

Rodent control  
in  
Hong Kong

November 2018

# Policy

- **Public health importance**

**Plague, urban typhus, Hantavirus infection, leptospirosis, rat bite fever etc.**

- **Nuisance**

**Damages of food and physical properties.**

# Commonly found species in the urban



*Rattus norvegicus, Rattus rattus and Mus musculus*

# Control strategies

**Keep down the rodent population with:**

➤ **Surveillance**

**1. Community**

**-Rat-flea index**

**-Infestation rate**

**2. Port areas**

**- Rat-flea index**

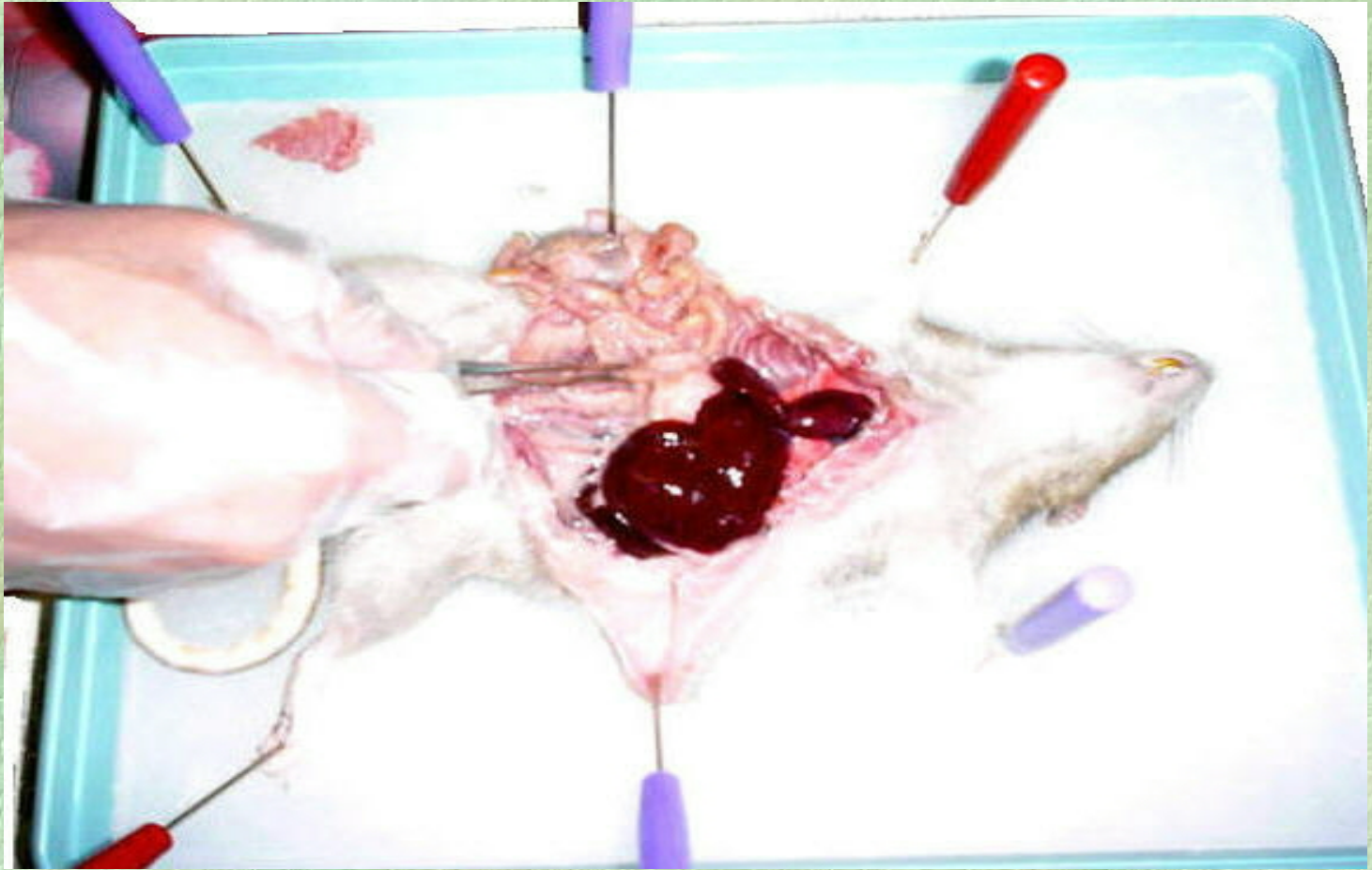
➤ **Regular inspection**

# Surveillance

- **On plague**
- **At territory level**
- **Capture rats for examination on signs of plague infection**
- **Rats suspected to be infected are sent to PHLC of DH for confirmation**
- **Rat-flea Index**



