New Tekko™ Pro Insect Growth Regulator Concentrate from Control Solutions provides effective, long-term control of listed pests including cockroaches, fleas, flies, mosquitoes, gnats, crickets, litter beetles, and ants. Tekko Pro is formulated with Combination Chemistry™, which combines two active ingredients with two modes of action into one innovative product. Tekko Pro contains two insect growth regulator active ingredients: Pyriproxyfen, a juvenile hormone analog and Nevaluron, a chitin synthesis inhibitor. Tekko Pro prevents listed cockroaches from developing into egg-laying adults. One treatment inhibits reinfestation of listed cockroaches for six months. So for listed insects; Tekko Pro may be a serial killer.

Contact your local distributor, CSI rep or visit www.controlsolutionsinc.com

By Rick Rupkey
NPMA President
702-664-9066
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A s your Association President, I have been busy moving forward the agenda which I set out for you last issue. I meet at least quarterly with the Department of Agriculture and its representatives in an open dialogue aimed at keeping our mutual goals aligned and ironing out issues before they become problems. The Legislature met and adjourned with no major issues coming to the floor. Our concerns over potential pollinator legislation were resolved with the support of our State Entomologist. Jeff Knight stepped forward and shared his opinion that pollinators are not being challenged by pesticides in this state and reminded those who would have tried to regulate us more, that the only case of pollinators dying off as the result of pesticides was a deliberate application by one beekeeper, sabotaging another beekeeper who had apparently infringed on his territory. Jeff also was our featured speaker at our annual Bee Hotline meeting held in March. He spoke to a group of almost 50 Pest Management Professionals about Pollinator Health and surrounding issues. He informed those in attendance that pollinators are comprised of a lot more than just bees. He also discussed colony collapse concerns, illustrating that many of the challenges facing bee colonies have nothing to do with pesticides, but are pressures placed upon the colonies that they have never faced before... like being moved from one end of the country to the other in pursuit of the latest crops needing pollinating. Imagine waking up one morning 1500 miles away from where you were the day before, being expected to go to work with no adjustment to the new temperature, environment and no time to adjust to the new working conditions.

I have been asked to participate in the creation of the Nevada Pollinator Protection plan by our state’s EPA representative Chuck Moses. We will be working together with other stakeholders to formulate and draft potential changes to our NAC’s. My goal is to make sure that inappropriate limitations are not placed on our industry, over an issue that is not being affected by our industry. I welcome your individual input on this subject and stand ready to help you address other issues as they may arise.
Within the last two decades, the exponential rise of bed bugs both in the numbers found within a given dwelling and the number of different dwellings involved is well publicized. It is only natural to be concerned about the role these parasites play in transmitting disease organisms to humans.

First, let us establish the difference between the words “can” and “do”. If bed bugs were a major vector of disease organisms to humans, it would have happened thousands of times because of the plentiful proximity of bedbugs to humans. Every day, thousands of bed bug jobs are done in our country without any noted documented case where bed bugs were the culprit of transmitting disease organisms to humans. CDC (Communicable Disease Center) in Atlanta keeps track of such incidences if they were to occur. It fortunately is not happening. However, there is a potential danger that via mutation of the bed bug and/or a disease organism, there could be a problem in the future.

Laboratory studies are conducted at different universities and agencies to see if the potential is there. In Canada, they were able to find hepatitis B in or on bed bugs after crushing up many bed bugs. This does not mean these insects are capable of transmitting the organisms to humans.

More recently at Penn. Medicine’s Center for Clinical Epidemiology and Bio-station, mice and bed bugs were confined. Bed bugs infested with a protozoa called Trypanosoma cruzi were able to transmit the parasites to the non-infested mice. In humans, if this were to happen, you would contact this parasite and the disease is called Chagas Disease. It is a first step to show that the bed bug can transfer the protozoa to a mammal.

The mammal is a mouse, not a human. In addition, Chagas Disease is rare in the U.S. It is most common in Latin and South America.

The literature says that bed bugs can feed on mice and rats. In the lab this is true. How often it occurs in a building is questionable. I have never been able to catch a rodent on a glue boards or multiple trap and found bed bugs on them or in the trap.

By Austin Frishman, Ph.D., B.C.E. President AMF Pest Management Services, Inc.

We have a responsibility to the public not to scare them to try to sell work. We do know, however, that the following is true and mandates the need to take immediate action when bed bugs are detected.

