

The potential expansion of the Zululand population itself is limited to a maximum of about 90 in the Eastern Shores Nature Reserve (St Lucia), 35 in Itala, and 6 in Weenen; about 130 in all. Forestry permission is still needed for the first introduction.

"Carrying capacity" is a difficult figure to calculate. The ecological carrying capacity of an area is assumed to have been reached when negative feed-backs (from food and social pressures) result in a stable population size. Black rhinos indicate clearly when they have reached carrying capacity - among other things, calves have an increased mortality rate, calving intervals are increased, the age at puberty is delayed, and there is intensified aggression among adults.

There is very little competition between other browsers and the black rhino, but in Etosha there is competition between rhinos and elephants.

Kruger National Park (Hall-Martin):

When the Kruger National Park was proclaimed in 1926 only 4 or 5 black rhino remained, and by 1940 the species was extinct. Reintroduction began in 1971 with 20 animals from Zululand, and 12 in 1972 from Rhodesia (now Zimbabwe). By 1982, 70 animals had been moved to the Kruger National Park, including two in 1981 from Addo (these two had originated in Zululand and were both minor). The sex ratio of these introductions was 38 males to 32 females. Animals have moved up to 70 km from their release point, with subadult males moving the furthest.

Recruitment rate is about 9% p.a., and there is on average one immature animal with every adult female. The population comprises about 39% immatures - this is a "young" and expanding population. By end-1983, the total population was estimated at 104 (Hitchins had estimated 113). At a density of 0,19 animals per sq.km, the Kruger National Park could hold 3 500 animals in suitable habitat; the population west of Skukuza is "fairly dense" at 0,19 per sq. km. The Kruger National Park and two reserves in S.W.A. (Etosha could carry 1 000 and Bushmanland 500) are the only places in the R.S.A. and S.W.A. that could therefore hold a genetically viable population if this is one holding a minimum of 500 animals.

The Kruger National Park rhinos are genetically "mixed" as they originate from Zululand (mostly) and Zimbabwe, in the proportion of 57 to 13 of the initial introductions. However, once upon a time the rhinos of these two areas were genetically continuous and so a mixing in the 1970's in a third area is not foolish. [In fact, artificially keeping them apart would rather be considered foolish - Collinson].