

NATURE NEWS

Prehistoric horseshoe crab under threat in Hong Kong

By Hazel Parry

Oct 9, 2006, 19:00 GMT

Hong Kong - It has swum the waters of the earth for 400 million years, predating mankind and even the dinosaurs, but now the peculiar horseshoe crab is facing its biggest survival challenge.

Pollution and the development of shorelines in Hong Kong is destroying the spawning and nursery grounds of the crab, one of the world's oldest and strangest-looking creatures, and in turn is drastically affecting its population.

A recent study by the City University in Hong Kong detected one or two crabs on every 1,000 square metres of seabed compared to 10 to 20 per 1,000 square metres in 2002 - a decrease of 90 per cent in four years.

Biologist Paul Shin Kam-shing, who led the study, said that in the 1980s and 1990s, Hong Kong had been home to three of four known species of the horseshoe crab, but recent studies found only two species remained, with one of these in very low numbers.

'We don't really know how many are left,' Shin said. 'What we do know is the number is small and getting smaller. In Japan, it is also a problem, and they only have a few thousand left.'

The biggest threat to the survival of this species, said Shin, a professor at City University in Hong Kong, is quite simply the development and pollution of the shoreline where the crab lays its eggs and also spends its early years.

'The problem is that the horseshoe grows very slowly and needs the shoreline,' Shin said. 'The juvenile spends about 10 years on the shore before it reaches sexual maturity, and only then does it return to the sea.'

A female will lay up to 2,000 eggs at one time on the shoreline after swimming from the seabed with her mate, who hitches a lift on her back, usually on the high tide in spring. But even in the best conditions, the crabs' survival rate is very low. Only one or two out of every 10,000 eggs reach maturity.

Disturbing, destroying or polluting the shorelines is likely to reduce their chances of survival even further.

'It is not on the endangered species list yet - the reason being is that we don't know much about its numbers,' Shin said.

'If development continues like this, the habitat of the horseshoe crab will be gone,' Shin warned, adding, 'There will be no more spawning grounds, no more nursery grounds, and they will die out.'

It would be a strange twist of fate for a creature that has survived so long and outlived so many others to disappear within a generation.

Looking rather like a mutated insect or alien from a horror film, the horseshoe is by no means the most loveable of creatures. The adult is thought to live up to 20 years, growing about 50 centimetres in length. It has an armoured back, a long dagger-like tail, six pairs of legs and a compound eye like that of a house fly.

'It is a strange looking creature, and I can understand why people would ask: 'Why bother saving it?'" Shin said. 'But scientifically, it is considered important in the study of the evolution of marine animals. It is what we call a 'living fossil' because it has been in the world for 400 million years without much morphological change.

'Scientists have also discovered that its blood can be used to screen for bacterial contamination in pharmaceutical products.'

In truth, the horseshoe crab is not a real crab and is more closely related to the scorpion and the spider.

For most Hong Kong people, their first encounter is likely to occur at a seafood restaurant rather than the wild.

Mostly the crabs are there as a curiosity after being trawled up from the seabed accidentally by fishermen. However, they can also find their way onto the menu as soup. In another dish, the eggs are harvested from the female and served fried.

A survey by City University found about 40 horseshoe crabs ended up on the table in Hong Kong restaurants every month with around 20 per cent of those coming from local waters.

Shin said he is hoping to change that. His team at the university has recently received funding from the conservation foundation of the Hong Kong theme park Ocean Park to carry out a project to boost its population in the wild. The project is to involve working with park experts to increase public awareness of the crab and starting a two- year breeding and release programme.

'Hong Kong is lucky enough to have two species of horseshoe crab,' Shin said. 'After 400 million years, it would be nice for them to survive long enough for our grandchildren to see the real thing and not just pictures of them in books.'

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