A Southern Brook Lamprey (Ichthyomyzon gagei) is shown swimming in a clear plastic container. Water is flowing over the lamprey from the left, creating a dynamic scene. The lamprey's body is elongated and tapers towards the tail. A small, rectangular label with a barcode is visible on the upper left side of the container.

Ontogeny of Southern Brook Lamprey, *Ichthyomyzon gagei*, with emphasis on abundance, distribution, and morphology in a small watershed

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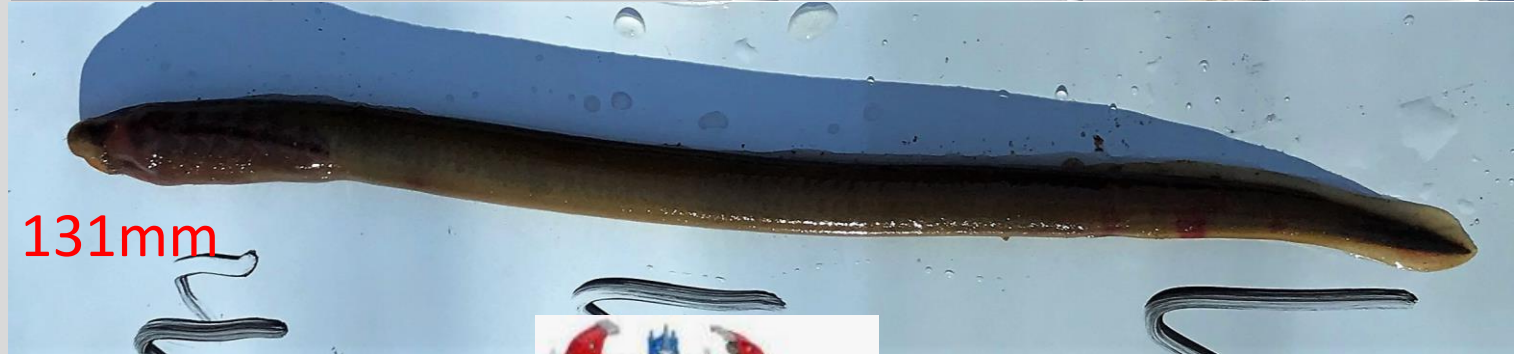
What we know...

- Southern United States
- Habitat preference



What we know...

- 3 Life Stages
- Life span
- Estimated Maximum Length



????????

