

Even small companies are targets of cybercrime. Are you taking the necessary steps to protect your organization?



/// VOLUME 7, ISSUE 3



Even small companies are targets of cybercrime. Are you taking the necessary steps to protect your organization?

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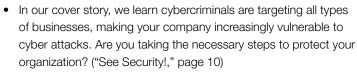
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# Are You Up To The Challenge?

n this issue of PCT Canada, we take a look at some of the key issues facing the Canadian pest management industry — and its customers. On any given day, PMPs are confronted with multiple challenges, from growing pest populations and random regulatory audits to cybercrime and online competition. We've attempted to address each of these important issues in a series of articles in this edition of PCT Canada:





**Dan Moreland** 

- A Health Canada official confirmed that the number of PCO inspections are increasing and are expected to remain a priority. ("It's Audit Time!," page 16)
- Would greater collaboration between pest control companies and municipalities better serve the public when it comes to rodent control? ("Rat City," page 20)
- Ticks are more numerous, and more are testing positive for the bacterium that causes Lyme disease. ("Tick Check," page 24)
- Building up content so customers find you in Google searches can provide a strong online foundation for building your business. ("Bugging Google," page 32)

Although this edition of PCT Canada covers a wide array of topics, as evidenced by the above list, it illustrates the complex nature of the business landscape for pest management professionals. Modern-day PMPs must not only be technically competent, but business savvy, becoming experts in everything from finance and accounting to human resources and online marketing. It's a daunting task, but also exciting for those with an entrepreneurial spirit. As we discuss in "Tell



STOY A. HEDGES

Me Something Good" (page 30), online reviews from satisfied customers are a lot like face-to-face customer referrals and word-of-mouth advertising - they are a simple way to get the word out and boost your brand reputation. We hope you find this edition of PCT Canada helpful as you continue to take on a growing array of business challenges.

We're also excited to announce that the 2<sup>nd</sup> Edition of the PCT Field Guide for the Management of Structure-Infesting Flies by Stoy Hedges is about to be sent to the printer.

The completely revised and updated field guide features tips for identifying and controlling dozens of species of flies, from small flies and filth flies to biting flies and nuisance flies. The digest-sized, paperback book also features a full-color identification guide and dozens of practical case studies. To read an excerpt from the book, turn to page 36, or to place a pre-publication order for the PCT Field Guide for the Management of Structure-Infesting Flies, call Paula Corrao in PCT's Book Department toll-free at 800/456-0707. \*



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# Citron Acquires UK's citron 1st Class Hygiene





Earlier this year, Citron Hygiene entered the washroom services market in the United Kingdom, acquiring 1st Class Hygiene based in Leicestershire, England, from the Fantham family. For more than 20 years, 1st Class Hygiene has provided a comprehensive range of washroom hygiene, pest control and related services.

This is Citron's second acquisition in the UK. In July 2018, it acquired Admiral Cleaning Services Limited, a facility supply distributor also based in Leicestershire, England. The two companies give Citron the infrastructure to provide washroom and pest control services to an expanded group of customers, building out a robust service offering for this market. Both entities will operate as Citron Hygiene UK Limited.

"We are excited to be executing on our global vision and welcome 1st Class to the Citron team," said Peter Farrell, CEO of Citron. "With this acquisition comes the opportunity to welcome a new group of team members who are very experienced in the service industry, and provides a great foundation for Citron to grow its innovative washroom and pest control platforms in the UK," he added.

On behalf of the Fantham family, Paul Fantham noted, "As we looked to expand our business in the UK, we were introduced to Peter and the extended Citron team and couldn't help but feel excited about their plans, both in the UK and globally. Citron became the obvious choice for our family to partner with." Both Paul and Philip Fantham will join Citron in leadership roles in Citron's UK organization and will play an integral role in building the Citron brand in the UK.

Citron Hygiene provides commercial washroom and food service hygiene, pest control solutions and a broad range of chemical and other facility-based products and services. It is headquartered in Toronto and has offices across Canada and in the US and UK.

# Vancouver Island Man **Dies of Rabies After** Nick from Bat

### According to the Vancouver Sun, a

21-year-old man from Vancouver Island died of rabies in July after a bat "struck" his hand and then flew away.

Nick Major was standing outside of his car on the side of a road in broad daylight when the bat flew into him.

The bat left no visible puncture wound or scratch marks, which is not unusual because bat scratches can be microscopic, said Dr. Bonnie Henry, B.C.'s chief provincial health officer. Major developed symptoms of rabies six weeks after exposure.

This is the first confirmed death from rabies contracted in B.C. since 2003.

According to the B.C. Centre for Disease Control, the only animals that carry rabies in the province are several species of bats. About 0.5 per cent of bats carry rabies in B.C. but on average, 13 per cent of bats sent for rabies testing are positive.





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# Deltamethrin Decision, Pest Control Product Act Review

The Canadian Pest Management Association is monitoring two regulatory issues that could impact the industry. The first is the **proposed registration decision** (PRD2019-07) for deltamethrin.

Deltamethrin is the active ingredient in DeltaGard SC, applied outdoors to control insect and tick pests, and Annihilator Poly-Zone Insecticide, labeled for the control of crawling and flying insect pests in agricultural facilities.

The public comment period closed on August 19. Health Canada's Pest Management Regulatory Agency will review comments before making a final registration decision. This is an important decision because deltamethrin is one of the few products registered in Canada to control 'wild' ticks such as the blacklegged tick that transmits Lyme disease, said CPMA President Sean Rollo, a technical and business development manager at Orkin Canada. Ticks and Lyme disease are a growing public health issue in Canada (see the article Tick Check on page 24).

"It's important that we follow it and make sure that we continue to have input," said Rollo of the decision process.

