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The Horseshoe Crab's Big Potential In Medical Industry

By Syarifah Hunaini Syed Jamil KOTA BAHARU, July 5 (Bernama)
The king crab, used as bait by fishermen to catch crabs or left to die in the sun when trapped in their fishing nets, may end up being the most sought after arthropod if its commercial value is fully realized.

Maybe now, many will open their eyes when they realized the commercial value of the blue fluid in the arthropod, which can fetch RM17, 500 (USD5, 000) a liter in the United States. It is said that the fluid can cause human blood to coagulate and this means it has huge potential in the medical field.

Dr Zaleha Kasim, the head of the Structure C Master of Science (Aquaculture) Programme, at University Malaysia Terengganu's Tropical Aquaculture Institute (IAT), believes the crabs, also known as horseshoe crab, holds great potential.

The king crab found in Malaysia is of two types. The scientific name of those found along the beaches is *Tachypleus gigas* while the ones found in the marshes are called *Carcinoscorpius rotundicauda*.

The king crab known as 'belangkas' in Malay resembles a military steel helmet with a long pointed tail. It can reach 51 cm (20 inches) in length. It possesses a remarkable regeneration capability plus an extraordinary immunity system.

GREAT POTENTIAL IN MEDICAL AND COSMETIC INDUSTRY

"The studies are still at the initial stage but the arthropod holds great potential for the medical and cosmetic industry," she told Bernama.

Dr Zaleha pointed out that the king crab is edible and its meat and eggs are delicious. However, it doesn't enjoy widespread appeal. "In Kota Tinggi, Johor, the king crab is a specialty and there are some restaurants specializing in 'asam pedas' and 'sambal tumis' made from the king crab. "But the people there don't want to publicize the delicacy, fearing that Kota Tinggi will be inundated by those seeking king crabs," she said. From a medical point of view, she said, the king crab's blood can be used to detect the presence of viruses, bacteria and toxin.

ANTI TOXIN KIT

She explained, an anti toxin kit has been developed using the serum from the arthropod and has been in use in Europe, United States, Japan and West Asia since 1988. In Japan, she said, the people there consume raw fish and this is where such kit is useful. "Normally, the fishes brought ashore will be tested to ensure that it's free from bacteria or toxin and is safe for consumption. "We are now capable of producing a similar product to be marketed, including at the international level, but we may not have adequate supply of king crabs to carry it out in big scale. The product has a big market worldwide," she said. To extract one liter of fluid, 115 small king crabs found in the waters of Peninsula or 45 big ones found in the waters of Sabah are needed.

FLUID EXTRACTED WITHOUT KILLING KING CRAB

"From each king crab, we take a small amount of fluid without killing it. The process is repeated every three months to avoid any negative effect on the arthropod," she added. Realizing the potential, IAT is now conducting a comprehensive study to get to know the king crab better apart from ensuring its survival. She explained that the research carried out at IAT since 2004 is to produce, using biotechnology, king crabs that mature fast. Apart from that, IAT also has established cooperation with scientists in India, to find remedies for diabetes and cancer by using king crabs. "It's quite a unique and sensitive animal, and has difficulty in adopting to other habitats. However, we are finding ways to breed them in cages," she said.

KING CRAB PIONEER BREEDING PROGRAMME IN PASIR PUTEH

She noted that, for a start, about 500 fishermen in Semerak, Pasir Puteh, will be chosen to breed king crabs inside cages with each of them being allocated 500 of the arthropods. about 10 researchers from UMT will assist in the breeding programme. The breeders can reap up to RM1200 for each harvest, she said. "This provides additional income for the fishermen other than helping to preserve the king crabs," she said. The king crab's potential must be exploited and that is why IAT has requested a RM3 million grant for research and to build a RM10 million laboratory to produce anti toxin kits. -- BERNAMA