



Minnesota Pest
Management
Association

Peer to Peer Instruction

By Jay Bruesch, BCE

A professor of advanced mathematics at a prestigious university needed to teach the skills necessary to solve a certain type of complex equation. Not sure how to go about this, he strode into the lecture hall and wore out an entire new piece of chalk scribbling an eye-crossingly complicated equation on the blackboard. He said, "Everybody solve this equation. I'll be back in half an hour." Then he was gone. Some of the students had an idea of how to solve the equation; others had not a clue.

When he returned to the lecture hall, he was pleased to find that everyone had come up with the correct answer. Not only that, but when he put a similar equation on the board, everyone in the class was able to solve it quickly and accurately.

Here's what happened: The professor was so much an expert at higher mathematics that solving it was second-nature to him. On the other hand, the students in the room who at least had an idea how to solve the problem worked at it, and then they helped the clueless students, explaining the principles and procedures of the equation as they went along. Those brighter students may have been smart, but they were much closer than the professor was to the time when they had had no idea. They remembered how they had struggled, and so they were able to understand why some of their classmates were having trouble. They were able to guide their classmates in the right direction because they had been confused themselves not long before.

The principle behind this story is called "peer-to-peer learning."

Many years ago, I was a middle school foreign language teacher. This was in the very infancy of personal computers, and the school had some computers that students could use after regular school hours were over. The students who "got" the lessons on the difficult concepts in German sentence structure went down to the computer lab, designed simple games to teach the difficult stuff, and then shared the fun little computer games to allow their classmates to practice with the new material. I had yet to see my first TRS-80 16 KB computer, so I had no idea what to do. Peers instructed peers, and everyone learned.

There are dozens of ways you can employ peer-to-peer instruction in your company's training exercises. Some examples:

Hand out pesticide labels for new products your company will be using, and instruct teams of two, three, or four people to design a quiz on those labels. Grade and discuss the

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quizzes as a group, and then turn the tables and have the “instructors” become the “learners.”

Use familiar game-show formats like Trivial Pursuit, Jeopardy!, and Pictionary and have opposing teams create games based on the content you want to teach or reinforce. Then, have the groups play each other's games.

Assign technical topics such as pest biology, behavior, and control to small teams. Have them look up the needed information and then create

short technical bulletins and accompanying quizzes.

Use your imagination to come up with ways the members of your group can instruct and then quiz each other. It'll take some of the pressure off your back and will likely be more effective than for you to just deliver a lecture. Give this idea some thought, make sure the instructions are as clear as possible, and then stand back and watch as your group members teach each other.

Don't over-use this technique, though; you don't want it to

become yet another ho-hum meeting activity. Use peer-to-peer instruction to teach and review relatively mundane, simpler material. There are plenty of subjects for which only you are the qualified trainer, and you don't want peer-to-peer to get boring or expectable. Put on your thinking cap! Be creative!

Jay Bruesch, a 42-year veteran of the pest management industry, retired in 2019 and now serves as Executive Director of the Minnesota Pest Management Association.

Authors Needed

If you are an Active or Allied member and you'd like to contribute an article to the newsletter pertaining to a current pest of concern, proper equipment use and care, application techniques, pesticide safety, choosing formulations and active ingredients, pesticide rotation – this list could go on and on – send your articles to Jay Bruesch at minnpest1@gmail.com. We'd like to have a store of articles that we can use as the need arises.



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The Power of Company Values in Pest Management

By Todd Leyse, Adam's Pest Control

In the highly competitive world of pest management, distinguishing your business isn't just about the services you offer; it's about the values you embody. As co-owners of Adam's Pest Control, Inc., a legacy firm with a robust growth trajectory since 1971, we've seen firsthand how foundational values not only shape company culture but also forge deeper connections with customers, enhancing both reputation and operational excellence. Here's a closer examination of why values matter and how to integrate them into the fabric of your company.

Building Customer Loyalty

In an era where consumers have endless choices, company values serve as a lighthouse, guiding them to businesses that not only solve their problems but also resonate with their personal beliefs. Values-driven companies enjoy "stickier" customers—clients who return time and again because they trust in the ethos behind the service.

Elevating Reputation

Your company's values are a beacon in the marketplace. They signal what your business stands for beyond profit margins. In the digital age, where reviews can make or break a business,

a steadfast commitment to your core values can significantly enhance your reputation, acting as a powerful differentiator in a crowded field.

Empowering Your Team

Values serve as a north star for you and your employees, offering them a sense of purpose and belonging. When your team members believe in what they're working towards, they deliver their best, fostering an environment where excellence is the norm, not the exception.

Defining Your Company Values

The genesis of authentic company values often lies within your team. Engaging employees in the process of defining values ensures they are genuinely reflective of the people who will live them every day and you'll also get their buy in—they are more likely to follow the values if they helped create them.

Solicit Input: Conduct surveys, hold focus groups, or organize team retreats to gather insights from your employees about what values they believe the company embodies or should embody.

Identify Common Themes: Look for recurring patterns or themes in the feedback.

