Lake Superior Splake Stocking

Michigan Trout Unlimited's Policy Presentation to the Natural Resources Commission September 8, 2022





Presentation Flow

- Background
- Concerns
- Recommended Actions
- Research Needs
- Summary
- Questions





Brook Trout











Splake









Lake Trout



Background

• Splake

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- Lake Trout & Coaster Brook Trout
- The void & their purpose
- The problems with the solution
- LSTC charge and response on splake





Concerns

- Competition (& predation)
- Introgression
- Identification & Harvest





GLFC LTSC 2021 Conclusions

1. "... the probability of splake backcrossing with both brook trout and lake trout is high."

"... there is evidence that splake introgression into lake trout and brook trout has occurred."

"... continued splake stocking does pose a risk to the health of both lake trout and brook trout populations in Lake Superior and tributary streams."

2. Splake may impact lake and brook trout though ecological dynamics such as competition or predation, (little is known though).

3. Harvest of splake is low relative to the number stocked.

4. Misidentification of splake may be common. This may result in harvest of brook trout less than the 20-inch minimum size limit that exists on many Michigan waters of Lake Superior and tributaries.



Recommendations

Risks: Genetic introgression of splake in lake and brook trout populations reduces fitness and hinders recovery. Ongoing competitive dynamics inhibits coaster brook trout and lake trout populations.

Action 1. Cease splake stocking in Michigan waters of Lake Superior Splake confirmed in brook trout spawning areas >25 mi. from nearest stocking sites

Action 2. Reduce splake stocking in areas in close proximity to key coaster brook trout and lake trout resources.

2000-2017, 1.9 million splake stocked <1.2 mi. from lake trout spawning grounds 2000-2017, 1.5 million splake stocked <3.1 mi. from brook trout spawning grounds Splake can travel long distances, but 65% have been resampled within 3 miles of the stocking location





Recommendations

Risk: Unintentional harvest of coaster brook trout less than 20 inches due to misidentification.

Action 1. Increase minimum size limit on splake to 20 inches

Action 2. Implement a 100% mark (adipose clip) on stocked splake

11 of 15 reported splake were confirmed brook trout (Feringa et al 2016)





Recommendations

Risk: Costs associated with raising and stocking splake are disproportionate to the anglers utilizing this fishery; and the "return-to-creel" return on investment of splake stocking has previously been reported by the MDNR as low (costly).

Action 1. Reallocate resources from raising and stocking splake to habitat restoration projects to improve wild fish populations

Action 2. Replace splake stocking with coaster brook trout stocking

In Michigan waters, since 2000, 1.9 million splake stocked, average return to creel = 1.64% (+/- 0.76) (number harvested vs stocked).



Research Needs

Introgression of Splake in Lake and Brook Trout Populations – how much genetic mixing has occurred

Extent of Splake Migration – *fin clipping & acoustic tagging*

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Existing Coaster Brook Trout Populations – where are they and what do they need, can we bring them back to healthy fishable populations?



Summary – from others

"... splake pose a threat to the genetic integrity and demographic health of Lake Superior lake trout and brook trout populations." (LSTC)

"... splake stocking may provide little benefit to Lake Superior trout fisheries and continued stocking should be weighed against the risks splake stocking present to both lake trout and brook trout management goals." (LSTC)

"...management efforts to release splake into near-shore waters of Lake Superior near native brook trout streams, including the natural population of coaster brook trout should be re-evaluated." (Feringa et al 2016)



Summary

- Splake were meant to fill a "void"
- But the void wasn't/isn't totally vacant
 - Coaster brook trout restoration desirable
 - Unique lake trout genetics worth protecting
- Overlap is present reproductively & competitively
- Raise awareness stop passive perpetuation
- Balancing risks & uncertainties





... Thank You

