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Mismatch between sea lamprey behaviour and trap location explains low trapping success

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Presenter Information
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Jess Barber, USFWS
Istvan Imre, Algoma University
Chris Holbrook, Ted Castro-Santos, USGS
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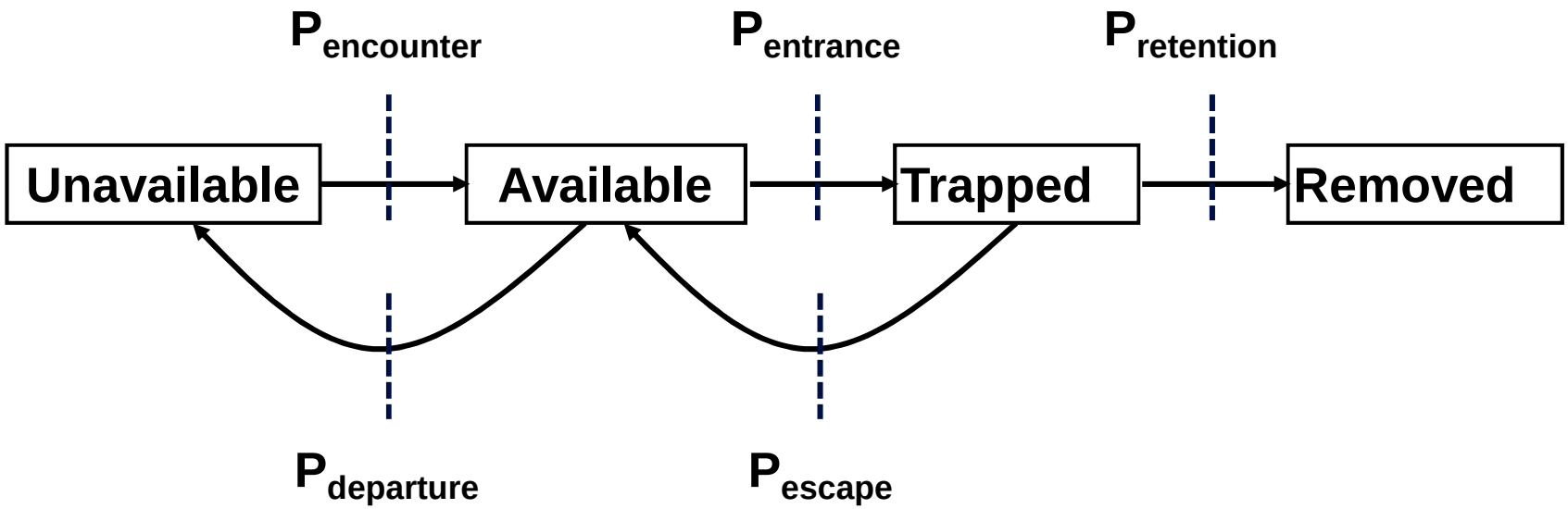
Acknowledgements

Context: Control of Invasive Species

A BETTER MOUSETRAP

BY CATHERINE HARRELL

Context: Conceptual Framework



Bravener + McLaughlin. 2013. CJFAS 70:1438-1446

Context: Earlier Observation

Component of trapping	
Encounter	0.06 – 0.08
Entrance	0.10 – 0.33
Retention	1.0
N	662

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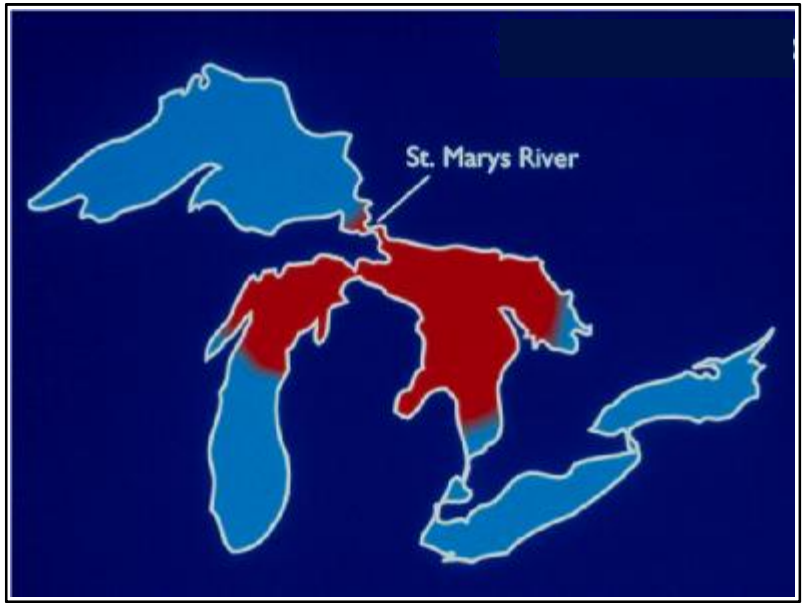
Questions:

Probability of encounter is low because individuals:

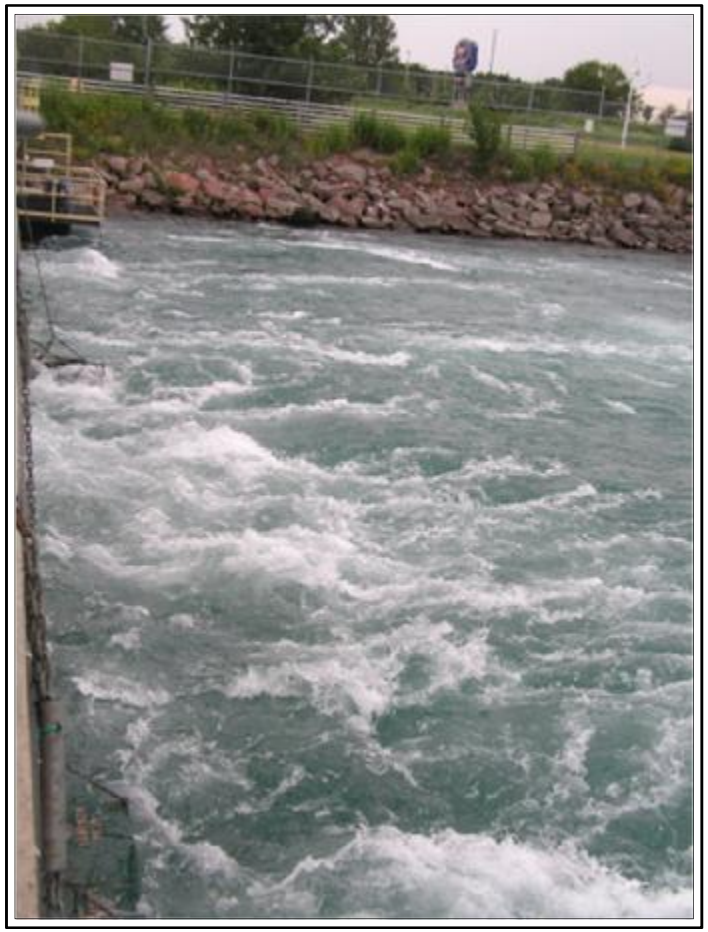
- stop before reaching the trap location?
    - wall of generating station
- reach the wall, but are located away from the traps?
    - widely dispersed and attached
    - aggregated away from the traps

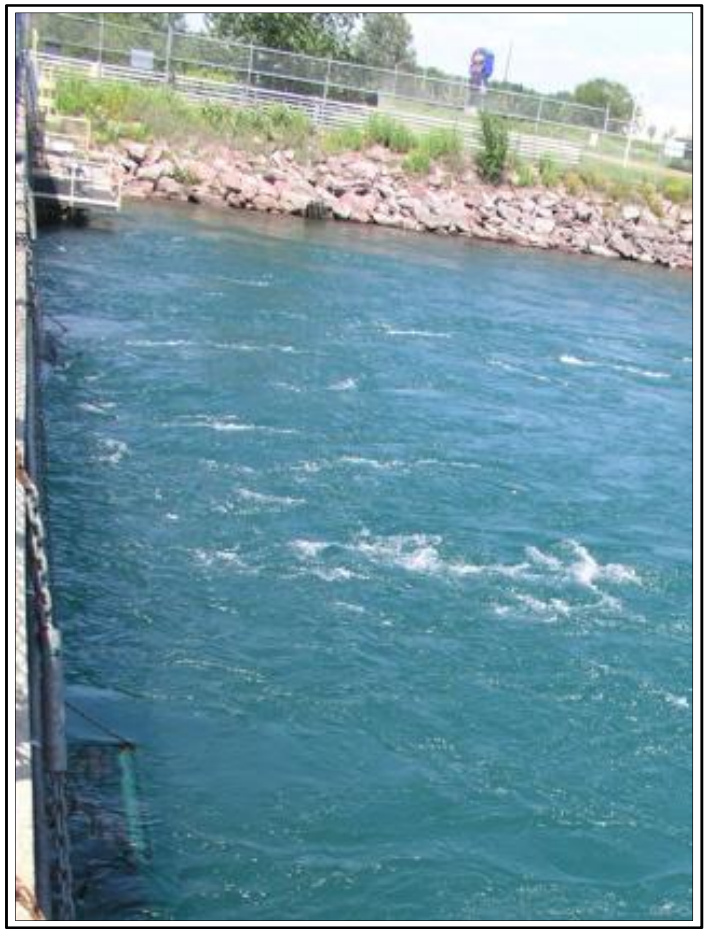
Probability of encounter is influenced by discharge