*Rodent trapping*

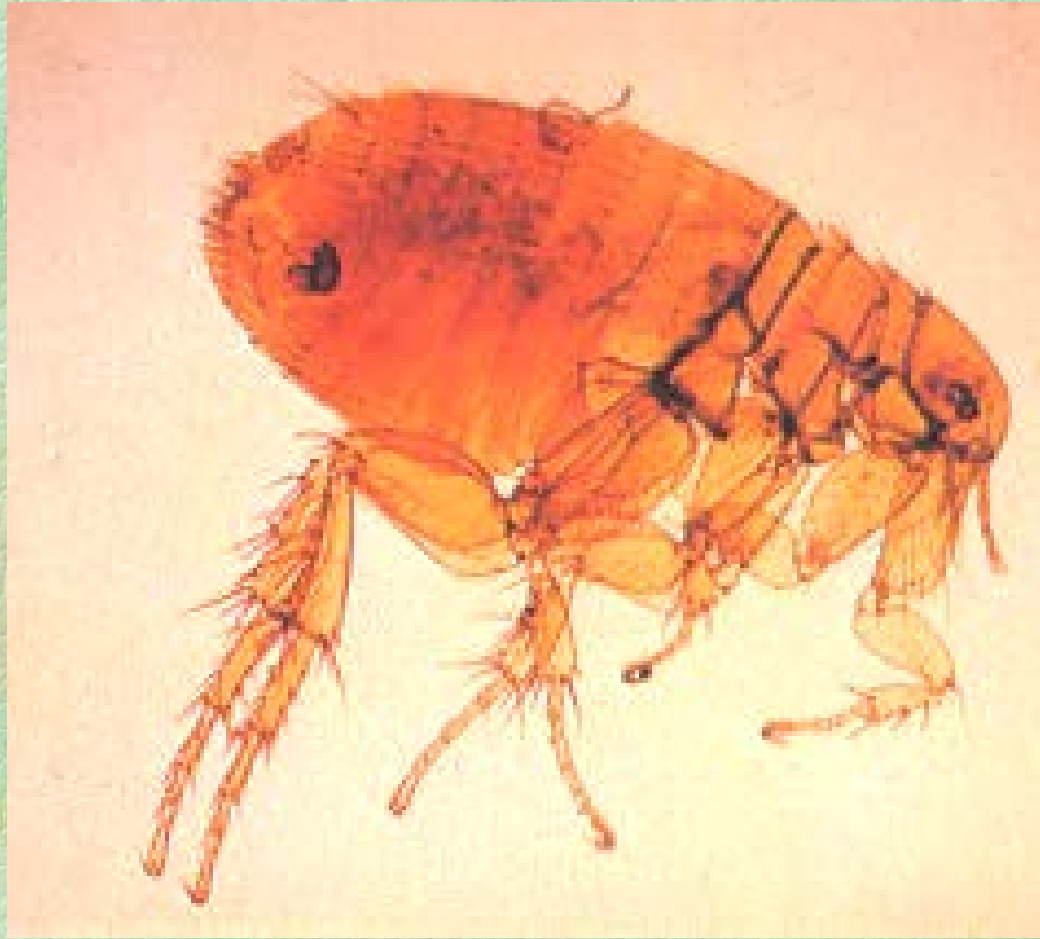


*Rodent autopsy*



*Combing*





印鼠客蚤 (*Xenopsylla cheopis*)

# Plague surveillance

$$\text{Rat-flea Index} = \frac{\text{No. of rat flea}}{\text{No. of rat examined}}$$

