Oryx

Antelopes under pressure: Ethiopia’s Swayne’s hartebeest in peril

By Misganaw Tamrat, Anagaw Atickem & Nils Chr. Stenseth, 28th April 2022

Swayne’s hartebeest *Alcelaphus buselaphus swaynei* is one of the many African antelope species that has experienced a drastic population decline during the last few decades. Until the early 1990s, Swayne’s hartebeests were abundant in the open grasslands of Ethiopia, Somalia, and Djibouti. However, the population declined as a result of the rinderpest virus. As the human population increased, more and more of the grassland was converted into agriculture or used for livestock grazing. Currently, the subspecies is found only in Ethiopia and in 2017, it was categorized as Endangered on the IUCN Red List.

Swayne’s hartebeest in Maze National Park. Photo: Misganaw Tamrat

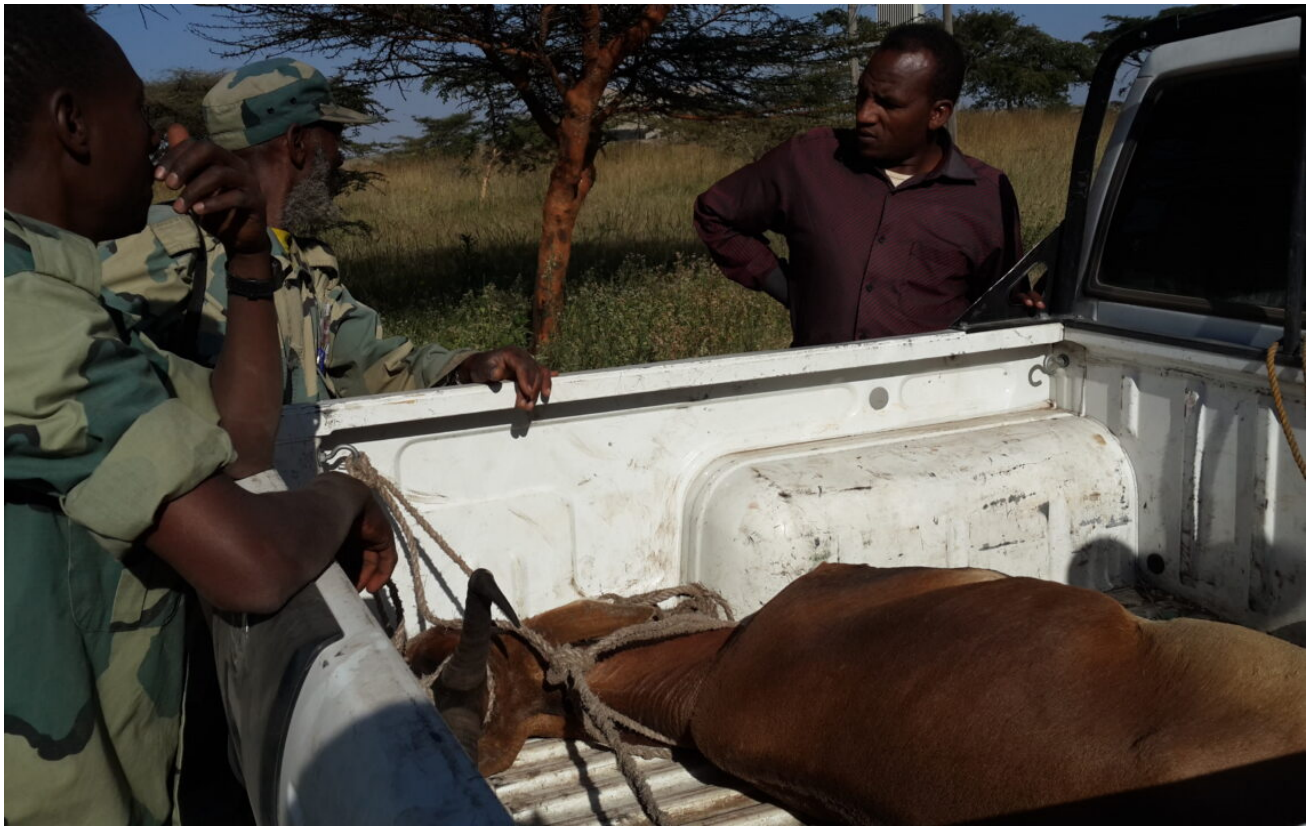
We conducted a nationwide survey and population estimate of Swayne’s hartebeest , confirming that it is restricted to two localities: Senkele Swayne’s Hartebeest Sanctuary and Maze National

Park, with estimated populations of 521 and 1,095 individuals, respectively. The global population is therefore only 1,616 individuals. Our study of the species' genetic variability, based on mitochondrial DNA, revealed no significant genetic population differentiation between the two subpopulations.

Our research also revealed that the number of livestock within the two protected areas surpasses the number of hartebeests more the 100 fold. Besides exploitative and interference competition with livestock, their presence can also be a source of disease transmission. Given this situation, possible conservation measures for the hartebeest should focus on the protection of the grassland habitat from livestock grazing and other anthropogenic factors.

Swayne's hartebeest in Maze National Park,. Photo: Misganaw Tamrat

A second important conservation measure would be the translocations of some of the remaining individuals to new locations, in particular as Senkele Swayne's Hartebeest Sanctuary is only 55 km^2 area surrounded by human settlements. With no water sources within the sanctuary and high livestock pressure, the carrying capacity of the area is most likely already at its limit. Translocation of some individuals to other suitable areas may be considered in the future. However, the failure of the translocation of 113 and 90 Swayne's hartebeests to Nechisar and Awash National Park, respectively, in 1974 from Senkele Swayne's Hartebeest Sanctuary is an important lesson for future translocation projects. In Awash National Park only 12 individuals survived 2 years after the translocation. Those translocated to Nechisar National Park showed a slight increase in numbers within the first 2 years but then slowly decreased to only one remaining male in 2017. Given the critical situation of Swayne's hartebeest in Ethiopia, it is critical that we take care of the remaining population.



Scouts bring back Swayne’s hartebeest found exhausted 25 km away from the Senkelle Swayne’s Hartebeest Sanctuary during the dry season.

The article Swayne’s hartebeest in Ethiopia: population estimate, genetic variability and competition with livestock is available in *Oryx—The International Journal of Conservation.*

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Nils Chr. Stenseth is professor of ecology and evolution at the University of Oslo, and adjunct professor at Addis Ababa University. Stenseth has worked on a broad spectrum of population-biological topics, including how wildlife populations are being affected by anthropogenic factors.