



Common Wildebeest, *Connochaetes taurinus*

Legal Status: The common wildebeest is listed by the 2000 IUCN Red List as Lower Risk—Conservation Dependent. It is not listed by CITES and is not protected by the U.S. Endangered Species Act. The 1998 IUCN African Antelope Database estimated the current wild population of common wildebeest to be 1,223,420 but largely declining.

Description: The common wildebeest is a large (163-260 kg, depending on subspecies and gender), high-shouldered antelope with a broad muzzle and cowlike horns. Their broad muzzles are specially adapted for close, rapid bulk feeding of short grasses. Like other alcelaphines, the wildebeest body is sloped down from the shoulders to the rump. Wildebeest have short glossy coats; the color can be geographically, individually and species-variable, from slate gray to dark brown. They have black faces, manes and tails as



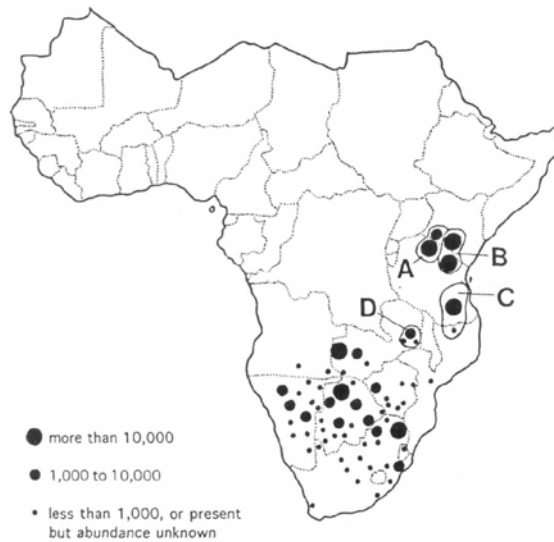
well as dark vertical stripes. Wildebeest have hoof glands in the forefeet and preorbital glands, which are more pronounced in the males. In spite of having legs that are short relative to other alcelaphines, the gnu is capable of a fast gallop, up to 80 kph.

Activity: Wildebeest exhibit early-morning and late-afternoon grazing peaks. They are very water-dependent, needing to drink almost daily. This limits them to pastures that are within commuting distance to water sources, generally 10-15 km. They will drink during the heat of the day when predators are less active. Depending on their age and size, wildebeest are vulnerable to predation by spotted hyenas, cheetahs, leopards, wild dogs, and lions. Gnu are an important stable for these predator species, as well as for Nile crocodiles, which opportunistically take wildebeest as they cross rivers during their annual migrations.



There are permanently resident and some almost permanently nomadic populations of wildebeest, and all gradations in between. The small, resident populations may consist of about eight cows with calves, while large migratory populations may number in the thousands. It is not known why some populations in the same region and under the same conditions are resident and some are nomadic. At night, aggregated wildebeest rest in linear bedding formation containing anywhere from a few dozen to several thousand animals. The migration of the Serengeti wildebeest is one of the best-known and most studied migrations in Africa. Almost a million wildebeest make the seasonal movement from their wet season range on the open plains to their dry season refuge in the woodlands, a round trip of about 400 km. The pattern of movement can vary somewhat from year to year depending on rainfall and the resultant food supply. It is common for up to several hundred thousand Thomson's gazelle and up to a quarter of a million zebra to make the journey with the wildebeest.

Range and Habitat: Wildebeest dominate the plains and acacia savannas of eastern Africa, with their southern distribution stopping at the Orange River. They occur on extensive short-grass plains and bordering acacia savannas of Botswana, Namibia, southeastern Angola, and southwestern Zambia, as well as in the major river valleys of Mozambique and southeastern Tanzania. They occur in the largest numbers on the great plains of southern Kenya and northern Tanzania which make up the Serengeti ecosystem. There is an isolated population of Cookson's wildebeest in Zambia's Luangwa Valley. Wildebeest favor plains covered by colonial grasses and are generally absent from temperate and montane grasslands.