- Bed bugs have caused anemia in humans simply by drawing blood. The younger the child, the easier it is to become anemic.
- The cast skins of the bed bug and dried blood fecal material can cause asthmatic attacks in humans.
- Itching, lack of sleep, depression, anxiety and severe scratching are all possible if you do not get rid of bed bugs.

So be careful what you tell your customer. Be truthful. There are enough reasons to do control without exaggeration.

Change in the economy means we have to work SMARTER not HARDER!

Lloyd Mendt Snigel

Our economy has changed and we have to change with it. I am still involved with the Discovery retreats, which are designed to help you make the necessary changes to advance in this economy not just stay afloat or be happy to make payroll.

It is time for YOU to invest in YOU and LEARN what you need to know to establish a PLAN to move forward.

If you stand still, you will be trampled to death.

Call Terry NOW for consulting information and to order Lloyd’s latest book, Bug People to Business People at (760) 751-0335 or email: terry@atf.net

For Retreat information, please contact Dena at (760) 941-8140

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BEYOND THE FLY SWATTER: TIPS FOR MANAGING FILTH FLIES IN COMMERCIAL ESTABLISHMENTS

By Sylvia Kenmuir
Board Certified Entomologist, Training and Strategic Marketing Director, Target Specialty Products

The first fly swatter was invented in 1900 by Robert R. Montgomery from Decatur, Illinois. Patent No. 640,790 was for a Fly-Killer made of wire netting attached to a handle. The netting was a critical component and reduced the wind drag, giving the swatter a “whip like swing”. A year later it was featured in Ladies Home Journal as a tool that kills without crushing. Fly management has come a long way from the invention of the swatter, although many people still swear by their use.

Flies are one of the most important pests for commercial pest management, especially for restaurants and food processing areas. While a prolonged fly problem is an annoyance for your customers, the fly flies pose a serious human health issue due to their breeding and foraging habits which are associated with organic matter that can be in the form of dead animals, garbage, or feces. All fly management programs begin with identification of the insect you are dealing with. Fortunately, it does not require an entomologist to identify flies. The learning process begins with 1) a good identification key, such as the PCT Field Guide for the Management of Structure Infesting Flies (1994 Stoy A. Hedges, Moreland, Dan), 2) a hand lens and, 3) practice.

When we are dealing with commercial pest management large filth flies and small filth flies are two groups you will most likely encounter. Once the fly has been correctly identified, determine their breeding habits and locations.

The first group, the large filth flies or “invaders” typically breed outdoors and will “invade” a structure. There are three main large filth flies we find invading structures: House Flies (Musca domestica), Little house flies (Fannia sp.), and Blow/Bottle flies (Calliporidae sp.). During your site inspection the question you should ask is “Where is the moisture and organic matter required for these flies to breed?”

The second and more often challenging group is the small filth flies or “annoyers” which typically breed indoors and can be particularly annoying to clients as they often have multiple breeding sites once inside a structure. For small filth flies, we have three main “annoyers” in structures: Moth (drain) flies (Psychodidae sp.), Fruit flies (Drosophila spp.), and Phorid flies (Phoridae sp.). During your site inspection the question you should ask is “Where is the moisture and organic matter required for these flies to breed?”

The first stop in both a large and small filth fly management program is to look at the sanitation. Sanitation is pest control, so when we approach management this will be key regardless of whether you are dealing with outdoor or indoor breeders.

For outdoor breeders, a thorough inspection of the perimeter will be necessary to find all possible outdoor sources the flies are utilizing to breed. Trash bins are often the culprit. Sanitation and trash management will be a critical component to all management programs. Take the time to show your customer their trash areas and point out the importance of proper sanitation management and how it contributes to the problem. This can always be a challenge because the customer’s perception is often “This is trash and you want me to keep it clean?” While keeping in mind these pests fly, and some from great distances, provide suggestions such as regular trash container cleaning with steam, more frequent disposal pickups and containers with lids.

