



Estimation of the growth curve and heritability of the growth rate for giant panda (*Ailuropoda melanoleuca*) cubs

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ABSTRACT. Giant panda cubs have a low survival rate during the newborn and early growth stages. However, the growth and developmental parameters of giant panda cubs during the early lactation stage (from birth to 6 months) are not well known. We examined the growth and development of giant panda cubs by the Chapman growth curve model and estimated the heritability of the maximum growth rate at the early lactation stage. We found that 83 giant panda cubs reached their maximum growth rate at approximately 75-120 days after birth. The body weight of cubs at 75 days was 4285.99 g. Furthermore, we estimated that the heritability of the maximum growth rate was moderate ($h^2 = 0.38$). Our study describes the growth and development of giant panda cubs at the early lactation stage and provides valuable growth benchmarks. We anticipate that our results will be a starting point for

more detailed research on increasing the survival rate of giant panda cubs. Feeding programs for giant panda cubs need further improvement.

Key words: Growth; Chapman model; Feeding program; Lactation; Survival rate