

# Duetting birds with rhythm present a greater threat

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Birds that sing duets with incredible rhythmic precision present a greater threat to other members of their species than those that whistle a sloppier tune, according to a study of Australian magpie-larks reported in the June 5th issue of *Current Biology*.

"When partners duet, they signal to other magpie-larks that they are working as a team to defend their territory," said Dr. Michelle Hall of the Max Planck Institute for Ornithology of the new findings. "The level of precision in their duets seems to let others know how 'good' they are—their ability and/or motivation to cooperate for territorial defense."

Coordinated displays are widely used among animals to defend shared resources, and may signal coalition strength so that groups can assess the relative competitive ability of rivals and avoid unnecessary fights. For example, lions roar in choruses that provide information about their group's size to intimidate rivals, as do gibbons, chimpanzees, and wolves, Hall said.

Paired Australian magpie-larks sing notes in rapid alternation to produce duets for territorial defense. One member of the pair repeatedly makes a call that sounds like 'peewee,' and the other responds each time with 'wit,' Hall said. Experiments have shown that the birds' duets are more threatening territorial displays than songs sung solo.

However, magpie-lark pairs vary considerably in their singing skills. Highly coordinated partners create alternating notes so closely spaced

that they can sound like a single bird. In contrast, others' relatively poorer vocals often include gaps, overlaps, or irregular tempos. Yet the influence of those timing differences on the level of threat perceived by members of the birds' listening audiences remained uncertain.

Hall and study collaborator Robert Magrath of Australian National University, Canberra, tested the function of duet precision by broadcasting coordinated and uncoordinated songs on twelve magpie-lark territories. Male magpie-larks responded most aggressively to coordinated duets, evidence that the sound of precise pairs signaled a strong coalition more likely to fend off intruders.

Longer-term partners more often produce well-coordinated duets, they found. Thus, they said, duetting talent may signal the pairs' ongoing motivation to act collectively—the stability of their unions. Duet precision might also indicate the ability for concerted action. For instance, duet 'tempo' slows when partners are farther apart.

Hall said she hopes to continue exploring the magpie-larks' duets in different contexts, to find out "whether precision of duets signals coalition quality by revealing fighting ability, or motivation, or both."

Source: Cell Press

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