These are the seeds from which your company values can grow.

Refine and Define: Draft a list of values that resonate with the collective input. Ensure these values are actionable, memorable, and aligned with your company's mission and vision.

Communicating Your Values

Once defined, your values should not remain confined to an internal document. They must be communicated consistently and integrated into every facet of your company's operations

Employee Onboarding: Introduce new hires to your company's values from day one, integrating them into training programs and performance evaluations.

Regular Communication: Reinforce these values through regular meetings, company communications, and by embodying them in leadership actions.

Recruitment: Use your values as a framework for hiring. Prospective employees should align with these core beliefs, ensuring cohesion and mutual growth.

Customer Engagement: Let your values shine in your marketing materials,

social media presence, and customer service protocols. Show clients not just what you do, but why you do it.

Regardless of the size of your pest management company, from solo operator to a business with hundreds of employees, your values are the heartbeat of your organization. They set you apart, earn loyal customers, attract dedicated employees, and ultimately, drive your success. In a world where trust is paramount, let your values be your guide. They're not just words; they're the foundation upon which lasting businesses are built.

Embrace your values, communicate them with pride, and watch as they transform not just your business, but the lives of those it touches. In the journey of growth and excellence, let your values light the way.





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Good Mosquito Control Requires Effective Strategies and Knowledge of Key Species

Here is a bit of both to get you started

Dr. Mohammed El Damir, B.C.E

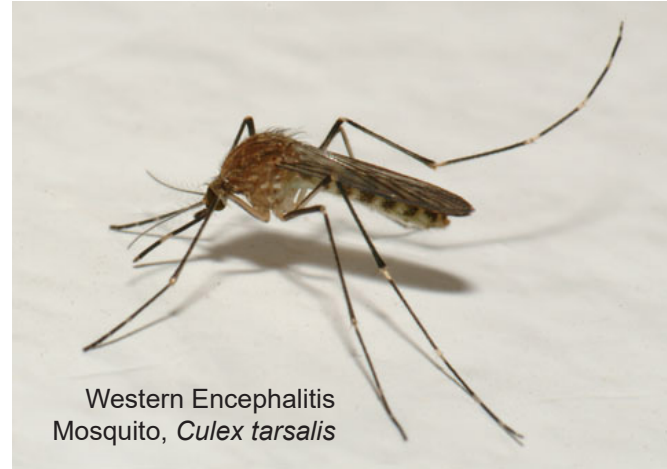
The diverse behaviors exhibited by mosquitoes have intrigued scientists, adding complexity to the study of these fascinating insects. With more than 3,500 species globally, and more than 200 in the United States alone (CDC, 2020; Harbach and Kitching, 1998; Harbach, 2015), understanding the detailed behaviors of mosquitoes has become a puzzle for scientists. The buzz surrounding mosquito behaviors has captivated researchers, who strive to unravel the mysteries behind their various activities, from feeding habits to breeding preferences. With the oncoming arrival of the summer sun and the onset of outdoor activities, delving into mosquito behavior becomes crucial for effective pest control and the protection of public health.

Recognizing the significance of mosquito behavior is essential in formulating successful pest control strategies (Burkett-Cadena, 2013). Adult mosquitoes draw energy from flower nectar, while females necessitate a blood meal for egg development. The larvae

in various water bodies manifest a diverse range of breeding habitats (Foster and Walker, 2002). Mosquitoes employ diverse overwintering strategies, confront threats from predators despite their brief lifespan and utilize sophisticated mechanisms for locating hosts (Burkett-Cadena, 2013).

Mosquitoes are crucial in ecosystems as a food source for various animals, contribute to pollination and help maintain ecological balance by controlling populations of other organisms. However, their importance needs to be balanced with the potential health risks associated with disease transmission.

Beyond being mere nuisances, mosquitoes pose significant health risks by causing allergic reactions and transmitting pathogens that cause disease, such as Zika, yellow fever, dengue fever, chikungunya and West Nile viruses (CDC, 2020). Documented transmissions involve various bodily fluids, underscoring the need for further research (Burkett-Cadena, 2013).



Western Encephalitis
Mosquito, *Culex tarsalis*

The severity of symptoms varies, influenced by factors like host type, age and sex. For example, Zika virus infections may be asymptomatic in 80 percent of cases, but newborns can suffer severe brain damage if mothers contract the virus during pregnancy (CDC, 2020).

Identification

The following is information specifically designed for pest control professionals that covers the identification, behavior, and health impacts of the most concerning mosquitoes in the U.S.

***Aedes aegypti* (Linnaeus)** is identified by distinct black and white markings on its body and legs, boasts adult females measuring approximately 4-7 millimeters in length and are known for their preference for feeding on

human blood (Vinogradova, 2000). This mosquito is a primary vector for the Zika virus, a mosquito-borne disease causing severe health issues, especially during pregnancy (Kraemer et al., 2015). Additionally, *Ae. aegypti* transmits other viral diseases such as dengue fever, chikungunya and yellow fever, all with severe health consequences (Bhatt et al., 2013).

