

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

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AIM

To describe ontogenetic changes in the structure of ultrasonic calls and morphometric parameters of yellow steppe lemmings

METHODS

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

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

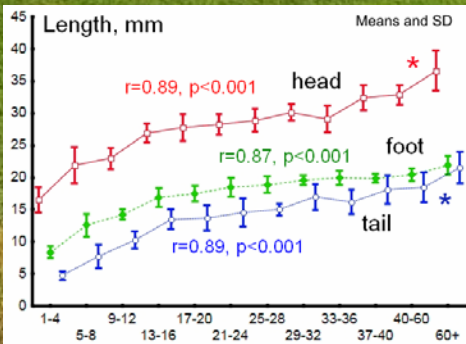
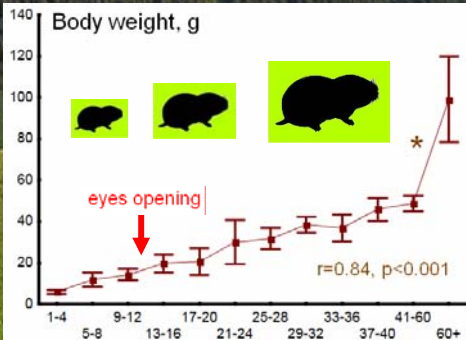
Each individual was recorded for **2 min** at 22° C using a recorder Pettersson D1000X (384 kHz, 16 bit). After this — measurement and weighing.

Up to **10** calls per individual were analyzed using Avisoft SASLab Pro software (**1176** sounds in total).

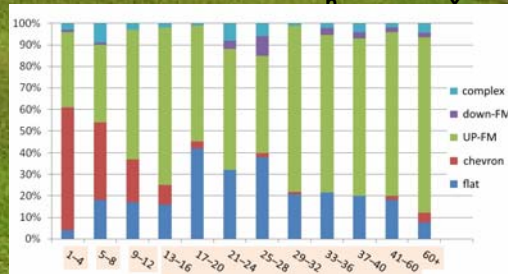
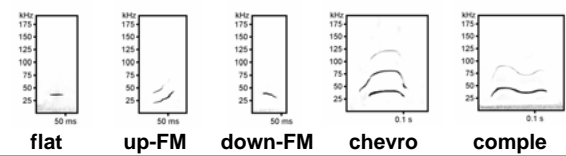
RESULTS

Ultrasonic call acoustics

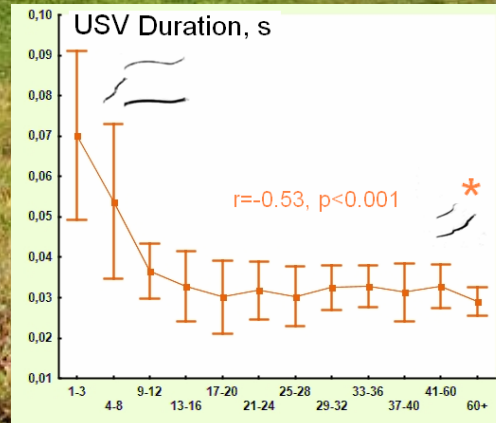
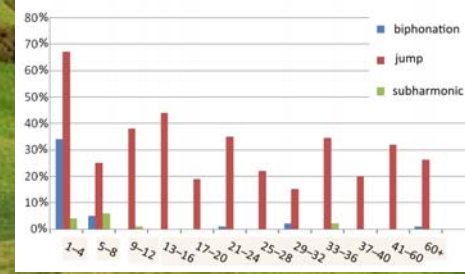
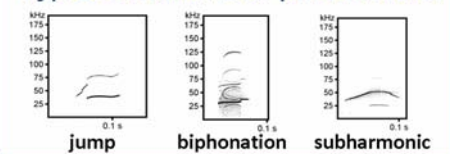
Body size



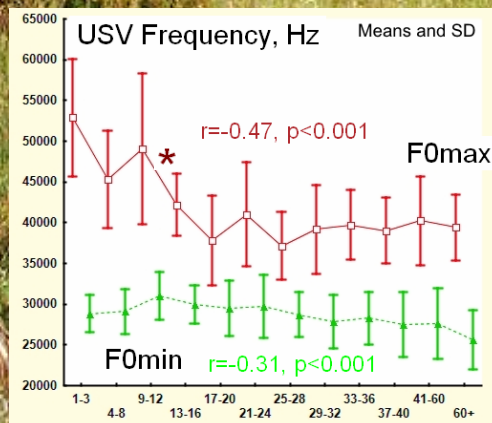
Types of frequency contours:



Types of non-linear phenomena:



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

