



**HURRY & RESERVE  
YOUR SEAT FOR THE  
2016 PEST EXPO.**  
*See Page 13 for details.*

**SPIDERS IN THE DESERT**  
*By Rick Vetter, Page 6*

**DUST IN THE ...WHERE?**  
*By Stuart Mitchell & Andy McGinty, Page 8*

**TIPS FOR BED BUG VICTIMS**  
*By Paul J. Bello, Page 12*

The  
**CSI:**  
CONTROL SOLUTIONS INC.

evidence reveals...

**Tekko™ Pro**  
is responsible.



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 Novaluron, 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](http://www.controlsolutionsinc.com)



**Innovation you can apply.**

A Tekko™ Pro treatment should only be made by a licensed pest management professional.

Tekko is a trademark of Control Solutions, Inc., Pasadena, Texas 77507

## IT HELPS TO KNOW WHAT THE PEST MANAGEMENT TRENDS ARE IN OUR INDUSTRY



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

**R**emember, trends occur only if a few companies try something new and it works and is profitable. Positive word spreads quickly and others jump on board. Here are some of the top trends today offering income.

Pest proofing, covering insects and rodents, not giving it lip service -- but going out and selling it. Assign specific crews to do so. Talk to your distributors for ideas of what is working.

Soft rodenticide baits -- Sales are prospering as bait acceptance has improved.

Increase in the use of pheromone traps for destroying and/or pinpointing pantry pest problems. This is true for commercial and residential accounts.

Expanding services into wildlife management, including bird specialty work. Some of this work brings in five figures or more. Cleaning solar panels, removing invasive bird nests from telephone lines and bird proofing are in increasing demand.

Fly management in commercial buildings includes the use of insect light traps, scheduled drain cleaning, enzyme foam treatments, installation of air curtains and more use of fly paper.

Bed bug maintenance programs and heat chambers are available for persons desiring such treatments after traveling.

If you are not sure how to initiate such programs, ask for advice. Call NPMA and request help via the NPMA mentor program. They will hook you up with another PMP in a different area of the country who will share their knowledge with you.

It sometimes feels uncomfortable to try new things. If you get too comfortable in what you did yesterday, tomorrow may become extinct for your company. McDonalds used to only serve only hamburgers. That changed to include chicken and fish. They did not do breakfast. That changed to breakfast served until 11:00 A.M. Now they are going to serve breakfast all day long! Competition forces you to make bold moves. What is your next move?

### TABLE OF CONTENTS

**Pest Management Trends. . . . . 3**  
*By Austin Frishman*

**It's Lonely at the Top. . . . . 4**  
*By Lloyd Merritt Smigel*

**Spiders in the Desert . . . . . 6**  
*By Rick Vetter*

**Dust in the... Where? . . . . . 8**  
*By Stuart Mitchell & Andy McGinty*

**From The Claims File . . . . . 10**  
*By Andy McGinty*

**Ten Tips for New Bed Bug Victims . . . 12**  
*By Paul J. Bello*

**Mr. Pest Control Questions. . . . . 14**

**2015 Pest Expo Business Directory . . . 15**

**The Regulatory Corner  
Wood-Destroying Pests . . . . . 18, 20**  
*By Robert Leavitt*

**Pest Identification - Aphids . . . . . 22**  
*By Jeff B. Knight*

This magazine is published by the Nevada Pest Management Association, PO Box 33986, Las Vegas, NV 89133 [www.nevadapma.org](http://www.nevadapma.org) • (702) 251-5561

**President** - Rick Rupkey  
[pres@nevadapma.org](mailto:pres@nevadapma.org) • (702) 251-5561

**Vice President** - Joey Toth  
[vp@nevadapma.org](mailto:vp@nevadapma.org) • (702) 808-0317

**Secretary** - Misty Goodroad  
[sectreas@nevadapma.org](mailto:sectreas@nevadapma.org) • (702) 522-8300

**Graphic Designer** - Bob Burch  
[bob@bobburchdesign.com](mailto:bob@bobburchdesign.com) • (702) 565-2983

NPMA reserves the right to refuse, or discontinue any editorial or advertisement and shall not be liable to anyone for printing errors, misinformation, or omissions. No reprinting in any form without written permission from the Association. Copyright 2015. All rights reserved.

# IT'S LONELY AT THE TOP



By **Lloyd Merritt Smigel**  
Care Management Consultants

**W**hen the boss gets a new car or vacations all summer long, and his or her employees cannot get a 50 cent an hour raise because "We're going through hard times right now." - There's a problem.

True, it IS your company and YOUR money but it is not exactly PERCEIVED that way. If you have problems at home - no one wants to hear about YOUR problems, but they do expect your caring about theirs. If you can't afford that big vacation this year because of added insurance costs, no one cares.

Therefore, it's lonely at the top. So suck it up and move on. It is what it is. Each man (or woman) is for themselves and their families. So what?

Right or wrong -- it's life. Sort of the way you feel about yourself and your family. We all live in our own worlds and everything revolves around it. It took me a long time to figure that out. But once I did, life was easier.

When I had my own offices, I used to look at my lowest paid employee and go over their pay to see how WE can move it forward. By consistently moving my lowest paid employee upwards - everyone usually did well.

Another bonus to that is when the annual review came it rarely involved pay, as that was an ongoing effort by both of us.

When I reviewed pay with the lowest paid individual, we discussed how WE can move forward. Be it Sales, Office or Service, there was always a way to create incentives that would help the company and, in turn, would allow me to increase pay through salary, hourly and/or bonus structure.

It's management's obligation to create the environment where the employee and company can both grow and profit. It takes time and thought to do this. When the employee feels that they have no control over their earnings and/or future - they then have a job - not a career. If they want to advance for their own benefit as well as their families and you create no path -

*After the game,  
the king and  
pawn go into  
the same box.*  
**Italian Proverb**

generally, the good ones will leave to better themselves and the bad ones will stay.

The average employee believes that you are probably profiting about 40-50% (or more) of what you bring in. If you do a \$1,000 termite job - they think you are profiting about \$400 - \$500 or more. They have little concept of insurance, electricity bills, phone bills, State and Federal Taxes, Attorney Fees, etc. etc.

If you share a P&L with them and they see you are only making 5-20% profit, it may help them understand what life is really like owning your own business. I'm not trying to look for pity as a boss, but rather understanding.

Many sales and service people go into their own business and fail. They fail because they had to learn the hard way what business is really about. They had to learn how the government controls so much of 'free' enterprise.

I'm not complaining. The point is that until employees learn what really happens at the top - it will be lonely at the top. The more we teach our employees the more they (and we) can both grow and profit.

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



Lloyd Merritt Smigel

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) 751-0336 or email: [terrycare@att.net](mailto:terrycare@att.net)

For Retreat information, please contact Dena at (706) 941-8140

[www.lloydsmigel.com](http://www.lloydsmigel.com)



# Partner with the company that works as hard as you do.



## 1 - Superior Training

Free 1-day training at Bird•B•Gone's manufacturing facility in Santa Ana, CA.



## 2 - Superior Products

Full line of products available: bird spikes, bird netting, electric track and more!



## 3 - Superior Service

Our bird control engineers lead the industry with more than 90 years of hands on experience.



