

# Hangman Redband: Population connectivity in a highly degraded watershed



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# Hangman Creek Watershed



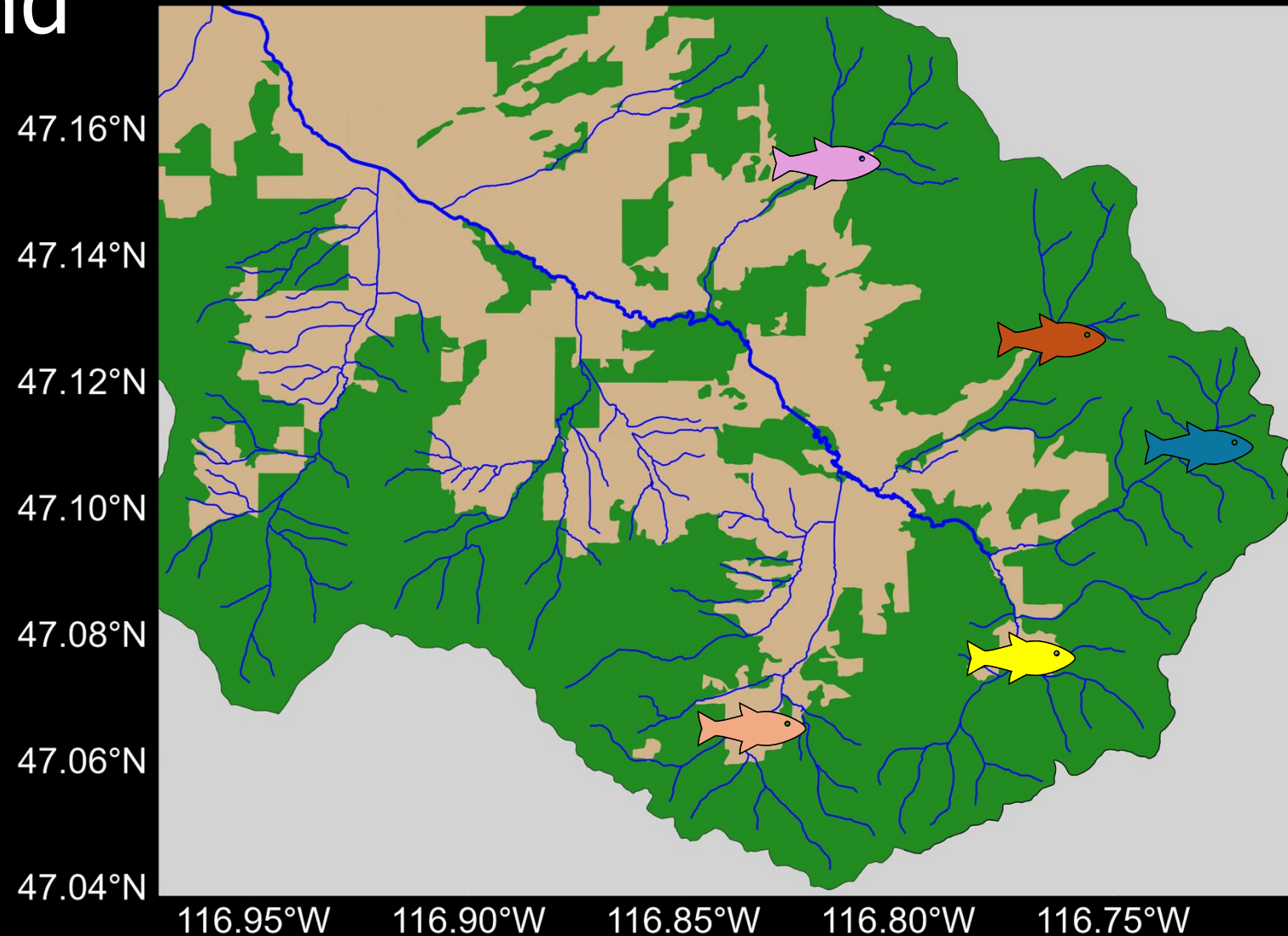
Background

Monitoring

Trends

Conclusions

# Hangman Redband



Background

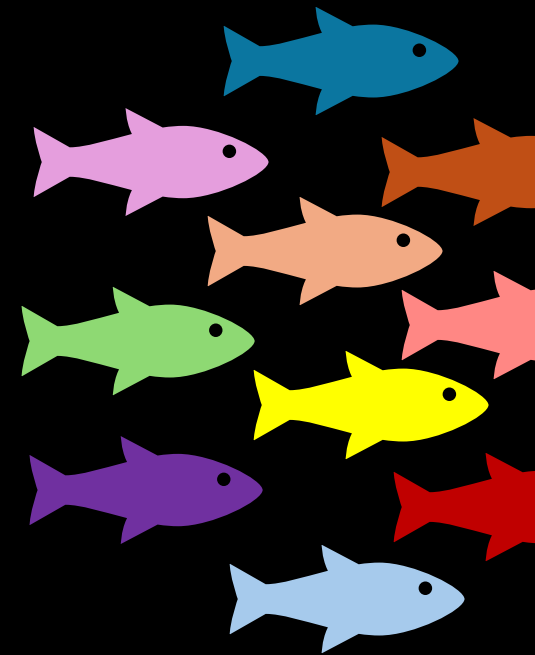
Monitoring

