

Too much sperm may kill the queen

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Researchers at CSE (Centre for Social Evolution) at the Institute of Biology, University of Copenhagen have studied the sperm-quality among ants.

An ant queen only has sex once in her lifetime, and at this occasion she needs enough semen to last her lifetime. She mates with several males who all die from exhaustion afterwards, whereas the queen can live on for decades. The queen will then continually fertilize the millions of eggs she needs to lay in order to build the enormous ant colony.

The more sperm the queen has, the longer she can keep laying eggs. However, the queen does not store as great an amount of semen as she has capacity to. The CSE researchers have discovered that too much sperm will put the queen at risk of dying from diseases. Possibly because she spends a lot of energy keeping the sperm alive, which means less energy to her immune response. The number of males that contribute to her sperm stock also affects her risk of dying. The more males, the greater the risk of dying – possibly because the mating requires a lot of energy which will make her immune response vulnerable.

CSE continues the research, specifically orientated towards unveiling the secret behind the incredible quality of ant-semen that makes it possible for the sperms to live for years within the queen. The researchers hope to find results that can be important for infertility-research among humans.

Source: University of Copenhagen

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