**BIRD•B•GONE**<sup>®</sup> Inc.  
Professional Bird Control Products

Call today for detailed advice from the leading industry experts in bird control

**866-286-3520**  
[www.birdbgone.com](http://www.birdbgone.com)



# SPIDERS IN THE DESERT



**By Rick Vetter**  
*Research Associate (Retired),  
Department of Entomology,  
University of California Riverside*

**S**piders are an interesting group for the pest control industry. They don't inflict damage to homes or spread disease as do creatures such as termites, carpenter ants, filth flies, and fleas. However, they are often one of the top three most common reasons why a home owner requests pest management services. Except for the overblown, perceived threat of medical importance of a few species, spiders are mostly a nuisance, making disheveled webs in the corners of rooms, suggesting bad housekeeping skills. Even educating home owners that, overall, spiders are actually beneficial for humanity does little to reduce their desire to have these eight-legged guests obliterated.

Although Nevada is a large state with mostly water-stressed environments, 88% of its human population is centered in Clark (73%) and Washoe (15%) counties with most of the population draw being in and around Las Vegas. Therefore, most of the Nevada spider issues should be regarding invasion of homes by desert spiders.

The spider of greatest concern should be the western black widow. The mature female widow's coloration of a red hourglass on a shiny black body is very familiar to most non-arachnologists (although that doesn't stop people from creatively misidentifying harmless dark spiders with reddish-orange spots as black widows). However, when black widows emerge from the egg sac, the young spiderlings look nothing like the mother. They have tan legs and cephalothorax (the body part to which the legs attach) and a white abdomen with black spots. As they mature, the white abdomen turns into white stripes, the background color starts to darken and the spider exhibits the more typical widow coloration. Males retain the coloration of the juveniles, have much smaller abdomens and are not commonly identified correctly.

Widow spiderlings balloon so on warm days when there are updrafts and the spiders are still small, they emit silk from the back end of their abdomen, the silk eventually catches the wind like a parachute and the spiders float off like aerial plankton, traveling a few feet

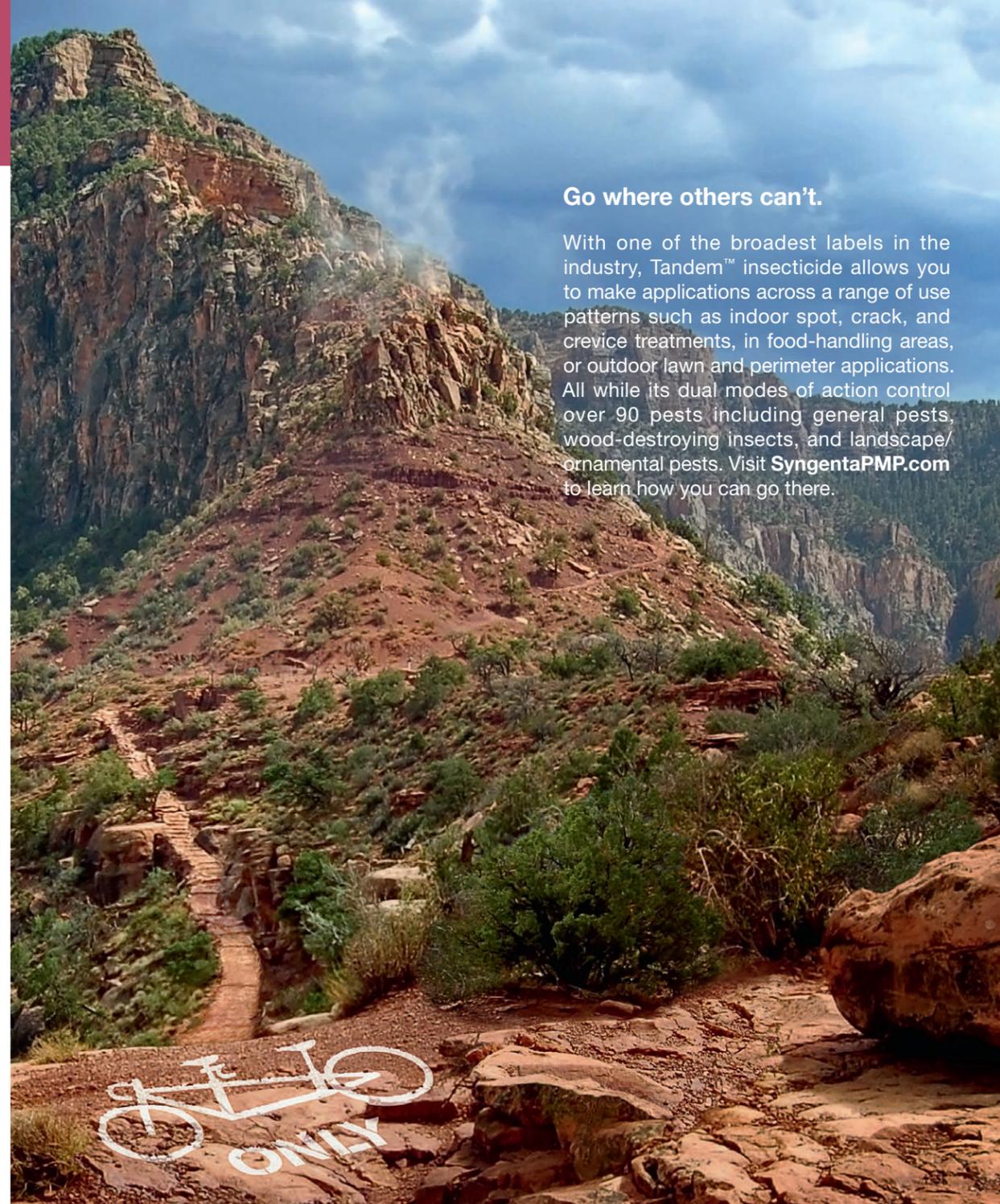
to miles before landing and starting their lives. This is the mechanism how they can reinfest a home and is the reason why constant pest management is necessary for the control of black widow spiders.

Black widows are not typically found inside homes. They usually take up residence outside on patio furniture and barbecues and inside garages where there is lots of insect traffic (i.e., by the doors and vents). Bites by black widows typically manifest in systemic signs and symptoms of envenomation. There may be some redness where the bite occurred and red lines streaking away from the bite site but not much more on the skin surface. However, much of the expression will be in severe pain often radiating through the back, rigid stomach muscles that can be mistaken for appendicitis, and localized sweating. In regard to the sweating, only one limb may sweat while the other body parts are dry. In Australia, one account of a bite from their widow spider reported a puddle developing on the emergency room floor as the bite victim's leg dripped sweat. Antivenom is available and appears to counteract the widow venom within 30 minutes or so. The danger the spiders pose is correlated with size, the bigger the widow spider, the more severe a bite can be because the bigger widows have longer fangs, stronger biting musculature and more venom to inject.

The next spider to consider is in the recluse genus. Brown recluse spiders are not native to the western United States and are not indigenous to Nevada. However, the desert recluse is a relative of the brown recluse and its range extends northward to include the southern tip of the state including Las Vegas and surrounding areas. There are no additional native populations of recluse spider in Nevada. The desert recluse should be considered medically important however, it still is not as dangerous as people make it out to be. One of the problems in identifying the desert recluse is that it looks somewhat different than the brown recluse. Whereas the brown recluse has pigmentation in the head region, giving a good impression of a violin mark, this pigment is very slight or missing in a desert recluse. So a desert recluse is often uniformly tan. To add even more confusion to the equation, many spiders in the desert are uniformly tan so it would be very easy to misidentify common, harmless Nevada desert spiders as desert recluses and vice versa.

