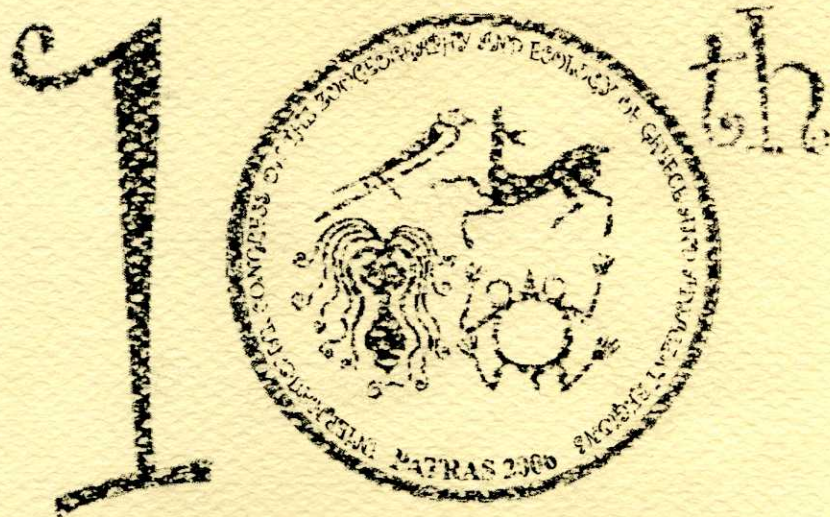


10th International Congress on the
Zoogeography and Ecology of Greece and
Adjacent Regions
Patra, 26-30 June 2006



BOOK OF ABSTRACTS

ALLOMETRY OF EXTERNAL MORPHOLOGY IN THE RED PORGY (*Pagrus pagrus* L., 1758) UNDER REARING CONDITIONS

MINOS G.¹, KOKOKIRIS L.¹ & KENTOURI M.²

1. Alexander Technological Educational Institute of Thessaloniki, Department of Aquaculture & Fisheries Technology, P.O. Box 157, GR-63200 Nea Moudania, Greece, e-mail: gminos@otenet.gr
2. Department of Biology, University of Crete, Irakleio, Crete, Greece

Nine morphometric relationships versus total length (TL), and total length versus weight (W), were estimated according to the sex of the protogynous red porgy, *Pagrus pagrus* reared in captivity (Crete, Greece). A total of 295 individuals, aged from 1+ to 6+ years old were sampled (0.09-2.5kg body weight, 17.5-49cm, total length). The power function $y=ax^b$ was used. The first derivate $dY/dTL=abTL^{b-1}$, where Y is each morphometric character, was used to study the growth pattern of each character in relation to growth in length (TL). The length-weight relationship showed isometric growth and no inter-sex variability but it also showed that for a given length, the males are slightly heavier than females. The results showed significant sex-specific differences for most of the morphometric characters studied. In males the interorbital distance showed an increasing and the preorbital distance a decreasing growth rate in relation to the TL while in females both these characters had constant growth rates. Also, in females the height and the width of the head, showed a decreasing rate while in males both these characters remained constant. Thus, male red porgy seems to have longer head height compared to females but also longer head width and orbits positioned more backwards to the head. The adaptive significance of this set of traits still remains unknown, but the morphological changes and the greater development of the head structure complex must be related to specific features of male biology. Further research on the morphology of the head is required to search for effective sex discriminators, and to define sex identification methods with many applications either in fisheries or in the rearing of this species.