***Culex pipiens* Linnaeus**, commonly known as the northern house mosquito, is prevalent in the northern U.S. and southern Canada. Distinguished by a light-brown body with scattered pale patches, *Cx. pipiens* adults have a dark proboscis, antennae of similar length and wings with thin dark scales (Carpenter and La Casse 1974; Darsie and Ward 2005). Notably, it carries

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and transmits viruses such as West Nile virus and St. Louis encephalitis virus, contributing significantly to the global prevalence of filariasis (Reeves et al. 1942, Dohm et al. 2002, Molaei et al. 2006, Turell 2012).

***Culex quinquefasciatus* Say.** Commonly known as the southern house mosquito, *Culex quinquefasciatus* is a medium-sized brown mosquito found in tropical regions and the lower latitudes of temperate areas. Adult mosquitoes of this species measure between 3.96-4.25 millimeters in length, featuring brown coloration with darker proboscis, thorax, wings and tarsi (Lima et al., 2003; Sirivanakarn et al., 1987; Darsie and Ward, 2005). In the southern U.S., it

plays a crucial role as the primary vector for St. Louis encephalitis virus and also transmits West Nile virus.

Culex tarsalis, identified by its white median band on the proboscis and overlapping white bands on the tarsal joints, is the primary mosquito vector in western North America (Reisen, 1993; Carpenter and LaCasse, 1955). This species is responsible for the transmission of St. Louis encephalitis virus, Western equine encephalitis virus and other viruses such as Llano Seco, Turlock, Gay Lodge and Hart Park viruses (Reisen, 1993). It is also an efficient experimental vector for Japanese and Venezuelan equine encephalitis viruses (Reisen, 1993).

***Anopheles quadrimaculatus* Say.** These mosquitoes are easily identifiable by their unique resting position and distinct features, including long palps and dark scales on their wings forming four darker spots (Rutledge et al., 2005). As a major vector of malaria in the eastern U.S., *Anopheles quadrimaculatus* played a role in the persistence of the disease until its eradication in the 1950s (Rutledge et al., 2005). Despite successful eradication efforts, sporadic cases of local transmission in the U.S. are still linked to *An. quadrimaculatus* (CDC, 2003).

Apart from its role in disease transmission, *An. quadrimaculatus* is recognized as a pest species (O'Malley, 1992). Identified

as a complex of five sibling species, commonly referred to as *An. quadrimaculatus* in collections or fieldwork (Reinert et al., 1997), this mosquito typically targets large mammals, including humans, as its primary hosts.

Anopheles freeborni, often known as the western malaria mosquito, features an adult with a brown-to-black color, adorned with yellow-brown hairs and gray-brown stripes on the thorax. The mosquito's scaled wings display four dark spots, with the male's spots being less conspicuous (Carpenter and LaCasse, 1955). Recognized as a significant malaria vector in the western U.S., *An. freeborni* has been implicated in malaria outbreaks, posing a health risk to humans

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Larvae of *Culex* mosquitoes make dense groups in standing water.

within its geographical range (Aitken, 1945; Carpenter and LaCasse, 1955).

Effective Mosquito Solutions

Effective mosquito control necessitates a comprehensive strategy (Burkett-Cadena, 2013). Here are some prevalent mosquito control practices.

Protective Measures.

Advise customers to use insect repellents, such as those that contain DEET, on the body and clothes. They should follow product label directions for proper application and reapply as necessary, especially after sweating or swimming.

Help customers to identify local peak mosquito activity times, usually during dawn and dusk, tell them it's best to plan outdoor activities accordingly and use screens or mosquito nets if they must

be outdoors during these hours. It's best to wear long sleeves and pants, and opt for lightweight, breathable fabrics in light colors to stay comfortable while protecting against mosquito bites. Tuck in clothing to minimize exposed skin.

Customers also can regularly inspect and repair damaged window screens and install door sweeps to close gaps at the base of doors.

During your service visits, regularly inspect and remove larval breeding sites, such as puddles, water in containers, clogged gutters, etc. Trim tall grass and bushes, as mosquitoes often rest in these areas. Suggest customers include mosquito-repelling plants in their gardens.

Mosquito Larvicide

Treatments. In the management of mosquito larvae, certified mosquito

control professionals leverage a variety of larvicides registered by the Environmental Protection Agency (EPA), applying them strategically through methods like backpack sprayers; governments and municipalities can use truck or aircraft-mounted sprayers to apply them, tailored to scale, to the affected area.

For residential mosquito control, individuals seeking practical solutions can choose from user-friendly options like mosquito dunks or bits, applying them manually to small bodies of water. Larvicides, available in forms such as liquids, dunks, tablets, bits, pellets, granules and briquettes, offer versatility for professionals to select the most suitable application method. Bacterial larvicides are commonly utilized by public health officials, with *Bacillus thuringiensis* subspecies *israelensis* (Bti) being a prevalent choice, along with insect growth regulators and oils/films. Bacterial larvicides such as Bti eradicate mosquito larvae, while insect growth regulators impede their transition to adulthood. Additionally, oils and films form a thin surface layer, effectively eradicating both larvae and pupae.

