

## First report of vocalisation in *Zootoca vivipara*

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Vocalisation is reasonably well known as a means of communication in squamates. For example, many gecko species use chirps and barks as part of their social signalling and alarm calls (Marcellini, 1977), and certain anoles exhibit a range of acoustic signals (Leal & Rodríguez-Robles, 1997). The first, and until now, only published account of lizard vocalisation in relation to the British fauna was made by Simms (1970). He describes an encounter during the summer of 1962 in an unspecified location within “lizard country”, where he heard high-pitched squeaks of short duration and faint volume. Initially, he believed these sounds to be territorial warning calls made by shrews. However, upon further reflection and comparison, he concluded that the sounds were different and originated from a lizard on a nearby bank. Simms later heard a similar isolated squeak from a sand lizard *Lacerta agilis* that he kept in a vivarium, and he noted that such vocalisations occurred regularly in the wild and noted that shrews and lizards frequently used the same banks and runways; he also reports instances of shrews preying upon lizards.

In August 2023, during a translocation for a housing development project in Brightlingsea, Essex, Great Britain, several *Zootoca vivipara* emitted short, chirp-like sounds co-inciding with moments before handling. This was heard again later at the translocation receptor site. No vocalisation was made during handling of individual specimens. The emitted sound resembled a brief chirp akin to that of a small bird or shrew, with a clear tonal quality. The call lasted approximately 0.2–0.5 seconds. Lizards producing these sounds exhibited body stiffening and increased visual scanning of their environment, as well as other behaviours such as heightened alertness and rapid movement within the receptor bucket. Both adult males and females were present in the bucket, but the sounds could not be attributed specifically to either sex.

This observation raises intriguing questions about the role of vocalisation in *Z. vivipara*. The production of a chirp-like alert sound, though subtle, indicates that acoustic communication may complement the well-documented visual (Recknagel et al., 2024) and chemical signals in this species (Martín, 2014). The timing of the calls, which occurs before capture and release, would support a hypothesis that these vocalisations serve as an immediate alarm signal to alert conspecifics to potential danger. Additionally, although further investigation is needed, it is possible that these vocalisations facilitate communication among

individuals, potentially co-ordinating group responses during stressful events. The species may live in quite large colonies (Smith, 1951) and so would be expected to show such social behaviours, including the recently described construction of communal hibernation cells (Hodges & Seabrook, 2022).

Regrettably, the vocalisations were not recorded and so are not available for further analysis. However, it is hoped that this report will inspire further interest in this subject leading to an understanding of the function of vocalisations in *Z. vivipara*.

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