**Estimating Fish Age: Influence of Maximum Age, Structure, and Comparison Type on Precision**

Fish age estimates are instrumental for proper understanding of fish population dynamics. Ages are often estimated from readings of various calcified structures (otoliths, spines and finrays, and scales), either multiple times by one individual (within-reader), or one time each from multiple individuals (between-reader). The precision, or repeatability of these readings, is most often measured by the average coefficient of variation (ACV). The 1447 points of precision data included in this study have been collected from 449 papers in the fisheries literature from 1983 to 2021. In this study, we assessed the effects of calcified structures examined and the type of readings taken on mean ACV, as well as on the relationship between log maximum estimated age and log ACV. We found that mean ACV did not differ by comparison type but did differ by structure types, with otoliths being significantly different from spines and finrays (combined) and scales, which did not differ from each other. Furthermore, we found that the relationship between log between-reader ACV and log maximum age differed by structure type, but only between otoliths and spines and finrays combined. For all structures, log within-reader ACV and log maximum age displayed a negative relationship that did not differ among structures. Log between-reader ACV and log maximum age also displayed a negative relationship, but only for spines+finrays. These results suggest that ACV may not be independent of structure examined or maximum estimated age in some cases.