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PHYSIOLOGICAL STUDY OF SEXUAL BEHAVIORS IN CAPTIVE SICHUAN SNUB-NOSED MONKEYS

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Sichuan snub-nosed monkeys are believed to be seasonal breeders in the wild and in captivity. Previous studies in Sichuan snub-nosed monkeys have suggested that estradiol modulates female sexual solicitations during the mating season. However, the details of the relationship between hormones and behavior, and the effects of social context on this relationship have not been fully explored. We studied the relationship between sexual behaviors and physiology in a group of captive Sichuan snub-nosed monkeys in the Everland Zoo, South Korea. The study group contained 2 males and 2 females at the beginning of the study, but group composition changed to 1 alpha male and 2 females, then to 1 alpha male and 1 adult female, and then to 1 sub-adult male and 2 females. We compared male and female behavior and sex hormone levels during the mating and non-mating seasons to see if hormone levels are different in different seasons and to assess how hormone levels are related to behavior. We collected behavioral data for 6 months using focal animal sampling and all occurrence sampling, and collected fecal samples at 2-3-day intervals for 4 months spanning the mating and non-mating seasons. We analyzed hormone levels in the fecal samples via radioimmunoassay. We found clear periodic solicitation peaks by the adult female in the mating season, which perfectly corresponded with copulation peaks. Our results suggest that females may modify their behavior in response to changes in their social group, and hormones are closely related to sexual behaviors in Sichuan snub-nosed monkeys.

Keywords: Captivity, Physiology, Sexual behaviors, Seasonal breeders