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Individual identity of ultrasonic calls along ontogeny in the yellow steppe lemmings (*Eolagurus luteus*)

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Individual vocal identity is important for supporting mother-offspring relationship and for individual vocal recognition in groups of mammals. Pup rodents primarily vocalize in the ultrasonic (USV) range, but ontogeny of individual vocal identity until maturation was not investigated in rodents. Our expectances were that a degree of individual identity in the USV calls will increase with age, as it is more important for the mobile adolescents and adults with permanent social relationships than for mothers looking for their neonate pups falling out of the nest. We recorded USV calls of 120 yellow steppe lemmings *Eolagurus luteus* in the laboratory colony of Moscow Zoo (Russia) at February-June 2018. Subjects were recorded at one of 12 post-natal-day (PND) age-classes: PND 1-4, 5-8, 9-12, 13-16, 17-20, 21-24, 28-32, 33-36, 37-40 (pups), PND 41-60 (adolescents); PND 60 and older (breeding adults). We recorded 10 individuals per age-class, 120 in total, each isolated for 2 min at 22^0C on an unfamiliar territory, using Pettersson D1000X (384 kHz, 16 bit). In total 1176 USV calls (up to 10 per individual) were analysed spectrographically. We measured 6 acoustic variables in each call and estimated the vocal individuality for each age-class with discriminant function analysis. In newborns (PND 1-4 days) 57% of USV calls were correctly assigned to individuals. In the older pups (PND 5-40 days), percent of correctly assigned to individuals USV calls ranged from 43 to 62%. In adolescents, percent of correctly assigned to individuals USV calls was 52%; whereas in adults it was 40%. ANOVA did not reveal significant differences in the individual vocal identity between the age-classes ($F_{11,105}$=0.74, p=0.70). We discuss that, against expectations, vocal individuality of USV calls in yellow steppe lemmings did not increase with age, remaining at the same level in pups and adults. Supported by RSF grant 19-14-00037.