Trends

Conclusions



# Importance of Population Connectivity



↑ Diversity

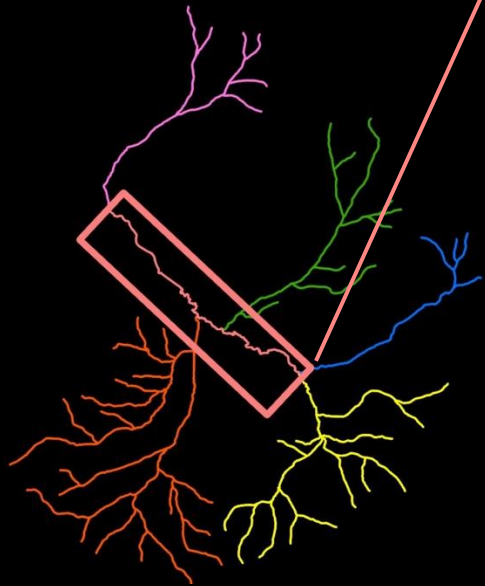


variable Environmental  
Conditions

↑ Adaptability

Resilient  
Population

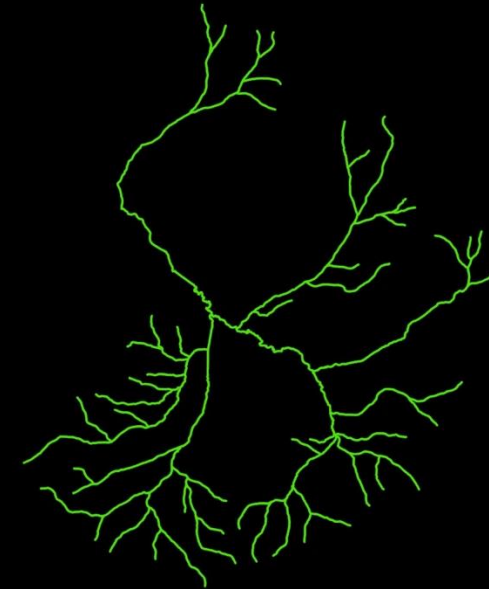
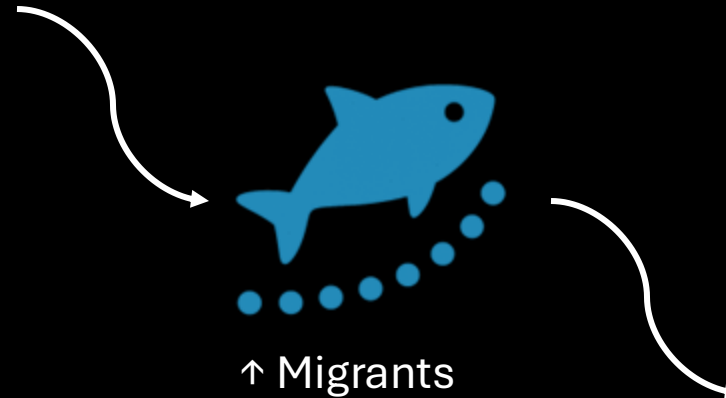
# Improving Connectivity Through Restoration



