



# A Lean, Skilled, Effective & High-Quality Army of Pestbusters

Chairman & CEO, Thomas Fernandez



**PESTBUSTERS**





## VISION

To develop ambassadors to be the standard for the pest management industry.

## MISSION

Nurturing our people to be leaders who ignite passion in order to differentiate and dominate our niche



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"NO, THAT'S NOT A SEXY NEW PERFUME....  
THE EXTERMINATOR JUST SPRAYED!"

**'Not A Sexy Job'**

**Pest Control**



### RATS IN SINGAPORE

**NORWAY RAT**  
Body length: 180-220mm  
Characteristics: Larger front quarters, tail shorter than body.

**ROOF RAT**  
Body length: 150-200mm  
Characteristics: Tail longer than body.

**RAT LIFE**  
Life span: 1-2 years  
Characteristics: Reproduce fast, omnivorous diet, eat of refuse.

# 1,000 more rat burrows detected

Over 85 per cent found in housing estates by town councils

Report by **HEATHER CHEN** and **HEATHER CHEN** for **SINGAPORE TODAY**

More than 1,000 more rat burrows were detected last year in public areas compared with 2014, said the National Environment Agency (NEA).

"This shows that we tend to be more alert in looking for rat burrows and to be vigilant. We now will be able to catch the rats, but also go the other way to stop the rats from reproducing," he said.

The NEA said that the rat burrows have been getting an increasing number of rats about 10 burrows in a hole.

# Rats! They're adapting and multi...

re food waste built-up ironment help ents thrive

**GI ZENKIN**  
MENT CORRESPONDENT



The rat infestation in Bukit Batok has thrown a spotlight on the rodents. Here are the three common rodents found in Singapore.

### Brat pack

**Norway rat (Rattus norvegicus)**  
Length of head and body: 170mm-200mm  
Weight: 150g to 200g  
Pointed nose, large ears and slender body compared with the Black rat.

**Black rat (Rattus rattus)**  
Length of head and body: 150mm-200mm  
Weight: 100g to 150g  
Pointed nose, large ears and slender body compared with the Norway rat.

**House mouse (Mus musculus)**  
Length of head and body: 60mm-70mm  
Weight: 10g to 30g  
Relatively small head and ears.

**NEA says:** The Norway rat is the most common rat found in Singapore. It is a generalist feeder and is found in all types of habitats. The Black rat is a more specialised feeder and is found in urban areas. The house mouse is a generalist feeder and is found in all types of habitats.



## Rats resurface in Bukit Batok

Restoration work on vacant state land managed by HDB

Restoration work on vacant state land managed by HDB has led to rats resurfacing in Bukit Batok. The rats are found in the area around the restoration work.

NEA said it will continue to help HDB with rat control operations over the next few days. It added it will also work with HDB to put in place a tight rat control regime.

Meanwhile, temple volunteers said the temple has tried to keep the rodents at bay using various methods, including planting sticky traps and using other methods.

Ms Sim, a volunteer at See Thian Fish Combined Temple, shows the rat traps around the temple. Temple volunteers said rat infestation has been a problem there since the middle of last year.

PHOTO: ONG JIE JIN

## 灭虫公司 商场更勤于防鼠 生意增50%

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本地商场过去半年的防鼠意识明显提升,有灭虫公司生意激增50%。也有商场连续两周末日进行灭鼠及防鼠工作,防止鼠害无所遁形。

滨海广场今年1月发生火祸餐馆自助餐小窝出现死老鼠,环境局之后更在14家餐饮场所的假天花板发现鼠踪,引起关注。

受访灭虫公司告诉本报,本地各大商场有了前车之鉴,过去半年的防鼠意识明显提升,灭虫公司生意激增50%。

“灭虫公司生意激增50%”

“多数商场其实都有聘请灭虫公司进行定期灭鼠。”

灭鼠公司表示,灭鼠工作非常重要,商场灭鼠工作非常重要,商场灭鼠工作非常重要。

## Bukit Batok residents & shopkeepers at their wits' end trying to keep rodents out of their homes & shops

# Rat attack

NEA to take enforcement action as eatery calls in pest control operator

By **CAROLIN KIEW** and **SARAHNOA CHAN**

THE owner of Hotpot Culture yesterday admitted that a dead rat had been found in one of its dishes, as the National Environment Agency (NEA) said it will be taking the closure order to stop the eatery from trading.