Current Population Estimates and Distribution:

The census figures below are taken from the 1998 IUCN African Antelope Database:

1. *Connochaetes taurinus mearnsi* (Western white-bearded wildebeest)—938,190. Kenya, Tanzania.
2. *Connochaetes t. albojubatus* (Eastern white-bearded wildebeest)—72,420. Kenya, Tanzania.
3. *Connochaetes t. taurinus* (Blue or brindled wildebeest)—127,510. Angola, Zambia, Mozambique, Namibia, Botswana, Zimbabwe, South Africa, Swaziland.
4. *Connochaetes t. johnstoni* (Nyassa wildebeest)—73,450. Tanzania, Malawi, Mozambique.
5. *Connochaetes t. cooksoni* (Cookson's wildebeest)—11,850. Zambia.

Husbandry and Diet: The staff at the San Diego Wild Animal Park has compiled a comprehensive husbandry manual, the AZA Antelope Taxon Advisory Group Husbandry Manual for Alcelaphinae. This manual is available in electronic form and can be obtained by contacting Randy Rieches, Curator of Mammals, rieches@sandiegozoo.org.

Wildebeest have successfully been exhibited and propagated in zoological facilities for many decades. Depending on the size of the enclosure and the number of specimens, they have been successfully displayed in multi-species exhibits with species such as: roan antelope, eland, sitatunga, fringe-eared oryx, scimitar-horned oryx, impala, waterbuck, lechwe, Roosevelt's and Grant's gazelle, slender-horned gazelle, Thomson's gazelle, topi, kob, giraffe, cape buffalo, black rhino, zebra, pygmy hippo, addax, greater kudu, white rhino, ankole, blackbuck, aoudad, deer, llama, capybara, and a variety of avian species, including ostrich, waterfowl, storks, cranes, flamingos and waterfowl (AZA Antelope Taxon Advisory Group Mixed Species Resource Manual, 1998). Common

wildebeest have been known to hybridize with black or white-tailed gnu.

Wildebeest can tolerate a wide range of temperatures and can be kept outside year-round in many parts of North America. Inside quarters with heat should be available if the outside temperature falls below 45° F. Stall space requirements are a minimum of 70 ft² per animal, larger if the animal is to be confined for an extended period of time. Wildebeest should not be housed together in close holding quarters, as they can be expected to fight. Outside exhibit space is a minimum of 600 ft² for one animal, 800 ft² for two and 200 ft² for each additional animal. Barriers should be a minimum of 6', preferably 8'. Regulations on space requirements and barriers should be consulted as they vary some from state to state.

Fresh, clean water must be available at all times, as wildebeest are very water-dependent and must drink daily. A nutritionally complete diet consisting of both hay and concentrates should be provided daily. More detailed diet information is available in the AZA Antelope Taxon Advisory Group Husbandry Manual for Alcelaphinae.

The most serious concern for wildebeest in terms of infectious diseases is malignant catarrhal fever (MCF). Although wildebeest do not exhibit clinical signs of this disease, they are carriers of the herpesvirus causing the African form of MCF. Transmission of this disease from wildebeest to cattle in Africa has been temporally associated with the calving of the wildebeest. Should the disease be transmitted to any Asian or European ungulates, the resulting infection can be fatal. All wildebeest should be tested for MCF prior to being shipped to another facility and prior to being considered for multi-species exhibits. They should not be housed with or near non-African hoofed stock.

Wildebeest can be extremely nervous and flighty when separated from familiar surroundings or conspecifics and are prone to self-trauma in new and/or transport situations. Common problems seen in this species are fractures, gore wounds, and lacerations. They are prone to the common parasites that affect other ungulates, including cestodes, nematodes, strongyles, haemonchus and coccidia. Restraint of wildebeest is generally by chemical immobilization, although sub-adult animals can be handled in a drop-chute tamer device.