Although recluse bites can cause skin lesions, the spider's reputation greatly precedes itself. Throughout North America, physicians and the general public blame spiders in general and recluse spiders in particular for causing all kinds of nasty skin lesions. This often occurs in areas of North America where no recluse spiders

*Continued on page 16*



## Go where others can't.

With one of the broadest labels in the industry, Tandem™ insecticide allows you to make applications across a range of use patterns such as indoor spot, crack, and crevice treatments, in food-handling areas, or outdoor lawn and perimeter applications. All while its dual modes of action control over 90 pests including general pests, wood-destroying insects, and landscape/ornamental pests. Visit [SyngentaPMP.com](http://SyngentaPMP.com) to learn how you can go there.



syngenta®

©2012 Syngenta. Important: Always read and follow label instructions before buying or using Syngenta products. The instructions contain important conditions of sale, including limitations of warranty and remedy. Tandem™, the Alliance Frame, the Purpose Icon and the Syngenta logo are trademarks of a Syngenta Group Company. Syngenta Customer Center: 1-866-SYNGENT(A) (796-4368). 1LGP2027 08/12

# DUST IN THE... WHERE?

Over approximately the last 2 years, we have observed that while in the pursuit of structural pests such as bed bugs, fleas, and other influential insects, inappropriate or counter-labeler use of dust formulations has resulted in a significant increase of both claims and lawsuits.

Throughout the U.S., whether performed by pest management professionals or wildlife damage control professionals (licensed and certified to apply a dust formulation), some applications have resulted in third parties and/or consumers filing complaints with the courts and/or regulatory agencies. Claims are not limited to certain areas of the country. We have handled, or helped PMPs handle, exposures in all four corners of the country.

We are hopeful the following information will help with the technical side of applying dust products. More importantly, we offer simple ways to help mitigate claims and/or suits that are becoming more frequent every year.

Let's start with the types of claims/suits we are receiving. We can then delve into some pragmatic information about dust applications that you may want to implement within your company and with your employees.

There is one common "statement" that we constantly hear with "dusting" or dust application claims. It is made by about every dusting expert and regulatory official as well as anyone involved with the claimant or plaintiff.

"If the consumer can see the dust, you used too much!"

Of course there are some that disagree, but when you have a number of credible experts testifying to this statement being true, it does make it difficult for your defense. Here is a prime example:

"We have a condo that was treated for fleas. Got a call well into the claim that too much dust was used and the state was called in. The state inspector wrote up a report that too much dust was used and the resident moved out for close to six months! The unit had to be cleaned three times and we were not informed until about the 3rd time the condo was to be treated (another issue about reporting claims early). Needless to say, this certain consumer was very, very particular about any residue of any kind. Since this claim is still ongoing, we will leave other issues out of the article for defense purposes. The bottom line is this claimant stated that the dust caused her property damage and bodily injury.

Here is the kicker. There were two other condos that were also treated with dust resulting in the same complaints. This time we were able to get on it from the

start. And guess what? Even though you could see dust in isolated areas, swab and air samples came back with normal results. Therefore they basically have no claim. It is our understanding that the other condo that had to be treated three times (per residents demands) was in the same shape. Right now, we have one claim where we have demands well over \$100K for one condo and \$0 for the other 2 units.

So how can that be? Three condos with the same alleged conditions, but such different results? Again who was involved and when? On the claims side, it is so easy. If you have an insurance person or expert in litigation that knows these exposures, CALL THEM! That is everything!

We have had other dusting situations that turned out to be nothing. Some even under the insured's deductible. But this is all after the fact. Now let's focus on ways to mitigate or totally avoid these claims in the first place.

Dust formulations, when applied correctly or per labeler directions, are exceptionally effective in the reduction and elimination of pest pressures. However, nowhere on a dust insecticide label have I ever read, "apply per resident's demands" or "applications should be per the property owners' and/or residents' requirements" or "treat if you feel like it." So why do it?

While following the directives of the product label, you must be aware of the hidden structural components that may carry a dust formulation from region A to region B. If you apply the product here, it will go where?

A dust formulation particle can be 0.4-10 Qm (micrometer or micron is one millionth of a meter) in size. If one throws a little Brownian motion or physics into the mix, dusts can be either very effective tools or very expensive claims.

Brownian motion or pedesis (Greek meaning "leaping") is the random motion of particles suspended in a fluid (liquid or gas) resulting from collisions with the quick atoms or molecules in the liquid or gas.

If particles subject to Brownian motion are present in a given medium and there is no preferred direction for random oscillations, then over a period of time, the particles will tend to be spread evenly throughout the medium. For example, if A and B are two adjacent regions and, at the time or t, A contains twice as many particles as B, then at that instant the probability of a particle leaving A to enter B is twice as great as the probability that a particle will leave B to enter A. The physical process in which a substance tends to spread steadily from regions of high concentration to regions of lower concentration is diffusion.

*Continued on page 16*



## Target Advantage The products you need, when you need them.

### Advantages of working with Target Specialty Products:

- Training & regulatory staff
- Continuing education tracking
- Board Certified Entomologists
- Licensed arborists
- Equipment specialists
- Next day delivery in most areas

### National distributor of pest management & plant protection solutions

Fumigation • Golf • Landscape • Nursery • Public Agency  
Pest Management • Vector • Vegetation Management

### Contact your local Target representative for more information.

Austin, TX  
800-896-1259

Baltimore, MD  
888-215-0028

Chesapeake, VA  
800-203-6456

Dallas, TX  
800-345-9387

Fresno, CA  
800-827-4389

Houston, TX  
800-901-9746

Las Vegas, NV  
866-472-3695

Oklahoma City, OK  
800-522-9701

Portland, OR  
877-827-4381

Raleigh, NC  
800-705-9253

Reading, PA  
888-225-6080

Sacramento, CA  
800-533-0816

San Antonio, TX  
800-925-3922

San Jose, CA  
800-767-0719

San Marcos, CA  
800-237-5233

Santa Fe Springs, CA  
800-352-3870

Tempe, AZ  
800-352-5548

Topeka, KS  
877-777-5614



By **Andy McGinty, EVP/COO**  
LIPCA Insurance

This article surrounds the issue of WDOR/WDIRs (WDOR) inspections and decision making. The housing market is almost back in most areas of the country and so are new WDOR claims. The only positive about the housing crunch over the last 5-6 years is we have seen a huge decrease of WDOR claims which is always good. That is starting to change.

With that said, as per the questions listed above, let's delve into these issues a little more. As for the history (past evidence) of the home, if you have it under contract what should be listed on the WDOR? Again as stated

some PMPs think it is important to list everything they can on the WDOR for the users benefit. Again I think this is a very small minority of the industry that does this "history report". The question is easy - Why do it?

