Below

The Sexual, Agonistic and Derived
Social Behaviour Patterns of the Wild

Chacma Baboon, Papio Ursinus

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social and agonistic behaviour natterns the Chacma baboon, P. ursinus, were the subject of field study chiefly in the Cape of Good Hope Nature Reserve where intensive close-range observation of a single group was possible. The mating system in this group was one in which the male dominant in terms of such criteria as frequency of aggressiveness and of social "attractiveness" (as shown by the number of animals presenting to him, and participating in grooming with him) tended to have a brief, exclusive relationship, with the Other males would also mate female in full oestrus. with her, on the same day as the dominant male, before the stage of exclusion was reached. are presented on the frequency of occurrence of components of sexual behaviour.

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Agonistic behaviour was analysed particularly in terms of frequency and intensity of occurrence within the group. Aggressive episodes by the dominant male occurred, on average, about once in six hours of day-time, except on the first occasion when the tame baboon accompanied the group on the whole of its day-range. The dominant male was then repeatedly aggressive throughout the day. positive correlation was found between the of mating per day by the dominant male and frequency of aggression by females against female dominant male results in a proportional increase in tension amongst the females which is directed partly at the oestrous female, partly at other females. Aggressive episodes, sometimes very noisy and rough-looking, never resulted in visible injury

to the victim, and mostly consisted of threats without physical contact. Supposed conflictexpressions, such as yawning, are briefly described.

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Aggressive chasing, when observed in male 1 of S group, 1960, and in other large males of S and C groups 1958/59, has been accompanied by a loud, two-phase (double) bark, repeated again and again as the animal pursued its victim. This double-bark is uttered repeatedly by dominant males when disturbed by human beings. It is possible that its significance then is chiefly for its effect upon the group whose activities are notably inhibited when this double-barking occurs. When such a male catches up with the animal he is chasing, his reactions have **varied considerably in intensity and form, but they** never lasted for more than a few seconds. victim has sometimes been seized in the hands only and, as Bolwig says, appears to be beaten or rubbed The victim is sometimes seized on the ground. viciously in the jaws of the male, but no visible



injury has ever been observed to result from such aggressive episodes. The noise of these episodes is considerable, because of the double-barking of the male; the shrieking of his victim, and possible noise from the other baboons. Attacks made by adult females differ somewhat from those of the dominant males. These differences will be analysed later.

1. Hall, K.R.L. (1962) Numerical data, maintenance activities and locomotion of the wild chacma baboon, Papio ursinus. Proc. zool. Soc. Lond. 139: 181

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In 1958/59, aggressive episodes, in the Cape Reserve groups under observation, were recorded on only thirty-three occasions. Eighteen of these consisted of chasing and chastising by large males, but only one of these episodes involved another No instances occurred of actual fighting between males. The threat-chasing and double-barking of the large male was usually the whole of the episode, the chase not being continued. In only eleven cases did the male catch, beat or bite its victim briefly. No severe injury was observed, the victim always getting up and going away. Chasing and scrapping between other animals recorded on fifteen occasions.

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Data on the frequency with which such episodes occur in natural groups, the status or class of the participants, the causes, and the intensity—variations in the behaviour, are all of importance in establishing the nature of the social organization of baboons. Since Zuckerman's (1932) report of the lethal aggressiveness of zoo baboons, careless assertions as to the "authoritarian", "autocratic", or "totalitarian" regime characteristic of baboons have persisted. Apart from the fact that such sociological terms are meaningless when applied to non-human groups, no evidence had been adduced from field studies to corroborate or refute the implications of Zuckerman's findings.



Yerkes, R.M. & Yerkes, A.W. (1935). Socialbehavior in infra-human primates. Chapter in: A handbook of social psychology. worcester. Mass. Hooton, E. (1942) Man's poor relations. Hall, K.R.L., Boelkins, C. and Goswell, M.J. In press. Behaviour of the Batas Monkey, Erythocebus-patas Hall, K.R.L. The Sexual, Agonistic and Derived Social Behaviour Patterns of the Chacma Baboon, Papio Ursinus. The much closer-range and more intensive observa-*tions of S group in 1960 confirm and elaborate the impression that aggressive episodes are not only not very common in natural groups but that they usually terminate as mere threats. of the 1958/59 episodes could never be determined.

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Frequences of aggression by males and by females against different classes of animal (Table 15) bring out several points. Thus, male 1 was the aggressor against females on twenty-one occasions, and against other males and juveniles on eight occasions. An "aggressive episode" includes threat-expressions, as well as actual chasing and chastising. The dominant male of the group was therefore aggressive, in terms of certain characteristic behaviour patterns, on twenty-nine occasions in 190 hours, i.e. about one episode for every six and a half hours of daylight. The frequency of aggressiveness by the three most prominent males of the group against the females and against other animals suggests that this may be one indication of relative dominance amongst the males.

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There is no significant correlation between the dayfrequencies of male 1's aggression and the dayfrequencies of his mating (Spearman r= -0.09, P=

> 0.05). A significant negative correlation would
be expected if male 1 were the more aggressive the

less frequently he mated, but clearly the twobehaviour-patterns are, at least statistically,

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The frequency of the different components of aggressive behaviour, for all days of observation of S group, Cape, 1960, show that contact reactions of grappling or beating with the hands and biting are far less common than the no-contact reactions of threat and chasing. Thus no-contact reactions occurred on sixty-four occasions against thirty-one of contact when males were the aggressors, and on 108 occasions against twenty-six of contact when females were the aggressors.

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An interesting social reaction was noted on a few occasions when male 1 or one of the other males was the aggressor against a female. It consisted of "ganging up" by some of the females to combine in threatening the aggressive male, with the regular efrect or making the male withdraw. Thus, on 22nd August, two females began fighting noisily. chased after one of them who was slightly oestrous. He seized her with his hands, and bit her hard while she shrieked continually. She tried to present to him, and he mounted her. She ran away, and was again pursued by him. Several of the other adult females "pursued by him. now turned on him, and threatened him, snarling at Male 1 double-barked and him with teeth bared. charged at several of them in turn, making vicious slaps or swipes with his hands, but he did not engage



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| ¥ | with any of them. Most of this episode took place |
| ` | MOST OF LITTS episode took place |
| 1 | in the shallow water of a pool. The rest of the |
| | group sat, or stood, gazing at the antagonists. The |
| | pepisode lasted five minutes. and the combined threat |
| ^ | of the females was sufficient to divert male 1. |
| | "Ganging up" by females against a female aggressor |
| į | against a remaie aggressor |
| • | was also observed. |
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