The restaurant, at 100A Singapore Street, had been one of the first to be closed by NEA after the rat was found in one of its dishes. The eatery's operations have been suspended.

Hotpot Culture's owner Liu Chiao said she had called NEA to report the rat. She said she had called NEA to report the rat.

## Restaurant comes clean about dead rat

NEA to take enforcement action as eatery calls in pest control operator

By **CAROLIN KIEW** and **SARAHNOA CHAN**

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# Dengue fight leads to drop in new cases

100 fewer fresh cases last week, but figures still higher than usual

Linette Lai

The number of new dengue cases has fallen sharply in the face of an all-out effort to stem the spread of the mosquito-borne virus.

Last week, there were 412 new cases, 100 cases fewer than in the week before, though still significantly more than is normal at this time of the year.

Even in 2013 - when dengue cases surged to an all-time high of 22,000 - only 247 cases were reported in the same period.

On its website, the National Environment Agency (NEA) advised people to keep up the fight against dengue, warning that the number of cases this year could exceed 30,000.

The projection is based in part on the 5,000 new dengue cases detected since the beginning of the year.



Last month, NEA announced that it would be stepping up its anti-dengue efforts, including training more than 5,000 additional grassroots volunteers to educate residents on preventing mosquito breeding.

It will also roll out another 20,000 Gravitrap - placed in common corridors to trap mosquitoes - by June this year.

The agency also announced home owners will be fined \$200 if they are found to be breeding mosquitoes at home. Previously, only

those whose homes were in active dengue clusters were penalised.

This was an apparent response to NEA's discovery of 50 per cent more mosquito-breeding sites in homes in January, compared with numbers for the same month last year. As of Tuesday, there were 102 active dengue clusters in Singapore, where at least two cases were reported within 150m of each other in a fortnight.

Of these, 22 were considered high-risk red zones,

The largest, with 102 cases, in the area bounded by Lorong Chuan, Ang Mo Kio Avenue 1 and the Central Expressway.

Since the start of the year, stop-work orders have been issued to construction companies at 19 sites.

This year's higher-than-usual dengue numbers are attributable to a change in the prevailing dengue virus, as well as warmer weather in recent months, which facilitates mosquito-breeding.

Dengue experting professor at National University that dengue trend control because ing spots can be seen that we don't see. "Take care example. They a case one in different

Linette@sph.com.

# Dengue vaccine not foolproof but 'better than none'

World's only vaccine can prevent eight in 10 admissions, nine in 10 cases of severe infection, says dengue expert

Linette Lai

The world's only existing dengue vaccine is not perfect, and dengue expert Tikki Pang is the first to admit that. It is only around 50 per cent effective against the two strains most commonly found here, and 75 per cent effective against the other two strains.

Even then, Professor Pang believes Singapore should give serious thought to making this vaccine available here as soon as possible.

"Even a partially effective vaccine is better than none," said Prof Pang, who is a visiting professor at the Lee Kuan Yew School of Public Policy at the National University of Singapore.



Professor Pang says Singapore should give serious thought to making Dengue vaccine available here as soon as possible due to the high public health urgency.

children aged two to 16 years, across 10 countries in Asia and Latin America.

Recently, it was approved for use in four countries - Brazil, Mexico, the Philippines and El Salvador.

The World Health Organization (WHO) is currently studying the scientific evidence in order to come up with international recommendations for the vaccine's use. Here, the Health Ministry and Health Sciences Authority, which regulates health products, have said they are "actively tracking" the vaccine.

Last month, the National Environment Agency (NEA) warned that Singapore could see its worst dengue outbreak this year, with a perfect storm of factors threatening to push numbers over the 30,000 mark.

"We have waited more than 40 years for this vaccine. How much longer do we want to wait?"

The available evidence, he added, suggests that the vaccine could prevent eight in 10 hospitalisations due to the mosquito-borne virus here, and nine in 10 cases of severe infection.

