

## Abstract

My study researches the individual male characteristics of *Cordulegaster boltonii* in relation to their epigamic behavior. The first part of this study analyzes the relations of the measured characteristics (length and height of the wing, wings area, body weight, age), in the second part I assess their possible effect on the epigamic behavior of males of *Cordulegaster boltonii*, specifically how they affect the intensity of searching for females. Males of this species perform distinctive scanning flights over a stream to find an ovipositing female to mate with her. I used individually marked males to quantify their performance which can be interpreted as reproductive success because more active males are more likely to meet and mate females. My work includes 3 methods of evaluating activity. The first is based on the actual number of flights, the second on the average daily order of the males (based on the number of flights in days when the males have been seen). The third method combines the average daily order with number of days when the males could be seen. In the second part of the study I evaluate the effect of the above-mentioned individual characteristics on the flight activity of males. The outcome of the GLM indicates that the only characteristic with significant effect is the age of the males. I have also evaluated the dependence of flight frequency on a daytime and on an air temperature. I analyzed the data of morphological characteristic for females, too, and I evaluate the extend of the sexual dimorphism within this species.

## Key words

Odonata – *Cordulagaster boltonii* – length of wing – height of wing – weight – wing area – flights – air temperature – sexual dimorphism