

**REPRODUCTION IN THE MALE  
SLENDER LORIS, *LORIS TARDIGRADUS*  
*LYDEKKERIANUS*, CABR.**

CYCLICAL reproductive phenomena are generally characteristic of mammals living in temperate and subarctic regions. Such extreme environmental variations do not occur in the tropical regions, except under certain xerotic conditions where aestivation may occur associated with cessation of reproductive activity. While extensive work has been done on the study of reproductive cycles of rodents, the same attention has not been paid to the study of reproduction of the lower primates, especially the Lemuroidea. There is some suggestion of a restricted breeding season in many of the lower primates, and of some varying intensity in the higher

primates (Asdell<sup>1</sup>). The paucity of information on the reproduction of this interesting group is probably due to the difficulty of obtaining adequate numbers of animals through the year. It is essential that this lacuna should be filled as a means of providing links in the reproductive behaviour between the lower primates and the higher primates on the one hand and the other mammalian groups on the other. It is with this object in view that a systematic study of the reproduction in the male slender loris, *Loris tardigradus lydekkerianus* has been undertaken. Lorises were collected from the forests within a radius of about 25 miles from Bangalore between December 1941 and May 1945.

Loris breeds twice a year, one or occasionally two young being born in late April or May and again in November or December; young have been produced in captivity as late as June (Hill<sup>2</sup>).

Hill<sup>3</sup> suggested that the male experienced two heat periods and that the abdominal testes became scrotal overnight, and the scrotum was affected by a reticular pigmentation. On the basis of this observation, Ramaswami and Anand Kumar<sup>4</sup> point out that the testes should descend and become scrotal during March-April and September-October when mating occurs. They did not observe any case of complete descent of the testes into the scrotal sacs in any of the animals maintained in their colony. Our observations based on collections from the wild state show that the testes are either inguinal, or abdominal and do not usually descend, more than temporarily into the scrotum. Activity of the males as determined by the presence of sperms in the seminiferous tubules, epididymes and ductus deferens extends throughout the year with no sign of regression during any season.

Our collection reveals that the weight of the testes can be taken as a fair index of sexual activity. The testes weights range from 0.013 to 3.465 gm. In testes weighing between 0.013 and 0.062 gm. the seminiferous tubules are in an immature state. A large number of closely packed spermatogenic tubules full of spermatogonial cells is characteristic of this stage. In those with testes weights ranging from 0.072 to 0.180 gm. traces of central lumen are visible and the primary and secondary spermatocytes are in various stages of division. Spermatogenic activity commences when the testes weigh about 0.760 gm. The testes with weight over 0.900 gm. are functionally active and their tubules are full of spermatozoa. Func-

tional testes may be abdominal, inguinal or scrotal in position. It appears therefore that the descent of the testes into the scrotal sacs is not very necessary for its normal working.

The growth of the accessory glands of reproduction is closely correlated with the growth of the testes. All show linear correlations with the weight of the testes.

Ramaswami and Anand Kumar<sup>4</sup> state that the penis functions normally when the testes are suprascrotal (inguinal?) but not when the latter are mechanically forced into the scrotum. The anatomical position of the scrotum and the penis precludes this suggestion. Further this statement which is not supported by adequate experimental evidence needs to be verified.

A more detailed paper on the correlations between the testes and the accessory glands of reproduction will be published elsewhere.

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1. Asdell, S. A., *Patterns of Mammalian Reproduction*, Comstock Pub. Coy, 1946.
2. Hill, W. C. O., *Nature (London)*, 1935, 136, 107.
3. —, *Primates I. Strepsirhini*, University Press, Edinburgh, 1953.
4. Ramaswami and Anand Kumar, *Naturwissenschaften*, 1962, 5, 115.