Variation de la structure des peuplements de tortues d'eau douce dans des habitats contrastés

Amani Naidja[(1)], Rachid Rouag[(1)] , Nadia Ziane[(2)]

[(1)]Biodiversity and Ecosystems pollution laboratory , Chadli Bendjedid – El Tarf University

[(2)]Environmental Biomonitoring Laboratory, Department of Biology, Faculty of Sciences, Badji Mokhtar University.

Email : amaninaidja6@gmail.com

Belonging to two species; European Pond Turtle and Leprous Emyde, which lived in syntopia, were studied at two separate sites. In order to verify the impact of urban pollution on the ecology of water turtles, we selected two types of habitat. A polluted by wastewater discharge located in Ben Amar. The second is a protected environment located near Lake Tonga, namely the Messida canal. In the first site "Canal Messida", we captured 47 Emys orbicularis and 18 *Mauremys leprosa*; and in the second site "ben Amar", we captured 34 *Mauremys leprosa*. The estimated population density at the Messida Canal was remarkably very high for the first species, Emys orbicularis (9.40 ind / ha), compared to its syntopic *Mauremys leprosa*. In the Ben Amar stream, densities were very high at 170 ind / ha. The size distribution of the two populations studied looked like an inverted pyramid, with a dominance of adult individuals and a small representation of juveniles, which did not exceed 6%. Overall,
the majority of adult E. orbicularis ranged between [160-180 mm] and those of *M. leprosa* ranged in the range [180-200 mm]. We have found that the size and shape of the body of the two sexes differ considerably (males <females). The results obtained show a total absence of the European Pond Turtle from the Ben Amar Canal, a very polluted environment. Also there is an absence of sexual dimorphism in the population of *M. leprosa* of the Ben Amar Canal, also a very polluted environment compared to that of the Messida Canal, this absence of dimorphism is mainly due to a smaller size of the females compared to those of the males. Further studies will undoubtedly make it possible to highlight the physiological and behavioral mechanisms of this form of adaptation.

Keywords: *Emys orbicularis, Mauremys leprosa, sexual dimorphism, Messida channel, Ben Amar, Algeria.*