The second issue is the upcoming parliamentary review of the **Pest Control Products Act**, which regulates the prod-



ucts used to control pests. PMRA administers the act on behalf of the Minister of Health.

It's unclear how the review might impact the industry because the act doesn't come up for discussion very often. (The current act received Royal Assent in December 2002 and came into force in June 2006.) This is an opportunity, however, for the industry to suggest some changes.

One change CPMA is pursuing is for PMRA to interpret the use of pesticides based on use patterns and health risks, not on specific pests. Currently, if a pest is not specifically listed on the label, the product cannot be used to treat that pest, explained Rollo.

For example, a product labelled to control merchant grain beetles in a food processing facility cannot be used to control sawtoothed grain beetles if not also listed, even though they are nearly genetically and behaviourally identical. "That's an example of how we get handcuffed in our industry because of the way that the label language

is and what the laws say," said Rollo.

This is a real concern as non-traditional pests — such as Lyme-disease carrying ticks or the spotted lanternfly currently in New York State — explode in population size and expand their range. It can take years to get pests added to labels. "What do we do in the meantime?" asked Rollo. "From the structural pest management side of things, there are no special provisions for an emergency use" of products, he said.

As long as applicators follow label instructions and mitigate all health and environmental risks, it should not matter which specific pest is being controlled by the product, he said.

PMRA alerted CPMA to the upcoming review of the act. "They asked for our input," said Rollo. This shows the agency's transparency and willingness to work with industry, he said.

CPMA meets annually with PMRA each fall and is expected to learn more about the parliamentary review then. Changes to the act could be made in 2020.

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# SECURITY

Even small companies are targets of cybercrime. Are you taking the necessary steps to protect your organization?

# CYBERCRIME IS THE BIGGEST THREAT TO BUSINESSES IN CANADA, SAY EXPERTS.

And while large corporations may be the leading targets, small companies are not immune from attack.

In fact, 47 per cent of small- and medium-sized companies experienced a cyberattack in 2017, according to a Statistics Canada survey that was released last October.

The attacks cause serious disruption. At more than half (54 per cent) of the 12,600 businesses surveyed that fell victim to cybercrime, employees could not carry out day-to-day tasks.

Another 53 per cent reported that employees were unable to use resources and services like desktop computers and email, and 58 per cent experienced downtime — about 23 hours on average.

Nearly one third (32 per cent) of the companies had to spend additional time responding to cyber security incidents, and 30 per cent incurred additional repair or recovery costs.

\$\$\$\$. We're not talking pocket change, either. Canadian businesses spent \$14 billion to prevent, detect and recover from cyber security incidents in 2017, reported Statistics Canada. On average, medium-sized businesses (50 to 249 employees) spent \$113,000 and small businesses (10 to 49 employees) spent \$46,000.

Most companies (65 per cent) believed an external party was responsible for the cyber incident, as opposed

to an employee, supplier, customer or partner. And while 39 per cent could not identify a motive, others said it was an attempt to steal money or demand a ransom payment (38 per cent), access unauthorized areas (26 per cent), steal personal or financial information (23 per cent), or disrupt or deface the business or web presence (22 per cent).

#### **CRAFTY CRIMINALS.**

Cyber thieves often use social engineering to exploit predictable human behaviour. For example, an employee receives a legitimate looking email from a vendor asking for updated financial data, so she provides that information (which the criminals steal) or clicks on the provided link, which downloads malware.

According to the Canadian



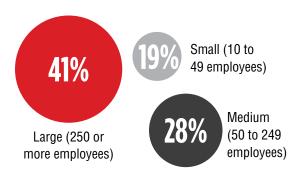


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#### **COMPANIES OF ALL SIZES VULNERABLE**

# Businesses that were impacted by cyber security incidents, by size:



Source: Statistics Canada, Cyber Security and Cybercrime in Canada, 2017

#### **HOW COMPANIES IMPACTED**

# Five ways businesses were impacted by cyber security incidents:

Prevented employees from carrying out day-to-day work		
Prevented use of resources and services		
Minor incidents, minimal impact		
Additional time required to respond		
Additional repair or recovery costs	30%	

Source: Statistics Canada, Cyber Security and Cybercrime in Canada, 2017

Centre for Cyber Security (Cyber Centre), the government's authority on cyber security, the most common forms of cybercrime that small businesses face are spam, ransomware and phishing.

On the rise is formjacking, where criminals load malicious code onto a business's website to steal shoppers' credit card details. Another is whaling, which is phishing aimed at senior executives and high profile recipients who have privileged access to company resources.

Among Canadians who owned a ".ca" domain between

November 2017 and January 2018, 85 per cent received a phishing email, according to a 2018 survey by the Canadian Internet Registration Authority (CIRA). CIRA surveyed 500 business owners and employees who manage IT at companies with up to 500 employees.

Nearly one third (32 per cent) reported in the CIRA survey that users of their website had unwittingly divulged sensitive information, 22 per cent reported a distributed denial-of-service attack (when a access to a network or website is disrupted), and 19 per cent reported being

hit by ransomware.

Most Canadian businesses (95 per cent) used some form of cyber security to protect themselves, customers and partners, stated Statistics Canada. Still, security coverage was not universal and a significant number of companies did not employ anti-malware software (24 per cent), email security (26 per cent) or network security (32 per cent), like firewalls.

Two-thirds (66 per cent) of businesses allowed employees to use personally owned devices for business-related activities, but only 47 per cent of these businesses had security measures in place to manage these devices, found the survey.

# YOU ARE RESPONSIBLE. In

addition to using various forms of cyber security to protect the business, it is essential to train employees on how criminals may try to exploit them.

Only 54 per cent of small businesses provide cybersecurity training for their employees, found the CIRA survey.

