

Worawitoo Meesook 2008: Reproductive Biology for Thai Monocled Cobra *Naja kaouthia* Lesson, 1831 Propagation in Captivity. Master of Science (Zoology), Major Field: Zoology, Department of Zoology. Thesis Advisor: Associate Professor Panas Tumkiratiwong, Ph.D. 54 pages.

As Thai monocled cobra is at high risk of various causes, especially human hunting and become threatened with extinction. Therefore, the Queen Saovabha Memorial Institute (QSMI), Thailand, initiated a captive breeding program to supply healthy snakes for venom and antivenom production. However, to be successful in their propagation, the reproductive biology of Thai monocled cobra maintained in captivity is basically required, namely gross anatomy of female and male urogenital systems, histology of ovaries and testes and monthly sex hormonal profiles of male total testosterone and female estradiol and also their reproductive behavior. All of the samples were collected at the Queen Saovabha Memorial Institute. It was found that ovaries were elongated with the right ovary larger and more anterior to the left one. A single array of follicles inside ovaries was demonstrated. Oviducts and ureters were open to a common cloaca. Testes were also elongated with the right testis larger and more anterior to the left one. The vas deferens was open to the hemipenis. Two stages of follicle development, previtellogenic follicles and vitellogenic follicles were recognized within their ovaries. Additionally, corpus luteums were found in ovaries collected in November but not in May. The atretic follicles were commonly appeared. Their testes were composed of seminiferous tubules. Various stages of spermatogenic development were processed seminiferous tubule. However, no difference in the process of spermatogenic development between May and November was found. Female Thai monocled cobra had two kidneys with the right kidney more anterior to the left one, the same as that of the male. Female estradiol concentration was surged in between October-November while as male total testosterone level was peaked in between August-September, one to two months prior to male maximal levels. However, no data on their reproductive behaviors observed in captivity was available and also no natural Thai monocled cobra was available to be compared to captive Thai monocled cobra.

---

Student's signature

---

Thesis Advisor's signature

/ /