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Press Release

For Immediate Release

Thirteen new ant species discovered in Hong Kong

April 1, 2019

"If you believe that all life surrounding you in Hong Kong has been discovered, then you'll realise that you just need to look a bit closer... not for big things, but for ants and other insects walking at your feet, to find a plethora of new creatures," said Dr Benoit Guénard from the School of Biological Sciences of the University of Hong Kong (HKU).

In two separate articles recently published in *Zookeys* and *Asian Myrmecology*, Dr Guénard and his team expanded the knowledge on Hong Kong ants by adding 13 species to the 174 species officially recorded.

Among those are three new species of the genus "*Strumigenys*", also known as miniature trap-jaw ants, new to Science and thus far known only from Hong Kong. As their name indicates, these species are tiny, measuring only 2 to 4mm long but are astounding predators of the small arthropods living in the forest leaf-litter. They can open their mandibles widely and snap their prey with the fast-closing movement of their mandibles.

The new species described by a recent HKU graduate student Wilfred Kit Lam Tang, and the researchers Mr. Mac Pierce and Dr Benoit Guénard, are named *Strumigenys hirsuta*, in reference to its hairy appearance; *Strumigenys lantau*, as this extremely rare species is known only from a single locality on Lantau Island; and *Strumigenys nathistorisoc*, in honour of the Hong Kong Natural History Society who funded this research through the Name an Ant Program (<https://benoitguenard.wordpress.com/name-an-ant/>) which invites donors to support scientific research on biodiversity in exchange for having a species named after them.

Ken Bradley, Chairman of the Hong Kong Natural History Society (www.hknhs.org) said that the Society readily supports Dr. Guénard's research which is in line with the Society's objective of "encouraging the study of Natural History in general and in particular in Hong Kong". "There are still many species in Hong Kong to be discovered and the support and involvement from the community in this endeavour is absolutely fundamental," said Dr. Guénard.

Another five species of *Strumigenys* are newly recorded from Hong Kong but had already been described from other Asian regions. One of them, *Strumigenys formosa*, was known only from Taiwan where only two queens had been collected since its discovery in 1988. For the first time, the worker caste is thus described from a single specimen collected in Tai Po Kau Nature Reserve; enhancing our knowledge on this species' distribution and its importance for conservation. Other species recorded were previously known from South East Asia, Japan, Taiwan or other provinces of China. Finding

these new, and for some of them rare species, is a good thing for Hong Kong and its biodiversity, but other discoveries are more worrisome.

Indeed, five of the species newly recorded are non-native to Hong Kong, four belonging to the *Strumigenys* genus, and one, *Brachymyrmex patagonicus*, here recorded for the first time from mainland Asia. This latter is an urban pest well-known for its ability to enter and establish nests within a wide range of buildings, like hospitals, hotels, schools, and houses, and colonise various rooms such as kitchens, offices, and laundry rooms, but also more sensitive areas such as infirmary and neonatal units. In some American states, where it is also introduced, it has become the species causing the most frequent intervention from pest control companies. If the population in Hong Kong, currently known only from Hung Hom, was to proliferate, it would most likely induce an increase in pest management costs; and more harmful for the environment and populations, a more frequent use of pesticides.

The discovery of five more exotic species in Hong Kong, like the fire ants (*Solenopsis invicta*) in the early 2000's, highlights the regional importance of Hong Kong in importing species, some with important consequences for human populations and local biodiversity. It also indicates the need to deploy efficient survey and monitoring programmes to quickly detect these species after their arrival so targeted actions to suppress them or limit their spread through Hong Kong and beyond can be activated.

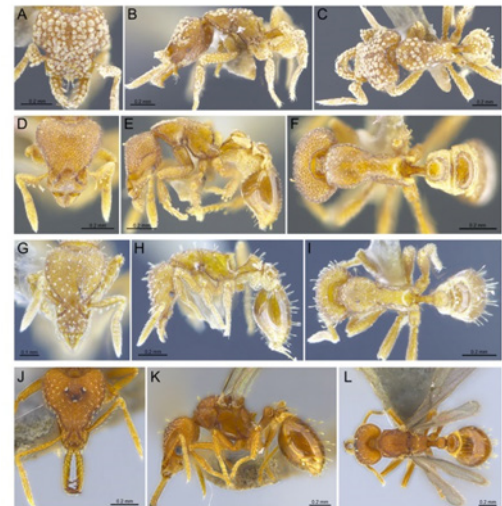





Monitoring Hong Kong insects can thus reveal both beautiful and alarming discoveries. With probably several hundreds, if not thousands of species waiting to be found, it shows the fantastic diversity that the city still has to offer if protected sufficiently. In parallel, it also represents an important step for uncovering more alarming species, in particular exotic ones for which early detection represents a key requirement to ensure success in the limitation of their spread and negative impacts.

Links of journals:

Tang K.L., M.P. Pierce, & B. Guénard (2019). Review of the genus *Strumigenys* (Hymenoptera, Formicidae, Myrmicinae) in Hong Kong with the description of three new species and the addition of five native and four introduced species records. *Zookeys* 831, 1-48.
<https://zookeys.pensoft.net/article/31515/>

Guénard B. (2019) First record of the emerging global pest *Brachymyrmex patagonicus* Mayr 1868 (Hymenoptera: Formicidae) from continental Asia. *Asian Myrmecology* 10: e010011.
<http://www.asian-myrmecology.org/publications/am10/guenard-2018-am010012.pdf>

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<p>Image 1. Head (left), profile (middle) and dorsal (right) views of four new exotic ant species detected in Hong Kong; (A-C) <i>Strumigenys hexamera</i>, (D-F) <i>S. membranifera</i>, (G-I) <i>S. nepalensis</i>, and (J-L) <i>S. rogeri</i>.</p>	<p>Image 2. Profile (top), dorsal (bottom left) and head (bottom right) views of the new species <i>Strumigenys hirsuta</i>.</p>
	
<p>Image 3. Profile (top left), antennal (top right), dorsal (bottom left) and head (bottom right) views of the new species <i>Strumigenys lantau</i>.</p>	<p>Image 4. Profile (top left), mandibular (top right), dorsal (bottom left) and head (bottom right) views of the new species <i>Strumigenys nathistorisoc</i>.</p>
	
<p>Image 5a. Head view of the new species <i>Brachymyrmex patagonicus</i>.</p>	<p>Image 5b. Profile view of the new species <i>Brachymyrmex patagonicus</i>.</p>