"Training and awareness are critical to ensuring your business

is cyber-secure. No matter how great your IT

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#### **BUSINESS MANAGEMENT**

team is, anyone with a network-connected device can be the weak point that brings your business down," said Jacques Latour, chief security officer at CIRA in a news release.

Because cybercriminals continue to use more advanced and harder-to-detect methods, training for employees must be ongoing.

The Business Development Bank of Canada, a financial institution for entrepreneurs, provided a checklist to help small businesses secure their operations. The checklist includes:

#### STRATEGY AND HUMAN RESOURCES POLICIES

- Does your company have a clear security policy for information and communications technologies (ICT) that's known to staff?
- Do you have a policy on acceptable ICT use, password quidelines and security practices?
- Do you have confidentiality agreements for contractors and vendors?
- Does your company have a privacy policy?

#### **DATA BACKUP**

- Do you centralize critical data (anything needed in dayto-day operations, including customer information) on a server and back it up nightly to a remote location?
- Do you centralize important data (anything important to the business but that doesn't get updated frequently) on a server and back it up semi-regularly off-site?

#### **DESKTOP SECURITY**

- Do all computers have working anti-virus software?
- Do you have a security policy for downloading and installing new software?
- Do you have passwords with a minimum of eight alphanumeric characters that are changed every 90 days?
- Are all computers updated with the latest system updates and security patches?

## **INTERNET AND NETWORK SECURITY**

- Do you have a firewall and intrusion detection on all web connections?
- Do you use a virtual private network for remote access?
- Are all modem and wireless access connections known and secured?

### PRIVACY AND SENSITIVE INFORMATION

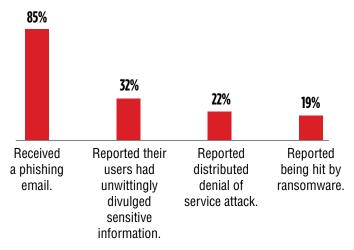
- Is customer financial information encrypted and accessible only to those who need it?
- Are paper files kept in locked filing cabinets with controlled access?

## **AUDIT**

Do you perform a periodic audit (every six months at least)
 of your ICT security checklist?

### **WAYS ACCESS WAS GAINED**

# Canadians who owned a ".ca" domain (personal and business websites) between November 2017 and January 2018 and:



Source: Canadian Internet Registration Authority Survey 2017-2018

# **GREATEST NEGATIVE IMPACT**

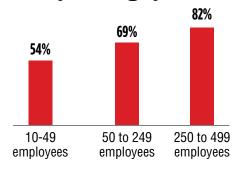
# Respondents who believed the greatest negative impact to the business could come from these types of malware:

Virus	43%	Unwanted applications	.16%
Ransomware	. 36%	Adware	. 12%
Trojan	34%	Bots or botnets	. 11%
Spyware	29%	Cyber-currency miner	.10%
Phishing/Spear phishing	32%	Other	1%
Worm	25%	Prefer not to answer	3%
Backdoor	16%	Don't know	.16%
Keylogger	16%		

Source: Canadian Internet Registration Authority Survey 2017-2018

## WHAT ABOUT TRAINING?

# Organizations that provide at least some cybersecurity training by size:



Source: Canadian Internet Registration Authority Survey 2017-2018



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Regulatory Agency is conducting
more inspections of pest management
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## **According to the most recent**

**report**, the agency audited 145 structural and landscape pest control operations in the 2017-2018 fiscal year. This is up from 125 the year prior and 83 in fiscal year 2015-2016.

"We have definitely noticed an increase in audits," said Aaron Soudant, quality assurance manager at Abell Pest Control, which has had six of its service centers inspected by the agency in the past two years. Inspectors are showing up unannounced at branches; they were always able to do that but now are doing so more often, he explained.

"The number of inspections of pest control operators has been increasing, and pest control operators are expected to remain a priority inspection area for Health Canada," wrote Natalie Mohamed, a spokesperson for Health Canada, in an email.

The industry became a focus of Health Canada two years ago due to a high level of noncompliance found by inspectors and a rising number of consumer complaints

# concerning the misuse of pesticides. (PCT alerted readers to PMRA's plan in 2017.)

Only 35 per cent of companies inspected last year were found to be in compliance, down from 65 per cent in 2016-2017.

According to Mohamed, the compliance rate of inspections has not exceeded 65 per cent over the past five years. "It is noted that this is due, in part, to the fact that inspections often target companies considered at higher risk for non-compliance," she wrote.

#### WHAT ARE INSPECTORS LOOKING

**FOR?** Pest management professionals who have experienced inspections recently said the process took one to three hours and covered a lot of ground.

Adherence to labels. A major objective of inspections is to verify that companies are safely applying and handling pesticide products. Soudant said inspectors closely evaluated Abell Pest Control branches for compliance with regulations that were introduced or changed in the past five to 10 years.

This included changes to propoxur use, requirements for tamper-resistant bait sta-

tions and the use of the commercial class of rodenticides.

According to the Health Canada report, the primary violation last year continued to be the use of pest control products contrary to label directions. This included incorrect use sites or locations (39 violations), pests not included on the label (30 violations) and bait stations not properly labelled (19 violations).

In addition, "they're out there swabbing tanks," said Soudant. Inspectors began sampling tanks last year to determine whether pesticides are being mixed at the proper rates per label directions. Per Health Canada, 123 application equipment samples (wipe and spray tank formulation) were collected last year during inspections, and 102 (83 per cent) were found to be compliant.

**Proper PPE.** Another focus of inspection is personal protective equipment (PPE). "They're very much looking out for us to make sure we're using the proper PPE; that companies are providing that PPE to their staff," said Soudant.

