

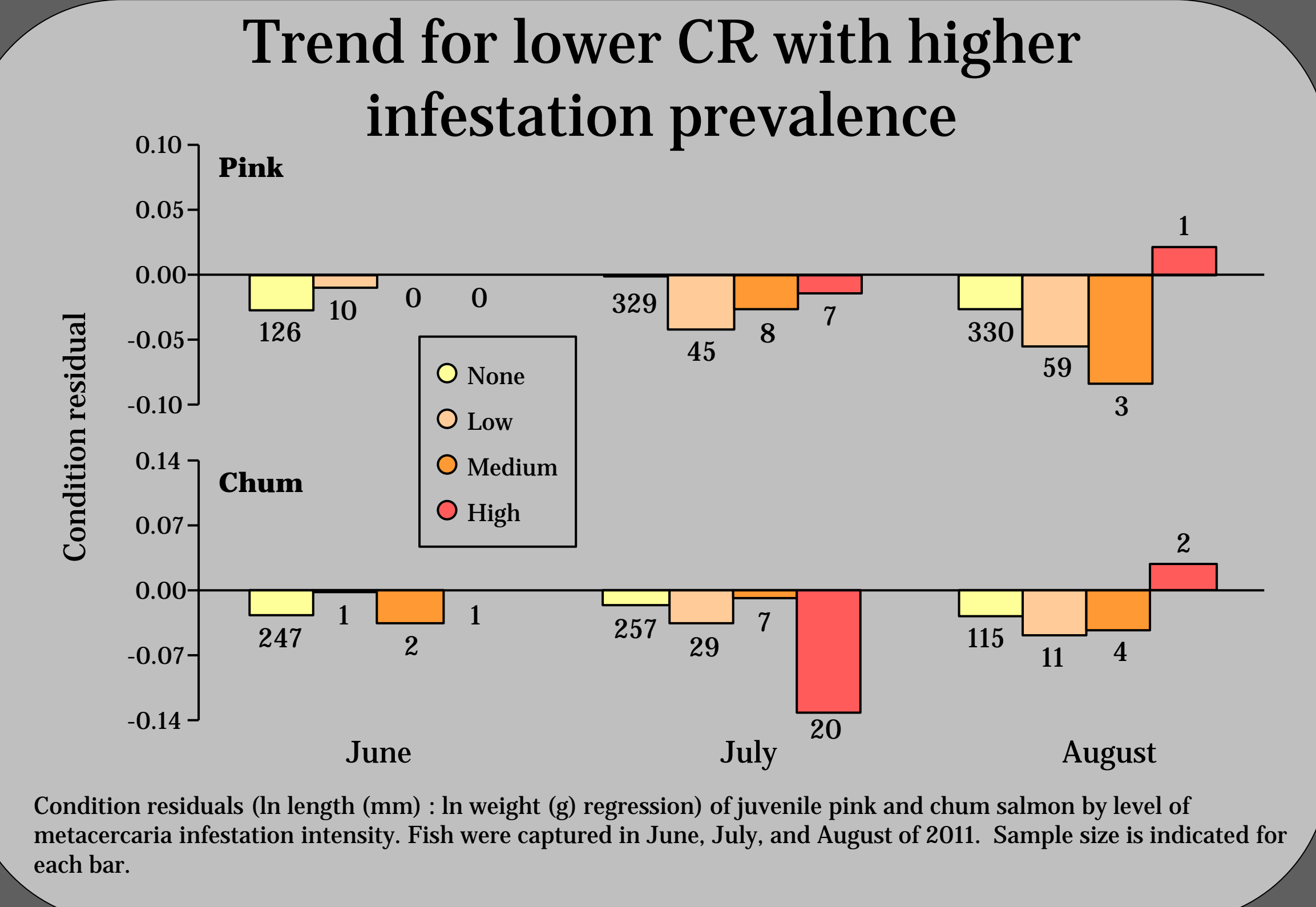
