Update Log - Oklahoma Fishery Analysis Application

Main App

1. 9/3/18 - Dray
   1. Problem: catch curve was incorrectly calculating mortality. I had calculated the natural log of the catch before putting data into catchCurve() function (FSA). Turns out catchCurve() calculates natural log on its own too…so essentially, it was taking a log of a log…no wonder why they were always such low mortality rates.
   2. Fixed: I reworked code to account for this. Just removed step where natural log of frequency was previously calculated and renamed a few things in both the catch curve plot function and the mortality table function.
2. 9/3/18 – Dray
   1. Problem: Age database needed updated gear codes – also went through age data validation code
   2. Fixed: compiledagedata.csv was updated with new gear codes
   3. Note: All fields in compiledagedata.csv should comply with data validation rules
      1. Exception: Day field – a few records (very small handful) had “.” for Day. I deemed this okay, but Validation App makes it a required field from now on.
3. 9/30/18 – Dray
   1. Problem: Main app wouldn’t work with imported data that had periods in the TL\_mm or Wt\_g fields (R reads this field as a factor).
   2. Fixed: Wrote functions that change any periods to NA, then changes TL\_mm and Wt\_g fields to numeric.
4. 11/15/18 – Dray
   1. Problem: Change simple CV to RSE in CPUE tables. Also change calculation method for N RSE(25) and RSE(40)
   2. Fixed: What ODWC actually needed was RSE. Still not a completely correct method, but better than nothing. Methods for calculating N RSE(25) and N RSE(40) were incorrect. Changed to method used by Dumont and Schlechte (2004)… N = (CV/RSE)2
5. 11/15/18 – Dray
   1. Problem: Reference R2 did not account for “weighted” regression. Ogle’s catchcurve function does this automatically as a TRUE/FALSE argument, so I didn’t know how to do this specifically. R2 value isn’t included in Ogle’s functions, so when calculating it, I had to do the weighted regression manually as well.
   2. Fixed: Figured out how to do this…now calculates weights in first linear model and runs a second linear model with the weights.
6. 11/15/18 – Dray
   1. Problem: Including sex-specificity for Paddlefish
   2. Fixed: modified species codes in speciesinfo.csv…320 for Paddlefish (all), 320.1 for Paddlefish (male), 320.2 for Paddlefish (female). Also modified the WSnames.csv (links ODWC species codes with species names needed for relative weight calculations in FSA functions) to account for new sex-specific codes (each sex has different relative weight calculation, including one for an overall paddlefish)…Brown and Murphy 1993. Also updated gabelhousenames.csv to include all 3 paddlefish spp codes (used in FSA functions to reference PSD groupings for species).
7. 11/15/18 – Dray
   1. Fixed: Updated Total Effort Table to use Gear.Length (minutes) for electrofishing samples (consistent with what is used for CPUE). Also fixed the error produced when uploading an independent sample (one of the functions was referencing a selectize input from the first tab.
8. 3/2/2020 - Dan
   1. Fixed: update to Shiny package broke renderDataTable function.  Research into this indicates this function is being depreciated and the same function from the DT package is to be used instead. I added DT package to the app and changed the code to specifically call DT::renderDataTable to make tables.
9. 1/17/2021 – Dan
   1. Problem: CPUE by PSD size class often add to more than the total CPUE…typically when there were sites with Species.Code=98 (no fish in sample). Upon investigating, we originally had deleted any row that did not have a Gabelhouse.Name. This means that any sample that either had no fish, or only caught fish that do not have PSD size classes defined would be removed, so when the addZeroCatch function (which is being depreciated) was run, the sample was not there to receive zeros. This was necessary as if you run psdAdd() on spp with missing species names, there was a bug that added additional rows and made it so the list of PSD names and the original file do not have the same number of rows (causes cbind or mutate to throw an error due to mismatch).
   2. Solution: I contacted Derek Ogle about the bug and he quickly rebuilt psdAdd so it no longer had this behavior. I then rebuilt the code using a dplyr approach and waited to throw out the spp that do not have PSD size classes until after using complete() (which is the preferred approach over addZeroCatch). I also added logic to find fish where no TL data was present and deleted these also so they do not appear in the table (they may have a total CPUE, but if no TL’s were taken, can’t meaningfully express this in PSD-based CPUEs). I also allowed trophy size to be in the table. The sizes sort fine using dplyr verbs instead of the old approach. At some point we should update the total CPUE table to include trophy size also.
10. 1/17/2021 - Dan
    1. Made several other small changes:
       1. Started replacing plyr’s join with dplyr left\_join.  However, there are places where we intentionally made gear code or species code character rather than numeric and left\_join checks this before running and throws an error so these are left.  We also have 2 instances of join\_all that I’m not sure has a dplyr counterpart, but I’ll need to research.  I’d like to get us off of plyr entirely some day if we can as loading order is an issue that causes lots of problems (especially if we want to load dplyr in ui.r, which is not done now...would also have to load plyr and do so first to avoid plyr overwriting dplyr.
       2. Changed renderTable function for PSD size definitions (both mm and inch) so NA displays as blank space in table.