

Why every sample matters: health surveys in brown bear populations

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**Institute lecture hall
October 15, 2025.
at 11:40 AM**



ReC-IMI



Colloquium of the Institute for Medical Research and Occupational Medicine

Lecture title: Why every sample matters: health surveys in brown bear populations

Lecturer: Agnieszka Sergiel, Associate Professor, Institute of Nature Conservation, Polish Academy of Sciences, Kraków

Time and place: October 15, 2025, at 11:40 AM, Institute lecture hall

Abstract

Monitoring the health of brown bear populations is essential for understanding ecosystem stability, managing human–wildlife interactions, and guiding conservation strategies. Comprehensive health surveys provide insights into population dynamics, disease risks, toxicological burdens, and nutritional status. Because brown bears are wide-ranging and long-living species with diverse diets and exposure pathways, every type of biological sample – ranging from blood through hair to noninvasive faecal samples – offers unique and complementary information. Blood can reveal hematological and biochemical baselines, pathogens, and contaminants; hair provides long-term records of hormones, diet, and contaminants as well; while faeces offer non-invasive insights into gut microbiota, parasites, diet composition, and hormones. Collecting a wide array of samples maximizes the resolution of population health assessments and reduces bias introduced by single-source data. Furthermore, integrating results from multiple matrices strengthens our ability to detect subclinical conditions, identify emerging threats, and evaluate long-term trends under changing environmental pressures. This lecture will highlight recent findings from bear health surveys across different regions and emphasize the value of a proper sampling strategy for advancing wildlife health monitoring and conservation.

Curriculum Vitae

Agnieszka Sergiel is a biologist and has been working on bears since 2002, initially focusing on physiological and behavioural effects of stress and then expanding into ecology. Currently, she is an Associate Professor at the Institute of Nature Conservation of Polish Academy of Sciences in Kraków, investigating brown bear stress ecophysiology and chemical communication. Her research interests also include integrated population health surveys. She has been a member of International Association for Bear Research and Management since 2007, the IUCN SSC Bear Specialist Group since 2009, and board member of Bear Care Group since the end of 2020. Agnieszka has also been involved in captive bear welfare projects in Poland and other European countries that aimed at ending illegal keepings and at relocations to bear-appropriate conditions.

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