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Civitella Alfedena (AQ), 7-10 Maggio 2014

edited by

S. Imperio, S. Mazzaracca, D.G. Preatoni

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Associazione Teriologica Italiana established a Best Paper Award for young researchers. Eligible researchers are leading authors less than 35 years old, and within 7 years from their PhD (but young researcher at an even earlier stage of their career, i.e. without a PhD, are also eligible), who have expressed interest in the award in the Communications to the Editor (step 1 of the online submission procedure; for details, see the Electronic Publication Guide; <http://www.italian-journal-of-mammalogy.it/public/journals/3/authguide.pdf>).

If the eligible leading researcher is not the corresponding author, the latter should express interest on the leading researcher's behalf. Criteria are innovation, excellence and impact on the scientific community (e.g., number of citations).

The award will be assigned yearly, in the second semester of the year following that of reference (i.e., Best Paper Award for 2013 will be assigned in the second semester of 2014). The Editorial Committee is responsible to assign the award. A written motivation will be made public on the journal website.

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Riassunti: Comunicazioni e Poster

edited by
S. Imperio, S. Mazzaracca, D.G. Preatoni

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Progetto LIFE09/NAT/IT/000160 Arctos

Does the insurance system enhance mitigation of predator-livestock conflicts? Experiences from the Province of Grosseto

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G119

Within the LIFE MEDWOLF project (LIFE11/NAT/IT/069; 2012-2017) we analysed the functionality of the regional legislation (Law 26/2005) which introduced an insurance policy in order to obtain compensation for damage caused by predators. Based on the insurance registry, and limited to the Province of Grosseto, every year (2007-2012) an average (\pm SD) of 18.2 (\pm 4.4) holdings declared damages, 56.3 (\pm 27.5) depredation events were reported, and €28.395 (\pm 11.359) were paid in compensation. A mean of 60.3 (\pm 7.8) holdings were insured on a yearly basis, representing 5.51% of all sheep holdings in the Province of Grosseto in 2012 (n=1095). To assess extent and direction of predator-livestock conflict, and the effectiveness of management interventions, we analysed temporal trends in: depredation events, the number of insured holdings, and costs for compensation and damage prevention. These figures were contrasted to those relative to the 2000-2005 period, before

changes in the current regional legislation took place. Finally, to investigate whether official damage records are representative of the actual damages incurred, we compared depredations declared in 2012 to the insurance to those declared to the National Health System (ASL), the latter required by all livestock holders regardless of whether they were insured or not. Results suggest that functionality of the insurance policy is questionable: (a) very few holdings are insured; (b) despite the fact that depredations are annually increasing ($R^2=0.85$, $F=22.78$, $p=0.009$), the number of insured holdings has remained constant ($R^2=0.13$, $F=0.58$, $p=0.491$); (c) in 2012, the number of holdings that declared damages to the ASL were 177% higher than those that declared damages to the insurance (n=61 vs. n=22, respectively). The management implications of our study extend beyond the Province of Grosseto, and it allows a quantitative evaluation of current-conflict resolution management strategies.

Resource selection and connectivity of recovering brown bears in the Brenta Dolomites

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G158

Reintroductions are often difficult and can result in increased dispersal and mortality of released animals, especially in fragmented landscapes. Connecting habitat patches that support occupancy is key to ensuring long-term population recovery for umbrella species such as brown bears (*Ursus arctos*). In 1999 the reintroduction project "Life Ursus" was initiated and 10 brown bears were translocated from Slovenia to the Eastern Italian Alps (Adamello-Brenta) where the bear population was considered extirpated by the end of the 20th century. Here, we describe the habitat selection and space use patterns of reintroduced brown bears in Trentino, Italy, with the ultimate goal of identifying corridors between preferred habitat patches. We built annual resource selection functions (RSF) using generalized linear mixed-effects models with data from 6 bears fitted with GPS collars between 2006 and 2012 at the landscape and home-range scales. Then, integrating habitat selection, movement and landscape features we employed least cost path (LCP) analyses to empirically define regional movement corridors. Finally, we used Kappa-statistics to compare the realized habitat selection at the landscape scale with a habitat suitability model (HSM) developed to predict potential habitat prior to reintroduction.

At the landscape scale bears selected home-ranges at intermediate elevations in steep terrain. Habitat selection inversely correlated with road occurrence and human use landcover types, i.e. settlements, pastures and agricultural lands. Bears selected landcover types that provide forage, such as shrublands, deciduous forests, but also orchards. Within their home-ranges bears

also avoided landcover types related to human use (especially bike trails, settlements and pastures). K-fold cross-validation indicated a high predictive capacity of our RSFs. We identified road crossings of movement corridors between preferred habitat patches throughout the study area; with higher densities in the south. The comparison between the predictive pre-reintroduction HSM and the realized habitat selection showed fair agreement with highest agreement in rocks/ice, agricultural lands and water. Spatial discrepancies resulted from the HSM predicting lower suitability in orchards, deciduous forest and wetlands and higher suitability in conifer and mixed forests than the RSF.

The combined process-based approach of the RSF and LCP analyses aids to identify both potential habitat for brown bear settlement and corridors that will allow for settlement in the future. This approach also provides information on the biggest constraints to bear movements, such as the barrier created by the Adige valley. But, we suggest verifying and monitoring the use of movement corridors with e.g. camera traps or DNA monitoring. Our RSF allows identifying areas where current and future brown bear habitat selection may occur and thus, can aid to reveal potential conflict areas. Increasing awareness for key brown bear habitats and corridors and raising local acceptance of this species, especially in the interface between human dominated landscapes and wilderness areas, is necessary for brown bear conservation.