

# PESTCRAFT

Newsletter of the Singapore Pest Management Association

## a “humpbacked” fly?



Photo extracted from: <http://pestcontrolcanada.com/phorid-flies-humpback-flies-drain-flies/>

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Phorid flies are sometimes called humpbacked flies, coffin flies or scuttle flies. There are about 3000 species occur worldwide and mostly found in tropical zone. The adult has a humpbacked appearance thus giving rise to the name “humpbacked fly”. Phorid fly has a habit of running rapidly across a surface instead of taking flight immediately when being disturbed leading to their other common name “scuttle flies”.

Phorid flies are minute in size, about 0.5 to 6 mm in length. They are usually black or brown in colour depending on the species. Their wings are clear and have two heavily hardened veins towards the leading edge of the wing. Phorid flies resemble the more commonly encountered fruit flies (*Drosophila* spp.) which are often associated with overripe fruits. However, phorid flies do not have the red eyes like fruit flies.

Phorid fly can complete its life cycle from egg to adult in as little as 14 days. Given a 98% survival rate, a pair of phorid fly in a protected area can give rise to about 55 million flies in 60 days, what a productive fly!

Phorid flies are found throughout the world. They can breed on a wide variety of decaying organic matter thus are serious pests in food handling facilities. Some of their breeding sites include unsanitary places such as drain pipes, covered discarded food materials at the

bottom of trash cans, plumbings, grease traps, etc.

Often, phorid flies found in the building are likely due to breeding associated with drain lines or plumbing. Accumulation of decaying organic matter in the drain lines is an ideal breeding source for phorid flies. Other preferred breeding site include waste plumbing leaks.

To solve phorid fly problems, identify and removing the breeding sites is the key. If phorid flies are breeding inside the drain then drain cleaning products should be used to remove the organic matter inside the drain. If breeding is caused by a leak in plumbing, it should be rectified. Insect light trap can be used if phorid fly activities are suspected.

Lastly, insecticides may be the least helpful in solving a phorid fly infestation because the flies that are present are only a fraction of the population from the breeding site. So, simply treating the adults (e.g. misting application) does not address the root cause.

The next time you encounter phorid flies in a facility, remember to check the drain lines!



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Monday to Friday  
9:00 am - 5:00 pm

Saturday  
9:00 am - 1:00 pm

Sunday & Public Holiday: Closed



# Introducing the Inaugural World Pest Day!

The Inaugural World Pest Day was celebrated on 6 June 2017, with an official launch in Beijing, China that was attended by many representatives of national pest management associations and key players in the industry.

The concept of the 'World Pest Day' was initiated by the Chinese Pest Control Association (CPCA) and supported by the Confederation of European Pest Management Association (CEPA), the Federation of Asian & Oceania Pest Management Association (FAOPMA), National Pest Management Association (NPMA) of the USA and the World Health Organization's Collaborating Centre for Vector Surveillance and Management.

After two years of preparation, this event was launched to awareness among the general public about the importance of pest management in protecting life, food sources, commercial business and of course, reputations. It is about time our industry received the recognition it deserves! Did you know that the world's deadliest creature that endangers human life is the mosquito? These tiny creatures alone can kill more than 2,000,000 people in one single year.

After the success of the launch of this day and positive feedback internally, it has been decided that World Pest Day shall be an annual, global event.

Check out the photos taken by Mr Andrew Chan, President of the SPMA, who represented Singapore at the inaugural launch of this special day in China!



Group pictures of delegates from around the world.