Strict adherence to label instructions is emphasized for proper larvicide usage. Licensing requirements,

managed by government agencies or certified entities, vary by state, requiring compliance with statespecific regulations. Municipalities employ both aerial and ground applications, following state-specific regulations and ensuring effective mosquito larvicide treatments. The comprehensive approach to mosquito control includes the targeted use of various larvicides—biological larvicides, larvicidal oils, insect growth regulators (IGRs), pesticides and other approved components—to disrupt mosquito development at breeding sites, contributing to effective population control.

Mosquito Barrier

Treatments. Mosquito barrier treatments for outdoor areas surrounding homes or structures are commonly used to control mosquito populations. This involves applying insecticides to resting sites such as foliage and shrubs, creating a barrier that prevents mosquitoes from entering the treated area and reducing the local mosquito population. These treatments, commonly applied by pest management professionals (PMPs), use various products, including sprays, mists and foggers. In areas with high mosquito populations or concerns about mosquito-borne diseases, these treatments can be effective. Careful

continued on next page

Mosquitoes, *continued*

adherence to instructions is crucial to ensure the safety of humans, pets and the environment while reducing the mosquito population. Here are some best practices for mosquito barrier treatments:

- Carefully follow product instructions for use, storage and disposal.
- Wear required personal protective equipment, including gloves and long-sleeved clothing, throughout the process.
- Employ backpack sprayers, misters or foggers suitable for mosquito barrier treatments.
- Ensure no people or pets are present before treatment. Clear the treated area of pet items, toys, food and other objects. Mix only the required amount, ensuring the solution's pH falls within the recommended range.
- Confirm the misting system functions without leaks.

- Cover surfaces people might contact after treatment.

Thorough Vegetation

Treatment. Treat vegetation up to 10 feet high, emphasizing the underside of leaves. There's a suggestion that treating upper tree canopies might be more effective in reducing *Culex spp.* abundance (Trout et al., 2007). Treat areas up to 50 feet from structures, as applicable.

Identify and treat shady and moist areas where mosquitoes rest. Do not treat edible or flowering plants that bees and pollinators may contact.

Treatment Beyond

Structures. For treating anything beyond structures, follow these guidelines:

- Treat areas where the lawn meets wood, retaining walls and ornamental plantings.
- Treat several yards into any bordering woodlands.
- Treat ground cover vegetation near homes or walkways.
- Treat paths, roadways and areas frequented by people.
- Do not treat within 25 feet of major bodies of water or as the product label informs.
- Avoid spraying during windy conditions and adhere to state regulations.
- Understand that barrier treatment reduces populations of mosquitoes

but does not provide 100 percent elimination and lasts three to four weeks. Therefore, success relies on repeated treatments at three to four-week intervals.

A comprehensive understanding of mosquito behavior and the identification of key species are vital for effective long-term mosquito solutions. Implementing a multifaceted approach is crucial for success. Safeguarding public health demands collective responsibility and ongoing collaboration between researchers, pest control professionals and communities. By adhering to best practices and advancing control measures, we can create resilient communities that minimize the risks posed by mosquito-borne diseases while maintaining a balance with environmental conservation.

The author is technical and training director at Adam's Pest Control. This article is reprinted from www.pctonline.com.

References

- Burkett-Cadena, N. D. (2013). Mosquitoes of the Southeastern United States. University of Alabama Press, Tuscaloosa, Alabama. 64p.
- Carpenter, S. J., & La Casse, W. J. (1974). Mosquitoes of North America (North of Mexico). University of California Press, Berkeley, California, pp. 284-285.

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Carpenter SJ, La Casse WJ. (1955). Mosquitoes of North America (North of Mexico). University of California Press, Berkeley, California.

CDC. (2020). Centers for Disease Control and Prevention, National Center for Emerging and Zoonotic Infectious Diseases (NCEZID), Division of Vector-Borne Diseases (DVBD). <https://www.cdc.gov/>

Ciota, A. T., & Kramer, L. D. (2013). Vector-virus interactions and transmission dynamics of West Nile virus. *Viruses*, 5(12), 3021-3047.

Darsie Jr., R. F., & Ward, R.A. (2005). Identification and Geographical Distribution of the Mosquitoes of North America, North of Mexico. University Press of Florida, Gainesville, Florida, pp. 79115.

Duggal NK, Bosco-Lauth A, Bowen RA, Wheeler SS, Reisen WK, Felix TA, Mann BR, Romo H, Swetnam DM, Barrett AD, Brault AC. (2014). Evidence for co-evolution of West Nile virus and house sparrows in North America. *PLOS Neglected Tropical Diseases*, 8(10), e3262.

Foster, W. A., & Walker, E. D. (2002). Mosquitos (Culicidae). In: Mullen G, Durden L, editors. Medical and Veterinary Entomology. Academic Press, San Diego, California. 261-317pp.

Harbach, R. E., & Kitching, I. J. (1998). The Phylogeny and Classification of Anopheles. In Mosquito Systematics (Vol. 2, pp. 19-35). CABI.