Fragmented Population



Mainstem Hangman Creek  
habitat restoration



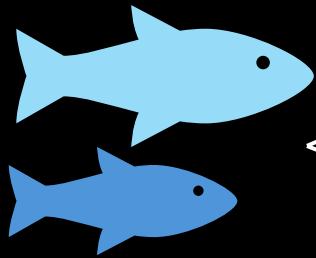
Connected Population

# Monitoring Migratory Behavior



Migrant Portion

Has the proportion of fish that migrate to mainstem habitat changed overtime?



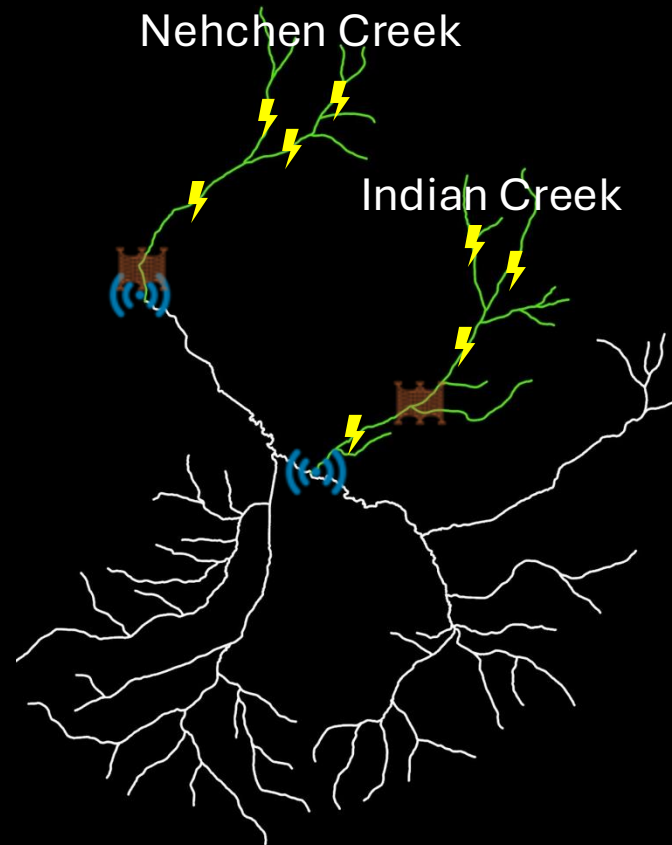
Migrant Size

How does size compare between migratory and resident fish?

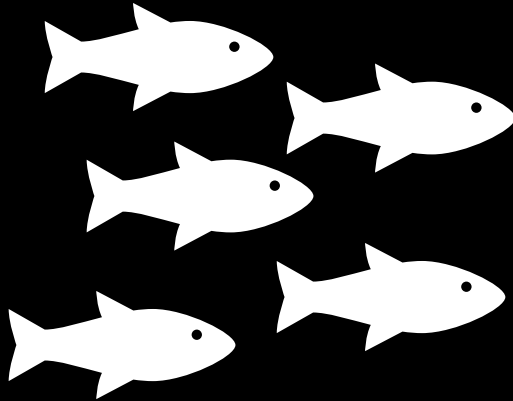
Has there been a change in size overtime?



