

Date: Tuesday 31 October, 2017
Time: 17:10 – 19:00
Room: Seminar Room

Patterns of variation in haemoparasite infections in great tit fledglings

Presenting author: **Adam Krupski**

Authors: **Adam Krupski¹, Anna Dubiec¹**

Affiliations: ¹Museum and Institute of Zoology, Polish Academy of Sciences, Warsaw, Poland

Vector-transmitted haemoparasites commonly infect birds. While patterns of infection with these parasites in adult individuals are generally well explored, very little is known about their occurrence in young individuals. One of the reasons is a long pre-patent period in some parasite genera, such as *Plasmodium* and *Haemoproteus*, which precludes the detection of infections during the nesting period in many small cavity nesting passerines. Here, the occurrence of four genera of avian haemoparasites – *Plasmodium*, *Haemoproteus*, *Leucocytozoon* and *Trypanosoma* – was studied in hatch-year great tits (*Parus major*) during the post-fledging period. Data were collected during two years in the population characterized by high prevalence of *Plasmodium*, *Haemoproteus* and *Leucocytozoon* (over 60% in each genus) and low prevalence of *Trypanosoma* (5%) infections in adult birds. Mean annual prevalence in fledglings was 22%, 32%, 8% and 18% in the case of *Plasmodium*, *Haemoproteus*, *Leucocytozoon* and *Trypanosoma*, respectively. Male and female fledglings did not differ in infection rates in any of the considered parasite genera. The probability of infection was not associated with individual body size measured either shortly before fledging or during the post-fledging period. However, the presence of infection was related with sampling date in the case of *Plasmodium*, *Leucocytozoon* and *Trypanosoma* parasites. Specifically, the probability of manifesting infection in the blood with each of these three parasite genera increased with the progress of the season. Observed temporal variation in infection occurrence may be associated with differences among the vectors transmitting these parasites (different genera of blood-sucking arthropods) in their phenology and/or their degree of endophagy, i.e. attacking the host in enclosed places.