2024臺灣陸域哺乳類紅皮書名錄

The Red List of Terrestrial Mammals of Taiwan, 2024

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臺灣狐蝠 Formosan flying fox
NCR C2a(i)b
鄭錫奇 / 攝

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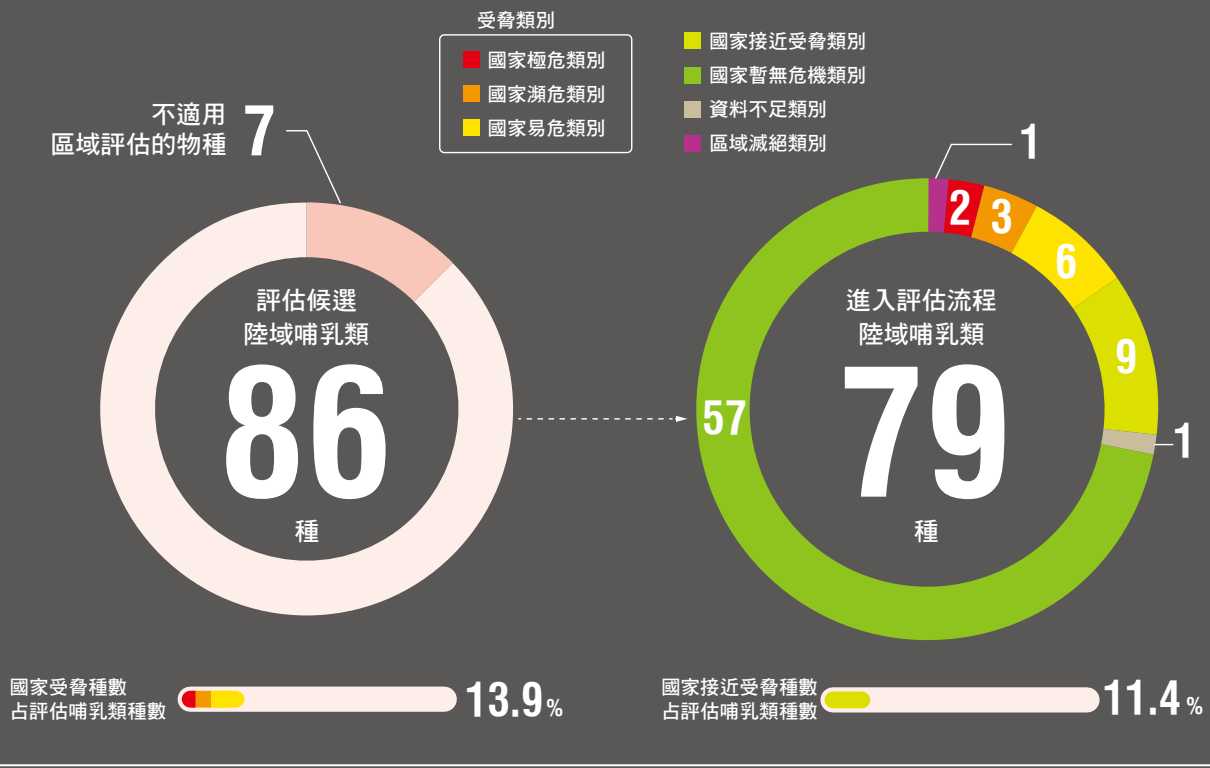
Martes flavigula chrysospila
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陳惇聿 / 攝

2024 臺灣陸域哺乳類紅皮書名錄

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摘要

定期檢視及更新國家或地區分類群的族群現況及滅絕風險是重要且必要的工作，藉此能達到實際檢視保育作為及政策推行的效益。本報告為臺灣第二次依據國際自然保育聯盟 (International Union for Conservation of Nature, IUCN) 建議類別與標準，對臺灣野生陸域哺乳類動物進行國家紅皮書名錄評估。本次列入評估候選的陸域哺乳類野生動物共 86 種，其中 7 種不適用 (Not Applicable) 區域評估篩選，最終計有 79 種進入評估流程。評估結果臺灣國家受脅 (Nationally Threatened) 陸域哺乳類動物共有 11 種，其中臺灣狐蝠及歐亞水獺 2 種屬於國家極危 (Nationally Critically Endangered, NCR) 受脅類別；石虎、臺灣黑熊及霜毛蝠等 3 種屬於國家瀕危 (Nationally Endangered, NEN) 受脅類別；黃喉貂、臺灣小黃鼠狼、臺灣無尾葉鼻蝠、金黃鼠耳蝠、水鼩及臺灣穿山甲等 6 種屬於國家易危 (Nationally Vulnerable, NVU) 受脅類別；另有 9 種包括臺灣水鹿、麝香貓、毛翼管鼻蝠、大足鼠耳蝠、紅棕鼠耳蝠、臺灣長耳蝠、細尾長尾鼩、黑腹絨鼠及高山田鼠為國家接近受脅 (Nationally Near Threatened, NNT) 類別。國家受脅種數及接近受脅種數分別占臺灣陸域哺乳類評估種數的 13.9% 及 11.4%。另臺灣的全球受脅陸域哺乳類共 6 種，其中 1 種 (雲豹) 為區域滅絕 (Regionally Extinct, RE)，3 種 (臺灣黑熊、臺灣狐蝠及臺灣穿山甲) 屬於國家受脅類別，2 種 (大足鼠耳蝠及臺灣水鹿) 屬於國家接近受脅類別。本報告相較於 「2017 臺灣陸域哺乳類紅皮書名錄」，評估物種新增 1 種臺灣新紀錄種大足鼠耳蝠。此外，共有 7 種進行類別調整，其中 1 種 (臺灣長耳蝠) 滅絕風險上升，3 種 (臺灣野山羊、食蟹獴及麝香貓) 滅絕風險下降，另有 3 種 (毛翼管鼻蝠、紅棕鼠耳蝠及細尾長尾鼩) 原屬於資料不足類別 (Data Deficient, DD)，已重新評定於其他紅皮書類別中。

