

TRILOBITES

These Birds Form a Trio, but Probably Not a Throuple

Some pairs of cranes in India, known for their monogamous devotion, seem to bring in a third bird to act like a kind of avian au pair.

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Cranes have a reputation as romantics. The birds live in faithful pairs, dancing and defending their territory together. When intruders approach, the birds lift their beaks and emit a loud song with one voice.

In India, the sarus crane — crimson-headed and as tall as an adult human — is celebrated for its monogamy. “When one of the birds dies, the local mythology is that the other bird pines away in grief,” said K. S. Gopi Sundar, a scientist at the Nature Conservation Foundation in India. “The truth is, of course, a little bit different.”

Dr. Sundar discovered that sarus crane couples occasionally let a third bird join them. He described the behavior last month in the journal *Ecology*. Living as a trio — alas, not quite a throuple — may help the birds raise young in poor conditions, with one behaving perhaps a bit like an avian au pair. The birds even turn their signature duet into a song for three.

Dr. Sundar first spotted a sarus crane trio in 1999. “When I mentioned it to experts in the U.S., they smiled and patted me on my head,” he said. But he was not ready to let go of the idea. He followed that trio for the next 16 years.

Starting in 2011, he also trained field assistants (usually local farmers) to monitor sarus cranes. After gathering data through 2020, Dr. Sundar and Swati Kittur, a colleague at the foundation, dug into that database to look for trios.

Observers had spotted 193 trios among more than 11,500 crane sightings. “So trios are definitely rare,” Dr. Sundar said. Some included a male and two females; some were the other way around.

Suhridam Roy, a graduate student at the foundation, visited four of these trios and played recordings of other crane pairs singing their territorial duets. In response, each trio performed its own synchronized call. The scientists called it a triet.

The data does not reveal how many chicks these trios raised or how long they stayed together. But 16 years of observing that original trio gave some hints about their family dynamics.

These cranes lived in a low-quality habitat, where a lack of wetlands would most likely make it hard for a typical duo to raise young, Dr. Sundar said.

But in a group of three, the outcome turned out better. Each year, one adult in that trio — a female — vanished while the other two nested and laid eggs. “It was not a throuple,” Dr. Sundar said. Only two of the three animals mated each season.

But when the resulting chick or chicks were about a month old, or immediately after the nest had failed, the absent female reappeared. If there were chicks, she helped feed them. And working together, the three cranes raised a chick nearly every other year.

“Finding a novel behavior like this in a system where we all thought that they were monogamous for a long time is super interesting,” said Sahas Barve, an evolutionary ecologist at the Smithsonian Institution’s National Museum of Natural History in Washington, D.C.

And the study raises a lot of questions, he said. Most important: “Who is that third bird?”

In some bird species, including Florida scrub-jays and Seychelles warblers, grown offspring often stay to form a trio with their parents and help raise their siblings, Dr. Barve said.

But Dr. Sundar thinks it is unlikely that sarus crane trios include a grown chick, based on other research he has done. However, he noted that the third adult could be related in another way. Sharing some genes with the chick could help explain how this system evolved.

If the third adult is unrelated, though — and if it is not allowed to mate — what benefit does it receive from living in a trio?

“The only benefit that we could think of for the third bird is that it’s getting practice,” Dr. Sundar said. The helper can learn how to defend its home and feed chicks. At least one trio the researchers observed included a very young male.

The scientists also saw that trios were more common in undesirable habitats. Dr. Sundar thinks teaming up may be an adaptation to bad circumstances.

Team parenting appears across the animal kingdom. Species of monkeys, mongooses, spiders, insects, birds and fish engage in cooperative breeding. So do humans. But until now, no cranes were known to parent in teams.

“It’s challenging assumptions that we have about this family of birds,” said Anne Lacy, senior manager of North America programs for the International Crane Foundation.

Ms. Lacy said she and her colleagues had never observed trios among North American cranes, but added, “Could it happen when we’re just not looking? Absolutely.”

Dr. Sundar plans to use genetics to learn whether sarus crane helpers are relatives. One question he doesn’t plan to ask, though, is whether the helper is ever a chick’s true parent. In other words, is the sarus crane really monogamous?

“These birds are preserved for the mythology that they are with each other all the time, and that they are faithful,” he said.

Learning that some percentage of cranes stray from their partners, Dr. Sundar said, risks damaging the relationship between human and bird. “Why destroy this mythology for a statistic and for a scientific paper?” he said.