

= Chacma baboon =

The chacma baboon ( *Papio ursinus* ), also known as the Cape baboon , is , like all other baboons , from the Old World monkey family . It is one of the largest of all monkeys .

Located primarily in southern Africa , the chacma baboon has a wide variety of social behaviors , including a dominance hierarchy , collective foraging , adoption of young by females , and friendship pairings . These behaviors form parts of a complex evolutionary ecology .

In general the species is not threatened , but human population pressure has increased contact between humans and baboons . Hunting , accidents and trapping kill or remove many baboons from the wild . This has reduced baboon numbers and disrupted their social structure .

= = Taxonomy = =

Due to hybridization between different baboon ( *Papio* ) populations across Africa , authors have occasionally grouped the entire radiation as a single species , the hamadryas baboon , *Papio hamadryas* . Arbitrary boundaries were then used to separate the populations into subspecies . Other authors considered the chacma baboon a subspecies of the yellow baboon , *Papio cynocephalus* , though it is now recognised as a separate species , *Papio ursinus* . The chacma baboon has two or three subspecies , depending on which classification is followed . Grubb et al . ( 2003 ) listed two subspecies , while Groves ( 2005 ) in *Mammal Species of the World* listed three . This article follows Groves ( 2005 ) and describes three distinct subspecies . In the Grubb et al . ( 2003 ) paper , *P. u. raucana* was believed to be synonymous with *P. u. ursinus* .

*Papio ursinus ursinus* Kerr , 1792 ? Cape chacma ( found in southern South Africa )

*P. u. griseipes* Pocock , 1911 ? Gray @-@ footed chacma ( found in northern South Africa to southern Zambia )

*P. u. raucana* Shortridge , 1942 ? Ruacana chacma ( found from Namibia to southern Angola )

= = Physical description = =

The chacma baboon is perhaps the longest species of monkey , with a male body length of 50 ? 115 cm ( 20 ? 45 in ) and tail length of 45 ? 84 cm ( 18 ? 33 in ) . It also one of the heaviest ; the male weighs from 21 to 45 kg ( 46 to 99 lb ) . Baboons are sexually dimorphic , and females are considerably smaller than males . The female chacma weighs from 12 to 25 kg ( 26 to 55 lb ) . It is similar in size to the olive baboon and of similar weight to the more compact mandrill , which is usually crowned the largest of all monkeys . The chacma baboon is generally dark brown to gray in color , with a patch of rough hair on the nape of its neck . Unlike the males of northern baboon species ( the Guinea , hamadryas , and olive baboons ) , chacma males do not have a mane . Perhaps the most distinctive feature of this baboon is its long , downward @-@ sloping face . The canine teeth of male chacma baboons have a mean length of 3 @. @ 86 ± 0 @. @ 30 cm at the time they emigrate from their natal troop . This is the time of greatest tooth length as the teeth tend to wear or be broken thereafter .

The three subspecies are differentiated by size and color . The Cape chacma is a large , heavy , dark @-@ brown , and has black feet . The gray @-@ footed chacma is slightly smaller than the Cape chacma , lighter in color and build , and has gray feet . The Ruacana chacma generally appears to be a smaller , less darkly colored version of the Cape chacma .

= = Ecology = =

= = = Habitat and distribution = = =

The chacma baboon inhabits a wide array of habitats including woodland , savanna , steppes , and subdesert , from the grassy alpine slopes of the Drakensberg to the Kalahari desert . During the

night the chacma baboon needs hills , cliffs , or large trees in which to sleep . During the day water availability may limit its range in arid areas . It is found in southern Africa , ranging from South Africa north to Angola , Zambia , and Mozambique . The subspecies are divided across this range . The Cape chacma is found in southern South Africa ; the gray @-@ footed chacma , is present from northern South Africa , through the Okavango Delta in Botswana , Zimbabwe , Mozambique ( south of the Zambezi ) , to southwest Zambia ; and the Ruacana chacma is found in northern Namibia and southern Angola .

= = = Diet = = =

The chacma baboon is omnivorous with a preference for fruits , while also eating insects , seeds , grass , smaller vertebrate animals , and fungi ( the desert truffle *Kalaharituber pfeilii* ; at the Cape of Good Hope in particular , it is also known for taking shellfish and other marine invertebrates . It is generally a scavenger when it comes to game meat , and rarely engages in hunting large animals . One incident of a chacma baboon killing a human infant has been reported , but the event is so rare , the locals believed it was due to witchcraft . Normally , chacma baboons will flee at the approach of humans , though this is changing due to the easy availability of food near human dwellings .

= = Behavior = =

= = = Social organization = = =

The chacma baboon usually lives in social groups , called troops , which are composed of multiple adult males , adult females , and their offspring . Occasionally , however , very small groups form that consist of only a single adult male and several adult females . Chacma troops are characterized by a dominance hierarchy . Female ranking within the troop is inherited through the mother and remains relatively fixed , while male ranking is often in flux , especially when the dominant male is replaced . Chacmas are unusual among baboons in that neither males nor females form strong relationships with members of the same sex . Instead , the strongest social bonds are often between unrelated adult males and females . Infanticide is also common compared to other baboon species , as newly dominant males will often attempt to kill young baboons sired by the previously dominant male . Baboon troops possess a complex group behavior and communicate by means of body attitudes , facial expressions , vocalizations and touch .