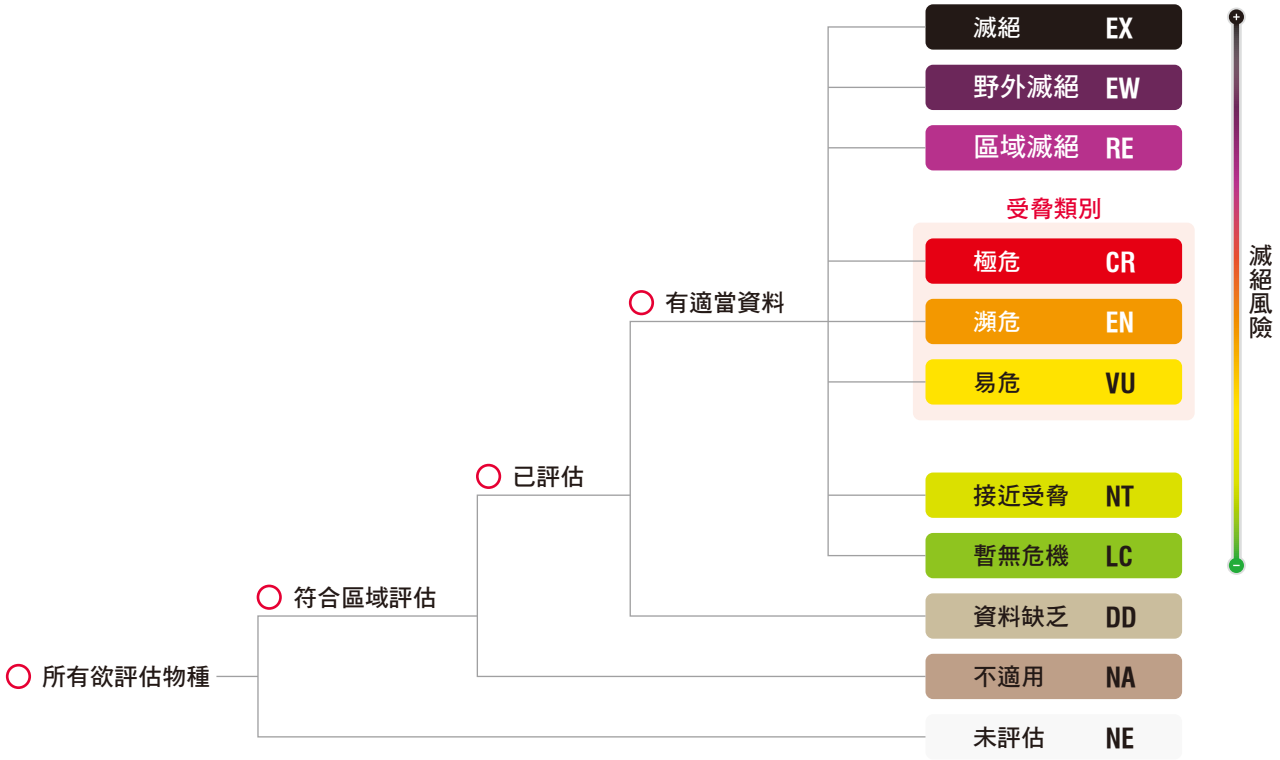


1. 前言

探討物種 (species) 或分類群 (taxon) 面臨滅絕的風險是野生動物保育經營管理的重要課題。依據受威脅程度所列出的物種清單是進行復育計畫、研究、監測與保育措施排列優先順序的參考依據，同時也是爭取社會支持棲地保護及輔助資源分配決策的重要工具 (Townsend et al. 2007; Pimm et al. 2014)。

為了瞭解野生動物分類群滅絕之風險，國際自然保育聯盟 (International Union for Conservation of Nature, IUCN) 物種存續委員會 (Species Survival Commission) 所負責的 IUCN 全球紅皮書名錄 (IUCN Red List of Threatened Species) 成為保育上重要的工具，自 1964 年發布以來已逐漸受到各國或各地區重視，逐步成為評估全球物種保育狀況與族群變化趨勢最重要的參考依據 (Rodrigues et al. 2006; IUCN Standards and Petitions Committee 2024)，另其所列出之類別 (圖 1) 及評估標準 (criteria) (IUCN 2012a)，以及後續發布的 IUCN 紅皮書名錄地區及國家級評估標準應用指南 (IUCN 2012b)，亦成為許多國家或地區評估其境內受脅物種名錄的首要參考依據 (Townsend et al. 2007)。藉由標準化的評估方法，不僅有助於各國立法與執法，也讓全球紅皮書評估涵蓋的物種更加完整 (Rodrigues et al. 2006)。

圖 1. IUCN 國家或區域紅皮書類別。



如果一個國家或地區欲依據 IUCN 系統進行野生動物分類群之滅絕風險評估，其所產出的國家或地區紅皮書則需無偏差地根據 IUCN 紅皮書類別及標準 (IUCN Red List Categories and Criteria) 進行評估 (IUCN Standards and Petitions Committee 2024; IUCN 2012b)。區域或地區 (region) 指的是地球範圍內，任何一個可明確界定的空間範圍，如大陸、國家及州省等 (IUCN 2012b)。由全球至區域時，對受脅物種評估而言，自然會產生原生或外來種，繁殖或非繁殖物種，或先前曾經分布，但已局部滅絕的區域現象 (IUCN 2012b)。本報告採用的評估標準與類別係依據 IUCN 紅皮書名錄類別與標準 3.1 版 (IUCN 2012a)。然而，由於空間尺度的關係，當前述標準應用於分布不完全侷限於評估範圍的物種時，評估流程與標準設定的閥值可能並不適當，因此必須有所有調整。IUCN 紅皮書名錄地區及國家級評估標準應用指南提供了調整建議 (IUCN 2012b)。

