

Book of abstracts

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“Biodiversity positive by 2030”

17-21 June 2024 – Bologna, Italy



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changes in legal protection influenced gray wolf population trends in the US. We infer what consequences downlisting could bring for wolves in the EU, while highlighting the differences between the legal and biological contexts of wolf recovery in the US and Europe.

ID: 1127

Goats and islands: not always a matter of eradication

Francesca Giannini², Elisabetta Raganella Pelliccioni¹, Camilla Gotti¹, Nadia Mucci¹, Giovanni Quilghini³, Nicola Baccetti¹

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Many islands are characterized by the presence of feral goat populations. In the Mediterranean, most of them have been introduced in recent years. However, Montecristo Island (Italy) hosts a goat population since the Neolithic, when animals at an early stage of domestication were introduced. Here we show how it has been managed and investigated so far. The population has been subjected to heavy poaching till after Second World War, then Government-run control activities started with the aim of reducing grazing pressure, from 1970 to late 1990. In the last decades it has been the target of several studies focused on demographic, phenotypic, health and genetic aspects, as well as on impact on the island ecosystem. During project "RESTO con LIFE", a management plan of the population has also been formulated. If this population is worth conserving is a matter of debate. Beside its ancient origin, the value of Montecristo goat population lies on its pivotal role as a driver for the protection of the island in the early 1970s, leading to the present designation of State Nature Reserve. Nevertheless, its conservation should be guaranteed while ensuring the preservation of the other ecosystem components.

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Resilience: history of use in community ecology

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This lecture will focus on the historical development of the terms "stability" and "resilience" in community ecology. Although both terms are central concepts to the field of ecology, their definition, meaning and applications have generated multiple controversies over the past decades. Indeed, resilience is often used in its narrow meaning as the ability of the system to recover to its pre-disturbed state following a disturbance ("engineering resilience"), which is centered on the existence of a single stable equilibrium. However, when defined sensu Holling, resilience is not limited to a single stable equilibrium and is more broadly applicable to the systems with multiple stable states, which are much more likely to be found in nature. Much confusion around the terms stability and resilience and the fact they were defined in multiple ways demonstrate the multidimensional character of both stability and resilience. This lecture will highlight different dimensions that can be measured for both stability and resilience and clarify the relation between these two concepts.

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ID: 1131

A pond of knowledge: applying multi-disciplinary approaches to amphibian conservation

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Habitat degradation due to intensive agriculture and urbanization is the most important contributing factor to amphibian diversity loss in Europe, particularly in the Mediterranean region. As their natural habitats decrease, amphibians often resort to using artificial water bodies as reproductive sites. Here, using presence data from an environmental DNA-based monitoring study on amphibian biodiversity from 37 freshwater sites in the Province of Trento (including both protected areas and artificial or human-impacted water bodies), we used a multivariate analysis, integrated with regression tests, to identify distinct presence/absence patterns in relation to ecological and landscape variables that are known to significantly influence the structure of the amphibian community. For example, we show that farm ponds may be important reproductive sites for amphibians, with a higher species richness than expected, even though these habitats have been virtually ignored in monitoring programmes up to now. This study provides methodological improvements by generating 'ecological condition indices', which can be applied to identifying meaningful correlations between the environment, human behaviour and amphibian species, i.e. powerful transdisciplinary tools with applications in endangered species monitoring, environmental and landscape assessment, urban ecology and policy development, in relation to habitat alterations accelerated by climate changes and/or other environmental crises.

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The ecological consequences of treescape expansion through planting and natural colonisation

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