Harbach, R. E. (2015). Mosquito Taxonomic Inventory. Retrieved from <https://mosquito-taxonomic-inventory.info/>

Kilpatrick, A. M., Kramer, L. D., Campbell, S. R., Alleyne, E. O., Dobson, A. P., & Daszak, P. (2005). West Nile virus risk assessment and the bridge vector paradigm. *Emerging Infectious Diseases*, 11(3), 425.

Lima, M. T., Oliveira, C. M. F., & AzeredoEspin, A. M. (2003). Species and Distribution of Adult Anopheles (Diptera: Culicidae) in Panama. *Journal of Medical Entomology*, 40(5), 746-751.

Reisen, W. (1993). The western encephalitis mosquito, *Culex tarsalis*. *Wing Beats*, 4(2), 16.

Ross, H. H. (1964). The colonization of temperate North America by mosquitoes and man. *Mosquito News*, 24(2).

Sirivanakarn, S., White, G. B., & Strickman, D. (1987). Culicine Mosquitoes of the Indochina Peninsula (Diptera: Culicidae).

Mosquito Systematics, 19(3), 188-254.

Trout, R. T., Brown, G. C., Potter, M. F., Hubbard, J. L. (2007). Efficacy of Two Pyrethroid Insecticides Applied as Barrier Treatments for Managing Mosquito (Diptera: Culicidae) Populations in Suburban Residential Properties, *Journal of Medical Entomology*, vol. 44, no. 3, May 1, 2007, pp. 470-47.

Turell, M. J. (2012). Members of the *Culex pipiens* complex as vectors of viruses. *Journal of the American Mosquito Control Association*, 28(4s), 123-126.

Vinogradova EB. 2000. *Culex pipiens* Mosquitoes: Taxonomy, Distribution, Ecology, Physiology, Genetics, Applied importance and Control. Pensoft Publishers, Sofia, Bulgaria. 36-58pp.

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Must-Have Tools for Pest Management Pros

Desiree Straubinger
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Behind every great pest management professional (PMP) is a vehicle outfitted for any situation. The tools may differ based on the type of client, but this list can help ensure you are always prepared—anytime and anywhere. Note: the list doesn't include application equipment/products—which are a given!

Flashlight

The single, most important piece of equipment a PMP can carry is a durable, powerful flashlight. If you can't see the pest, you can't eliminate it. There are regulations on flashlight use in potentially explosive environments (such as grain bins), so you may need an additional, intrinsically safe flashlight for those circumstances. And it's a good idea to have two working flashlights plus extra batteries or a battery charger.

Vacuum and Extension Cord

The fastest way to remove a pest population is to vacuum what you see before doing any chemical treatment to the area. Don't wait for pests to encounter your pesticides!

Extension Pole with Duster Head

Like vacuuming, having a duster head on an extension pole to knock down spider webs and old wasp nests helps remove pests from around structures and demonstrates added value to your customer.

Ladder

A safe ladder that has been inspected can lower the opportunity for accidents in the field. Have procedures in place for daily, quick inspections prior to use and recorded annual inspections for all company-provided ladders.

Spill Kit

Any spill kit needs to be large enough to clean up all the liquids carried on a vehicle on any given day. At a minimum, it should contain absorbent material, paper towels, kitchen-sized trash bags, a dustpan, and broom.

Safety Kit

Keep safety cones, Instant Soap 'N Water from BASF, eye wash, and first aid (alcohol wipes, bandages, etc.), leather gloves, bump cap, knee pads, a clean roll of paper towels, and a reflective safety vest, in the vehicle.



PPE Kit

Always have plenty of PPE materials on your vehicle! Include safety glasses and goggles, chemical resistant gloves, respirator, and coveralls.

Rodent Kit

Building a specific kit for rodent work is essential. A large bucket with a cloth organizer over the lip is great for exterior stations. This allows room for extra station keys, a brush to clean stations, extra trays and rods, new bait, and a trash bag for the old bait. For an interior kit, remember to add items like snap traps and glue boards.

Service Kit

For interior service, especially at large properties, having all essential tools at your side means fewer trips to your vehicle to grab what you need. Include items like screwdrivers, ink pens, permanent markers, shoe

covers, rubbing alcohol (to remove sticky residue on insect light traps or insect monitors), wiping cloths, paper towels, and a telescoping mirror for inspections.

Measuring Wheel

Take the guesswork out of measuring your properties before you treat them.

Garden Rake

A great tool to rake back mulch/groundcover for inspection/treatment or to find bait stations buried in the landscaping.

Collection Containers

Sometimes you find an insect you can't identify on the spot. Having leakproof collection containers allow you to take a sample with you to identify later using a microscope or to deliver to someone else to identify. Don't forget rubbing alcohol—some insects will

continued on next page

Equipment, *continued*

eat others inside the vial before you can get back to your vehicle!

Identification Guide

PMPs need a good field guide in their vehicles to identify pests once they are collected. Otherwise, you can't do a successful treatment!