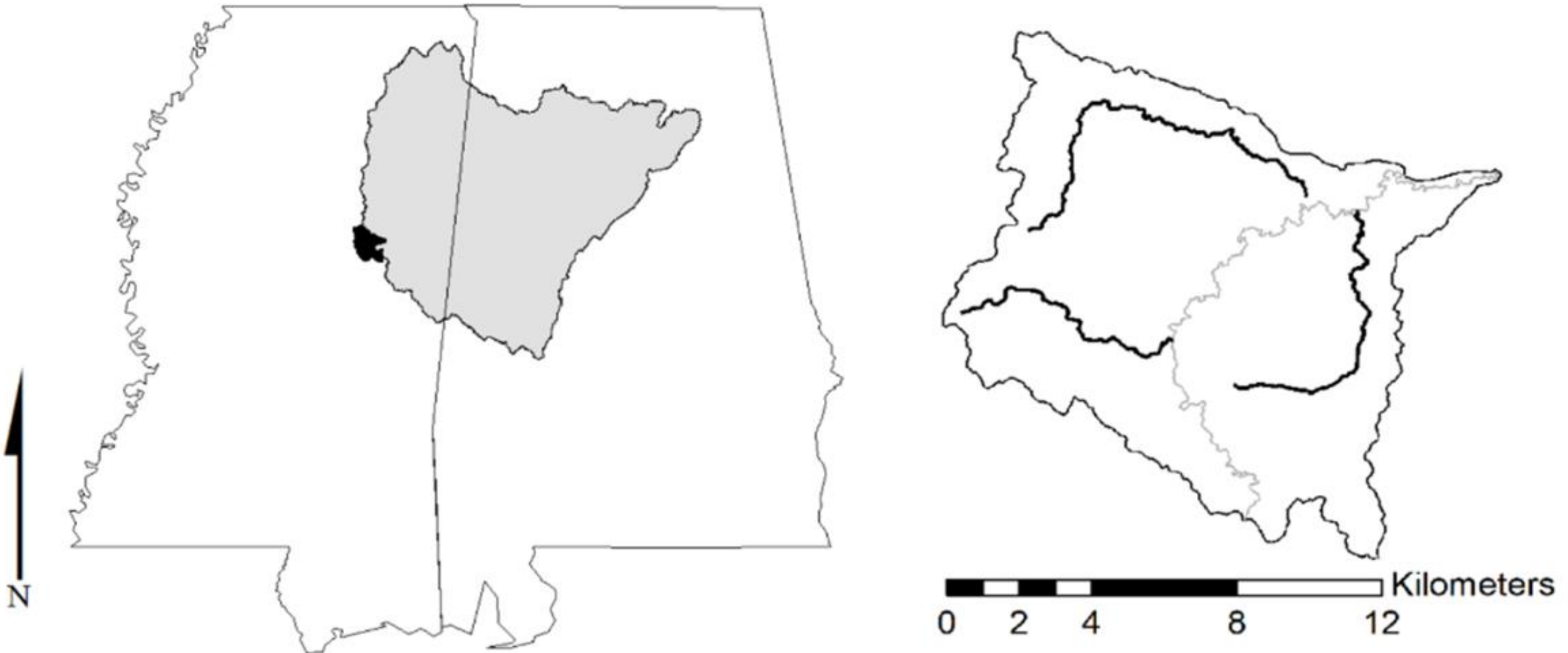


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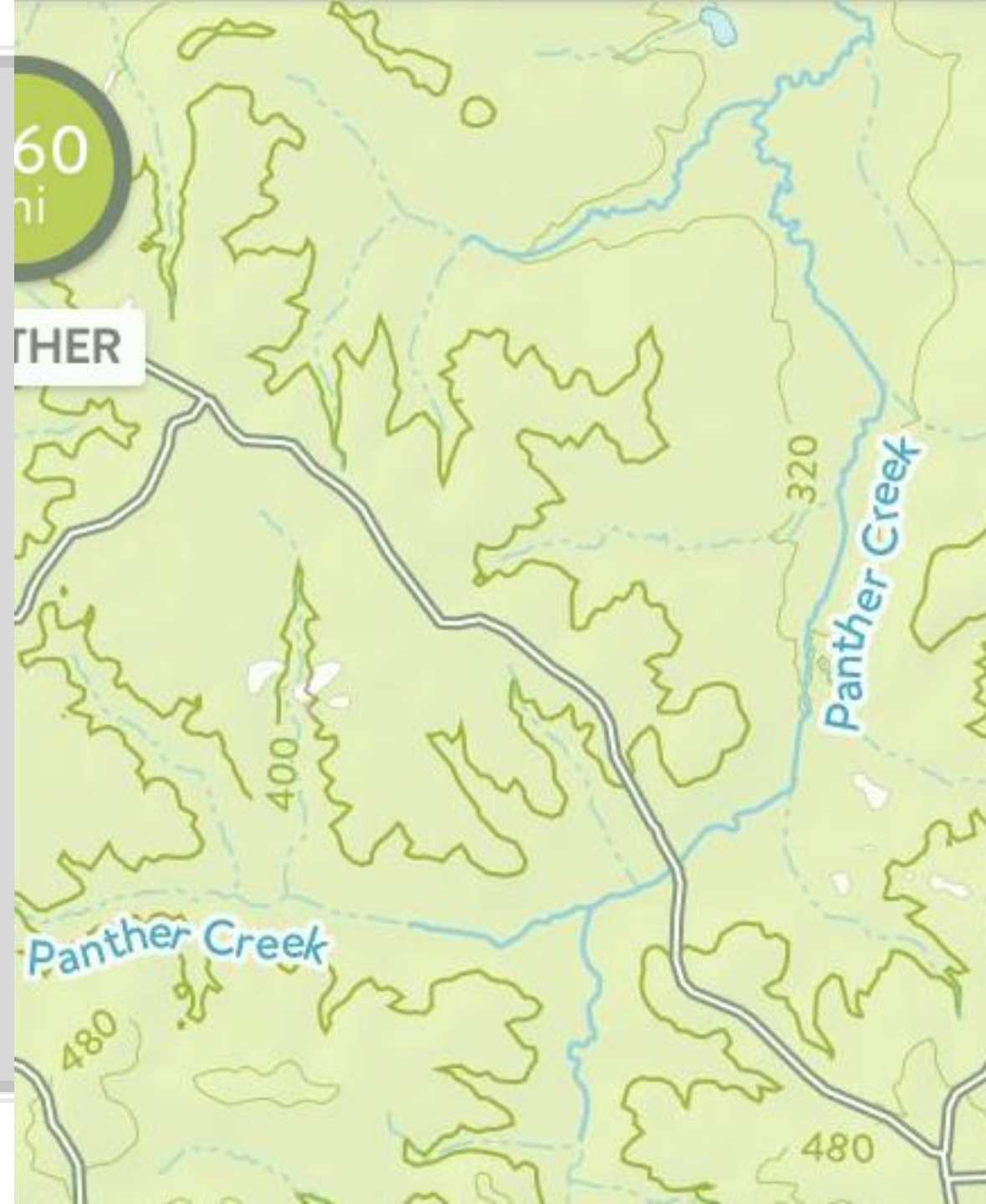
Objectives

