



Session 02

Evolution of catches and variability in the life history traits of the bonga shad, *Ethmalosa fimbriata*, a highly targeted small pelagic fish in West African coastal waters**Ousseynou SAMBA^{1,*}, Khady DIOUF¹, Waly NDIAYE¹, Moustapha MBENGUE¹, Khady DIOP^{1,2}, Papa NDIAYE¹ and Jacques PANFILI^{2,3}**

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Abstract

An updated study of the main life history traits of the bonga shad, *Ethmalosa fimbriata* (Bowdich), was undertaken in Senegalese coastal waters, together with an evaluation of the captures and fishing effort over the past 33 years, this species being one of the most targeted by fishermen in coastal and estuarine areas. Captures varied considerably over the years, with a peak in 2001. Samples were collected monthly from July 2012 to June 2013 in the main fishing harbors of Joal and Mbour. The reproduction period mainly occurred from March to June, with a maximum gonado-somatic index in May for Mbour and in June for Joal. The size at first sexual maturity was similar for both sexes: 176 mm for females and 180 mm for males for Mbour, and 177 mm for both sexes for Joal. The absolute fecundity was very variable, $135,500 \pm 88,300$ eggs (mean \pm SD) for Mbour females with a relative fecundity of 436 ± 190 eggs g⁻¹ (mean \pm SD). For Joal, the fecundity was slightly lower but was also very variable, $131,000 \pm 56,000$ eggs (mean \pm SD) and 396 ± 84 eggs g⁻¹ (mean \pm SD). Growth was rapid and variable in both locations with longevity of 6-7 years, the main growth occurring during the 3 first years of life. The asymptotic length modeled by the Von Bertalanffy growth function was higher for Joal (319 mm) than for Mbour (289 mm).



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Extended book of Abstract

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