Easily Accessible Product Labels (*label book and/or digital*)

A must-have when transporting pesticides! Yes, the containers have labels on them, but they wear down over time. Paper labels are easy to flip through but maintaining them may be a

challenge. You need a defined process to make sure you have the most up-to-date copies for every book in the field and printing can become expensive. Digital access is easy through companies that offer apps and maintain them for you.

A couple more items that are also good to have:

Extra uniform in case you have a chemical spill, get caught in a downpour, or get dirty at a client's property.

Small cooler to carry cold water, lunch, or snacks for the day.

Minnsect Bug Fair



The Entomology Department at the University of Minnesota presents an annual “bug fair” called The Great Minnsect Show. Exhibitors include beekeepers, research entomologists, entomology suppliers, and just about anything you can imagine for people who love bugs.

The Minnesota Pest Management Association staffed a booth at the show that included quizzes and “bug” prizes for beginners, intermediate, and expert level attendees. Also featured was a focus on career opportunities for bug enthusiasts. MPMA offered a brochure with personal stories from hobbyists, pest control technicians, technical directors, pest management consultants, and many more bug-related professions.

Pictured above is MPMA Executive Director Jay Bruesch, sharing bug lore with a couple of inquisitive youngsters.

Stamp Out Stored-Product Pests

By Chris Keefer, Ph.D., Technical Services Manager, Syngenta Professional Pest Management

For proper identification of stored product pests (SPPs), it's imperative to be able to distinguish the feeding habits of the four main groups: internal feeders, external feeders, scavengers, and secondary pests. This will help you properly identify the species, develop an integrated pest management plan, and communicate it to the client.

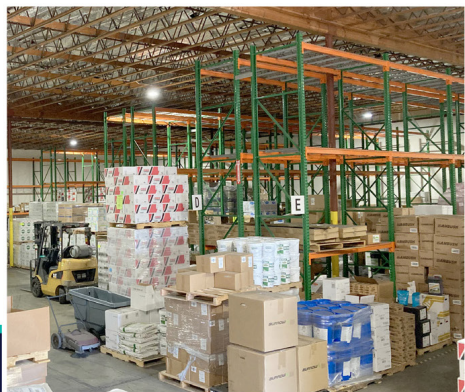
Inspection is vital and must include the investigation of all individual packages of potential harborages, such as grains, cereals, and raw legumes. Infested

material must be disposed of immediately and properly. In some cases, the infested material can be placed in the freezer (for an appropriate length of time) to eliminate the active infestation.

Pheromone traps can tell you the density and help pinpoint the location of the infestation. If necessary, use a non-residual aerosol labeled for use in and around food to flush out flying SPPs. Use residual insecticides per label instructions and carefully treat cracks and crevices in the infested area.

MDA Newsletter

If you don't already subscribe to the Minnesota Department of Agriculture's newsletter, you should. The latest version is [found here](#). It has interesting articles pertaining to applicators including our industry and possibly some of the supplemental licenses you and your technicians may carry. Look at the articles about Incident Response Plans and New Pesticide Application Reporting Requirements, as well as tips to learn how to avoid getting fined in the future!



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April Board Meeting Minutes

MPMA Board of Directors Meeting April 16, 2024

Office of Adam's Pest Control, Inc. 2900 Eagle Bluff Circle Medina, MN 55340

Attending in person

Jay Bruesch, MPMA
Dr. Mohammed El Damir, Adam's Pest Control
Todd Leyse, Adam's Pest Control
Travis Chambers, BASF
Kathy Watrin, Granite Pest Control
Joe Watrin, Granite Pest Control
Rob Greer, Rove Pest Control
Christine Wicks, Minnesota Department of Agriculture
Lane Zimmerman, Rainbow Pest Experts
Dr. Stephen Kells, University of Minnesota
Rusty Binkley, Rockwell Labs
Nathan Heider, Spidexx

Keith Gordon, Veseris
Dannis Warf, Envu
Brian Elm, Veseris

Attending remotely via Zoom

Personal asst. to Matt Eickman, Abra Kadabra Environmental
Caroline Kohnert, Plunkett's Pest Control
Mike Weissman, Syngenta
Dave Johnson, Catchmaster
Morgan Manderfield, Ecolab
Roger Mackedanz, Minnesota Department of Agriculture
Gurinderbir Chahal, Minnesota Department of Agriculture

Prior to the Meeting

MPMA Active and Allied members were notified of the meeting date and time, and that it was going to be both in-person at the offices of Adam's Pest Control, and remotely via Zoom.

Rob Greer, President

Rob called the meeting to order at 11:30 am and circulated a signup sheet.
Attendees were invited to introduce themselves and the organizations they represent.

