**ACTION ITEMS FROM MEETING**

* Remove skipped-breeding from Dovi’s simulation code and re-run – **John** (DONE)
* Run exactly the same fishSim 6yr script and set a different seed – **John** (DONE)

All below w/ regards to Dovi’s simulation code (i.e. not fishSim)

* Why are we getting warnings from the optimx function? – **John**

Run the model outside of the optimization function

Try using the nlminb function again and see if the warnings pop up

* Adjust model to account for full sibs? – **John**
* Why do the output survival values not match the input values? – **John**

Average fecundity: says ~2. Is this right?

Can test by making them available every one year

Adult survival: test if it’s the max age cap by making max age 100

YOY survival: run several times and check

* Edit script to enforce 0 population growth - **Dovi**
* Peruse code to identify any potential issues and areas for optimization – **Charlotte (and Dovi?)**

**Notes from meeting**

Having an estimation model that aligns with the data generating model is crucial.

Sampling at the appropriate time (eg before or after mortality) is critical.

The fishSim results look good

The DoviIBS results, not so much

Look at Charlotte's recent paper -- it took her a *really* long time to get the model working.

As soon as she worked out the underlying issue, it worked way better

The process of finding the issue out was going back to the basics and locking things down in the data generating model. Then having an estimation model that exactly replicated the data-generating model. Then moving step-by-step. But start from something that's almost deterministic, then add in variation, it's great to start with something that's working perfectly.

For seeds, Charlotte will set a vector of random seeds

Generate a random vector of numbers, then set the seed to these.

Use geometric mean instead for population growth?

Charlotte would add a warning in case an impossible comparison pops up in the positives during estimation (instead of just having a 0).

print("warning") or something like that

Errors can perpetuate through the optimization algorithm ..

Run through the model outside of the optimization algorithm and see if I can reproduce the error

Have a version of the model that's doing exactly what the model's trying to do, and print out every row.

Charlotte will have a totally deterministic version of her model and see if/when she gets a NaN

Print out the optimization as it's running through

Charlotte definitely wants to know what's causing the warning. Maybe a parameter needs to be bounded.

Maybe I'm ending up on some local optimum

Part of the issue with Dovi's code could be skipped-breeding with the females

Once we get this working, we should touch base with Mark and Alex