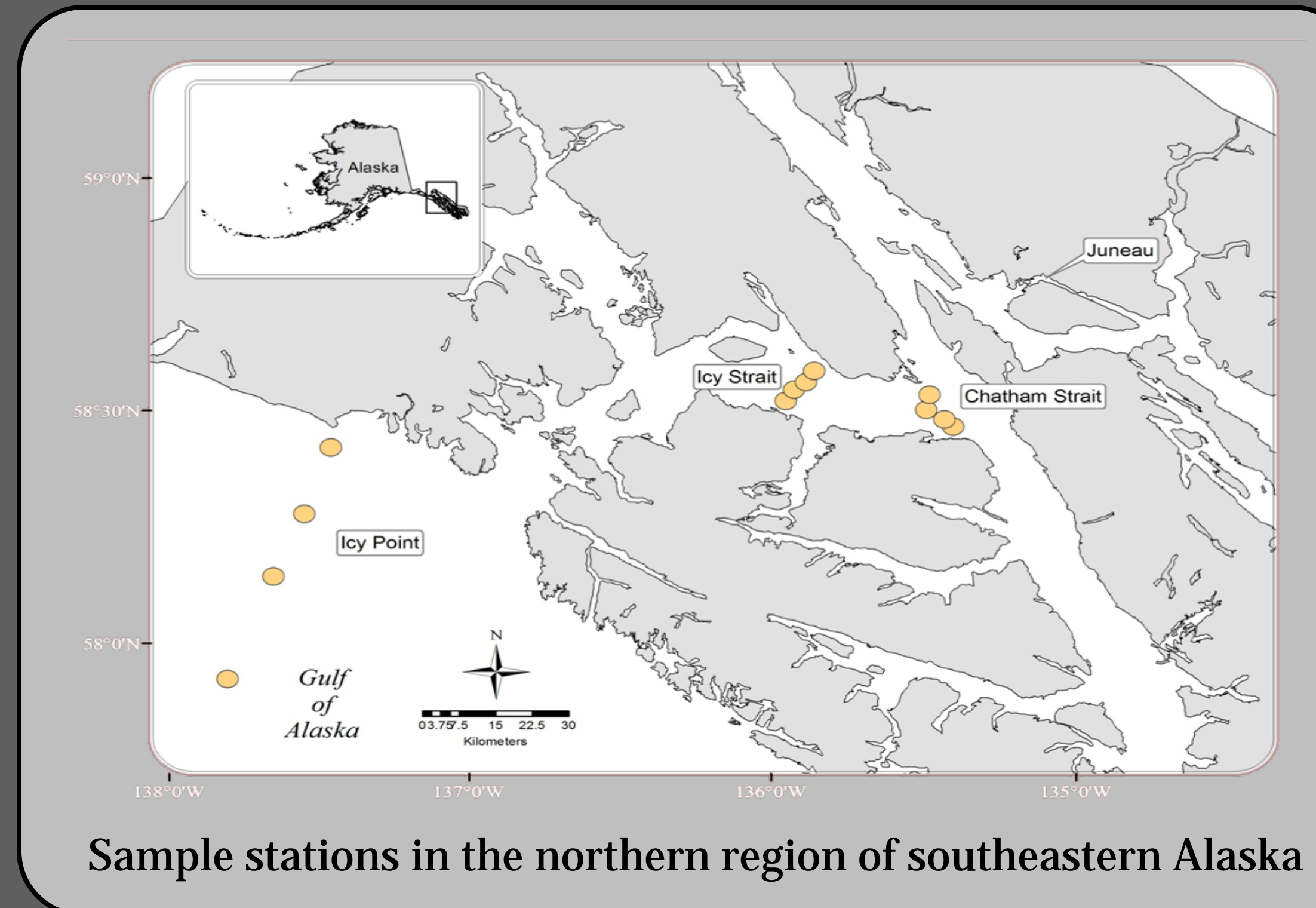
E. R. Cote, E.A. Fergusson, J.A. Orsi

