Habitat Committee Report to ASMFC Policy Board

Jake Kritzer, Chair

November 5, 2015

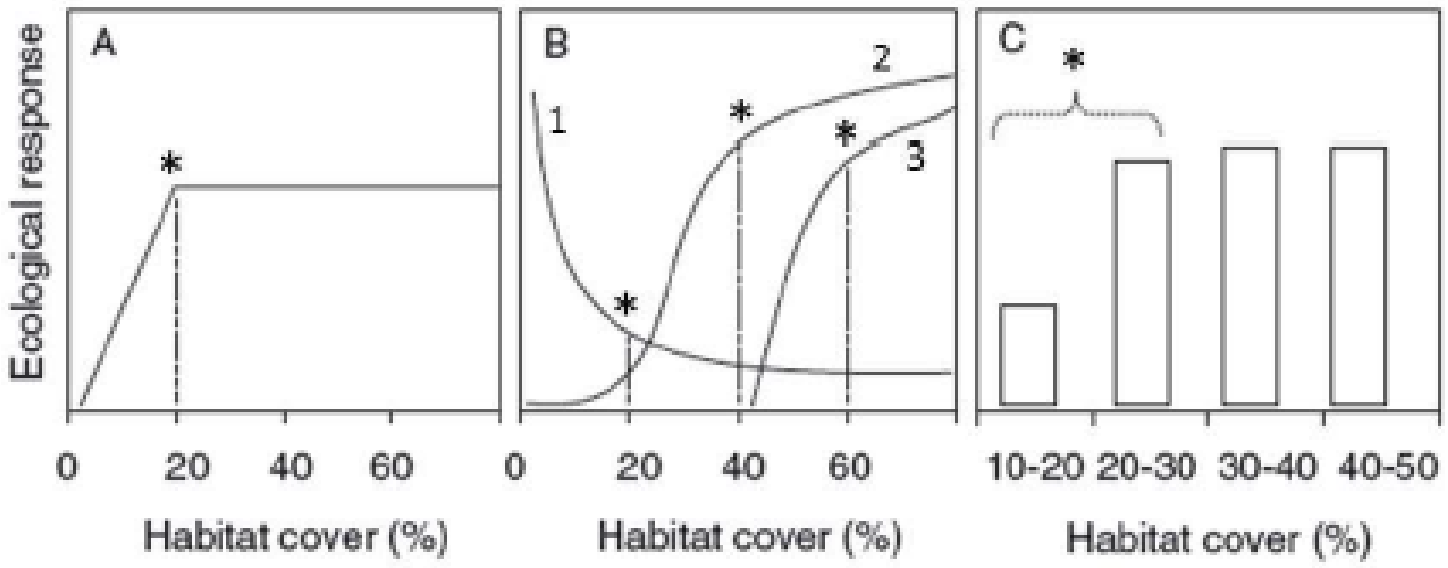
Habitat Bottlenecks

- Completed full draft of “living” document.
- Definition:

  A habitat bottleneck is defined as a constraint on a species’ ability to survive, reproduce, or recruit to the next life stage that results from reductions in available habitat extent and/or capacity and reduces the effectiveness of traditional fisheries management options to control mortality and spawning stock biomass.

- I.e., instances where habitat presents a non-linear constraint on productivity.

Habitat Bottlenecks



Swift and Hannon (2010)

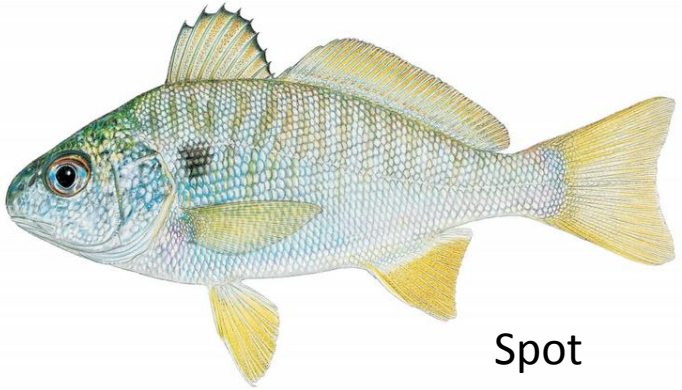
Habitat Bottlenecks

Examples

- American lobster: Drastic increase in mortality >20^{o}C
- Summer and winter flounder: Hypoxia in nearshore spawning grounds (<5 mg $O_2 \cdot l^{-2}$)
- Horseshoe crabs: Availability of high quality spawning beaches (vulnerable to erosion, sea level rise, development, etc.)
- Atlantic sturgeon: Dams.

