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## Health and Reproductive Status of the Brown Bear Population in Croatia

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Within scope of the LIFE DINALP BEAR project a large scale survey of health and reproductive status of brown bear population has started. Aims of the designed study were to investigate effects of different parasitological and microbiological (bacteria, viruses, fungi) agents on health of individual bear, bear population and public health as well. Ecological aspects and interrelations of bears and agents are examined. Samples have been collected during spring and autumn hunting season in 2015. From the bears that died from other causes sampling took place throughout the year. In total 68 bears were sampled. Most important parasitological finding regarding public health was positive trichinellosis test in two animals (3%) from the same hunting ground. Prevalence of Baylisascaris transfuga in spring season was 37%, while in autumn season was 84% considering infestation of adult forms of parasite. In some animals the intensity of invasion was high and it could influence the health status (body mass) of those individuals. Since B. transfuga was widespread amongst bear population in the whole range, ecological importance will be further investigated. Trematoda Dicrocelium dendriticum was found in gallbladder of 61,5% sampled bears. There is no literature describing the relations bear-Dicrocelium so the results will be great contribution in understanding this relation. The isolation of lipophilic Malassezia species was performed using swabs from the ear canals and anus. Only one species, M. pachydermatis was isolated. In order to obtain more detailed epidemiological data all isolates are analyzed using different molecular methods. General knowledge about viral diseases in brown bears is sparse. Since the mortality caused by viral disease has potential negative impact on free-ranged population and management success, obtained samples were tested for the presence of the most important viral agents of carnivores. Due to human expansion in bears' habitat possible role of bears as reservoirs of viral pathogens has been taken in to account as well. Samples are also tested for Leptospira species. With a study of reproductive organs (ovaries, uteri, testicles) we wanted to define the earliest and latest age of reproduction capability in females and males. Preliminary results showed that supplementary feeding of free living bears could foster the earlier gonadal activity (maturation). Results are supported by histological findings.