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PROGRAM & ABSTRACTS



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MICROBIAL COMMUNITY OF GREEN FROG'S SKIN

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Amphibian populations have been declining throughout the world in the last several decades. Although numerous factors, including habitat destruction, pollution, introduced species, and global environmental changes contribute the most to amphibian population decline, yet many amphibians are dying of infectious diseases.

Recent studies of amphibian skin infections were mainly focused on the presence of chytridiomycosis neglecting other members of the frogs' skin communities. Samples for mycological and algological analyses were collected from 100 individuals belonging to *Pelophylax esculenta* complex on three localities in South Banat, Serbia using non-aggressive, rapid and inexpensive “adhesive tape” method for microbial biofilm observation.

In analysed samples variety of fungal reproductive structures, and in few samples spore germination, and mycelia formation were detected. Sporulation of some typical soil-borne fungi and the causative agent of amphibian chromomycosis as well as human phaeohyphomycosis, *Fonsecaea* sp. was detected along with water mold, *Aphanomyces* sp. the pathogen responsible for amphibian egg mortality and saprolegniasis of mostly salamanders and tadpoles. For both pathogens, these were the first reports for green frogs in Serbia. Microscopy analysis showed the presence of aeroaquatic hyphomycetes (eg. *Canalisporium* sp.). Besides mycobiota, the frog's skin has proved to be a good medium for the survival of diatoms (detected in high diversity and abundance), Cyanobacteria and Chlorophyta.

Adhesive tape method proved itself useful as a consequential diagnostic tool for preliminary observation of the microbial community on the skin of amphibians including potential pathogens and symbionts. It provides minimal stress to the studied animal and can be easily applicable in various conditions of field research.