- **Population Abundance and seasonal changes**
- **Determine the impact that size has on metamorphosis**



Question 1

- Will Southern Brook Lamprey will be present throughout the entirety of Panther Creek?

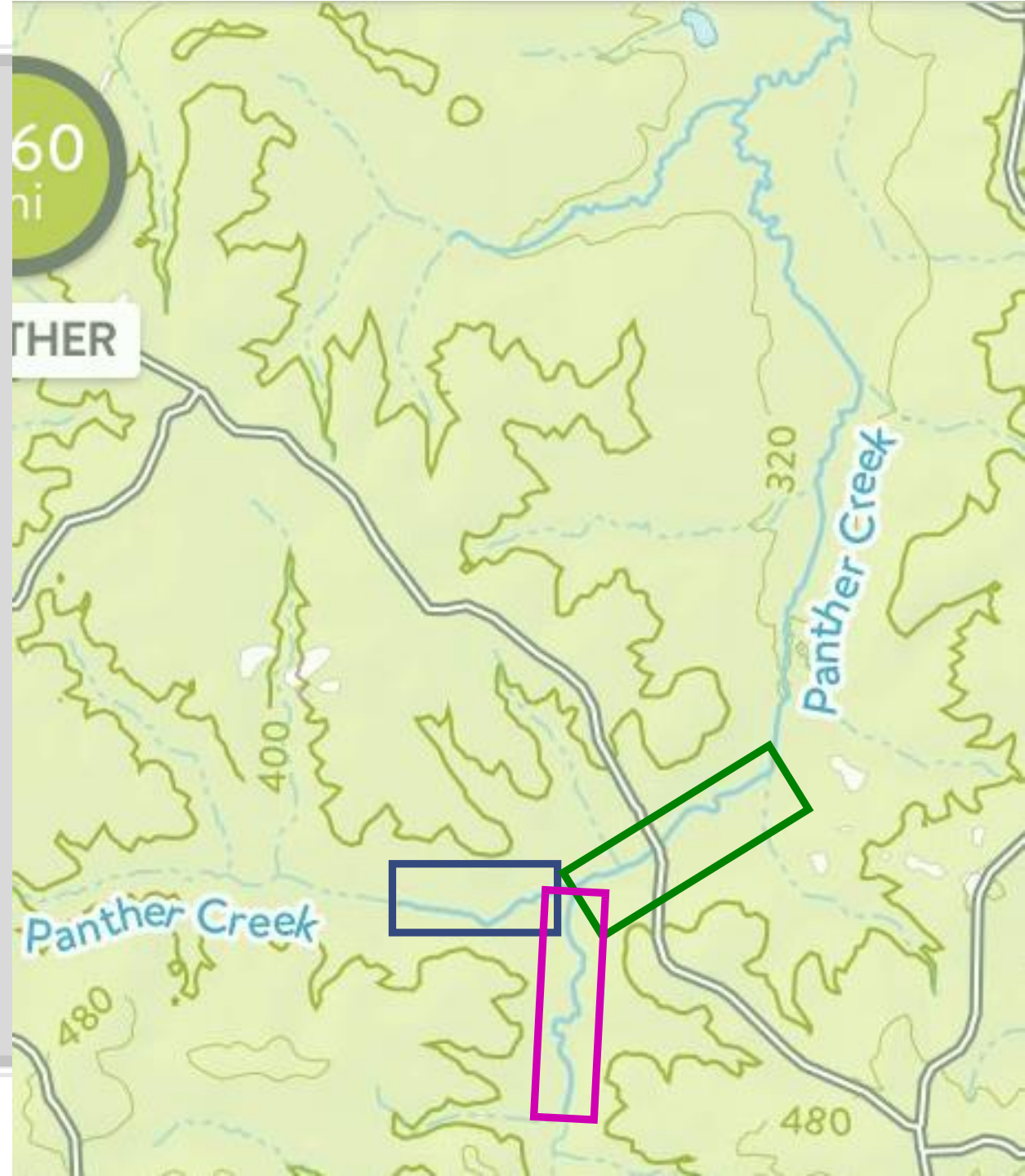


Question 2

At what size will
metamorphic traits always
be present?