What happens if you list past evidence? What could be some of the problems? :

1. You list a previous infestation but not the other one or two that also occurred in the past years? Yes we handled that claim.
2. Damage was once located in a place that looks to be fixed or it is not readily accessible at the time of your inspection. You mentioned live termites but nothing about past damage. They find out later that the sellers just patched that area (yeah, hard to believe they would do that) but the damage is still there. One of their allegations in that lawsuit was (paraphrasing), "Well you listed past termite activity but you didn't mention the past damage!" We eventually won on that but insured lost a deductible and now has claim on his loss history.

Continued on page 12

## General Liability Insurance Small Premium Accounts

(\$150,000 pest/lawn receipts or less)

# AS LOW AS \$500 ANNUALLY

AS LOW AS

ANNUALLY

(ADMITTED PAPER A+ rated • 1-2M limits \$500 deductible)



INDUSTRY OWNED NATIONAL PEST AND LAWN PROGRAM  
COVERAGES FOR GL, PROPERTY, EQUIPMENT, UMBRELLAS, W/C, AUTO, BONDS AND MORE!

*Will work with any agent you choose*

800-893-9887 Ext. 7016 • Fax 225-927-3295 • [www.lipca.com](http://www.lipca.com) • [andy.mcginity@lipca.com](mailto:andy.mcginity@lipca.com)

# BRIGAND

## RODENTICIDES

*Palatable,  
Practical &  
Simply Deadly...*



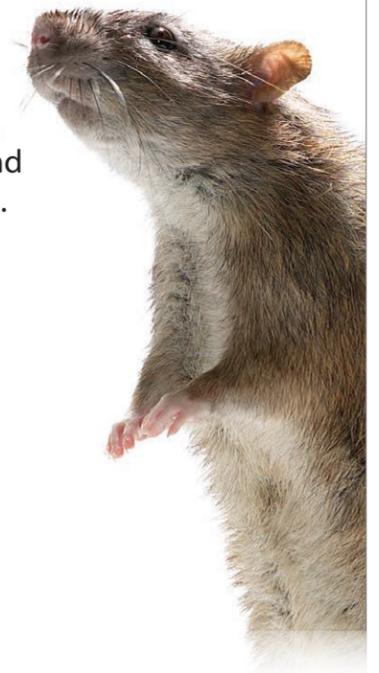
### SOFT BAIT

Highly attractive soft bait, ideal for clean-out and to tempt rodents away from other food sources.



### WAX BLOCKS

Moisture tolerant wax block bait with a unique chocolate aroma, ideal in all situations.



**AB Bait Co. 610.849.1723**  
[www.ABBAITCO.com](http://www.ABBAITCO.com)



**LinkedIn**



Brigand baits contain bromadiolone 0.005% w/w.  
EPA REG NO. 87235-1 and NO. 87235-2

# TEN TIPS FOR NEW BED BUG VICTIMS



**By Paul J. Bello**  
PJB Pest Management Consulting  
Author: *The Bed Bug Combat Manual*

So there you were, minding your own business when the worst happened, you discovered that you have bed bugs. Maybe you know how you got them, maybe you don't but, that may seem to matter little now as you focus on what to do right now to address your situation. Of course you want to make the right decisions so that you don't inadvertently make matters worse. The following tips are provided to get you headed in the right direction:

Don't panic! There is no need to panic, become overly distraught or emotionally lose it simply because you have bed bugs. Sure, this is a problem but it's a temporary situation which can be resolved in a time efficient manner provided that the correct steps are taken. Remember that in difficult situations it's usually best to remain calm such that you can make good decisions.

Stop! Don't make rash decisions and don't throw anything out. Bed bug victims often report that they've been advised to throw out infested furniture. It is not necessary to throw out furniture (i.e. sofas, chairs, mattresses, box springs and other such items) simply because there are bed bugs. All we need to do is eliminate the bed bugs. Think of it this way, you wouldn't throw out your dog or cat just cause it has fleas, you'd just do what you needed to do to get rid of the fleas.

Educate yourself. One of the very best first steps you can take is to educate yourself such that you know about bed bugs. Utilize the information on credible websites which offer valuable information online for free.

Don't let your bed bugs turn into head bugs! One of the most debilitating effects of bed bugs observed is the anxiety and related psychological toll that bed bugs can inflict upon an individual. We need to remember that these are blood feeding insects and nothing more. All we need to do to eliminate these pests from our homes is to utilize effective methodologies.

It's bed bugs, not rocket science. There's no secret formula to successful bed bug elimination. Essentially all that is necessary is that we inspect and treat all the places where bed bugs are hiding. Of course that may be easier said than done but I've not yet seen a bed bug problem that cannot be remediated given sufficient and proper effort.

Hire the right pest professional for you. There are various published tips on how to select a pest professional. Do your homework by reading up on this and watching the available brief videos prior to making your purchase decision.

Can't afford a pro? High quality professional bed bug work can be costly and many folks find that they simply cannot afford to hire a pest professional. However, this doesn't mean that all is lost simply because you cannot afford a professional. The do-it-yourself approach can be successful provided suitable guidance from a competent, experienced and knowledgeable source is obtained to assure that your efforts are effective.

Where to get help for free. Suitable bed bug advice and assistance is available at no cost from various online sources. Even if you don't have your own computer, online access is available at your local public library. Sources of such information and help include various government agencies, universities and others.

Avoid this common mistake. The most common mistake observed is that people make ill-informed decisions and follow poor advice. As previously mentioned, this common mistake can be easily avoided through educating yourself about bed bugs.

Online bed bug informational sources include but are not limited to the following: bedbuggeneral.com • bedbuggerforums.com • cdc.com • pjbpestconsultant.com • University of Florida • University of Kentucky • Rutgers University • University of Minnesota • Virginia Tech University • Local Health Departments.

## Claims File - Continued from page 10

3. What about conducive conditions? You list some conditions in the past but not all of them. Leaks going on for years but you only list one or use the words "few leaks in the past". What is a few? Kind of like the extent of damage issue. You state the damage is minor but to the buyer it is major (possible future article).

A few tips that I think will help down the road. The first one is pretty simple when you think about it. JUST PUT DOWN WHAT THE DOCUMENT ASKS. No more and no less. If you lack info you are to document then you are in trouble. If you put too much info it can be just as bad.

The WDOR was written that way for a reason. It is to protect all parties that depend on this document.

Continued on page 13



## January 29, 2016

### The Orleans Hotel & Casino

To receive the discounted room rate, please book your room by Dec. 28, 2015. Use code A6NPL01.



## KEYNOTE SPEAKERS

**Gail Getty - Bed Bugs & Cockroaches**

**Rick Vetter - Spiders**

**Sylvia Kenmuir - Occasional Invaders**

**Stuart Mitchell - Flies**

**Erin Monteagudo - Labels**

Earn Six CEU Units for 2016 Valid in Arizona, California, Nevada, Utah, New Mexico, Washington and Oregon • Meet with Vendors and Suppliers • Continental Breakfast • Lunch Buffet • Refreshments • Raffles

**MEET & GREET**  
January 28 • 6-8pm  
Principal plus one guest only.  
Please RSVP to [sectreas@nevadapma.org](mailto:sectreas@nevadapma.org)

REGISTER NOW ONLINE AT [WWW.NEVADAPMA.ORG](http://WWW.NEVADAPMA.ORG)

Questions call Misty (702) 656-0455

## Claims File - Continued from page 12

Whether you agree or not with the current form (most I don't) it is the hand you have been dealt. If you put information there that alters the wording it takes away from the strength that is there to protect your company.