= = = Morning dispersal patterns = = =

The chacma baboon often sleeps in large groups on cliffs or in trees at night to avoid predators . The morning dispersal from the sleeping site is synchronized , with all members leaving at the same time . In most cases , dispersal is initiated by a single individual , and the other members of the group decide whether or not to follow . At least five followers must be recruited for a successful dispersal initiation , and not all initiation attempts are successful . Surprisingly , the initiator 's dominance status shows little correlation with successful initiation of departure ; more @-@ dominant individuals are no more likely to lead a successful departure than subordinate individuals . One study has shown that while the success rate of dispersal initiation attempts is relatively constant across all sexes , male are more likely to attempt initiation than females , and lactating females are less likely to attempt initiation than females without dependent offspring . A separate study has achieved slightly different results . While dominance hierarchy does not play a significant role in initiating the morning dispersal , social affiliation does . Chacma baboons that play a more central role in the group ( as measured by grooming behavior and time spent with other members ) are more likely to be followed during the morning dispersal . This study concluded that group members are more likely to follow the behavior of individuals with which they are closely affiliated .

### === Foraging behavior ===

Dominance does play a role in group foraging decisions . A dominant individual ( usually the alpha male ) leads the group to easily monopolized resources . The group usually follows , even though many subordinate members cannot gain access to that particular resource . As in morning dispersal , the inclination of group members to follow the leader is positively associated with social interactions with that dominant individual .

Collective foraging behavior , with many individuals taking advantage of the same resource at once , has also been observed . However , this behavior can be chiefly attributed to shared dietary needs rather than social affiliation . Pregnant females , who share similar dietary needs , are more likely to synchronize their behavior than fertile females . Foraging synchronization decreases in areas with lower food density .

### === Adoption ===

Adoption behavior has been observed in chacma baboons . Orphaned baboons whose mothers have disappeared or died are often too small to care for themselves . In one study of nine natural orphans and three introduced orphans , all but one orphan were adopted by another member of the group . The individual that was not adopted was 16 months old , four months older than the next oldest orphan , and was old enough to survive on its own . Adoption behavior includes sleeping close to the orphaned infant , grooming and carrying the orphan , and protecting it from harassment by other members of the troop . Both males and females care for infants , and care does not depend on the infant 's sex . Additionally , all caregivers are prereproductive , only four or five years of age . The two major theories explaining this behavior are kin selection , in which caregivers take care of potentially related orphans , and parental practice , in which young caregivers increase their own fitness by using an orphan to practice their own parental skills .

### === Friendship ===

Males and female chacma baboons often form relationships referred to as " friendships " . These cooperative relationships generally occur between lactating females and adult males . The females are believed to seek out male friendships to gain protection from infanticide . In many baboon species , immigrant alpha males often practice infanticide upon arrival in a new troop . By killing unrelated infants , the new male shortens the time until he can mate with the females of the troop . A female with dependent offspring generally does not become sexually receptive until she weans her offspring at around 12 months of age . However , a mother usually becomes sexually receptive shortly after the death of her offspring .

This protection hypothesis is supported by studies of stress hormones in female baboons during changes in the male hierarchy . When an immigrant male ascends to the top of the male dominance hierarchy , stress hormones in lactating and pregnant females increases , while stress hormones in females not at risk of infanticide stay the same . Additionally , females in friendships with males exhibit a smaller rise in stress hormones than do females without male friends .

The benefits of friendship to males are less clear . A male is more likely to enter into friendships with females with which he has mated , which indicates males might enter into friendships to protect their own offspring and not just to protect that female 's future reproductive success . These friendships may play a role in the mating system of chacma baboons . A female will often mate with several males , which increases the number of potential fathers for her offspring and increases the chances she will be able to find at least one friend to protect her infants .

Female chacma baboons have been observed to compete with each other for male friends . This may be the result of one male having a high probability of paternity with multiple females . These competitions are heavily influenced by the female dominance hierarchy , with dominant females displacing subordinate females in friendships with males . Generally , when a more @-@ dominant female attempts to make friends with an individual which is already the friend of a subordinate

female , the subordinate female reduces grooming and spatial proximity to that male , potentially leaving her offspring at higher risk of infanticide .

= = Relationship with humans = =

= = = Conservation = = =

The chacma baboon is widespread and does not rank among threatened animal species . However , in some confined locations , such as South Africa 's Southern Cape Peninsula , local populations are dwindling due to habitat loss and predation from other protected species , such as leopards and lions . Some troops have become a suburban menace , overturning trash cans and entering houses in their search for food . These troops can be aggressive and dangerous , and such negative encounters have resulted in hunting by frustrated local residents . This isolated population is thought to face extinction within 10 years .

The chacma is listed under Appendix II of CITES as it occurs in many protected areas across its range . The only area in South Africa where they are monitored is in the Cape Peninsula , where they are protected .

Observations by those working hands @-@ on in South Africa 's rehabilitation centers have found this species is damaged by human intervention ; troop structures are influenced , and over the years a significant loss in numbers has occurred . Because they live near human habitats , baboons are shot , poisoned , electrocuted , run over , and captured for the pet industry , research laboratories and muthi ( medicine ) . Despite this , assessors working for the IUCN believe there are no major threats that could result in a range @-@ wide decline of the species .

= = = In popular culture = = =

In 2011 , the British Television Channel ITV1 aired an eight @-@ episode miniseries , hosted by popular British comedian Bill Bailey . The series followed the lives of three different family groups of chacma baboons in South Africa . The series focuses on the baboons ' abilities to adapt to human settlement and their complex social lives . It is generally structured within a narrative , with each adult baboon having a name and being treated as an ' actor ' in the story . The three families of baboons have each developed their own ways of life ; the ' Smitz ' group spends most its time trying to rob food from tourists along a coastal highway , the ' Tokai ' group has remained in a more natural forest area , and the ' Da Gama ' group lives on the rooftops of an apartment complex . The program is the second attempt by Bailey to produce a semiserious nature documentary , and it received generally favourable reviews .