MU researcher works to save one of the world's most endangered birds

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The entire population of the Tuamotu Kingfisher -- less than 125 -- lives on one tiny island in the south Pacific, and without serious intervention soon, they will cease to exist. Credit: Kesler/University of Missouri

The Tuamotu Kingfisher is a multicolored, tropical bird with bright blue feathers, a dusty orange head, and a bright green back. The entire population of these birds – less than 125 – lives on one tiny island in the south Pacific, and without serious intervention, they will no longer exist. One University of Missouri researcher is trying to stop the birds' extinction by working with farmers and residents on the island inhabited

by the kingfishers.

"If we lose these birds, we lose 50,000 years of uniqueness and evolution," said Dylan Kesler, assistant professor in fisheries and wildlife at the University of Missouri's School of Natural Resources in the College of Agriculture, Food and Natural Resources. "Because it has lived in isolation for a very long time, it's unlike any other bird. There is no other bird like this on the planet."

In new studies published in the journal *The Auk* (published by the American Ornithologists Union) and the *Journal of Wildlife Management*, Kesler and his team of researchers have uncovered important information to help ensure the birds' survival and a unique way to attach radio transmitters to the birds to track them.

To survive, the kingfishers need several specific habitat characteristics:

- Hunting Perches about 5 feet off the ground – The birds hunt by "pouncing." They watch their prey and then fall on them from hunting perches about 5 feet high. Without the perches in broadleaf trees at the appropriate height, the birds have no way to hunt.

- Exposed ground – the birds' food consists mainly of lizards, which are easier to spot where the ground is clear of vegetation. When coconut farmers conduct intermediate burns on their land – which are hot enough to kill brush, but do not lead to widespread fires or kill the lizards – it exposes more ground and the birds can see the lizards.

- Dead trees for nesting – the birds create nests by flying into dead trees and hollowing cavities. Live trees are too hard and many

farmers cut down their dead coconut trees. By encouraging farmers to leave some dead trees, the birds will continue to be able to build nests.

- Lessoning the impact of predators – cats and rats, which were introduced to the island by humans, now hunt the Tuamotu Kingfisher. By wrapping metal bands around the trees, the predators are less likely to get into the nests, but Kesler is still searching for other solutions that might alleviate the pressure on the birds.

In a separate study, Kesler also developed a "weak-link" radio harness for the birds to wear. In previous studies with different birds, scientists have reported unintentional harm to the birds after attaching radio transmitters. That harm included scratching the birds, making the birds act peculiarly and introducing infections. Using this new harness, Kesler was able to track the birds during the study, and the harness was shed within two months.

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"Unfortunately, even with all our work to date, the [population](#) is still crashing," Kesler said. "We're seeing some turnover, but each year when we return, there are more empty territories and the population decreases. At this rate, these birds will be gone within our lifetime."

More information: For more information, visit: [picra.net/tk2010/TK2010/Introduction.html](#)

Provided by University of Missouri-Columbia

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