

Summary

Sex ratio is an important part of the life history of a species, hence it is also a frequent topic of interest of scientists. Deviation from the parity, which is the most common in nature, occurs when the cost of raising offspring depends on their sex, or when sons and daughters bring different fitness. The cost of raising offspring depends, among other things, on the dynamics of growth and the body mass and size achieved. Therefore, the sex ratio among juveniles should be skewed towards the smaller sex in species showing sexual size dimorphism (SSD) already before independence.

The studied species was the Whiskered Tern *Chlidonias hybrida*. This species is characterized by the greatest sexual size dimorphism among terns (adult males are from 3 to 10% larger than females). In addition, Whiskered Tern exhibit a parental care system unique to terns - almost all females desert before the juveniles become independent, leaving the care of the offspring to the male. Hence, breeding success depends more on the quality of the male than the female. The study was conducted in breeding colonies on carp ponds in the Upper Vistula Valley. The aim of this study was to analyse (1) growth parameters of chicks (including checking whether SSD is already present in the nestling period) and factors affecting them; (2) hatching (HSR) and fledging sex ratio (FSR) at the population level and the factors affecting the above ratios; (3) sex-specific chick mortality and the factors affecting the probability of survival.

The results showed that SSD was already developing at the chick stage. At the hatching, the total head length was greater for males than for females, while at the fledging already 3 of the 4 measured parameters showed significant sex-dependent differences. In addition to the achieved dimensions, intersex differences were also related to the growth dynamics - the most significant concerned the maximum growth rate of body mass, higher in males than in females (**Banach et al. 2021**). Despite the higher cost of rearing males than females, suggested by the above results, there was no deviation from parity in HSR and FSR at the population level. Also, none of the analysed factors affected HSR. Analysis of the effect of hatching success on the HSR also suggests that the sex ratio does not differ from the sex ratio at the egg-laying stage. FSR was dependent on the volume of eggs - the proportion of females in the brood was positively correlated with the average volume of eggs. Among individuals that died and disappeared during the nesting period, there were more females than males - such a correlation applied to chicks that fell victim to predation, and was not observed among individuals found dead in the nest. However, overall chick mortality was so low that the sex of the individual did not significantly affect the probability of chick survival.

The only factor modifying survival was the size of the brood - as the number of chicks in a brood increased, the probability of survival to flight decreased (**Banach et al. 2024**).