

SOCIAL ORGANISATION IN PRIMATES

The primates have a wide range of types of social organisation, which reflects their diversity of life style and ecology. Many prosimian species have a widely dispersed food supply. They have a solitary way of life and have social contact only during courtship and mating. Primates with a more stable food supply tend to form multimale groups. Comparative study (Brown 1975) suggests that in harsh environment troops are dominated by a single male, whereas in rich environments the troops have a number of co-operating dominant males. Sexually strategy results in particular kinds of mating system, which have profound effects upon the social organisation of the species. A variety of examples can be found among the primates.

TYPES OF ORGANISATION → The social behaviour of primate can be classified as follows:-

1. MULTIMATE BISEXUAL SOCIAL GROUPS :- Gorilla, African baboon and monkeys (rhesus monkey, squirrel monkey, woolly monkey, spider monkey, bearded saki vaka's) shows multimale bisexual social organisation.

Each social group has several male in which one is master male or alpha male and several females. Bonded females remain with their infants. In fact there are several small groups living together and forming a bigger group. One big group may have more than 200 individuals. Two major groups within multimale bisexual grouping are :-

- Those which do not divide in smaller feeding groups.
e.g:- Gorilla & Lorques.
- Those which divides daily into smaller feeding groups.
e.g:- Baboons & Macaques

A. GORILLA :- Dian Fossey has conducted an extensive study of the mountain gorilla, spending 5 years observing the behaviour of this species in jungle. The home range of a group of mountain gorilla, which will normally contain between 5 - 20 individuals, covers an area of about 13 sq. kms.

Low land gorilla groups contain a greater number of individuals (15-30) and range over an area of 24-40 sq. kms.

Gorilla moves round over long established pathways and each group is led by an adult male - "Silver back".

In gorilla's group the males have dominance hierarchy and the most dominant is known as "Alpha" followed by Beta and Gamma. But there is no dominance amongst females.

Dominant male is not very aggressive and all other males have access to receptive females. Eisenberg (1978) calls them as "age graded". Band of gorilla mix when they come into others home range.

B. RHESUS MONKEY :- Macaca mullata are inhabitant of India. They do not have families but the offsprings of a particular mother stay close to her. As the troop moves, the females and young males are always in lead. The most dominant male is the leader of the group. The leader plans the day and area of foraging. The males have dominance hierarchy but the bonded female acquire dominance form "alpha" male and his bonded female will enjoy high place in dominance hierarchy among female and rest of the group members. Even infants bonded female acquire that dominance like the royal family. The dominant males can be identified by their majestic walk and by their long strides. They carry their tail up. A subordinate male fast its tail between hind limbs.

If the α male goes away from the group even for a short period, the β male will raise its tail and as soon as the α -male returns it will tuck its tail down. Social group of rhesus monkey may split into smaller feeding groups temporarily for foraging but all family units remain in near vicinity and unite at the time of danger. Roosting behaviour is of common occurrence. Approximately 200 individuals roost together. In winter 6-10 members embrace each other and sleep together in night (huddled).

C. SQUIRREL MONKEY :- *Saimiri sciureus* are found in northern part of South America. The group size vary from 30-100 individuals. Adult female and their young form the core of group. During breeding season adult males intermerge in the groups of females for the few months.

D. BABOON :- *Papio hamadryas* band always moves under the sway of a few dominant males. The groups have 50-100 individuals, which wander in an area of 3 km in diameter.

Most dominant males lives in the centre of the group and the other less dominant spaced out around him. When troops moves the females and infants remain in the centre for safety. At the edge of the group the youngest males. At the time of attack of predators youngest males gives alarm calls and male rush over and threaten the intruders. They spend night sleeping on certain trees. The male's position in the dominance depends on its strength and ability for fighting. All the females subordinate to males.

The *Papio* is a terrestrial inhabitant of the plains of North East Africa and South-West Arabia. Baboon society has several levels of organisation.

The simplest :-

- i - The breeding unit is harem of 1-10 females with a single male.

- ii- Several members of different harem may form larger band while feeding, and these bands may act as a unit to defend a feeding site from a rival band. The bands do confine their wandering to a larger area of about 25 sq. kms.
- iii- Several bands may join into larger group for sleeping (700).

The Ethiopian gelada baboons (Theropithecus gelada) are large sized aggressive monkeys. The adult males are capable of chasing leopards. They sleep in cliff as one male family unit. In the morning these units get together to form a large troop of many males and females which remain together all through the day while foraging.

2. SINGLE MALE BISEXUAL GROUP :- Papio ussinus and Presbytis entellus show single male bisexual social organisation.

a. Chacma baboon (P. ussinus) :- Found in Angola and Zambia form one male family units of about 20- individuals. In day time many such unit lives close to each other and may appear as one group of many individuals. Their home range overlaps considerably.

b. Hanuman langurs :- Widely distributed over Indian sub-continent, can live from sea level to high up in the mountain (4267 km). It lives in social groups of various size and composition.

Unimale bisexual group having infants of both sexes, juveniles and several adult females. Resident male dominants and taken decision of foraging site, grooming site etc. He may be challenged by young males. The challenger leads the group (take over). The defeated land is ousted and leaves the group and may lead solitary life or joins a all male group. Sexually

maturing males comes out of the group and make a all male group.

Presbytis are highly territorial in a fixed area (home range) it may overlap and quite extensive at times. In bisexual group it vary from 0.07 - 13 sq.kms. In all male group - more extensive - 4.3 - 22 kms. All groups use large trees as their sleeping sites within a limited area (100-150 sq meters). It comprises one large tree or 2-6 small trees or both. This area is an important locations as most of the groups activities start and terminate here.

3. DIFFUSED SOCIAL GROUP :- Pan troglodytes (chimpanzee) form temporary groups which wander over ranges of several squares kilometers and last for few hours or days. The group may have all males, all females and their infants or a combination of males and females.

Pan paniseus (bonobo) inhabiting Congo is our nearest evolutionary cousins. Kano (1973) was surprised to witness the bonobo females ruling the roost. They sat friendly together as they groomed each other, allowing favoured males to sit with them. If a male made a rare challenge against females seated together, they either ignored his boorish display or chased him into jungle. Male bonobos remain bonded with their mother for life but never mate with them. Each group weave 20-30 side branches into a well padded mother.