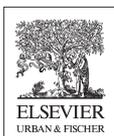
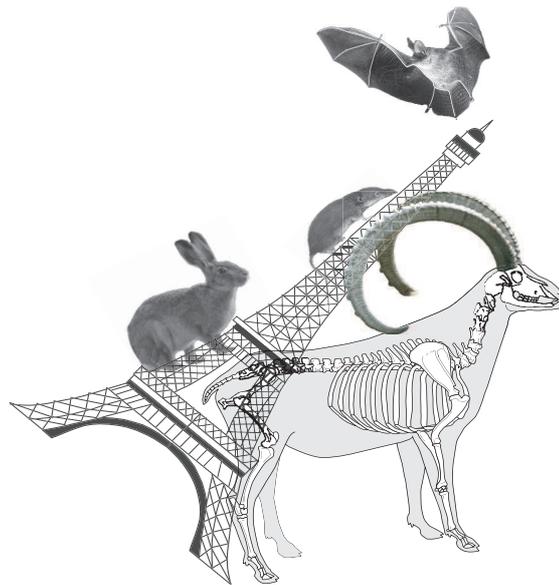




# ECM 2011

## VI<sup>th</sup> European Congress of Mammalogy

Université P. et M. Curie - Muséum national d'Histoire naturelle  
Paris, France - 19 to 23 July 2011



# Poster Communications

## The national action plan for the pyrenean desman (*Galemys pyrenaicus*)-(PNAD): ecology, distribution and conservation issues: methodological approach

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The National Action Plan for the Pyrenean Desman (PNAD) was launched in September 2009 for a period of 5 years. Three axes (Study, Conservation and Communication) composed of 25 actions have been proposed to enhance the conservation status of the species. The recommendations for management are difficult to implement due to the very poor knowledge about the biology, ecology and distribution of Pyrenean Desman. The priority is to coordinate a survey of Desman to update the distribution map of the species via a standardized reproducible survey over time. For this, consider what protocols should be considered to ensure reliable and robust results (procedures, frequency over time, the representative sample size, etc) in response to the conservation issues? The objective of this poster is to present the adopted methods which enable to update the distribution map of the Pyrenean Desman (1), to characterize the preferred habitats of the species (2), the genetic characteristics of the species (gender, diversity, fragmentation of populations ...) by faecal sampling (3), to study the impact of human activities including hydro-electric power plants (4). The application of the method, approved by the scientific committee of PNAD, will be implemented in July 2011 throughout the French Pyrenees and on experimental study sites.

## How landscape and predation shape eurasian lynx distribution: modeling potential redeployment of lowland western europe by a large carnivore

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Tolerance of anthropic environment has allowed large carnivores to recolonize and to be reintroduced within Europe in the last forty years. This indicates that, even in areas where the return of large carnivores seems unlikely, their presence and establishment is possible, even in highly modified environments. In the current context of the return of large carnivores in Europe, there is a need for scientific conservation tools to assess the full potential and consequences of the return of large carnivores in Europe, and in particular to evaluate potential impact on game and livestock. Today, the return of the Eurasian Lynx (*Lynx lynx*) in areas where it has been absent for long periods is becoming increasingly probable, and this requires further investigations. Three main lines of research will be particularly important: the use of habitat by Eurasian Lynx, the effect of habitat on predation behavior, and potential sources of conflict with human populations. The research project will address fine scale habitat use, the effect of prey's spatial variation on Lynx predation behavior, the use of different statistical methods to estimate Lynx's

viability in various habitats and landscape, and a review of current conflicts throughout Europe. Results should allow better understanding of the Lynx redeployment potentials in lowland Western Europe.

## The most endangered rodents in Europe? - Taxonomy, distribution and protection status of the mole-rats of the carpathian-basin

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The subfamily of mole-rats (Rodentia: Spalacinae) is one of those mammal groups in Europe whose taxonomy could not have been regarded as clearly established. Out of the taxa representing the group in Europe, mole-rats of the Carpathian Basin have been the least known and understood from a taxonomical point of view. During our research we were the first to run cytogenetic investigations on the Hungarian populations followed by molecular biological study extended to all populations of the entire Carpathian Basin. Our results have proven the existence of five karyologically different chromosomal forms, all endemic to Carpathian Basin. When investigating DNA from mitochondrial genes we found such differences between different forms that arise the necessity of species-level differentiation between some forms. Distribution areas of each form significantly differ in climatic terms as well. In the same time while we mapping the distribution of the mole-rat populations of the Carpathian Basin, we also had to face the fact that these unique taxa are extremely endangered. We created an inventory of the factors endangering their habitats. Based on this data we made the IUCN risk assessment of these forms. It has proven that each form has to be treated as a separate conservational unit as they significantly differ in terms of population size and the degree of endangerment. Their protection is a task with prominent importance for nature conservation as with their extinction, rodents that are unique and separated in evolution for a long time would disappear from the planet forever.

## Change of small mammal community and subspecies (*Microtus oeconomus mehelyi*) conservation problems in a central-european marshland

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The change in environment will cause a rapid alteration in community composition of small mammals, this may result to the local extinction of specialist species. To avoid this, we need to obtain information from this species such as glacial relict subspecies root vole (*Microtus oeconomus mehelyi*), which only occurs in some relict marshland habitats in Hungary (Fertő-Hanság, Szigetköz, Kis-Balaton). Our investigation was conducted in a marshland area on Kis-Balaton, where data are available for community of small mammals from 12 years. On the basis of anthropogenic effects (firing, mowing) and natural disturbance (drier, wetter weather-period) the 12 study years can be divided into five periods. As a result of habitat degradation, the abundance of several species decreased and some of them (*Microtus agrestis*, *Microtus oeconomus mehelyi*) became locally extinct. Due to the human perturbation and environmental disturbance significant differences were found in the composition of small mammal community and diversity changes. Due to improving habitat quality