



**Some biological characteristics of oriental river freshwater prawn  
*Macrobrachium (Macrobrachium nipponense)* Holthuis, 1951  
(Decapoda, Palaemonidae) in Alagol Lagoon, Iran**

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**Abstract**

Some biological aspects (i.e. sex ratio, size frequency distribution, recruitment, relative growth rate) of Oriental river freshwater prawn *Macrobrachium (Macrobrachium nipponense)* were investigated in Alagol Lagoon, Caspian Sea, Iran. Sex ratio, size frequency distribution and relative growth rates were used to investigate sexual dimorphism. A total of 429 prawns were monthly collected during one year. Density of female prawns significantly was higher than males (205 (47.29%) females versus 224 (52.2%) males). In general, male prawns were significantly larger and heavier than females. The size frequency distribution was not normal ( $k_s = 1.94$ ,  $p=0.001$ ) for either sex. The average ( $\pm$ SD) carapace length was about  $65 \pm 10.79$ , and  $53.10 \pm 9.07$  mm for males and females, respectively. The male prawns had longer lifespan and larger size than females. The spawning period of the present species in the Alagol lasts for four months from the beginning of April to end of July with a peak in May. This finding demonstrates that the higher allometry in males occurs as a function of dominant position over females. A positive allometric and a negative allometric growth were observed for the TW/Carl ratios in male and female prawns, respectively. This is also indicated by the larger weight of males than females.

**Keywords:** Oriental river prawn, Population structure, Growth rate, Sex ratio, Alagol Lagoon, Iran.