

= Hartebeest =

The hartebeest (pronounced / \ ?här @-@ t? @-@ ?b?st \ /) , also known as kongoni , is an African antelope , first described by the German zoologist Peter Simon Pallas in 1766 . Eight subspecies have been described , including two sometimes considered to be independent species . A large antelope , the hartebeest stands just over 1 m (3 @.@ 3 ft) at the shoulder , and has a typical head @-@ and @-@ body length of 200 to 250 cm (79 to 98 in) . The weight ranges from 100 to 200 kg (220 to 440 lb) . It has a particularly elongated forehead and oddly shaped horns , short neck , and pointed ears . Its legs , which often have black markings , are unusually long . The coat is generally short and shiny . Coat colour varies by the subspecies , from the sandy brown of the western hartebeest to the chocolate brown of the Swayne 's hartebeest . Both sexes of all subspecies have horns , with those of females being more slender . Horns can reach lengths of 45 ? 70 cm (18 ? 28 in) . Apart from its long face , the large chest and the sharply sloping back differentiate the hartebeest from other antelopes .

Gregarious animals , hartebeest form herds of 20 to 300 individuals . They are very alert and non @-@ aggressive . They are primarily grazers , with their diets consisting mainly of grasses . Mating in hartebeest takes place throughout the year with one or two peaks , and depends upon the subspecies and local factors . Both males and females reach sexual maturity at one to two years of age . Gestation is eight to nine months long , after which a single calf is born . Births usually peak in the dry season . The lifespan is 11 to 20 years in the wild and up to 19 years in captivity .

Inhabiting dry savannas and wooded grasslands , hartebeest often move to more arid places after rainfall . They have been reported from altitudes on Mount Kenya up to 4 @,@ 000 m (13 @,@ 000 ft) . The hartebeest was formerly widespread in Africa , but populations have undergone drastic decline due to habitat destruction , hunting , human settlement , and competition with livestock for food . Each of the eight subspecies of the hartebeest has a different conservation status . The Bubal hartebeest was declared extinct by the International Union for Conservation of Nature (IUCN) in 1994 . While the populations of the red hartebeest are on the rise , those of the Tora hartebeest , already Critically Endangered , are falling . The hartebeest is extinct in Algeria , Egypt , Lesotho , Libya , Morocco , Somalia , and Tunisia ; but has been introduced into Swaziland and Zimbabwe . It is a popular game animal due to its highly regarded meat .

= = Etymology = =

The vernacular name " hartebeest " (pronounced / \ ?här @-@ t? @-@ ?b?st \ /) could have originated from the obsolete Afrikaans word hertebeest , literally deer beast . The name was given by the Boers , based on the resemblance of the antelope to deer . The first use of the word " hartebeest " in South African literature was in Dutch colonial administrator Jan van Riebeeck 's journal Dagregister in 1660 . He wrote : " Meester Pieter ein hart @-@ beast geschooten hadde (Master Pieter [van Meerhoff] had shot one hartebeest) " . Another name for the hartebeest is kongoni , a Swahili word . Kongoni is often used to refer in particular to one of its subspecies ? Coke 's hartebeest .

= = Taxonomy = =

The scientific name of the hartebeest is *Alcelaphus buselaphus* . First described by German zoologist Peter Simon Pallas in 1766 , it is classified in the genus *Alcelaphus* and placed in the family Bovidae . In 1979 , palaeontologist Elisabeth Vrba supported *Sigmoceros* as a separate genus for Lichtenstein 's hartebeest , a kind of hartebeest , as she assumed it was related to *Connochaetes* (wildebeest) . She had analysed the skull characters of living and extinct species of antelope to make a cladogram , and argued that a wide skull linked Lichtenstein 's hartebeest with *Connochaetes* . However , this finding was not replicated by Alan W. Gentry of the Natural History Museum , who classified it as an independent species of *Alcelaphus* . Zoologists such as Jonathan Kingdon and Theodor Haltenorth considered it to be a subspecies of *A. buselaphus* . Vrba dissolved

the new genus in 1997 after reconsideration . An MtDNA analysis could find no evidence to support a separate genus for Lichtenstein 's hartebeest . It also showed the tribe Alcelaphini to be monophyletic , and discovered close affinity between the Alcelaphus and the sassabies (genus Damaliscus) ? both genetically and morphologically .