Jay Bruesch

Vote to approve January 2024 meeting minutes

Travis Chambers asked to have the minutes amended to reflect his mention of merit scholarships awarded to deserving high school graduates who are children of Association members: the Chicago Area Pest Control Association and the Iowa Pest Control Association currently offer such scholarships for high school graduates (Pelliterri Scholarship sponsored by the Wisconsin Pest Control Association is one example; similar scholarships are offered elsewhere). Typically, the amount of these scholarships is \$1,000.00. Challenges we'd need to address include likely changes to our tax status and possible headaches because of that. Also, endowing one or two annual scholarships would require funding we don't currently have; thus, we'd have to become a fund-raising organization (with the aforementioned changes to our tax status. We'd need some members to step forward to organize and conduct fund-raising activities. Considering that everyone is quite busy, it would be difficult to find volunteers to run fund-raising activities.

President Rob Greer advised that we wait until our current tax status is formally recognized by the IRS before we pursue any venture that will require us to apply for a different and more complicated tax status. The paperwork for recognition as a 501(c) organization was submitted some months ago; it is not clear why IRS is lagging on their response to our request.

On the topic of meeting minutes: It was mentioned that, although everyone wants a copy of the minutes as soon as possible and therefore we email the minutes to the membership within a few days of each meeting; but we don't vote to accept or amend the minutes until three months from then. To solve this problem, minutes from future meetings will be watermarked "DRAFT" until approved by the membership. Once approved, the watermark will be removed, and the minutes will be distributed as

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April Board Meeting Minutes, *continued*

final. This means that minutes from the most recent meeting will NOT be published in the newsletter. The previous meeting's minutes will be included in the newsletter, with the "DRAFT" watermark removed.

In order to expedite the creation of accurate meeting minutes, members should respond via reply email, indicating the approval (just reply "Approved"), or offer any important changes you want to have made. Beware of offering nit-picky details that really don't matter; otherwise, the process of arriving at satisfactory meeting minutes can go on forever.

Financial report

MPMA received \$19,347 in revenues during the three-month reporting period of January 16 and April 16. MPMA spent \$29,411 for such things as the executive director's salary and special-projects pay; meeting catering; printer supplies; award clock for the outgoing President; meal catering; and the cost of MPMA's new tabletop display cloth.

Our new \$20,000.00 CD was shown in the register as an expense for a purchased item. It should be shown as a Funds Transfer. The January minutes will bear this amendment, as will all future editions.

One line item in the Expenses report described a license for SnagIt. SnagIt is image-capture and processing software for which we must purchase an annual license. This was not a "luxury" purchase or a careless use of Association money: It was necessary to have SnagIt in order to process and utilize the many different file formats that were used by those who sent in their "stories" for our brochure "Jobs for Bug Lovers." SnagIt will surely come in handy for future documents as well, since everything from the smallest item or image up to an entire page can be captured and then saved, pasted or otherwise used.

Old Business

Morgan Manderfield, Ecolab: MDA/MPMA review of SPCA, Cat. M, Master's, Vertebrate exams

MPMA was given the opportunity to review the new Structural, Category P (Vertebrate), Category M (Non-Commercial Structural) and Master's exams. Among those MPMA members reviewing and offering comments on the new exams were Dr. Mohammed El Damir, Caroline Kohnert, Morgan Manderfield, Jay Bruesch and one or two others. As other revised exams come online, Dr. Stephen Kells has indicated he will look at them and offer suggestions.

Mr. Chahal indicated that the Category E exam is currently being revised and should be ready within 1.5 years.

Dr. Stephen Kells: Wrap-up of 2024 MN PMP Conference and possible plans for future Conferences and an improved vendor experience at the Heritage Center

Post-Conference surveys of Conference participants were about 80% favorable, indicating high satisfaction. Those who choose to participate in person, as well as those who participate online, are by and large satisfied with the version they chose.

There was some dissatisfaction among Allied members (particularly, vendors exhibiting at the Conference) concerning room assignments. This resulted from a concern that those vendors who were assigned to the Captain's Room at the Heritage Center may have received less traffic from Conference attendees, this by virtue of the Captain's Room being somewhat removed from the main traffic flow of the Conference. In order to remediate this situation on the spot, Dr. Kells ensured that attendees were reminded of the location of the Captain's Room, and of the need for attendees to be sure to visit those vendors assigned to the Captain's Room.

Dr. Kells has committed to booking the Heritage Center for the 2025 MN PMP Conference; adding to the potential carrying capacity of this venue is the fact that the hotels attached to the Heritage Center have meeting and conference rooms available, which could add to the longevity of the Heritage Center as a Conference venue. One big advantage of using the Heritage Center for the MN PMP Conference is that both the Heritage Center and the attached hotels have easy-to-access, free parking.

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Todd Leyse suggested that vendor room assignments should be given out according to seniority, with long-time vendors getting the best exhibit locations and newcomers receiving the less-desirable spots. Pertaining to specific vendors requesting a certain display booth location: this has on occasion been done in the past (e.g., one vendor might specify that they want Table No. 14 year after year), but there is no guarantee that it will continue to be done in the future.

Travis Chambers, BASF, suggested that the vendor lightning rounds should occur immediately before or after breaks.

Dr. Kells indicated that there is the possibility of splitting speakers into a rotation into 3 rooms.

