

SEXUAL COMPATIBILITY BETWEEN TWO HETEROCHRONIC MORPHS IN THE ALPINE NEWT *TRITURUS ALPESTRIS*

Mathieu Denoël & Poncin Pascal

Department of Ethology and Animal Psychology, University of Liège, 4020
Liège, Belgium
E-mail: mathieu.denoel@ulg.ac.be

Numerous populations of newts and salamanders are dimorphic: while some larvae become mature and thus paedomorphic, others metamorphose and become adult later. The two morphs largely differ in morphology. According to sexual selection theories, we could expect some female choice towards the alternative morphs. Although paedomorphosis can be adaptive in allowing resource partitioning and an earlier age at maturity, it is worth determining the strength of sexual isolation between morphs. Whereas sexual compatibility may promote maintenance of polymorphism by mixing genes, sexual isolation could indeed be the first step to sympatric speciation.

We staged more than 200 encounters involving the four possible crosses within and between the heterochronic morphs of the Alpine Newt *Triturus alpestris* (Amphibia, Caudata). Both quantitative and qualitative aspects of different types of behaviour were taken into account, with particular emphasis on the success of sperm transfer. We also determined secondary sexual characters.

The success of heterotypic and homotypic encounters was similar, thus involving sexual compatibility between the two heterochronic morphs. Paedomorphs and metamorphs displayed identical behavioural patterns at similar frequencies. Females did not appear to be selective against males on the basis of their epigamic characters.

Our results do not support hypotheses predicting sympatric speciation from polymorphic species. Conversely, they do favour models predicting the maintenance of polymorphism.

[M. Denoël was supported by a fellowship from the FRIA (Belgium)].

Biota

Revija za biologijo in ekologijo / Journal of biology and ecology

Vol. 2, Supplement

Abstracts

of the oral and poster presentation of the

11th Ordinary General Meeting of Societas Europaea Herpetologica (SEH)

Žalec, Slovenia, July 13-17, 2001



Društvo za proučevanje ptic in varstvo narave
Society of Bird Research and Nature Protection

radoživ

Društvo varuhov okolja Radoživ
Environmental Society Radoživ