African bird discovery proves there is something new under the sun

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(PhysOrg.com) -- "Four and 20 black birds baked in a pie" - but wait, one has blue-gray eyes.

That discovery, backed by DNA analysis, means scientists now know there is one more species of black shrike in the Albertine Rift of Africa than was previously thought. And if Dr. Gary Voelker has his way, he'll soon be studying the bird's habits to determine its susceptibility to the deforestation now occurring across its native habitat.

The bird *Laniarius willardi*, is a newly described species of boubou shrike (*Malaconotidae*) whose single distinctive trait is its blue-gray eyes. The paper describing the new species will appear in the July issue of the international ornithological journal *The Auk*.

"This bird has been around for probably at least a couple million years; it's old, but it's new to science at least in the DNA age," said Voelker, assistant professor of wildlife and fisheries and curator of birds with Texas AgriLife Research at College Station.

"Clearly, it was noticed before, because as we started to look at comparative material from other natural history collections, we saw that several specimens collected in 1910 were noted to have had gray eyes," he said. "But it apparently never occurred to those collectors that their find was potentially something different than other black shrikes that might have been collected in the same basic region."

The same fate might have befallen more recent collections had it not been for conversations Voelker had with Tom Gnoske from the Field Museum in Chicago while in Malawi, and later with Dr. Ben Marks, then a doctoral student at Louisiana State University and now curator of birds and mammals for the Texas Cooperative Wildlife Collections at Texas A&M University.

"The DNA work that shows this to be a new species is recent, though the actual birds sampled were collected in 1997 by Gnoske and Marks on a research expedition for the Field Museum of Natural History," Voelker said. "It was basically conversations between Ben, Tom and myself a few years ago, during which they mentioned the eye color difference of this shrike which finally triggered the find."

Voelker said such discoveries are very rare in Africa. He said most of today's new bird species discoveries are made in South America. He attributes the African discovery in large part to the lack of DNA work in the tropical rainforest area of Central Africa where the bird was found.

"Another significant aspect of this particular species, at least from what we can tell from the data we've gathered, is that it occurs in a narrow elevational band between 1,200 and 2,000 meters," he said. "Those birds collected in 1910 were taken from sites that are now likely completely deforested to make way for tea plantations which grow successfully to about 2,000 meters elevation. Above that level, Laniarius willardi gets replaced by another shrike species that looks exactly like it except for the eye-color difference."

Voelker said knowing the environmental niche a particular species inhabits is important to conservationists for tracking a serious loss of its native habitat which could also impact other species.

"The discovery of this new species clearly illustrates that scientific

collecting still has an important role to play in efforts to document and understand biodiversity in Africa and other understudied areas," he said. "These and future results from our ongoing work in various parts of Africa should have an impact on conservation strategies now and in the future."

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