

Movement of Blue catfish in the Potomac River


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ARTICLE

Low Apparent Survival and Heterogeneous Movement Patterns of Invasive Blue Catfish in a Coastal River

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Objectives/goals

1. Examine movement patterns of Blue catfish in the Potomac River
2. Obtain estimates of survival in non-native habitats

Dart tagging study (2012-2015)

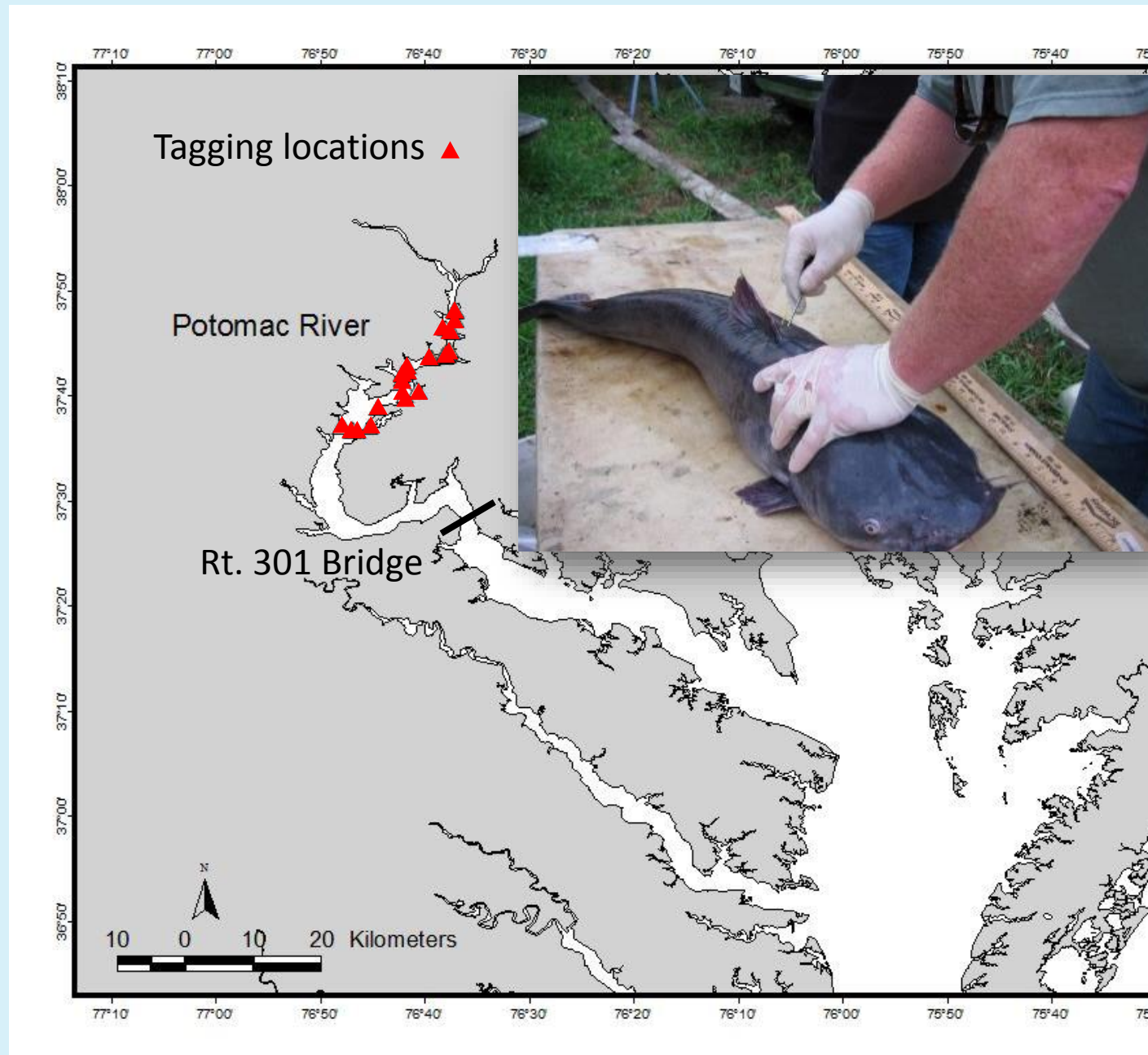


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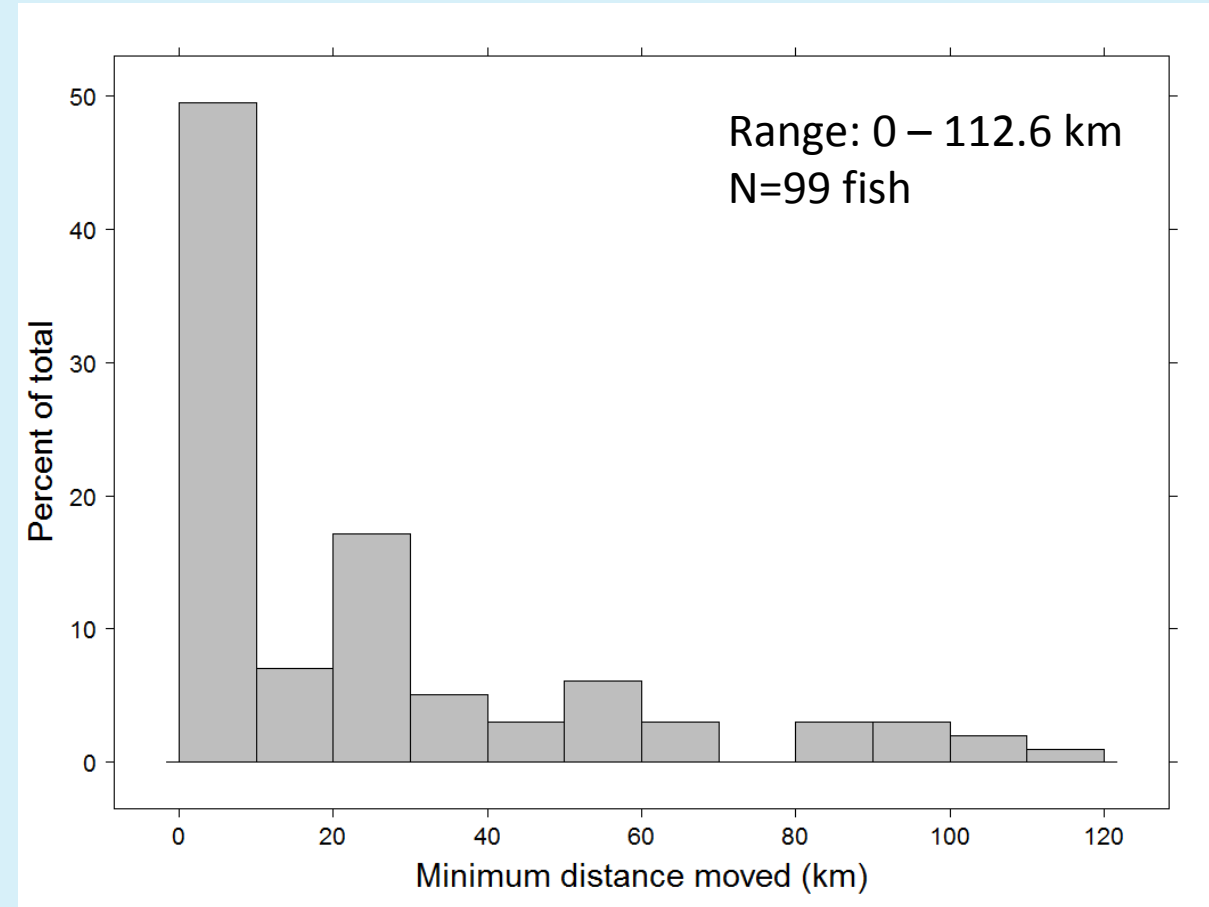
Methods

- External reward tags (2) applied by MDDNR
- 1,237 tagged blue catfish
- Size range from 30 to 132 cm TL
- Tags returned by rec/com fishers
- 104 returns (8.4% return rate)
- At-large from 2 – 1,208 days