= = = Subspecies = = =

Eight subspecies are identified , of which two ? A. b. caama and A. b. lichtensteinii ? have been considered to be independent species . However , a 1999 genetic study by P. Arctander of the University of Copenhagen and colleagues , which sampled the control region of the mitochondrial DNA , found that these two formed a clade within A. buselaphus , and that recognising these as species would render A. buselaphus paraphyletic (an unnatural grouping) . The same study found A. b. major to be the most divergent , having branched off before the lineage split to give a combined caama / lichtensteinii lineage and another that gave rise to the remaining extant subspecies . Conversely a 2001 phylogenetic study , based on D ? loop and cytochrome b analysis by Øystein Flagstad (of the Norwegian Institute for Nature Research , Trondheim) and colleagues , found that the southern lineage of A. b. caama and A. lichtensteinii diverged earliest . Analysis of skull structure supports partition into three major divisions : A. b. buselaphus division (nominate , also including A. b. major division) , A. b. tora division (also including A. b. cokii and A. b. swaynei) and A. b. lelwel division . Another analysis of cytochrome b and D @-@ loop sequence data shows a notable affinity between the A. b. lelwel and A. b. tora divisions .

The eight subspecies , including the two controversial ones , are :

? A. b. buselaphus (Pallas , 1766) : Known as the Bubal hartebeest or northern hartebeest . Formerly occurred across northern Africa , from Morocco to Egypt . It was exterminated by the 1920s . It was declared extinct in 1994 by the International Union for the Conservation of Nature and Natural Resources (IUCN) .

A. b. caama (Saint @-@ Hilaire , 1803) : Known as the red hartebeest or Cape hartebeest . Formerly occurred in southern Angola ; northern and eastern savannahs of Namibia ; central , southern and southwestern Botswana ; Northern Cape , Eastern Cape , Western Cape , Free State , Northwest and Gauteng provinces and western KwaZulu @-@ Natal of South Africa . Presently has been eliminated from all these areas except Northern Cape , central and southwestern Botswana and Namibia . Major re @-@ introductions have taken place in these countries . The population of this hartebeest is on the rise .

A. b. cokii (Günther , 1884) : Known as Coke 's hartebeest or kongoni . Native to and confined within Kenya and northern Tanzania .

A. b. lelwel (Heuglin , 1877) : Known as the Lelwel hartebeest . Formerly found in northern and northeastern Democratic Republic of the Congo ; southeastern and southwestern Sudan ; and the northwestern extreme of Tanzania . Drastic population decrease since the 1980s has confined most individuals to protected areas inside and outside its range .

A. b. lichtensteinii (Peters , 1849) : Known as Lichtenstein 's hartebeest . Inhabits the miombo woodlands of eastern and southern Africa . It is native to Angola , the Democratic Republic of Congo , Malawi , Mozambique , South Africa , Tanzania , Zambia and Zimbabwe .

A. b. major (Blyth , 1869) : Known as the western hartebeest . Formerly occurred widely in Mali , Niger , Senegal , Gambia , Guinea @-@ Bissau , Guinea , Ivory Coast , Ghana , Nigeria , southwestern Chad , Cameroon , western Central African Republic and Benin . Nowadays it occurs in much lower numbers mainly in protected areas of these countries . It is probably extinct in Gambia .

A. b. swaynei (Sclater , 1892) : Known as Swayne 's hartebeest . Restricted to the southern Rift Valley in Ethiopia . It formerly occurred throughout the Rift Valley , and its range extended eastward into northwestern Somalia . It has disappeared from Somalia by 1930 . Its populations are very low and on the decline .

A. b. tora (Gray , 1873) : Known as the Tora hartebeest . Formerly occurred in northwestern Ethiopia and western and southwestern Eritrea . Its present status is unclear , though locals have

reported small numbers from these areas .