President of FAOPMA,  
Mdm Huang Xiao Yun



President of Chinese Pest  
Control Association (CPCA),  
Mr Xu Jianguo



"Proud to be here!"  
President of Singapore Pest  
Management Association  
(SPMA), Mr Andrew Chan

# RatX The Natural Way to Eradicate Rats & Mice

## Features of RatX

- Made in USA
- Patented formula
- Non-Toxic
- 100% Natural
- No risk to children or pets
- No risk to livestock or birds
- No known resistance
- No risk of either primary or secondary poisoning - bird of prey friendly
- No special requirement for transport, handling, storage or disposal
- Can be used as bait box refill to keep bait dry
- No risk of contamination to crops or food
- No environmental pollution - fully biodegradable
- RatX has a toxicity level to humans that is equivalent to salt or sugar
- RatX starts working immediately and has a 100% mortality rate
- RatX is FDA GRAS approved safe. Generally recognized as Safe (GRAS) is an American Food and Drug Administration (FDA) designation that a chemical or substance added to food is considered safe by experts
- Under the Federal Insecticide, Fungicide, and Rodenticide Act, RatX is a FIFRA 25(b) Product, this means RatX does not require an EPA Registration number
- RatX does not require NEA registration

## How it works?

RatX is consumed as a food source as part of a rat's or mouse's natural eating habit.

It coats the lining of a part of the rat's lower gut. This coating of "fine hairs" in the lower gut, called villi, disrupts the message system to the rat's brain causing it to stop drinking.

After ingestion, dehydration commences causing blood thickening & circulatory collapse, whereby rats and mice become lethargic, retreat to their burrow, lapse into a coma and die.

## Why it works?

The specific mode of action of RatX and its inherent safety to non-rodents is based on a range of characteristics unique to rats and mice:

- Rats and mice are opportunistic feeders and can consume up to 10% of their body weight.
- Rats and mice cannot vomit or regurgitate.
- Rats and mice have a unique digestive system in which the caecum (sack between large and small intestine) plays an active role.

## Suggested bait locations :-

- Livestock and Poultry Farms
- Industrial, Retail and Domestic Premises
- Conventional and Organic Farms
- Parks & Other Public Areas
- Schools & Hospitals
- Food Eateries & Wet Markets
- Food Processing, Packing and Storage Areas
- Forestry & Woodland Management
- Pharmaceutical facilities

## Available sizes

RatX is available in 1.36 kg resealable bag and 11.33 kg bag or pail.

## Frequently Asked Questions :-

**Q:** Why does RatX kill rats & mice and not harm humans and other animals?

**A:** Because all rats and mice have a digestive system that is different from other animals. The way rats and mice absorb water through their lower gut is quite different to any other animals, including humans and birds. This unique digestive system is part of what makes rats and mice different from other animals.

**Q:** What would happen if my cat or dog ate a mouse or rat killed by RatX?

**A:** Nothing, because RatX contains no poison, there is no risk of secondary poisoning. Your cat and dog are perfectly safe as are poultry and other farm livestock. It is the same for birds of prey.

**Q:** How long does it take to kill a rat or mouse?

**A:** When used correctly, death will occur within 4 to 7 days of regular feeding. More rats and mice may be seen during this period as they become lethargic and slower to react to disturbance.

