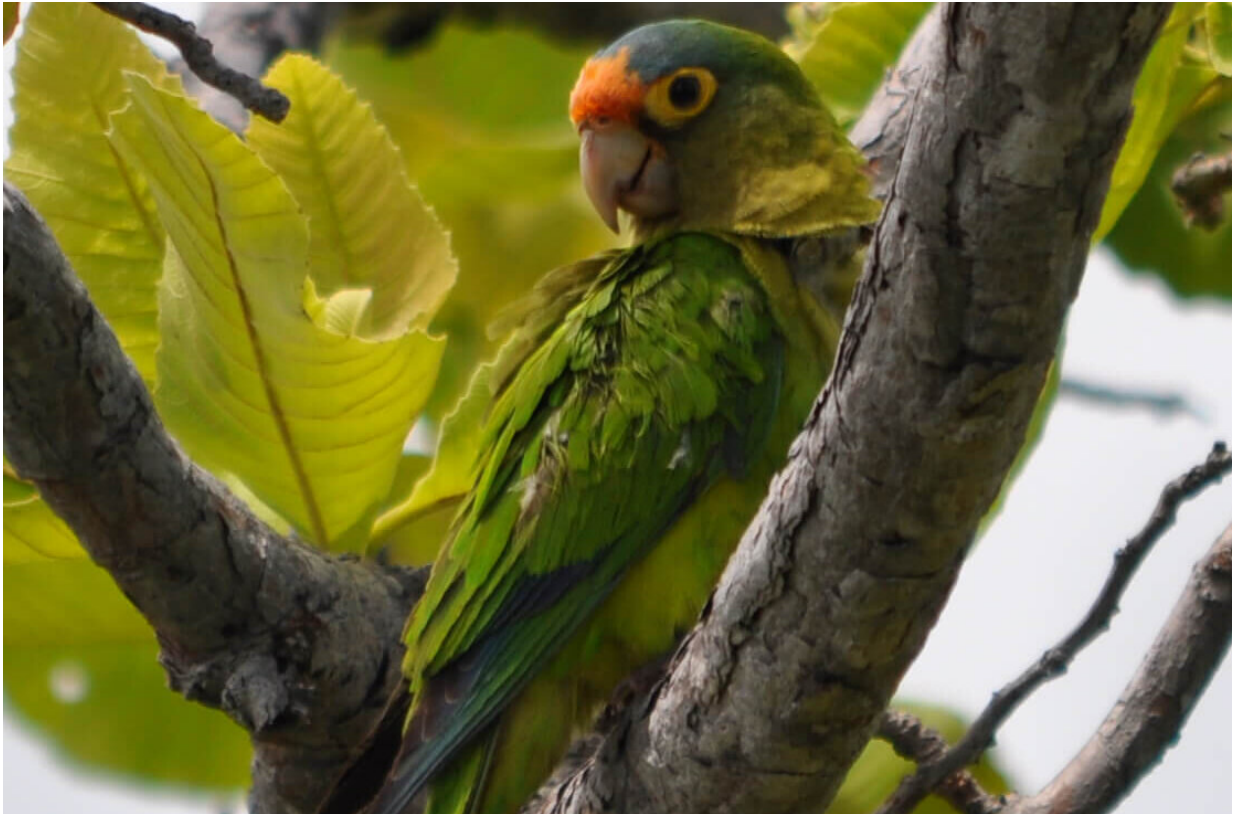


Parrot talk can lead to flock

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Orange-fronted conure. Credit: Heidi M. Thomsen

During flock encounters, a single vocal interaction seems to be sufficient for making the decision of whether to recruit an individual or flock. Parrots are known for their splendid ability to imitate, including the contact calls of other individuals during vocal interactions. Such rapid vocal matching is hypothesized to precede and mediate the formation of

new flocks. But how are such interactions perceived by others?

Heidi M. Thomsen, first author and Ph.D. student at the Department of Biology, University of Copenhagen explains that "by using a novel [experimental design](#), we were able to gain valuable insights in the [flock](#) decisions of a social parrot, the orange-fronted conure (*Eupsittula canicularis*). We conducted a field experiment in which flocks of wild orange-fronted conures were attracted to two loudspeakers simulating two orange-fronted conures engaged in a contact call interaction. During the interaction, one simulated individual would act as the leader by calling first, followed by the other individual. We specifically tailored the playback so the contact calls of the follower would imitate those of the leader. The listening wild flocks could now decide to fly after either the leader or the follower to fuse with it."

The results showed that flocks primarily chose to fuse with the leaders of the simulated vocal interactions. Furthermore, flocks responded with higher contact call rates and with contact calls that were more similar to the playback when they chose to fuse with a leader compared to trials where they chose a follower. Especially if the leader was a male.

"Although we do not yet know why leaders are preferred, our findings suggest that orange-fronted conure flocks rely on eavesdropping on vocal interactions to infer the relative quality of unfamiliar individuals. While orange-fronted conures frequently engage in contact call imitation during vocal interactions with conspecifics, we here illustrate that vocal imitation also has implications for potential third party listeners," says Thomsen.

These birds respond selectively to interactants, indicating that contact call imitation plays an essential role in facilitating the formation and maintenance of affiliative social interactions—and not only with the individuals they directly interact with. This is a missing key to

understanding the function of vocal [imitation](#) in parrots.

More information: Heidi M. Thomsen et al, Follow the leader? Orange-fronted conures eavesdrop on conspecific vocal performance and utilise it in social decisions, *PLOS ONE* (2021). [DOI: 10.1371/journal.pone.0252374](#)

Provided by University of Copenhagen

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