Social Organization: Wildebeest are highly gregarious and exhibit a typically alcelaphine territorial system. Herds consist of adult and sub-adult cows, juvenile cows of both sexes and sub-adult bulls. Herd size can vary from around ten in stationary herds to over a thousand in nomadic herds. Associated females establish dominance hierarchies. Males are cut out of the herd as yearlings; rejection by their own mothers and by other females with new calves triggers the process but the territorial males do the driving out. Bulls may become



territorial at 4-5 years of age but territorial bulls comprise less than half of the total male population. Non-territorial bulls form bachelor herds and are often relegated to marginal habitat.

Reproduction: Wildebeest exhibit a unique breeding strategy that has been referred to as "breeding synchrony." Some 80-90% of the calves are dropped during a three-week birth peak following a period of active labor of about an hour and a gestation of about 260 days. This is thought to be a calculated sacrifice, designed to restrict most of the predator-induced mortality to the short post-natal feeble period of the calves. Wildebeest calves are extremely precocial, getting to their feet and seeking the udder in an average of six minutes post-parturition. They are able to run and keep up with the herd in a matter of hours. Imprinting occurs at first suckling and cow-calf recognition is via scent.



Mothers with new calves tend to associate in nursery herds and may congregate in hundreds on calving grounds. The timing of calving and rutting occurs under favorable conditions, with the rut coming at the end of the rains when the animals are in top condition and the calving occurring at the beginning of the period of most reliable rainfall.

In the North American captive population, females have given birth for the first time as young as one and a half years of age. The oldest recorded dam to have given birth was sixteen and a half years of age. The median age of females at first reproduction is five years, 11 months. There are dams in the captive population that have had as many as eleven calves. While the captive population exhibits birth peaks in June and July, the "breeding synchrony" seen in wildebeest in the wild has not been strictly replicated in captivity.

Captive History: The earliest known wildebeest in North America were a wild-caught pair that came to the Bronx Zoo in 1903 via the dealer Hagenbeck. These animals apparently did not breed. A wild-caught pair arrived at the Milwaukee Zoo late in 1912, and although the male lived there until 1925 and the female until 1931, they also appear not to have bred. The National Zoological Park imported a wild-caught female in 1922 and another 1.2 captured during the Smithsonian-Chrysler Expedition arrived in 1926. From this group came the first recorded captive wildebeest birth in North America, a male calf born in 1930. Wild-caught animals imported by the Bronx, Brookfield and St. Louis Zoos in the early to mid 1930's also produced offspring.

In 1941, a captive-born pair of wildebeest was sent from the Brookfield Zoo to the San Diego Zoo, where another successful breeding herd was established. From the late 1950's

through the mid-seventies, there was a huge influx of wildebeest (more than fifty combined specimens of *albojubatus* and *taurinus*) brought in from the wild by a number of zoos. Over the years, there were prolific breeding programs at the Brookfield Zoo, National Zoo, Busch Gardens Tampa, San Diego Zoo and Wild Animal Park, Denver Zoo, San Antonio Zoo, Winston Safari, Paramount King's Dominion and Fossil Rim Wildlife Center.

Zoo Programs: The captive management of common wildebeest falls under the purview of the AZA Antelope Taxon Advisory Group, which has designated them as a display/education/research species. A North American Regional Studbook for Common Wildebeest is maintained and a Population Management Plan is being developed for this species. There are currently about 100 common wildebeest managed in U.S. facilities that report to the Studbook Keeper; there are probably an equal or greater number being held in private hands. According to ISIS figures current as of October, 2000, there are 150 captive common wildebeest in the European Region.

Conservation: Although the wild population of common wildebeest is close to 1,250,000, their long-term future is by no means assured. The biggest threat to wild wildebeest populations is continued loss of habitat due to the expansion of human settlements. The Serengeti ecosystem represents the world's greatest remaining aggregation of large land mammals. The reduction or loss of the Serengeti's migratory corridors would prove catastrophic for species such as the wildebeest, zebra and Thomson's gazelle.



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