

= Mantled guereza =

The mantled guereza (*Colobus guereza*), also known simply as the guereza , the eastern black @-@ and @-@ white colobus , or the Abyssinian black @-@ and @-@ white colobus , is a black @-@ and @-@ white colobus , a type of Old World monkey . It is native to much of west central and east Africa , including Cameroon , Equatorial Guinea , Nigeria , Ethiopia , Kenya , Tanzania , Uganda and Chad . The species consists of several subspecies that differ in appearance . It has a distinctive appearance , which is alluded to in its name ; the long white fringes of hair the run along each side of its black trunk are known as a mantle . Its face is framed with white hair and it has a large white tail tuft .

The mantled guereza is diurnal and arboreal , found in both deciduous and evergreen forests . It is an adaptable species that can cope with habitat disturbance and prefers secondary forest close to rivers or lakes . Although previously thought only to eat leaves , it also eats seeds , fruits , and arthropods . It is able to digest plant material with a high fibre content with its specialised stomach and may only eat from a few plant species at a time . It is preyed on by birds of prey and some mammals , such as the common chimpanzee and the leopard .

The mantled guereza lives in social groups of three to fifteen individuals . These groups normally include a dominant male , several females , and the offspring of the females . It has a polygynous mating system and copulation is initiated with vocal communication . After a gestation period of just over five months , infants are born with pink skin and white fur , which darkens to the adult coloration by three to four months . The mantled guereza is well known for its dawn chorus , the males ' " roar " is a method of long distance communication that reinforces territorial boundaries . It also makes other vocalization and uses body postures , movements , and facial expressions to communicate .

The mantled guereza is listed as Least Concern by the International Union for Conservation of Nature (IUCN) because it is widespread - although it is locally threatened in some areas , the decline is not great enough to list it in a higher category of threat . However , one subspecies found in Kenya is listed as Endangered . It can survive well in degraded forests and in some areas it is more common in logged areas than unlogged ones . The mantled guereza is also threatened by hunting for bushmeat and for its skin .

= = Etymology = =

The mantled guereza has many alternative common names including the guereza , the eastern black @-@ and @-@ white colobus , the magistrate colobus , or the Abyssinian black @-@ and @-@ white colobus . The name " mantled " refers to its mantle , the long silky white fringes of hair that run along its body and " guereza " is the native name of the monkey in Ethiopia . The scientific name *Colobus* derives from Greek *kolobus* meaning " mutilated " which refers to its lack of thumbs .

= = Discovery and taxonomic classification = =

The mantled guereza was discovered by Eduard Rüppell , a German naturalist and explorer , during his trip to Abyssinia between 1830 and 1834 . He wrote about the species in *Neue Wirbelthiere von Abyssinien* , *Saengthiere* in 1835 . It was first seen in Europe in 1890 in Berlin Zoological Garden when three individuals were purchased from a dealer from Massawa , Eritrea .

The mantled guereza is in the Colobinae subfamily , also known as the leaf @-@ eating monkeys , a group of Old World monkeys from Asia and Africa . This subfamily is split into three groups , the colobus monkeys of Africa , of which the mantled guereza is a part , the langurs , or leaf monkeys , of Asia , and an " odd @-@ nosed " group . The African colobus monkeys are divided again by distinctions in color , behavior , and ecology . The three genera are the black @-@ and @-@ white colobi , the red colobi , and the olive colobi . There are three black @-@ and @-@ white colobi : the mantled guereza , *Colobus guereza* , the king colobus , *C. polykomos* , and the Angola colobus , *C. angolensis* . Groves lists seven subspecies of mantled guereza in *Mammal Species of the World* (MSW) (2005) . The validity of the Djaffa Mountain guereza , *C. g. gallarum* , is uncertain , although

not listed by Groves in MSW , it is recognised in his 2007 Colobinae review paper , and by International Union for Conservation of Nature (IUCN) assessors Gippoliti and Butynski in 2008 .

Western guereza , *Colobus guereza occidentalis* , occurs from eastern Nigeria , Cameroon , and Gabon at the edge of its western range to South Sudan and Uganda , west of the Nile .

Omo River guereza , *C. g. guereza* , found in Ethiopia , in the highlands west of the Rift Valley down to the reaches of the Awash River , the Omo River , and in the Blue Nile gorge .

Djaffa Mountains guereza or Neumann 's black @-@ and @-@ white colobus , *C. g. gallarum* , found in the Ethiopian Highlands east of the Rift Valley .

Dodinga Hills guereza , *C. g. dodingae* , found in the Didinga Hills in South Sudan .

Mau Forest guereza , *C. g. matschiei* , occurs from western Kenya and Uganda south into northern Tanzania .

Mt Uaraguess guereza or Percival 's black @-@ and @-@ white colobus , *C. g. percivali* , found in the Matthews Range in Kenya .

