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types produced during the rut is lacking. The purpose of this study was to describe vocalisations produced by male and female Mongolian gazelles during the rut.
Material/methods: Calls were recorded from 10 to 25 December 2017 in Transbaikalia, Russia, using four automated SongMeter SM2+ recorders (900 hours in total). The devices were mounted at 0.5 m above the earth in places of concentration of the Mongolian gazelle harem groups, at a minimal distance between devices of 1 km. We also used a manual recorder Marantz PMD 660 with Sennheiser K6-ME66 microphone to determine the situation during calls. During the manual recordings (8 hours in total), the distance to animals was 150-500 m. Male callers were identified by visible vapour from the mouth or nose; female callers were identified by stomach and nostrils movements during the calling. Acoustic analyses were made using Avisoft SASLab Pro software.
Results: Male and female calls were classified into types based on spectrograms. Males call types included the nasal and oral barks, the closed-mouth snorts and the open-mouth running calls. Female calls included the oral and nasal "cat" calls and the closed-mouth snort. Male nasal and oral barks were produced in series up to a few dozen calls, each duration up to 100 ms. In the oral barks, visible frequency bands ranged between 500 and 750 Hz; in the nasal barks, the maximum energy was higher than 800 Hz. Male nasal snorts were noisy calls without harmonic bands of 200-250 ms, produced at a strong expiration when an animal spotted people or a car. The low-frequency (200-300 Hz) tonal-noisy open-mouth running call (up to 500 ms) was produced during an intense inspiration, commonly within series of barks emitted during fast female chasing.
Female cat calls (duration from 80 to 500 ms; fundamental frequency 400-500 Hz, sometimes up to 1000-1500 Hz) occurred singly or in irregular series. The cat calls were commonly low-intense but occasionally as loud as male barks. Females produce cat calls during contacts with other females within a harem or when running from a chasing male. Female snorts were similar to male snorts but were often made in irregular series and were never interspersed with barks.
Conclusion: This is the first investigation of calls produced by male and female Mongolian gazelles during the rut. In contrast to males, the female calls were surprisingly high frequency for such large animals and acoustically indistinguishable from the calls of neonate Mongolian gazelles described in a previous study.
The Russian Science Foundation supported this study, grant No 19-14-00037.

Effect of human presence on red deer behaviour in game farming: new stag vocalisations identified from automated recordings

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/Objective: Human presence modifies the behaviour of animals on game farms. The impaired behavioural repertoire is undesirable for game animals, so game managers try to retain wild-type behaviour in trophy red deer bred on the farms. The purpose of this study was to highlight the apparently lacking forms of vocal behaviour (contact calling) in untamed European red deer

stags. Previously, this kind of behaviour was only known for wapiti stags and European red deer hinds and calves.
Material/Methods: Automated audio recording with SongMeter 2+ device was used to record the calls of farmed untamed Iberian red deer stags (*Cervus elaphus hispanicus*). The device was mounted above the feeder and recorded all calls in 20 m around the feeder permanently for 20 hours per 24-hour cycle between 22 and 26 January 2018 from the four stags (of 7.5, 5.5, 4.5 and 3.5 years old) kept together in the paddock of 0.3 hectares separately from the hinds. The total length of recording was 90 hours. Acoustic analyses were made using Avisoft SASLab Pro software.
Results: By visual inspection of spectrograms, the recorded stag calls were classified into three types: roars, contact calls and bellows. For European red deer stags, roars were previously only described in the rutting periods. In contrast, stag contact calls were found for the first time in the European red deer stags, and the bellows have never been previously found in either stags or hinds of either red deer or wapiti. ANOVA showed that factor call type affected all acoustic variables. The roar was the longest among the three call types, with the highest maximum fundamental and peak frequencies. The contact call was the shortest and had maximum fundamental frequency intermediate between the roars and bellows, with peak frequency lower than in the roar but not differing from the bellow. The bellow was the lowest in maximum fundamental frequency and intermediate in duration between the roar and contact call.
Farm Iberian red deer stags in the non-rutting period produced the roars primarily at daytime (1.38 calls/h *vs* 0.14 calls/h at nighttime), whereas the contact calls and bellows were mainly made at night (contact calls: 10.0 *vs* 1.1 calls/h; bellows: 0.46 *vs* 0.03 calls/h respectively). Thus, some call red deer stags produce types only in the absence of people. The contact calls and bellows were emitted by the stags nearly exclusively at nights, so the keepers and managers even did not suspect that the stags on their farm produced such calls.
Conclusion: The apparent behavioural deficits in animals bred on game farms can be side-effects of human presence. These behavioural activities can be revealed with automated devices in the absence of people.
The Russian Foundation for Basic Research supported this study, grant No 19-04-00133.

Using digital photographs as an alternative method for collecting goose wing data

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There is no national bag recording scheme in the UK, so it is crucial to gather data and monitor our harvestable species through other methods. Wing surveys can provide invaluable information on the age and sex ratios of waterbird harvests which can, in turn, be used to provide trends in productivity. The UK's wings survey has previously obtained low levels of goose wings, likely due to issues with storage space. This pilot survey investigated the use of digital photographs of goose wings from hunters as an alternative method of collecting age ratio data. A list of 17 participants was compiled, including proactive members of BASC and BASC staff who are known to shoot geese. Epicollect5 was used to create a data collection form on which