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Posters



A42. From roar to bugle: variation of red deer (*Cervus elaphus*) rutting calls across native populations

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We report about the acoustic variation among subspecies of red deer *Cervus elaphus*, with involvement of own data on Pannonian, Iberian, Siberian and Far Eastern subspecies. The acoustic variation of red deer diverges into two branches, Eastern, with low-frequency rutting roars (52-274 Hz) and Western, with very high-frequency rutting bugles (660-2080 Hz). The presumable ancestral patterns found in modern Bactrian subspecies in Central Asia contain both the high and low fundamental frequencies given simultaneously. This ancestral pattern can be traced in Siberian wapiti, in which the weak low frequency given simultaneously to the strong high fundamental frequency occurs in 65% of male rutting calls. The larynx morphology does not differ between Eastern and Western subspecies. Within Corsican, Canadian, Iberian and Siberian subspecies males and females vocalize at the same frequency. In Canadian and Siberian wapiti, females produce calls, very similar to male rutting bugle. Male Siberian wapiti, in their order, produce female-like contact calls and often use them in male-male conflicts. The subspecies-specific use of either high or low fundamental frequency results in distinctive ontogenetic pathways between the Eastern and Western subspecies. In the Western Iberian red deer, the fundamental frequency descends to adulthood, similarly to vocal ontogeny in humans. In the Eastern Siberian red deer, the fundamental frequency remains high along ontogeny from newborns to adults, similarly to vocal ontogeny reported for ground squirrels. Unusual for mammals, the fundamental frequency correlates positively with body mass, with the lowest calls in the smallest and the highest calls in the largest subspecies. Support: RFBR grant 15-04-06241.