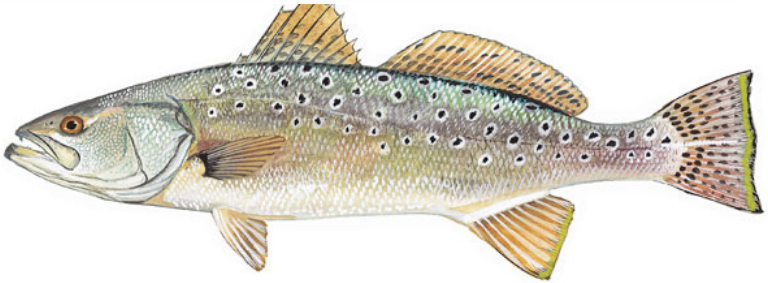
Sciaenid Habitat Source Document

Atlantic croaker

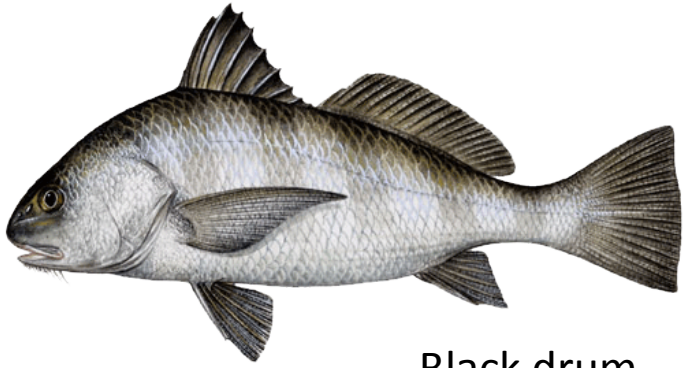


Spot

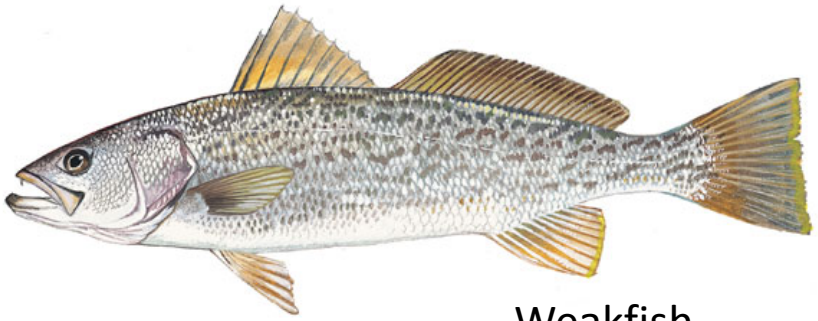
Red drum



Spotted seatrout



Black drum



Weakfish

Sciaenid Habitat Source Document

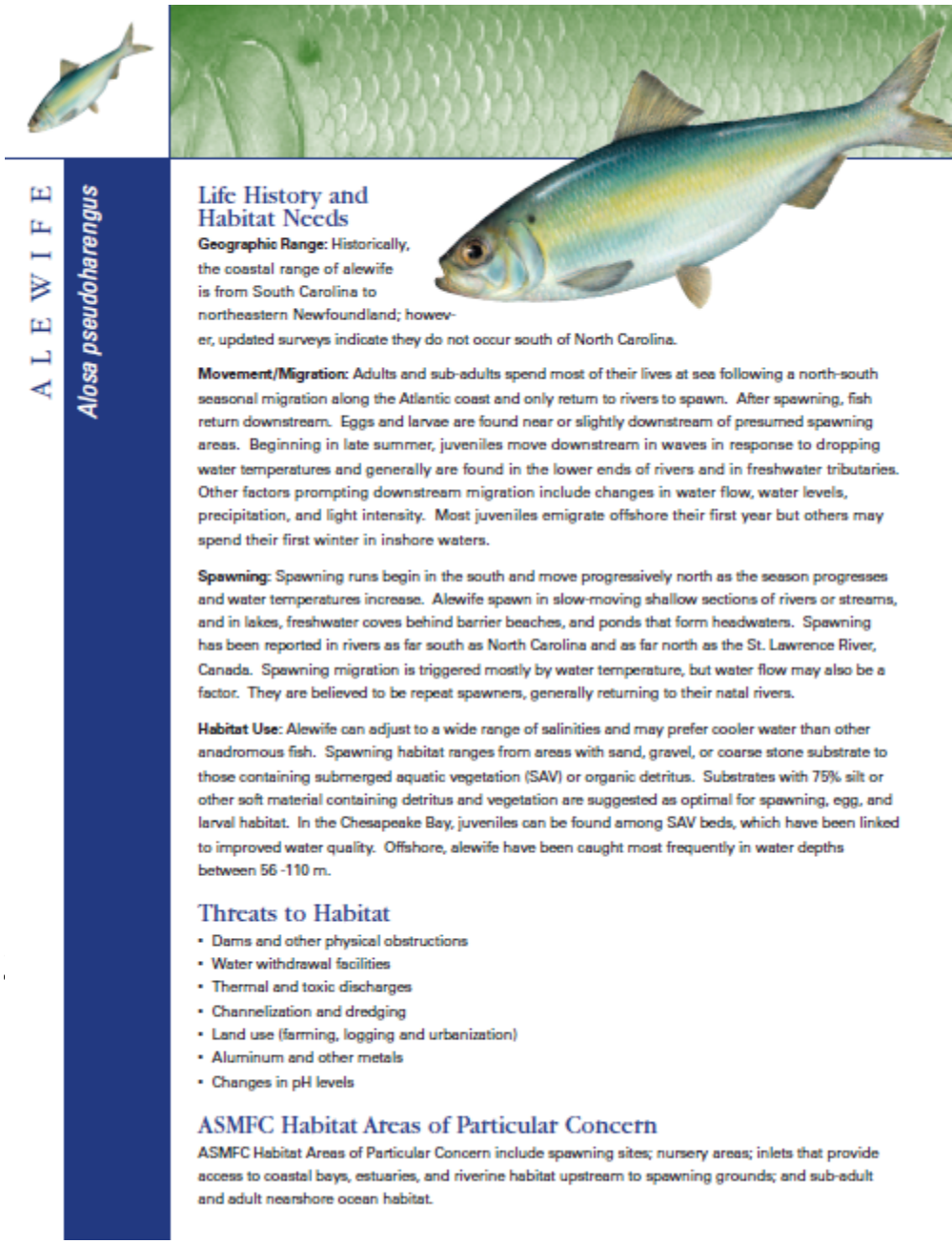
- Awaiting Introduction + full HC review.
- Includes southern, northern and Gulf kingfish.
- Second multispecies source document, following diadromous species (2009).
- Prompted discussion about ensuring source documents exist for all managed species.
- Agreed we should distinguish source documents from habitat management series (impacts, mitigation, etc.)

HABITAT HOTLINE *Atlantic*

- Topic: Impacts of Energy Development on Fish Habitats.
- Follows 2014 edition on impacts of climate change.
- Final drafts due Nov. 9; publication late Nov./early Dec. after layout, etc.

Habitat Factsheets

- Completed updates where warranted, with one exception (American eel).
- Agreed to update factsheets as needed going forward.
- More focused review a FMP sections are updated.



ALEWIFE

Alosa pseudoharengus

Life History and Habitat Needs

Geographic Range: Historically, the coastal range of alewife is from South Carolina to northeastern Newfoundland; however, updated surveys indicate they do not occur south of North Carolina.

Movement/Migration: Adults and sub-adults spend most of their lives at sea following a north-south seasonal migration along the Atlantic coast and only return to rivers to spawn. After spawning, fish return downstream. Eggs and larvae are found near or slightly downstream of presumed spawning