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Example Abstract

**Prey Consumption and Repeatability of Performance in
Winter Flounder**

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Understanding the pattern and sources of variation in fish performance under a given set of environmental conditions is critical for predicting the consequences of this variation and its relationship to a population's adaptive potential. Although inter- and intra-individual variation underpins many ecological and evolutionary inferences, these sources of variation and even the distinction between them are often overlooked in ecological studies. Knowledge of the variance structure in life-history and performance traits for at-risk life-stages is particularly important when predicting effects of large-scale environmental processes like climate change and ocean acidification. We used laboratory experiments to assess the role of inter- and intra-individual repeatability of performance by young winter flounder, *Pseudopleuronectes americanus*, an ecologically and economically important flatfish from Atlantic coastal habitats. The consumption rate of recently metamorphosed winter flounder was quantified by using a one-on-many predator-prey trial protocol. Short-term (6 hr) trials were run to quantify individual consumption rates then run again on the same individuals after a brief (2 d) interlude. In addition, repeated trials were also run after a longer interval (10 to 40 d) in order to evaluate longer term consistency of performance. Although age accounted for most of the inter-individual variation in prey consumption across the longer intervals, a significant amount of variance in performance was unexplained at all interval durations and is attributed to intra-individual variability in performance. Our analyses allow for a more insightful inspection of the sources and therefore potential consequences of phenotypic variation and can help optimize future experimental designs.