Like Galapagos, RP has extraordinary biodiversity, says expert

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Contributor

WE COULD HAVE WELL INSPIRED Darwin.

The Philippines has "the kind of diversity that most people associate with the Galapagos Islands," according to Dr. Lawrence Heaney, the curator and head of mammals at the Field Museum of Natural History in Chicago.

Created by volcanoes and located some 972 kilometers west of Ecuador, the Galapagos Islands' vast number of endemic species, not found anywhere else on earth, inspired Darwin's theory of evolution.

Citing the fact that 25 previously unknown species of mammals were recently discovered in the country, Heaney, a renowned authority on island ecosystems, told an audience of students, scientists, NGOs and government officials at the US Embassy last week that he believes the Philippines "is an extraordinary place for biodiversity."

Since the early 1980s, Heaney has teamed up with Filipino biologists to conduct field studies on small mammals like bats, rats and mice throughout the Philippines.

Based on this research, he concluded that the Philippines was one of the world's premier natural laboratories for understanding biodiversity.

"The islands of this archipelago are 10 or even 100 times better for observing the kind of diversity that most peo-

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ple associate only with the Galapagos Islands," he said, adding that the concentration of diversity found within its small land area (128th the size of Brazil) could be the highest in the world.

Heaney's lecture, "The Rich Terrestrial Biodiversity in the Philippines," was sponsored jointly by the US Embassy and the Philippine government.

A US Embassy spokesperson explained the lecture's importance: "Protecting the environment is a global issue... How we behave affects the rest of Asia and the world. To highlight this interdependence, it is helpful to have an expert, who has spent decades studying species diversity issues, remind us just how special this place is."

Geological history

Understanding a bit of geological history could help explain how the Philippines became such a wonderful laboratory.

Traditionally, people were taught that the Philippines was connected by land bridges to Borneo, Taiwan and other nearby areas, Heaney said.

It is now widely accepted that except for the Palawan group, which was very likely part of Borneo at one time, the rest of the Philippines was not attached to any major land mass.

Heaney said that within the Philippines, there were deep water channels that divided island groups, so Luzon was never connected to Mindanao. Panay and Cebu were attached to each other but were in a separate group.

Mindoro, Sibuyan Island, and Romblon had always been distinct geological units. Heaney said that 50 to 70 percent of the mammals on these islands lived nowhere else in the world.

Amazing discovery

Learning more about existing species and discovering new ones were part of Heaney's research.

The discovery of a "dwarf cloud rat" last year in the Mt. Pulag national park in Benguet was amazing, he said, adding that the last time anyone saw one was in 1896. The dwarf cloud rat was a previously unknown relative of the "giant cloud rat."

Heaney lamented the lack of biodiversity studies in the Philippines. He said understanding the processes involved in evolution, ecology and conservation had substantial applications for managing environment issues and concerns.

For instance, he and his team learned that the Cordillera tradition of burning the forest adjacent to the rice terraces in order to control the rat population was one of the worst things they could do.

Fruit bats

"In natural forests, the native species are competitively dominant and they don't go into the rice terraces. It's not the native mammals that do the economic damage but the non-native exotic species, like sewer rats, that were accidentally brought in years ago," Heaney said.

With regards to the natural reforestation of watershed areas, studies showed that protecting fruit bats was one of the best ways to control flooding and erosion. It was also a good way to promote the regeneration of natural forest in watershed areas.

"[The fruit bats] eat fruits and then fly across open spaces. As they fly, they poop and that poop contains seeds," Heaney said.

Threats to biodiversity

There were, however, many threats to maintaining this biodiversity.

The dramatic population growth in the country was one, Heaney said. In the 30 years he has been studying the Philippines, the population more than doubled, he observed.

"I'm a biologist. When you have an explosion of species in an area and the animals severely damage their environment, the population of that animal crashes," he said. "It is not sustainable."

Habitat loss was another concern, highlighted by some dramatic statistics. In 1900, the Philippines had 70 percent old-growth forest cover. In 1992, it had less than 8 percent.

Heaney said the problems associated with the environment were easy to spot. He said he noticed most of them while travelling around the country on a bus.

He said he believes watershed issues in the Philippines would be a key economic issue in the future. "Protecting your water sources is an essential issue. Don't do things that will damage water and you will have fewer problems."

Protecting the environment

On a positive note, he noticed that more people were becoming aware of the country's natural gifts.

Heaney, who played a key role in the founding of the Wildlife Conservation Society of the Philippines, recalled that in 1992 only 26 people attended their first meeting. But in 2007, they had as many as 500 attendees.

He was also happy to report that the number of young biologists who want to work on environmental conservation was increasing.

Although foreigners could do a lot in terms of promoting good biological and economical information, Heaney said, ultimately, the decision to protect the environment would depend on the Filipinos.