Tagbase Code Library

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Purpose: Develop a library of R functions to manipulate, analyze, and visualize data from tagbase

My approach to this is currently to leave PFRP with some basic functionality and to simplify the analysis learning curve for students, and those who are learning about electronic tag data analysis. The most common question I get is about how to do geolocation (trackit, ukfsst). The biggest obstacle to this is getting data in the correct format to be read by the functions prepit() and ukfsst(). I have written a function so a user can use a PTT to number to extract and format the data for prepit. I plan to modify a function I wrote a while back to create nice plots of the resulting geolocation tracks. This is currently based on trackit outputs, but I should probably add the capacity to plot ukfsst outputs too. I don’t find the basic plotting ability of trackit & ukfsst to be sufficient.

Another common request is for plotting depth & temperature time-series data (PDT and time at depth/temperature summaries). I have created a function to plot PDT’s, including an akima() interpolation if desired. I’m stuck on getting the dates on the x-axis at the moment, but the function is almost complete. I also have an old function for time-at-temp/depth time-series plots which I’ll modify for this library too. Overall, it seems worth having some good summary plotting capability that can be used to visualize time-series patterns.

It seems to be worth planning upfront how we want to structure things. Perhaps we can base the development of the library around classes, where the objective of various functions is to end up with common classes that simplify analysis and plotting. The package adehabitat might be a useful model for how to use classes to structure things.