But there is one small addition you might consider that we have seen effective on WDORs for years. For those WDORs that are issued on structures you have on a current contract, simply write in the additional comments section on the WDOR, "**RECORDS AVAILABLE UPON REQUEST.**" When the buyer calls you later and complains that you didn't list this history or the past evidence, you simply let them know that we never got a request for file materials. We have

got our insureds out of dozens and dozens of claims and lawsuits over the last decade with that defense. **IMPORTANT: make sure you get permission from the current owner of the structure before you send any materials.** Again it does not stop all lawsuits but I can tell you in the last 15 or so years where our insureds use this wording on the document; I can count the number of lawsuits on one hand. Good luck!

*Andy McGinty is the EVP/COO of LIPCA Insurance. LIPCA is 100% owned by pest and lawn companies since 1985. Andy has been handling and supervising all variety of pest and lawn claims and lawsuit for over 23 years.*

## The Cabinets Aren't Bare

**Question:** How much time before a person is able to put items back after applying gel bait for cockroaches inside kitchen cabinets – next day, 2 days? Is it necessary to empty all of the cabinet?

**Answer:** Most cockroach gel baits are limited to crack and crevice applications in food handling areas. If applied properly, then items in kitchen cabinets should not contact gel baits. Since active ingredients are contained within gel baits, it's not necessary to wait to put items back into cabinets. The cabinets don't have to be totally emptied prior to treatment either. Just enough to provide access to the cracks and crevices you'd like to treat. If you're worried about dripping gel bait onto items in the cabinet during application, then go ahead. But a calibrated bait gun would keep you from worrying about drips

## German Specialist

**Question:** What equipment would you suggest for someone wanting to specialize in German cockroach management? Is wall injection necessary?

**Answer:** More important than any equipment is the ability to properly inspect and find German cockroach harborages. This is what will define you as a specialist from other PMPs. Once you find their harborages, baits or crack and crevice treatments will probably be your most common treatment methods. Non-repellent aerosols or liquids are a better bet than repellent products because the latter carries the risk of spreading cockroaches. If you must knock down a pocket of cockroaches with a repellent product, make sure the treatment is thorough and don't assume cockroaches that run away are going to die.

It is common for German cockroaches to live in wall voids, especially in large infestations, but it is not always necessary to treat wall voids. Wall voids should be dealt with when an inspection leads you to believe they are a problem. Wall injectors are used when holes need to be drilled into walls to gain access to the wall voids. They may not be necessary if dusting through an existing opening or around an electrical outlet or light switch provides enough access for treatment application with a duster or portable aerosol generator, ideally with non-repellent products.

## Incoming!

**Question:** I'm having a problem with German cockroaches in a restaurant I've serviced since April 2014. It's in a shopping plaza connected to a nail salon, bakery and another restaurant (I haven't talked to any

of them yet). It's not a dirty restaurant although they do have table legs, pipes behind the cookline and a grease trap that could be cleaned. The restaurant was fumigated for termites about six months ago. It had German cockroaches before the tenting and I was hoping it would kill all of them so I could get a fresh start. From the beginning I have used 50 Maxforce® FC roach bait stations, 122 Victor® pheromone traps, Maxforce® Complete, glue boards, 5 tubes of Maxforce® FC roach gel bait, Optigard® Flex, Demand® and Nylar IGR. I'm getting them but they continue to have the same problem. Any suggestions would be greatly appreciated.

**Answer:** A fumigation done right would have killed every German cockroach present at the time of treatment. This leads me to believe that the cockroaches are an incoming problem, meaning a food distributor or employees are bringing them into the restaurant. In this type of situation, monitors placed where food is delivered and around employee lockers alert to incoming cockroaches, at which point these areas are treated before cockroaches spread to other parts of the kitchen. This is probably the key step that was overlooked.

It's possible for neighboring businesses to have German cockroach infestations that would contribute to this restaurant's problem. If they were part of the fumigation, this is probably not the case. You may never know the pest status of the neighboring businesses, but a dust application to shared walls can prevent a shared problem and will last for several months.

In general, German cockroach management fails when all of the cockroach harborages are not found and treated directly. Don't waste time treating the entire kitchen. Focus on monitoring and inspection. Whenever you find a pocket of cockroaches, treat it directly. If you choose to use a repellent product, make sure the treatment is thorough and every cockroach is accounted for. Don't assume cockroaches that are running away will die. Make sure they die front of you. You can also lay off the IGR for now since it lasts for several months. Hope this helps.

## It's the Knockdown

**Question:** How can you tell if a product is repellent or non-repellent? I've been trying to find information on product labels, SDS and anywhere online and I just can't get a read on what is what. I have a good idea from what I've noticed in the field with certain products, but I would love to find a list of active ingredients or products to be able to reference once and for all.

### AB Bait Company

www.abbaitco.com  
**Andrej Branc** 610-849-1723  
sales@abbaitco.com

### AP&G Catchmaster

**Jackie Bell** 480-760-5874  
jbell@catchmasterpro.com

### Allergy Technologies, LLC

allergytechnologies.com  
**Tom Nishinura** 215-654-0880  
service@allergytechnologies.com

### B&G Equipment Co

www.bgequip.com  
**John Cotton** 678-688-5601  
jcotton@bgequip.com

### BASF

www.pestcontrol.basf.us  
**Margie Koehler** 951-277-8554  
margaret.koehler@basf.com

### Bayer Environmental Science

www.backedbybayer.com  
**Josh Shoemaker** 602-820-5684  
josh.shoemaker@bayer.com

### Bell Laboratories, Inc

www.belllabs.com  
**Jeremy Davis** 574-361-5058  
jdavis@belllabs.com

### Bird-B-Gone, Inc

www.birdbgone.com  
**Mike Dougherty** 800-392-6915  
mike@birdbgone.com

### Bird Barrier America

www.birdbarrier.com  
**Ryan Wilke** 310-525-3328  
ryan.wilke@birdbarrier.com

### Control Solutions Inc

www.controlsolutionsinc.com  
**Rob Ives** 713-203-4058  
rives@controlsolutions.com

### Cornerstone Merchant Services

www.cornerstonemerchant.com  
**Chuck Ley** 702-880-8116  
julio@cornerstonemerchant.com

### Ensystem

www.ensystem.com  
**Ed Wilson** 909-615-5659  
ewilson@ensystem.com

### United Phosphorus

**Jeff Ziehmer** 602-510-7006  
jeff.ziehmer@uniphos.com

### Fleetmatics

**Scott Anderson** 866-844-2235  
chelsey.carlson@gmail.com

### G & K Services

www.gkservices.com  
**Mike Malloy** 702-677-3000  
tamila.kolodish@gkservices.com

