

Appendix A. Details regarding empirical trajectory used

All example analyses were run on a single trajectory from zebra AG256, a free-ranging female zebra collared in Etosha National Park, Namibia. Data were collected from AG256 from October 2009 through August 2010 in an intentionally irregular manner (two fixes separated by one minute, then a third 19 minutes after that). Before analysis, this trajectory was regularized using the `adehabitatLT` package such that only the first and third fix of each set remained, thereby resulting in relocations every 20 minutes. Additionally the trajectory was cut to include only the 10800 points from February through June 2010 to limit the dataset size for rapid analysis and because this time period corresponds with the wet season in Namibia. For the purpose of the home range analyses, this trajectory was further trimmed to only the 4247 points from February 15, 2010 - April 15, 2010 while AG256 remained in the western part of her range.