

FUNCTIONS OF ALL-MALE UNITS IN A MULTILEVEL SOCIETY OF *RHINOPITHECUS BIETI*

B. Ren, M. Li

Key Laboratory of Animal Ecology and Conservation Biology, Institute of Zoology, Chinese Academy of Sciences, Beijing, 100101, China

Presenter's E-mail: renbp@ioz.ac.cn

Snub-nosed monkeys are known for their complex multi-level structure consisting of nuclear one-male units (OMUs) and one or more all-male units (AMUs). Males in AMUs are reproduction-deprived. Why they tolerate group-living is still a pertinent question in evolutionary biology. A wild group of *R. bieti* has been being observed at Xiangguqing in Baimaxueshan National Nature Reserve, Yunnan, China since 2003. A 89-individual group isolated from the original one(480 members) by reserve staff in May 2008 was focused to investigate function of AMUs in this complex society. First, we found there was only one AMU in the study group. AMU showed peaceful and affiliative nature of interaction between its members. AMU is not cohesive. An unstable social hierarchy among the members, especially adult males, makes AMU's individuals scatter by twos and threes in the whole group. This might be the reason that many previous studies got several AMUs in one group. The AMU in *R. bieti* naturally is a pool hospice for: 1) transferring male from other group and receiving the least aggression from members in OMUs; 2) ousted juvenile males to escape from killing by OMU takeovers; 3) juvenile males who left his natal OMU voluntarily; 4) preventing old males from being solitary. Other functions of AMU are to provide 1) a space for immature male to grow up; 2) chance for strong breeding males in AMU to overtake an OMU.

Keywords: The Yunnan snub-nosed monkey, Multilevel societies, Function of AMU