

Additional file 4: How to define the ellipse of the potential path area

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At each step, and for each individual, an ellipse is drawn; two consecutive records are used as focal points and the length of the major axis of the ellipse is computed as $D = \phi \times \Delta t$ (ϕ is the maximum velocity of the individual and Δt is the time difference between the consecutive records). The area of the ellipse represents the potential path area [1].

References

- [1] Long, J. A. and Nelson, T. A. (2012). Time geography and wildlife home range delineation. Journal of Wildlife Management, 76(2):407–413.