

Fumigants & Pheromones

Digital Newsletter Delivered by Insects Limited, Inc.

Issue 176

**Are we inviting clothes moths into our living and working spaces?
The full menu of clothes moth larvae includes dead rodents and birds**



Patrick Kelley, BCE
President of Insects Limited

Clothes moths are the number one pest in the world that consume and damage our clothing and rugs. Unknown to many, adult clothes moths do not eat, instead the larval stage of this damaging pest is the only one doing the damage.

When thinking about what clothes moth larvae like to feed on, materials such as feathers, wool, and fur come to mind.

While these materials can be food sources, the menu list for clothes moths expands to include dried and desiccated carcasses of rodents, birds, and other animals as well.



Hidden reservoirs of dead animals like these (inside or outside) give the moths a foothold to keep their populations high until they see a chance to invade our spaces and consume our belongings. By not actively seeking out and removing dead animals, we are more than likely inviting them into the spaces where we live and work.

Ironically, IPM specialists and pest professionals can sometimes use pest control measures that benefit the populations of clothes moths. Louis Sorkin, the renowned Board Certified Entomologist from the American Museum of Natural History (retired) stated this, "Pest Management Professionals, technicians, etc., forget where they place rodent traps, monitors, bait stations and those dead, dried corpses become prime larval feeding areas over time. They can be in somewhat inaccessible places. Anticoagulant rodent baits also contribute to potential larval food items when the rodents die in inaccessible (to us) places, but small moths and dermestids will find them." Lou also backed up his comment by granting us permission to use a plethora of his images of clothes moths actively feeding on dead animal carcasses. You will those at the end of this article (Viewer beware: Some may find these images disturbing).

Insects Limited Product Guide

Our newest product guide is a must-see. The 20-page full-color and fully illustrated booklet can be viewed as a hard copy, online, or as a [PDF HERE](#).



Imagine a mouse in a city environment that is living outside a museum or a residence. That mouse runs to a bait station box, strategically placed by a pest management professional, and consumes some of the toxic bait that was placed into that box to specifically kill it. After a few days, the mouse begins to feel sick. The mouse's natural instinct in its weakened state is to find a quiet and protected space away from predators. Looking for safe harborage, the sick mouse locates and easily slips through a small ¼ inch (6.35 mm) gap on the outside of the building and finds a void inside a wall. Here in the void, the mouse feels safe, but dies a few days later when the effects of the toxic bait finally reach a lethal level. Flesh-eating flies find the corpse quickly to consume the rotting flesh, but after one or two months, that dead mouse dries up and sits there. Six months to a year later, a lone female clothes moth (potentially from a resident population in the building) happens to find the dead mouse in that wall void and lays her eggs on it. Her 30 - 50 eggs hatch in a few days, and an infestation begins that can rapidly reach hundreds of moths searching for food sources to lay their eggs. When hatched, these hungry offspring will eventually find the collections being stored at the museum or will find your closet full of wool or your favorite Persian rug. Now imagine this scenario playing out in multiple locations around the museum or a residential building, while each and every dead mouse carcass is a prime food source for clothes moth caterpillars.

Individuals that set up and forget about mouse traps that they set and placed in rarely seen areas, can also lead to clothes moth and carpet beetle issues. I have also seen structural defects on the roofs of city buildings that allow birds to fly down into a crevice, get trapped there and die, where moths eventually find them.

Regardless of how a dead rodent or bird ends up in close proximity to people and their belongings, the fact that they are present, poses a risk that they will attract clothes moths and/or carpet beetles that can eventually cause serious damage. Understanding the complexities of this insect and its diet will ultimately help us control the amount of damage that it does.

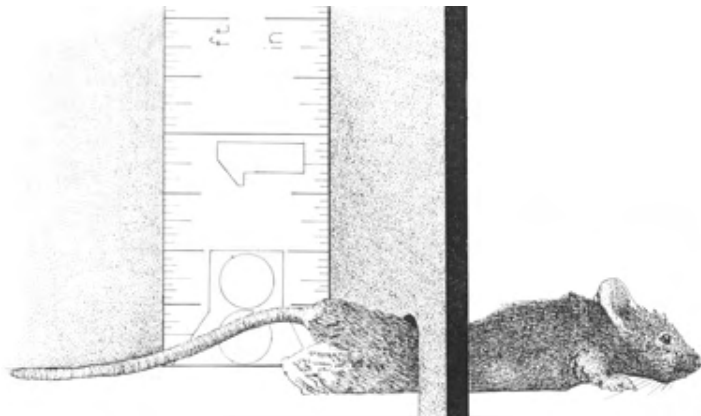
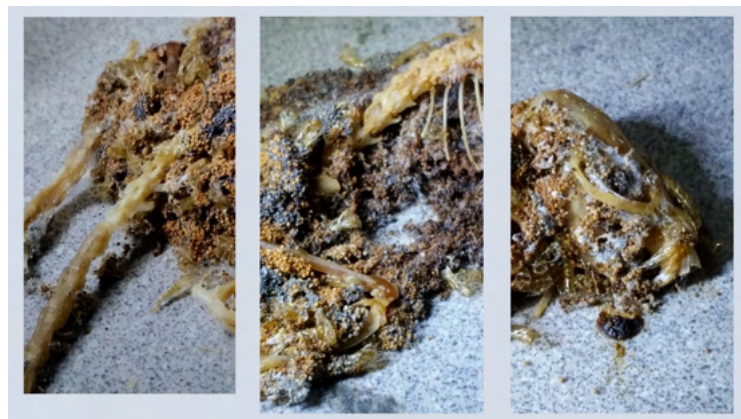