Using tools such as Google Earth may assist you in surveying the area at a greater distance to determine what may be contributing to any fly problems. When looking at the maps, both moisture and organic debris should be on your radar. If the source is beyond what should be on your radar. If the source is beyond what
you have four with three more in waiting. This can be
three sales reps a year ago. We went down to two and
Presently, I am working with a company that had
prefer to work with. They are looking for a career and
attitudes towards the public. These are the people I
like their job, they are still positive and have great
their family going. Even though they don’t particularly
working this job (sometimes it’s a second job) to keep
They are courteous, energetic, eager to help and are
They are presently working in another service industry.
want to leave me. If they do want to leave – enjoy.
work, have good benefits, are making more than the
of my people – go for it. They are happy, have fun at
Shops, etc.). Is it right to “steal” someone from another
meet them at meetings (CEU, Conventions, Work
Drain management is a critical component of an indoor
breeding. Typically, this will lead you to the drains.
Exclusion tactics can include a variety of strategies. The
first should be looking at doors and windows. Windows
should have proper screening and doors should be kept closed and sealed. If doors cannot be kept closed, suggest an air door (curtain) which uses a strong stream of air to keep flying insects from entering. Lighting is a critical component in any pest management program. Certain lights attract insects. Know your lights and recommend changes to avoid attracting flies to the structure.
Additional methods of management can include a strategic use of pesticides on resting surfaces and perimeter baiting. Some flies, such as the house fly have developed resistance to many bait actives. Bait rotation and knowing your active ingredients becomes critical to a successful pest management program. Once the large fifth flies enter a structure another good method available to the pest professional is the use of Insect Light Traps (ILT). Proper installation and maintenance of light traps is critical to their success. Improper installation, poor location and exceeding the bulb life are often the reasons an I LT program fails. During your inspection, follow all moisture sources and places where organic matter collects. This will give you a starting point as to where the flies may be breeding. Typically, this will lead you to the drains. Drain management is a critical component of an indoor breeding fly program. Over the years new tools that
you are able to manage, exclusion becomes critical.
Kenmuri - Continued from page 6
Continued on page 22
S
o your season is now moving forward. This is
time of year that the fun begins – or does it?
If you haven’t prepared for this properly, you
can really lose a lot of business over the next several
months. And for those of you in the Northern part of
this country, that could be really hurtful. If you did not
prepare and do not have the manpower and/or policies
in place by now – June Gloom will hit you.
Yes, I DO understand that sometimes it is out
of your control (unexpected turnover, unforeseen
emergencies, etc.), but being ready and having back up
plans and options ready is always the way to go. That
can, however, be expensive. In most cases, I advise my
clients to hire at least one or two “extra” people and
have a backup of another one or two.
One of my clients presently has three people who are
licensed and want to come work for him but there are
no openings. He meets with them once a month for
coffee and “stays in touch”. One of those people works
in another industry and has gotten his license while
waiting for an opening. Now THAT’S the way to enter
the season.
Finding these people are easier than you think.
They are working out there and are unhappy. You
meet them at meetings (CEU, Conventions, Work
Shops, etc.). Is it right to “steal” someone from another
company? I have always said that if you can “steal” one
of my people – go for it. They are happy, have fun at
work, have good benefits, are making more than the
average person in this industry and I doubt if they’ll
want to leave me. If they do want to leave – enjoy.
Secondly, I prefer to find my people “out there”.
They are presently working in another service industry.
They are courteous, energetic, eager to help and are
working this job (sometimes it’s a second job) to keep
their family going. Even though they don’t particularly
like their job, they are still positive and have great
attitudes towards the public. These are the people I
prefer to work with. They are looking for a career and
benefits, not just a dead end job.
Presently, I am working with a company that had
three sales reps a year ago. We went down to two and
now have four with three more in waiting. This CAN be
done but it takes follow up and work.
I like to talk to them at their job and give them what
I call a pre-interview. They have no idea I am doing
this. I ask them if they like the job and hours and other
questions that you may not be able to ask during a
normal (government controlled) interview. I don’t have
to worry about what questions I can or can’t ask, as this
is not a formal interview.
If it goes well, we go to a formal interview and establish
the parameters we must set so that he or she is
preparing to come to work with a two-week notice to
where he or she is presently working.
I like to SHOW my clients how this is done a few
times so that they become comfortable with the pre-
interviews. The point is that these people are out there
and working “temporary” jobs.
By having them lined up, you can avoid going
through the same “Ground Hog Day” year after year
and avoid the June Gloom.
S
Since beginning as a licensed applicator and technician in 1976, I’ve seen all sorts of things working in customer’s homes. But it was when working on a bed bug remediation project that an incident occurred that would forever set the tone for how I viewed bed bug projects, as well as how I conducted bed bug remediation work going forward. Years ago I received a call seeking assistance at a large apartment complex. During our initial conversation it was reported that the apartment complex was experiencing a long-standing bed bug situation, that the problem had been on-going for at least four years and that it had progressively worsened. By the time they had contacted me they were on their fourth pest company. They had simply had enough and were at their wits end. During the conversation, the situation and plan of action regarding the necessary remediation work was discussed and agreed upon.