截至 2024 年所統計之資料，全世界哺乳動物共有 6,753 種 (Mammal Diversity Database 2024)，IUCN 已進行 5,983 種評估，其中受脅類別有 1,338 種 (IUCN 2024)。但 IUCN 的受脅類別評估為全球尺度，評估的對象以「種」呈現，對於國家或地區尺度仍需要完整的評估，才能定期更新該國家或地區物種的分布範圍、族群趨勢、數量與受脅原因等資訊。臺灣的 86 種陸域哺乳類動物 (其中 27 種為臺灣特有種，21 種為特有亞種)，目前已知有 83 種進入 IUCN 全球紅皮書名錄評估，本報告針對臺灣特有種的地區評估應可作為全球評估之重要參考依據之一，因此定期更新紅皮書資訊極為重要。農業部生物多樣性研究所與農業部林業及自然保育署共同執行臺灣地區性紅皮書評估，2017 年已發表第一次臺灣地區性的陸域哺乳類紅皮書名錄，經過 7 年後，由於不少物種變更了分類地位及學名，有些監測資料累積而導致分布範圍增加或減少，有些則因基礎生物調查與研究而更進一步了解族群現況，因此，本報告進行第二次臺灣地區性陸域哺乳類動物滅絕風險評估，藉此希望能瞭解物種受脅的程度與變化情形，以及檢視過去不足之資料並加以補充，將有助於滾動式地推動保育策略及族群復育。

2. 評估流程

本報告中臺灣陸域哺乳動物滅絕風險的評估流程與方法簡述如下：

2.1 界定納入評估之分類群

本報告物種學名係參考 Burgin et al. (2020) 及美國哺乳動物學會 (American Society of Mammalogists, ASM) 的世界哺乳動物名錄資料庫 (Mammal Diversity Database 2024)，另外翼手目 (Chiroptera) 部分則依據鄭錫奇等 (2022a)、嚙齒目 (Rodentia) 部分依據 Lin et al. (2020)、鼩鱨目 (Eulipotyphla) 部分則依據 Lin and Motokawa (2014) 等文獻來確立最新之臺灣陸域哺乳動物學名，綜合以上資料庫及文獻資訊產出本次評估之臺灣陸域哺乳類學名名錄，並將此名錄提供予臺灣物種名錄 (Catalogue of Life in Taiwan, TaiCOL)。英文俗名以美國哺乳動物學會資料庫 (Mammal Diversity Database 2024) 及臺灣蝙蝠圖鑑 (第四版) 為參考依據 (鄭錫奇等 2022a)。



Ursus thibetanus formosanus
臺灣黑熊 Formosan black bear
NEN C2a(i)
鄭錫奇 / 攝

Myotis formosus flavus
金黃鼠耳蝠 Hodgson's myotis
NVU A2ad; B2b(iii)c(iii); Ca(i)b
鄭錫奇 / 攝



本次評估新增 1 物種，為 2018 年發現分布於金門地區之新紀錄種蝙蝠－大足鼠耳蝠 (*Myotis pilosus*) (周政翰等 2019)，共有 86 種陸域哺乳動物列入候選評估名單。依據 IUCN 紅皮書名錄地區及國家級評估標準應用指南 (IUCN 2012b) 的建議原則，印度犬果蝠 (*Cynopterus sphinx*)、棕果蝠 (*Rousettus leschenaultii*) 和大高頭蝠 (*Scotophilus* cf. *heathii*) 為無法確認是否長期居留於臺灣區域者；臺灣家蝠 (*Pipistrellus* sp. 1 (*taiwanensis*)) 和山家蝠 (*Pipistrellus* sp. 2 (*montanus*)) 為分類地位未確認者；緬甸小鼠 (*Rattus exulans*) 屬於外來入侵種；而臺灣梅花鹿 (*Cervus nippon taiouanus*) 為野外滅絕後再引入之物種，因此這 7 種屬於不適用 (Not Applicable) 於區域評估之物種，其餘出現於臺灣國土涵蓋範圍內之陸域哺乳動物均列入正式評估清單，共計有 79 種進入評估流程。

Chimarrogale leander
水鼩 Leander's water shrew
NVU B1ab(iii)c(iii,iv)
鄭錫奇 / 攝



2.2 資訊蒐集與初步評估

完成評估對象篩選後，依據 IUCN 評估標準 (IUCN 2012a; IUCN Standards and Petitions Committee 2024) 製作每一受評估分類群的資料表。以 2017 年所發表之評估資料作為本次評估之基礎 (鄭錫奇等 2017)，資料表各欄位就所需資訊，儘量蒐集既有的學術發表論文、研究報告及資料庫，並詢問參酌相關專家的意見，以填列數據、載明資料來源並進行必要之說明。

2017 年版本發表至今，於臺灣地區各處所設置的紅外線自動相機涵蓋地區逐漸廣泛，成為了近年中大型哺乳動物長期監測及族群趨勢變化之重要參考資料 (翁國精等 2023)，並透過台灣生物多樣性網絡 (Taiwan Biodiversity Network, TBN) 所提供的物種出現點位資料來進行分布範圍變化的相關分析；翼手目類群資

料來源為農業部生物多樣性研究所之長期調查監測資料。此外，2018 年啟動之「國土生態保育綠色網絡建置計畫」，針對瀕危動物提出之石虎、歐亞水獺、臺灣狐蝠及臺灣穿山甲等哺乳動物之保育行動計畫，亦為本報告重要的參考資料 (鄭錫奇等 2022b；張仕緯 2023；劉建男及林育秀 2023；孫敬閔 2023)。

本報告評估的空間範圍為中華民國實質管轄的陸地領域，包括臺灣本島及周遭島嶼，如澎湖、蘭嶼及綠島等離島，以及鄰近中國大陸的金門及馬祖。

每一受評估之分類群均依照 IUCN 紅皮書名錄類別與標準使用指南第 16 版進行評估 (IUCN Standards and Petitions Committee 2024)。評估流程係由包括：A. 族群量下降、B. 分布範圍、C. 族群量小且下降、D. 族群量極少且分布侷限，以及 E. 量化分析等五大標準及對應之次要標準 (Sub-criterion) 及資格限制 (Qualifiers) 所構成之決策樹 (logic tree) 進行 (表 1)。評定的標準會以滅絕風險最高之類別作為評估結果，即當某一物種在進行國家及地區評估所蒐集資料中符合 A-E 標準中任何一項極危受脅類別，該物種即評定為國家極危 (Nationally Critically Endangered, NCR)；當評估之某一物種所蒐集資料中符合 A-E 標準中任何一項瀕危受脅類別，該物種即評定為國家瀕危 (Nationally Endangered, NEN)；當評估之某一物種所蒐集資料中符合 A-E 標準中任何一項易危受脅類別，該物種即評定為國家易危 (Nationally Vulnerable, NVU)，當評估之某一物種所蒐集資料中符合 A-E 標準中任何一項接近受脅類別或未來可能達到受脅類別時，該物種即評定為國家接近受脅 (Nationally Near Threatened, NNT)；當評估之某一物種均不符合以上標準時，則列為國家暫無危機 (Nationally Least Concern, NLC)；而當某一物種並沒有足夠的分布或族群資料可直接或間接進行滅絕風險評估時，該物種就屬資料缺乏 (Data Deficient, DD) 類別。

