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TITLE

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23rd of September 2017- afternoon

D – Topic: Effects of environmental changes on wild fauna and habitats

14:30 – 15:15	**Plenary lecture - The effects of modern agriculture on farmland birds in Britain: can we change their fate through science-based management?** Carlos Sánchez (Game & Wildlife Conservation Trust)
15:15 – 15:35	**Invited lecture – Spatial-Temporal Analysis of large game and tuberculosis within Idanha-a-Nova County for the years of 2006 – 2016** José Aranha (University of Trás-os-Montes e Alto Douro, CITAB, Dept. of Forest and Landscape, Vila Real, Portugal)
15:35 – 16:00	**DISCUSSION**
16:00 – 16:40	*Coffee break and Poster Session*
16:40 – 17:00	**Invited lecture – The increase of ungulates due to environmental changes: meat quality of hunted meat** Claudia Russo (University of Pisa - Dept. of Veterinary Science, Italy)
17:00 – 17:15	**Atomic study using hair from faeces of *Canis lupus signatus* as an environmental bio-indicator for monitorization of Ecosystems** Miguel Costa (Dept. de Medicina Veterinária, Escola Universitária Vasco da Gama, Coimbra, Portugal)
17:15 – 17:30	**Diversification of the Spanish grey partridge (*Perdix perdix* ssp. *hispaniensis*) habitat in the natural protected Area of the "Lago de Sanabria y sierras Segundera y de Porto" (Zamora, NW Spain)** Pablo Santos (Natural Areas and Protected Species Section (Zamora-Spain). Territorial Service for the Environment of Junta de Castilla y León)
17:30 – 17:45	**Wild rabbits (*Oryctolagus cuniculus*) in shrubby environments: correlation between habitat factors and the species presence** António Crespí (Dept. of Biology and Environment (DEBA), School of Life Sciences and Environment, CITAB, University of Trás-os-Montes and Alto Douro, Vila Real, Portugal)
17:45 – 18:00	**Threatened fish and mussel populations in Douro basin (Northern Portugal): in-situ and ex-situ conservation measures** Amilcar Teixeira (CIMO-ESA-IPB — Mountain Research Centre, School of Agriculture, Polytechnic Institute of Bragança, Portugal)
18:00 – 18:30	**DISCUSSION**
18:30 – 19:00	**Conclusions – Closing ceremony**
20:00	***CONFERENCE DINNER***

Threatened fish and mussel populations in Douro basin (Northern Portugal): impacts of environmental changes and *in-situ* and *ex-situ* conservation measures

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Abstract

Freshwater ecosystems are threatened by human activities and their biodiversity declines far greater than those on marine and terrestrial ecosystems. Several impacts such as habitat loss and fragmentation, pollution, river regulation, overexploitation, introduction of invasive species and envoronmental changes are responsible for increasing the extinction risk of native species and for the disruption of important ecosystem functions and services. Freshwater mussels (Bivalvia: Unionoida) are among the most threatened faunistic groups in these freshwater ecosystems. These mussels depend on fish to complete their life cycle, where mussel larvae use a specific range of fish hosts to metamorphose. Therefore, the persistence of freshwater mussel species will ultimately depend on the conservation of their fish hosts. The Iberian Peninsula holds a high level of spatially restricted species and endemisms. Many native fish and mussel species of Iberia are listed as vulnerable, endangered or critically endangered and their populations are declining. In this study, we will use data collected in the last 5 years in the main tributaries of River Douro in Portugal to assess the conservation status of native freshwater mussel and fish species and, in particular, the impact of environmental changes. Despite the low human density in three basins (Sabor, Tâmega and Tua), some river stretches are suffering of habitat loss and degradation. Furthermore, the increase in intensity and magnitude of extreme climatic events are inducing higher mortality rates in fish and mussel populations. There are reports of massive die-offs of mussel populations due to a succession of irregular drought and flood events. For all these reasons, several *in-situ* and *ex-situ* conservation measures have been developed to protect endangered native species of NE Portugal. In addition, other actions were oriented to the training and public awareness for the conservation of threatened species and habitats.

Key words: bivalves; fishes; conservation; threats; impacts