

FEATURE ARTICLES

BREEDING STRATEGIES OF A SOCIALLY MONOGAMOUS NEOTROPICAL PASSERINE: EXTRA-PAIR FERTILIZATIONS, BEHAVIOR, AND MORPHOLOGY

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Abstract. Blue-black Grassquits (*Volatinia jacarina*) are small, granivorous, Neotropical birds that are abundant in central Brazil. During the reproductive season, the socially monogamous males acquire a blue-black plumage and defend very small, clustered territories that resemble leks. They execute a conspicuous courtship display that consists of a leap, revealing white under-wing patches, synchronized with a vocalization. We collected data on the morphology and behavior of banded males and characteristics of their territories to determine how these factors may influence acquisition of mates and nesting. For a second group of birds in the area, we used microsatellite genotyping to test the breeding synchrony hypothesis, which predicts that tropical species that breed synchronously should exhibit high rates of extra-pair fertilization (EPF). We found that males that successfully formed a pair bond differed from unsuccessful males in their behavior, but not in morphological attributes or territory features. Successful males spent more time in their territories, executed displays for longer periods and at greater rates, and their display leaps were higher. These results point to the greater importance of behavior relative to other factors in the successful reproduction of Blue-black Grassquit males. In the second group of birds, EPFs occurred in 63% of 11 nests and involved 50% of the 20 chicks sampled. This exceptionally high incidence of EPF in the small sample analyzed occurred in diverse contexts, including intraspecific parasitism and quasi-parasitism, a rare type of maternity loss where the resident female is parasitized by other females that were fertilized by the resident male. A short and highly synchronized breeding season, clustered breeding in small territories, and granivorous habits may contribute to the high rates of EPF in this tropical species.

Key words: Blue-black Grassquit, breeding clusters, extra-pair fertilization, mating strategy, social monogamy, *Volatinia jacarina*.