表 1. IUCN 紅皮書受脅 (極危、瀕危、易危) 及接近受脅類別評估標準簡要內容。修正自 IUCN Standards and Petitions Committee (2024)

受脅類別判斷標準 A-E	極危 (CR)	瀕危 (EN)	易危 (VU)	接近受脅 (NT)
A. 族群量下降 (時間區間為 10 年或 3 個世代，以較長者為準)				
A1	≥ 90%	≥ 70%	≥ 50%	≥ 30%
A2, A3 & A4	≥ 80%	≥ 50%	≥ 30%	≥ 20%

A1. 經由以下列舉任何方式所觀察、推估、推測或懷疑物種族群下降已經發生，而造成下降的原因明顯是可逆的且原因已知並且停止：
- (a) 直接觀察。〔A3 除外〕
- (b) 適合該分類群的物種豐度指數。
- (c) 分布範圍、占有面積或棲地品質減少或下降。
- (d) 際或潛在的開發破壞。
- (e) 直接觀察受外來種、雜交種、病原、污染源、競爭者或寄生物之影響。

A2. 經由 A1 所列舉任何方式所觀察、推估、推測或懷疑物種族群降低已經發生，但造成降低的原因仍未停止、不明或不可逆。

A3. 經由 A1 所列舉任何方式所推估、推測或懷疑物種族群未來近期內會降低。(最長可達 100 年)。

A4. 經由 A1 所列舉任何方式所觀察、推估、推測或懷疑物種族群未來任何一段時間會降低， 造成降低的原因仍未停止、不明或不可逆。

受脅類別判斷標準 A-E	極危 (CR)	瀕危 (EN)	易危 (VU)	接近受脅 (NT)
B. 分布範圍之判定標準 (至少具備 B1 或 B2 其中之一的條件)				
B1. 分布範圍 (EOO)	< 100 km²	< 5,000 km²	< 20,000 km²	< 20,000 km²
B2. 占有面積 (AOO)	< 10 km²	< 500 km²	< 2,000 km²	< 2,000 km²
且需遭遇以下 3 種情況中的至少 2 種；僅符合 1 種情況時，可判定為 NT。				
(a) 嚴重破碎化或居留區數目為右項數值者	= 1	≤ 5	≤ 10	≤ 10
(b) 經由觀察、推估、推測或預估，下列各項情況之一的數值仍持續下降者： (i) 分布範圍；(ii) 占有面積； (iii) 棲地之區域、實際面積或品質；(iv) 生長地點或亞族群之數目；(v) 能繁殖之成熟個體數				
(c) 下列各項情況其中之一的數值呈現劇烈變動時： (i) 分布範圍；(ii) 占有面積；(iii) 生長地點或亞族群之數目；(iv) 能繁殖之成熟個體數				
C. 族群量小且下降之判定標準				
族群內之成熟個體數	< 250	< 2,500	< 10,000	< 20,000
且具備 C1 或 C2 其中之一的條件				
C1. 經由觀察、推估或預估物種族群成熟個體數持續下降。(時間至少為未來 100 年)	3 年或一代 下降 25% (以長者為準)	5 年或二代 下降 20% (以長者為準)	10 年或三代 下降 10% (以長者為準)	10 年或三代 下降 10%
C2. 經由觀察、推估或預估，能繁殖成熟個體數持續下降，而且其族群結構遭遇下列至少一種情況者：				
a(i) 每個亞族群能繁殖之成熟個體數	≤ 50	≤ 250	≤ 1,000	≤ 1,000
a(ii) 成熟個體都生長在一個單獨的小族群內所占比例	90%-100%	95%-100%	100%	100%
(b) 成熟個體呈現劇烈變動				
D. 族群數量極少且分布侷限之判定標準				
族群遭遇以下情況：				
D. 成熟個體數	< 50	< 250	D1. < 1,000	D1. < 2,500
且 / 或遭遇以下情況：				
D2. 出現面積受限或位於居留區的物種族群在未來有可能會面臨威脅，使之受脅程度提升至極危或瀕危類別 (此準則只用於評估易危及接近受脅類別。	-	-	D2. 占有面積 < 20 km² 或分布地點數 ≤ 5	D2. 占有面積 < 50 km² 或分布地點數 ≤ 10
E. 量化分析				
在野外絕種之機率	10 年內或三個世代內在野外絕種之機率超過 50% (以長者為準，但不超過 100 年)	20 年內或五個世代內在野外絕種之機率超過 20% (以長者為準，但不超過 100 年)	100 年內在野外絕種之機率超過 10%	-

2.3 公開意見徵詢

經由步驟 2.1 至 2.2 的評估流程產生之結果提供哺乳類相關專家學者審視，以檢視資料的完整性及補充缺乏之資訊，於 2024 年 11 月完成評估結果，並召開公開徵詢意見會議，廣泛徵求專家、民眾及政府相關部門的意見，最後再依據最新獲得之資訊，執行上述之步驟產出本評估報告。



