

METAL LEVELS IN THE TISSUES OF LOGGERHEAD TURTLE HATCHLINGS AND EMBRYOS ON DALAMAN BEACH, TURKEY

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Loggerhead sea turtles make 3-5 nests with two weeks intervals and prefer to nest on their natal beach. Because of these general characteristics of loggerhead nesting behaviour, we have investigated the metal levels in the eggshells, liver, muscle and yolk of the embryos (n= 35) and hatchlings (n= 55) found dead in the nests. Three to five samples from 20 nests were collected during the hatching season of 2007 on Dalaman beach, Turkey. These samples were air dried in the field and left in an oven until a constant weight was reached. The metal (Fe, Cu, Mn, Ni, Zn, Cr, Pb, As and Cd) concentrations were analysed by atomic absorption spectrometry. The mean values [\pm SE(Min-Max)] of metals found in the tissues were: Fe [455,3 \pm 65(33,8-4008,8)], Cu [6,1 \pm 0,8(0-36,4)], Mn [8,85 \pm 1,66(0-77,01)], Ni [21,01 \pm 2,46(0,76-97,9)], Zn [103,1 \pm 10,3(0-730,4)], Pb [1,47 \pm 0,29(0-16,63)], As [0,36 \pm 0,11(0-8,08)], Cd [0,28 \pm 0,09(0-6,83)] and Cr [0,38 \pm 0,09(0-3,93)]. Fe was highest in the eggshell and slightly lower in the muscle, liver and yolks. Cu and Zn were higher in the Muscle and liver. Mn and Ni were higher in the eggshells. The concentrations of Pb, Cr, As and Cd were quite low in all samples. The concentrations of these metals among the collected samples were temporally analysed by having 5 nests from every two weeks period in August and September. These values show that adults eliminate metals by transferring to the eggs and the amount of the transfer is slightly higher in pre-laid nests within the season.