### JT Eaton

www.jteaton.com  
**James Rodriguez** 800-321-3421  
james@jteaton.com

### Kness Mfg Co, Inc

www.kness.com  
**Paul Yu** 641-932-7846  
paul@kness.com

### Liphatech

www.liphatech.com  
**Larry King** 714-985-9265  
kingl@liphatech.com

### Lipca, Inc

www.lipca.com  
**Andrew McGinty** 225-927-3283  
andy.mcginty@lipca.com

### Mattress Safe Inc

www.mattresssafe.com  
**Will Poston** 770-205-5335  
gary@mattresssafe.com

### MGK

www.mgk.com  
**Matt Kenney** 559-232-8696  
matt.kenney@mgk.com

### Modern Methods Sales & Marketing

**Art Guzman** 702-577-6382  
guzzer60@gmail.com

### Nisus

www.nisuscop.com  
**Scott LaFave** 714-270-0335  
scottl@nisuscop.com

### P+L Systems LLC

www.pandlsystems.com  
**Steve Jackson** 877-928-2847  
pcallahan.na@pandlsystems.com

### Paragon Professional Products

**Steve Diaz** 928-201-9347  
diazsteve@aol.com

### Pest Control Supplies

www.pcspest.com  
**Will Shively** 816-421-4696  
wshively@pcspest.com

### Pestwest Environmental

www.pestwest.com  
**Scott Baldwin** 480-747-2688  
scott.baldwin@pestwest.com

### Pitbull

www.pitbullpestcontrol.com  
**Joey Toth** 702-400-1946  
jtoth@pitbullpestcontrol.com

### Protect-A-Bed

www.protectabed.com  
**Brian Hirsch** 414-731-1663  
brian.hirsch@protectabed.com

### Sundance Insurance

www.sundanceinsurancegroup.com  
**Jessica Jackson** 702-270-8277  
jessica@sundanceinsurancegroup.com

### Syngenta

www.syngenta.com  
**Nick Grisafe** 909-353-5907  
nick.grisafe@syngenta.com

### Target Specialty Products

www.target-specialty.com  
**Kurt Smith** 702-631-7495  
kurt.smith@target-specialty.com

### Technicide

www.technicide.com  
**Jim Harper** 800-950-5866  
jim@technicide.com

### UnivarEnvironmental Sciences

www.univar.com  
**Jason Mayers** 702-528-4411  
jason.mayers@univarusa.com

### Western Sage Insurance

www.westernsageinsurance.com  
**Rick Morache** 702-735-0198  
rickm@westernsageinsurance.com

Continued on page 16

# MR. PEST CONTROL QUESTIONS

**Answer:** In general, it's the pyrethrin and pyrethroid products that are repellent. Most, not all, pyrethrin and pyrethroid active ingredients end in -thrin, as in bifenthrin and deltamethrin. These products usually indicate knockdown properties as well. These are the two giveaways that a product is repellent. The newer chemistries, like the neonicotinoids, fipronil and indoxacarb (to name a few), are non-repellent. Most product labels are quick to mention that a product is non-repellent and may state that it does not have knockdown properties. The terms "delayed-action", "transfer" or "sharing" describe non-repellent products as well.

Combination products that contain both repellent and non-repellent active ingredients can go either way. The two can be combined in a formulation that results in a non-repellent product, as in Transport<sup>®</sup>, which states that it is non-repellent. If the product information mentions knockdown, as does Temprid<sup>®</sup>, then it is repellent. You'll be more flexible over time if you can spot these qualities instead of relying on a list that can change.

## Spiders - Continued from page 6

of any species have been found. Misdiagnosis and overdiagnosis of skin lesions as recluse bites is a big problem in medicine in that there are about 40 medical conditions that cause skin lesions that can be or have been misdiagnosed as recluse bites. Even in regions that have recluse spiders, bites are not very common. The biggest concern when a skin lesion is misdiagnosed as a recluse spider bite is that it could easily be another medical condition which is then treated as a spider bite, the actual condition continues unchecked and the condition is then able to run rampant with potentially dangerous results including death. Some of these medical conditions include: cancer, Lyme disease, leukemia, basal cell carcinoma, necrotizing bacterial infection, anthrax, diabetic ulcer, shingles, bed sores, adverse reaction to medications, burns, poison oak.

One of the biggest advancements that has surfaced in spider venom toxicology in the last decade is the realization that the bacterial infection MRSA (methicillin-resistant *Staphylococcus aureus*) is a common, widespread affliction that both the medical community and the general public have been mistaking for spider bites. MRSA is common in places where people interact with each other in high density for long periods of time. Some of these places include prisons, other correctional facilities, nursing homes, long-term health care facilities, military barracks, and high school, collegiate and professional sports locker rooms. On

several occasions, a facility requested "spider control" and the pest management professional was able to convince the facility that their problems were bacterial not spider. This allowed the facility to correctly address the problem, the pest control person was a hero and it prevented an uncomfortable situation (i.e., spraying for spiders when it was not a spider-related incident and then getting blamed for continued skin lesions in the building's occupants due to incompetency).

*Rick Vetter has recently authored a book entitled, The Brown Recluse Spider.*

## Dust - Continued from page 8

External physiochemical factors that affect the molecules in a liquid or gas include: Radiation, Temperature, Air/Gas or Fluid Pressure & Density, Light, Color, Sound, Electrical Field, Magnetism, Acidity or Alkalinity (pH).

Now that you are thoroughly confused or enlightened on dust particle movement, the best method to avoid claims is to read, understand, and follow the label. Within their directions, product labels incorporate and balance all dust formulation characteristics.

Pragmatically, and within the IPM template, product labels blend all required information to provide the "How to..." within an environmental assessment.

A duster pulls air into a chamber and through agitation mixes a metered dose of dust per compression application. Avoid inhalation, ingestion, and eye/skin irritation through labeler directed use of PPE.

Dust applications must result in a fine surface film within unexposed and/or inaccessible sites. In pursuit of structural pests, dust applications must approach the IPM goal of environmentally benign as well as the prevention of claims and losses.

Folks, training is everything! Whether in the office or in the field, facilitated training of applicators by licensees or vendors through instructional, hands-on dust applications must be completed and constantly updated. Just as essential as ongoing training is documenting (in writing) the training event topic (noting lecture and/or hands-on training), instructor, date, time and duration, location, attendees, and any pre/post-quiz or pre/post-test results (file with documentation). ATTENDEES MUST SIGN THE TRAINING SHEET FOR VERIFICATION! No documentation, and it NEVER happened!

Plaintiffs' attorneys are subpoenaing training records and questioning the documents if attendees

*Continued on page 20*

Drywood Termite  
Prevention & Treatment

VERSATILITY  
REDEFINED  
Dust or WP? Yes!



CimeXa<sup>™</sup>  
insecticide dust

Rapidly controls bed bugs and other pests with 10 year residual

Apply ANYTIME Works OVERTIME

InTice<sup>10</sup> perimeter bait

Long lasting, broad spectrum, cost effective insect bait for use indoor & outdoor

UNFAIR ADVANTAGE<sup>™</sup>

Rockwell Labs Ltd  
creating the future of pest control

www.rockwelllabs.com

# THE REGULATORY CORNER WOOD-DESTROYING PEST INSPECTION AND REPORTING

By Suzanne Suter

Nevada Department of Agriculture

Termites are not one of the more frightening looking insects in southern Nevada, but they certainly are one of the most destructive. It seems Nevada homeowners are more creeped out by roaches, bed bugs, scorpions, and even springtails, than by termites. But tiny cryptic termites, more sneaky than bedbugs and the first cousin of roaches, are often not even recognized as a threat. However, the National Pest Management Association reports that termites cause about \$5 billion in property damage nationwide every year. Yet Nevada homeowners (and some Nevada pest control operators) are unaware that, according to the U.S. Forest Service Termite Infestation Probability Map, southern Nevada falls in the Moderate to Heavy Zone for termite infestations.