Illustration by J. Crocker, taken from Rodent Control: A Practical Guide for Pest Management Professionals, with permission from GIE Media



Moths and caterpillars around a dead mouse on a glue board. Photo courtesy of Louis Sorkin, BCE



Clothes moth frass on a rodent carcass. Photo courtesy of Louis Sorkin, BCE



A completely consumed rodent carcass covered in webbing clothes moth frass and some empty pupae. Photo courtesy of Louis Sorkin, BCE



Clothes moths and dermestid beetle larvae have consumed the hide and hair from the rodent on the left. The image on the right also shows evidence of clothes moth and dermestid larval feeding alongside blow flies and sarcophagid flies and puparia. You can see these two mice on this glue board are earlier in their decomposition since there is more flesh and skin evident. Photos courtesy of Louis Sorkin, BCE.

****A very special thanks to Louis Sorkin, BCE for the ideas behind this article and the detailed images of clothing moths on dead and desiccated rodents.**



Louis Sorkin, BCE showing off some live arthropods. Photo taken from <https://twitter.com/AMNH/status/1115673710487375873>, American Museum of Natural History, Twitter account April 9, 2019.

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A Reflection on the 14th Stored Product Protection Conference



Tom Mueller
Vice President of Insects Limited

It was worth it.

Sweating the details, investing the capital, fretting for the first two months after the announcement and wondering if anyone is going to show up, organizing the tours, acquiring the sponsorships, working with the speakers, creating the content, designing the posters, sacrificing other areas of the business, assembling welcome packets, multiple site visits, arguments/heated conversations, and (oh yeah) preparing a presentation as well as moderating.

It was all worth it.

Our purpose at [Insects Limited](#) is to help protect the world's food and cherished belongings from damage by insect pests. We do this by incorporating science, education, innovation, and quality pheromone technology products. This conference was a commitment to our belief that if we can educate our niche area of the pest control industry, then we really can move one step closer to protecting the world's food (and cherished belongings). Educating the world is not just a fluff statement and we said this throughout the 2-day conference in West Lafayette, IN, USA on June 13-14.

Of the 119 people in attendance, there were 11 countries represented from 6 continents. Rarely have I been prouder of this company and our team members than when each attendee stood up to introduce themselves (Name, Company, Years in the Industry, number of SPP conferences attended in the past) to start the conference. There was a nice buzz throughout the conference with pest control operators, technical directors, quality managers from food manufacturers, academics, and vendors together all collaborating on food safety and stored product protection. It was almost as if each integral person in food safety were all there hearing the same topics and discussing ways to improve their processes to help protect the food they produce and the brand they represent.

The speakers were top-notch. With a focus on new and innovative technology and methodology, the topics ranged from the importance of properly conducting a grain fumigation to remote pest monitoring, to protecting food in African nations, the topics were practical and relevant. Attendees were also lucky to have 4 members of FSS (Westfield, IN) conducting a demonstration of a grain bin fumigation on-site at the Purdue Research Farm.

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It wasn't all just about the presentations and tours. The real conversations and friendships were constructed during our welcome reception as well as the social event, sponsored by UPL. We all packed into the second floor at Harry's Chocolate Shop and filled our stomachs with heavy hors d'oeuvres and some of us filled it with beer as well. It was an opportunity to share about our countries, our companies, tell "war stories," and connect with one another outside a professional setting.

Planning an international conference takes attention to every detail, and loads of patience, it's stressful, and there are sacrifices that must be made in the day-to-day running of the company, but it was worth it.

If you or your company are interested in partnering to host the next conference, please contact me at t.mueller@insectslimited.com. We are open to partnering with companies that want to help protect the world's food and cherished belongings from threats of damage by pests.



View the full photo album from the 14th Stored Product Protection Conference [here](#).