

COMPARING SEASONAL GROWTH FROM DIFFERENT NORTH SEA FLATFISH

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The aim of this study is to study the seasonality in somatic growth in four North Sea flatfish species sole (*Solea solea*), plaice (*Pleuronectes platessa*), turbot (*Scophthalmus maximus*), and brill (*Scophthalmus rhombus*), and explore the factors that explain the differences seasonal patterns. Seasonal growth is estimated using a new statistical model in which the classical von Bertalanffy length at age curve is adapted using a cyclic cubic regression spline in the exponential term. This cyclic cubic regression spline allows estimating seasonal growth that is not necessarily “symmetric” as is the case in available methods. Our results suggest that the different species indeed have different seasonal growth. The differences in growth can be related to reproduction strategies and food availability for the different species. Periods of high growth are related to food availability and periods of low growth are related to the timing of spawning.