

Research in Captive Reproduction of Sea Turtles

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Abstract: After years of efforts, Guangdong Huidong Sea Turtle National Nature Reserve finally overcome Green sea turtle (*Chelonia mydas*) artificial breeding problem in May 2017. The factors influencing sea turtle captive breeding mainly include nutrition, temperature, light, water flow, mating fertilization, parent selection and endocrine system and so on. It is important to do diet diversification, to have a balanced, comprehensive and reasonable nutrition in the daily management of the parents turtles; Water temperature is one of the important external causes the turtle breeding, female start nesting on the beach only when the water temperature is higher than 24 °C; Light period extension can promotes turtle breeding activities in the spring, and, covering sun-shade net above pool will be conducive to the breeding turtle's health in the summer; Flowing water cultivation mode could be of benefit to the turtles sexual gonads maturity; Mating success rate can be greatly improved after more than a month of abstinence then dismantle separation net; Turtles reproductive cycle includes sexual gonad development and maturity, gamete formation, copulation, nesting and eggs hatching five key links, First four links are regulated directly by turtles endocrine system, but hatchability is under the influence of ambient temperature and humidity.

Key words: Sea Turtle; Nature Reserve; Mating fertilization; Artificial Breeding