areas. Beginning in late summer, juveniles move downstream in waves in response to dropping water temperatures and generally are found in the lower ends of rivers and in freshwater tributaries. Other factors prompting downstream migration include changes in water flow, water levels, precipitation, and light intensity. Most juveniles emigrate offshore their first year but others may spend their first winter in inshore waters.

Spawning: Spawning runs begin in the south and move progressively north as the season progresses and water temperatures increase. Alewife spawn in slow-moving shallow sections of rivers or streams, and in lakes, freshwater coves behind barrier beaches, and ponds that form headwaters. Spawning has been reported in rivers as far south as North Carolina and as far north as the St. Lawrence River, Canada. Spawning migration is triggered mostly by water temperature, but water flow may also be a factor. They are believed to be repeat spawners, generally returning to their natal rivers.

Habitat Use: Alewife can adjust to a wide range of salinities and may prefer cooler water than other anadromous fish. Spawning habitat ranges from areas with sand, gravel, or coarse stone substrate to those containing submerged aquatic vegetation (SAV) or organic detritus. Substrates with 75% silt or other soft material containing detritus and vegetation are suggested as optimal for spawning, egg, and larval habitat. In the Chesapeake Bay, juveniles can be found among SAV beds, which have been linked to improved water quality. Offshore, alewife have been caught most frequently in water depths between 56 -110 m.