Developed by pharmaceutical company Sanofi-Pasteur, the new vaccine - called Dengvaxia - has been tested in more than 30,000



The authorities have stepped up inspections (above) and public education campaigns, and are also rolling out more traps to try and keep the mosquito population under control as Singapore could see its worst dengue outbreak this year. PHOTO: ST FILE

fight against dengue, said Prof Pang, who was also director of research policy and cooperation at the WHO from 1999 to 2012.

"For example, physicians are very aware of how to take care of those who have dengue, and our mortality rate is very low," he said.

"Singapore has also invested in dengue research, which will benefit not just us, but the whole region."

Even if the dengue vaccine is not foolproof, it would cut down on the

dengue numbers and help to relieve some strain on hospitals and general practitioners, as well as reduce the number of work days lost when people are infected by the virus, Prof Pang said.

"And serotypes (strains) change all the time. You cannot predict what's going to happen in six months," he added.

Many things are still unknown about the new vaccine, such as how long its protection will last or whether

the virus will mutate and render the vaccine ineffective.

While a few other dengue vaccines are in the works, it will be several years before they are ready. "You have to build this ship as you sail it," Prof Pang said. "Why? Because of the public health urgency. I'm the first to admit that (the vaccine) is only partially effective, but it's the best we have."

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# Anti-dengue efforts stepped up as cases could hit 30,000

The Straits Times, Friday, 19th February 2016

Samantha Boh

A perfect storm of factors threatens to push dengue cases here to a high of over 30,000 this year, but the authorities are not standing by idly.

The National Environment Agency (NEA), Ministry of Health (MOH) and People's Association (PA) aim to intensify inspections and education efforts.

This year, the Mizzie Wipeout

Campaign, which had been held in April or later in other years, will be held at the end of this month instead. It teaches residents to prevent mosquito breeding in their homes.

Over 5,000 PA volunteers will conduct house visits and educate residents on preventing breeding.

Another 20,000 Gravitrap - placed in common spaces to trap mosquitoes - will also be rolled out by June to 3,000 Housing Board blocks currently without them.

The NEA warned yesterday that Singapore might have its worst dengue outbreak this year, exceeding the record 22,170 cases in 2013, as a result of warmer temperatures due to the El Nino phenomenon and a switch in the predominant virus serotype to DEN-2 from DEN-1.

It has observed a 50 per cent increase in the number of mosquitoes caught in its Gravitrap last month, compared with the figure in January last year. The number of breeding

sites found in homes over the same period has also risen by 50 per cent.

This year, two have died of dengue fever and more than 3,370 have been infected with the virus.

The El Nino phenomenon promotes faster breeding and shorter incubation times for the dengue virus, while a switch in predominant virus serotype is historically followed by a spike in dengue cases due to lower immunity to the virus strain.

The NEA said it will continue to

step up inspections islandwide, focusing on areas found to have higher incidence of mosquito breeding.

As of Jan 31 this year, the NEA has conducted more than 126,000 inspections, uncovering over 1,900 cases of mosquito breeding.

Of these, more than 600 inspections of construction sites were done, with 12 per cent found to have mosquito breeding. Over 10 notices to attend court and stop-work orders were issued.

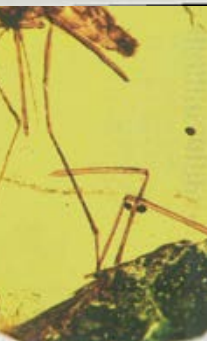
The NEA will also increase manpower by hiring temporary officers.

Outreach efforts will also be intensified through advertisements, posters at bus stops and distribution of pamphlets on dengue to residents.

Yesterday, the MOH said that, given the Zika virus, it is even more critical to wipe out mosquito breeding. The virus is not fatal but is linked to babies being born with small heads.