Random Stratified Design





Sampling: Electrofishing



Sampling: Electrofishing





MS-222

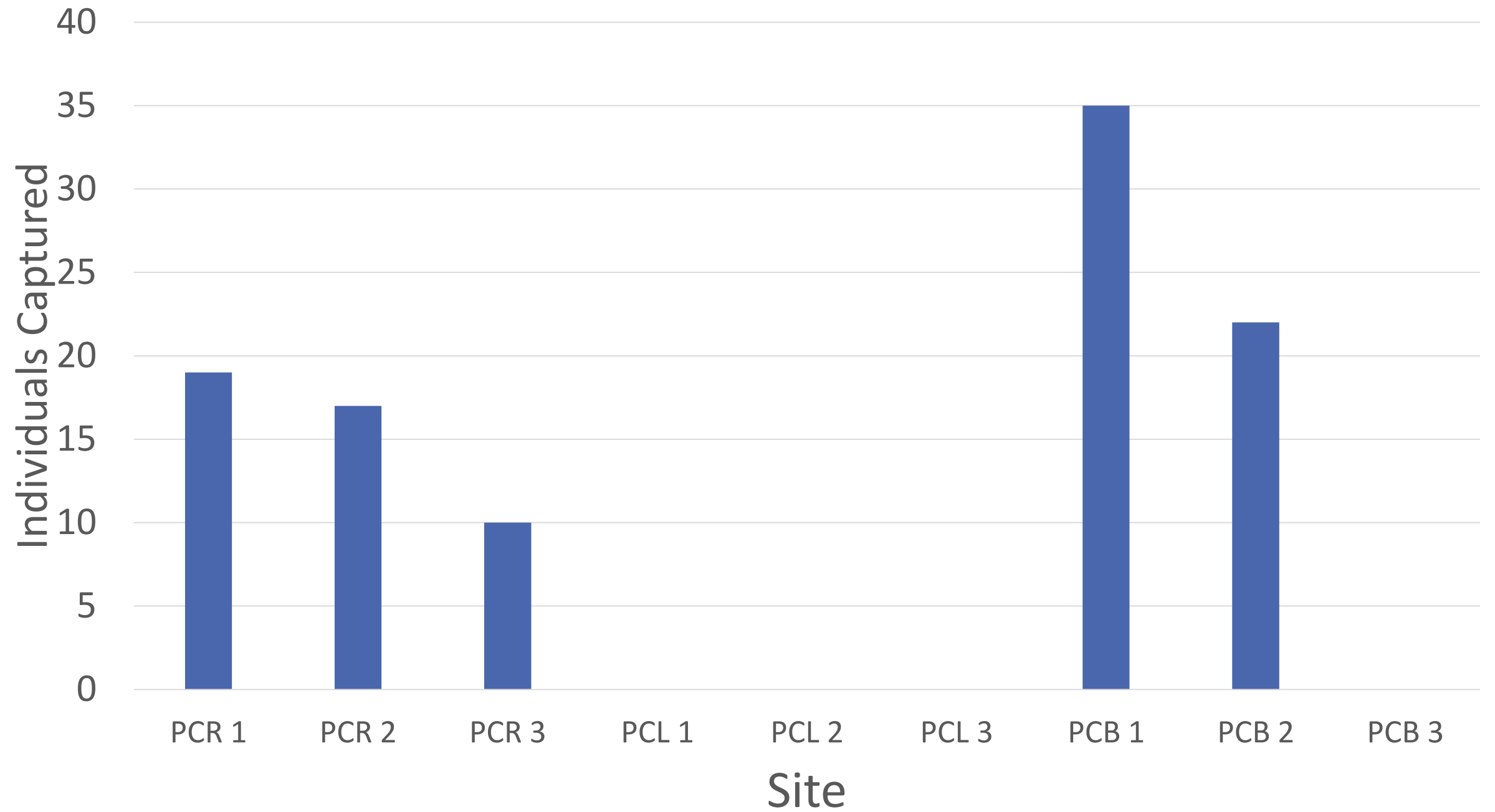


Measure
Total
Length



Pictures of