# Tagging and Detection Events



# Quantifying Portion of Migrants



Tagged Fish

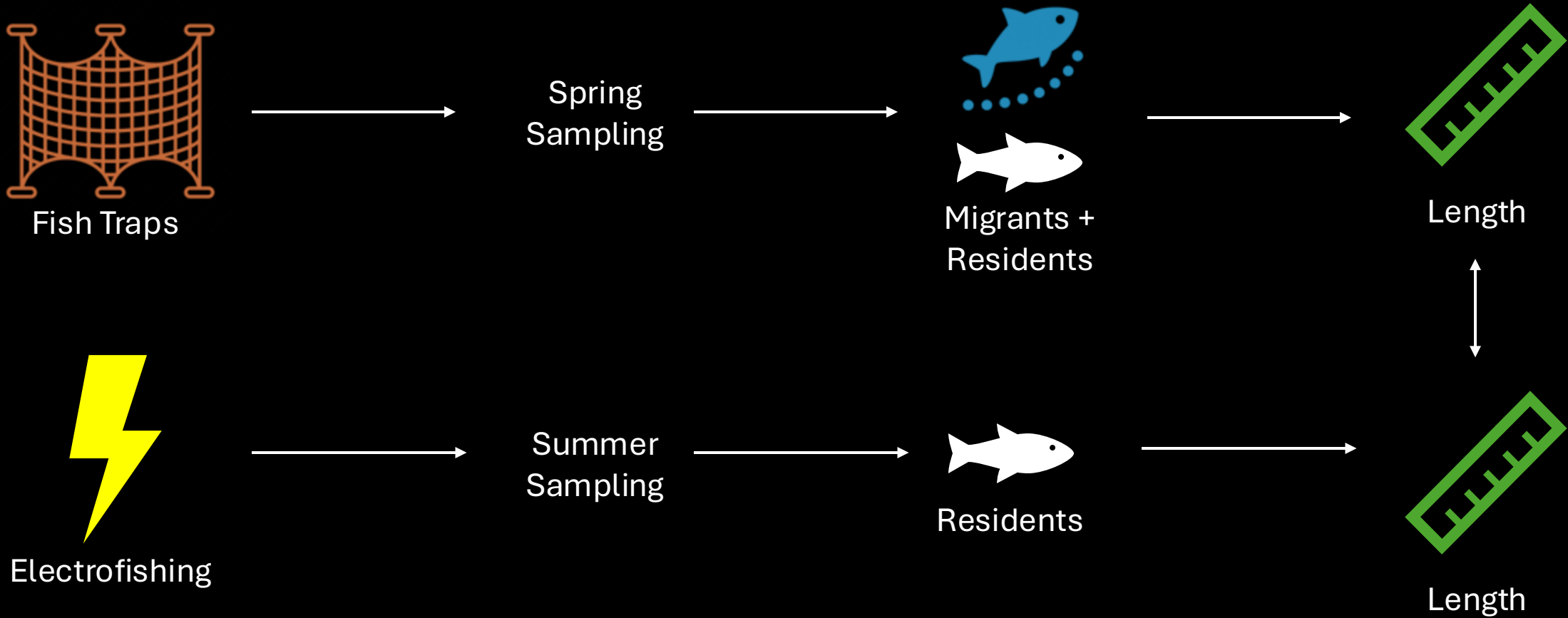


PIT Tag Detection  
Sites

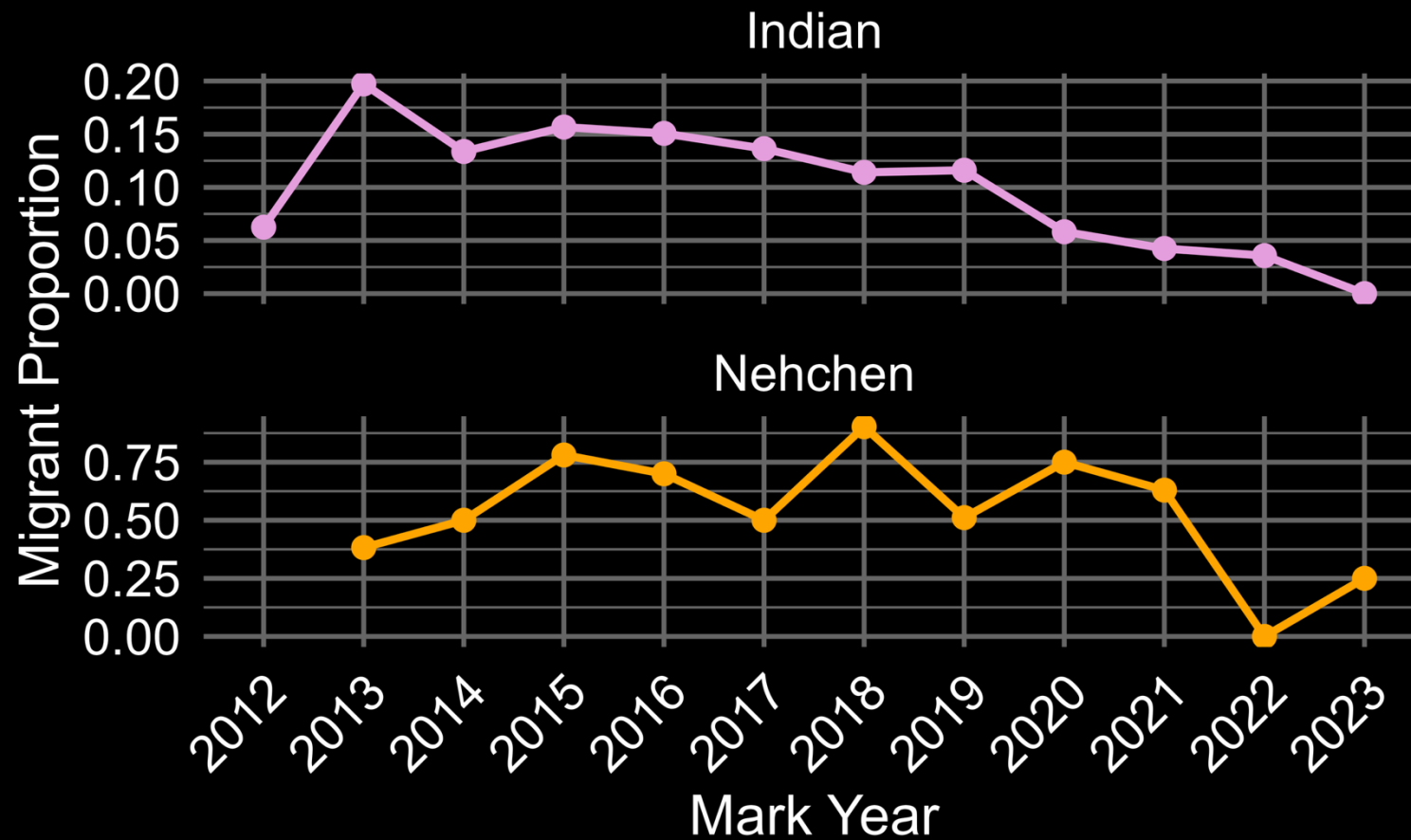
Migrant



