



The *Harryplax severus*, a pale yellow crab, was named by the Lee Kong Chian Natural History Museum's crustacean curator, Dr Jose Mendoza (left), who is an avid fan of the wizarding world. Dr Mendoza was inspired by Professor Severus Snape, the potions master in the *Harry Potter* series. ST PHOTOS: ONG WEE JIN



Lee Kong Chian Natural History Museum's entomologist, Dr Hwang Wei Song, with a slide of the assassin bug *Physoderes minime*, so named for its similarity to a species about 24 per cent larger. ST PHOTO: CHEW SENG KIM

Popeye and Mini-Me are... bugs

And Prof Snape is a crab, thanks to scientists who name species after popular characters

Audrey Tan

What do Professor Severus Snape of *Harry Potter* fame, spinach-gobbling cartoon character Popeye, and Austin Powers villain Mini-Me have in common?

Most people would recognise them as figments of popular culture. But they have also been immortalised in the annals of science, with newly discovered animal species named after them.

The *Paraphysoderes popeye*, *Physoderes minime* and *Harryplax severus* – two species of assassin bugs, and a crab respectively – were recently discovered and named by scientists from the National University of Singapore's (NUS) Lee Kong Chian Natural History Museum.

Armed with dagger-like piercing mouthparts, assassin bugs are a group of carnivorous insects so named for the many ways they kill their prey and suck them dry.

There are more than 7,000 species of them around the world, and they play an important role in controlling the population of other insects, such as caterpillars.

Last month, the museum's entomologist, Dr Hwang Wei Song, 35, added 15 new species to the ever-growing list.

Of these, two of them, *Paraphysoderes popeye* and *Physoderes minime*, were named after popular culture: the cartoon character, Popeye the Sailor Man, and Mini-Me, a character from the Austin Powers series of movies, respectively.

The other 13 were given descriptive names, such as *Macrophysoderes cirripilosa*, which refers to its curly hair, or named after a place. For example, *Physoderes muensis* was named after Gunung Mulu, a national park in Sarawak, Malaysia, where it was found.

Dr Hwang had worked with Professor Christiane Weirauch, from the University of California, Riverside, on the scientific paper which described the new species.

"Scientists usually consider various matters before naming a new species. The name can describe the way the organism looks, or honour a person or a place," said Dr Hwang.

For him, the popular culture references were indicative of the way the bugs looked. For example, *Paraphysoderes popeye* has enlarged

forearms, similar to the cartoon character's bulging biceps. The species can be found only on the eastern edge of Papua New Guinea.

Physoderes minime, on the other hand, was named for its similarity to a larger known species – *Physoderes fuliginosa*, which is about 24 per cent larger. *Physoderes minime* can be found only on the islands of Luzon and Panay in the Philippines.

The discovery of the 15 new species was 10 years in the making.

Dr Hwang first had to sort through 905 specimens of assassin bugs – all smaller than a 10-cent coin – from natural history museums around the world.

Then, as part of his PhD thesis to systematically study how this group of assassin bugs, known as physoderines, are related and should be classified, he visited museums to compare specimens, and conducted computational analyses to determine their evolutionary relationships.

"This group of assassin bugs is actually quite diverse in South-east Asia, but most species described many years ago were rather poorly done by various scientists, leading to misidentifications and impressions of low diversity," he said.

It is important to keep an inventory of such species, to understand the role they play in the natural ecosystem.

A group of blood-feeding assassin bugs, known as kissing bugs, transmits Chagas disease, a parasitic disease that leads to heart failure and gut complications.

"Kissing bugs are found in South-east Asia and the Western Hemisphere, but luckily the disease-causing parasite they trans-

mit is found only in the Americas," said Dr Hwang.

"Understanding what species we have in this region would allow us to quickly identify public health risks should they crop up.

"Some assassin bugs could also have the potential to be used as a biological control for pests in agriculture."

As for the *Harryplax severus*, the pale yellow crab was named by the Lee Kong Chian Natural History Museum's crustacean curator Jose Mendoza, 38, an avid fan of the wizarding world.

Like Dr Hwang's serendipitous discovery of the new bug species, Dr Mendoza's eureka moment also came while sorting through specimens collected 20 years ago in Guam – an island in the western Pacific Ocean – by collector and naturalist Harry Conley.

When Mr Conley died in 2002, his samples were passed to biologist Gustav Paulay, who later passed them to Professor Peter Ng, an international expert on crab taxonomy and head of the museum in NUS.

The crab's name – *Harryplax severus* – was a nod to both Harrys (Conley and the boy wizard), and Severus Snape, the misunderstood potions master in the books.

"(Its name) is an allusion to a notorious and misunderstood character in the *Harry Potter* novels, Professor Severus Snape, for his ability to keep one of the most important secrets in the story, just like the present new species which has eluded discovery until now, nearly 20 years after it was first collected," noted Dr Mendoza and Prof Ng in the January edition of *ZooKeys*, a scientific journal.

Said Dr Mendoza: "Crabs and other crustaceans are often overshadowed by charismatic organisms like mammals and birds, and naming it after a popular culture reference would perhaps draw attention to the species, and be a good way to let people know about the great diversity of crustaceans around the world."

It was a strategy that seems to have worked, with international publications such as the *National Geographic*, *Guardian* and *Time*, reporting on the discovery.

Said Dr Mendoza: "What's in a name? Apparently a lot. I didn't think the name would catch the public's attention as much as it has... We have merely scratched the surface; there are still more species waiting to be discovered and described."

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The late Alan Rickman starred as Professor Severus Snape in the movie *Harry Potter and The Half-Blood Prince*. PHOTO: WARNER BROTHERS