Postnatal ontogeny of ultrasonic calls and body size in yellow steppe lemmings Eolagurus luteus

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AIM

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METHODS

12 post-natal-day (PND) age-classes:

- PND (1-4) 10 individuals per age-class
- PND (5-8) 110 pups and 10 adults
- PND (9-12) 120 individuals in total.
- PND (13-16) 10 individuals per age-class
- PND (17-20) 110 pups and 10 adults
- PND (21-24) 120 individuals in total.
- PND (25-28)
- PND (29-32)
- PND (33-36)
- PND (37-40)
- PND (41-60/adolescents)
- PND (60+/adults)

Each individual was recorded for 2 min at 22°C using a recorder Pettersson D1000X (384 kHz, 16 bit). After this — measurement and weighing.

Up to 10 calls per individual were analyzed using Avisoft SASLab Pro software.

RESULTS

Body size

Types of frequency contours:

- flat
- up-FM
- down-FM
- chevrolet
- complex

Types of non-linear phenomena:

- jump
- biphonation
- subharmonic

USV Duration, s

USV Frequency, Hz

The ontogenetic pathway of USV shortening and decrease F0max is the same as in domestic mice

CONCLUSION

In yellow steppe lemming mature USV patterns emerge early in ontogeny and coincide with eyes opening

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