Some conferences, such as the Purdue Conference and NPMA PestWorld, offer breakout sessions in addition to whole-audience plenary sessions. Logistically, this might not be practical for the MN Conference.

Last year, the MN PMP Conference online version was offered in the fall, in addition to the spring availability of the online conference. Only 3 people availed themselves of this offer, and therefore this option will not be offered in 2024. The online version of the 2024 Conferernce will be accessible until April 30, the deadline for completion.

Rob Greer: Social Media Committee update

There is some interest in MPMA having a presence on social media. This is not intended to be a daily tweet, post or Tik Tok content; rather, we were thinking about twice a month posts. Members would have to step forward to volunteer to handle a social media platform and keep it up to date.

Adam's Pest Control's IT staff will set this up, once we know what we want to do.

Todd has not prepared a proposal for MPMA's social media usage: We need to get off of NPMA's coattails first (they currently manage our website, though poorly; and they have indicated that they want to be free from member states' Website management by the end of 2024. MPMA will have to take the reins and design a website, then monitor and actively manage it.

Todd will come to the July 2024 MPMA meeting with a proposal, including budget; the membership will vote to approve the proposal, or suggest modifications to it.

Morgan Manderfield, Jay Bruesch: The Great 2024 Minnpest Show

MPMA will have a booth at The Great 2024 Minnpest Show, the Entomology Department's annual insect expo; At our booth, we'll offer a light-hearted bug quiz, with categories for larvae (young folk); pupae (older kids); and adults (University students, experienced pest control technicians, etc.). Prizes to be awarded for just about any degree of success include fake crickets and a variety of fake spiders. We do have fake cockroaches as well, but since Ecolab gives out cockroaches at their exhibit, we're going to try not to use the cockroaches unless we run out of everything else.

Also for MPMA's booth at the 2024 Great Minnsect Show, we have developed a professional-looking, glossy brochure that introduces a number of ways that people who love bugs can turn their avocation into a well-paying job. In the brochure, we feature stories of a number of different kinds of professionals who turned their love of nature and bugs into a lucrative career. Careers featured include pest control technician; pest control supervisor or trouble-shooter; pest control consultant; technical director; National technical manager for a large firm; research entomologist. The idea is that people who love insects and other arthropods will see a sampling of the career opportunities open to them. Ideally, this would result in a better quality of new hires would sign on because they are passionate about bugs.

MPMA: Results of owner/manager breakfast and happy hour

Did any new members sign up? The short answer is No. We did have several active members sign up at the most recent renewal

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deadline, as well as a number of Allied members. Sadly, some of the companies that joined MPMA as Allied members and indicated they wanted to rent exhibit space in the exhibit rooms did not show up at the Conference at all, with the result that potentially useful products and services did not get introduced to the Conference attendees.

Concerning the MPMA Happy Hour and the non-member recruiting breakfast, interest was high and both large and small companies networked with each other, sharing ideas and insights. Discussions spilled over into the break time between educational sessions. It looks as though some useful and enduring communication will take place between member and non-member firms, and between large and small companies.

Set dates and venues for next two MPMA meetings

We have a venue for our July meeting: It is Plunkett's office at 40 52nd Way NE, Fridley. October's venue is still to be determined, but it will likely be Rove's office, Plunkett's office or possibly Adam's office.

New Business

Todds Leyse/Jay Bruesch: Should MPMA appoint a committee to study and implement fund-raising for a continuing U. of M. graduate student endowment?

Also discussed was the possibility of MPMA creating a merit scholarship for graduating high school seniors whose parents are MPMA members. From the standpoint of feasibility, this could be done without a whole lot of difficulty. But philosophically, we need to consider who we are, and then give thanks for our good fortune by establishing a program of pest management modules, either to be live at the PMP Conference, or presented by means of small brochures to be handed out. Those who pick up and read this handout might gain ideas on how they can translate their interest and passion to a career involving love of nature and bugs.

Todd Leyse: Booth assignments

Todd led a discussion on the topic: Should we assign a formal booth assignment policy for MN PMP Conference Allied vendors? (Communicate any logistical issues to Allison Forcier.) It makes sense to assign display booths on the basis of longevity: those who have exhibited at the PMP Conference for many years get first choice; those who are new might get less-desirable spots.

Rob Greer: Mastermind for Business

Rob explained what Mastermind is and will present a summary and recommendation at our next meeting in July.

Rob Greer: Automating meeting minutes

Rob reported that there are now options for automating the transcription of meeting minutes. Microsoft Teams has a transcription feature built in. Rob is going to present on this topic at our July meeting.

Next Meeting

Tuesday, July 16, 2024 11:30 am – 1:00 pm (Central): venue is Plunkett's Pest Control, Inc. 40 52nd Way NE Fridley, MN 55421. Members may also attend via Zoom.

Adjourn

President Rob Greer moved to adjourn at 1:00 pm; this was seconded and approved.

Respectfully submitted by Jay Bruesch, BCE

Executive Director, Minnesota Pest Management Association



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Norway Rat
Roof Rat
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Above photo courtesy of Jeffrey McGovern, The Resource Shop



3

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