentially damaging pests. Your vigilance will go a long way to preserving these treasures to our society.

Please contact [Insects Limited](#) for consultation on monitoring, treatment and management of these pests or the other species that can cause damage to our cultural heritage or your own home.

Email Pat

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Stored Product Insects Tips and Tricks – As Seen in PMP Magazine



Pat Kelley
President of Insects Limited

Stored product insects follow our food supply all the way from farm-to-fork. In other words, they can be found right on the farm where the crops are grown all the way to the forks at our kitchen table and everywhere in between. A few of those areas include farm storage bins, transport trucks, food processing plants, food distribution warehouses, grocery stores and finally in our own pantries. You can expect them to be in whole or processed grains, seeds, nuts, or processed food such as cereals, pasta, flours and much, much more.

The best tip to prevent damage from these destructive insect pests is to get to know who they are and then monitor for their presence.

Who they are: Stored Product Insects (SPIs) can include;

- Indian meal moth • cigarette beetle • drugstore beetle • warehouse beetle • saw-toothed grain beetle • merchant grain beetle • Mediterranean flour moth • almond moths • tobacco moth • angoumois grain moth • red flour beetle • confused flour beetle • rice weevil • granary weevil • red-legged ham beetle • lesser grain borer • larger grain borer

How to Monitor: Most SPIs have **pheromone lures** that make monitoring and detection quite effective. Strong fliers like Indian meal moths, warehouse beetle, cigarette beetle and other SPI moth species can be monitored using a hanging diamond **NoSurvivor™ Trap** while crawling beetles like red flour beetle, confused flour beetle and saw-toothed grain beetle should be monitored using a pitfall style trap like the **All Beetle™ Trap**. The strong fliers can also be monitored by viewing daily trap images on your phone or computer using **SightTrap™** technology.



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