# Quantifying Fish Size

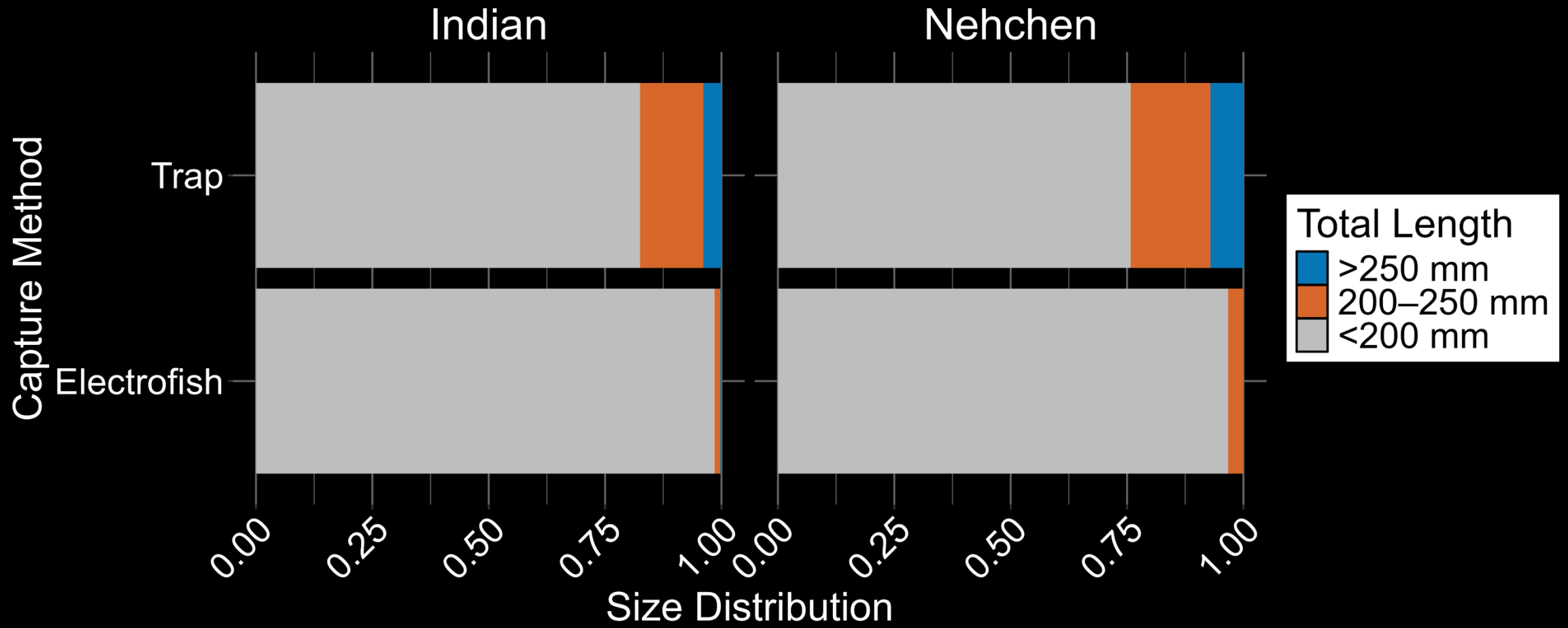


# Portion of Migrants

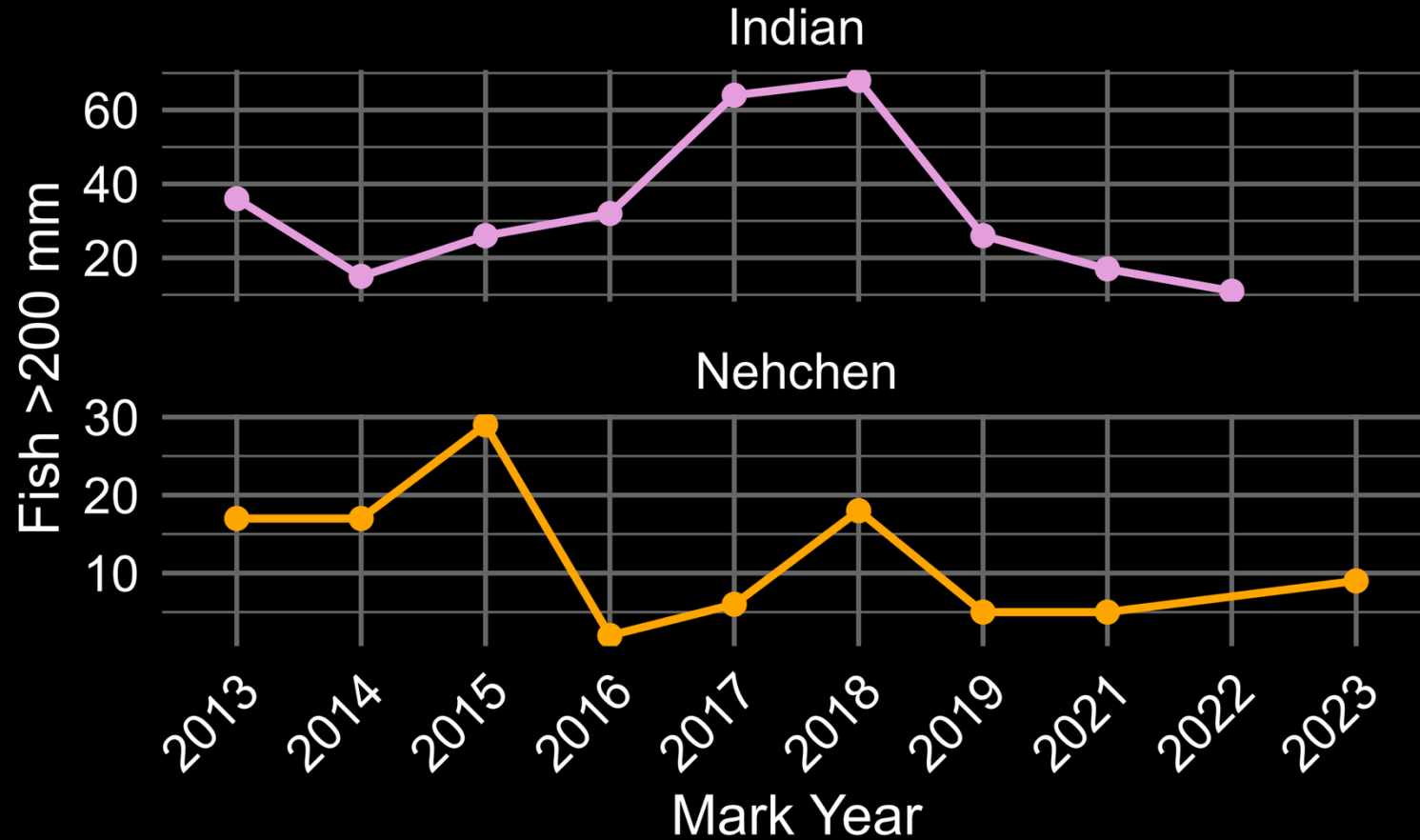




# Portion of Large Fish

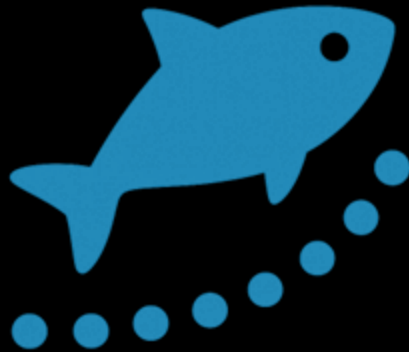


# Total Large Fish Overtime

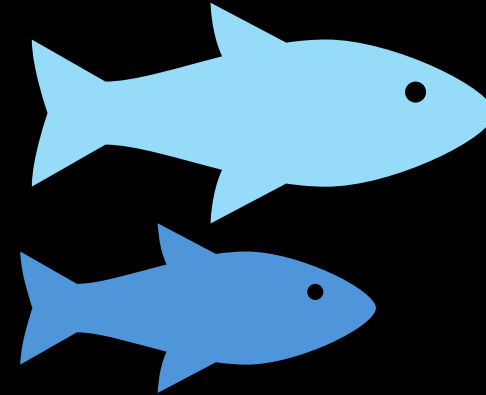