== Genetics and hybrids ==

In 2000 , a study scrutinised two major populations of the Swayne 's hartebeest , from the Senkele Wildlife Sanctuary and the Nechisar National Park , for mitochondrial (D @-@ loop) and nuclear (microsatellite) variability in an attempt to estimate the levels of genetic variation between the populations and within the subspecies . The results showed a remarkable differentiation between the two populations ; that from the Senkele Wildlife Sanctuary showed more genetic diversity than the one from the Nechisar National Park . Another revelation was that the translocation of the individuals from the Senkele Wildlife Sanctuary in 1974 had not made a significant contribution to the gene pool of the Nechisar National Park . Additionally , the Swayne hartebeest populations were compared with a large red hartebeest population , and both subspecies were found to have a high degree of genetic variation . The study advocated in situ conservation of the Swayne 's hartebeest and a renewed attempt at its translocation in order to conserve genetic diversity and increase its population size in both the protected areas .

The diploid number of chromosomes in the hartebeest is 40 . Hybrids are usually reported from areas where ranges of two subspecies overlap . Hybrids between the Lelwel and Tora hartebeest have been reported in eastern Sudan and western Ethiopia , in a stretch southward from the Blue Nile to about 9 ° N latitude . A study proved a male hybrid of the red hartebeest and the blesbok (*Damaliscus pygargus*) to be sterile . Sterility of the hybrid was attributed to difficulties in segregation during meiosis , indicated by azoospermia and a low number of germ cells in its seminiferous tubules .

There are three common cross @-@ breeds between the subspecies :

Alcelaphus lelwel x *cokii* : Known as the Kenya Highland hartebeest or the Laikipia hartebeest . It is a cross between the Lelwel and Coke 's hartebeest . This hybrid is lighter in colour and larger than Coke 's hartebeest . It is a light buff with reddish @-@ tawny upper parts , and the head is longer than in Coke 's hartebeest . Both sexes have horns , which are heavier as well as longer than those of the parents . It was formerly distributed throughout the western Kenyan highlands , between Lake Victoria and Mount Kenya , but is now believed to be restricted to the Lambwe Valley (south @-@ west Kenya) and Laikipia and nearby regions of west @-@ central Kenya .

Alcelaphus lelwel x *swaynei* : Also known as the Neumann 's hartebeest , named after traveller and hunter Arthur Henry Neumann . This is considered to be a cross between the Lelwel hartebeest and Swayne 's hartebeest . The face is longer than that of the Swayne 's hartebeest . The colour of the coat is a golden brown , paler towards the underparts . The chin has a hint of black and the tail ends in a black tuft . Both sexes have longer horns than the Swayne 's hartebeest . The horns grow in a wide " V " shape , unlike the wide bracket shape of Swayne 's hartebeest and the narrow " V " of Lelwel hartebeest , curving backward and slightly inward . It occurs in Ethiopia , in a small area to the east of Omo River and north of Lake Turkana , stretching north @-@ east of Lake Chew Bahir to near Lake Chamo .

The Jackson 's hartebeest does not have a clear taxonomic status . It is regarded as a hybrid between the Lelwel and Coke 's hartebeest . The African Antelope Database (1998) treats it as synonymous to the Lelwel hartebeest . From Lake Baringo to Mount Kenya , the Jackson 's hartebeest significantly resembles the Lelwel hartebeest , whereas from Lake Victoria to the southern part of the Rift Valley it tends to be more like the Coke 's hartebeest .

== Evolution ==

The genus *Alcelaphus* emerged about 4 @.@ 4 million years ago in a clade whose other members were *Damalops* , *Numidocapra* , *Rabaticeras* , *Megalotragus* , *Oreonagor* , and *Connochaetes* . An analysis using phylogeographic patterns within hartebeest populations suggested a possible origin of *Alcelaphus* in eastern Africa . *Alcelaphus* quickly radiated across the African savannas , replacing several previous forms (such as a relative of the *hirola*) . Flagstad and colleagues showed an early

split in the hartebeest populations into two distinct lineages around 0 @. @ 5 million years ago ? one to the north and the other to the south of the equator . The northern lineage further diverged into eastern and western lineages , nearly 0 @. @ 4 million years ago , most probably as a result of the expanding central African rainforest belt and subsequent contraction of savannah habitats during a period of global warming . The eastern lineage gave rise to the Coke 's , Swayne 's , Tora and Lelwel hartebeest ; and from the western lineage evolved the Bubal and western hartebeest . The southern lineage gave rise to Lichtenstein 's and red hartebeest . These two taxa are phylogenetically close , having diverged only 0 @. @ 2 million years ago . The study concluded that these major events throughout the hartebeest 's evolution are strongly related to climatic factors , and that there had been successive bursts of radiation from a more permanent population ? a refugium ? in eastern Africa ; this could be vital to understanding the evolutionary history of not only the hartebeest but also other mammals of the African savanna .