Prionailurus bengalensis
石虎 Leopard cat
NEN C1; E
林冠甫 / 攝

3. 臺灣陸域哺乳類評估結果

本次的評估結果，計有 2 種為國家極危 (NCR)，3 種為國家瀕危 (NEN)，6 種為國家易危 (NVU)，合計 11 種為國家受脅物種，另有 9 種屬於國家接近受脅 (NNT)，分別占臺灣陸域哺乳類評估種數 79 種的 13.9% 及 11.4%；另根據 Chiang et al. (2015) 之發表，將雲豹 (*Neofelis nebulosa*) 視為區域滅絕 (Regionally Extinct) 的物種。與「2017 臺灣陸域哺乳類紅皮書名錄」相比，有 1 種 (臺灣長耳蝠 *Plecotus taivanus* 由 NLC 調整為 NNT) 滅絕風險上升；有 3 種 (麝香貓 *Viverricula indica* 由 NVU 調整為 NNT；臺灣野山羊 *Capricornis swinhoei* 及食蟹獴 *Urva urva formosana* 由 NNT 調整為 NLC) 滅絕風險下降；另有 3 種 (毛翼管鼻蝠 *Harpiocephalus harpia*、紅棕鼠耳蝠 *Myotis soror* 及細尾長尾鼩 *Chodsigoa sodalis*) 從資料不足 (DD) 重新評估其受脅類別 (調整為 NNT)，並新增新紀錄種 1 種 (大足鼠耳蝠列為 NNT)。下列物種名錄表格中，亦列出 2017 年臺灣陸域哺乳類紅皮書之評估類別，以利進行兩次評估結果的差異比較，並提供 2024 年全球紅皮書名錄類別，以利於不同空間尺度紅皮書評估結果之比對參考。欲瞭解本報告所有陸域哺乳類評估資料可洽詢通訊作者。

Manis pentadactyla pentadactyla
臺灣穿山甲 Formosan short-tailed pangolin
NVU C2b
林盈采 / 攝



3.1 國家極危 (NCR) 類別陸域哺乳類名錄

分類群	中文名	評估標準	2017 臺灣紅皮書類別	2024 全球紅皮書類別
Lutra lutra (Linnaeus, 1758)	歐亞水獺	C2a(i)b; D	NCR	NT
Pteropus dasymallus formosus Sclater, 1873	臺灣狐蝠	C2a(i)b	NCR	VU

3.2 國家瀕危 (NEN) 類別陸域哺乳類名錄

分類群	中文名	評估標準	2017 臺灣紅皮書類別	2024 全球紅皮書類別
Prionailurus bengalensis (Kerr, 1792)	石虎	C1; E	NEN	LC
Ursus thibetanus formosanus Swinhoe, 1864	臺灣黑熊	C2a(i)	NEN	VU
Vespertilio sinensis (Peters, 1880)	霜毛蝠	A2acd; B1ab(iii,iv,v)c(iv); C2b	NEN	LC



3.3 國家易危 (NVU) 類別陸域哺乳類名錄

分類群	中文名	評估標準	2017 臺灣紅皮書類別	2024 全球紅皮書類別
Martes flavigula chrysospila Swinhoe, 1866	黃喉貂	C2a(i)	NVU	LC
Mustela nivalis formosana Lin et al., 2010	臺灣小黃鼠狼	B1ab(iii, iv); D2	NVU	LC
Coelops frithii formosanus Horikawa, 1928	臺灣無尾葉鼻蝠	C2a(i)b	NVU	NT
Myotis formosus flavus Shamel, 1944	金黃鼠耳蝠	A2ad; B2b(iii)c(iii); Ca(i)b	NVU	NT
Chimarrogale leander Thomas, 1902	水鼩	B1ab(iii)c(iii,iv)	NVU	LC
Manis pentadactyla pentadactyla Linnaeus, 1758	臺灣穿山甲	C2b	NVU	CR

3.4 國家接近受脅 (NNT) 類別陸域哺乳類名錄

分類群	中文名	評估標準	2017 臺灣紅皮書類別	2024 全球紅皮書類別
Rusa unicolor swinhoii (Sclater, 1862)	臺灣水鹿	B1c(iv)	NNT	VU
Viverricula indica (É. Geoffroy Saint-Hilaire, 1803)	麝香貓	B1c(iv)	NVU	LC
Plecotus taivanus Yoshiyuki, 1991	臺灣長耳蝠	B1b(i)	NLC	NT
Myotis soror Ruedi et al., 2015	紅棕鼠耳蝠	B1c(iii)	DD	DD
Myotis pilosus (Peters, 1869)	大足鼠耳蝠 *	C2a(i)	--	VU
Harpiocephalus harpia (Temminck, 1840)	毛翼管鼻蝠	B1c(iii)	DD	LC
Chodsigoa sodalis Thomas, 1913	細尾長尾鼩	B1b(iii)	DD	DD
Eothenomys colurnus (Thomas, 1911)	黑腹絨鼠	B1c(iv)	NNT	LC
Alexandromys kikuchii (Kuroda, 1920)	高山田鼠	B1c(iv)	NNT	LC

註：* 本版名錄新列入之新紀錄種，2017 年未評估。

3.5 國家暫無危機 (NLC) 類別陸域哺乳類名錄

分類群	中文名	2017 臺灣紅皮書類別	2024 全球紅皮書類別
Capricornis swinhoei Gray, 1862	臺灣野山羊	NNT	LC
Muntiacus reevesi micrurus (Sclater, 1875)	臺灣山羌	NLC	LC
Sus scrofa taivanus (Swinhoe, 1863)	臺灣野豬	NLC	LC
Urva urva formosana (Bechthold, 1936)	食蟹獴	NNT	LC
Melogale subaurantiaca (Swinhoe, 1862)	鼬獾	NLC	LC
Mustela sibirica taivana Thomas, 1913	黃鼬狼	NLC	LC
Paguma larvata (C. H. Smith, 1827)	白鼻心	NLC	LC
Hipposideros armiger terasensis Kishida, 1924	臺灣葉鼻蝠	NLC	LC
Miniopterus fuliginosus (Hodgson, 1835)	東亞摺翅蝠	NLC	NE
Tadarida insignis (Blyth, 1862)	東亞游離尾蝠	NLC	DD
Rhinolophus formosae Sanborn, 1939	臺灣大蹄鼻蝠	NLC	LC
Rhinolophus monoceros Andersen, 1905	臺灣小蹄鼻蝠	NLC	NE
Kerivoula furva Kuo et al., 2017	玄彩蝠	NLC	LC
Harpiola isodon Kuo et al., 2006	金芒管鼻蝠	NLC	LC
Murina bicolor Kuo et al., 2009	黃胸管鼻蝠	NLC	LC
Murina gracilis Kuo et al., 2009	姬管鼻蝠	NLC	LC
Murina puta Kishida, 1924	臺灣管鼻蝠	NLC	LC
Murina recondita Kuo et al., 2009	隱姬管鼻蝠	NLC	LC