# Takeaways



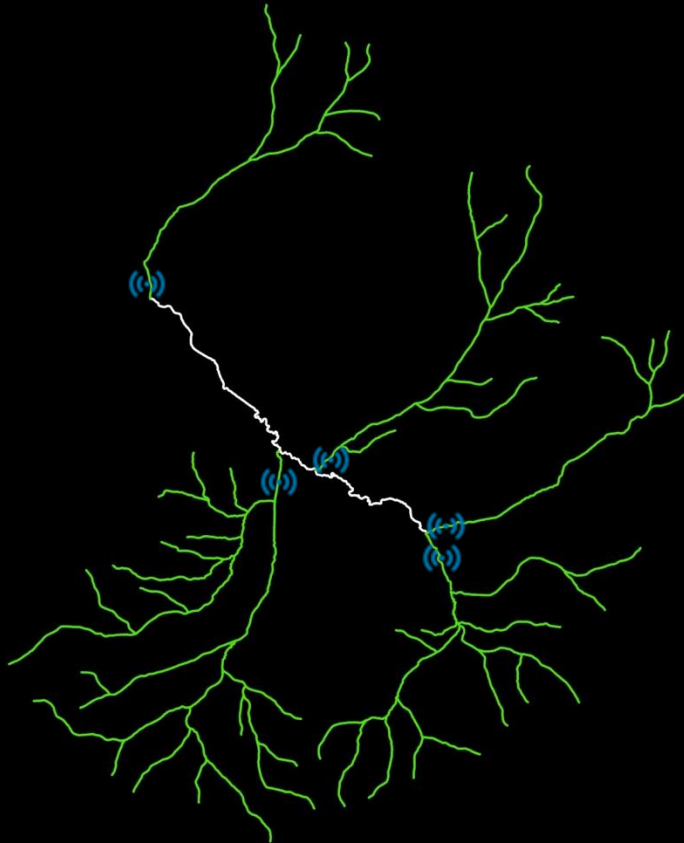
↓ Expression of  
migratory LH



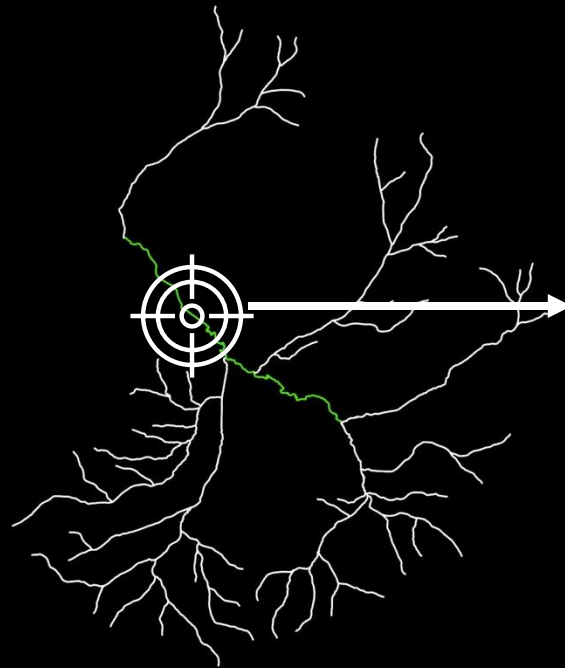
Rearing in mainstem  
Hangman Creek can result  
in a size advantage for  
