

Abstract

Social learning in animals is a frequently studied topic, including birds. Great tits belong to frequently tested passerine species in this context. For this experiment we have chosen another tit species as model birds – adult and juvenile blue tits (*Cyanistes caeruleus*) and coal tits (*Periparus ater*). We tested an effect of social information on discrimination learning between palatable and unpalatable prey. Red and green artificial prey items resembling shieldbugs with a mealworm glued underneath were offered to birds. One variant was palatable, the other was unpalatable, soaked in bitter substance. Experimental groups were allowed to observe a pretrained tutor of the same species choosing palatable prey variant and rejecting the unpalatable one. The birds were then subjected to an individual discrimination learning task with simultaneously offered palatable and unpalatable prey items. The control group was not allowed to observe tutor and learned only individually. On the following day, all birds participated in a memory test. We tested if social information has an influence on avoidance learning in juvenile and adult birds of both species. We found that both species of tits were similarly successful in discrimination learning and there was no difference in success in performance between adult and young birds. Social information affected prey discrimination learning only in adult blue tits, experimental birds were more successful than control ones. The opportunity to observe an experienced tutor had no effect on performance of adult coal tits and juvenile birds of both species. Which of the two colours represented a positive stimulus, had an effect on discrimination learning in adult and juvenile tits of both species. Birds with positive green variant of prey and negative red variant were more successful than birds with the opposite color combination. In adult blue tits, social information and prey colour had a marginal positive effect on performance in the memory test. Performance in the memory test in adult coal tits was affected only by the prey colour, and the young birds of both species were not affected by any of the observed factors.

Key words: social learning, individual learning, discrimination learning, aposematism, *Periparus ater*, *Cyanistes caeruleus*