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The sex lives of birds: Banding together may pay off for subordinate males

Male spotted bowerbirds (*Ptilonorhynchus maculatus*) build and defend a structure of sticks and straw - the bower. They decorate these nests with colourful objects to attract mates during the breeding season. Certain non-resident subordinate males are tolerated by resident males in their bowers over multiple breeding seasons. Previous research has shown that these male coalitions bring indirect benefits to subordinate males. So far, however, it has been unclear whether lower-ranking males also have direct advantages. A current study by the Vetmeduni shows for the first time that in rare cases the lower-ranking birds benefit directly from copulation opportunities.

A current study by the Vetmeduni documents four cases of sneaky matings or mating attempts by subordinate males. The cases were observed in the bowers of spotted bowerbirds during the 2018 breeding season. Several non-resident males disrupted ongoing copulations between the bower-owner and a receptive female, and these events were followed by vigorous aggressive interactions. "These observations shed new light on same-sex social dynamics in bowerbirds and support the hypothesis that subordinate males are sexually mature individuals who occasionally gain access to females while visiting established bowers," said study first author Giovanni Spezie of the Konrad Lorenz Institute of Ethology at the Vetmeduni.

First observation of extremely rare events

The rarity of the events now observed is remarkable. Extensive observations have been made on spotted bowerbirds for several decades - but so far, none of the observed copulation events has been documented. Study lead author Leonida Fusani from the Konrad Lorenz Institute of Ethology at Vetmeduni: "The fact that we were able to record at least four independent observations in different individuals strongly indicates that sneaky copulations are not an isolated and abnormal behaviour. Rather, it is a behavioural pattern or alternative reproductive strategy used by subordinate males."

Beta profits from Alpha – male coalitions are profitable

Male-male coalitions have so far been observed particularly in birds such as manakins, grouse, peacocks, wild turkeys and bowerbirds. A common feature of most courtship coalitions is that a dominant "alpha" male accounts for all or most copulations, while subordinate "beta" males abstain from breeding and have no—or very limited—access to mates. Sacrificing reproductive potential for a male association may seem paradoxical, but it has direct and indirect benefits for the subordinate males. The animals benefit indirectly, for example, from taking over the position of the alpha male after his death or from learning behaviour that is important for successful mating from him. As it turns out, they also derive direct benefits from clandestine mating with females.

wissenschaftliche Ansprechpartner:

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