According to Health Canada, lack of appropriate PPE resulted in 17 violations last year.



































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## MARKET WATCH

#### **Documentation + communication.**

Inspectors want to look at work orders and paperwork to evaluate proper documentation of pesticide use. In addition, they're tracking whether clients and the public are being provided with the required precautionary notifications.

"They're looking at how we communicate to our clients, like reentry times; how that's being completed," explained Soudant.

Make sure staff training manuals are up to date, as well, said Chris Frederick, owner of Pest Detective in North Vancouver, B.C.

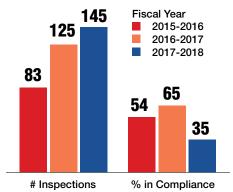
**Product storage + vehicles.** Inspectors inventoried product storage areas and vehicles, checking product quantities and pulling pest control product (PCP) registration numbers to ensure products were still registered for use in the province. At Pest Detective, they also inspected products in the DIY store, said Frederick, who was audited 18 months ago.

Frederick urged PMPs to rotate products on storage room shelves — don't just jam new products up front — so older products get used first. "You don't want your product sitting around too long. Somebody's got to keep up on your inventory," he said.

Auditors inspected two of Frederick's service vehicles, which were chosen at random. "Fortunately for us we always want to see the vehicles clean and with all our MSD sheets in there, products secured properly

### PMP SCORECARD

More inspections, fewer companies found in compliance:



**Source: Health Canada Pesticide and Compliance Reports** 

# **Enforcement Actions**

According to Health Canada spokesperson Natalie Mohamed, pest management companies are most commonly cited for these non-compliance issues:

- Use of product contrary to label directions.
- Unapproved application method or equipment.
- Failure to wear appropriate personal protective equipment.
- Possession of unregistered (never registered or expired) pesticides.

Inspectors assign penalties for non-compliance based on the level of risk to human health or the environment. Enforcement responses can include the issuance of notices of violation with monetary penalties (up to \$10,000 per violation), compliance orders, warning letters, product seizures or refusal to allow entry of a product into Canada.

In addition to pest and landscape management companies, Health Canada focuses inspection on product registrants, importation, retailers, users (such as agricultural and industrial users), and complaints of misuse.

Inspectors from Health Canada's National Pesticide Compliance Program promote, monitor and enforce compliance with the Pest Control Products Act (see related article page 8) and its regulations.

Visit here for a current list of compliance violations and enforcement actions.

and canopies locked," he said.

Transporting pesticides in the cabs of trucks and reusing containers (albeit handy at times) are big no-nos, reminded Soudant.

"The best advice is to make sure you're familiar with pesticide storage requirements both at your office and in the vehicle.

There are slight variations from province to province so (PMPs) need to be familiar with those storage regulations," he said.

According to Health Canada, possession of unregistered (never registered or expired) products was noted in 29 instances last year.

**Employee knowledge.** Expect employees to be interviewed, as well. Inspectors may ask what products they use for certain pests and how they apply these products.

"So you do need to be familiar with the label at all times. You can consult the label during the interview, which is fine, but again you do need to be prepared and have that information at hand," said Soudant.

**ALWAYS BE AUDIT READY.** The key to

passing inspection is to always stay compliant, not wait for an inspection. "This is just a part of the daily business operations. Make sure you're always audit ready. If they pull your truck over today you're not going to have time to get ready. You have to be ready today," said Ryan Sawyer, Sawyer Pest Management, London, Ont.

Sawyer, who's had federal and provincial inspections, said it is the business owner's responsibility to ensure daily compliance, to conduct internal audits and monthly vehicle inspections. "That's a part of good business practices," he said.

And if PMPs have questions about labels or how to interpret regulations, reach out to PMRA, which enforces those laws, for clarification. "They're there to help us and we can reach out to them and ask those questions and make sure we're doing things properly," said Soudant.

While a little inconvenient, the inspections are necessary, said Frederick. "Everybody is held to same high standards," regardless of company size, and that is good for the industry, he said. The inspections ensure that everyone is playing by the rules.



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Researchers from the Vancouver Rat Project are evaluating municipal rat control programs across North America to develop a better approach.

**Early indications:** Private pest management has a role to play... and some improvements to make.

few years ago, the Vancouver Rat Project found that Norway rats in the city's Downtown Eastside neighborhood carried pathogens like leptospira, bartonella and bacteria commonly found in hospitals, such as *C. difficile* and staphylococcus.

Now the group is developing a rat management framework for municipalities, based on data gathered from control programs in major cities across North America.

Working under the guidance of noted rodentologist Dr. Bobby Corrigan, researcher

Michael Lee explored control programs in a number of different cities including Philadelphia, Washington, D.C., Seattle, Chicago, New Orleans, and New York City.

"The basic idea was to look at what municipal governments are doing to address rats on a large scale because they're the ones that have the incentive and the onus of dealing with rats at a citywide level," said Lee. (By comparison, private pest management is focused on protecting individual client properties.)

He interviewed program designers, directors and managers to learn what was

working in the programs and how they thought the programs could be better. Lee also went out in the field with municipal and private pest management professionals to see what each city was dealing with on the ground.

Lee currently is evaluating interview data to identify best practices that cities can use to either develop new rat management programs or improve existing ones. He expected to finish the report by year end but said some early insights clearly stand out.

### A SINGULAR FOCUS DOESN'T WORK.

"Municipalities develop and implement these programs with the best intentions and they decide to focus on a specific area of management," said Lee. But by concentrating on specific areas or actions, he said, "All the other issues that contribute to the rat problem kind of fly under the

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#### RODENT CONTROL

radar," he said.

For example, a city may focus on responding to citizen rat complaints. As such, city workers spend their time baiting rat burrows (because that's what citizens want to see) but not on improving sanitation issues.

