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Individual- and ejaculate-specific sperm traits in ant males

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ABSTRACT

Sperm cells are the most morphologically diverse cells across animal taxa. Within species, sperm and ejaculate traits have been suggested to vary with the male's competitive environment, e.g., level of sperm competition, female mating status and quality, and also with male age, body mass, physiological condition, and resource availability. Most previous studies have based their conclusions on the analysis of only one or a few ejaculates per male without investigating differences among the ejaculates of the same individual. This masks potential ejaculate-specific traits. Here, we provide data on the length, quantity, and viability of sperm ejaculated by wingless males of the ant *Cardiocondyla obscurior*. Males of this ant species are relatively long-lived and can mate with large numbers of female sexuals throughout their lives. We analyzed all ejaculates across the individuals' lifespan and manipulated the availability of mating partners. Our study shows that both the number and size of sperm cells transferred during copulations differ among individuals and also among ejaculates of the same male. Sperm quality does not

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