442

INTERGENERIC AND INTERSPECIFIC HYBRIDS IN GIBBONS: CHROMOSOMAL ASPECTS OF THE SMALL APE EVOLUTION

S. Baicharoen[1], T. Miyabe-Nishiwaki[2], Y. Hirai[2], K. Duangsa-ard[3], B. Siriaroonrat[1], H. Hirai[2]

[1]Conservation, Research & Education Division, Zoological Park Organization, Bangkok 10300, Thailand, [2]Primate Research Institute, Kyoto University, Inuyama, Aichi 484-8506, Japan, [3]Chiangmai Zoo, Chiangmai, Thailand

Presenter's Email: hhirai@pri.kyot-u.ac.jp

Two cases of intergeneric hybrid gibbons have been described in the literature. The "Siabon" was the result of interbreeding a *Symphalangus* female and a *Hylobates* male. In contrast, "Larcon" was the result of interbreeding a *Hylobates lar* female with a *Nomascus leucogenys* male. Both individuals were identified as intergeneric hybrids by chromosome analysis, because kartyotypes show very high intergeneric specificity. We recently encountered another intergeneric *Hylobates* x *Nomascus* hybrid at Chiangmai zoo, Thailand. According to zoo records the mother was a *Nomascus* fertilized by a *Hylobates*, being an opposite condition to Larcon and subsequently named "Conlar". We performed chromosome painting and found the mother had a 1a7b22a karyotype of chromosomes 1, 7 and 22 of the genus *Nomascus*, which was the same type as the father of Larcon. However, the hybrids were of very different pelage pattern. For instance, Larcon had a black abdomen whereas Conlar's abdomen was yellowish, which probably results from a hardwired sexual dimorphism seen in *Nomascus*. Due to geographic separation no cases of natural intergeneric hybrids have been recorded, whereas wild interspecific hybrids are documented. We conclude that karyotypic specificity and polymorphisms are highly important for genus and species differentiation in gibbons. High rates of chromosome evolution are characteristic for small apes. This is a very characteristic event of gibbons. Based on our findings we discuss chromosomal aspects of gibbon evolution and ask the question: "Does chromosomal variation drive gibbon evolution?"

Keywords: gibbons, chromosomes, hybrid, evolution