migrants



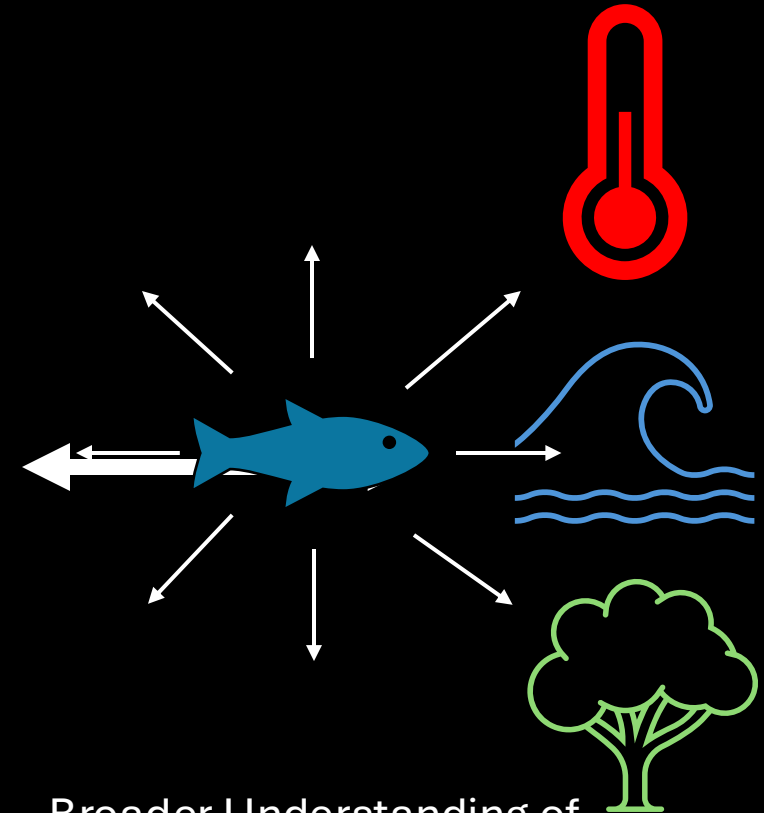
# Future Monitoring



↑ PIT Tag Monitoring



Fine Scale Assessment of  
Occupancy



Broader Understanding of  
Migration  
Fine Scale Assessment of  
Habitat



A photograph of a forest stream with a small weir made of corrugated metal. The stream flows through a forest with large trees and snow patches on the banks. The word "Questions" is overlaid in white text in the center of the image.

Questions