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Sex ratio and sexual dimorphism in a population of *Pelobates fuscus* from Transylvania, Romania

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Geschlechterverhältnis und Geschlechtsdimorphismus in einer Knoblauchkröten–Population (*Pelobates fuscus*) in Rumänien

In einer Population der Knoblauchkröte (*Pelobates fuscus*) nahe Klausenburg, Rumänien, wurden in den beiden Jahren 2000 und 2001 Geschlechterverhältnisse, äußere Morphologie und Körpermasse untersucht. Die Mãnnchen waren in beiden Jahren häufiger als die Weibchen. Die Weibchen waren eindeutig schwerer und größer (Masse: 32,3 ± 7,5g; Länge: 64,1 ± 5,7 mm) als die Männchen (Masse: 21,0 ± 4,1g; Länge: 52,2 ± 3,5 mm). Bei beiden Geschlechtern war die Masse positiv mit der Länge korreliert.

Schlüsselbegriffe: Amphibia, Anura, Pelobatidae, *Pelobates fuscus*, Geschlechterverhältnisse, Geschlechtsdimorphismus.

Abstract

Sex ratio, external morphology, and body mass were studied in a population of *Pelobates fuscus* from near Cluj–Napca city, Romania, during spring of 2000 and 2001. Sex ratio differed significantly from a balanced situation with males significantly outnumbering females in both years. Females (mass: 32.3 ± 7.5g; length: 64.1 ± 5.7 mm) were significantly larger than males (mass: 21.0 ± 4.1g; length: 55.2 ± 3.5 mm). In both sexes body mass had a direct relationship with body size.

Key words: Amphibia, Anura, Pelobatidae, *Pelobates fuscus*, sex ratio, sexual dimorphism.

1 Introduction

The common spadefoot toad *(Pelobates fuscus*) is widely distributed in Central and Eastern Europe, and is a strictly nocturnal, secretive toad, with burrowing habits generally confined to areas with sandy soil and river floodplains (NÖLLERT 1990). With respect to the large distribution area published data give only limited information on overall variation of the toads population characteristics.

The aim of the present study is to provide comparative information on sex ratio, external morphometry, and sexual size and shape dimorphism in a population of *P. fuscus* from Transylvania, Romania.

2 Materials and Methods

This study took place in a mosaic of permanent and temporary ponds and puddles near Cluj–Napoca city, Romania, from 14.4. through to 30.4.2000 and 12.4. through to