The MOH said it is working to expand Zika virus testing capabilities to public hospital laboratories, and has set up a clinical advisory group to ensure doctors can give advice on the virus.

samboh@sph.com.sg



In the background, Republic and government of Singapore. In the foreground, the mosquito is shown in its natural habitat. It is the most common mosquito in Singapore. PHOTO: COURTESY OF NEA



# THE VISIONARY LEADERSHIP

## Is Simplicity the Secret to Business Success?

By staying small and concentrating on his customer's needs, one Colorado PCO has it both—a successful company and the time to enjoy the benefits of hard work.

by Kevin M. Cooney



Time for a pipe and some peaceful moments, one of the advantages to Ken Doty's unorthodox, but successful, approach to the pest control business.

**S**traight and simple—that's Ken Doty's secret to success.

In an economy being transformed by computerization and abstract monetary policies involving trillions of dollars, this PCO's approach may, at first glance, seem out of step with the times. But it's put food on the table for Doty, his family, and the families of his four year-round employees for many years.

"We run our business," Doty said in explaining his business philosophy. "It doesn't run us."

The owner of Doty's Pest Control, Fort Collins, CO, also believes in taking control of his accounts right from the start. "I knock on the door and say, Good morning, Mrs. Jones—ready to leave?" Doty said. Then, before the homeowner does leave, Doty

walks through every room with him or her and removes toys, covers foodstuffs, and makes sure that any pets are put outdoors before he applies one ounce of chemical.

### Details vital

"The first thing we do is tell the customer what we're going to do," Doty explained. "We give them detail, detail, detail and then they're happy, confident that they're working with a professional."

That's another aspect of Doty's philosophy toward his work: "You have to sell yourself, then you sell your product," he said.

He has apparently done a good job on that score, because the Doty's business today comes mostly through referrals from satisfied customers. In a city which has virtually doubled in size during the past decade and has a large transient population (the 18,000 students of Colorado State University), successful word-of-mouth advertising is a tough nut to crack.

But to Carroll Doty, Ken's wife and company office manager, it's really very easy. "Treat your customers like family," she said, "and they'll keep coming back."

Doty started in the business 20 years ago virtually by accident—a fraternity brother who had held pest control jobs during summer vacations from college suggested the two help pay their way through school by treating homes and offices in their spare time. After his friend received a grant to pursue graduate studies, Doty

*continued on page 38*

Thomas Fernandez of Singapore, left, visited the Doty to learn American methods of pest control he can use in his home country.



young businessman on the right path. "He said, Doty, if you're going to be a pest control operator," Doty recalled. "Stay out of ornamentals, cattle spraying or weed control—don't get spread too thin."

Doty followed his advice, turning down several opportunities over the years to get into agricultural and lawn spraying services. Instead, he concentrated on servicing northern Colorado's structural pest control needs.

What's the payoff for staying small? "I can sleep at night," he responded.

"One thing I've had to watch very closely," Doty continued, "is what's happened to other PCOs—they've told me, I made more money when I grossed \$200,000 a year than I do now with \$500,000 a year." And I ask them, "Why don't you go back to \$170,000 a year and enjoy life?"

### Uncommon

Running a pest control business in a partially urban, partially rural area, Doty occasionally has those encounters one pest not usually seen by other PCOs these days—bedbugs. While he said he's "definitely limited" as to what kinds of chemicals he can use to fight this pest, Doty employs



Ken Doty explains the importance of label precautions on an insecticide container to Fernandez, who said he's impressed with the advanced western methods of pest control.

crack and crevice treatments and mattress treatments to contain this type of infestation.

He also regularly runs across bats, which are common along Colorado's Front Range (that area east of the Rocky Mountains, where the state's major urban areas are located), fleas migrating in from the agricultural operations surrounding Fort Collins, and, of course, cockroaches.

Doty uses Killmaster in the Whitmore system for roach control and, for flea infestations, Vapona total-release bombs.

When it comes to termites work, Doty said the only difference between his techniques and those of PCOs in other regions concerns the spacing of his applications. The rock-hard clay soil common to the Fort Collins area requires closer spacing of termiticide injections than would

be expected in other areas.

### Education

While he may advocate a simpler approach to business, Doty continues to absorb whatever information he can on the latest techniques. He's a past president of the Colorado Pest Control Association (1980-81) and an active member of the National Pest Control Association. Doty also brings his technicians along to industry seminars, because, "Sometimes the boss learns something he forgets to pass along to his people back at the office," he said.