Tail, Head,
and Body

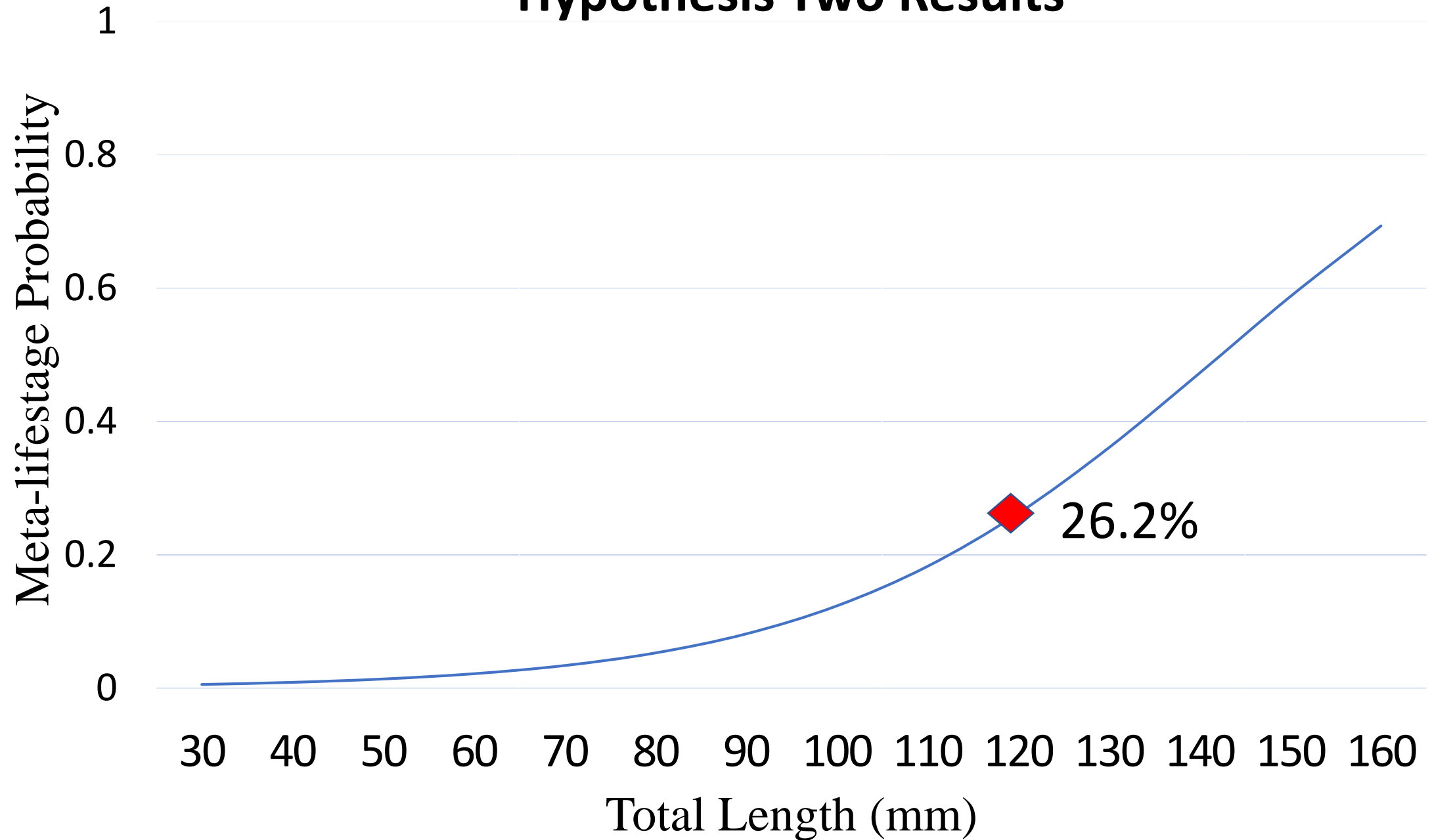
Question 1: Will Southern Brook
Lamprey will be present throughout
the entirety of Panther Creek?