Methods: Site



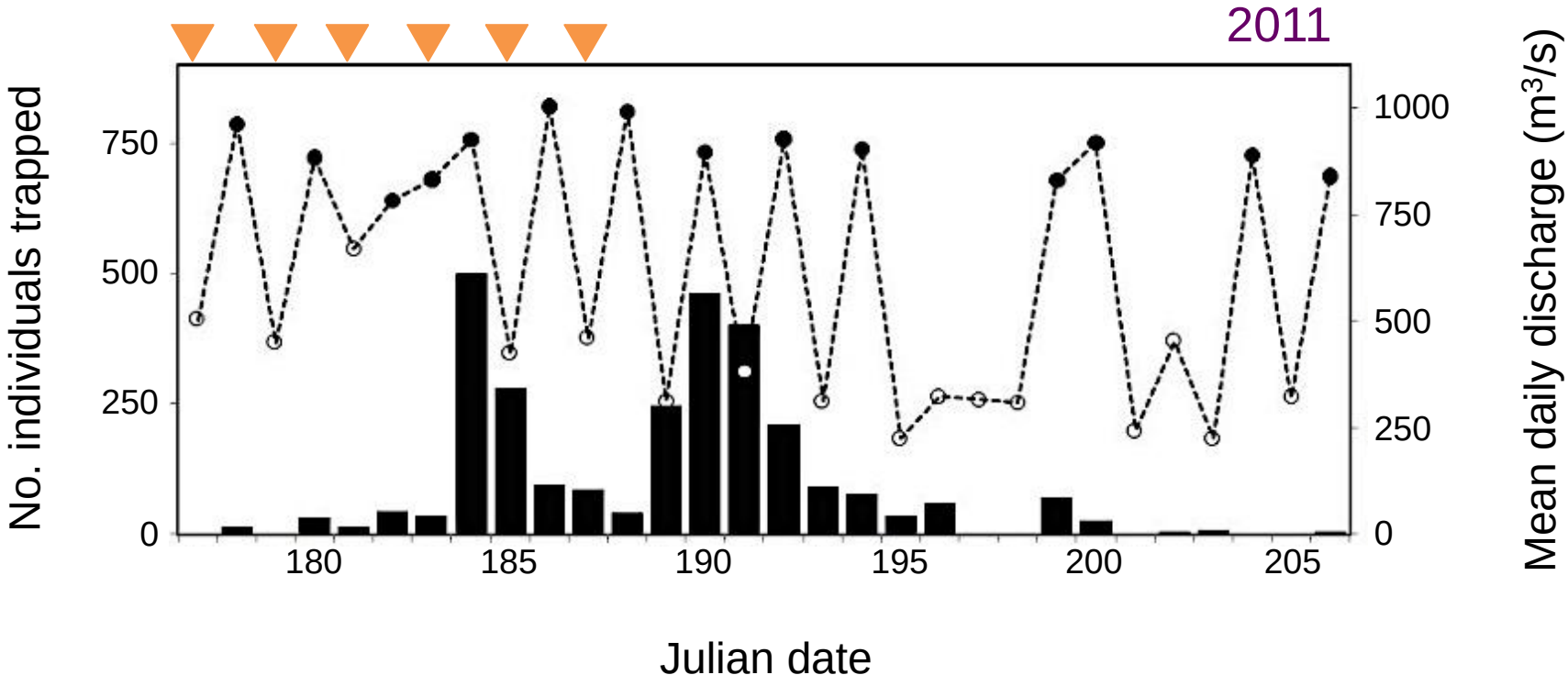
Methods: Discharge Experiment





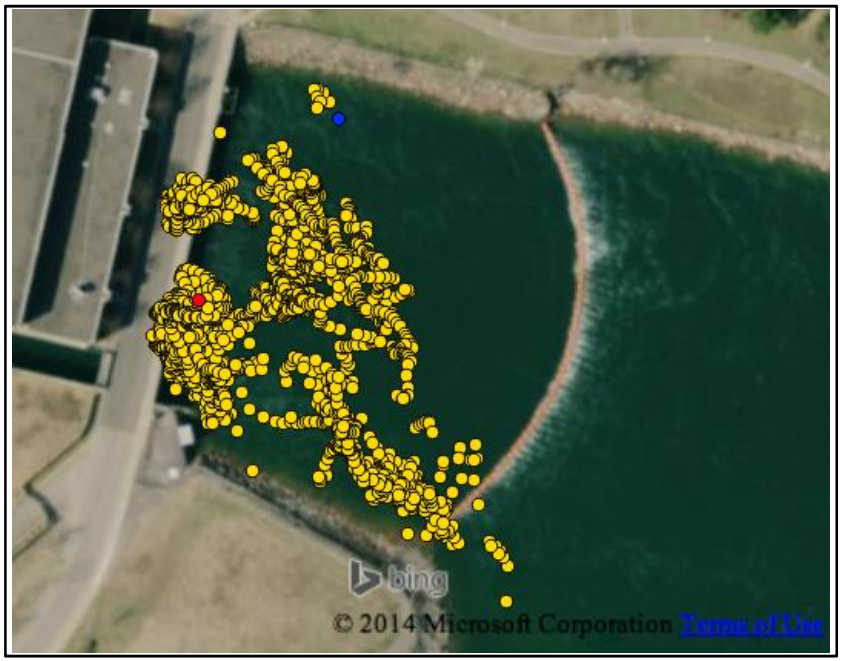
Methods: Acoustic Telemetry

Methods: Experimental Design



Rous et al. 2017. CJFAS in press

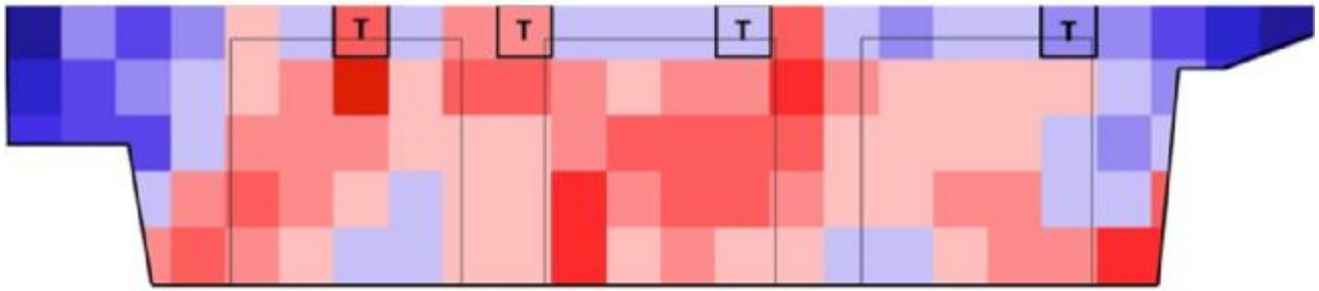