Eastern black @-@ and @-@ white colobus , *C. g. kikuyuensis* , occurs in Kenya on the Ngong Escarpment of Mount Kenya and in the Aberdare Range .

Kilimanjaro guereza , *C. g. caudatus* , found in Tanzania and Kenya in the forests surrounding Mount Kilimanjaro and Mount Meru .

The morphological difference between subspecies is most pronounced between the southeastern Kilimanjaro guereza , *C. g. caudatus* , and the northwestern western guereza , *C. g. occidentalis* . The intermediate subspecies show a gradual change between the two .

= = Physical description = =

The mantled guereza has a distinctive pelage , it is mostly black , with long white fringes of silky hair ? known as a mantle or ornamentation ? along the sides of its body and tail . The bands that make up the mantle start at the shoulders and extend along the back until they connect at the lower torso . The tail is long and ends in a white tuft which varies in how much it covers the tail . These features vary in color among subspecies , for example the tail of *C. g. guereza* is gray until the white tail tuft which covers half of its length , while the tail tuft of *C. g. caudatus* makes up 80 % of the tail . The mantle color ranges from white to cream or yellow . Its face is framed by white hair and it has bushy cheek hairs . The thigh has a white stripe .

Infants are born with pink skin and white hair . The hair and skin darken as they age and by three to four months they attain adult coloration . Male usually gain their coloration before females . The male typically weighs 9 @.@ 3 and 13 @.@ 5 kilograms (21 and 30 lb) and the female weighs between 7 @.@ 8 and 9 @.@ 2 kilograms (17 and 20 lb) . The head and body length averages 61 @.@ 5 centimetres (24 @.@ 2 in) for males and 57 @.@ 6 centimetres (22 @.@ 7 in) for females . Like most colobi , the mantled guereza has a small thumb that is vestigial . There is dentition sexual dimorphism among the subspecies . In some , the males have larger teeth than females , in others the reverse is true , and some have no significant difference .

= = Distribution and habitat = =

The mantled guereza is distributed throughout Equatorial Africa . It ranges from Nigeria and Cameroon in the west to Ethiopia , Kenya , Uganda , and northern Tanzania in the east . The mantled guereza lives in both deciduous and evergreen forests . It mainly inhabits forest and savannah woodlands and often extend into highland and montane forests . It can be found in other forest habitats , both primary and secondary , such as riparian (near fresh or brackish water) , gallery , and upland forests . It is particularly common in forests close to rivers and lakes and at high elevations . It can be found in elevations as high as 3 @,@ 300 metres (10 @,@ 800 ft) . This species prefers secondary forests and selects them over old @-@ growth forests if given the choice . It is likely that the mantled guereza prefers these forests due to the increased number of food trees and the weaker chemical defenses of the species within . The mantled guereza is sometimes found in swamps as well as human @-@ made habitats such as Eucalyptus plantations , which may be

frequented when the monkey has nutritional deficiencies .

= Ecology =

The mantled guereza is primarily arboreal , but does sometimes descend on the ground to forage and travel , perhaps more so than most other colobines . It is diurnal and rests for up to half the day . Foraging or travelling are the next most common activity . Sometime after dawn , mantled guereza groups leave their sleeping trees and will return to them at dusk . During the day , the mantled guereza has long rest periods in between periods of moving and feeding . Other activities , including grooming , greeting , playing and being vigilant , are performed to a lesser extent .

Despite its reputation as an exclusive leaf @-@ eater , the mantled guereza is not an obligate folivore . While it mainly eats leaves and fruit , its diet is quite variable . It may eat bark , wood , seeds , flowers , petioles , lianas , aquatic @-@ plants , arthropods , soil , and even concrete from buildings . The amount of each food item in its diet varies by area and time of year . Nutritional factors like protein , tannins , and sodium levels in leaves influence its food choices . It may even intermittently travel longer distances to access plants with higher levels of nutrition . Leaves usually make up over half of its diet , although fruits are occasionally eaten more depending on the season . When foraging for leaves , the mantled guereza prefers young ones over old . With fleshy fruits , the mantled guereza prefers to eat them unripe , which may serve to reduce competition with primates that eat ripe fruits . It consumes a number of plant species but only some make up most of its diet at a specific site .

Like all colobi , the mantled guereza is able to digest leaves and other plant fibers with a large , multi @-@ chambered stomach that contains bacteria in certain areas . Like most colobines , it prefers foods with high fiber content that can be easily extracted with its specialized stomach . The mantled guereza is mostly preyed on by the crowned hawk @-@ eagle , but it is also eaten by other birds of prey such as Verreaux 's eagle . The common chimpanzee is known to hunt the guereza . The leopard is another possible predator .