Soon after, I was on location and up to my neck in bed bugs. It was immediately clear that the problem would never be eliminated if the work was allowed to continue in the manner observed. The efforts were haphazard, ineffective and, obviously, not working. I began my work with an inspection of the facility. The complex was large and hundreds of apartments were infested, varying from very light (where just a few bed bugs were present), to severe (where the apartment was a video-worthy “bed-bug-ground-zero”).

As a pest pro, I had entered many homes. Some are very neat and clean, while others not so much. During my inspection I entered one particular apartment. This was when something occurred which I’ll never forget, that served to set the tone for me on bed bug work. It was such an influential moment that I included it in the beginning pages of my book, The Bed Bug Combat Manual, with the specific intent to help others adopt a similar mindset regarding their own bed bug work. It was at this point that she literally broke down in tears while holding her baby in her arms and crying on my shoulder.

Something like that is not easily forgotten. It was “the hook” that shaped my bed bug outlook and mindset from then to this very day. I promised that we would be taking care of her problem and would be saving her and her family from bed bugs immediately. My thoughts included that the mission here was easily defined as: (1) save these people from being bitten by bed bugs, and (2) save their assets (i.e., prevent them from having to throw out their infested beds and furniture that they could ill afford to replace). The mission needed to be accomplished by delivering zero bed bugs. To successfully deliver zero bed bugs and keep my promise, a thorough and comprehensive work effort was required – which we did.

Since that time I have performed bed bug remediation projects at many locations. I am continuously surprised by how this one pest can adversely affect so many normally sane people on an emotional and psychological basis. In speaking with numerous bed bug victims, I’ve come to understand that sometimes it is not the bed bugs themselves, but underlying issues that they trigger which so unnerv...
By Charles Moses  
Environmental Scientist  
Nevada Department of Agriculture

Everyone has become more security conscious since the terrorist attacks of September 11, 2001. Although pesticides were not involved in these attacks, businesses that sell, distribute, or apply pesticides and federal and state regulators have long known that pesticides may cause human health and environmental effects if used improperly or released accidentally or deliberately into the environment.

Safe and secure pesticide practices are necessary to protect workers, customers, and the community. Both businesses and regulators have the responsibility of assuring that pesticides are used responsibly by individuals who have a legitimate need for them. In this way we can help maintain their continued availability.

On August 1, 2013, the President issued Executive Order on Improving Chemical Facility Safety and Security, directing the Federal Government to improve operational coordination with state and local partners,

• enhance federal agency coordination and information sharing,
• modernize policies, regulations and standards, and
• work with stakeholders to identify best management practices.

The Nevada Department of Agriculture (NDA) and the U.S. Environmental Protection Agency (EPA) have an agreement to inspect and to enforce state and federal rules which govern the manufacture, sale, distribution and use of pesticides in the State of Nevada. Pesticide “use” includes not only the application of the pesticide but also includes mixing, transportation. If you produce, process, handle, or store extremely hazardous substances such as many pesticides you have a general duty “to identify hazards which may result from such releases, using appropriate hazard assessment techniques, to design and maintain a safe facility taking such steps as are necessary to prevent releases, and to minimize the consequences of accidental releases which do occur.”

Regulations help prevent pesticide incidents from occurring. However, major chemical accidents or incidents and criminal actions cannot be prevented solely through regulatory requirements. Rather, understanding the fundamental root causes of pesticide accidents and incidents, widely disseminating the lessons learned to raise awareness, and integrating lessons learned into safe operations are essential components of prevention. This recognition is one reason why NDA asks that reports be filed with the agency of any emergency dumps of pesticides, accidents involving the spillage of pesticides or the spillage at sites of operations of unmixed pesticides that are detrimental to persons, wildlife, domestic animals or crops.

Once sites are accessed, pest control companies, pesticide dealerships, and pesticide producing establishments can take appropriate steps to minimize risk by developing a written risk management plan.
The plan does not substitute for regulations, nor is it a regulation itself. It cannot and does not impose legally binding requirements on the regulated community, and the measures it describes may not apply to a particular situation based upon circumstances, but it may protect you and your facility from accidental releases and/or criminal activity.