The earliest fossil record dates back to nearly 0 @. @ 7 million years ago . Fossils of the red hartebeest have been found in Elandsfontein , Cornelia (Free State) and Florisbad in South Africa , as well as in Kabwe in Zambia . In Israel , hartebeest remains have been found in northern Negev , Shephelah , Sharon Plain and Tel Lachish . This population of the hartebeest was originally limited to the open country of the southernmost regions of the southern Levant . It was probably hunted in Egypt , which affected the numbers in the Levant , and disconnected it from its main population in Africa .

= = Description = =

A large antelope with a particularly elongated forehead and oddly shaped horns , the hartebeest stands just over 1 m (3 @. @ 3 ft) at the shoulder , and has a typical head @- @ and @- @ body length of 200 to 250 cm (79 to 98 in) . The weight ranges from 100 to 200 kg (220 to 440 lb) . The tail , 40 to 60 cm (16 to 24 in) long , ends in a black tuft . The other distinctive features of the hartebeest are its long legs (often with black markings) , short neck , and pointed ears . A study correlated the size of hartebeest species to habitat productivity and rainfall . The western hartebeest is the largest subspecies , and has a characteristic white line between the eyes . The red hartebeest is also large , with a black forehead and a contrasting light band between the eyes . The large Lelwel hartebeest has dark stripes on the front of its legs . Coke 's hartebeest is moderately large , with a shorter forehead and longer tail in comparison to the other subspecies . Lichtenstein 's hartebeest is smaller , with dark stripes on the front of the legs , as in the Lelwel hartebeest . The Swayne 's hartebeest is smaller than the Tora hartebeest , but both have a shorter forehead and similar appearance .

Generally short and shiny , the coat varies in colour according to subspecies . The western hartebeest is a pale sandy @- @ brown , but the front of the legs are darker . The red hartebeest is a reddish @- @ brown , with a dark face . Black markings can be observed on the chin , the back of the neck , shoulders , hips and legs ; these are in sharp contrast with the broad white patches that mark its flanks and lower rump . The Lelwel hartebeest is a reddish tan . Coke 's hartebeest is reddish to tawny in the upper parts , but has relatively lighter legs and rump . Lichtenstein 's hartebeest is reddish brown , though the flanks are a lighter tan and the rump whitish . The Tora hartebeest is a dark reddish brown in the upper part of the body , the face , the forelegs and the rump , but the hindlegs and the underbelly are a yellowish white . The Swayne 's hartebeest is a rich chocolate brown with fine spots of white that are actually the white tips of its hairs . Its face is black save for the chocolate band below the eyes . The shoulders and upper part of the legs are black . Fine textured , the body hair of the hartebeest is about 25 mm (1 in) long . The hartebeest has preorbital glands (glands near the eyes) with a central duct , that secrete a dark sticky fluid in Coke 's and Lichtenstein 's hartebeest , and a colourless fluid in the Lelwel hartebeest .

Both sexes of all subspecies have horns , with those of females being more slender . Horns can reach lengths of 45 ? 70 cm (18 ? 28 in) ; the maximum horn length is 74 @. @ 9 cm (29 @. @ 5 in) , recorded from a Namibian red hartebeest . The horns of the western hartebeest are thick and appear U @- @ shaped from the front and Z @- @ shaped from the sides , growing backward at first

and then forward , ending with a sharp backward turn . The horns of the red and the Lelwel hartebeest are similar to those of the western hartebeest , but appear V @-@ shaped when viewed from the front . The Lichtenstein 's hartebeest has thick parallel ringed horns , with a flat base . Its horns are shorter than those of other subspecies , curving upward then sharply forward , followed by an inward turn at an angle of about 45 ° and a final backward turn . The horns of Swayne 's hartebeest are thin and shaped like parentheses , curving upward and then backward . The horns of the Tora hartebeest are particularly thin and spread out sideways , diverging more than in any other subspecies .