= Behaviour =

= Social structure =

The mantled guereza lives in stable social groups usually containing three to fifteen members . The groups usually contain one male , several females and juveniles . In some populations , groups containing several males are common . In multi @-@ male groups , males tend to be aggressive with one another with one being dominant . Some males may be expelled from these groups . Multi @-@ male groups may contain father @-@ son pairs or unrelated males . Males that are not part of groups either live solitarily or with other outside males in bachelor groups . The females keep the groups cohesive and they are matrilineally related . They rarely disperse from their natal groups , except possibly when they break apart . Males on the other hand , usually leave when they become subadults or adults . They may start out being solitary and or in bachelor groups . They gain entry into a social group either by being on the periphery or displacing a group male .

Because of its low quality diet and the dispersed distribution of its food , the mantled guereza has a resident @-@ egalitarian social structure . Female guerezas living in a group often have an egalitarian dominance style with no formalized rank relations . Relationships are relaxed and friendly with rare signals of dominance or subordination . Physical aggression within the group is usually not harmful and rarely escalates into a conflict . Allogrooming is an important part of mantled guereza interactions and mostly occurs between females . The adult males rarely groom in the groups . While not strictly territorial , mantled guereza groups can be aggressive towards each other . In some populations , groups may defend core areas (which exist as a small part of the home range) , resources , and mates . During intergroup encounters , males can engage in direct or indirect mate defense , like defending a female 's resources . It is the males that participate in agonistic inter @-@

group encounters but female may do so as well . Aggressive encounters between groups usually involve chases , displays and vocalizations rather than physical contact .

= = = Reproduction and parenting = = =

The mantled guereza has a polygynous harem @-@ based mating system . Mating solicitations are made by both males and females , half of the time for each . To solicit mating , the mantled guereza will walk near its potential partner and make low @-@ intensity mouth clicks or tough @-@ smacks . During copulation , the males hold on the female 's ankles and body . Most matings take place between individuals of the same group but copulations outside of the group have been recorded . In multi @-@ male groups , more than one male may mate with the females . The gestation period lasts 158 days with a 16 @-@ 22 month interbirth interval . The newborn guereza relies on its mother for support and must cling to her . As they grow older , infants can move on their own but keep returning to their mothers . The infants take up most of the attention in the groups . The other females in a group may handle an infant although the latter are only comfortable with their mothers . The males normally don 't pay much attention to infants until they are four to five weeks old . Infants can eat solid food at about eight to nine weeks and by fifty weeks they are fully weaned and no longer need to hold on to their mothers .

= = = Communication = = =

The most notable vocalization of the mantled guereza is the " roar " , which is made mainly at night or dawn by males . The sound of a roar can be carried for up to a mile . It is normally the dominant male who roars when there are multiple males in the group . Roars are used for long distance communication and can regulate inter @-@ group spacing without direct , physical contact while foraging . When one male starts roaring , neighboring males will start to roar as well . Often , the mantled guereza will respond to calls regardless of " caller identity , " focusing more on the collective vocal displays and not the familiarity of the caller . There is variation in the roars of males which could signal the status of their group and fighting ability . With a roar , a male can advertise his body size ; both actual and exaggerated . Other vocalizations are made as well . Males may snort , possibly as an alarm call . " Purrs " are made before group movements . Females and infants may " caw " when under mild distress . When in more serious distress , like if an infant is in danger , females and sub @-@ adults will squeak or scream . " Tongue @-@ clicking " is made during mild aggression . In addition to vocalizations , the mantled guereza communicates with several different body postures and movements , displaying of fringe fur , facial expressions , and touches .

= = Conservation status = =

Because it can live in both dry and gallery forests and move on the ground , the mantled guereza is less threatened than many other colobine species . The IUCN lists it as Least Concern because " although locally threatened in parts of its range , this widespread species is not thought to be declining fast enough to place it in a higher category of threat . " However , some of the subspecies are classified under different categories . The Mt Uaraguess guereza , *C. g. percivali* , is listed as Endangered due to its small range and its risk from hunting , while the Dodinga Hills guereza , *C. g. dodingae* , the Djaffa Mountains guereza , *C. g. gallarum* , and the Mau Forest guereza , *C. g. matschiei* are all listed as Data Deficient .

The Dodinga Hills guereza hasn 't been recorded since the 1960s . Unlike most other primate species , the mantled guereza can survive habitat degradation and can even thrive in degraded forests . Sometimes , logging may increase the number of preferred food trees for the mantled guereza and it is more abundant in logged areas than unlogged ones . However , complete forest clearance causes dramatic declines in numbers . In Uganda complete forest clearings caused a decline of 50 % over eight years . The mantled guereza is also threatened by hunting for meat and its skin . Mantled guereza meat sells as bushmeat for \$ 4 ? 9 US . The skins have been sold for

fashion or in the tourist trade .