

## Growth Pattern, Condition Factor and Relative Condition Factor of Twenty Important Demersal Marine Fish Species in Nigerian Coastal Water

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**Abstract :** Fish is a key ingredient on the global menu, a vital factor in the global environment and an important basis for livelihood worldwide<sup>1</sup>. The length - weight relationships (LWRs) is of great importance in fishery assessment<sup>2,3</sup>. Its importance is pronounced in estimated the average weight at a given length group<sup>4</sup> and in assessing the relative well being of a fish population<sup>5</sup>. Length and weight measurement in conjunction with age data can give information on the stock composition, age at maturity, life span, mortality, growth and production<sup>4,5,6,7</sup>. In addition, the data on length and weight can also provides important clues to climatic and environmental changes and the change in human consumption practices<sup>8,9</sup>. However, the size attained by the individual fish may also vary because of variation in food supply, and these in turn may reflect variation in climatic parameters and in the supply of nutrient or in the degree of competition for food. Environment deterioration, for example, may reduce growth rates and will cause a decrease in the average age of the fish. The condition factor and the relative condition factor<sup>10</sup> are the quantitative parameters of the well being state of the fish and reflect recent feeding condition of the fish. It is based on the hypothesis that heavier fish of a given length are in better condition<sup>11</sup>. This factor varies according to influences of physiological factors, fluctuating according to different stages of the development. Condition factor has been used as an index of growth and feeding intensity<sup>12</sup>. Condition factor decrease with increase in length <sup>12,13</sup> and also influences the reproductive cycle in fish<sup>14</sup>. The objective here is to determine the length-weight relationships and condition factor for direct use in fishery assessment and for future comparisons between populations of the same species at different locations. To provide quantitative information on the biology of marine fish species trawl from Nigeria coastal water.

**Keywords :** condition factor, growth pattern, marine fish species, Nigerian Coastal water

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