Atlantic States Marine Fisheries Commission

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Atlantic Sturgeon Stock Assessment Subcommittee
Meeting Summary

Conference Call and Webinar
December 9, 2015

Stock Assessment Subcommittee Members: Mike Bednarski, Eric Schneider, Amanda Higgs, Mike Celestino, Dewayne Fox, Ed Hale, David Secor, Laura Lee, Jared Flowers, Mike Loeffler, Bill Post, Kiersten Curti

ASMFC Staff: Katie Drew, Kristen Anstead, Max Appelman

Public: Time King, David Kazyak, Tanya Darden, Daniel Farrae

Laura Lee (Chair) provided an update to the SAS on progress with the Bycatch and Tagging Working Groups. The BWG concluded that data for reliable estimates of sturgeon bycatch is limited to the NC gillnet fishery, the SC commercial shad fishery, and the Federal observer data, and so estimates are being developed/updated for those regions. The TWG finalized the data request letters and data template, and data was due December 1st. While most researchers have confirmed with ASMFC Staff that they fully intend to accommodate the request, only a handful have actually submitted data to the ASMFC. The main cause for concern is who will be working with the data, and what the data will be used for. ASMFC Staff has worked with committee members to alleviate those concerns amongst data providers.

Next, Jared Flowers provided a review of the telemetry model, goals and objectives, and data needs. Basically, the tagging model is a multi-state mark-recapture model, and the primary objective is to derive survival estimates at the coast-wide and DPS level, on an annual (or maybe monthly) scale. Jared's modeling approach differs slightly from Will Smith's (previous member heading the tagging model portion of the assessment), and therefore the data request may be modified. Jared would also like to look at movement between different areas and DPSs to get a better idea of where mortality is taking place, and this would require more spatial information from data providers. Additionally, data providers are including genetic sample IDs so that acoustically tagged fish can be traced to Tim King's tissue repository data base.

Laura then reviewed criteria for the selection of indices of relative abundance for standardization. The criteria are fairly straightforward: given longevity of the species, 15-20 year surveys with statistically sound designs would be ideal, and only ones that catch sturgeon, or operate during a time and place in which sturgeon are available to capture. Survey methodology should be consistent throughout the time series, unless changes can be accounted for with standardization. A concern came up about times series shorter than 15 years being excluded that would still be informative. In these circumstances, criteria will be a little more flexible. Note: biological data will come from surveys of any length, and these criteria are only for indices being used for abundance.

The SAS went over the draft report outline that Laura put together. The outline has 3 volumes; one for the coast-wide assessment, one for DPS level, and one for river-specific assessment. The outline essentially follows the ASMFC standard report outline. Members pointed out that a lot of the sections already exist in old documents and can be repurposed for this report, mainly introductory, background, and habitat sections. The outline is still open for discussion, and although the assessment report will primarily be constructed by SAS members, it is still a product of the Technical Committee and therefore the TC will have opportunity to weigh in on the outline discussion (perhaps on the TC call tentatively scheduled for some time in January).

Tim King (U.S.GS) presented a PowerPoint to the SAS on his work with Atlantic sturgeon genetics and the shift to genomics. Tim explained many complex ideas and there were a lot of take away points from the presentation, but in summation, moving to population genomics (incorporates1000s of markers as opposed to 12) would enhance resolution for more accurate genetic assignment to an existing DPS.

David Kazyak (U.S.GS) then briefed the SAS on his work with census population size for the Hudson River. Dave is exploring a spatial capture-recapture model for estimating census population size for the Hudson River also. The idea is to compare the census population size to effective population size. There was member interest to roll this work into the assessment so duplicate efforts are avoided.

Daniel Farrae then presented a short PowerPoint of a study that characterizes population genetic structure between fall and spring spawned Atlantic Sturgeon in the Edisto River, SC. Results indicated fall and spring fish are genetically distinct, and suggests that there might be more differentiation between fall/spring Edisto River populations than across rivers. This could complicate the structure of the stock assessment, i.e., river/season specific analysis, but it's not apparent if data exists to support that specific of an analysis at this time.

Follow up:

- ASMFC Staff to coordinate a conference call with the tagging working group to verify data needs for the telemetry model. Following the conference call, ASMFC Staff will follow up with researchers to provide necessary data.
- ASMFC Staff to coordinate a conference call with the genetics workgroup to discuss the genetic information that was presented today, and provide direction for the SAS moving forward with the assessment
- ASMFC Staff to coordinate a conference call with the TC following the holiday.
    - SAS Chair to brief the full Technical Committee on progress with the stock assessment, and seek input on challenges encountered.
    - Staff will work with SAS/TC Chair to develop agenda for the call.
- Request SAS membership approval for David Kazyak and Jared Flowers from the Sturgeon Board at the February meeting in Alexandria, VA.