First molecular data of the Borneo Banteng Bos Javanicus lowi from Sabah, Borneo

Abstract

Phylogenetic relationships among three subspecies of banteng, Burma banteng *Bos javanicus birmanicus* in mainland Southeast Asia, Javan banteng *Bos javanicus javanicus* in Java, and Bornean banteng *Bos javanicus lowi* in Borneo, and the presence/absence of interbreeding between wild Bornean banteng and domestic cattle in Sabah, Malaysia, were investigated by partial sequences of cytochrome *b* and D-loop of mitochondrial DNA. The results show that genetic distance of the Bornean banteng are relatively close to the gaur *Bos gaurus*/gayal *Bos frontalis* (the cytochrome *b*, 0.004–0.025; the D-loop, 0.012–0.021) followed by Burma banteng (the cytochrome *b*, 0.027–0.035; the D-loop, 0.040–0.045), and kouprey *Bos sauveli* (the cytochrome *b*, 0.031–0.035; the D-loop, 0.037–0.042). There are much greater distances between Bornean banteng and domestic cattle, *Bos taurus* and *Bos indicus* (the cytochrome*b*, 0.059–0.076; the D-loop, 0.081–0.090). These results suggest that the Bornean banteng diverged genetically from other banteng subspecies and that the wild Bornean banteng from this study are pure strain and have high conservation value.