Results: Horizontal Space Use



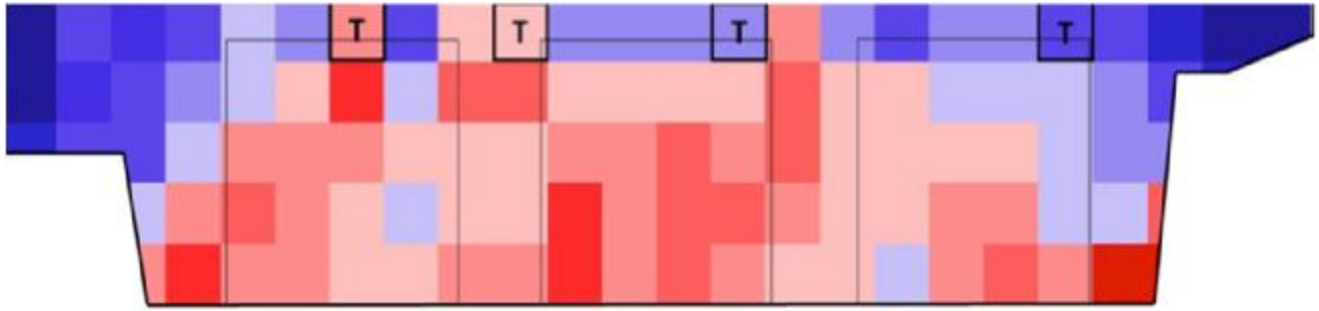
Rous et al. 2017. CJFAS in press

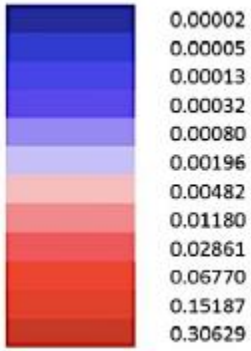
Results: Vertical Space Use

Low discharge



High discharge





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Conclusions:

