

## **River Herring Technical Expert Working Group (TEWG)**

### **Genetics Subgroup Webinar/Conference Call**

**October 6, 2014**

**1:00 - 3:00 p.m.**

### **Summary**

#### **I. Overview**

The Genetics Subgroup of the River Herring Technical Expert Working Group was established to “consider issues related to population stock structure rangewide. Also, discuss possible effects from hybridization, understanding the effects of stocking on genetic diversity, and any impacts landlocked populations may have on anadromous forms” in order to help contribute to the expected products of the TEWG. Dan Hasselman, chair of the Genetics Subgroup, convened a call on October 6, 2014, to begin discussions with the subgroup. The draft agenda focused on reviewing the table of research recommendations. Meeting materials included a draft of research recommendations, compiled by Dan, which included input from the Atlantic States Marine Fisheries Commission stock assessment and Endangered Species Act listing decision. 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 Genetics Subgroup members or the public on various overarching topics. Some ideas have been combined where appropriate.

- The subgroup discussed the option of integrating otolith microchemistry with genetics work. Otolith microchemistry has the potential to provide information on the following:
  - Coarse resolution on topics such as time of habitat use, residency in specific areas, etc.
  - Stock structure on the level of watershed (potentially finer resolution than previous molecular assessments using microsatellites)
  - Some members thought that keeping options open for additional techniques was important too such as body morphology, otolith growth patterns, etc. These are important and complementary stock identification techniques to otolith microchemistry and genetic work.
- The subgroup also discussed inclusion of evolutionary/ecological implications of landlocked populations during recovery/restoration activities. For example, obtaining samples before and after dam removal is important. Considering the possible mixing of landlocked and anadromous river herring may be important for restoration or conservation if it makes anadromous river herring less adaptable. Questions were raised if it could impact the coastwide population?

### **III. Next Steps**

The Genetics Subgroup discussed the following next steps:

- Conduct ranking exercise for ‘Table of Research Recommendations’ and summarize results to identify research priorities that the Genetics subgroup agrees are of high interest.
- Andrew Whitely will provide information to add a row to capture effective number of breeders, which is different than the currently captured effective population size.
- The subgroup will consider the overlapping issues identified through the Ecosystem Integration Committee.

### **IV. 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.

- Suggest habitat group consider otolith microchemistry as a source of information.

### **V. Participants**

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

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

#### **a. Subgroup Members**

Dan Hasselman

Mike Bailey

Lisa Kerr

Sara Turner

Andrew Whitely

#### **b. Staff**

Diane Borggaard

#### **c. Other Participants**

Sarah Laporte

### **VI. Meeting Materials**

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

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

a. Draft Agenda

b. Hasselman’s Synopsis of Research Recommendations

**River Herring Technical Expert Working Group (TEWG)  
Genetics Subgroup Conference Call and Webinar  
October 6, 2014  
1:00 pm**

Call-In Number: 1-888-394-8197

Passcode: 499811

Webinar: <https://www3.gotomeeting.com/join/222404006>

**Draft Agenda**

- 1) Welcome and brief introductions (*D. Hasselman*)
- 2) Re-visit table of Research Recommendations to consider:
  - i) integration of molecular markers and otolith microchemistry
  - ii) inclusion of evolutionary/ecological implications of landlocked populations during recovery/restoration activities
  - iii) other ideas
- 3) Process moving forward – how to maintain momentum
- 4) Public comment period