Other cities may zero in on doing property inspections or enforcing bylaws to reduce conducive conditions, such as citing homeowners for having long grass or brush piles. This requires boots on the ground and significant funding, said Lee, so not many resources are left to manage rodents elsewhere, like in parks or commercial districts.

"If you want to deal with a rat infestation on the level of an entire city, you really have to focus on all jurisdictions — commercial, residential, city property — and you have to focus on modifying the environment across all of those different areas. Cities have not seemed to really be able to do that," he said.

#### LOW BIDS DON'T PRODUCE RESULTS.

To supplement rat management efforts, some cities hire private pest control companies. "The private pest control industry definitely has a huge role to play," said Lee. This is especially true for cities setting up programs for the first time. Working with private industry can lessen the burden on cities to hire inspectors, conduct training and build department infrastructure but still allow them to direct control efforts.

Still, cities that hired private pest control companies had mixed results. "What ends up happening is they go to the lowest bidder and then that company, because they bid so low, haven't given themselves the resources to do the control very well so all they're doing is going around and burrow baiting, and they're not dealing with all of the other issues that they know they should be dealing with," said Lee.

## **TEAMWORK ACHIEVES MORE. Col-**

laboration can make or break a program. "There needs to be a close cooperation if not direct lines of communication between what cities are doing and what the private



In April, Toronto Councillor Ana Bailão (Ward 9 – Davenport) passed a motion to improve the city's rat mitigation strategies and rat control education, as well as to review the preventative strategies now used with capital works projects.

"This is an important motion that will have a positive impact on the health and wellness of people across the City of Toronto. In many communities with older, single-family homes, such as those in Ward 9, rats have been an issue during the spring when they leave their burrows.

"By incorporating a preventative strategy to future construction projects, Councillor Bailão is working to ensure the city will be taking proactive measures to reduce the rat populations that harm these families," wrote the councillor's communications assistant Adrian Martins in an email.

City staff is reviewing the requested measures and is expected to provide an update at year end.

pest control companies are doing," said

In one city he visited, rodent control program managers regularly communicated with private pest control companies and vice-versa to discuss control challenges and problem areas. The two groups commonly shared information back and forth, and this helped both groups achieve more.

"I would say that sort of communication was not really the norm of what I saw," said Lee. Usually, the cities and private companies were instead doing their own things. But, Lee said "I definitely don't think that is the most effective way to go if you

really want to get at this issue."

**TRUST IS AN ISSUE.** Some municipal stakeholders believe that private pest control companies won't fix what is causing a rat problem even if they know what it is.

"That's a commonly held myth that some people hold; that (PMPs are) more interested in making money than addressing the underlying reasons for the infestation, because if you do then your contract ends," Lee said.

While he does not share this opinion, Lee said this feeling erodes trust in the industry and makes it difficult to collaborate and develop partnerships.





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# Tick populations and Lyme disease are on the rise.

PMPs see opportunities to educate clients and eventually provide tick management programs.





icks are not a new pest in Canada. What is new: Ticks are more numerous, and more are testing positive for the bacterium that causes Lyme disease.

Two years ago in some parts of Ontario, 30 per cent of ticks tested positive for Borrelia burgdorferi, said Mike Heimbach, business development director at Abell Pest Control, which has partnered with the Magnota Lyme Disease Research Laboratory at the University of Guelph to raise awareness of the pest. "Now in some areas it's as high as at least 50 per cent. They've identified a real increase in the percentage of blacklegged ticks that carry Lyme disease," he said.

In July, **Global News reported** that more than half of ticks tested in some Ottawa neighbourhoods carried the bacterium. As such, the public health unit there no longer tests the pests; it is assumed they carry the debilitating illness.

In 2017, 2,025 cases of Lyme Disease were reported by **Health Canada**, up from 144 cases in 2009.

Chris Frederick, owner of Pest Detective, North Vancouver, B.C., knows people who have contracted the disease. One was a friend's son. "It ended his hockey, and it affected his schooling. He wasn't diagnosed for quite a long time; I think close to two years," he said.

Infected blacklegged ticks transmit the bacterium through their bite. The disease causes flu-like symptoms and, if not diagnosed early and treated with antibiot-

ics, the infection can spread to the joints, heart and nervous system.

Tick populations have increased in number and range mainly due to warmer temperatures that have allowed them to overwinter. Migratory birds transport the pests to new areas where they can survive.

#### **AWARENESS IS INCREASING**

The Pest Detective franchise in rural Okanagan, B.C. has had more clients ask about ticks and how to control them. "Inquiries are on the rise; awareness is on the rise," said Frederick. Still, not a lot of people are booking tick management service; more are looking for tips on what they can do to minimize the pests that get on themselves, their pets and properties, he said.

The same is true in London, Ontario, said Ryan Sawyer, Sawyer Pest Management. Providing callers with information on how to reduce their risk "is more PR" than it is revenue generating, he explained.

People and pets may pick up ticks from walking, hiking, biking and doing other outdoor activities in parks and natural areas, but even urban dwellers are at risk.

"The likelihood of someone contracting Lyme disease in his/her own backyard is very real," said John Abell, president of Abell Pest Control, in a news release. Tick populations tend to gravitate to wooded or bushy areas with tall grasses;

A recent survey by Abell Pest Control of 1,000 Canadians in five provinces found that on average more than 72 per cent of respondents could identify and remove a tick. An average of 60 per cent said they had learned about or received training on tick prevention.

"The good news story is that Canadians are much more aware of ticks and Lyme disease than they were, and how to protect themselves against ticks, which is great," said Heimbach.