Areas of Concern

Threats to personnel and facilities may come in different forms and from different sources. Threats from outside the facility may include trespassing, unauthorized entry, theft, burglary, vandalism, bomb threats, or terrorism. Threats from inside the facility may arise from inadequate designs, management systems, staffing, lack of training or other internal problems such as substance abuse, sabotage, theft, disgruntled employees, and workplace violence, among others.

Common Security Measures

Most security measures are intended to prevent intruders from gaining access from the outside which include fences, walls, locked doors or alarm systems. Security lighting and video surveillance and training of staff can enhance existing security measures. At times it may be wise to consider changing locks when a disgruntled employee leaves.

Facility Design

A well-designed facility limits the quantity of chemical that could be released and prevents equipment damage. Buffer zones, containment areas and mitigation planning can effectively increase site security. If you store hazardous liquids, you may want to consider containment systems (e.g., buildings, dikes, and trenches) that can slow the rate at which the chemical spreads and provide time to respond. Double-walled vessels can also protect against attempts to rupture a tank.

Best Management Practices for Agrichemical Storage and Handling

Storage and handling of pesticides and fertilizers in their concentrated form pose the highest potential risks to human health and potential environmental contamination. If your facility includes a mixing and loading site the facility needs to be properly designed.

The ideal facility provides:

- separate storage for pesticides and fertilizers, which is secured and keeps products out of the weather (buildings should be located at least 50 feet from other buildings),
- secondary containment of the stored products,
- a safe mixing and loading area away from surface and ground water sources, and
- worker protection features such as showers, first aid, and spill clean-up kits. In addition, ideal pesticide management practices include:
- maintaining good records of all chemical use,
- providing preparation and training to respond to emergencies, including spill response,
- minimizing the amount of agricultural chemicals stored and handled, and
- reducing waste such as rinsate, containers, and partially used product.

Primarily, minimizing and reducing chemical waste means buying only the amount of chemical needed for each season, mixing only the amount of chemical needed, recycling empty pesticide containers when possible and properly disposing of pesticides no longer being used. To assist, the NDA has a waste pesticide disposal program open to both the public and the industry. Information on NDA’s pesticide waste disposal and container recycling program can be found in the resources listed below.

Computer Security

Computer "hacking" can occur from both internal and external sources. Most of the steps to limit this type of damage are probably measures that are already in place as part of cybersecurity or information technology management. Some companies have developed alternate capabilities and systems to protect receipt and transmission of confidential information. Backup power systems and/or air conditioning systems can be important, particularly if processes are computer controlled. Access to computer systems used to control processes may need to be controlled so that unauthorized users cannot access them; appropriate computer authentication and authorization mechanisms on all computer systems are useful. Entrance into control rooms may need to be monitored and limited to only authorized personnel.

Communications

For emergency communications, some companies use radios and cell phones as a backup to the regular phone system or voice-versa. Reporting of criminal and terrorism related activities can be done through the Nevada Threat Analysis Center (NTAC) at ntacnv.org.

Resources

By taking adequate measures to assure that your pesticide establishment is secure, you will prevent accidental releases and intentional or unintentional pesticide misuse. If you have any questions, please contact me at 775-353-3716 or Robert Leavitt at 702-668-4574.

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Nisus
www.nisuscorp.com

Pitbull
www.pitbullpestcontrol.com

Protect-A-Bed
www.protectabcd.com

Bite-Tech
702-400-1946
jtho@pitbullpestcontrol.com

Sundance Insurance
www.sundanceinsurancegroup.com

Dialysis
www.dialysis.com

Environmental
www.envicino.com

Lightning Protection
www.lightningprotection.com

Small Business
www.smallbusiness.gov

The Regulatory Corner

Pesticide Safety and Site Security

Continued from page 12

THANK YOU TO ALL THE BUSINESSES THAT SUPPORTED THE ASSOCIATION AT THE 2015 PEST EXPO

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Pit Bull Pest Control Supplies
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Pest West Environmental
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Pitbull
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Protect-A-Bed
www.protectabled.com

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Sundance Insurance
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Target Specialty Products
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MR. PEST CONTROL QUESTIONS

Voids Devoid of Scorpions

**QUESTION:** What is your best recommendation for a scorpion treatment inside a residence?

**ANSWER:** Indoor treatments for scorpions should be targeted to voids like wall voids and attics. Those are the areas in a structure they tend to inhabit. Focus on the walls in the house where scorpions are seen the most. Scorpions in light fixtures point to the attic being a problem. Dusts are the best formulation for voids although aerosols and space treatments can also be used. Hiding places in living areas like closets and underneath furniture can be spot treated with a residual, but this should not be the basis of an indoor program. These are also good places to put glue boards for trapping and monitoring.

