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X Congresso Italiano di Teriologia

Acquapendente (VT), 20–23 Aprile 2016

edited by
R. Chirichella, S. Imperio, A. Molinari, G. Sozio, S. Mazzaracca, D.G. Preatoni

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Riassunti: Comunicazioni e Poster

edited by
R. Chirichella, S. Imperio, A. Molinari, G. Sozio, S. Mazzaracca, D.G. Preatoni

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Riassunti: Comunicazioni e Poster
Abstracts: Communications and Posters

X Congresso Italiano di Teriologia

Livestock depredation by puma in the argentine Espinal, southern Buenos Aires province

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P256

Livestock predation is one of the most frequent sources of conflict between humans and carnivores throughout the world, representing a serious problem for wildlife conservation. We investigated the conflict between puma (*Puma concolor*) and ranchers in two counties (Villarino and Patagones) of Buenos Aires Province (Argentina).

During the last decades, the natural habitats of this region have been dramatically changed by the expansion of livestock raising and agriculture, that are the principal sources of income for local people. This study aims to characterize puma predation and describe its effects in this region.

Data were collected from 2007 to 2015 through three different techniques: semi-structured interviews, workshops with ranchers and kill site inspections. We found a difference in number and type of predominant livestock between the two counties. Cattle is the most common species (40.3%) in Villarino, whereas in Patagones sheep are more abundant (32.7%). Nevertheless, sheep (adults and lambs) were the most predated livestock (22% in Villarino and 65.8% in Patagones) in both counties. Possibly due to the different livestock husbandry in the two counties, a difference occurred in number of calves killed (8% in Villarino and 3.5% in Patagones). Therefore sheep predation by puma produced a higher economic loss in Patagones than Villarino, whereas cattle predation showed the opposite trend.

Most of the predation events occurred in the cropland (48%), probably due to the major presence of sheep in this habitat type, followed by shrubland (26%), grassland (17%) and grassland with shrubs (9%). Predation events occurred mostly at night (95%), when human activities are less frequent, and far from anthropic areas (roads and villages). No seasonal predation pattern was recorded on domestic sheep, whereas the predation on calves was concentrated during the calving season (from September to December). The mean number of livestock killed for each predation event differed according to the method we used to collect the data. For example, in Patagones (the only county in which we have enough field data) this number was 33.7 individuals considering the data from semi-structured interviews and workshops and 5.3 when we used only data collected directly by field operators through kill sites inspection. If we consider only ranches (n=23) with puma predation and where we know the exact number of individuals present and depredated, the average of livestock killed by pumas (n=25.1), represents a minimum proportion of the average of individuals presents (n=504.6).

Interviews, workshops and kill site inspections showed that local people and pumas have a coexistence conflict in the study area, due to puma attacks on domestic herds. We believe that the informations collected throughout structured questionnaire, in conjunction with our analysis on puma's kill sites, is a very precious source of data about species and conflict with ranchers. Based on the informations given by them, it's possible to get sufficient evidences to create a general scenario of the reality in a specific area. The results showed that there is a difference in husbandry practices between the two counties. The majority of depredation events occurred in croplands at night and sheep were the mostly depredated with no seasonal depredation pattern. Depredation on calves was less frequent and concentrated during the calving season. There is a considerable difference in the average of individuals depredated comparing informations recollected by ranchers and kill site inspections data. In this sense, we are aware that maybe an enlarged perception by some ranchers, could result in an overestimation of their herd losses due to puma attacks. Despite the conflict between human and puma could lead some serious problems in terms of livestock depredation and economic loss, our results indicate that is necessary consider in systematic way the impact of puma predation in our study area to avoid bias related with the methodology or the operators and, in this way, to contribute to establish management measures that could decrease the conflict.

X Congresso Italiano di Teriologia

Buzzing in case of emergency: distress calls in greater mouse-eared bats

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P337

Distress calls are broadcast by bats when being physically constrained, such as when attacked by a predator or handled by people. Although they have been studied in a few species, more work is needed especially to unveil their function. In our work, carried out in western Sicily in 2015, we set out to provide a first description of distress calls in greater mouse-eared bats *Myotis myotis*. We caught 20 subjects (13 adults and 7 juveniles) on roost emergence and recorded the calls they emitted when handled with a D1000X Pettersson real-time bat detector. Calls typically had a multiple component buzz structure and were audible to the unaided ear. We found that frequency of maximum energy (FMAXE) as well as start (SF) and end (EF) frequencies were all higher in adult calls than in juveniles. Adult calls also showed a smaller number of both harmonics and pulses in a buzz. Body size, expressed as forearm length (FAL) influenced the number of pulses in a buzz. FAL showed a positive correlation with body mass, FMAXE, EF but a negative correlation with call duration and number of pulses in a buzz. Although our study is preliminary, based on our first findings we suggest that distress calls convey individual information to conspecifics and perhaps elicit differential behavioural reactions (such as mobbing) in colony members. Besides increasing sample size in analyses, our next step will be to carry out behavioural tests in the field to explore the function of distress buzzes in greater mouse-eared bats.