Pest management companies also are increasing employees' knowledge of the pest. "We had to do some further training" after numerous tick-related questions came up during a recent staff meeting, Frederick said.

### **A GROWTH OPPORTUNITY?** At

present, tick control doesn't account for much revenue at most pest management

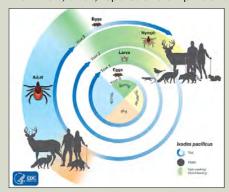
# The Tick Lifecycle

The **lifecycles** of the two blacklegged ticks found in Canada vary slightly.

The lifecycle of *lxodes scapularis*, the blacklegged (or deer) tick found in southeastern and south central Canada, generally lasts two years.

The lifecycle of *Ixodes pacificus*, found in British Columbia and called the Pacific deer tick, generally lasts three years.

Both ticks go through four life stages: egg, larva, nymph, and adult. After eggs hatch, the ticks must have a blood meal at every stage to survive. They feed on mammals, birds, reptiles and amphibians.



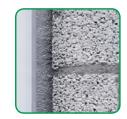


The lifecycles of the two blacklegged ticks found in Canada vary, lasting about two or three years.

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## **PEST FEATURE**

companies. "Ticks right now are a relatively small part of our business but as they become more and more of a health issue, who knows where that may end up?" said Sean Rollo, Orkin Canada's technical and business development manager in Moncton, New Brunswick.

The number of Canadians diagnosed with Lyme disease is increasing, which could make the control of ticks on private and public land a higher priority.

"The easier it becomes to diagnose it, the more it will be on the radar a little bit more," said Aaron Soudant, quality assurance manager, Abell Pest Control. "I do expect (tick control) to become more of a service and business for us as the years go on," he said.

Abell Pest Control established a scholarship at University of Guelph to help further Lyme disease research.

# New Invasive Tick Coming to Canada?

The Asian longhorned tick was identified in New Jersey in 2018 and has since spread to eight other U.S. states. According to entomologists, its potential distribution includes parts of southern Canada, from the Maritimes to British Columbia.

Haemaphysalis longicornis is difficult to identify because it looks so similar to other species. It has not been found to transmit disease-causing pathogens to humans in North America, but it has shown this ability in Asia. The tick also is a concern for animals and livestock.



Haemaphysalis longicornis looks similar to a number of tick species.

# WHERE TO FIND

# **Blacklegged Ticks**

According to Health Canada, surveillance indicates that populations of blacklegged ticks are spreading in eastern and central Canada.

**Areas of high risk** for Lyme disease were identified in Ontario, British Columbia, Manitoba, Quebec, New Brunswick and Nova Scotia.

Other common ticks in Canada include the Lone Star tick, American dog tick, brown dog tick and Rocky Mountain wood tick. These ticks can transmit tickborne diseases like ehrlichia, tularemia, Rocky Mountain spotted fever and Colorado tick fever.



Ticks can transmit diseases like ehrlichia, tularemia, Rocky Mountain spotted fever and Colorado tick fever.

# Tick Management Best Practices

# Help customers protect themselves and their backyards.

As protectors of property and public health, pest management professionals are well-suited to help customers prevent tick bites and Lyme disease.

**Help yourself.** Educate customers on how to avoid tick bites. This includes wearing long pants, applying an insect repellent like DEET, and doing a tick-check on everyone (including the dog) after spending time in natural areas and provincial parks, whether walking, hiking, biking or hunting. Ticks also can be picked up in urban greenspaces, like city parks, and even in backyards.

**Always inspect.** Identify the areas of the property where ticks may be found. "'They're not going to be in the well-groomed lawns. They're going to be on the edge of properties where longer grass may come to the edge of a forest," said Aaron Soudant, quality assurance manager, Abell Pest Control.

**Get physical.** Encourage clients to keep up their yards. Trim back overgrown trees, shrubs and plants that hang over or impede walkways. Keep grass mowed and pick up leaf litter and debris along fence lines to reduce conditions that attract tick-carrying rodents and wildlife. Create a transition — such as a wide strip of wood chips — between the lawn and wooded or natural areas.

**Deter wildlife.** Rodents and small animals are part of the tick lifecycle; they bring ticks onto the property. As such, make the property less hospitable for mice, raccoons and skunks. "If you can control those pests then you reduce the risks of the ticks being around the property as well," said Soudant.

**Target the treatment.** Apply a liquid pyrethroid (e.g., deltamethrin, which is under review; see article page 8) where grass meets forest, along fence lines and to the perimeter of the house where ticks are found. Also encourage clients to treat their pets with vet-approved control products.



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# Tell Me Something GOOD

If you are not asking customers to share positive online reviews about your company, you are missing out on a simple way to boost your brand reputation.

ositive online reviews are a lot like face-to-face customer referrals and word of mouth. And in some ways they're much better, because they can reach far more people who are looking to hire a service like yours.

But according to a **new survey** from The Manifest, a business news and how-to website based in Washington, D.C., only 40 per cent of small businesses encourage happy customers to leave positive reviews online.

"It's not hard to get a happy client to write a review, but it does take some nudging," said Alan Rabinowitz, CEO of SEO Image, an SEO and reputation management company, in a news release.

Getting positive online reviews is just as important as managing the not-so-positive ones. According to the survey of 529 small businesses across the U.S., more than half of companies (53 per cent) respond to online reviews publicly; 48 per cent respond privately.

A public response is important — even if you follow that with a private one. That's because small businesses that respond publicly to negative reviews demonstrate that they care about the feedback they receive from customers, said online reputation management experts.

"If a potential customer sees a company's response to a negative review, they're more likely to buy from them because it shows they care about their customers' feedback," said Anthony Will, CEO of Reputation Resolutions, an online reputation management company, in a statement.