Juvenile Pink and Chum Salmon

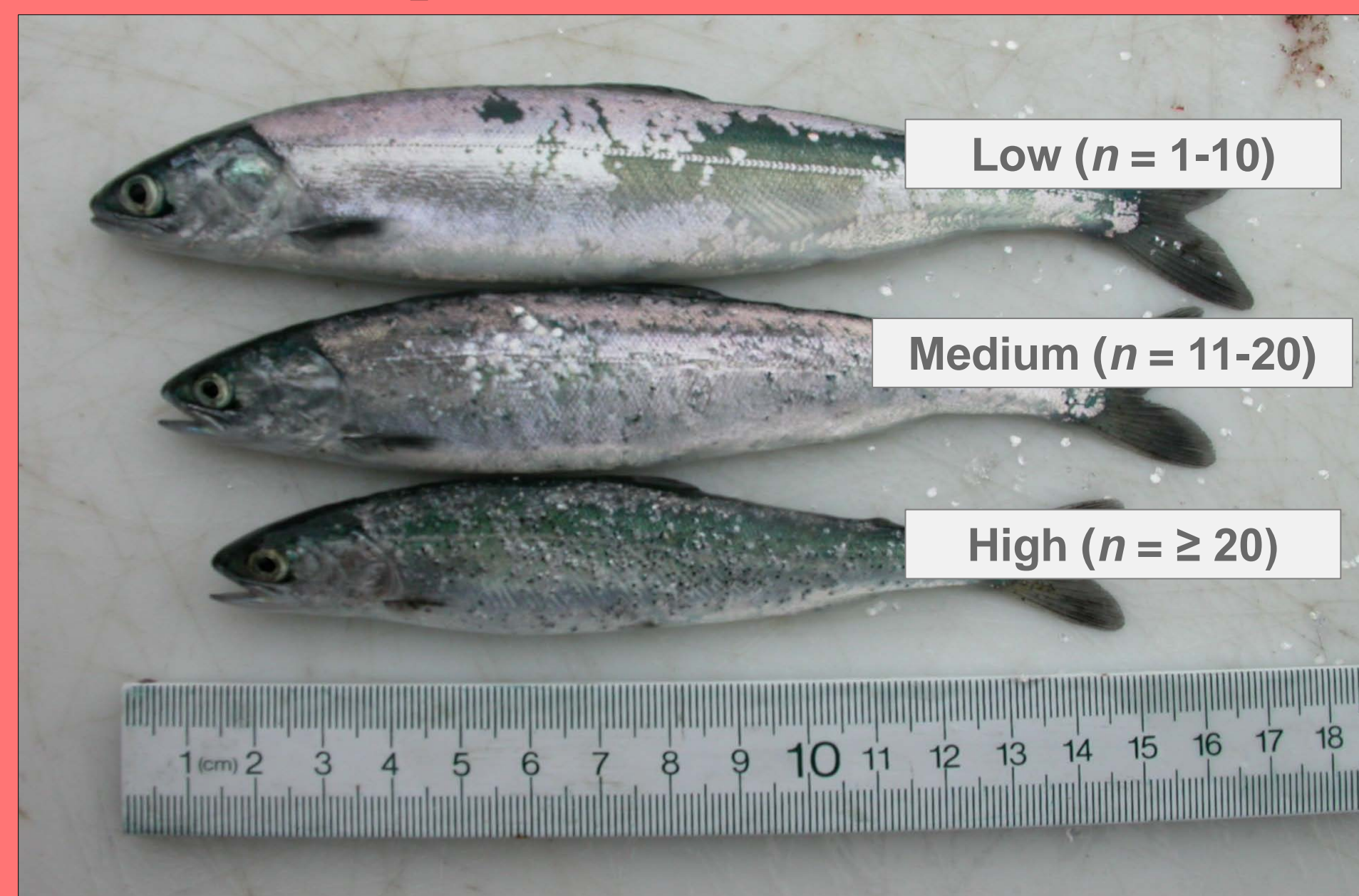
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-Background-

Environmental stressors such as parasites may affect condition, growth, and survival of seaward migrating juvenile salmon. Gaining a better understanding of potential negative effects caused by parasites is therefore important. Metacercaria, also known as "black spot disease," are larval trematodes which have been observed on the skin of juvenile salmon caught during the Southeast Coastal Monitoring project, in strait and coastal habitats of Southeast Alaska, over the past 15 years. In the summer of 2011, a pilot study to quantify metacercaria prevalence (% infestation) and the degree of infestation on the skin of juvenile pink and chum salmon caught in surface trawls was initiated.