3.5 國家暫無危機 (NLC) 類別陸域哺乳類名錄 (續)

分類群	中文名	2017 臺灣紅皮書類別	2024 全球紅皮書類別
Myotis fimbriatus taiwanensis Ärnbäck-Christie-Linde, 1908	臺灣毛腿鼠耳蝠	NLC	LC
Myotis frater Allen, 1923	長尾鼠耳蝠	NLC	LC
Myotis laniger (Peters, 1870)	華南水鼠耳蝠	NLC	LC
Myotis rufoniger (Tomes, 1858)	赤黑鼠耳蝠	NLC	LC
Myotis secundus Ruedi et al., 2015	長趾鼠耳蝠	NLC	LC
Submyotodon latirostris (Kishida, 1932)	寬吻鼠耳蝠	NLC	LC
Barbastella darjelingensis (Hodgson, 1855)	東方寬耳蝠	NLC	LC



Rhinolophus monoceros
臺灣小蹄鼻蝠 Formosan lesser horseshoe bat
NLC
周政翰 / 攝

3.5 國家暫無危機 (NLC) 類別陸域哺乳類名錄 (續)

分類群	中文名	2017 臺灣紅皮書類別	2024 全球紅皮書類別
Eptesicus pachyomus horikawai Kishida, 1924	堀川氏棕蝠	NLC	LC
Nyctalus plancyi (Gerbe, 1880)	絨山蝠	NLC	LC
Pipistrellus abramus (Temminck, 1838)	東亞家蝠	NLC	LC
Scotophilus kuhlii Leach, 1821	高頭蝠	NLC	LC
Thainycteris torquatus (Csorba and Lee, 1999)	黃頸蝠	NLC	LC
Crocidura tadae Tokuda and Kano, 1936	長尾麝鼩	NLC	DD
Crocidura shantungensis hosletti Jameson and Jones, 1977	小麝鼩	NLC	LC

3.5 國家暫無危機 (NLC) 類別陸域哺乳類名錄 (續)

分類群	中文名	2017 臺灣紅皮書類別	2024 全球紅皮書類別
Crocidura tanakae Kuroda, 1938	灰麝鼩	NLC	LC
Suncus murinus (Linnaeus, 1766)	家鼩	NLC	LC
Anourosorex yamashinai Kuroda, 1935	短尾鼩	NLC	LC
Pseudosoriculus fumidus (Thomas, 1913)	臺灣長尾鼩	NLC	LC
Mogera insularis (Swinhoe, 1863)	臺灣鼴鼠	NLC	LC
Mogera kanoana Kawada et al., 2007	鹿野氏鼴鼠	NLC	NE
Lepus sinensis formosus Thomas, 1908	臺灣野兔	NLC	LC
Macaca cyclopis Swinhoe, 1863	臺灣獼猴	NLC	LC
Apodemus agrarius (Pallas, 1771)	赤背條鼠	NLC	LC
Apodemus semotus Thomas, 1908	臺灣森鼠	NLC	LC
Bandicota indica (Bechstein, 1800)	鬼鼠	NLC	LC
Micromys minutus (Pallas, 1771)	巢鼠	NLC	LC
Mus formosanus Kuroda, 1925	田鼷鼠	NLC	LC
Mus musculus Linnaeus, 1758	家鼷鼠	NLC	LC
Niviventer coninga (Swinhoe, 1864)	刺鼠	NLC	LC
Niviventer culturatus (Thomas, 1917)	高山白腹鼠	NLC	LC
Rattus losea (Swinhoe, 1871)	小黃腹鼠	NLC	LC
Rattus norvegicus (Berkenhout, 1769)	溝鼠	NLC	LC

3.5 國家暫無危機 (NLC) 類別陸域哺乳類名錄 (續)

分類群	中文名	2017 臺灣紅皮書類別	2024 全球紅皮書類別
Rattus tanezumi (Temminck, 1844)	亞洲家鼠	NLC	LC
Callosciurus erythraeus thaiwanensis (Bonhote, 1901)	赤腹松鼠	NLC	LC
Dremomys pernyi owstoni (Thomas, 1908)	長吻松鼠	NLC	LC
Tamiops maritimus (Bonhote, 1900)	條紋松鼠	NLC	LC
Belomys pearsonii kaleensis (Swinhoe, 1863)	小鼯鼠	NLC	DD
Petaurista lena Thomas, 1907	白面鼯鼠	NLC	LC
Petaurista grandis (Swinhoe, 1863)	大赤鼯鼠	NLC	LC

3.6 資料缺乏 (DD) 類別陸域哺乳類名錄

分類群	中文名	2017 臺灣紅皮書類別	2024 全球紅皮書類別
Hypsugo pulveratus (Peters, 1871)	灰伏翼	DD	LC



Viverricula indica
麝香貓 Small Indian civet
NNT B1c(iv)
鄭錫奇 / 攝

4. 臺灣之全球受脅陸域哺乳類物種

本報告列入評估候選之 79 種陸域哺乳類中，有 6 種列為紅皮書全球受脅哺乳類 (IUCN 2024)，包括 1 種屬於臺灣區域滅絕 (RE) 之物種，3 種為臺灣紅皮書中受脅類別 (CR、EN 及 VU) 之物種，2 種為臺灣紅皮書中接近受脅類別 (NT) 之物種。