One Foot Up and Out

**QUESTION:** Will a perimeter treatment with Termidor kill scorpions? Also, will Termidor cause any harm to outdoor landscaping?

**ANSWER:** Termidor doesn’t harm plants. At most, it can’t be applied too close to edible plants because it can be taken up by the plant and ingested later. I don’t doubt that a perimeter treatment of Termidor would kill some scorpions (although scorpions are not on the label). However, a perimeter application with Termidor is limited to one foot out from the foundation. There will probably be scorpions outside of that boundary that will go untreated. For scorpions, you have to go out of your way to treat under objects on a property. A simple perimeter application is often not enough and other pesticide products allow more flexibility as to where they can be applied.

**Target Your Pest**

**QUESTION:** I’m dealing with a two bedroom end unit in a complex. The problem is scorpions. We have dusted the unit’s attic, voids and kitchen appliances, sprayed the baseboards and perimeter sprayed with the power spray truck. We have recommended trimming all trees around the unit and blocking off access from the air spray truck. We have recommended trimming all trees around the unit and blocking off access from the air conditioner with foam. We are using Transport indoors, DeltaDust for appliances and the attic and Cyper TC outside, but the apartment still has major infestation. Any recommendation will be appreciated.

**ANSWER:** My question is where is the infestation? In a major infestation of any pest, we should be able to set eyes on where the pests are living. Any of these products applied directly to scorpions should provide some control. Maybe there is more attention being given to applying pesticides as opposed to finding scorpions. Around the exterior, pesticides really need to be targeted under harborages where scorpions like to hide. Spend time turning over anything they can be hiding under, preferably with a stick. Indoors, sticky monitors can help you in two ways: by physically trapping scorpions and by helping you locate population centers. The more scorpions on a monitor, the closer you are to finding the location where they are entering the unit and can treat more directly.

**Try Something Different, and Not Just a Pesticide**

**QUESTION:** I was wondering what the best chemicals are for controlling scorpions. I have been using Demand CS for the interior and Permethrin SFR for the exterior. I do have pretty good results but not good enough for some clients.

**ANSWER:** Scorpions are difficult to control indirectly with pesticides. There probably isn’t a product that’s going to meet a customer’s expectation of scorpion annihilation on its own, especially in Nevada. Customers must do their part in making their property less attractive to scorpions by reducing items on or close to the ground that provide shade and moisture. The perimeter of the structure should be as much of a vast wasteland as possible from a scorpion’s point of view. Then, exterior perimeter treatments would be easier to apply and probably more effective. Otherwise, you really have to spend time applying a residual under possible harborages so that the product can make better contact with scorpions. This also increases your chances of being stung by scorpions! If this is the route you must take, pyrethroid products can make better contact with scorpions. This also increases your chances of being stung by scorpions! If this is the route you must take, pyrethroid products provide knockdown. In general, look for products that leave particles behind like wettable powders and microencapsulates for a better residual.

**It is obligatory to say that exclusion is the best way to keep almost any pest out of structures. Once indoors, customers may say that scorpions are everywhere, but sometimes it is possible to hone in on an area where they are seen the most. If so, they may be associated with an attic, a wall void or a crawlspace. These are opportunities to apply treatments directly to scorpions that will have a more significant impact on scorpion numbers than just applying a residual around the interior.**

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Scorpions Can Take the Heat

**QUESTION:** Can scorpions live in an attic when the temperature is around 130 degrees?

**ANSWER:** Well, that’s a good question, and try as I might I could not find any resource that actually gave specific lethal temperatures. There are companies now that advertise to do heat treatments of structures to eliminate bed bugs, termites, and scorpions, and the temperature they apparently attempt to achieve is 140-150 degrees, but their websites do not state what the high end temperature is for scorpions. Bed bugs we know cannot withstand 120 degrees for more than about 30 minutes, but scorpions are probably tougher critters. Certainly, they are adapted to living in extremely hot climates, and since parts of Nevada and Arizona will hit 120 degrees outside, that temperature does not wipe them out. Of course, when temperatures get that hot the scorpions will all have huddled up somewhere that is cooler and dark, so their little micro-environment likely is well below the air temperature.

