

# Team discovers three new bird species in Africa

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Rudder's Forest Robin (*Stiphornis rudderi*). Credit: Texas A&M University

Texas A&M University team has discovered three never before documented bird species, and there could well be more, the team's leader said.

Dr. Gary Voelker, professor and curator of birds in the department of wildlife and fisheries sciences at Texas A&M University, College Station, headed the recent discovery of a trio of similar African birds living in close proximity, but that are different species which share no common genes.

Voelker was lead author on an article published recently in the scientific journal *Systematics and Biodiversity* discussing that discovery.

"The discovery of these three new species is a good example of the amount of potentially hidden diversity living in Afrotropical forests," Voelker said. "Our evidence runs directly counter to the belief of earlier research that said Afrotropical forests are static places where little evolutionary diversification has occurred.

"The areas were referred to as 'museums' of diversity, meaning they believed because many of the birds look similar across their ranges, then they probably were the same species. That's a point we are finding not to be true."

The point of most interest, Voelker said, is that two of the three birds, which all look pretty much alike at first glance, live in close proximity to one another in an area that lacks significant geographic barriers typically

associated with the forming of new species. Despite this, the birds don't share genetic makeup and their appearance is indeed somewhat distinct when closely analyzed.

Voelker described the three new species as forest robins in the genus *Stiphornis*; two from West Africa and one from the Congo Basin.

"Each of the three represents a distinct lineage based on our genetic analysis," he said. "The three are further distinguished from already documented birds in the genus by clear differences in appearance such as wing and tail length and subtle differences in their plumage; one species has a distinctive song as well."

Voelker said because many of the birds within the species look a lot alike, there's hasn't been much research done historically to find if they are in fact, different species. This lack of research also means there is much less well-preserved DNA available for genetic analysis and those specimens that are available are rather old.

However, his team's recent collecting work in Africa has enabled them to add to the limited genetic material that several other museums have, which in turn, has allowed them to address the species diversification question.



Dahomey Forest Robin (*Stiphornis dahomeyensis*). Credit: Texas A&M University

"This overall lack of collecting bird specimens in Afrotropical lowland

forests is likely inhibiting the discovery of any number of new species, though several apart from the three we studied have been described in recent years," he said. "This suggests that a lack of sampling in the region, rather than a lack of obvious variation in the [birds](#), is a key contributor to fully documenting avian biodiversity in lowland forests."

Through genetic analyses and careful assessment of variation in plumage and appearance that is facilitated by museum specimens, the team was able to determine the three lineages tested represented new species.

They are named *Stiphornis dahomeyensis* or the Dahomey Forest Robin found in Benin and the central region of Ghana, the *Stiphornis inexpectatus* or Ghana Forest Robin collected from Brong-Ahafo and Central Regions of Ghana, and the *Stiphornis rudderi* or Rudder's Forest Robin discovered along the Congo River near Kisangani in the Democratic Republic of the Congo.

Voelker, who named all three species, said Rudder's Forest Robin was named for U.S. Army Major General Earl Rudder, who served as Texas A&M University's 16th president and third president of the Texas A&M University System.

"I felt naming this special bird for Major General Rudder was a great way to acknowledge the role of Texas A&M University in supporting its faculty and student research," he said.



Dr. Gary Voelker shows museum specimens of newly documented bird species.  
Credit: Texas A&M AgriLife photo by Kathleen Phillips

When asked how this study benefits the public, Voelker said:

"It's important to document that there is variation in a group like *Stiphronis*, and others that tend to lack obvious variation in a natural setting," he said. "Doing so gives conservation managers more data to reference when seeking to define important areas of concern. This may ensure such areas are defined to save the highest possible amount of biodiversity, which helps to sustain all life forms."

**More information:** Gary Voelker et al. Three new species of (Aves: Muscicapidae) from the Afro-tropics, with a molecular phylogenetic assessment of the genus, *Systematics and Biodiversity* (2016). [DOI: 10.1080/14772000.2016.1226978](https://doi.org/10.1080/14772000.2016.1226978)

Provided by Texas A&M University

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