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Room: Seminar Room

Microclimate of great spotted woodpecker nest holes in living and dead trees

Presenting author: **Grzegorz Hebda**

Authors: Grzegorz Hebda[1]

Affiliations: [1]Department of Biosystematics, University of Opole, Opole, Poland

The function of birds' nest design is to minimize the detrimental effects of predator and parasite pressure and to provide a suitable microclimate for developing nestlings. The insulating function of holes may be particularly important for woodpeckers, whose nestlings hatch naked and incapable of thermoregulation for at least a week. Insufficient insulation from ambient conditions may cause hypothermia during cold weather or hyperthermia on hot days. As the microclimate of holes can vary with position on a tree and internal dimensions, birds should use holes with the most favourable characteristics.
The microclimate of natural nest sites of hole-nesters is poorly documented. Few studies consider air temperature and humidity of tree holes in respect to detailed physical characteristics and location on a nest tree.
I present data on air temperature and humidity in tree holes used as nest sites by great spotted woodpeckers (*Dendrocopos major*), the most numerous woodpecker species in the Palearctic. Studies were carried out in the oak-lime-hornbeam stands of the Białowieża Primeval Forest. I discuss how the nest hole's dimensions and its position on a tree influence the microclimate within. Particular attention was paid to analyses of microclimate in respect to the condition of the nest tree and the location of the hole in a living or dead substrate.