Through it all, however, Doty makes the time for his family and the vast recreational resources of the Rocky Mountains.

"I'm probably the most fortunate pest control operator in America," he said, "because I stayed in low gear." ☐

# HANDBOOK OF PEST CONTROL MALLIS

EIGHTH EDITION

HANDBOOK  
OF  
PEST  
CONTROL

Pest  
Control

THE LEGEND

NOR



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Walter  
Krebs  
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R. Elmann

Profile card

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The United States has one pair of wings,  
controlled by over three million insects in  
the world. Most have large populations and  
require one of the most sophisticated  
systems management with the support  
of various departments. See Walter K. Krebs



# POWER OF KNOWLEDGE



# STRONG EMPHASIS ON TRAINING AND DEVELOPMENT



# TRAINING MODULE

S/N	TRAINING MODULE / DESCRIPTION	DURATION [NO. OF DAYS]
<i>Before Confirmation</i>		
1	OHSAS 18001:2007 Occupational Health & Safety Requirement Awareness Briefing	1 hr
2	OHSAS 14001:2004 Environmental Management System - Standard Requirement Awareness Briefing	1 hr
3	ISO 9001:2008 Quality Management System Awareness Briefing	1 hr
4	Emergency Spill Training	1 hr
5	Induction Orientation	1 hr
6	OJT Induction	14
7	Construction Safety Orientation Course	1
8	Shipyard Safety Instruction Course	1
9	Basic Introductory Programme/ QEHS Management System	3
10	Advance Training	2
11	Explosive Powered Tools Operation	1 hr
12	Using of Termatrac Tools for termite detection	1 hr
13	Trithor Installation	1
14	Work at Height - Workers	1
15	Body Worn Camera Training	1

S/N	TRAINING MODULE / DESCRIPTION	DURATION [NO. OF
<i>After Confirmation</i>		
1	Joint NEA-ITE Pest Management / Control Certification	60 / 40 hrs
2	On the Job Training	56 hrs
3	Introduction to Operations Coordination	1
4	Now Everyone Can Sell	2
5	Basic English for non English Speaking workers	10 hrs





# CAREER DEVELOPMENT





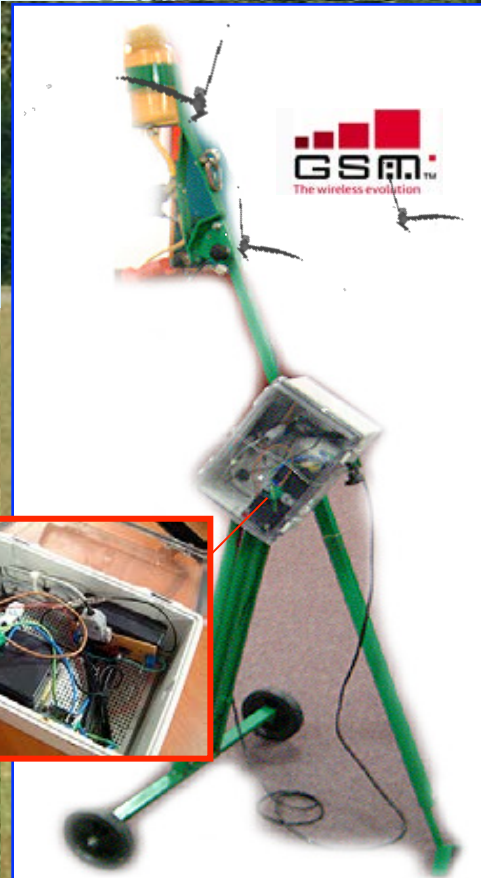


We are an inclusive company



Training Commitment





# Breakthrough in Bird Strike Management

FEATURED ON  
THE NEWS IN  
YEAR 2006





# BREAKTHROUGH IN CROW MANAGEMENT



# Breakthrough in Crow Management



Bico Lite™



*This anti-bird chemical has been used and proven in Germany and other places... but it's never been used against crows in trees, so we had to devise some sort of delivery system.*

— Mr Fernandez (left), holding one of the anti-crow spray dispensers, his company came up with. Hung on tree branches, they spray a fine mist of the chemical at intervals

# Here's a grape way to shoo off those pesky crows

**Pest-busting firm is spraying trees with a new anti-bird chemical derived from grapes, to chase away those scavengers**

By NATALIE SOH

WHEN crows create havoc, you can either shoot them down or shoo them away.

