

CONTRIBUTION TO POPULATION BIOLOGY OF *Libellula fulva* (Odonata: Libellulidae) ON COAL SLUDGE SEDIMENTATION POND (KARVINÁ – CZECH REPUBLIC)

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Abstrakt

Dolný A., Matějka P.: A contribution to population biology of *Libellula fulva* (Odonata: Libellulidae) on coal sludge sedimentation pond (Karviná – Czech Republic). Ekológia (Bratislava), Vol. 26, No. 4, p. 341–351, 2007.

The basic ecological characteristics of the only known population of *Libellula fulva* Müller in the Czech Republic (estimate of population size, territoriality, time of occurrence, mating season etc.) including the description of the habitat and overall dragonfly assemblage in the researched locality are reported.

In 2002, we marked 76 males, total number of recaptures was 31. In 2003, we marked 114 males, there was a total 50 recaptures. The estimate of the Schnabel population density of adult males in the 2002 was 123 specimens (the 95% confidence limits: 88–178). The estimate of the males population size in 2003 was 188 specimens (the 95% confidence interval: 145–271). In 2002 imago activity lasted 70 days, in 2003 only 41 days. In 2002, imago activity became apparent at the end of April; the first immature imago was discovered on 27-IV-2002. The maximum discovered life span of adult specimens we identified to be 16 days in 2002. In 2003 it was 26 days. Immature adults were recorded no later than in the first two weeks of imago occurrence. Inter-specific territoriality was observed mainly in relation to *Orhretrum coeruleescens*.

We recorded 33 species of the dragonflies in the researched locality (12 species of Zygoptera, 21 species of Anisoptera). The only known area with the autochthonous occurrence of *Libellula fulva* in the Czech Republic is the Karviná-Doly – Mokroš locality, where *L. fulva*, curiously, evolves in a rather extreme environment i.e. a dam, which until recently was used for the sedimentation of coal sludge. Furthermore, this species was considered missing or rather extinct from 1913 to 1999 in the whole of the Czech Republic.

Key words: *Libellula fulva*, Odonata, population biology, mark-recapture method, sludge sedimentation pond