**Are warming temperatures accelerating fish growth? A case study of Common sole in North East Atlantic waters**

*Solea solea*—or Common Sole—is a flatfish that inhabits sandy or muddy ocean floor areas throughout Europe and Africa, including the Bay of Biscay, located west of France and north of Spain. The Bay of Biscay faces pressures such as fishing, shipping, tourism, nutrient enrichment, extraction of species, and substrate loss; another potentially important stressor to this area is climate change. Climate change influences the rise of ocean temperatures: within the Bay of Biscay, temperatures are projected to increase by 1.5°C to 3.0°C above mean conditions by 2099. Changes in temperature can affect fish biological processes such as sexual maturation, community structures, populations distribution, and body size and growth. A well-known concept involving the influence of temperature in body growth is the Bergmann's rule, which states that organisms inhabiting areas of lower temperatures display slower growth and larger asymptotic sizes. A useful tool in the study of the influence of temperature in fish are otoliths, structures found in the inner ear cavity of all teleost fish and that develop annulus, or rings, As fishes grow. Such rings can be used to determine the animal’s age by determining daily, seasonal, or annual growth patterns. This thesis will focus on studying the effects of sea bottom temperature in the growth of *Solea solea* from the Bay of Biscay, Divisions 27.8.a (North) and 27.8.b (Central), by analyzing the measurements of otoliths from *S. solea* captured in this area during the period of 1989-2020.

*Keywords:* *Solea solea*, otolith, fish growth, climate change, temperature size rule