

A HORMONAL METHOD TO DETERMINE THE SEX OF HATCHLING GIANT RIVER TURTLES, PODOCNEMIS EXPANSA: APPLICATION TO ENDANGERED SPECIES RESEARCH. V. A. Lance^{*}, N. Valenzuela and P. von Hildebrand. Zool. Soc. San Diego & Fund. Puerto Rastrojo, Bogota.

For most chelonian species sex is determined by the temperature at which the eggs are incubated. The temperature that determines a given sex differs among species and even among populations of the same species. In captive-breeding programs for endangered species it is important to know the sex ratio of the hatchlings being produced. We devised a hormonal method to determine the sex of recently hatched Giant River turtles, Podocnemis expansa using a blood sample of less than 0.5 ml. This method was previously used to identify the sex of Chelonia mydas weighing 40 kg (Owens et al., 1978; Herpetologia 34:270-273). Podocnemis eggs were left in natural beach nests in the amazon region of Colombia or were transported to Bogota and ~~incubated at 26.5, 28.5, 30.5 and 32.5 C.~~ Hatchlings were injected with 0.1 unit of ovine FSH in 0.2 ml saline i.p. and a 0.5 ml blood sample taken from the cervical sinus 4-6 hr later. Testosterone was measured in the plasma using a very sensitive and specific RIA. Testosterone was not detected in female turtles but was measurable in all male turtles. None of the embryos from the 26.5 and 28.5 incubations survived. Hatchlings from 30.5 were all male and hatchlings from 32.5 produced 77% males. Six natural nests produced 100% females.