分類群	中文名	2024 臺灣紅皮書 類別及評估標準	2024 全球紅皮書 類別及評估標準
Manis pentadactyla pentadactyla Linnaeus, 1758	臺灣穿山甲	NVU C2b	CR A3d+4d
Neofelis nebulosa (Griffith, 1821)	雲豹	RE	VU A2cd+4cd
Ursus thibetanus formosanus Swinhoe, 1864	臺灣黑熊	NEN C2a(i)	VU A2cd
Pteropus dasymallus formosus Sclater, 1873	臺灣狐蝠	NCR C2a(i)b	VU A4cd; B2ab(iii,iv,v); C1
Myotis pilosus (Peters, 1869)	大足鼠耳蝠	NNT C2a(i)	VU A4c
Rusa unicolor swinhoii (Sclater, 1862)	臺灣水鹿	NNT B1c(iv)	VU A2cd+3cd+4cd

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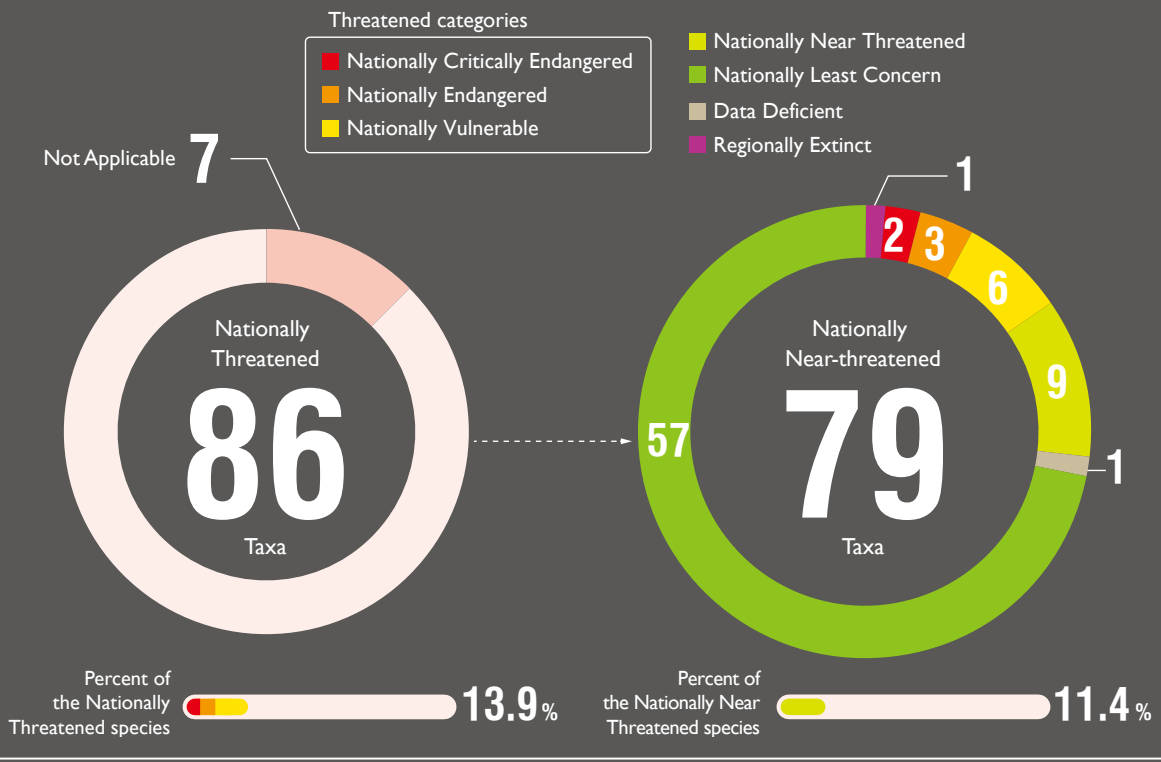
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The Red List of Terrestrial Mammals of Taiwan, 2024

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Abstract

Regularly reviewing and updating the population statuses and extinction risks of species or taxonomic groups within a country or region is essential for evaluating the effectiveness of conservation efforts and policies. This Red List presents insights from the second assessment of terrestrial mammal species in Taiwan based on the International Union for Conservation of Nature Categories and Criteria. A total of 86 species were selected for assessment; among these species, 7 were not applicable for regional assessment. Thus, the final assessment cohort comprised 79 species. The assessment revealed 11 nationally threatened terrestrial mammal species in Taiwan. Specifically, two species (*Pteropus dasymallus formosus* and *Lutra lutra*) were included in the Nationally Critically Endangered (NCR); three species (*Prionailurus bengalensis, Ursus thibetanus formosanus*, and *Vespertilio sinensis*) were included in the Nationally Endangered (NEN); and six species (*Martes flavigula chrysospila, Mustela nivalis formosana, Coelops frithii formosanus, Myotis formosus flavus, Chimarrogale leander*, and *Manis pentadactyla pentadactyla*) were included in the Nationally Vulnerable (NVU). In addition, nine species (*Rusa unicolor swinhoii, Viverricula indica, Harpiocephalus harpia, Myotis pilosus, Myotis soror, Plecotus taivanus, Chodsigoa sodalis, Eothenomys colurnus*, and *Alexandromys kikuchii*) were included in the Nationally Near Threatened (NNT). Overall, Nationally Threatened and Near Nationally threatened constituted 13.9% and 11.4% of the assessed terrestrial mammals. Notably, six terrestrial mammals in Taiwan are globally threatened. Our assessment of these mammals indicated that *Neofelis nebulosa* was Regionally Extinct (RE); *U. t. formosanus, P. d. formosus*, and *M. p. pentadactyla* were Nationally Threatened; and *R. u. swinhoii* and *M. pilosus* were Near Nationally Threatened. Compared with the Red List of 2017, the present list (2024) includes one new record species: *M. pilosus*. Category adjustments were made for seven species. Extinction risks increased for *P. taivanus* but decreased for three species *Capricornis swinhoei*, *Urva urva formosana*, and *V. indica*. Furthermore, three species previously included in the data deficient (DD), namely *H. harpia, M. soror,* and *C. sodalis* were reassigned to other categories.

