Research on site in Park Welgevonden, Limpopo, South Africa in 2008-2009
By Dennis Huele

The waterberg region, South Africa, is an area with nutrient poor vegetation and soils of moderate to low fertility. The landscape consists of mountainous woodland cut by deep ravines, with some scattered grassy plains. To enhance the capability of grazing herbivores to survive the dry winters, nutrient 'hotspots' were created by mowing and fertilizing plots of different sizes in Welgevonden private game reserve (33.000 hectares), artificially creating so called grazing lawns. We expected to see high utilization of the plots by grazing ungulates, not only due to the higher nutrient levels and improved sward structure of the vegetation, but also due to the better overview these plots offer of the surroundings, making it easier to detect approaching predators.
As expected, sward structure of the grasses improved on the plots that were mown either two times a year or three times a year (better stem to leaf ratios) and lawn forming grasses such as *Cyanodon dactylon* were significantly more abundant. Faecal counts indicated a high utilization of these plots especially by wildebeest and impala. Also, these faecal counts showed that especially blue wildebeest were utilizing the centers of the largest plots (25x25, 50x50 and 100x100 m) more intensively than the edges, suggesting that the mown plots were also used for predator evasion. No effect of different fertilization substances (phosphorus and nitrogen) could be detected: all plots were used equally intensive, whether they were fertilized or not.
Overall we could conclude that mowing significantly affected vegetation composition and sward structure, as well as the grazing behaviour of large ungulates.