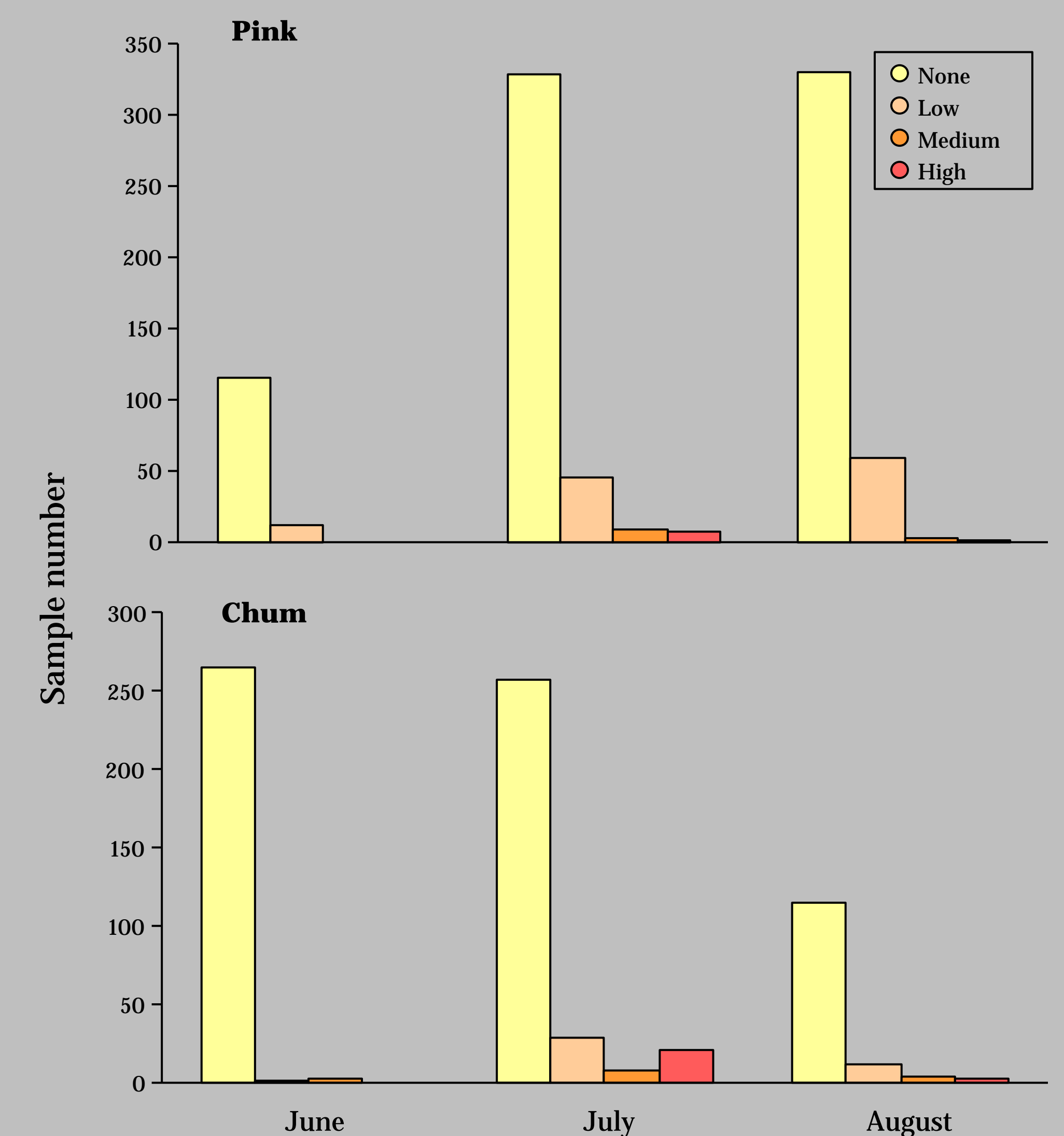
"Black Spot" Levels of Infestation



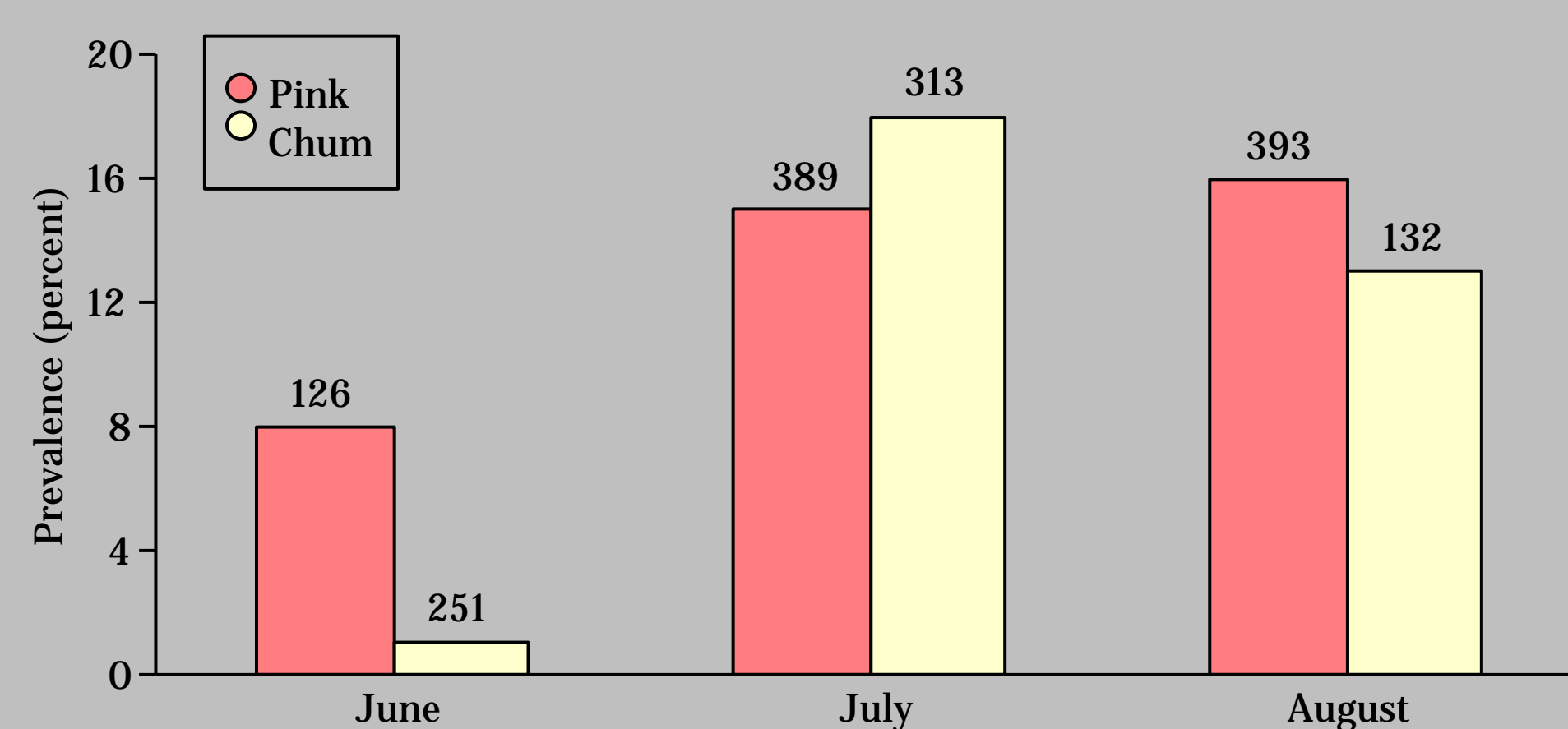
-Methods-

- Examined up to 30 fish per haul for "black spots"
- Measured length (mm) and weight (g)
- Categorized infestation intensity into four levels:
 - None
 - Low ($n=1-10$ cysts)
 - Medium ($n=11-20$ cysts)
 - High ($n>>20$ cysts)