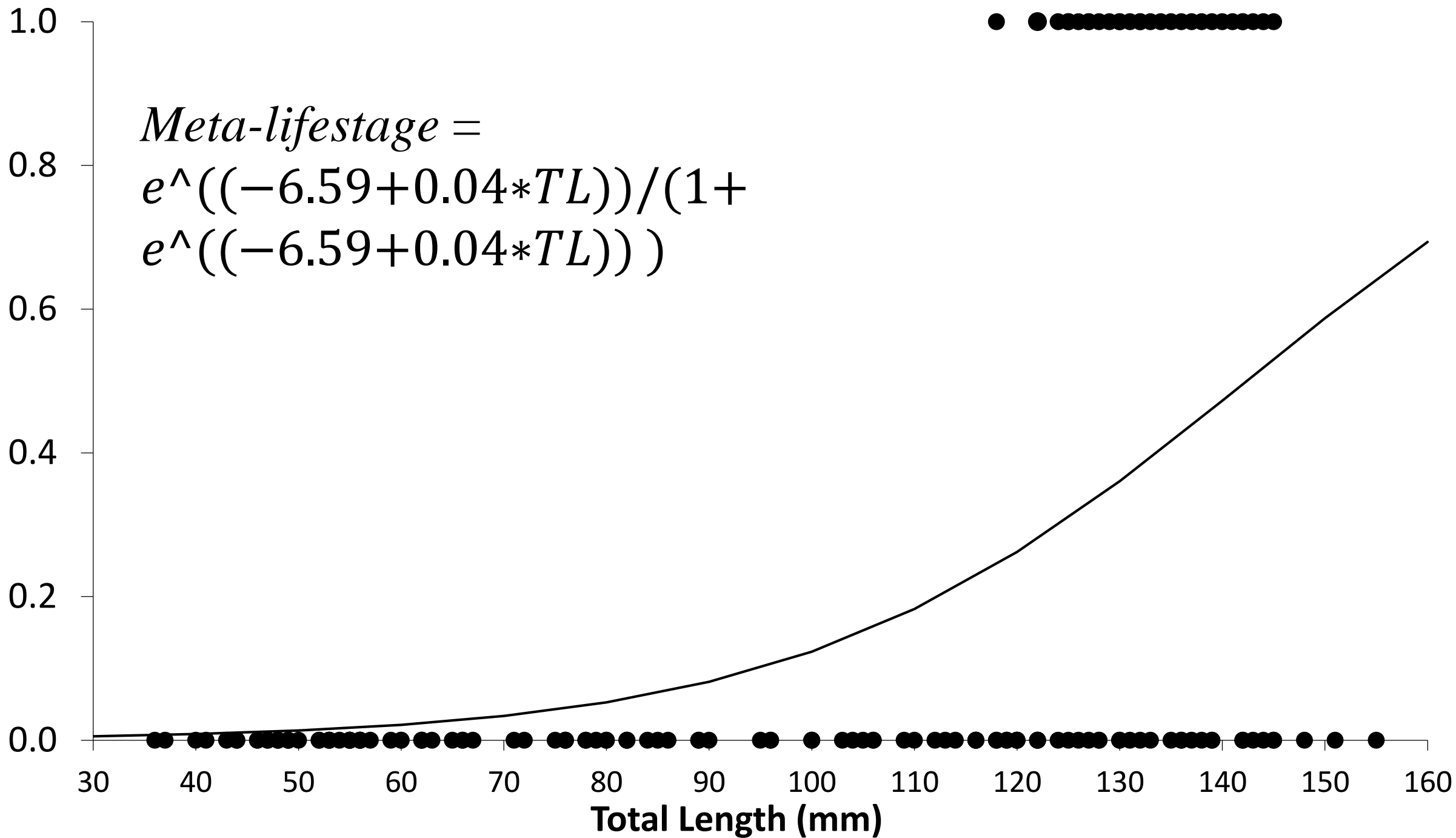
Question 2: At what size will metamorphic traits always be present?

