

## ***Abstract***

Large-scale restocking of hand-reared individuals can pose a risk for wild populations. A decrease in the abundance of the Mallard (*Anas platyrhynchos*) has led to game-farming and the release of hand-reared mallards for hunting purposes in many states, including the Czech Republic. Different selection pressures and evolutionary processes affecting farm animals may cause genetic and phenotypic divergence between these populations. The aim of this thesis is to find out if the phenotype of ducklings hatched from eggs in game-farm and wild population varies in growth, hematological, immunological and behavioral traits, in controlled conditions using common garden experiment. Game-farm individuals were heavier and characterized by larger growth, even when controlled for different egg size. Individuals hatched from eggs of wild origin, on the other hand, had a larger bill and tarsus in relation to body size. An analysis of hematological traits, such as the differential number of leucocytes and immature erythrocyte count in relation to the overall numbers of erythrocytes, displayed complex relations during ontogenesis. The heterophil/lymphocyte (H/L) ratio and the immature erythrocyte count were characterized by dynamic changes in the course of development of juveniles and by interaction with morphological parameters. In addition, in the case of the immature erythrocytes count, this dynamic was significantly different between individuals bred in captivity and those in the wild. These populations also differed in the component for common fraction of monocytes, basophils and eosinophils. The game-farm young showed a higher effectivity of non-specific immunity responses (in the bacteriolytic complement activity). In simple behavioural open-field testing, an increased activity in the wild individuals in comparison to farmed ones was revealed. The presence of these differences, despite the standard conditions, may suggest their genetic determination rather than a simple phenotype plasticity.

**Keywords:** Mallard (*Anas platyrhynchos*), phenotype, restocking, common garden experiment