Small businesses also should more actively advocate for their brand online. The survey found that only 44 per cent of companies use social media to promote and share positive content about their brand, yet 94 per cent of companies that monitor their online reputations have a social media presence.

The key is not to appear as being overly self-promotional.

"You want to help your target audience make the best decision for them — not just say how great you are," said Lauren Elliott, marketing communications manager at Thee Digital, a web design and marketing agency, in the news release.

Employing proactive strategies (e.g., asking customers for positive reviews) and reactive ones (e.g., publicly acknowledging and responding to reviews from unsatisfied customers) gives small business owners greater control over their brand's digital reputation.



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SEO and Your Pest Control Business

Search engine optimization (SEO) is vital for pest control businesses — making sure potential customers know who you are and what you do. In this second of two articles, learn how to maximize this marketing method.

By John Vuong

re you easy to find on the Internet? In today's world, the vast majority of consumers start looking for products and services online. That's why Google processes over 40,000 search queries per second! Just because bed bugs can be hard to find doesn't mean your pest control company should be. Take advantage of search engine optimization (SEO) to position yourself as a reliable, top-tier service provider in your area.

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#### **MARKETING**

#### WHAT IS SEO AND WHY DOES IT

MATTER? SEO is a process that allows you to position your company's website and other online assets so that Google finds them useful and authoritative. This causes Google to serve up your website higher in the search results for people who use search terms relevant to your industry.

Why does it matter? People use Google for 93 per cent of searches on mobile devices and 63 per cent of searches overall, and the first page of results get 71 per cent of the clicks. If you're not on the first page, you're not likely to get the attention you need to grow your business.

Wondering about the other search engines? Bing (run by Microsoft) is the primary competitor to Google. If you follow the best practices to rank well on Google, you'll do well on Bing and other competitors as well.

**USE SEO TO MEET THE CUSTOMER BUYING CYCLE.** The buying cycle for pest control can sometimes be very short, since most folks have a need they want to address immediately. The key is to build awareness of your company before the urgent need arises.

The customer buying cycle in this industry goes like this: awareness leads to education, which leads to a sale. That is, once a potential customer becomes aware of your company, they'll do some reading on how to handle specific bug problems. Then, if that bug problem arises, they're more likely to contact you to solve it.

Using SEO means optimizing your website for common terms that are used by searchers who have pest control needs. Terms like "pest control in (your city)"; "handling termites"; and "how to kill roaches" are all examples of phrases you may want to rank highly for.

Use these keywords on your service pages and in educational pieces, which help potential customers trust that you know what you're talking about. End each piece with the invitation for them to contact you if they need pest control help. That nudges the reader to become a paying customer.

People use Google for 93 per cent of searches on mobile devices and 63 per cent of searches overall, and the first page of results get 71 per cent of the clicks.

organic seo vs. Paid ads. Building up content so that customers find you based on keywords in Google searches is known as "organic SEO." It builds up over time and can give you a very strong foundation for your business online. However, it does take a while to get established. For more immediate results, you may want to invest in paid ads.

Google

Paid Google ads allow you to appear at the top of the page when a user searches specific terms. You'll pay per click that you receive. In order for this strategy to pay off, make sure that the page the potential customer lands on after clicking your ad is relevant and has a strong invitation for them to contact you.

#### WHAT TO LOOK FOR IN AN SEO

**AGENCY.** Of course, you're not in the business of SEO; you're in the business of protecting people's homes and businesses from pests. That's why you should consider partnering with a high-quality SEO company to help you get the online marketing results you need.

Here are some things to look for:

- Someone with a lot of experience helping other pest control companies succeed.
- An ethical company that does not practice underhanded ranking tactics.
- A company with a genuine interest in your success who understands your long-term goals.
- An agency with excellent reviews from past customers — don't be afraid to call them.

You want to make sure you're working with top-level professionals. Unfortunately, poor SEO techniques can hurt your website and ranking, and it can be very difficult to recover and regain the trust of Google's search algorithm.

Learn more about SEO strategies for pest control businesses. •

About the Author: John Vuong is founder and president of Local SEO Search Inc., a full-service search engine optimization agency for small- to medium-sized businesses based in Toronto. Established in 2013, the company specializes in SEO and digital marketing for service industries, including pest management.

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# CONTROL CASE STUDIES

**EXPERIENCE** IS THE BEST TEACHER IN THE PEST MANAGEMENT PROFESSION.

# By Stoy Hedges

Editor's Note: The following article is excerpted from the soon-to-be-published 2<sup>nd</sup> Edition of the PCT Field Guide for the Management of Structure-Infesting Flies.

est management is a problem-solving profession. A customer has a problem with an infestation of some pest, and it is the pest professional's job to solve it. Each situation is different, with many factors influencing an infestation—type of pest involved, number of pests present, construction and maintenance of the building, contributing conditions, and sanitation practices. The pest professional's knowledge and experience will even play a role in how quickly or effectively a particular pest problem will be solved.

Experience is the best teacher in the pest management profession. One can learn all about a pest's biology and habits, but until one deals with that pest in actual situations, the professional will not appreciate just how different pests act and live in the field. A skilled professional learns from his mistakes—and his successes. As he progresses in his career in pest management, his ability to solve pest infesta-



tions will increase with each experience.

Review of "case studies" is a good way to pass knowledge learned to other pest professionals. The following three case studies describe situations involving fly infestations in structures. One of these cases might be similar to a current situation you may have encountered and be of help in finding a solution.

#### FRUIT FLIES & FUNGUS GNATS. A

40-story office building reported flies in the offices on the first six floors. No live flies could be found during an inspection of the offices on these floors. The customer had also failed to collect any specimens as they had been asked to do on the day prior to the inspection. By inspecting windowsills, dead fruit flies were found in some offices on floors 2 through 5 but not on the sixth floor. Fungus gnats, however, were found on the sixth floor.