Infestation prevalence varies seasonally

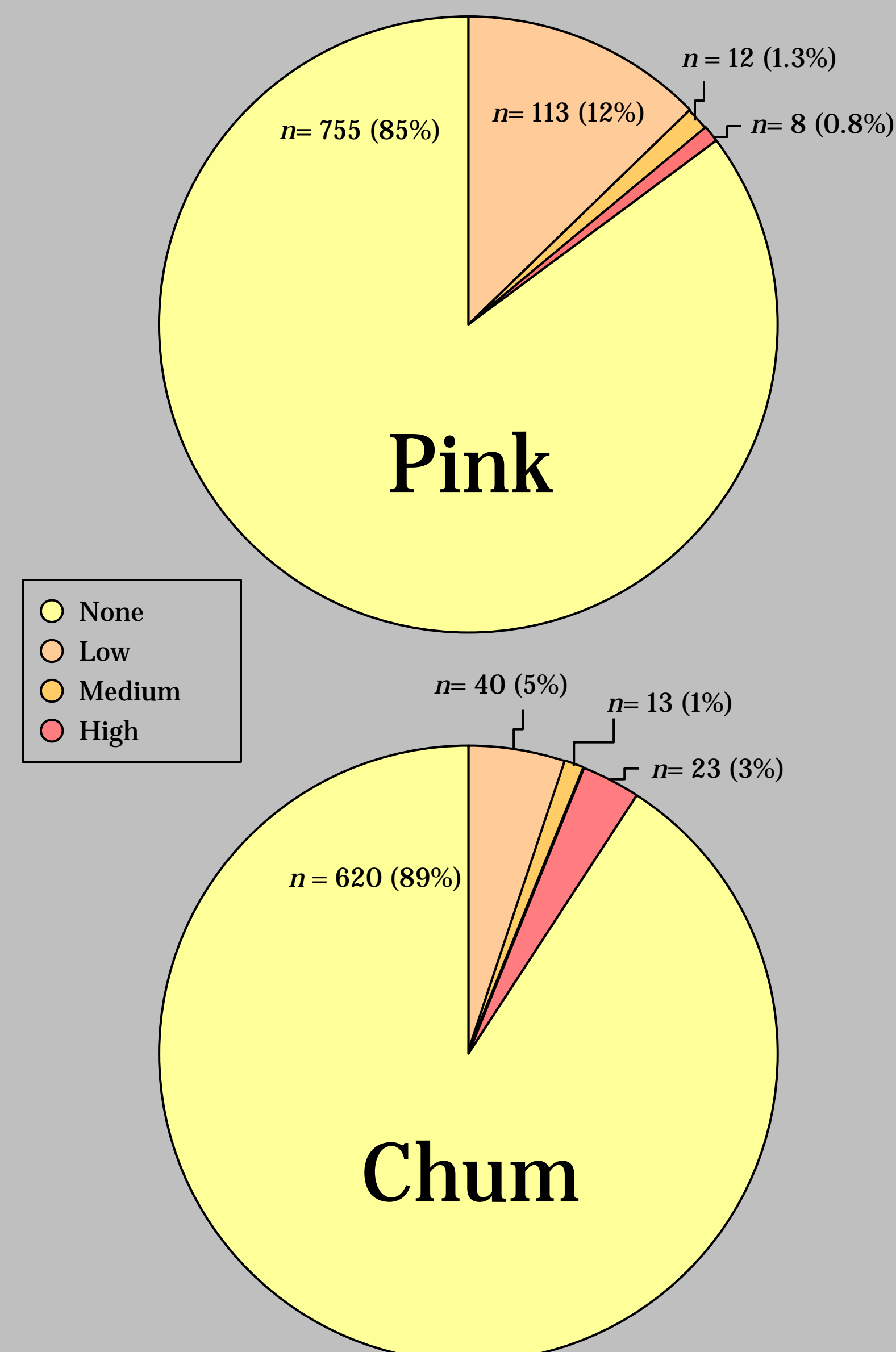


Seasonal Infestation Prevalence



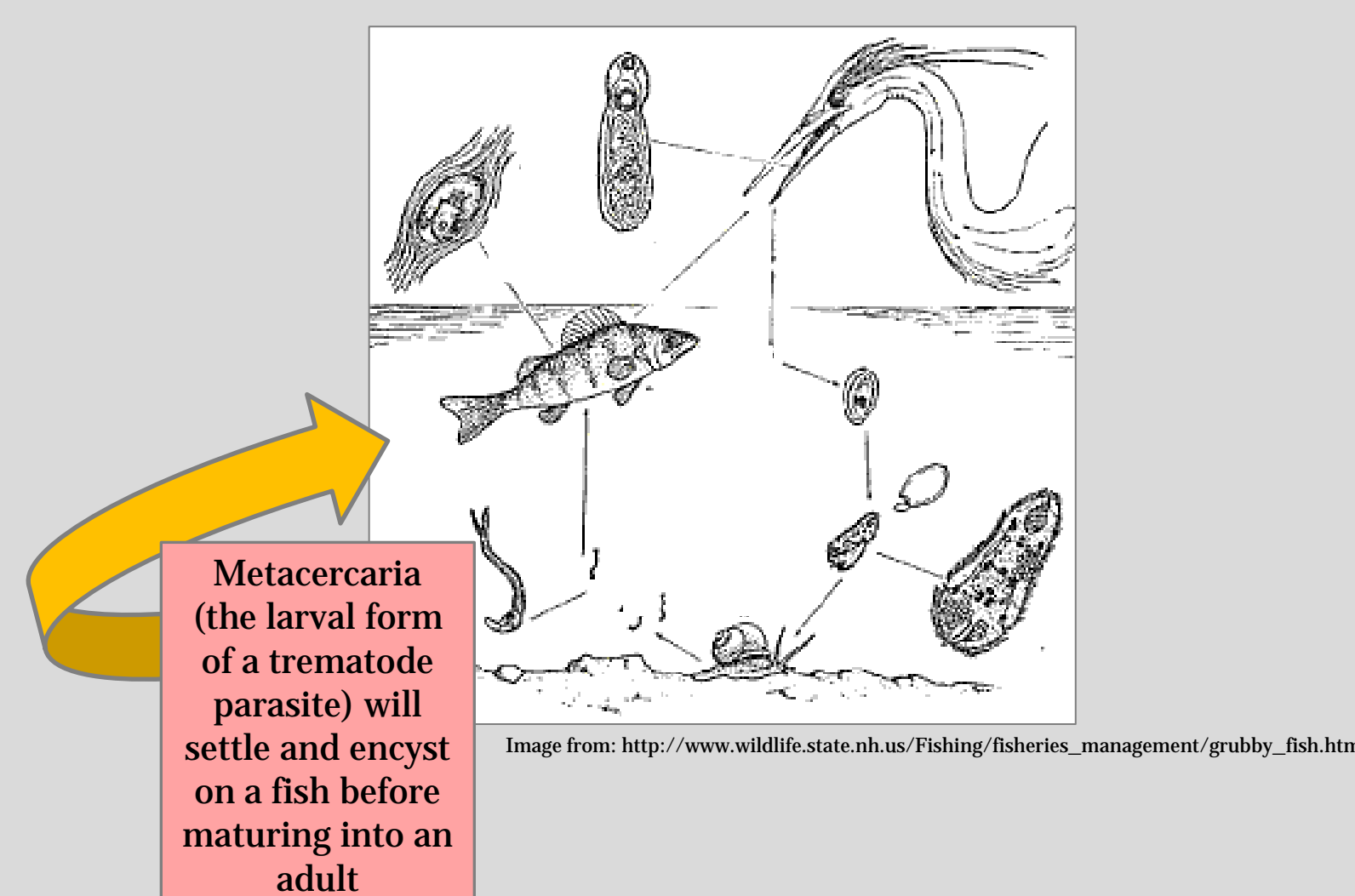
Prevalence (percent) of metacercaria on juvenile pink and chum salmon captured in June, July, and August of 2011. Number of fish examined is indicated above each bar.

Overall Prevalence of Metacercaria



Prevalence (percent) of metacercaria on juvenile pink and chum salmon captured in June, July, and August of 2011. Number of fish examined and prevalence is indicated for level of intensity.

Trematode Lifecycle



-Results-

Overall, a total of 908 pink and 696 juvenile chum salmon were examined during this pilot study. Prevalence of infestation was 14% for pink and 25% for chum salmon. Seasonal prevalence of infestation for June, July, and August was 8, 15, and 16% for pink and 1, 18, and 13% for chum salmon, respectively. Condition residual was also compared for the different levels of infestation intensity. Fish are currently being processed for whole body energy content and stock identification (hatchery vs. wild). Results from future study may give insight into relationships between infestation and early marine mortality of juvenile pink and chum salmon.