

Morphometric Comparison of Precociously Mature and Immature Male Chinook

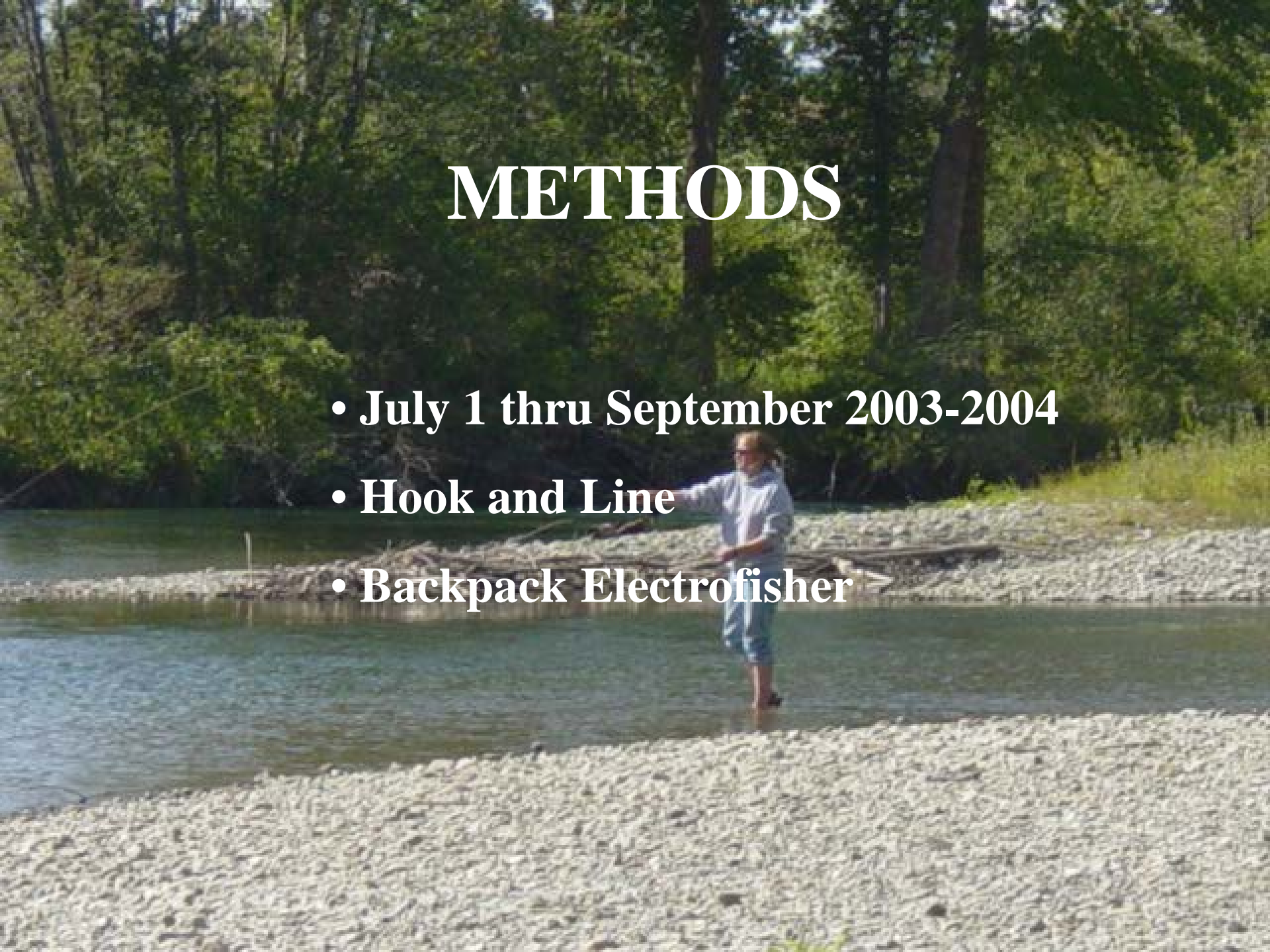
Brenda Ben James

Paul W. James

2004 5 25

METHODS

- **July 1 thru September 2003-2004**
- **Hook and Line**
- **Backpack Electrofisher**