I would bet that even in an attic that gets to 130 degrees the scorpions will move to seek a cooler place, and this may be beneath the insulation. I suspect that the temperature below the insulation that rests on sheetrock would be much cooler, as it would be cooled by the air in the living areas below. We know that bed bugs will do this too, rapidly moving to avoid temperatures that are getting too hot for their comfort, and this is one way to spread them around in apartments. A number of websites stated that scorpions “prefer” temperatures from about 75 to 99 degrees, so they are comfortable and active at that pretty high temp. Above that, they probably start looking for cover.

My personal guess is that a scorpion might die if kept at a sustained temperature of 130 degrees, but that they probably find places well below that temperature by moving under things in the attic. It would be interesting to put a thermometer in the open space in an attic as well as under the insulation and compare to see how much difference there is.

Want to see more questions and answers? Visit PestWeb.com or follow @MrPestControl on Twitter®.

Please note, Mr. Pest Control is answering questions supplied by PMP customers across North America. The answers are generated from industry and manufacturer-provided information. The answer may not be specific to the laws and regulations for your State, Province, Territory or Country. In addition, products mentioned may not be registered and or available in all areas. Check with your local Univar ProCenter for specific information to your area. Always read and follow label directions.

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**MR. PEST CONTROL QUESTIONS**

Mr. Pest Control - Continued from page 16

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Scorpion Proof

**QUESTION:** I have a customer who wants their house sealed from scorpions. Is there any literature or method on doing such a thing?

**ANSWER:** Scorpion exclusion would rely on more than just sealing up a house. Because they tend to hide under things, removing as many objects from around the home as possible is a good idea. Keep grass and ornamentals manicured so they are not providing hiding spots or touching the structure. Also, make sure that water is being directed away from the building because moisture attracts scorpions. Like spiders, scorpions are difficult to control unless treated directly, although exterior application of a residual to control other pests may indirectly control scorpions as well.

As for sealing the house, exclusion for other pests applies to scorpions as well. All doors, including garage doors, and windows should have proper weatherstripping. Openings around utility conduits, windows and in roof eaves or soffits should be closed properly. Weep holes can be loosely stuffed with stainless steel or copper mesh. All of these suggestions are good, but really should be done along with property modification.

Arachnid Relatives

**QUESTION:** What is the spider that looks like a scorpion?

**ANSWER:** You may be referring to a solpugid, also called a sun scorpion, wind scorpion, sun spider, or, in the Middle East, the camel spider. The largest species probably get no longer than five inches with their legs stretched out. In Arizona, I have found one nearly four inches long with legs stretched out, but the body is rarely longer than two inches.

The proper name for these relatives of scorpions is solpugids. They are non-venomous and, in some cases, even incapable of biting people. They are equipped with strong treading mandibles, a very aggressive personality and are highly efficient predators that will eat just about any other arthropod. Thus, they are adapted to living in extremely hot climates, and since parts of Nevada and Arizona will hit 120 degrees outside, that temperature does not wipe them out. Of course, when temperatures get that hot the scorpions will all have huddled up somewhere that is cooler and dark, so their little micro-environment likely is well below the air temperature.

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M y good friend, Dr. Stuart Mitchell, asked me to provide some information about termite liability and exposures for the PMP and their companies. This is a good subject to discuss as we have seen an increase in termite damage claims surrounding treatments and inspections of customers' homes. Due to the brevity of this article, I will focus on three important issues surrounding termite services and exposures.

### Trends and Liability Issues
When our office gets a claim, we not only handle the occurrence but we also try and perform loss control as well as determining causes that might be outside of the insured's control.

In our current economy and housing market, homes or structures have been sitting for months to multiple years abandoned. They might or might not have a termite treatment or contract but obviously with no one paying renewals, etc. there is an increased likelihood of termite activity during that time. With this scenario comes increased exposure for the pest professional.

We have seen insureds contacted by real estate companies or new owners to come in and take care of the current live infestations of whatever wood destroying insect might be present before the home is sold. Seems like a normal situation doesn’t it? The problems is the old damage that comes back to haunt the PMP should a reinfestation occur. Yes doesn’t it? The problems is the old damage that comes before the home is sold. Seems like a normal situation to the lay person or another lawyer surrounding the damages a graph that shows “possible termite activity”, that closes the door on those damages usually very quickly.

### Quality Control
This issue might not be new for larger companies, but those PMPs with about 10 employees or less need to step up their quality control if they want to avoid or control their termite liability.