Apart from its long face , the large chest and the sharply sloping back differentiate the hartebeest from other antelopes . The hartebeest shares several physical traits with the sassabies (genus *Damaliscus*) , such as an elongated and narrow face , the shape of the horns , the pelage texture and colour , and the terminal tuft of the tail . The wildebeest have more specialised skull and horn features than the hartebeest . The hartebeest exhibits sexual dimorphism , but only slightly , as both sexes bear horns and have similar body masses . The degree of sexual dimorphism varies by subspecies . Males are 8 % heavier than females in Swayne 's and Lichtenstein 's hartebeest , and 23 % heavier in the red hartebeest . In one study , the highest dimorphism was found in skull weight . Another study concluded that the length of the breeding season is a good predictor of dimorphism in pedicle (the bony structures from which the horns grow) height and skull weight , and the best predictor of the horn circumference .

= = Ecology and behaviour = =

Active mainly during daytime , the hartebeest grazes in the early morning and late afternoon , and rests in shade around noon . Gregarious , the species forms herds of up to 300 individuals . Larger numbers gather in places with abundant grass . In 1963 , a congregation of 10 @, @ 000 animals was recorded on the plains near Sekoma Pan in Botswana . However , moving herds are not so cohesive , and tend to disperse frequently . The members of a herd can be divided into four groups : territorial adult males , non @-@ territorial adult males , young males , and the females with their young . The females form groups of five to 12 animals , with four generations of young in the group . Females fight for dominance over the herd . Sparring between males and females is common . At three or four years of age , the males can attempt to take over a territory and its female members . A resident male defends his territory and will fight if provoked . The male marks the border of his territory through defecation .

Hartebeest are remarkably alert and cautious animals with highly developed brains . Generally calm in nature , hartebeest can be ferocious when provoked . While feeding , one individual stays on the lookout for danger , often standing on a termite mound to see farther . At times of danger , the whole herd flees in a single file after an individual suddenly starts off . Adult hartebeest are preyed upon by lions , leopards , hyenas and wild dogs ; cheetahs and jackals target juveniles . Crocodiles may also prey on hartebeest .

The thin long legs of the hartebeest provide for a quick escape in an open habitat ; if attacked , the formidable horns are used to ward off the predator . The elevated position of the eyes enables the hartebeest to inspect its surroundings continuously even as it is grazing . The muzzle is designed so as to derive maximum nutrition from even a frugal diet . The horns are also used during fights among males for dominance in the breeding season ; the clash of the horns is loud enough that it can be heard from hundreds of metres away . The beginning of a fight is marked with a series of head movements and stances , as well as depositing droppings on dung piles . The opponents drop onto their knees and , after giving a hammer @-@ like blow , begin wrestling , their horns interlocking . One attempts to fling the head of the other to one side to stab the neck and shoulders with his horns . Fights are rarely serious , but can be fatal if they are .

Like the sassabies , hartebeest produce quiet quacking and grunting sounds . Juveniles tend to be more vocal than adults , and produce a quacking call when alarmed or pursued . The hartebeest uses defecation as an olfactory and visual display . Herds are generally sedentary , and tend to migrate only under adverse conditions such as natural calamities . The hartebeest is the least

migratory in the tribe Alcelaphini (which also includes wildebeest and sassabies) , and also consumes the least amount of water and has the lowest metabolic rate among the members of the tribe .

= = = Parasites and diseases = = =

Several parasites have been isolated from the hartebeest . These parasites regularly alternate between hartebeest and gazelles or wildebeest . Hartebeest can be infected with theileriosis due to *Rhipicephalus evertsi* and *Theileria* species . South of the Sahara , common parasites include *Loewioestrus variolosus* , *Geddoelstia cristata* and *G. hassleri* . The latter two species can cause serious diseases such as encephalitis . However , parasites are not always harmful ? 252 larvae were found in the head of one Zambian individual without any pathogenicity . Nematodes , cestodes , paramphistomes ; and the roundworm *Setaria labiatopapillosa* have also been isolated from the hartebeest . In 1931 , a red hartebeest in Gobabis (southwestern Africa) was infected with long , thin worms . These were named *Longistrongylus meyeri* after their collector , T. Meyer .

