



## ABSTRACTS

- TI: FAMILY DOG PROJECT<sup>©</sup>: HISTORY AND FUTURE OF THE ETHOLOGICAL APPROACH TO HUMAN-DOG INTERACTION PROJEKT
- AU: Abdai J.<sup>1</sup>, Miklósi A.<sup>1,2</sup>
- AD: <sup>1</sup> Department of Ethology, Eötvös Loránd University, Budapest, Hungary  
<sup>2</sup> MTA-ELTE Comparative Ethology Research Group, Budapest, Hungary
- LA: English
- AB: Dogs occupy a specific niche in the human social environment. Some authors argued that dogs' social competence show functional similarities in their components (e.g. attachment, rule following) to that of humans due to their long history living in anthropogenic environment if proper socialisation is provided. The Family Dog Project<sup>©</sup> aimed to study dogs' social behaviour and problem solving skills; dog-human interaction; and also to provide some insight to the evolution and mechanisms of our own behaviour. In the recent years interdisciplinary research has been focusing on the genetic and neural mechanisms of dog behaviour. The present paper provides a concise overview of the research agenda of the Family Dog Project<sup>©</sup> pursued in the last two decades and future directions of canine biology.
- DE: dog, social behaviour, cognition, social competence, attachment, communication
- SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., LXXIX, 613: 9–20.
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- TI: HISTOPATHOLOGY CHANGES MASSETER MUSCLE (*MUSCULUS MASSETER*) CATTLE ACCORDING TO SEX AND AGE
- AU: Bogucka J.<sup>1</sup>, Bogucki M.<sup>2</sup>, Kalinowska A.<sup>1</sup>
- AD: <sup>1</sup> Department of Animal Biochemistry and Biotechnology, University of Science and Technology in Bydgoszcz  
<sup>2</sup> Department of Cattle Breeding, University of Science and Technology in Bydgoszcz
- LA: Polish
- AB: The aim of this study was to estimation the extent of histopathological changes in the *masseter muscle* in slaughter cattle depending on sex and age. Experimental material consisted of *masseter muscle* 40 head of cattle for slaughter. The animals were divided into three groups based on sex and age: I – bulls at the age of approx. 24 months (21), II – heifers approx. 24 months (12), III – cows older than 5 years (7). For histological analysis, muscle samples were collected immediately after slaughter. Muscle samples were frozen in liquid nitrogen (at -196°C). Then muscle samples were cut into 10 µm sections using a cryostat. Then the preparations were subjected to staining H+E to evaluate the extent of histopathological changes. The analysis included estimation of pathological changes, such as atrophy of muscle fibers, giant fibers, changes in the shape of fibers, necrosis with phagocytosis, split fibers and connective tissue hypertrophy. Percentage of pathological changes in *musculus masseter* was low, and in all groups had more than 98% of normal fibers. Histopathological changes in the muscle of slaughter cattle tested included changes in size (atrophy and hypertrophy of fibers), change the shape of the muscle fibers, connective tissue hypertrophy and occurrence sarcocysts. The most common histological change were the giant fibers, which was found in all groups of cattle, which may indicate a strong

influence of stressors associated with the before – slaughter proceedings. There was no effect of sex and age of the animals to the extent of the occurrence of pathological changes in the examined muscle.

DE: cattle, *masseter muscle*, histopathological changes

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., LXXIX, 613: 21–30.

TI: EFFICACY OF USING PASSIVE HAIR TRAPS FOR GENETIC SAMPLING A LOW DENSITY POPULATION OF THE EURASIAN BADGER *MELES MELES* IN THE STOBRAWA LANDSCAPE PARK (SOUTH-WESTERN POLAND)

AU: Kochan J.<sup>1</sup>, Kruszyński W.<sup>1</sup>, Strzała T.<sup>1</sup>, Mysłajek R.<sup>2</sup>, Mucha A.<sup>1</sup>, Kapuśniak V.<sup>3</sup>

AD: <sup>1</sup> Department of Genetics, Wrocław University of Environmental and Life Sciences

<sup>2</sup> Association for Nature “Wolf”

<sup>3</sup> Department of Biostructure and Physiology, Wrocław University of Environmental and Life Sciences

LA: English

AB: Non-invasive genetic sampling has been increasingly used in studies of wild animal populations, although poor quality and quantity of the DNA samples can require repeated amplifications to obtain reliable genetic profiles of each individuals. Consequently, we performed a pilot study to test whether using wire hair traps and DNA genotyping could be a useful tool in estimating the abundance of a low-density population of the European badger (*Meles meles*) in Poland. We located thirteen badger main setts in different regions of the Stobrawa Landscape Park (south-western Poland) and collected hair DNA samples using non-invasive hair-trapping devices. Traps were placed above the setts' entrances and on badger paths. Sampling was performed during two seasons: autumn (15 October to 22 November 2010) and spring (28 April to 27 June 2011). Trapping effort, defined as the number of trap-nights needed to obtain one hair sample, was 47.6 in autumn and 55.65 in spring. In total we collected 156 hair samples, of which 72 were collected in autumn and 84 in spring.

DE: hair DNA, *Meles meles*, non-invasive DNA, low density population

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., LXXIX, 613: 31–40.