MEASUREMENTS

- Length from pectoral fin to pelvic fin
- Body depth from front of dorsal fin
- Width at lateral line in front of dorsal fin
- Width taken ventrally at 50% of depth
- Width taken ventrally at 75% of depth
- Body depth at posterior end of pectoral fin
- Width taken ventrally at posterior end of pectoral fin



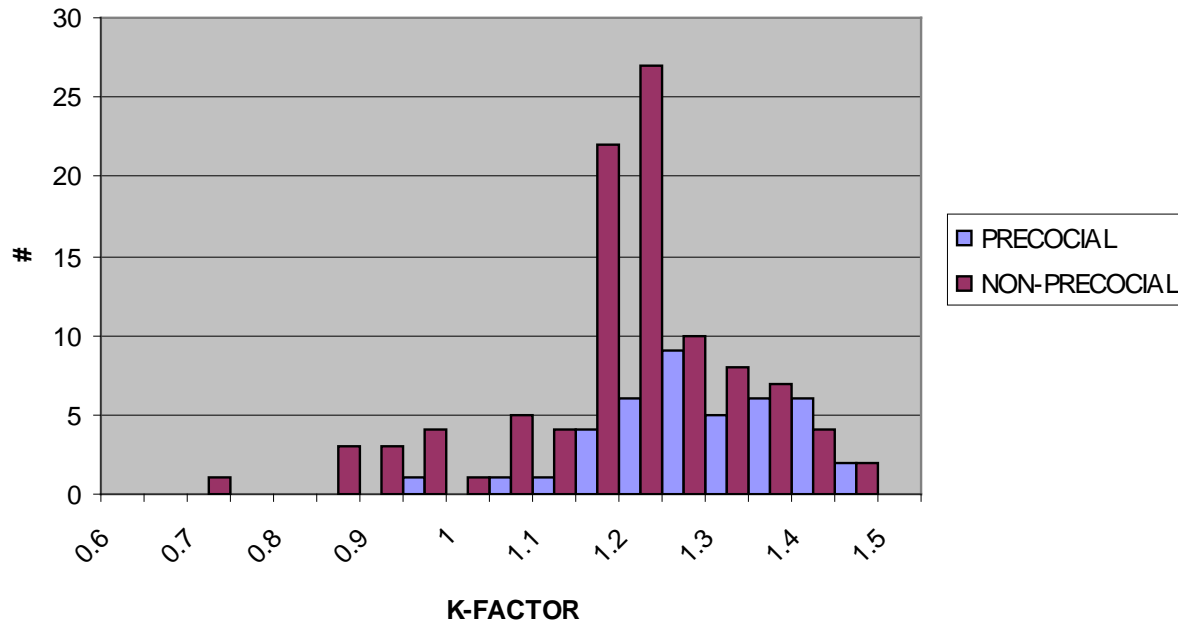


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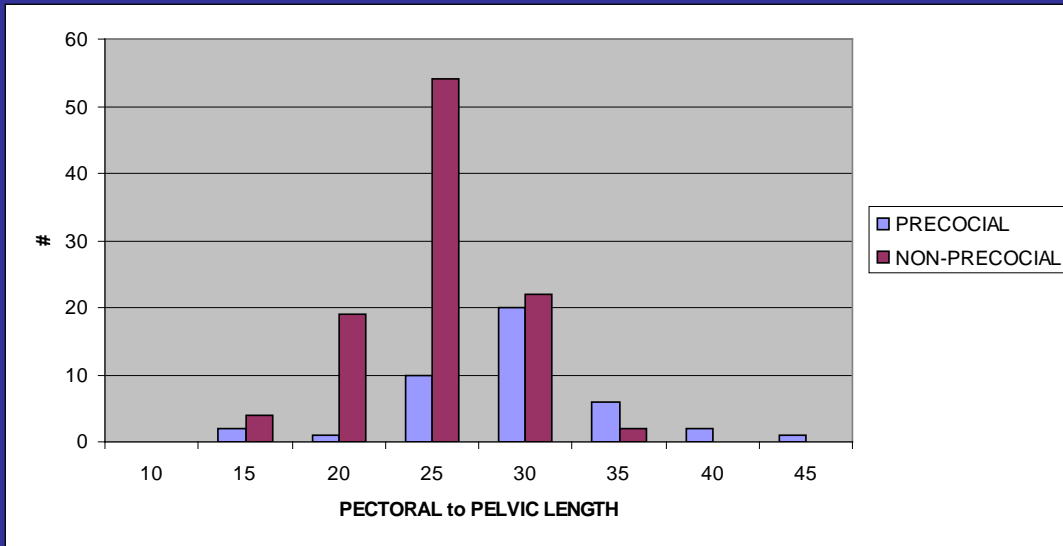
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K-FACTOR COMPARISONS



