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**Gruźlica bydłęca i paratuberkuloza  
u zwierząt dzikich oraz utrzymywanych  
w zakładach odizolowanych – analiza  
wybranych przypadków w świetle koncepcji  
„Jedno Zdrowie”**

**Bovine tuberculosis and paratuberculosis in wild and kept animals in  
confined establishments- analysis of selected cases in the light of the  
"One Health" concept**

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## **Abstract**

### **Bovine tuberculosis and paratuberculosis in wild and kept animals in confined establishments- analysis of selected cases in the light of the "One Health" concept**

Topics were considered in the microbiological, molecular dimensions and in the appearance of legal and organizational conditions for the protection of animal and human health. Analysis of a case of bovine tuberculosis (BTB) in Reeves's muntjacs (*Muntiacus reevesi*) in a "minizoo"-private animal collection with the possible contact between animals and visitors - *M. bovis* was isolated from the lymph nodes of two animals (classification based on the Genotype MTBC test of the gyrB gene polymorphism coefficient) points to the need to precisely define the legal obligations of the owners of such establishments in the field of public health protection, including the obligation to have documentation of the origin of animals, the results of their tests for infectious and invasive diseases, as well as in relation to personal protective equipment, divided into for employees and visitors. The legal obligation must be defined in accordance with the requirements of the Animal Health Law (AHL).

Combating BTB in European bison was not clear enough to be legal before the introduction of AHL in 2021 (cases of BTB in the Bison Breeding Center in Smardzewice - Kampinoski National Park and among free-living bison in the Borki Forest Inspectorate and in the Borecka Forest). According to the current legal status, the County Veterinary Officer is competent to prevent and combat BTB in European bison, which will facilitate both the effective implementation of the strategy for the protection and reintroduction of the species, and, taking into account the concept of "One Health", preventing the transmission of the disease to other free-living species and food producing animals.

Asymptomatic *Mycobacterium avium* susp. paratuberculosis infections were found in 11 species of herbivorous animals in Polish zoological gardens (positive results of bacteriological cultures of fecal samples, Real time PCR; species identification based on the Geno Type Mycobacterium CM test based on DNA-Strip technology). This pathogen is potentially dangerous also for visitors. This indicates the need to include paratuberculosis in the serological monitoring of infectious and invasive diseases in zoos.

**Key words:** bovine tuberculosis (BTB), paratuberculosis, wild and kept animals, "mini zoo"-private animal collection, zoo, confined establishments, Animal Health Law, "One Health" concept