

# Studying an elusive cuckoo

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In a single nest, perched on a branch overhanging a marshy river in Panama, four birds jostle for space. The birds all belong to a species of cuckoo called the Greater Ani, and each one has offspring in the communal nest. The birds take turns warming the heap of eggs and looking out for predators, teaming together to face the challenges of rearing young.

A dozen feet away, researchers peer out of an idling boat, binoculars to their faces as they count the birds, the eggs, and note the colors of the bands clamped around each bird's leg.

"The Anis are really hard to study," says Christina Riehl, a junior fellow with the Harvard Society of Fellows, who works at

a field site in Panama operated by the Smithsonian Tropical Research Institute. "They only build nests overhanging water and so you need to boat—often through waters with lots of crocodiles—to see the nests or catch the birds for banding and blood samples."

However, the communal nesting habits of the Greater Ani has Riehl intrigued. She's spent the past five years tracking birds, installing video cameras above their nests, and studying the genetics of each generation of birds to understand their behaviors.

The Anis nest in groups of two to four male-female pairs, adding up to four to eight adults per nest. Riehl has discovered that the bigger the group, the more young that survive, suggesting a clear advantage to the cooperation. However, there's competition in the mix too; before a female lays her own eggs, she'll try to kick other females' eggs out of the nest. In addition, sometimes an Ani will lay an egg and never return to the nest, taking advantage of the communal care.

"The prevailing theory for the last 30 years has been that cooperation should evolve among relatives," says Riehl. However, her genetic analyses of the Greater Anis that nest together suggest that there's something else at play in these cuckoos: The birds that share nests aren't related.

As she continues to track the birds and their offspring, Riehl wants to pin down how the communal nesting of Anis has evolved, why some females take advantage of the system, and what this information says about the evolution of cooperation and competition in general.



A video camera caught this image of two couples of Greater Ani cuckoos sharing a nest. Image courtesy of Christina Riehl.