

Oldest creature on planet for sale

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New Delhi: Known as the "living fossil" the neglected horseshoe crab is the latest to join the long list of "endangered species." Considered an important organism for its medicinal value in pharmaceutical, clinical and food industries, the Indian horseshoe crab is also useful as an indicator of the health of the coastal zone.

"The horseshoe crab is an amazing creature. The name horseshoe comes because its shell resembles a horse's hoof," says Dr Anil Chatterji, senior scientist at National Institute of Oceanography.

"Their long survival has given us opportunities to know more about the immuno-defensive mechanisms and perfection in their biological and physiological processes." he adds.

It is this property that made scientists use it in space to look for proof of any illness in outer space.

Apart from this, the horseshoe crab, a hard-shelled invertebrate that lives in warm, shallow coastal waters on the sea floor, is said to have properties to treat diseases such as typhoid and meningitis, act as a painkiller as well as create wound dressings for use on burn victims and skin-graft donors.

Even as it contributes to such a wide variety of medicinal uses the horseshoe crab with its armoured shell and spiked tail is gradually dying out and experts are calling out for including it under the endangered species.

"We want it to be included in the Schedule IV of the Wild Life Act so that it becomes labeled as endangered species," says Dr Anil who is presently in Malaysia carrying out research on the animal.

Though Orissa coast is reported to be the major breeding ground of the horseshoe crab, other important nesting sites such as Balaramgadi, Chandipur, Hukitola etc are not protected and require some form of protection atleast during the breeding season. The fishing activities at Balaramgadi in particular the trawling in coastal waters, the fish capturing in Burhabalanga estuary and the increasing pollution, continual destruction of the habitat and illegal beach activities have led to the significant decrease in the number of crabs visiting the beach for nesting, says Dr Chatterji.

Speaking about its medicinal properties, he says, while the shell of the crab could be used to create wound dressings for use on burn victims and skin-graft donors, the scientists also isolated a compound from the fluid that surrounds the animal's larva and found it to be causing formation of heart in chick embryo.

The development is significant as the team now intends to find a gene responsible for heart enlargement, a disease that also inflicts humans, he said adding the compound has been patented.

Dr Chatterji said the fluid has been tested in diabetic mice and found to lead to regeneration of 'islets of Langerhans' in pancreas, which helps produce insulin.

"The research on horseshoe crab has completely been discontinued in India. I do not see any possibility of re-starting these activities. The credit goes to policy maker. But the scientists working in USA, France, Denmark, Singapore, Malaysia, China and Thailand are very keen in continuing their researches to gain more and more from this valuable creature," adds Dr Chatterji who is presently working with French scientists on identifying pro-angiogenic factors from the eggs of horseshoe crab.

These findings will be useful in cardiac disorders and ischemia. However, Ecological Research and Development Group, Inc. (ERDG) a US-based non-profit organization has been actively involved in the conservation of the world's four

horseshoe crab species. It believes that environmental stewardship can thrive within a growing economy through healthy partnerships between government, industry, environmental groups and communities, therefore works to inspire and assist individuals and organizations to solve problems, change behaviors and promote sound decisions. Says wildlife conservationist and filmmaker Mike H. Pandey, "What existed along large parts of our Eastern coastline along the Sundarbans Delta and Orissa, has now got restricted to just one small pocket of Balasore and is rapidly declining." "This critically endangered species is being sold for 50 paisa a piece in the coastal areas and also being exported. There are also nine patents pending for the remarkable medicines that can cure cancer and make organ transplant history, says Mike who made the film 'Timeless Traveler the horseshoe crab' on the jurassic creature our years ago which also won two prestigious international awards.

"Patents for these findings have been filed with the US Patent Office, and the patents are pending. It takes two to three years for them to be awarded," adds Dr Anil.

Mike, along with Dr Anil has been working towards getting the creature included in the Schedule IV of the Wild Life Act so that it becomes labeled as endangered species. While Dr Anil feels disheartened about no progress or participation from the government to save the horseshoe crab, Mike says the matter is tied up in the inter-ministerial tussle of bureaucracy causing irreparable damage to the species.