Reproductive tactic of the Common Pochard (*Aythya ferina*)

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Summary of the PhD. thesis

Capability of reproduction is a fundamental characteristic of all living systems. "Desire" for it is, according to modern evolutionary theories, a motive force of majority of events in the living world. Every organism competes for the possibility to reproduce with the aim to have as many viable offspring as possible during an individual's life time. The way in which they cope with changing environment attracts the attention of many biologists. The evolutionary adjusting to environmental conditions or set of anatomical, physiological and behavioural adaptations is called life history. To puzzle out the life histories seems to be a challenge and we try to understand them using description of their characteristics (life history traits). Those are most frequently number and size of offspring, body size, number of reproductive events in a life time or lifespan. There is a lot of life history traits. Combinations of their diverse states lay in the background of great number of life histories. Birds serve as suitable models for life history investigation because their life cycle as well as reproductive event is properly separated into distinct parts and investment into reproduction can be quantified easily. This thesis focuses on the reproductive tactics (a narrower part of life history strictly associated with reproduction or a single reproductive event) of one species – the Common Pochard (*Aythya ferina*). Common Pochard is a representative of Anatidae, the family of precocial birds in which the reproductive event consists of two parts only: (i) clutch formation and (ii) clutch incubation. It is a species with uniparental care and the majority of energy necessary for young production is provided by a female parent. Both internal reserves and available food resources are most probably used. The most of results presented in this thesis addresses the allocation of available resources into clutch formation and indirectly its incubation, too. The emphasis is placed on an egg which is a primer element of every avian reproductive tactic and thus the first and essential object of any investigations. In particular chapters, I focus on egg size and ways in which it determines content of egg components and quality of young (mass and structural size) at hatching. The thesis deals with inter-nest variation in relationship between egg and young quality and speculates about possible causes and searches for links to female incubation effort. A separate chapter is addressed to the negative correlation between egg size and number which ought to be a result of underlying trade-off arising during resource allocations. The work also covers some behavioural aspects of reproductive tactic of the species, such as breeding site selection in context of nest predation probability. Thus, it gives a basic insight into reproduction of the Common Pochard. However, due to specificity of questions addressed, it still provides an incomplete picture only.