

A FIRST OBSERVATION ON THE SEXUAL BEHAVIOUR OF THE CRITICALLY ENDANGERED TONKIN SNUB-NOSED MONKEY (*Rhinopithecus avunculus*) IN NA HANG NATURE RESERVE, VIETNAM

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ABSTRACT

A first observation of the sexual behaviour of Tonkin Snub-nosed Monkey *Rhinopithecus avunculus* was made during a long-term study on the behavioural ecology of the species in its natural habitats in northern Vietnam. The copulation comprised a single mount lasting 43 seconds, and was possibly initiated by the female.

Keywords: copulation, single mount

INTRODUCTION

Tonkin Snub-nosed Monkey *Rhinopithecus avunculus* (Dollman) is a slender-bodied, sexually dimorphic, arboreal, critically endangered primate, endemic to northern Vietnam, where it is largely restricted to evergreen forests associated with steep karst limestone hills (Boonratana & Le, 1994, 1998). It belongs to the Colobinae subfamily and remains relatively unstudied in comparison with the other members of the “snub-nosed” group. The basic social unit of *R. avunculus* is a one-male unit, with extra males forming all-male groups (Boonratana & Le, 1994, 1998). The social structure of *R. avunculus* is flexible with different groups coming together exhibiting a secondary level of social organization – the band (Boonratana & Le, 1994, 1998).

A long-term study on the ecology and behaviour of *R. avunculus* was carried out in northern Vietnam in the Na Hang Nature Reserve (N22°16'-22°31' & E105°22'-105°29') and in Khau Ca Forest (N22°49'-22°52' & E105°05'-105°09'). The study in the Na Hang Nature Reserve was carried out from September 2004 to August 2005, and the study in the Khau Ca Forest was carried out from September 2005 to August 2006. This paper describes an observation made in the Na Hang Nature Reserve.

Primary forest in the Na Hang Nature Reserve is largely confined to the steep hills and mountains; other

parts of the reserve have been subjected to different degrees of disturbance. Given its extremely low population size, rarity, and relative shyness, few observations on the behaviour of *R. avunculus* have been made to date; consequently, there has been no published report on the sexual behaviour of *R. avunculus*. The following describes the first observation made during this study of this species' sexual behaviour.

SEXUAL BEHAVIOUR OF TONKIN SNUB-NOSED MONKEY

On 3 May 2005, a single-mount sexual mount was observed in a one-male unit in the Tat Tra area of the Na Hang Nature Reserve. The group consisted of six individuals – one adult male, four adult females, and a juvenile of indeterminate sex. This group was initially spotted at 08:13 h when an adult female travelled quadrupedally along a tree branch at a height estimated to be between 12 and 15 m from the ground. The first adult female sat on the branch until two other adult females joined her a few seconds later. All three females, led by the first adult female, then climbed to a higher branch (of the same tree). Soon thereafter, they were joined by the juvenile, another adult female and the adult male, in that order, all along the same path.

Moments later, one of the adult females climbed down to a lower branch, stood on all four limbs and raised her tail above and to one side of her body. The adult male followed the adult female down and positioned himself behind her, rested his feet on the supporting branch, held her midsection with both his hands, mounted and then penetrated the female from the rear. Upon penetration, the male made repeated thrusting movements that lasted for 43 seconds. The adult male sat down on the supporting branch after dismounting, waved his right forelimb in front of his face, and briefly shook his head from side to side. After copulation, the adult female climbed down to a lower branch of the same tree, and entered a neighbouring tree.

The one-male unit detected the presence of the human observers two minutes later at 08:20 h. Although the observers continued watching the group until 09:10 h, no additional copulations were observed during this period.

It is not possible to draw any generalizations from observations of a single copulatory bout. In addition, other important behaviours usually associated with copulation could have been missed, given the short duration of the observation and the observers' limited range of view.

Nevertheless, the observation described above does suggest that the female initiated the mating behaviour. Studies on *R. roxellana* Milne-Edwards (Ren, 2000; Liang *et al.*, 2000; Ren *et al.*, 2000, 2003; Zhao *et al.*, 2005, 2008) and *R. bieti* Milne-Edwards (Cui & Xiao, 2004) showed that most of the mating behaviours were initiated by the females, which typically comprise the female approaching and soliciting the male by prostrating herself with her hindquarters pointing towards the male and the resident male then mounting the female if he accepts her solicitation.

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