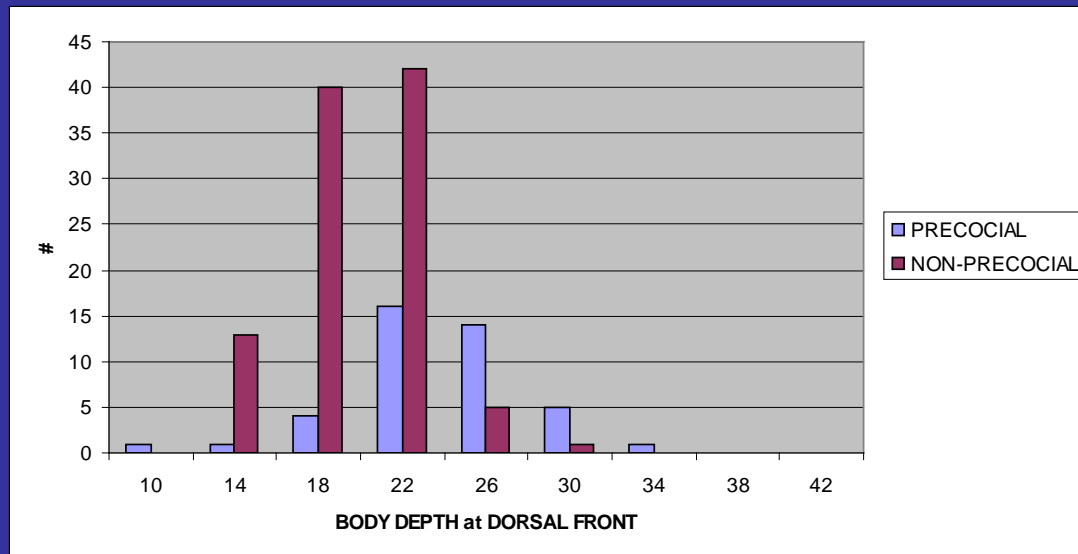
$$t = 3.98$$

$$p < .001$$



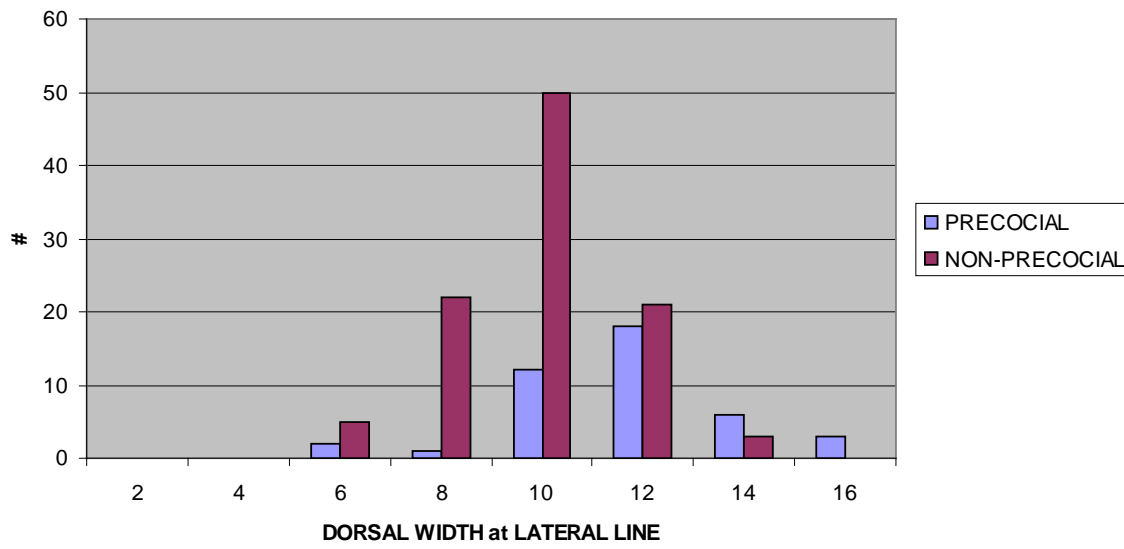
$t = 6.03$

$p < .001$



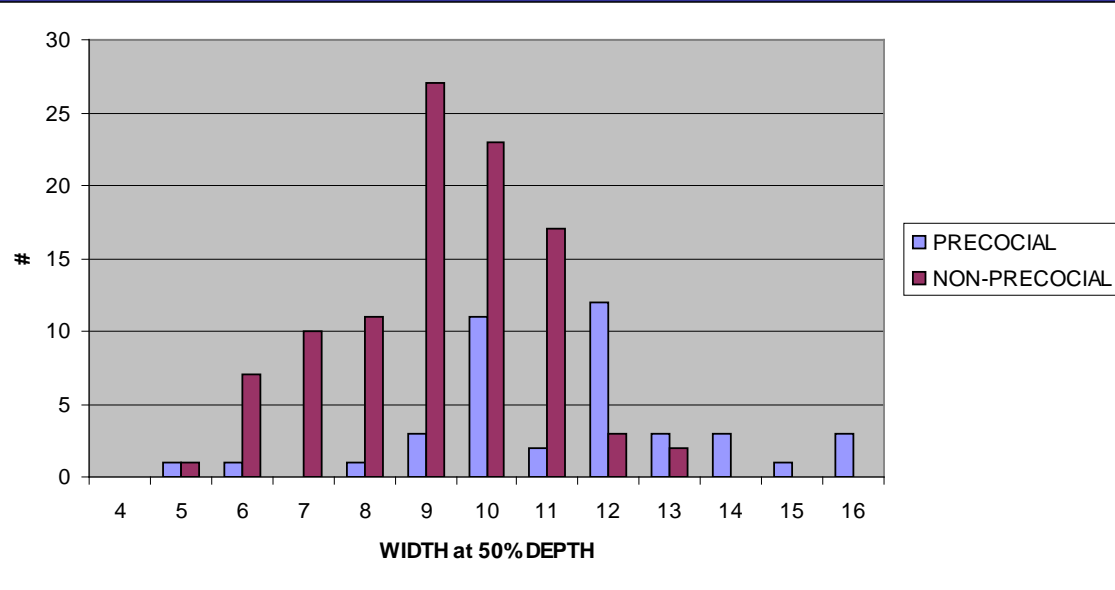
$t = 6.2$

$p < .001$



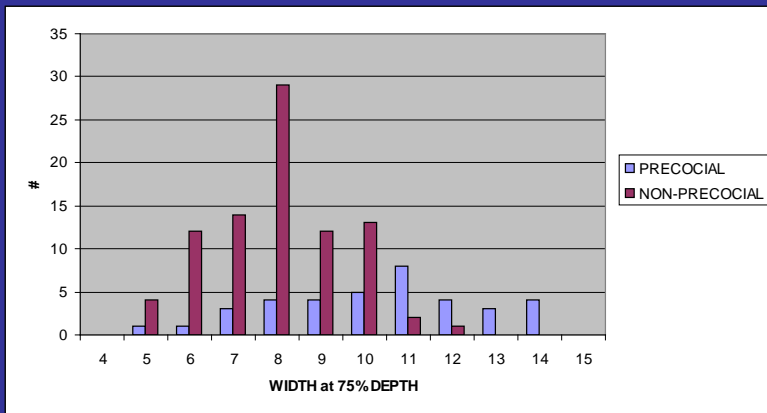
$t = 5.93$

$p < .001$



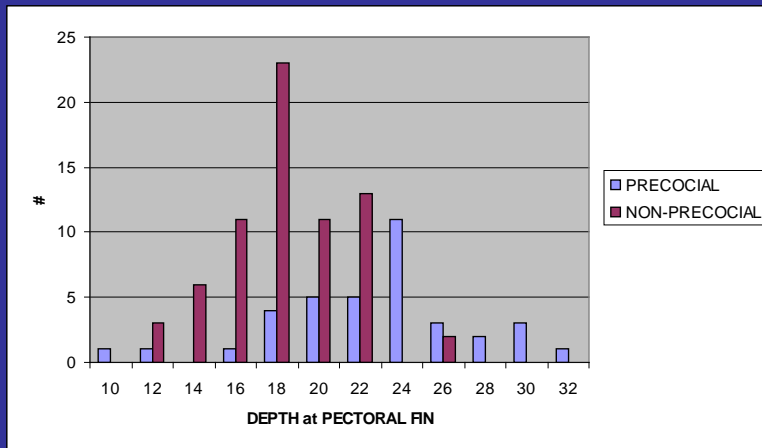
