Crab expert leads charge on climate

Peter Ng's mission is to build bridges between specialists in diverse disciplines

PROFESSOR Peter Ng's idea of heaven is to don his rubber boots and wade knee-deep in muddy swamps, trawling through the muck for new crab species.

Former students fondly remember a host of different crustaceans he kept as pets, including a huge coconut crab so strong that it broke out of its wire cage and probably ended up in someone's cooking pot.

But these days, the internationally acknowledged crustacean expert is spending more time on dry land.

As a member of a new National University of Singapore (NUS) task force on environmental sustainability research, his first mission is to help build bridges between experts from diverse disciplines such as engineering, law, science and economics.

Only then is there any hope of dealing with complex environmental issues such as climate change, he says.

"We need all players on board to strike a balance. Each pillar is strong as a single discipline, but environmental issues are multi-faceted and we need a big picture approach," says Prof Ng, 49, who is with the university's biological sciences department, "so the biologists and environmental scientists can study the impact on nature and biodiversity, and the economists and lawyers can formulate policies that will strike a balance between sustainability and economic development."

NUS president Tan Chorh Chuan announced last week that a research cluster on environmental sustainability had been formed to develop solutions for problems such as pollution, the fuel crunch and global warming.

NUS intends to take the lead regionally in tackling such issues. Even its upcoming NUS University Town campus in Kent Ridge is being planned "green", with sustainability at the heart of its design.

But Prof Ng admits he is facing an uphill task in the imperative field of climate change, where even experts cannot agree on how, or how badly, the planet will be hit by rising temperatures and sea levels.

"There are no short-cuts or simple solutions here. We can only try our best to manage our losses and stave off defeat. But we also cannot afford to lose this battle as it's the fate of humanity we are talking about here. It's the fate of our future generations," he says.

The first challenge is to get researchers talking to each other.

"Getting scientists from different fields to work together is one of the most challenging things on the planet. Like me, if I had a choice, I'd focus on crabs... Why should I care what a policy-maker thinks?"

So what prompted him to move beyond crabs to climate change?

"I believe that if you keep hurling crap at the environment, sooner or later it's going to throw something back. We all agree that there's a problem, and if we don't do something, there will be no more new crabs to discover in Bukit Timah Nature Reserve or anywhere else," he says.

He is leading the charge at the Tropical Marine Science Institute, which he heads.

The research facility was set up in 1998 to carry out research across marine disciplines, from studying water quality to the role of mangroves in the ecosystem and the impact of coastal development.

One promising project which has roped in experts from all fields aims to take the Garden City concept to the seas.

About 70 per cent of Singapore's shoreline is composed of hardened structures such as sea walls and breakwaters, he explains.

Pilot projects on Pulau Tekong and St John's Island are looking at how to attract marine life to such barren areas, by getting coral to take root, and sea life to congregate. So, marine engineers are working with biologists to design the best homes for coral, algae and sponges, in consultation with the National Development Ministry and urban planners.

Another project aims to showcase the rich animal and plant life in Singapore and the region to the public.

He is charged with moving the Raffles Museum of Biodiversity Research – a repository of the region's rich wildlife – from its cramped quarters at the university's science faculty to a spanking new building to be built on campus.

Fund-raising efforts to the tune of at least $30 million are under way, to create a full-blown natural history museum.

This will house over 300,000 preserved animal specimens, such as the highly endangered massive leafy sea turtle, which landed on the shores of Silapak beach in 1883, and the near-extinct cream-coloured giant squirrel, which was so common here 40 years ago that Prof Ng even had one as a pet.

The public will have free admission to the museum, which is expected to open in three years.

AN ICON OF EXTINCTION

"I love the dodo bird, it's the icon of extinction. Man wiped it out in less than 100 years, and there isn't a single preserved specimen left.

"We recreated our model at the museum based on bones, skeletons and literature on the bird. We named it Clarence, and it's the most accurate recreation around. Even the world's dodo experts agree.

"It shows that the creature was not the clumsy, stupid bird it has often been depicted as.

"We are living in a world that is losing 50 to 100 species every single day. Singapore has already lost about half its animal species in the last 200 years, we need to act fast to slow this trend."

Prof Ng

PRESSING NEED FOR ACTION

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It will also showcase environmental research, such as how air and water quality is monitored, in a building which will itself boast green features, such as heat-reflecting glass panels and recycled materials.

"It helps to put a face to the environmental effort, and animals and plants are this face. If you show people a beautiful flower or shrub, they feel for it." says Prof Ng, who is married with three sons aged seven to 15.

"And if you save one species, you will hopefully save a host of other creatures as well."