Threats to Habitat

- Dams and other physical obstructions
- Water withdrawal facilities
- Thermal and toxic discharges
- Channelization and dredging
- Land use (farming, logging and urbanization)
- Aluminum and other metals
- Changes in pH levels

ASMFC Habitat Areas of Particular Concern

ASMFC Habitat Areas of Particular Concern include spawning sites; nursery areas; inlets that provide access to coastal bays, estuaries, and riverine habitat upstream to spawning grounds; and sub-adult and adult nearshore ocean habitat.

American Eel Genetics

- Latitudinal patterns show random mixing, i.e., panmictic population.
- New data show non-random patterns along upstream-downstream gradients.

  → Changes to habitat and/or harvest management strategies warranted?
- Thorough review of spatial dynamics of eels warranted? (e.g., “unproductive watersheds”)
- Genetic, behavioral and life history diversity, and habitat linkages, as topic for *Habitat Hotline Atlantic 2016?*

2016 Work Plan

- Select topic and publish *Habitat Hotline Atlantic 2016*
- Complete habitat sections of tautog, northern shrimp & menhaden FMPs.
- Complete Habitat Management Series: Aquaculture and choose next topic (for completion in 2016?).
- Meet with ASMFC communications staff to discuss a variety of issues (Commission strategies, tracking and improving our reach, etc.).
- Compile habitat source documents for all managed species and re-organize web page.

Overview of Executive Committee Recommendations to the ISFMP Policy Board on Changes to ASMFC Guiding Documents

ASMFC

November 2015

Issue 1: Appealing Non-Compliance Findings

- The EC recommends to the Policy Board to remove a state's ability to appeal a non-compliance finding from the Commission guidance documents

Issue 2: Definition of a Final Action

- The EC recommends to the Policy Board the definition of final action is: setting fishery specifications (including but not limited to, quotas, trip limits, possession limits, size limits, seasons, area closures, gear requirements), allocation, final approval of FMPs/amendments/addenda, emergency actions, conservation equivalency plans, and non-compliance recommendations.

Issue 3: Amendment and Addendum Process

- The EC recommends to the Policy Board the same timeline outline for draft FMPS/amendments apply to PIDs and modifying the number of required public hearings to three for both PIDs and draft FMPs/amendments.
  - 30 days prior to the first hearing
  - 14 days after the last hearing

Issue 3: Amendment and Addendum Process

- The EC recommends to the Policy Board a minimum of 30 days public comment on all draft addenda.

Issue 3: Amendment and Addendum Process

- The EC recommends to the Policy Board using the three opportunities to solicit Advisory Panel input during FMP/amendment development.
  - During the development of the PID
  - During the development of the Draft FMP
  - During the public comment of the Draft FMP

Issue 4: TC Decisions and ASMFC Staff Participation on Committees

- The EC recommends to the Policy Board that TCs continue to strive to find consensus whenever possible, however a vote should be taken if a consensus can't be reached. The same standard for voting would apply to stock assessment subcommittees (SASC).

Issue 4: TC Decisions and ASMFC Staff Participation on Committees

- The EC recommends to the Policy Board science staff is fully involved with conduct of analyses and deliberations of TCs and SASCs. If consensus can't be reached within a TC, then science staff will not participate in a vote, however science staff will participate in SASC votes when necessary.

Issue 5: Commissioner Attendance

- The EC recommends to the Policy Board that a state's Executive Committee member be notified in the event there are repeated absences of a Commissioner. The Executive Committee member could then work with their state officials to determine what action, if any, should be taken.

Issue 6: Appeal Criteria

- The EC recommends the Policy Board take no action to change the current appeal criteria.

Issue 7: Definition of 2/3 Majority

- The EC recommends to the Policy Board a 2/3 majority will be defined by the entire voting membership, however any abstentions by the federal services will not be considered when determining the total number of votes.

Issue 8: AP, LEC, and TC Participation at Board Meetings

- The EC recommends to the Policy Board that AP chairs should present their report and answer any specific questions relevant to their report.
- AP chairs may not ask the Board questions or present their own viewpoints during Board deliberations.
- If the AP Chair has additional comment that is not the opinion of the AP they must move to the public microphone.
- If there is no AP meeting between Commission meetings, the Commission would not reimburse the AP Chair for travel to the Commission meeting.

Issue 9: Council Participation on Management Boards

- The EC recommends to the Policy Board that if a Council(s) has been invited as voting member of a board that manages multiple species, the board will designate which species can be discussed and voted on by the Council representative.

Issue 10: Web Based Public Hearings and Online Public Comment Surveys

- No specific recommendation to Policy Board
- Continue to explore and report back to EC in February 2016