Further investigation showed that the



Fruit flies may be found breeding far away from the area in which they are being seen.

fungus gnats were living in the soil of potted plants on employees' desks. These plants were being overwatered which promoted the growth of fungi in the soil. The employees were educated on proper watering procedures and were asked to allow the soil to thoroughly dry to kill the fungus gnat larvae.

The fruit flies proved more challenging. Inspections of drains, coffee stations, trash containers, and restrooms revealed no

fruit flies or breeding sites. The lowest floor of this building was a garage and loading dock, and an elevator which ran up to all floors was located in the loading dock area. A trash dumpster was found in the loading dock area approximately 75 feet from the elevator. An inspection of the dumpster revealed that garbage and wet, decaying organic debris had been allowed to accumulate under the dumpster. It appeared that the underneath of the dumpster had not been cleaned in some time. Fruit fly larvae, as well as blow fly larvae, were found living in the organic debris under the dumpster. Hundreds of fruit fly adults were seen flying about the loading dock area.

The fruit flies were attracted to the lights in front of the elevator and entered the elevator when the doors opened. The flies then would fly out onto the various floors when the elevator opened and proceeded to fly about the different offices. The office building's management was shown the



**©STOY HEDGES** 

dumpster area and was provided a list of written recommendations. The primary recommendation was to establish a regular cleaning schedule of the dumpster to prevent problems of this type from occurring in the future. No insecticide treatments were needed to solve this problem.

Lessons Learned: The breeding source is not always near the area where flies are seen. Sometimes, it can be a good distance from that area.

PHORID FLIES. During a routine surface checking Tin Cat mouse traps in a food warehouse, the service professional noted phorid flies being trapped on glueboards that were placed in the Tin Cats for insect monitoring purposes (trap synergy). Only a couple of traps had flies so the breeding source was likely nearby. A check of pallets in the area revealed a case of damaged cans where phorid flies were found breeding (see photo).

Lessons Learned: Glueboard traps in sta-



Flies and other insects captured on glueboards can alert to the presence of an infestation. Further investigation should be conducted to find the source.

tions or ILTs can reveal the presence of a fly infestation before the customer notices it. In food warehouses, damaged food items are often the source of small fly issues.

**MOTH FLIES.** A homeowner was experiencing a problem with small flies in one bathroom of the house. The service professional could not find the source of the flies. An entomologist was asked to

look at the situation and identified the flies as moth flies. No evidence could be found of the flies breeding in any drains, however, the entomologist noticed that the bathroom where the flies were seen was located next to the bathroom in the master bedroom. These two bathrooms shared the same wall for their plumbing pipes. A couple of holes were drilled into this wall and several moth flies emerged from these holes soon after they were drilled. The customer authorized for a larger opening to be made into the wall which exposed a water leak and a prime, active breeding source for moth flies. Correcting the leak, drying the area out, and repairing the wall solved the infestation. (Case Study provided by Mike Corbitt) Lessons Learned: Flies are not always breeding in areas accessible to your eyes. Wall voids can serve as breeding sites when leaks or other suitable conditions exist. \*

The author is a Board Certified Entomologist and President of Stoy Pest Consulting.



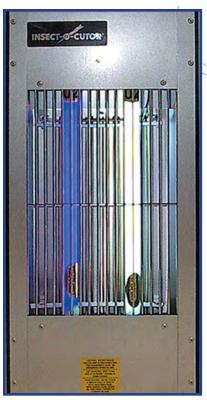
# Got Flies?

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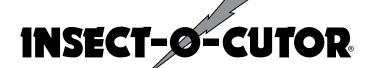


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MODERN BIRD CONTROL

# **Plastic Bird Spikes**

Virtually invisible, plastic bird spikes from Bird B Gone are ideal for use on roof peaks, ledges, rooflines, parapet walls, eaves, I-beams, windowsills, light posts, signs and more. The patented design is made from a non-conductive, UV-protected polycarbonate plastic that is not affected by extreme



temperatures and will not break. The patented design does not require assembly or that strips be assembled together to create the appropriate width. The deterrent can be glued, screwed or tied down to most surfaces. It has a five-year guarantee.

#### **Birdbgone.com**

# **RESOLV No Wax Soft Bait**

RESOLV Soft Bait, featuring the trusted active ingredient bromadiolone, is a good choice for the budget-minded PMP faced with moderate rodent infestations. With superior palatability even in hot environments and a low



cost-per-placement, RESOLV can be counted on in any situation to eliminate Norway rats, roof rats and house mice. The wax-free bait will not melt and is made without nuts or seeds to reduce debris and service time. Package design allows the aroma to escape, attracting rodents. A lethal dose may be consumed in one night's feeding with the first dead rodents appearing 4-5 days later. The product label allows removal of the paper to place bait directly onto a feeding device.

#### liphatech.com

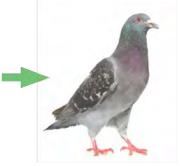


# Got Pigeons?

OvoControl P® - the "IGR" for Birds



Pigeons Eat Bait



**Eggs Don't Hatch** 



**No New Pigeons** 



Population Shrinks by 90 to 95%

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Timmy Madere, Pest Control
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Lessons from a Lifetime of Rodent Control & Trends in Urban Rat Ecology Mike Deutsch, Entomologist/ Industrial Hygienist, Arrow Exterminating



Understanding the Public Health Threat of Rodents: What You Need to Know Matt Frye, Community IPM Extension Area Educator, Cornell University



Understanding Rodent Behavior: How to Think Like a Rodent Bobby Corrigan, President, RMC Pest Management Consulting

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