**Q:** How much does it take to kill them?

**A:** Between 40 to 60 grams per mouse. To encourage consumption, other sources of food should be cleared away.

**Q:** What is it made of?

**A:** Natural vegetable and cereal grain materials.

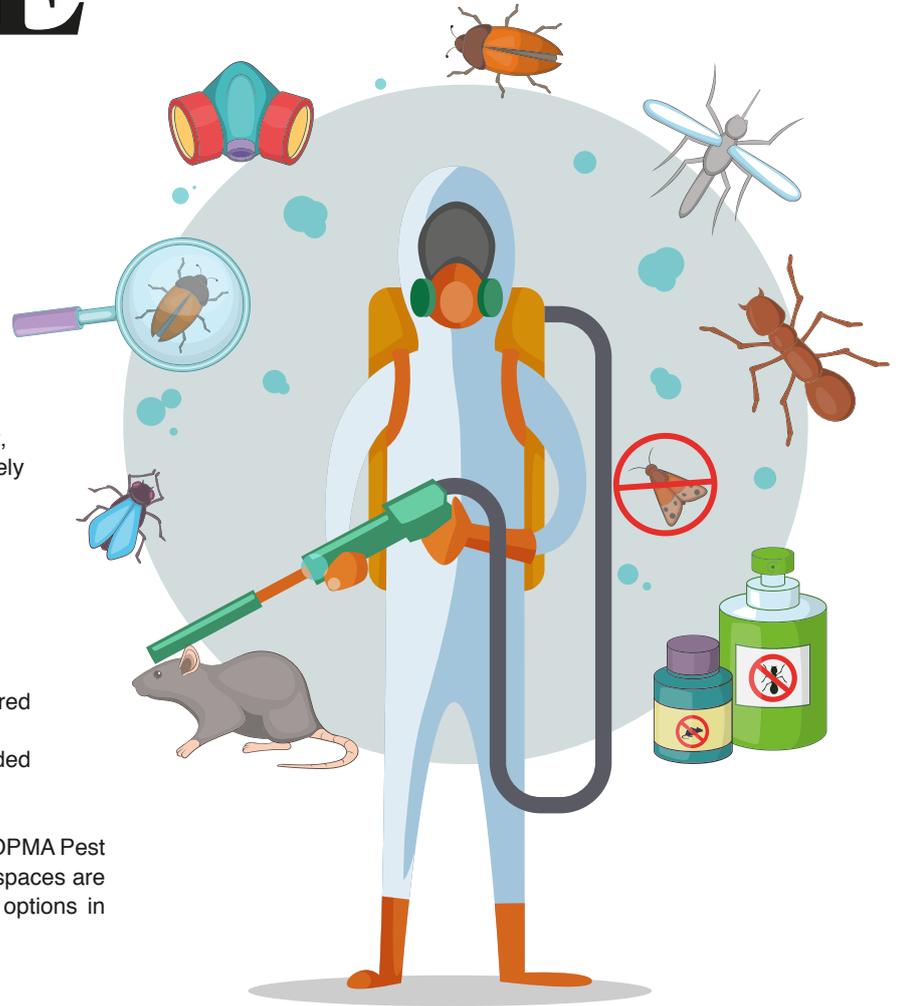


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# INSIDER UPDATE on FAOPMA Pest Summit 2017



On 1st August, Mr Andrew Chan and Mr Ng Say Kiat, President and Vice President of the SPMA respectively attended a FAOPMA Pest Summit organising committee meeting in Bangkok. After the success of Pest Summit 2016 which was held in Singapore last year, the newly merged FAOPMA Pest Summit 2017 in Chiang Mai has much to live up to.

During this meeting, the agenda and list of speakers was finalised. As an extra treat for those who registered under the early bird special, an additional gift of a Samsonite backpack worth about S\$160 will be handed out to participants.

Do note that if you have not yet registered for the FAOPMA Pest Summit 2017, please do so as soon as possible as spaces are fast filling up and so are nearby accommodations options in Chiang Mai!



Group picture of FAOPMA-Pest Summit 2017 Organizing Committee

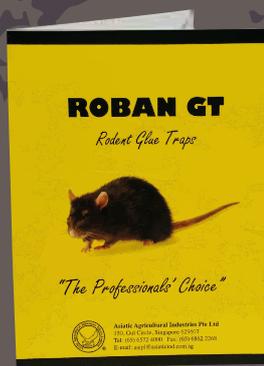


Organizing Chairman, Mr Su-Chart Lee speaking to the organizing committee



# RODENT INHIBITION PACKAGE

NO MORE SLEEPLESS NIGHTS WITH ASP'S R.I.P  
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## GLUE TRAP ROBAN GT

Roban GT is designed to trap Norway rats, and other rodent species like roof rat and house mouse. The clear and odourless glue presents a professional and pleasant look, and covers a greater surface area as compared to other rodent glue traps. The more the rodent struggles, the further they will get stuck. For best results, place the ready -to-use glue trap along the areas where rodents usually frequent



## RODENT PELLET RATROL

The pellet-shaped design of Ratrol makes it easier and more attractive for rodents to fit on them. Bait shyness? No worries. The delayed response of this bait will avert that problem among a bunch of curious rodents.