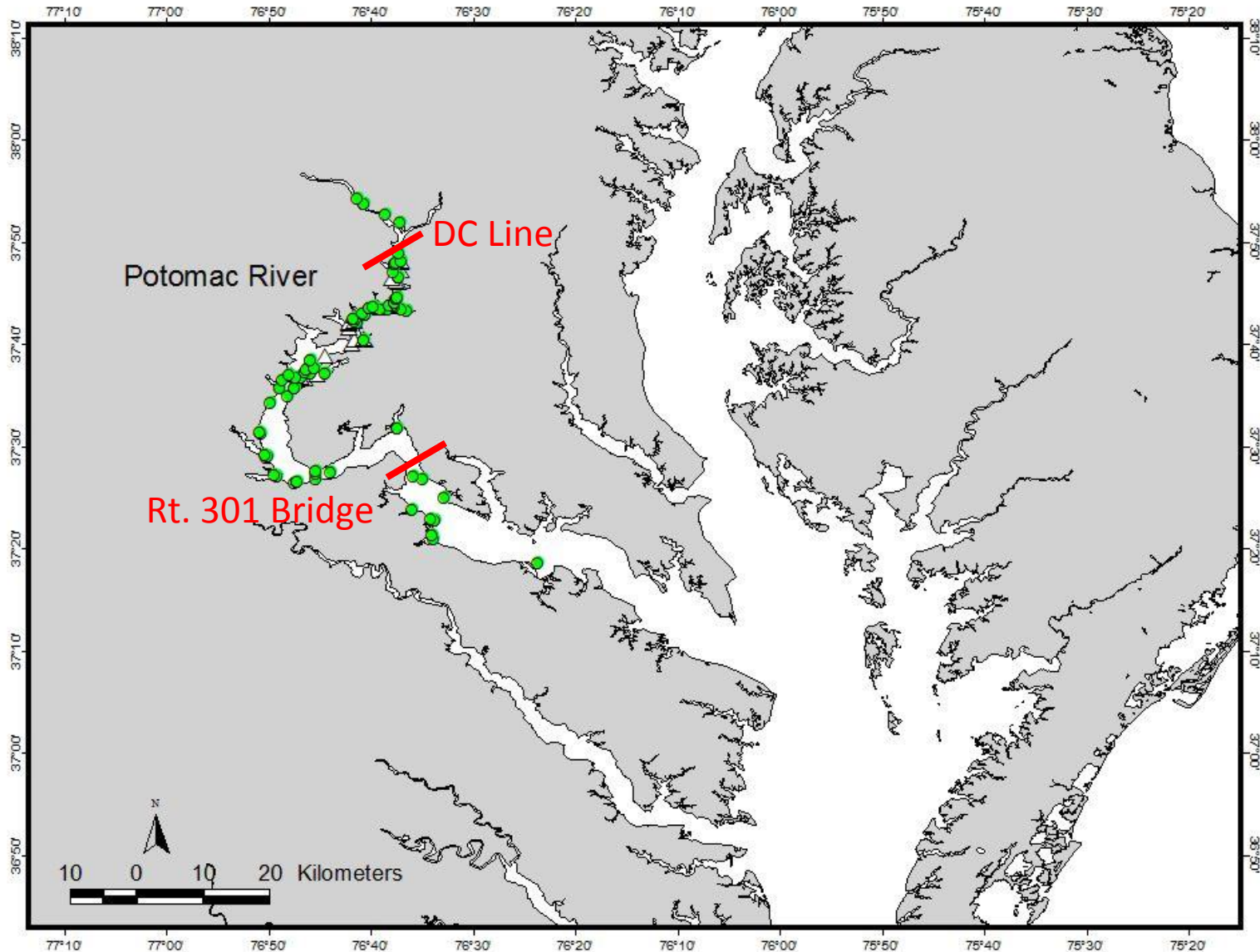


Results: Movements of Blue Catfish in the Potomac River

- Mean min distance moved = 24.1 km
 - distance not related to fish size, days-at-large
- 63% of recaptured fish moved downriver
 - greater distances downriver (34.4 km) vs upriver (6.7 km)
- High variability in movement behaviors
 - similar to native range
- Entire tidal Potomac River used (up to 12.8 ppt)



Results and discussion: Tag return locations



- 9% of returns below Rt. 301 Bridge
- Fish may have moved further than observed
- Down-river movement: increased exposure to fish with elevated levels of contaminants outside of advisory area
- Entire Potomac River supports Blue Catfish including salinities up to 12.8 ppt (observed as high 21.8 ppt in the James River)