

Activity area establishment of a subadult white rhino (*Ceratotherium simum* Burchell, 1817) male after release into a black rhino (*Diceros bicornis* Linnaeus, 1758) area in Namibia

GÖTTERT THOMAS

Museum für Naturkunde, Leibniz Institute for Research on Evolution and Biodiversity at the Humboldt University Berlin, Invalidenstraße 43,
10115 Berlin GERMANY; thomas.goetttert@mfn-berlin.de

Post-release monitoring of the spatial patterns of translocated rhinos provides important information regarding future management decisions. This abstract deals with the post-translocation establishment of activity areas of a single subadult white rhino (*Ceratotherium simum* Burchell, 1817) male that was released into an area, in which a six individual black rhino (*Diceros bicornis* Linnaeus, 1758) starter group has recently established home ranges and social organisation. The study was carried out in a fenced region, 368 km² in size and directly adjacent to the south-western border of the Etosha National Park in Namibia. The area consists of two geological formations: Etosha calcrete and Otavi dolomite. No rhinos were present in the area before. A mosaic of suitable habitat for black rhinos (Otavi woodland, Etosha mixed low trees and mopane shrub) and white rhinos (Etosha plains) can be found over the entire area. The study period for black rhinos was two years (March 2005 – February 2007). The white rhino was released in June 2006 and then tracked until February 2007. Data collection was based on VHF radio telemetry. Likewise to the black rhino group, the white rhino's activity areas included both geological formations of the study area. The total activity area of the white rhino (n = 81 fixes, eight months period) was 196.3 km² (100 % MCP), 135.1 km² (95 % Kernel) and 13.2 km² (50 % Kernel). Since comparing the position of this area with the black rhino group (pooled data, n = 268 fixes) over the same period (June 2006 – February 2007) reveals no (50 % Kernel) or little (95 % Kernel, Lazo's similarity index: 0.15) overlap, it appears that inter-specific communication could have occurred. Although the data collection period for the white rhino was too short to investigate seasonal effects, temporary changes in activity area establishment were still found by using the area-observation curve method, and sufficient numbers of fixes for Kernel analysis were gathered for three differing periods of temporary space use (n = 21 – 33 fixes, one to five months periods, 95 % Kernel: 64.1 km² - 123.9 km², 50 % Kernel: 5.6 km² – 38.5 km²). The white rhino successively shifted its activity area eastwards – away from the black rhino area. The unnatural situation of one individual roaming the area may have influenced the spacing strategy of the studied white rhino.