

# 臺灣穿山甲常見疾病

疫學研究組

陳彥彰 助理研究員

## 摘要

臺灣穿山甲(*Manis pentadactyla pentadactyla*)是分布於臺灣的中華穿山甲亞種之一，2019 年起被國際自然保護聯盟(IUCN)列為紅皮書(Red List)中的極危物種。2020 至 2022 年間，畜衛所接收了超過 90 隻臺灣穿山甲並進行屍體解剖、組織病理學檢查及微生物學檢查，多數送檢穿山甲都有嚴重創傷及長期治療史，創傷原因包括動物攻擊、陷阱及車輛撞擊，外觀檢查中經常發現消瘦、斷尾、四肢缺失及軀幹穿刺傷。常見病理學檢查結果為胸/腹水、間質性肺炎、肺泡出血、圓心伴隨心肌變性、出血性腸炎、腸道寄生蟲、糜爛性/潰瘍性胃炎、腎上腺皮質部出血及疥蟲感染。微生物學檢查可檢出第 2 型犬小病毒、類圓線蟲、美洲鉤蟲、腸道產氣莢膜梭菌等病原。

這些臺灣穿山甲的死亡原因與創傷、慢性緊迫及肺炎引起的呼吸窘迫具高度相關。目前穿山甲的病理及疾病研究資料仍相當有限，需要透過政府與私營部門合作，持續地累積數據，並使用次世代定序、病毒分離及原位雜合技術等診斷及分子生物學技術進行更進一步的研究。

# Common pathological findings in Formosan pangolins

Yen-Wen Chen

## Abstract

Formosan pangolin (*Manis pentadactyla pentadactyla*) is one of the subspecies of Chinese pangolins distributed in Taiwan and has been listed as Critically Endangered (CR) on the International Union for Conservation of Nature (IUCN) Red List since 2019. During 2020-2022, over ninety Formosan pangolins were submitted to Animal Health Research Institute for necropsy, histopathological examination, and microbiological examinations. Most of the pangolins had severe traumatic injuries and long-term histories for treatments. Causes of the traumas included animal attacks, traps, and vehicle collision. Emaciated, ruptured tail, loss of extremities and puncture wound of trunk were frequently noted at external examination. Common pathological findings were hydrothorax/hydroperitoneum, interstitial pneumonia, alveolar hemorrhage, round heart with myocardial degeneration, hemorrhagic enteritis, intestinal parasites, erosive/ulcerative gastritis, cortical hemorrhage of adrenal glands, and mite infestation. Microbiological examination results included *canine parvovirus* type 2, *Strongyloides* sp., *Necator americanus*, intestinal *Clostridium perfringens*, and so on.

The causes of death (COD) in these Formosan pangolins were highly correlated to traumas, chronic stress, and respiratory distress due to pneumonia. At present, research of pathology and diseases in pangolins is still limited, consistently collecting data and using diagnostic and molecular biological methods as next-generation sequencing, virus isolation, and in situ hybridization for further studies are in progress under the collaboration of public and private sectors in Taiwan.