

# POPULATION DYNAMICS OF A FRESH WATER TURTLE *KACHUGA TENTORIA* UNDER VARYING POLLUTION LOAD IN PANCHNADA (PART OF NATIONAL CHAMBAL SANCTUARY) AREA

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**ABSTRACT :** *Kachuga tentoria* is the most abundant and dominant species among fresh water turtles found in Panchnada area. The present studies are based upon the survey carried out by the authors between the period from March, 2006 to Feb., 2009. The population dynamics of turtles were directly related to basking behavioral activities because thermoregulation in reptiles is a behavioral and physiological strategy principally evolved to achieve desired body temperature with respect to varying ambient temperatures. These findings were confirmed by the authors with the help of demographic studies in the form of statistical data. Basking behavioral activity was related with changed climatic conditions.

It was noticed during survey that maximum basking occurs during early morning and late afternoon of summer and late morning through sun set in winters. Basking in early morning when the air temperature was lower than water temperature is entirely due to their demand for maintaining body temperature by getting sunlight and air. Moreover, basking is also a means of vitamin D synthesis as mentioned by Pritchard and Greenwood (1979) & Moll and Leglar (1971). Basking may commence even when the air temperature is lower than the water temperature and may continue after sunset if the air temperature has not dropped below 15°C. It is clear from the basking behavioral studies that small hard shell turtles were numerous over large hard shell turtles, although juvenile and young turtles of *Kachuga tentoria* were also noticed by the author. Although the data collected in the survey do not provide the total population of the turtle in the study area, but it determines the density patterns of turtle populations. During the survey it was found that individual species was difficult to identify from a distance through binoculars, therefore close watch was needed to identify *Kachuga tentoria*.

**Key Words :** *Kachuga tentoria*, fresh water turtle, basking behavioral activity, population dynamics, hard shell turtles, panchnada.