TI: REPRODUCTION TRAITS OF POLISH HEATH SHEEP, ŻELAŻNIEŃSKA SHEEP AND THEIR F<sub>1</sub> CROSSBREED WITH BERRICHONE DU CHER RAMS

AU: Niżnikowski R.<sup>1</sup>, Świątek M.<sup>1</sup>, Ślęzak M.<sup>1</sup>, Czub G.<sup>1</sup>, Głowacz K.<sup>2</sup>

AD: <sup>1</sup> Department of Animal Breeding and Production, Sheep and Goat Breeding Division, Warsaw University of Life Sciences

<sup>2</sup> Department of Animal Environment Biology, Division of Animal Hygiene and Welfare, Warsaw University of Life Sciences

LA: Polish

AB: Study was conducted in 2010–2013 in Sheep and Goats Research Farm in Żelazna on ewes of following breeds: Żelaźnieńska Sheep, Polish Heath Sheep, F<sub>1</sub> crossbreed – (Żelaźnieńska Sheep x Berrichone du cher) and F<sub>1</sub> crossbreed – (Polish Heath Sheep x Berrichone du cher). Reproductive traits were compared between Żelaźnieńska Sheep and Polish Heath Sheep and between Żelaźnieńska Sheep and its F<sub>1</sub> crossbreed in order to autumn tuppung. Moreover, reproductive traits were also compared between two groups of Polish Heath Sheep ewes in order to autumn and spring tuppung and between Polish Heath Sheep ewes and its F<sub>1</sub> crossbreed in order to spring tuppung. Based on the studies was stated as following: highly significant higher level reproductive traits in Polish Heath Sheep compare to Żelaźnieńska Sheep; higher level reproduction traits in Polish Heath Sheep from autumn tuppung compare to spring tuppung; significant and highly significant higher level of fecundity and lamb survivability at 7<sup>th</sup> day of Żelaźnieńska Sheep and significant higher fertility in F<sub>1</sub> crossbreed (Żelaźnieńska Sheep x Berrichone du cher); higher level of reproductive triats in Polish

Heath Sheep compare to F<sub>1</sub> crossbreed (Polish Heath Sheep x Berrichone du cher) in order to spring tugging; significance lower reproduction traits (except fertility) in F<sub>1</sub> crossbreed (Żelaźnińska Sheep x Berrichone du cher) compare to Żelaźnińska Sheep. Obtained results indicate that F<sub>1</sub> crossbreed (Żelaźnińska Sheep x Berrichone du cher) tugged in autumn was better to use in reproductive than F<sub>1</sub> crossbreed (Polish Heath Sheep x Berrichone du cher) tugged in spring. Improving these traits is probably possible by using proper breeding work.

DE: Berrichone du cher, sheep, reproductive traits, Żelaźnińska Sheep, Polish Heath Sheep, Berrichone du cher crossbreed

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., LXXIX, 613: 41–50.

TI: PRODUCTIVE, REPRODUCTIVE AND HEALTH PARAMETERS IN DAIRY COWS DEPENDING ON DRY PERIOD LENGTH

AU: Skrzypek R.<sup>1</sup>, Białoń K.<sup>1</sup>, Skrzypek K.<sup>2</sup>

AD: <sup>1</sup> Department of Cattle Breeding and Milk Production, University of Life Sciences in Poznań

<sup>2</sup> Experimental Farm in Poznań, Institute of Technology and Life Sciences in Falenty

LA: Polish

AB: This study analyzed effects of dry period length on milk performance, fertility and health of dairy cows. The analysis was carried out on data from 584 cows Polish Holstein Friesian cows managed in a free-stall farm. Cows with the shortest dry period ( $\leq 42$  days) produced least milk containing the highest level of protein, they also had the best health and fertility parameters. Dry period of 43 – 84 days was associated with the highest milk production, whereas cows with the longest dry period ( $> 84$  days) had an intermediate productivity between the above-mentioned periods.

DE: dairy cows, dry period length, milk performance, fertility, health

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., LXXIX, 613: 51–62.

TI: EFFECT OF AGE AT FIRST CALVING ON THE YIELD AND COMPOSITION OF SIMMENTAL COWS' MILK

AU: Szewczuk M.<sup>1</sup>, Chocilowicz E.<sup>2</sup>, Bartosiewicz R.<sup>1</sup>

AD: <sup>1</sup> Laboratory of Biostatistics, Department of Ruminant Science, The West Pomeranian University of Technology, Szczecin,

<sup>2</sup> Department Agricultural Producers Group Michel Feeds, Śmigiel, Poland Michel Sp. z o.o., Śmigiel

LA: English

AB: The aim of the study was to evaluate the effect of age at first calving on milk performance of Simmental cows during the first two 305-day lactation periods. The study was conducted in years 2009–2013 on one of the farms in the Pomeranian Voivodeship. The material consisted of 150 Simmental cows. The results show that the most favorable breeding of Simmental heifers should be performed in such a way, so that the calving occurs after the completion of 30 months of their lives, since these animals can achieve the highest milk, fat and protein production. Age at first calving (AFC) significantly affected the performance and composition of milk only in the first lactation, thus it seems justified to conduct research on other, larger cow populations, and also consider additional aspects, such as housing system, subsequent lactations or the condition and health of the animals. Appropriately estimated AFC can increase milk production and also have an impact on the health of animals and lower culling related to reproduction disorders.

DE: age at first calving, milk performance of cows, Simmental breed

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., LXXIX, 613: 63–72.