

River Herring Technical Expert Working Group (TEWG)
Species Interaction Subgroup Webinar/Conference Call
May 28, 2014
1:00 - 2:30pm

Summary

I. Overview

The Species Interaction Subgroup of the River Herring Technical Expert Working Group was established to “consider issues surrounding the interactions between river herring and other components of the ecosystems they occupy rangewide (includes trophic interactions and ecosystem services in freshwater, estuarine and marine environments)” in order to help contribute to the expected products of the TEWG. Eric Schultz, chair of the Species Interaction Subgroup, convened a call on May 28, 2014, to “kick-off” discussions and obtain input on approaches to move the subgroup forward. The draft agenda for the meeting included reviewing the charge of the TEWG and the subgroup, discussing previously identified threats and data gaps, and developing methods to comprehensively identify data gaps. Meeting materials included an excerpt from the Endangered Species Act Listing Determination for Alewife and Blueback Herring to facilitate discussions. This meeting summary includes the primary discussion topics and outcomes to contribute to future TEWG discussions. The information provided below reflects individual expert opinion and not consensus.

II. Key Topics

The below includes a list of individual expert opinion provided by Fisheries Subgroup members or the public on various overarching topics:

- One member pointed out that the Species Interaction Subgroup is heavily represented by New England. NMFS and ASMFC noted that it will be important for members to think outside of their own regions, and also to coordinate with the larger TEWG for input on discussion topics.
- Predator/prey relationships will be a focus of this subgroup. Depending on the region, cormorants, striped bass and seals substantially contribute to natural mortality. Other species can be locally important or important in particular life stages/transitions.
- Trophic interactions such as competition between river herring species, and with Atlantic herring, should be considered. The subgroup should also consider ecosystem services such as nutrient transport.
- Looking at past studies (temporally, spatially, regionally, etc.) will ensure that efforts are not duplicated and allow the subgroup to determine where there are data gaps
- Presentations from members of the subgroup and outside individuals with research into species interactions (mainly predation) will help move the discussion along and will be integrated into the next subgroup call. Presentations will be short and only a

certain number will occur during each future subgroup call. Suggestions for speakers to inform this and larger discussions included Eric Schultz/Justin Davis, Theo Willis, Dan Kircheis/James Hawkes.

- Monitoring studies will be important and suggestions can be developed (e.g., to information states on needed data to inform the issue).
- The Endangered Species Act (ESA) listing determination included a great synthesis on the topic of predation , but some observations are missing. For example, predation is an important threat, but may be temporarily heavy and focused on a select portion of river herring (e.g., predation on juveniles may be higher in freshwater in some areas). Also, a subgroup member reported that in recent years, river herring make a large component of the striped bass diet in Canada.

III. Key Outcomes

The below includes a list of individual expert opinions provided by participants related to specific threats, data gaps, research projects, conservation actions, information to be considered and/or monitoring (i.e., the identified research projects and/or conservation actions). These outcomes are listed in no particular order, and those related to other subgroups are also included in the “Cross-Cutting Issues” section below).

a. Data Gaps

- The relationship between life stage of alewife and striped bass, in terms of predation pressure, is not well-known. This information would help conserve river herring because the vulnerable ages classes could be better protected from predation.
- The degree to which striped bass impact natural mortality coastwide is not well-understood; in Maine seals and cormorants are evidently important, whereas striped bass are predominant in the mid-Atlantic region.
- What happens while river herring are spending time on the continental shelf before they migrate inland is unknown, as there is little evidence of predation on that life stage/age (2-3 years)
- Where river herring go after leaving the rivers is unknown. Do river herring in South Carolina go south? North? This information will help better understand interactions with other species.

b. Information To Be Considered (e.g., published papers)

- A set of papers that were referenced in the ESA listing determination is a good start. The subgroup has an excerpt of the listing determination with these references, which have been uploaded for the subgroup’s review.

c. Monitoring

- Recreational monitoring occurs in Canada, where biologists work with anglers to gather long-term information about river herring.

IV. Next Steps

The Species Interaction Subgroup discussed the following next steps:

- Marin will divide up the published papers (accessible on the FTP site) and each member will fill out the spreadsheet with information (time of year, location, duration, etc.) on their assigned paper. This will help identify data gaps throughout the entire range of the species.
- Members will submit other papers to Marin and Eric to be included in the above spreadsheet.
- Members who would like to give a brief presentation on their research will contact Marin. Other individuals (such as Justin Davis) will be contacted and invite to give a presentation during the next call (date TBD)

V. Cross-Cutting Subgroup Issues

The following cross-cutting subgroups issues were discussed and will be further considered by the TEWG and its Ecosystem Integration Committee.

- Collaboration with the Genetics Subgroup can illuminate the extent to which hybridization between the river herring species represent a quantifiable threat.
- Habitat Subgroup will be able to help during discussions of how predator abundance may be affected by invasive plants and how they invasive plants impact habitat quality.
- Genetics subgroup can also be consulted with to investigate migration patterns of the fish (e.g., where they go after they leave a South Carolina river).
- Stock Status Subgroup should consider assimilating predation data into modelling efforts to give a larger picture of species interactions. Species Interaction Subgroup could contribute to the information to be included.

VI. Participants

a. Subgroup Members

The affiliation of each member can be found on the subgroup roster available at the TEWG Species Interactions Subgroup website:

<http://www.nero.noaa.gov/protected/riverherring/tewg/species/index.html>

Eric Schultz

Diane Borggaard (for Kim Damon-Randall and Dan Kircheis)

Jim Hawkes

Joseph Gordon

Theo Willis (for Karen Wilson)

Trevor Avery

Kevin Sullivan

- b. Staff
Marin Hawk

VII. Meeting Materials

The following materials were provided to support the meeting. Additional information can be found at the TEWG Fisheries Subgroup website:

<http://www.nero.noaa.gov/protected/riverherring/tewg/fisheries/index.html>

- a. Draft Agenda
- b. Predation and disease excerpt from Endangered Species Act Listing Determination