

DNA 'bar codes' identify 15 new species of birds

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[CBC News](#)

Canadian researchers have helped uncover 15 new bird species through a process of genetic testing they say will pave the way for cataloguing the world's organisms.

The discovery of so many new species was made possible after analyzing and comparing the DNA genetic "bar codes" of 643 North American bird species.

"Bar-coding is revealing legions of unrecognized species, and it's going to change the species count for the planet," said Paul Hebert of the University of Guelph's Biodiversity Institute of Ontario, one of the authors of the study published Monday in the British journal *Molecular Ecology Notes*.

Hebert and the researchers from the University of Guelph and New York's Rockefeller University said the results suggest there might be more than 1,000 new species of birds added to the 10,000 around the world already identified.

A parallel study of bats in Guyana also revealed six new species from among 87 studied.

The new species are look-alikes to known species such as the hermit thrush, western screech owl and common raven. To the average birdwatcher they look superficially identical to their known cousins, but have DNA that diverges by at least 2.5 per cent.

These differences are easily identifiable by the birds themselves.

"If you watch them in nature long enough and carefully enough, when they came in contact, the boys of one species would not be interested in the girls of the other species in terms of reproduction and vice versa," Hebert told CBC News.

"They are truly as reproductively isolated as humans are from chimpanzees," he said.



The hermit thrush is one of 15 species of birds with a newly discovered look-alike species. Canadian and U.S. scientists discovered the new species by analyzing a sequence of DNA that acted as a genetic bar code. (Charles Rex Arbogast/Associated Press)

Could curb pests

The study also discovered 14 pairs of birds with separate names, as well as two trios and eight gull species, that had virtually identical DNA.

The snow goose and Ross's goose, for example, shared 99.8 per cent of DNA. The researchers suggest the species might be too young to show any major differences.

The findings open the door to a radical change in how animal species are defined and identified, and could change how amateur ornithologists and other nature lovers observe the world around them.

Hebert envisions the creation of hand-held devices that would allow the average person to identify plants and animals within minutes by analyzing their genetic bar code.

The technology could be used to help identify new species or be used at borders to identify and contain the movement of unwanted pest species that might have a negative impact if released into a foreign environment.

"If you can't recognize these, they're likely to gain more than just a foothold in the country," said Hebert. "They may

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spread and cause immense amounts of economic damage as some invading species have in the past."

The scientists hope to raise \$100 million to compile bar code records of 500,000 animal species by 2014.

With files from the Canadian Press