Hypothesis Two Results

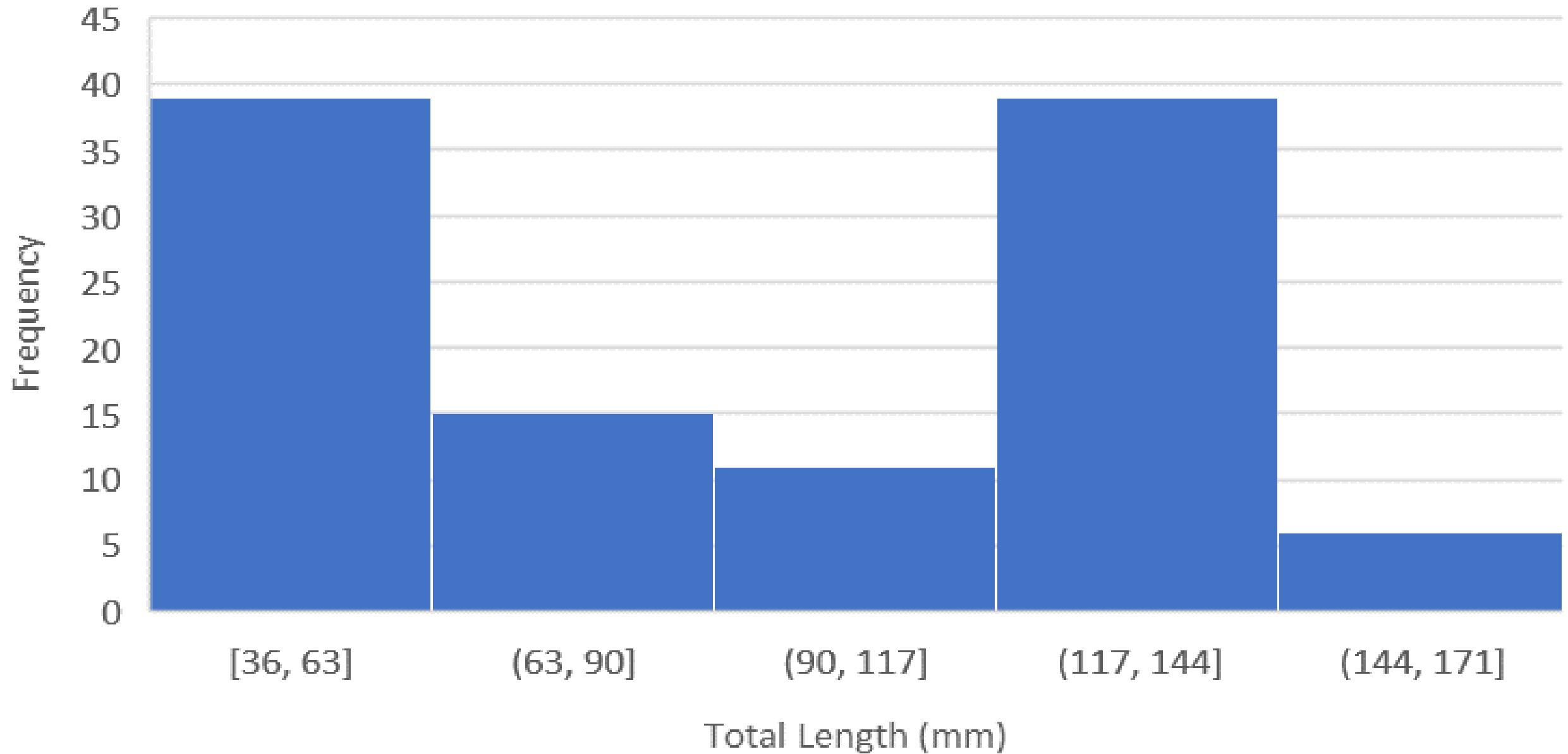


Meta-lifestage Probability

$$\text{Meta-lifestage} = \frac{e^{(-6.59 + 0.04 * TL)}}{1 + e^{(-6.59 + 0.04 * TL)}}$$



Lengths



Discussion

- Life Stages
- Anatomy
- Current Panther Creek Distributions
- Length is not the only factor influencing metamorphosis



For the Future...



A close-up photograph of a person's hands holding a small, light-colored, worm-like creature. The person is wearing a dark jacket with "FISH" and "S" visible on the sleeve. The background is a blurred, sandy or rocky surface. The word "Questions?" is overlaid in white text in the center of the image.

Questions?