

論文名稱: 台灣黑熊糞中繁殖類固醇年週期變動之研究

研究生: 張耿瑞 Geng-Ruei Chang

學位類別: 2004 國立中興大學 獸醫學系碩士論文

指導教授 毛嘉洪

關鍵詞: 台灣黑熊; 糞中繁殖類固醇

英文關鍵詞: Formosan black bears; Fecal reproductive steroids

資料來源 國家圖書館全國博碩士論文資訊網
<http://etds.ncl.edu.tw/theabs/index.jsp>

[摘要]

本研究應用非侵入性之酵素免疫分析法，對 6 隻圈養在特有生物研究保育中心低海拔試驗站之台灣黑熊糞中性類固醇之濃度變化做一為期 3 年多觀察與研究。結果顯示，台灣黑熊為季節性發情的動物，繁殖季主要在 3 至 6 月間。公熊睪固酮濃度具有季節性變化，睪固酮於冬季開始有增加的趨勢，而在春季達到最高的濃度。有分娩記錄的台灣黑熊，雌二醇及孕酮濃度變化較無配種或有配種無分娩的母熊有規則性且孕酮呈現出階段性增加。懷孕期約為 6-7.5 個月，但因懷孕期差異頗大，推測可能包含有胚延遲埋植期。母熊於分娩前後會出現不飲、不食、不排泄及行動減緩等類似冬眠的行為。此外，於繁殖季睪固酮及雌二醇濃度高低並非唯一決定交配與否的因素，而圈養條件下台灣黑熊會因環境、氣候、年齡、健康、哺乳等因素，造成個體上頗大繁殖差異。本研究可推論出台灣黑熊於類似自然環境下的年活動模式，主要分為活動期及似冬眠期兩個模式且可能因氣候適宜及食物來源較不匱乏，因此不包括冬眠期。本研究的結果可作為台灣黑熊野外的調查及研究之參考，並為台灣生物多樣性的維護略盡綿薄。

[英文摘要]

The present study utilized non-invasive enzyme-linked immunosorbent assays (ELISA) to measure the changes of fecal reproductive steroids in 6 Formosan black bears (*Ursus thibetanus formosanus*) at the Low Altitude Experimental Station of Endemic Species Research Institute. The results indicated Formosan black bears were seasonal breeder and the major breeding season was between March and June. Testosterone concentrations were fluctuated according to seasonal changes. The concentrations increased in late winter and reached to the highest peak in spring. Relatively regular patterns of estradiol and progesterone concentrations in pregnancy were observed in parturient females, and the gestation periods were about 6 to 7.5 months. Because the gestation periods were different, it might include a special reproductive phenomenon, delayed

implantation of embryo. Moreover, female Formosan black bears have hibernated behaviors, such as, fasting, non-excretion and sluggish activity at about a period before and after parturition. In non-mated females, progesterone concentrations were irregular and the peaks were lower than the mated bears. Health condition and environmental factors influences caused different reproductive behaviors in each individual. Thus, testosterone and estradiol concentrations were not the only factor that had influenced on mating behavior. The annual pattern could be divided into an active and like-hibernate period. Because of well climate and abundant food, the annual pattern did not include hibernation. This study provides useful information for the wildlife research and management of the Formosan black bears. Furthermore, the present study could also contribute to the conservation of Taiwanese biodiversity.
