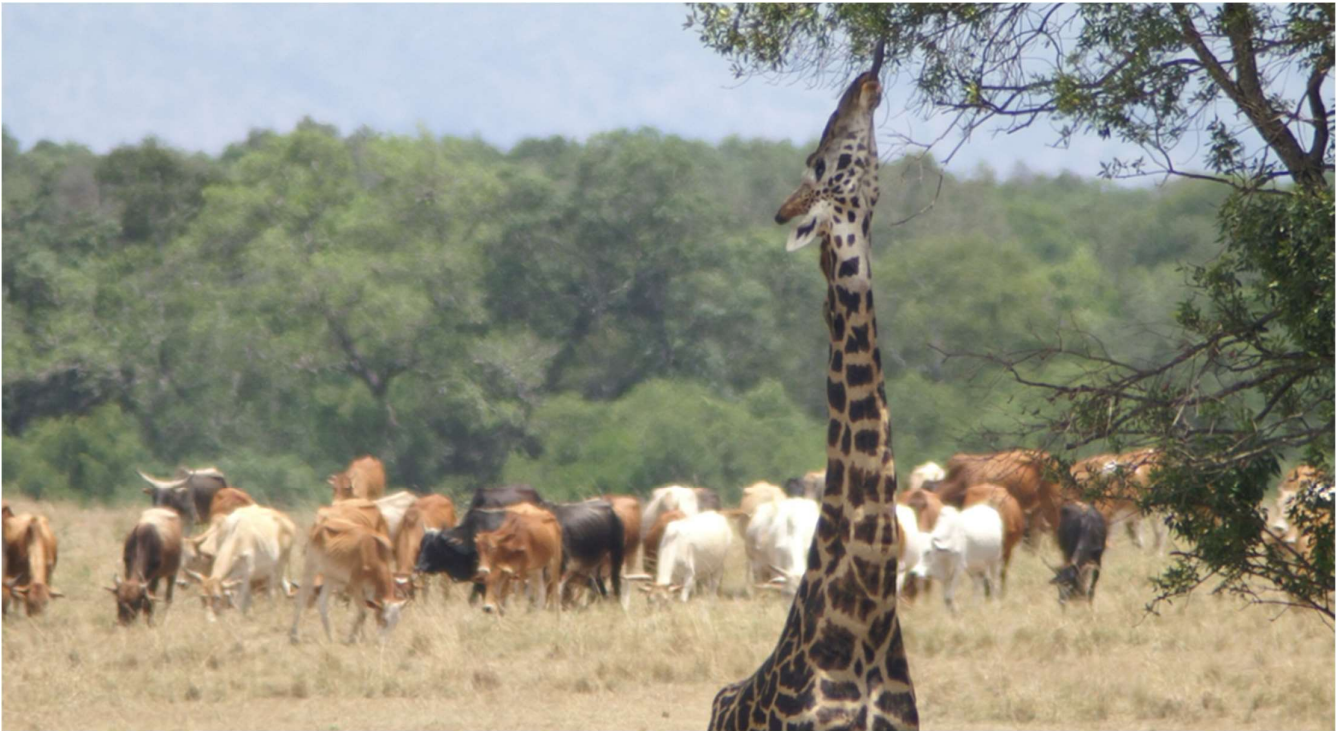


Symposium



ZOOLOGICAL SOCIETY OF LONDON
REGENTS PARK, LONDON, NW1 4RY

22 and 23 November 2018



Linking behaviour to populations and communities: how can behavioural ecology inform conservation?

An international symposium to discuss how human-influences changes in animal behaviour can support future conservation research

Abstracts

Speaker Biographies

Poster Abstracts

5. Planning conservation actions by investigating nest preferences and biotic and abiotic factors within lesser kestrel (*Falco naumanni*) colonies

Daniela Campobello^{1*}, Rosanna Di Maggio², Maurizio Sarà¹

¹Università degli Studi di Palermo, Dpt. STEBICEF (Section Animal Biology)

²Università Roma La Sapienza, Dpt SAIMLAL

* attending the symposium & presenting the poster

Email: daniela.campobello@unipa.it

The lesser kestrel (*Falco naumanni*) was until recently classified as a Vulnerable species. It is a cavity nester species finding proper nest sites in natural cliff holes or, as more frequently today, cavities found within rural buildings. These are often abandoned and therefore, with no maintenance, the main structures of kestrel colonies have been collapsing across years. To counterbalance the reduced availability of nesting sites for kestrels, and because of their unfavorable conservation status, artificial nest boxes have been placed in several areas of their breeding range. On our study site, the Gela Plain in Sicily, as on other Mediterranean breeding areas, high temperatures may reach lethal values for the nest content. Since 2004, we collected biotic and abiotic data at macro- and micro-scales to integrate an analysis aiming to predict nest temperatures in different nest types. Paradoxically, early breeders preferentially occupied the coolest nest types, the roof tiles, whereas late breeders, starting their nesting attempts with hotter temperatures, occupied the overheated nest boxes. We discuss our findings in the light of planning proper and efficient conservation actions, such as providing different nest types, by pondering whether kestrel nest preferences might either sort into ecological traps or be the result of ecological limitations.

6. Climatic impacts on hibernation behaviour in wild hazel dormice *Muscardinus avellenarius*

Rachel Findlay-Robinson, University of Cumbria

Email: rachel.findlay-robinson@uni.cumbria.ac.uk

Hibernation is a state of prolonged behavioural dormancy and metabolic depression, and is employed by many species to avoid periods of food scarcity. The timing of hibernation is often climate-linked, occurring in the winter in temperate regions in tandem with dormancy of food plants. During hibernation, animals experience 'arousals', where the metabolic rate and body temperature return to normal for a short time. These arousals, although apparently essential, use high amounts of energy that cannot always be replaced during the hibernation season. Hence, frequent arousals can be highly detrimental to an individual's chances of surviving the winter, and on their subsequent body condition. Warmer winters have been shown to increase the frequency of arousals in some species; with winter temperatures projected to continue increasing in temperate regions, understanding their effects on hibernators is essential. We will investigate the impacts of weather on hibernation patterns in wild hazel dormice. Dormice hibernate at, or just below, ground level, and so are relatively exposed to weather fluctuations during the hibernation period. We will record arousal frequency and subsequent activity levels during hibernation using dataloggers and camera traps, and measure habitat and microclimate variables to investigate if dormice can alleviate impacts of weather through hibernation site selection. These results will be integrated with UK Climate projections to model the potential effects of increasing winter temperatures on the hibernation success and overwinter survival of hazel dormice. These results will feed into future conservation strategies and habitat management protocols for dormice, and potentially other hibernating animals.
