

**Abstract:**

We have examined wild palearctic and nearctic parids in their ability to recognize and assess a threat level of sympatric and allopatric predators. The study was conducted in Prague, Czech republic, on great tits (*Parus major*) and blue tits (*Parus caeruleus*) during the winter of 2013, and the following year in the city of Calgary, Canada, on black-capped chickadees (*Poecile atricapillus*). Three species of falcons (merlin (*Falco columbarius*), common kestrel (*Falco tinnunculus*) and american kestrel (*Falco sparverius*)), were chosen, two of which were sympatric and one was allopatric to the studied parid species in each area. We have also tested their reaction to nest predators magpies (eurasian magpie (*Pica pica*), black-billed magpie (*Pica hudsonia*)). Using two ground feeders in the winter time, we gave parids a choice between a feeder with either one of the three dummies of falcons, or a magpie, and a feeder with a dummy of either a hawk (the most dangerous predator of small birds) or a dove (a harmless bird of the same size as falcons). As a control we have only used sympatric species: eurasian sparrowhawk (*Accipiter nisus*), Cooper's hawk (*Accipiter cooperii*), eurasian collared dove (*Streptopelia decaocto*) and mourning dove (*Zenaida macroura*). Results from the city of Calgary did not produce any conclusive evidence in the reaction of chickadees to the presented predators, while in Prague we saw that the reaction of tits is more influenced by their experience of the predators than by the threat they pose. Tits saw common kestrel, the most common falcon in Prague, as the most dangerous and allopatric american kestrel as the least dangerous of the predators. These results also prove that magpie is being rated as a potential predator by tits.

**Keywords:** antipredator behavior, feeder experiments, parids, predator recognition