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Check out plan to barcode world's species

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Canadian scientists are working on an ambitious project to create a global database of up to half a million of the world's species using DNA barcoding technology.

The scientists are hoping to raise \$US150 million (\$176 million) to fund an initial five-year stage of what they describe as the biodiversity equivalent of launching a rocket to the moon.

DNA barcoding, a technique for characterising a species using only a short DNA sequence, has wide-ranging implications for health and the environment.

It could help remove illegal fish and timber supplies from global markets, get rid of pests such as mosquitoes and even reduce the numbers of collisions between birds and aircraft.

Paul Hebert, head of the Canadian Centre for DNA Barcoding, is spearheading the plan.

This week's conference is being held by the Washington-based Consortium for the Barcode of Life, which was set up in 2003 in response to Hebert's initiative and now includes 160 organisations.

Among them are the CSIRO and other organisations in Australia, New Zealand and Papua New Guinea.

"We're now trying to launch in Canada the International Barcode of Life Project, which has a five-year life span," Hebert said at a three day seminar on DNA in Taipei.

"We hope to put \$US150 million into this through a 25 nation alliance."

"The idea is collectively we would gather 5 million specimens and 500,000 species within that five-year period," Hebert added, saying the entire project could take 15 years.

The seminar in Taipei has brought together 350 scientists from 45 countries to debate the "barcoding of life" concept.

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Scientists estimate that, while nearly 1.8 million species have already been identified, there might be another 10 million that are not known.

But DNA barcoding technology has progressed so rapidly that scientists predict science fiction-style powers to recognise previously unfamiliar creatures could become reality in a decade.

"Like in the film of *Star Trek*, anything scanned by such devices could display its image, name and function," said Allen Chen from Taiwan's Academia Sinica.

"This could be done 10 years from now after a global barcoding data bank is set up," said Chen, an expert in corals.

Scientists are already working on hand-held barcoders that would enable users to access a barcode data bank using a global positioning system, said Taiwan's Shao Kwang-tsoo, one of the conference chairmen.

Hebert said the alliance would invest heavily in the development of such technology.

Among them is Taiwan's top academic body, Academia Sinica, one of three chief organisers of the conference.

At its first conference in London in 2005, the consortium's data banks collected about 33,000 DNA references belonging to about 12,700 species.

Today it counts more than 290,000 DNA samples from about 31,000 species, including about 20 per cent of the world's estimated 10,000 bird species and 10 per cent of the 35,000 estimated marine and freshwater fish species.

The "barcoding of life" projects have drawn increasing attention, particularly from the US, Canada and Europe, as scientists explore the technique's applications, which range from food safety and consumer protection to the identification of herbal plants.

One British scientist is working on a project to barcode 2800 species of mosquito, or 80 per cent of those known to the world, within two years.

The project is aimed at reducing the scourge of malaria, which infects some 500 million people a year and is spread by some mosquitoes.

AFP

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