= = = Diet = = =

Hartebeest are primarily grazers , and their diets consist mostly of grasses . A study in the Nazinga Game Ranch in Burkina Faso found that the hartebeest 's skull structure eased the acquisition and chewing of highly fibrous foods . The hartebeest has much lower food intake than the other members of Alcelaphini . The long thin muzzle of the hartebeest assists in feeding on leaf blades of short grasses and nibbling off leaf sheaths from grass stems . In addition to this , it can derive nutritious food even from tall senile grasses . These adaptations of the hartebeest enable the animal to feed well even in the dry season , which is usually a difficult period for grazers . For instance , in comparison with the roan antelope , the hartebeest is better at procuring and chewing the scarce regrowth of perennial grasses at times when forage is least available . These unique abilities could have allowed the hartebeest to prevail over other animals millions of years ago , leading to its successful radiation in Africa .

Grasses generally comprise at least 80 percent of the hartebeest 's diet , but they account for over 95 percent of their food in the wet season , October to May . *Jasminum kerstingii* is part of the hartebeest 's diet at the start of the rainy season . Between seasons , they mainly feed on the culms of grasses . A study found that the hartebeest is able to digest a higher proportion of food than the topi and the wildebeest . In areas with scarce water , it can survive on melons , roots , and tubers .

In a study of grass selectivity among the wildebeest , zebra , and the Coke 's hartebeest , the hartebeest showed the highest selectivity . All animals preferred *Themeda triandra* over *Pennisetum mezianum* and *Digitaria macroblephara* . More grass species were eaten in the dry season than in the wet season .

= = = Reproduction = = =

Mating in hartebeest takes place throughout the year , with one or two peaks that can be influenced by the availability of food . Both males and females reach sexual maturity at one to two years of age . Reproduction varies by the subspecies and local factors . Mating takes place in the territories defended by a single male , mostly in open areas . The males may fight fiercely for dominance , following which the dominant male smells the female 's genitalia , and follows her if she is in oestrus . Sometimes a female in oestrus holds out her tail slightly to signal her receptivity , and the male tries to block the female 's way . She may eventually stand still and allow the male to mount her . Copulation is brief and is often repeated , sometimes twice or more in a minute . Any intruder at this time is chased away . In large herds , females often mate with several males .

Gestation is eight to nine months long , after which a single calf weighing about 9 kg (20 lb) is born . Births usually peak in the dry season , and take place in thickets ? unlike the wildebeest , which give birth in groups on the plains . Though calves can move about on their own shortly after birth ,

they usually lie in the open in close proximity of their mothers . The calf is weaned at four months , but young males stay with their mothers for two and a half years , longer than in other Alcelaphini . Often the mortality rate of male juveniles is high , as they have to face the aggression of territorial adult males and are also deprived of good forage by them . The lifespan is 11 to 20 years in the wild and up to 19 years in captivity .

= = Habitat = =

Hartebeest inhabit dry savannas , open plains and wooded grasslands , often moving into more arid places after rainfall . They are more tolerant of wooded areas than other Alcelaphini , and are often found on the edge of woodlands . They have been reported from altitudes on Mount Kenya up to 4 @, @ 000 m (13 @, @ 000 ft) . The red hartebeest is known to move across large areas , and females roam home ranges of over 1 @, @ 000 km² (390 sq mi) , with male territories 200 km² (77 sq mi) in size . Females in the Nairobi National Park (Kenya) have individual home ranges stretching over 3 @. @ 7 ? 5 @. @ 5 km² (1 @. @ 4 ? 2 @. @ 1 sq mi) , which are not particularly associated with any one female group . Average female home ranges are large enough to include 20 to 30 male territories .

= = Status and conservation = =

Each hartebeest subspecies is listed under a different conservation status by the IUCN . The species as a whole is classified as Least Concern by the IUCN . The hartebeest is extinct in Algeria , Egypt , Lesotho , Libya , Morocco , Somalia , and Tunisia .

The Bubal hartebeest has been declared extinct since 1994 . German explorer Heinrich Barth , in his works of 1857 , cites firearms and European intrusion among the reasons for the decrease in its numbers . It was extinct in Tunisia by the late 19th century . The last individual was shot in Missour (Algeria) in 1925 .

Coke 's hartebeest is listed as Least Concern . This species has been greatly affected by habitat destruction , and about 42 @, @ 000 Coke 's hartebeest occur today in Mara , Serengeti National Park , and Tarangire National Park in Tanzania and Tsavo East National Park in Kenya . The population is decreasing , and 70 % of the population lives in protected areas .

