

Individual Considerations

fish610.2 Ecological Considerations of EAFM

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Learning Objectives

Introduction to Individual Considerations

- Ecological scaling (Individual to ecosystem)
- Why include the individual level
- Individual components to be considered

Sex-Based Differences

- Define sex-based differences
- Explain the impact of sex on catchability
- Explain what causes sex ratios to be altered (including examples)
- Impact of altered sex ratios on ecosystem ecology

Phenotypic Variation

- What is phenotypic variation
- Examples of phenotypic variation
- Why phenotypic and life history variation should be included



Figure : Phenotypic variation expressed as pattern and coloration differences in *Donax variabilis*. Photo was taken by Debivort.

Variation in Body Size

- Causes of body size variation
- Impact of body size on catchability
- The types of fish which should have body size included within an EAFM management plan



Figure : Body size variation in Chinook Salmon. Photo taken by Paul Frater.

Behavioral Variation

- Examples of behavioral variation
- How behavioral variation impacts catchability
- Why behavioral variation should be incorporated

Physiological Variation

- What is physiologic variation
- Why should physiologic variation be included
- How physiologic variation impacts catchability

Incorporating Individuals into an EAFM Framework

- Summary of why to include individual variation
- Incorporating individual considerations into reference points
- Incorporating individual consideration into models (EwE and Atlantis specific examples)