Don't be misled by the false presumption that termites exist only in warm humid climates. Termites are the most important cellulose recycling organisms and the most abundant group of insects living in desert environments. While Las Vegas homeowners vigilantly battle ants and roaches, they are mostly oblivious to the fact that our deserts harbor more termites than ants and roaches combined. As we plow and build over termites' natural homes they are well adapted to move into our homes which offer an unprecedented desert buffet of pine studs, within an especially attractive oasis of plumbing penetrations and irrigated landscaping (enhanced all the more by occasional plumbing leaks).

Termites, once established within a home's timber frame, cause immense structural damage if left unchecked. In fact, the annual average cost to homeowners to repair and mitigate termite damage exceeds the monies dispensed by insurance companies to repair damage due to all other nationwide natural disasters combined. Home insurance covers the cost of most natural disaster damage to homes with the exception of - you guessed it - termites. That is because, unlike damage from other natural causes, insurance companies consider termite infestations to be preventable. Regular inspections for wood-destroying pests are an essential component of prevention.

While homeowners may not recognize the local threat of termites to homes, conventional banks and mortgage insurers are well aware that a termite infested house is a questionable investment and they look for assurance that their mortgages are backed by professional inspections for evidence of wood-destroying pests. Other than termites, common Nevada wood-destroying pests include wood-destroying fungi, carpenter ants, and powderpost beetles.

As a result of the labors of the National Pest

Management Association working in conjunction with builders and banks, mortgage lenders typically require that homes undergo wood-destroying pest inspections when homes are bought and sold. In our state, all wood-destroying pest inspectors must have a structural pest control license (often called a C3 license). The U.S. Department of Housing and Urban Development and the NPMA created form NPMA-33 for reporting inspection results. NPMA-33 is a minimal model for wood-destroying pest inspection reports. Here in Nevada, the NDA has developed and adopted a WDPIR that goes above and beyond the minimal requirements. NDA's WDPIR form is the only form that can be legally used for wood-destroying pest inspections in Nevada.

Frequently, two termite inspections are performed for a home when it is sold - one inspection paid for by the seller and one financed by the purchaser. Because NDA must receive a copy of all termite inspections performed by licensed operators, whether they are performed in conjunction with the sale of a house or for any other reason, the agency is in the position to scrutinize reports from different inspections performed on the same property. This may surprise you, but sometimes the WDPIRs present conflicting information. Conflicting reports, complaints, routine regulatory verifications, and particular questions which arise from inspections often prompt NDA investigation. When the NDA investigates conflicting WDPIRs that have been done within the same window of time, on the same property, these investigations sometimes reveal that a structure was inadequately inspected.

Reporting errors are of two fundamentally different types - errors pertaining to the actual inspection and errors in completion of the report form. While it's true that Nevada's WDPIR form is more comprehensive than the federal form, regulations pertaining to completing the WDPIR form are relatively simple:

(1) All reports are initially reviewed for completeness and legibility. The mortgage/escrow number may be omitted but all other information requested in the top section of the form is not optional. Company names must be fully recorded and all individuals must be listed by first and last name. Name and address of the property owner should be located and verified at the county assessor's site (in Clark County the website is [clarkcountynv.gov](http://clarkcountynv.gov); in Washoe County the website is [washoecounty.us/assessor](http://washoecounty.us/assessor)). NDA does not need to be included in this section as one of the recipients of the report.

(2) The check boxes listed next to four disclaimers printed near the middle of the form help protect

Continued on page 20



#64

THE TEMPRID® DIFFERENCE

Your workload might weigh you down,  
but your products won't.

[TempridDifference.com](http://TempridDifference.com)



Temprid®

Follow us on Twitter @BayerPestPro

EXPERIENCE THE DIFFERENCE.

- **A difference of value:** a broad-spectrum insecticide that reduces callbacks, saving you time and money
- **A difference of confidence:** provides proven control you can count on
- **A difference of flexibility:** a go-to product for any pest issue, tough or occasional
- **A difference of convenience:** a single perimeter control solution
- **A difference of satisfaction:** happy technicians lead to happy customers

While PPE is not required for Temprid ReadySpray, Bayer always recommends that appropriate protective clothing be worn as needed. Bayer CropScience LP, Environmental Science Division, 2 T.W. Alexander Drive, Research Triangle Park, NC 27709. 1-800-331-2867. [www.BackedbyBayer.com](http://www.BackedbyBayer.com). Bayer, the Bayer Cross and Temprid are registered trademarks of Bayer. Not all products are registered in all states. Always read and follow label instructions. © 2014 Bayer CropScience

# THE REGULATORY CORNER WOOD-DESTROYING PEST INSPECTION AND REPORTING

Continued from page 18

inspector liability and emphasize the purpose of the report. The format was designed to encourage inspectors to review each point with their clients. Each box should be marked.

(3) Infestation is reported on the form as either “yes” or “no” for each of the three generalized pest categories. In other words, the inspector is primarily looking for two things: live termites and signs of termites (or other wood-destroying insects or fungi). The option for “active” or “inactive” is relevant only if evidence of an infestation exists (the inspector has indicated “yes” with respect to one of the pest categories). Otherwise, the choice of “active” or “inactive” should not be made.

(4) Nevada’s WDPIR has a reportable requirement for “Conditions Conducive to Infestation.” Nevada’s form implicitly recognizes that a holistic approach to managing termites includes inspections and taking measures to prevent them by eliminating conducive conditions. No provisions on the federal form are provided for reporting the presence of specific environmental conditions associated with infestations even though these conditions are important aspects of predicting, tracing, and ultimately controlling infestations. A “yes” or “no” choice must be made for each condition listed on the WDPIR. Most of the complaints and conflicts received by the NDA involve the failure to report, or the inadequate reporting of, conditions conducive to infestation. Nevada laws defining each conducive condition are printed on the back of the form.

(5) If any “yes” choice is selected among the infestation or conducive condition categories the inspector must draw a diagram of the structure and explain the diagram in the area entitled “graph explanations.” The diagram should be a free-hand sketch of the structure’s floor plan and show the location of the positive finding. The floorplan needs a relevant landmark or compass direction for orientation. The “explanation” section must be completed when a diagram is made and should be used to explain the diagram.

(6) Nevada law does not require that the entire structure be inspected but information within the WDPIR form implies all areas were subject to inspection unless otherwise noted. The explanation area should be used to list any areas inaccessible for inspection such as an attic or a garage interior that is too filled with storage to allow adequate access. And, as stated, graphs and explanations go hand-in-hand so any explanation must also be accompanied by a drawing.

(7) Attachments of additional graphs, photos and explanations are encouraged. Figures with locations of positive findings and drawing explanations are not limited to the area provided on the form. Inspectors who opt to attach a larger presentation and explanation than can be presented on the form may simply reference the attachments in the graph explanation area, such as, “See attached graph and explanation.”

(8) Because the WDPIR functions as an unbiased reporting tool supplied and printed by the NDA, each form has a unique number and the form should not be duplicated.

