

It started with a squeak: Moonlight serenade helps lemurs pick mates of the right species

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Micocebus murinus on the lookout for a mate. Credit: Tiho Hannover

Lonely hearts columns testify that finding a partner can be hard enough, but at least most human beings can be fairly certain that when we do we have got one of the right species. Things aren't so simple for all animals. Some Malagasy mouse lemurs are so similar that picking a mate of the right species, especially at night time in a tropical forest, might seem like a matter of pot luck. However, new research in BioMed Central's journal *BMC Biology* has shown that our desperately cute distant cousins use vocalisations to pick up a partner of the right species.

Until recently, grey, golden brown, and Goodman’s mouse lemurs were all thought to be the same species. But genetic testing revealed that they are, in fact, three distinct, species so similar that they cannot be told apart by their appearance—so called cryptic species.

“A fundamental problem for cryptic species that live in the same area and habitat is the coordination of reproduction and discrimination between potential mates of the same species and remarkably similar individuals of other species” say Pia Braune and colleagues from the Institute of Zoology, University of Veterinary Medicine, Hannover University.

Males of these nocturnal species use advertising calls to let females know that they are looking for love. The researchers recorded advertising calls from the three species and then played them back to grey mouse lemurs, noting what response, if any, they made. “Grey mouse lemurs reacted more to calls from other grey mouse lemurs than to those of either other species”, say the researchers. Furthermore, the grey mouse lemurs seemed to ignore the calls of golden brown mouse lemurs, which live in the same area and habitat to them, but show some interest in the calls of Goodman’s mouse lemur, which they would never normally meet. “The importance of vocalisation in attracting mates is well known for frogs and birds”, explain the authors, “but this is the first evidence for species-specific call divergence in the communication of cryptic primate species with overlapping ranges.”

The lemurs’ moonlight serenades help to ensure that individuals of one species don’t waste time trying to mate with those of another, which would produce either no offspring or infertile hybrids. Indeed, the possibility of grey and golden-brown mouse lemurs encountering each other might explain the difference in calls and responses, according to Braune: “our data support the evolutionary hypothesis that species cohesiveness has led to divergence in signalling and recognition to avoid

costly hybridisation.”

Source: BioMed Central

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