## RODENT BLOCK ROBAN

Formulated with quality cereal and grains, this block bait is highly palatable to rodents. Its durability is noteworthy as the wax coating allows it to withstand tough weather conditions outdoors. Individually packed for convenience and sealed for extra freshness.



## BAIT STATION MULTIBAITER

Tamper-resistant, this bait station is an ideal partner in a comprehensive rodent control programme. Packed full with features that make it the most versatile bait station available. The lock -and-key feature also ensures that the bait is tucked away safely inside from prying hands and precious pets.



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# News from Around the World

Welcome to this new column in Pestcraft! This section will look at some of the biggest news stories related to pest management in both Singapore and the world. In this first edition, we bring you stories from Sri Lanka, Malaysia and Europe. Happy reading!



## Dengue Outbreak in Sri Lanka

Sri Lanka is suffering one of the worst cases of dengue outbreak in recent years. According to the Sri Lankan Ministry of Health, more than 109,000 cases of dengue have been reported and an all-time high of over 300 deaths has been recorded. Most of these fatal cases are located in the capital of Colombo, where rotting garbage has been piling up for months since the main rubbish tip for the capital collapsed.

Dengue is transmitted by the *Aedes aegypti* mosquito species, the same species that transmits the zika virus. While much of the attention has been focused on zika in the last couple of years, Singapore has been fortunate in seeing a decrease in dengue cases.

In addition to the rotting garbage, other reasons contributing to the fatalities are stagnant water pools left after monsoon rains and poor healthcare infrastructure to deal with patients who have been infected.

*For more information, go to: <http://www.straitstimes.com/asia/south-asia/as-dengue-cases-soar-sri-lanka-battles-a-deadly-foe-mosquitoes>*

## Rodent in Malaysian Hospital Canteen

Cleanliness and good sanitation is especially important in hospitals to ensure that diseases do not spread as ill people already have weakened immune systems and the contamination of medical devices or instruments could prove fatal.

Unfortunately, last month a video was posted on social media where a rodent was caught on camera eating vegetables from a buffet table in the canteen at the Hospital Tengku Ampuan Rahimah in Selangor, Malaysia.

The canteen was ordered to stop operations and clean up. Internal investigations into the incident were also undertaken and additional preventative measures implemented, as the same canteen had previously been shut down in 2005 and 2015 due to cleanliness issues.

## Eggs contaminated by pesticides in Europe

Eggs are a staple in the diets of many. Unfortunately, chicken farms in the Netherlands, Belgium, Germany and France were shut down after eggs in 15 EU Countries, Switzerland and Hong Kong were found to be contaminated with fipronil.

Fipronil is an active ingredient that is used in many pesticides for the control of pests such as cockroaches, termites and fleas and can be found in especially large quantities at construction sites where pre-construction soil treatment is carried out.

While fipronil is actually considered a “moderately hazardous pesticide” by the World Health Organisation to humans, it has actually been banned in many parts of the EU because it has been found to be highly toxic to fish, bees and certain bird species that play an important role in our eco-system. For humans, short-term contact with fipronil may cause minor skin irritation and if accidentally ingested, can cause nausea, vomiting, headaches, stomach pain and dizziness.

Although the UK Food Standards Agency (FSA) and the Dutch food and product safety board NVWA concluded that it was unlikely the contaminated posed a public health risk, millions of eggs and processed foods such as sandwiches and salads have been recalled.



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# SAVING THE PYTHONS!



On 5th July, SPMA together with representatives from AVA and NEA attended a meeting with Wildlife Reserves Singapore (WRS) which was held at the Singapore Zoo. The WRS is a self-funded organisation that manages the zoological institutes of Singapore and works on protecting biodiversity in Singapore and South East Asia.

The purpose of the meeting was to introduce the “Python Working Group” and other fauna working groups. WRS expressed interest in engaging and working together with SPMA because they have observed that PCOs in Singapore are often at the front line of local biodiversity encountered in residences as well as industrial/commercial areas. WRS shared that in 2016, a total of 377 pythons were captured (306 of which were captured by ACRES with the assistance of PCOs).

