

# 臺灣野生動物及北部牛場病媒及其攜帶重要病原監測

生物組

林育如 研究員

## 摘要

近年來，全球新興病媒疾病比例逐漸增加，我國動物性病媒及病媒疾病監測資料甚少。本項計畫分成二部分，包括針對臺灣北部牛場病媒及野生動物攜帶蜚，以及病媒攜帶病原進行監測，期建立基礎資料，作為疾病發生之預警。篩選北部地區三場不同飼養形態牛場作為北部牛場病媒及其攜帶重要病原監測之採樣標的，每月採樣一次。將病媒依蚊、蠅、蠓進行分類後進行病原監測，所有檢體均未檢出牛流行熱及牛結節疹。針對臺灣野生動物的蜚及病媒性疾進行監測：112 年度總計收集來自 17 種動物及 3 個環境樣本。經鑑定後，以血蜚屬數量最多，佔全數的 79%。其次是扇頭蜚屬 8%；花蜚屬 6%；革蜚屬，5%。其中於水鹿採到長角血蜚及黃頭鷺採到軟蜚，由於其他研究指出長角血蜚可媒介發熱伴血小板減少綜合症，軟蜚可媒介非洲豬瘟等疾病。未來預計增加對水鹿、鳥類為目標做系統性採樣。另針對野豬進行系統性採樣，共計收得 71 隻野豬，331 隻蜚。野豬蜚攜帶病原監測：非洲豬瘟、發熱伴血小板減少綜合症、蜚媒腦炎及克里米亞剛果出血熱等病毒性病原均未檢出；有檢出艾利西體、邊蟲及立克次體等病原。

# Surveillance of vectors and vector-borne pathogens in wildlife and cattle of northern Taiwan

Yu-Ju Lin

## Abstract

In recent years, the proportion of emerging vector-borne diseases has been gradually increasing worldwide. However, there is a lack of surveillance data on animal vectors and vector-borne diseases in Taiwan. This project is divided into two parts: monitoring vectors on cattle farms in northern Taiwan and ticks carried by wild animals, as well as the pathogens carried by these vectors, to establish baseline data that can serve as an early warning system for disease outbreaks. Three cattle farms with different breeding patterns in northern Taiwan were selected as sampling targets for monitoring **vectors** and important pathogens they carry. Samples were collected once a month. The collected vectors were classified into mosquitoes, flies, and midges for pathogen monitoring. None of the samples tested positive for bovine ephemeral fever or lumpy skin disease. For the monitoring of ticks and tick-borne diseases in wild animals in Taiwan, **tick** samples were collected from 17 animal species and 3 environmental samples in 2023. After identification, the majority of the collected ticks belonged to the genus *Haemaphysalis*, accounting for 79% of the total. This was followed by the genus *Amblyomma* (8%), the genus *Ixodes* (6%), and the genus *Dermacentor* (5%). Notably, *Haemaphysalis longicornis* was found on sambar deer (*Rusa unicolor swinhoii*), and *Argas* spp. were found on cattle egrets (*Bubulcus coromandus*). Other studies have indicated that *Haemaphysalis longicornis* can transmit severe fever with thrombocytopenia syndrome (SFTS), and *Argas* spp. can transmit African swine fever (ASF). Therefore, there are plans to systematically sample sambar deer and birds in the future. Additionally, systematic sampling of wild boars was conducted, with a total of 71 wild boars and 331 ticks collected. Pathogen monitoring for wild boar ticks revealed no detection of viral pathogens such as ASFV, SFTSV, tick-borne encephalitis virus (TBEV), or Crimean-Congo hemorrhagic fever virus (CCHFV). However, pathogens such as *Ehrlichia*, *Anaplasma*, and *Rickettsia* were detected.