### Margenau, L. L. S., M. J. Cherry, K. V. Miller, E. P. Garrison, and R. B. Chandler. Monitoring partially-marked populations with camera and telemetry data. Ecological Applications. *In Review*.

### data Folder

### We provide the camera and telemetry data for adult female white-tailed deer on the Bear Island Unit of Big Cypress National Preserve collected 2015-2017. This represents a subset (one study area) of the entire dataset used for analysis throughout the manuscript.

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### File list

marked\_data.RData

unmarked\_data.RData

trap\_locations.csv

**Description**

marked\_data.RData - Camera and telemetry data for ear-tagged and GPS-collared female white-tailed deer on the Bear Island Unit camera trapping array. Use this data in conjunction with the marked\_jags\_AR1.R file in marked folder.

Variable descriptions and structure:

* histories4D - 4-dimensional detection histories (present/absent) for each marked individual
  + array[Deer ID, trap, secondary occasion, primary period]
* x - Trap locations for the specific camera grid in UTM coordinate system (m)
  + array[UTME, UTMN]
* telemetry.deer - 4-dimensional telemetry locations for marked deer
  + array[Deer ID, telemetry occasion, coordinates, primary period]
* nTelemLocs - Number of telemetry locations for each marked individual during each primary period
  + matrix(Deer ID, primary period)
* t.length - Number of primary occasions in which telemetry data is available for each individual
  + vector
* start - The first primary period for the model based on starting primary period with marked deer
* end - The last primary period for the model based on the last primary period with marked deer
* t.in - Conversion of a ragged list to a matrix. Each row contains the sequential fortnight periods an individual deer was available on the camera grid for sampling. The first column indicates when individual entered the camera array.
  + matrix[Deer ID, telemetry locations]
* oper3D - Camera operational status matrix. 1 indicates cameras was operational, 0 indicates the camera wasn't available.
  + array[trap, secondary occasion, primary period]

unmarked\_data.RData - Camera data for female white-tailed deer on the Bear Island Unit camera trapping array. Use this data in conjunction with the unmarked\_nimble\_AR1.R file in unmarked folder.

Variable descriptions and structure:

* n - Detection histories (detected/not detected) counts of female deer
  + matrix[trap, sampling occasions]
* n3D - Split n into 3D array for modeling fortnights
  + array[trap, secondary sampling occasion, primary sampling occasion]
* prior\_means - Detection parameter priors from marked posterior means
  + matrix[primary sampling occasion, (sigma, lam0)]]
* prior\_varcov - Detection parameter prior variance-covariance matrices from the marked posterior means
  + array[primary sampling occasion, (sigma, lam0), (sigma, lam0)]
* x - Trap locations for the specific camera grid in UTM coordinate system (m)
  + array[UTME, UTMN]
* biweek – fortnight periods
  + vector
* oper - Camera operational status matrix. 1 indicates cameras was operational, 0 indicates the camera wasn't available.
  + array[trap, secondary occasion, primary period]

trap\_locations.csv – Camera locations. Use this data in conjunction with the sim\_data.R file in supp folder.