During the meeting, there were also discussions on ways for the different agencies and associations to work together towards conservation and management of wildlife handling. WRS highlighted that the animals of concern include snakes (mainly reticulated pythons), common palm civets, pangolins, plantain and slender squirrels. SPMA shared current protocols on handling wildlife and how PCOs could send wildlife to WRS. Opportunities for further education and training of PCOs in handling wildlife was discussed as well.

If you have encountered or captured snakes or other wildlife and have an interesting story to share, do send it to [contactus@spma.org.sg](mailto:contactus@spma.org.sg) by 1st November 2017 to be featured in the next edition of Pestcraft!



*Let's work together and save the pythons and other wildlife!*

# A Guide to Urban Snakes of Singapore: General Do's and Don'ts

Snakes play an important role in our ecosystem as they generally feed on smaller animals. However, they are often perceived as being dangerous, making people feel uncomfortable, especially if a snake were to be found in their homes. In Singapore, encountering a snake in urban areas can be common, as they venture there in search of shelter and food such as rats, geckos and other small animals. However, snakes are generally shy and harmless when left alone. Defensive behaviour such as rearing up, coiling or biting almost always occurs when a snake feels threatened or is provoked.

Common wolf snakes, paradise tree snakes, spitting cobras and reticulated pythons are the most commonly encountered snakes in Singapore's urban areas. However, these snakes are not pests and should be left alone if found in their natural habitats or released into suitable areas. Multiple agencies are supporting this management practice and working on the conservation of urban wildlife through working groups to rescue, rehabilitate and release wildlife encountered in urban areas. It is our role to educate members of the public about the importance of snakes in our ecosystem. They do not carry diseases and instead, feed on animals that may be vectors of human disease.

## When you encounter a snake:

1. Identify if snake is venomous or non-venomous.
2. If the snake is in a natural area and can move away on its own, leave it alone.
3. If the snake is in an area where it needs to be moved by you, ensure that you do not harm the animal in the process of removing it from the premises. It is recommended that only trained or experienced persons handle the snake.
4. If animal is of conservation value, such as a king cobra or a reticulated python,
  - Please call ACRES Wildlife Rescue at 9783 7782 or AVA at 1800-476-1600.
  - You can also deposit the animal at Wildlife Reserves Singapore (guard house at Night Safari) for data-keeping and monitoring. We will liaise with authorities for rehabilitation and release.

## A handy guide to talking about snakes:

1. Snakes are native wildlife and are important to our urban ecosystem. They help to eat rats and other pests.
2. Snakes are solitary creatures.
3. If you see a snake in a drain or along walkways, leave it alone by keeping a distance (at least 5 meters) and it will move away.
4. If you have pets, make sure they are kept safely in the house, or in an elevated sheltered structure.
5. If you are unsure of what to do, take a photo from a distance and call ACRES or AVA.

## Reticulated python monitoring

Wildlife Reserves Singapore has been working with the Singapore Python Working Group to record where pythons are found. This includes microchipping each individual so that we can monitor if they are recaptured, allowing us to better manage their population. If you have retrieved a python, kindly hand the animal to ACRES or WRS (near the Night Safari guardhouse).

### Non-venomous | Common in urban areas



**Oriental whip snake**  
(*Ahaetulla prasina*)



**Paradise tree snake**  
(*Chrysopelea paradisi*)



**Common wolf snake**  
(*Lycodon capucinus*)



**Painted bronzeback**  
(*Dendrelaphis pictus*)



**Striped kukri snake**  
(*Oligodon octolineatus*)



**Reticulated python**  
(*Malayopython reticulatus*)

### Venomous | Mostly in forests, occasionally in urban areas



**Equatorial spitting cobra**  
(*Naja sumatrana*)



**Wagler's pit viper - female**  
(*Tropidolaemus wagleri*)



**Wagler's pit viper - male**  
(*Tropidolaemus wagleri*)



**Malayan blue coral snake**  
(*Calliophis bivirgata*)



**Banded coral snake**  
(*Calliophis intestinalis*)



**King cobra**  
(*Ophiophagus hannah*)

Wildlife Reserves Singapore Group



Wildlife Reserves Singapore Conservation Fund

Photo credits: Alex Figueroa, Evan Quah, Anne Devan-Song, David Tan and Mary-Ruth Low