$t = 6.42$

$p < .001$



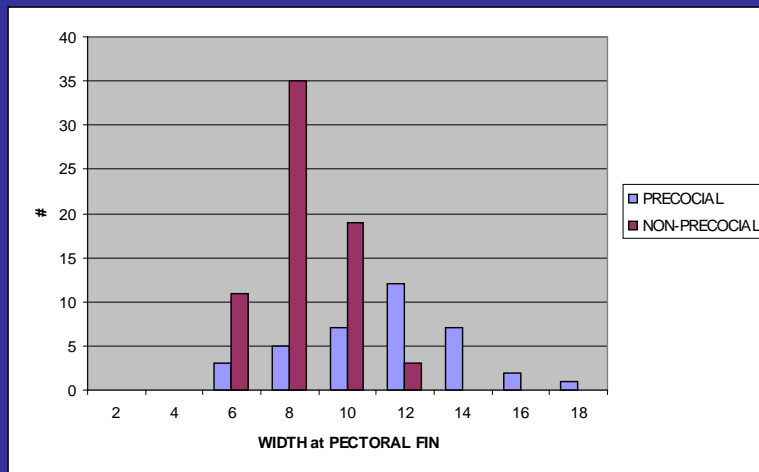
$t = 6.84$

$p < .001$



$t = 6.01$

$p < .001$



$t = 6.87$

$p < .001$

DISCRIMINANT FUNCTION ANALYSIS

80% Prediction Rate using:

- Width at lateral line in front of dorsal fin
- Body depth at posterior end of pectoral fin
- Width taken ventrally at posterior end of pectoral fin

CONCLUSIONS

- Significant differences for all measurements were found between precocious and immature male Spring Chinook
- Further analysis of 2003-2004 data needed
- Discriminant Function model can be tested in 2005.