*Xenopsylla cheopis*

**Rat-flea Index >1 : potential dangerous situation with respect to increased plague risk for humans**

# Plague surveillance (Community)

**Rat-flea survey in targeted environment (since 1970s):**

<u>Year</u>	<u>Biotope</u>	<u>R.F.I.</u>
2017	Industrial area	0.96
2016	Industrial area	0.79
2015	Cooked food hawker bazaars/ markets/centres	0.18
2014	Rural/Semi-rural villages	0.02
2013	Rear lanes	0.09
2012	Markets	0.19
	Wholesale food markets	0.60
2011	Squatter areas	0.17

# Plague surveillance (Port areas)

(Since 1998)

	No. of rodents collected				Rat-flea Index			
	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
<b>Hong Kong International</b>								
<b>Airport</b>	7	22	16	17	0.00	0.00	0.00	0.00
<b>Railway Cargoes</b>								
<b>Handling Areas</b>	7	1	2	N/A	0.00	0.00	0.00	N/A
<b>Cross Boundary Check</b>								
<b>Points on Land</b>	6	13	1	4	0.00	0.00	0.00	0.00
<b>Cross Boundary Ferry</b>								
<b>Terminals</b>	14	2	0	1	0.71	0.00	0.00	0.00
<b>Container Terminals</b>	46	32	25	19	0.00	0.07	0.00	0.00
<b>Public Cargoes Working</b>								
<b>Areas</b>	68	64	51	24	0.00	0.02	0.02	0.53
<b>Private Cargoes Working</b>								
<b>Areas</b>	<u>37</u>	<u>10</u>	<u>12</u>	<u>11</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>
<b>Total</b>	<b>185</b>	<b>144</b>	<b>107</b>	<b>76</b>	<b>0.06</b>	<b>0.03</b>	<b>0.01</b>	<b>0.14</b>

# Surveillance (Rodent Infestation Rates)

- Census baiting covering all districts since 2000
- About 100 baits are set in each district (each bait is at least 50 m apart)

➤ Rodent Infestation Rate = 
$$\frac{\text{No. of bait consumed by rodent}}{\text{No. of bait retrieved from the area}} \times 100\%$$

## Different levels of RIR for actions

Level	RIR	Action
1	0% - < 10%	Strengthen rodent control at locales concerned
2	10% - < 20%	Mobilize staff of other sections of FEHD
3	> 20%	Joint departments in rodent control

# Surveillance (Rodent Infestation Rates)

- Carried out twice annually
- RIR release to the public

<u>Year</u>	<u>Annual Rodent Infestation Rate</u>
2018	2.8% (Jan – Jun)
2017	3.5%
2016	4.0%
2015	3.0%
2014	3.2%
2013	3.1%
2012	2.4%

# Regular inspection

- **At district level**
- **Carry out in 19 districts**
- **Each district divided into areas**
- **Each area is served by one rodent control team.**
- **A total of 53 teams (210 staff)**
- **Some 1,500 staff from the contractors**
- **Initiate rodent control measures once rodent infestation found**

# **Rodent control services**

- **Rodent disinfestations in response to findings in surveillance and regular inspections**
- **Handling complaints on rodent problem in public and private areas**
- **Rodent and vector control related to rodent-borne diseases reported**
- **Rodent prevention advice given to public and government departments**



# Rodent disinfestations

## *Fundamental control:*

- Elimination of food, harbourage and passages

## *Direct disinfestations:*

- Poisonous baits
- Traps



***Rodent control work***

# **Anti-rodent campaign**

- **Annual**
- **Interdepartmental and territory-wide**
- **At territory level**
- **Objectives:**
  - **1) To arouse public awareness on the significance of rodent control and prevention in the community.**
  - **2) To reduce rodent population in the territory.**
  - **3) To promote the participation of public in rodent prevention and control work in their premises.**
- **2 phases**

# Anti-rodent Campaign

- **Target oriented**
  - Markets/Market Buildings and their surroundings.
  - Fixed pitch hawker bazaars and their surroundings.
  - Typhoon shelters and their peripheries.
  - Rear lanes, especially those associated with licensed food premises and their surroundings.
  - Other rodent problematic spots identified by district pest control staff.

# Anti-rodent Campaign

- **Publicity and health education**
  - Posters and pamphlets.
  - DVD.
  - Messages on radio, T.V. and smart phone.
  - Games.
  - Exhibitions.
  - Press release
  - Talks etc.



*Rodent prevention and control exhibition*

**END**