The Lelwel hartebeest is listed as Endangered , and numbers have declined greatly since the 1980s , when its population was over 285 @, @ 000 . It was formerly distributed mainly in the Central African Republic , Ethiopia , northern and northeastern Democratic Republic of Congo and southern Sudan . Fewer than 70 @, @ 000 individuals are left . Most of the population nowadays is found in Chad in the Salamat region and the Zakouma National Park (Chad) , the National Park population benefiting from improved protection and seeing an increase in population since the 1980s ; Manovo @-@ Gounda St. Floris National Park and Bamingui @-@ Bangoran National Park and Biosphere Reserve in the Central African Republic , where the populations have been falling ; Rumanyika Orugundu Game Reserve and Ibanda Game Reserve in Tanzania ; and Murchison Falls National Park in Uganda .

Lichtenstein 's hartebeest is listed as Least Concern , and occurs in protected areas such as the Selous Game Reserve and in the wild in southern and western Tanzania and Zambia .

The red hartebeest is listed as Least Concern . It is the most widespread , with increasing numbers after its reintroduction into protected and private areas . However , it has been extinct in Lesotho since the twentieth century . Its population is estimated to be over 130 @, @ 000 (as of 2008) , mostly in southern Africa . In Namibia , the largest population occurs in the Etosha National Park . A reintroduced population is flourishing in the Malolotja Nature Reserve (Swaziland) , outside its range . However , numbers have seen a sharp fall in southwestern Botswana .

The Tora hartebeest is listed as Critically Endangered ; the IUCN has ascertained that fewer than 250 mature individuals survive as of 2008 . They are possibly extinct in Sudan due to excessive hunting and agricultural expansion , but may still exist in smaller numbers in Eritrea and Ethiopia . There have been unconfirmed reports of sightings by locals of the Tora hartebeest southeast of the

Dinder National Park , from where it had disappeared before 1960 .

Swayne 's hartebeest is listed as Endangered , and is close to being Critically Endangered . The total population in 2008 was less than 600 , of which the mature specimens numbered within 250 . It is confined to four major protected areas : the Senkele Wildlife Sanctuary , Nechisar National Park , Awash National Park and Mazie National Park . The hartebeest in Senkele have to compete with the livestock of the Oromo people . A study in the Nechisar National Park during 2009 and 2010 found a considerable increase in the livestock of the Oromos (49 @. @ 9 % and 56 @. @ 5 % increase during 2006 and 2010 , respectively) , illegal resource exploitation , and habitat loss as major threats to the Swayne 's hartebeest populations there .

The western hartebeest is listed as Near Threatened . It has been eliminated from most of its range , including the southwestern savannas and Boucle du Baoulé National Park in Mali ; southwestern Niger ; southern Senegal ; Gambia ; Ivory Coast ; Burkina Faso . Small populations survive in Bafing National Park and the area bounded by Bamako , Bougouni and Sikasso in Mali ; Tamou Reserve in Niger ; Niokolo @- @ Koba National Park in Senegal ; Comoé National Park in Ivory Coast ; Diefoula forest and Nazinga Game Ranch in Burkina Faso ; Pendjari National Park in Benin ; and Bouba Njida , Bénoué , and Faro National Parks in Cameroon .

= = Relationship with humans = =

Hartebeest are popular game and trophy animals as they are prominently visible and hence easy to hunt . Pictorial as well as epigraphic evidence from Egypt suggests that in the Upper Palaeolithic age , Egyptians hunted hartebeest and domesticated them . The hartebeest was a prominent source of meat , but its economic significance was lower than that of gazelles and other desert species . However , from the beginning of the Neolithic age , hunting became less common and consequently the remains of the hartebeest from this period in Egypt , where it is now extinct , are rare .

In a study on the effect of place and sex on carcass characteristics , the average carcass weight of the male red hartebeest was 79 @. @ 3 kg (175 lb) and that of females was 56 kg (123 lb) . The meat of the animals from Qua @- @ Qua region had the highest lipid content ? 1 @. @ 3 g (0 @. @ 046 oz) per 100 g (3 @. @ 5 oz) of meat . Negligible differences were found in the concentrations of individual fatty acids , amino acids , and minerals . The study considered hartebeest meat to be healthy , as the ratio of polyunsaturated to saturated fatty acids was 0 @. @ 78 , slightly more than the recommended 0 @. @ 7 .