Growth Partner, Size Composition and Condition Factor of Five Fish Species of Sciaenidae Trawled from Nigerian Coastal Water

OMOGORIOLA, H.O.
Nigerian Institute for Oceanography and Marine Research, Lagos, Nigeria

The growth pattern and condition factor for five species of family Sciaenidae trawled from Nigeria coastal water were investigated in 2009. A total of 1,945 specimens ranging from 2.0 - 62.0 cm in total length and 1.70 - 1500.00 g in weight were analyzed. Total length and weight were measured using standard methods. The degree of association between length and weight was computed from linear regression analysis of growth pattern relationship, as shown by the following equation: LogW = -1.6058 + 2.5958 LogL (P. senegalensis); LogW = -2.6019 + 3.4585 LogL Pseudotolithus epipacus; LogW = -1.6350 + 2.7367 LogL Pentheroscion mbizi; LogW = -1.3947 + 2.5554 LogL Pteriscion peli; LogW = -1.9891 + 2.8601 LogL Pseudotolithus typus. All species studied exhibited positive allometric growth (b > 3) except Pseudotolithus epipercus with b = 3, and 45 that exhibited positive allometric equation with the mean b = 2.84 at p<0.001. The r² values ranged from 0.7876 for P. senegalensis to 0.9452 for P. epipacus, and all regression were highly significant (p<0.001). The condition factor (k) ranged from 0.69 + 0.27 (P. typus) to 2.34 + 32.28 (P. senegalensis) while relative condition factor (Kn) ranged from 1.63 + 2.40 (P. peli) to 3.72 + 8.67 (P. typus). Relative condition (Kn) revealed that P. typus was more robust and in a better condition than that of P. senegalensis; and had the highest mean condition factor (K). The best condition factors were recorded for those individuals within the lowest size groups. All the species studied were in good condition (k ≤ 0.5).