

Abstract

Promiscuity is a widespread evolutionary strategy of many socially monogamous bird species. A prerequisite for male reproductive success is not only to participate in within- and extra-pair copulations, but also to win the sperm competition and fertilise the egg. Two ejaculate parameters were studied repeatedly during a breeding season in barn swallows, sperm morphology (size of sperm components) and sperm motility. Sperm morphology is a highly repeatable trait within males either within season or among seasons. Sperm motility is medium repeatable within season. We found a relationship between sperm motility and sperm morphology, but not sperm numbers. In our study we tested the relationship between male ornamentation and the quality of his ejaculate traits, which could explain male reproductive success. The results suggest more colourful throat and larger tail spots to indicate an ejaculate of better quality, however, sperm motility was not related to the sexually selected trait – the tail streamers. Admittedly, the environment and male condition can influence the process of spermatogenesis. Sperm phenotype plasticity was tested by the means of manipulation with the ornament size (tail streamer length), nevertheless, no effect of manipulation was documented.

Key words: sperm morphology, sperm motility, ornamentation, repeatability, barn swallow