I will only go over one issue of Quality Control the pest professional could start with which I think is the most important if you want to mitigate future claims or suits. That is ANNUAL INSPECTIONS for your termite contracts. Bar none the main reasons we have termite damage claims, outside of poor original treatments, are the annual inspections.

Focus on doing follow up inspections after the annual inspection is done by your technicians. Check the quality of the work performed. Was the annual inspection document completed correctly? Does this year’s annual inspection show any major change since last year’s inspection document? Was the graph updated? There is nothing more aggravating when you look at say five annual inspections where three mention previous damage noted and the other two don’t mention it at all. You think plaintiff attorneys don’t live for inconsistencies like that for their case? You bet they do. Again just one example. Get out there and check the work your employees are doing! There is so much more you can do with your Quality Control.

This article just scratched the surface of what the pest professional could do on a day to day basis to protect their company. Please get with your loss control, insurance professional or others you might know in the industry to assist in limiting your termite liability exposures.

**By Andy McGinty, EVP/COO**

LIPCA Insurance

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**FROM THE CLAIMS FILE**

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A well-documented file from the insured, which is greater when handling a claim or lawsuit than having many conferences on documentation. There is nothing I have written numerous articles and spoken at thousands of dollars turns into a five-figure damage claim or a claim that should be only a few hundred or more. That is ANNUAL INSPECTIONS for your termite contracts. Bar none the main reasons we have termite damage claims, outside of poor original treatments, are the annual inspections.

Focus on doing follow up inspections after the annual inspection is done by your technicians. Check the quality of the work performed. Was the annual inspection document completed correctly? Does this year’s annual inspection show any major change since last year’s inspection document? Was the graph updated? There is nothing more aggravating when you look at say five annual inspections where three mention previous damage noted and the other two don’t mention it at all. You think plaintiff attorneys don’t live for inconsistencies like that for their case? You bet they do. Again just one example. Get out there and check the work your employees are doing! There is so much more you can do with your Quality Control.

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This year we have seen numerous grasshopper problems around the state. There are about 113 species of grasshoppers in Nevada, but only about nine of them are considered pest species. Grasshoppers belong to the family Acrididae in the order Orthoptera. They can be recognized by the medium length antennae and strong hind legs for jumping. Most adults have functional wings and some are capable of long flights.

In southern Nevada, we often see high numbers of the pallid winged grasshopper (Trimerotropis pallidipennis). This is one of the band winged grasshoppers so called because of the black band on the yellow hind wings (Fig. 1). This species is only an occasional problem in southern Nevada. This insect builds up high numbers in the desert areas. Once they become adults they move into the surrounding urban areas, but usually only cause limited damage. They are capable of migrating long distances and during these migrations the hoppers may move several hundred miles. This grasshopper is also highly attracted to lights and may become a nuisance around outdoor lights.

In northern Nevada the valley grasshopper (Oedaleonotus enigma) (Fig. 4) has also been a problem. This species builds up on burned and disturbed areas. When these areas dry out they move into crops and yards. Adults of this species often never develop functional wings.

Grasshoppers have an incomplete metamorphosis. The eggs hatch into nymphs and they then go through five molts to become adults. Adults are often very difficult to control. Therefore the focus of control is best aimed at nymphs, which also causes the most damage to vegetation.

Switching to low ultraviolet lights usually helps the problem. In northern Nevada the clear winged grasshopper (Camnula pellicula) (Fig. 2) can build up in high numbers (Fig. 3) on meadow and pastures area. Populations of this grasshopper can be as high as 50 or more hoppers per square yard. As the name implies, adults have clear wings.

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Kenmuir - Continued from page 8

will help maintain drains free from collecting debris have become available. Drains can be complex and have many nooks and crannies that extend far beyond what can be seen at the surface. Bio treatments for drains, using enzymes along with foaming machines, have made treating the source more effective allowing better treatment of this key breeding source. Commercial drain line service or Bioremediation has been gaining momentum as a new revenue stream for many PMP’s. Bioremediation uses live micro-organisms injected into the drain lines to help keep them clean. These organisms digest fat, oil and grease and convert them to water and carbon dioxide.

You, the pest management professional, play an important role when it comes to managing filth flies. This is one of those important services we provide in protecting human health.
At Univar Environmental Sciences, we've got more than just the right products for the job. Our team has the experience and the advice you can count on to help your business thrive. So get in touch today.

Call us at 800-888-4897 or go to PestWeb.com.