(9) Nevada’s WDPIR must not include any personal or business comments or recommendations such as, “It is recommended that the planter in front of the house be removed.” Treatment recommendations are requested on NPMA-33 but no allowance is made for them on Nevada’s WDPIR. Recommendations developed with clients should not be written on the WDPIR form.

(10) WDPIRs must arrive at NDA’s office within 15 days after the inspection date. The same form may be used for an inspection and treatment report if the treatment occurred within 15 days of the inspection. Otherwise, a second form must be used to describe any treatment information.

(11) Finally, Nevada’s WDPIR clearly states that it is neither a warranty nor guarantee of future infestations. It is a report of conditions at the time of inspection. Considering that evidence of wood-destroying pests can remain undetected, an inspector comment such as, “The structure is ALL CLEAR!” is inappropriate.

While completing the form is simple, a thorough inspection of the average home takes a couple hours to complete. The difference between a good inspection and a poor one relies on the dedication and training of the inspector. When you have questions about the WDPIR don’t hesitate to call us at the NDA office. We are always glad to help.

**Dust** - Continued from page 16

are not somehow documented or signed-in for verification. We can defend if not verified, but it does give the plaintiffs’ side an issue of fact they can use to confuse a jury.

We are hopeful the above information will be of benefit to your business and your knowledge of dust formulation application exposures. We feel these will be more common types of claims in the foreseeable future. Protect yourselves!

By Stuart Mitchell DO, MPH, BCE &  
Andy McGinty, LIPCA Insurance EVP/COO

PRESENTING  **BUG LOCK**® WITH **Secure Seal**®  
PROTECT-A-BED patented



## Bed Bug Proof

### Patented BugLock® - Stitched Safety Trench

The seal prevents passage of bed bugs into the encasement even if the zipper clasp pulls away from the end stop.



## Customer Proof

### Secure Seal®

Secure Seal locks the encasement onto bedding ensuring that it is not prematurely removed or removed by non-authorized personnel.

**ALLERZIP**®  
BEDDING ENCASEMENT

The original Bed Bug Proof  
Encasement featuring  
Patented BugLock®  
with Secure Seal®



**PROTECT-A-BED**®

Every Mattress Needs Protection®

Toll Free 866.297.8836 Fax 847.998.6919 [www.protectabed.com](http://www.protectabed.com)

©Beware of imitations. Protect-A-Bed vigorously protects its property interest in its patents, trademarks & copyrights

# FROM THE ENTOMOLOGIST'S MICROSCOPE: PEST IDENTIFICATION



By Jeff B. Knight, Entomologist  
Nevada Department of Agriculture  
www.agri.state.nv.us

## Aphids

Aphids are one of the largest families of the order Hemiptera (until recently they were in the order Homoptera). There are over 4400 species of aphids in the world and almost every plant has at least one species of aphid that feeds on it. Some aphids are very selective in the plants they feed on and may only feed on one or two species, whereas others have a very wide host range and may feed on hundreds of different types of plants.

Aphids often occur in large colonies (several hundred individuals) on plants (Fig 1). Most aphids are green in color but may be almost any color including pink, black, blue, or bright orange (Fig 2).

Aphids normally have long antennae, a pair of tubes called cornicles or siphunculi and another structure at the tip of the abdomen called a cauda (Fig 2). Siphunculi can range in size from being very long to absent. They are used to excrete various compounds including alarm pheromones. The length and shape of these are an important character in identifying the aphids to species.

The cauda (Fig 2) is also an important structure used in identification, it can be variously shaped and have various numbers



Fig. 1



Fig. 2



Fig. 3

Photos by Jeff Knight, Nev. Dept of Agriculture.

of hairs. Aphids have sucking type mouthparts that can vary in size depending on what they feed on. Within a species aphids may or may not have wings. Winged individuals are produced in response to colony size and season. Most female aphids reproduce parthenogenetically (without males) and give birth to their offspring. Some aphids will produce males during certain times of the year and after mating the females will lay

eggs. Under the right conditions aphids can go from a new born to reproducing adult in just a week. During their life cycle aphids may also alternate between the hosts that they feed on. Knowing if an aphid species does this can be very important in its management.

Aphid feeding can cause deformation in plants such as galls and curled or yellow foliage (Fig 3). During feeding many aphids may also transmit various plant diseases in the form of viruses. These viruses are some of the worst plant diseases. During feeding, these insects will often excrete copious amounts of fluids containing sugars. This often causes leaves to be shiny and sticky.

A wide variety of control methods can be used against aphids. These include systemic insecticides, contact insecticides including insecticidal soap, and physical methods such as washing them off of plants. There is also a wide variety of biological controls that are commercially available, such as parasitic wasps, lacewings and ladybird beetles.

For proper identification aphids must be specially prepared, mounted on slides and viewed under a high powered microscope. When submitted for identification, specimens should be collected and submitted either alive or in 70% alcohol. Always be sure to include the name of the plant they were collected from as this is very helpful in identification.

Call  
702-400-1946  
for more  
information

# EXPAND YOUR BUSINESS

## Whole Structure Fumigation



**\$0 NO COST TO YOU\***

\*Excludes Agency Program



**100% Elimination  
NO CALL BACKS!**



Through Pitbull Pest Control, you can now offer your customers immediate relief from Bed Bugs and Drywood Termites. No more call backs! One treatment is all your customers need.

## Bed Bugs & Drywood Termites

Nevada's  
Largest  
Fumigation  
Company

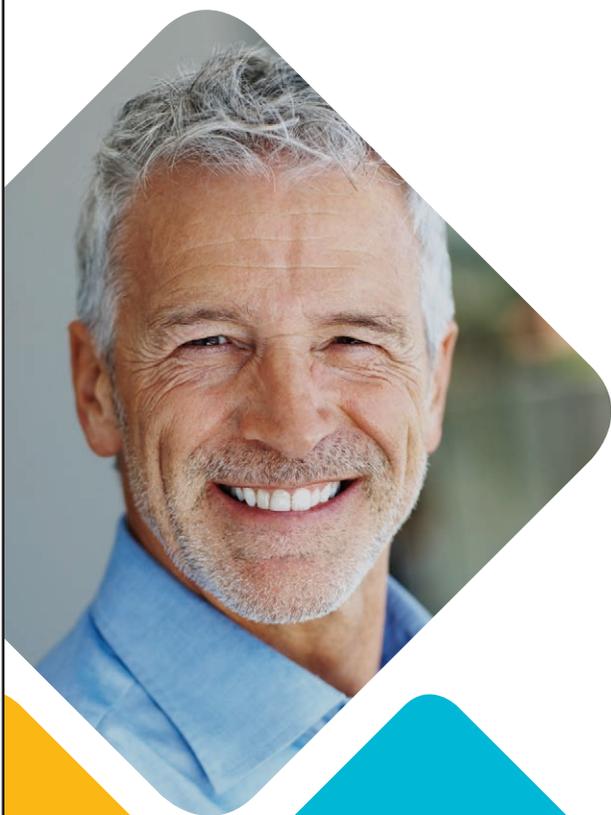


**PITBULL PEST CONTROL**  
"Dead Bugs Are Good Bugs"

Call 702-400-1946 and ask about our "Agency Program"



*The right product is just the beginning™*



## Our Business is Your Business

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**.

PestWeb 

ProCenter 

Premier  Services

Online  Training