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Rous et al. 2017. CJFAS in press

Significance

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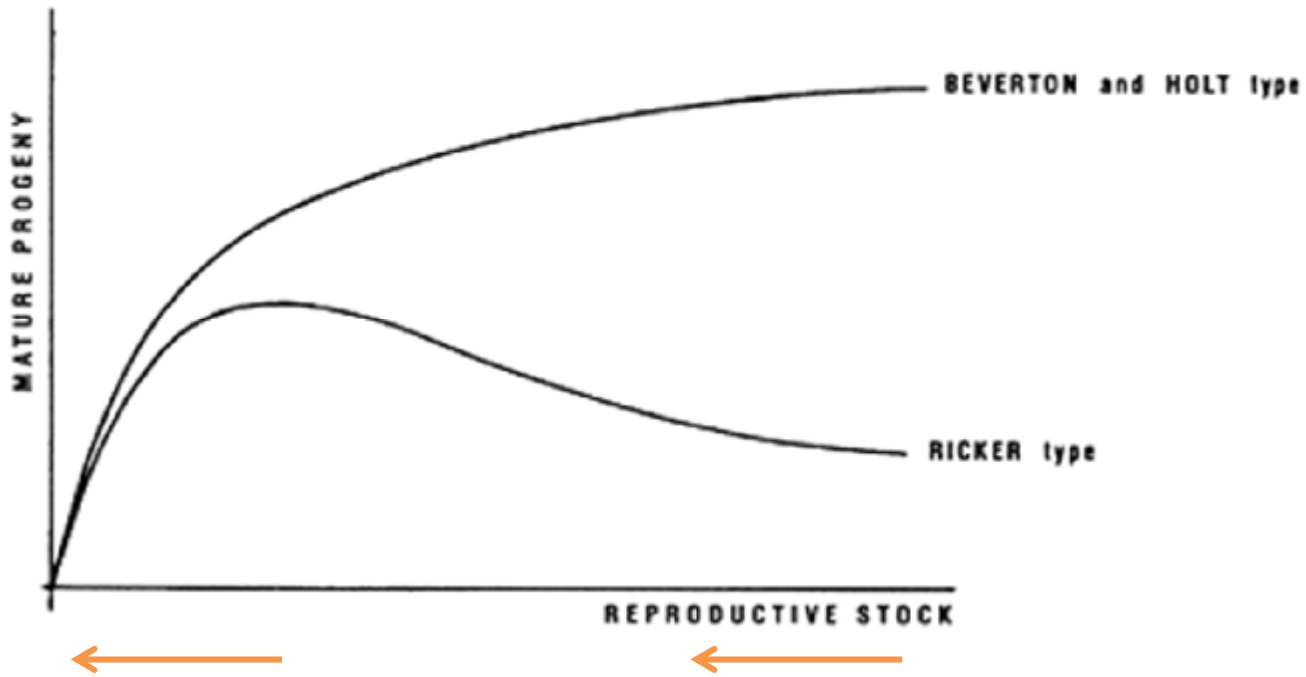
MATURE PROGENY
BEVERTON and HOLT type
RICKER type
REPRODUCTIVE STOCK