**AMAPPS Segmentation Instructions**

09/30/2016

This document contains instructions for segmenting data in the Atlantic Coast Surveys Database.

Latest R version: 3.3.1

Required packages and latest versions:

dplyr: 0.5.0

geosphere: 1.5-5

maptools: 0.8-39

rgeos: 0.3-20

tibble: 1.2

tidyr: 0.6.0

zoo: 1.7-13

Required files and locations:

1. Q:/Kyle\_Working\_Folder/Segmentation/Atlantic\_Coast\_Surveys/Data/AMAPPS.RData

* Contains observation table and track table in form of R objects ‘observations’ and ‘tracks’
* Extracted from ACS database on 08/12/16
* Required variables:
  1. tracks: **SurveyNbr, Transect, Replicate, Obs, Year, Month, Day, Sec, Lat, Long, Type, Condition, Seat**
  2. observations: **SurveyNbr, Transect, Replicate, Obs, Year, Month, Day, Sec, Lat, Long, Species, FlockSize, Condition**

1. R script: Q:/Kyle\_Working\_Folder/Segmentation/ Atlantic\_Coast\_Surveys/seg\_acs\_new.R

Instructions:

1. Open script and change path name for item 1 above as necessary.
2. Run function (approx. run time: 7 min)

e.g., seg.amapps = segmentAMAPPS(observations, tracks)

* See comments in script header for instructions on optional arguments

This produces a wide-form data frame with column names: **SurveyNbr, Transect, Replicate, Obs, Seat, Year, Month, Condition, seg\_num, seg\_dist, mid\_long, mid\_lat**, plus a column for each species