# FAOPMA-Pest Summit 2017

Conference Theme: New Perspective in Urban and Public Health IPM in Asia and Oceania

Venue: The Empress Hotel, Chiang Mai, Thailand

Date: 22-24 Nov 2017

You are cordially invited to attend the First and the Finest Integrated Pest Management (IPM) Convention to be amongst the world class invited speakers, and more than 60 exhibition booths, showcasing today's leading edge technologies and services of the pest management industry from around the world. This convention will be focusing on the New Perspectives in Urban and Public Health IPM in Asia and Oceania, plus a 1-day AIB Certification Program on "Basic Integrated Pest Management for Food Plants".

Here is the list of world-Class speakers invited for this convention:

## KEYNOTE SPEAKER

**Prof Dr Chow-Yang LEE, Universiti Sains Malaysia**

Present Challenges and Issues Confronting the Pest Management Industry and Vector Control in Asia



## DISTINGUISHED SPEAKERS

**Prof Dr Theeraphap CHAROENVIRIYAPHAP, Kasetsart University, Thailand**

• IPM against dengue and Zika vectors in Thailand

**Dr Bobby CORRIGAN, RMC Consulting, USA**

• Rodent IPM in factories, manufacturing plants and warehouses  
• Rodent IPM in supermarkets and shopping malls

**Dr Stephen DOGGETT, Westmead Hospital, Sydney, Australia**

• The surveillance of arboviruses and IPM programme against vector mosquitoes in Australia  
• IPM and Bed bug control: the importance of an industry standard

**Dr Foong-Kuan FOO, Anticimex, Singapore**

• Anticimex Smart – Intelligent pest control around the clock

**Dr Motokazu HIRAO, President of Japan Pest Control Association**

• IPM implementation in big buildings for 9 years in Japan

**Dr Christina LIEW, National Environmental Agency, Singapore**

• Community engagement for Wolbachia – a new technology

**Prof Dr Dini MILLER, Virginia Tech, Blacksburg, USA**

• German cockroaches: Effective management of large infestations  
• Why bed bug resistance is driving our need for effective non-chemical control methods

**Dr Rikiya Sasaki, Fuji Flavor**

• Visualization of infestation by stored product insects through digitization of occurrence by pheromone traps

**Mr Steve Broadbent, Ensystex**

• Creating excellence in cockroach baiting programs

## DISTINGUISHED SPEAKERS

**Prof Dr Faith OI, University of Florida, USA**

• What the world would be without pest management  
• Books, backpacks and bugs: IPM in public schools

**Mr Tony POULSEN, Rentokil Initial, Singapore**

• How do mergers and acquisitions play a role in the strategic management of a business

**Prof Dr Michael RUST, University of California – Riverside, USA**

• The principle of urban IPM  
• Managing subterranean termites in the urban settings

**Mr Tomoki SUMINO, Teisho Yoyoka, Japan**

• IPM program against stored product insects in food plants in Japan

**Mr Jon THOMPSON, Rentokil Initial NZ, New Zealand**

• Application of the principles of Integrated Pest Management (IPM) to high dependency sector including digital platforms for data capture and analysis

**Mr Ola Nordh, Anticimex Group, Sweden**

• Fundamentals for a successful acquisition strategy in the pest control industry

**Mr Say-Piau LIM, Bayer Environmental Health, Malaysia**

• Beyond the chemistry: Our revolutionary journey of innovation at Bayer

**Ms Sharon Hughes, BASF, England**

• A smart rodent box will not solve your problem – Integrated rodent management program

For more information, please visit: [www.faopma2017.com](http://www.faopma2017.com)