And getting the pesky scavengers to move on can be as simple as spraying a special chemical around their roosting area.

The chemical, derived from grapes, drives crows crazy but has no harmful effects on humans or the environment. PestBusters managing di-

whose company is one of the biggest pest-management firms here, said. "The idea is to use an anti-bird chemical, called Methyl Anthranilate, that irritates them and gets them to move to less-populated areas where they won't bother residents.

The Environment Ministry (ENV) has been managing Singapore's crow problem for several years now, mainly through culling, with organised gun shoots.

would spend \$1 million to meet this year's cull target of 50,000 crows. It has hired four Singapore Gun Club members to kill the pests and has asked the club to keep shooting crows on weekends voluntarily.

Singapore now has about 120,000 crows, compared to 120,000 crows in Tokyo. Many of some 7,000 in Serangoon Green are found in Serangoon Gardens, Kitchener Road and parts of Hougang and Ang Mo Kio Avenue 3.

Mischivous and aggressive, the crows here have been known to peck open black garbage bags, littering the area with rotten food. Some even go right into food bins to peck at leftover food.

A Serangoon Gardens resi-

dent had a flock of crows roosting in a row of trees opposite his home up until two months ago.

He said: "They make this awful noise when they come back to roost at 7 pm, and it would go on for two hours.

"Worse, they start again at 5 am when they wake up! You can't sleep with the windows open. So I thought I'd try to do something."

He said the birds tended to react to culling by laying more eggs.

So he tried an alternative. "This anti-bird chemical has been used and proven in Germany and other places... but it's many and other places... but it's never been used against crows in trees, so we had to devise some sort of delivery system."

functions like a deodorant dispenser used in toilets.

One to three of the dispensers are hung on the tree branches, and they spray a fine mist of the chemical at intervals.

To humans, it smells like grape concentrate. But to birds, it is highly irritating, especially when it gets into their eyes and the mucous membranes around their mouths.

Hougang resident Koh Bee Hwa, 54, said she would not mind if the town council tried the anti-bird chemical in the estate.

"But hopefully, when the crows get scared off to another place, they will go further away, instead of coming to roost on

A close-up, high-resolution photograph of a human eye, showing the iris, pupil, and eyelashes. The eye is looking directly at the viewer. The text is overlaid on the eye, with the 'O's in 'INNOVATION' containing circular patterns that resemble gears or technical diagrams.

DRIVEN BY  
INNOVATION





# CUTTING EDGE TECHNOLOGY & SKILLSFUTURE



## BODY WORN CAMERA SYSTEM

View surroundings via live-streaming technology  
Validation of quality work that stands for the brand



# OPERATIONS COMMAND CENTRE

Supervisors communicate and guide multiple associates at the same time.

Tap on Supervisors knowledge and experience optimally, maximizing productivity for OJT and operational work





# GPS TRACKING SYSTEM

**Monitor traffic conditions**  
**Advise on the least congested route**  
**Advise junior associates on how to best approach certain tasks**




# REMOTE INSPECTION WITH DRONES

Conduct checks via live feed from drone

Take video/pictures for follow-up purpose

Inspect high and inaccessible areas with ease

# DEVELOP YOUR BIGGEST ASSET

- 
- Our People Trained To Deliver Quality Services
  - Our Appearance are Professional
  - They Have Confidence due to training and knowledge
  - We train our People to Manage
  - As Leaders we LEAD



# OUR TERRITORY



*Headquarters : Singapore*

*Overseas Offices: Malaysia | Cambodia | Philippines | Vietnam | Myanmar*

*Future plans: United Kingdom | India | Sri Lanka | Indonesia*

# THANK YOU



**PRESENTATION BY: THOMAS FERNANDEZ**  
**PREPARED BY: DESIREE CHAN**