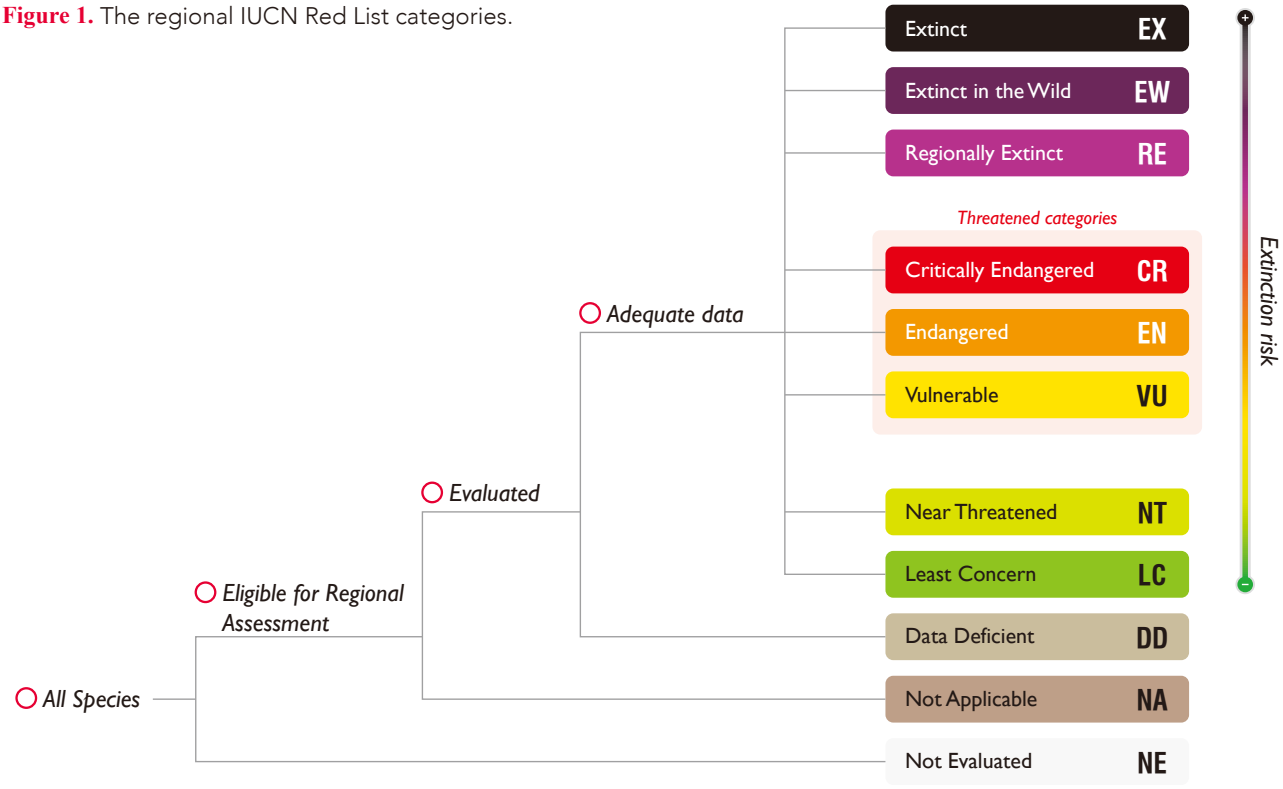


1. Introduction

Understanding the extinction risks faced by species or taxa is essential for the effective management and conservation of wildlife. Threatened species, organized by the degree of extinction risk, serve as key references for developing restoration plans, conducting research, monitoring trends, and prioritizing conservation efforts. These lists are also crucial for securing public support for habitat protection and guiding resource allocation decisions (Townsend et al. 2007; Pimm et al. 2014).

Since its introduction in 1964, the International Union for Conservation of Nature (IUCN) Red List of Threatened Species, which is managed by the IUCN Species Survival Commission, has become a central tool in biodiversity conservation. The Red List has gained international recognition, evolving into a primary reference for assessing species' conservation statuses and population trends worldwide (Rodrigues et al. 2006; IUCN Standards and Petitions Committee 2024). Its categories (Figure 1) and assessment criteria (IUCN 2012a), along with subsequent guidelines for applying these criteria at regional and national levels (IUCN 2012b), are now fundamental resources for many countries and regions in evaluating their threatened species lists (Townsend et al. 2007). The standardized assessment approach enhances legislative and enforcement efforts and expands the species coverage of the global Red List (Rodrigues et al. 2006).

Figure 1. The regional IUCN Red List categories.





Coelops frithii formosanus
臺灣無尾葉鼻蝠 Formosan tailless leaf-nosed bat
NVU C2a(i)b
鄭錫奇 / 攝

When a country or region assesses wildlife extinction risks by using the IUCN system, its national or regional Red List must be evaluated impartially following the IUCN Red List Categories and Criteria (IUCN Standards and Petitions Committee 2024; IUCN 2012b). A "region" refers to any clearly defined geographic area, such as a continent, country, or state (IUCN 2012b). Transitioning from global to regional assessments involves considerations such as native versus nonnative species, breeding versus nonbreeding populations, and areas where a species has become regionally extinct (RE) (IUCN 2012b). The present report was prepared based on version 3.1 of the IUCN Red List Categories and Criteria (IUCN 2012a). However, because of global variations in the spatial scale used for assessment, applying the IUCN criteria to species whose distribution extends beyond the assessment area may necessitate adjustments to the thresholds and criteria. The Guidelines for Application of the IUCN Red List Criteria at Regional and National Levels provide recommendations for such adjustments (IUCN 2012b).

As of 2024, 6,753 mammal species have been recorded worldwide (Mammal Diversity Database 2024). Among these species, 5,983 have been assessed by the IUCN, with 1,338 classified as threatened species (IUCN 2024). However, the IUCN's assessments of threatened species operate on a global scale, where the assessment focuses on the species level. Thus, comprehensive assessments at the national or regional level are necessary to regularly update species distribution, population trends, and threat factors specific to each country or region. Among Taiwan's 86 terrestrial mammal species (including 27 endemic species and 21 endemic subspecies), 83 have been included in the IUCN Global Red List. Insights from the present regional assessment of Taiwan's endemic species may guide global assessments. This report further highlights the importance of regularly updating the Red List. The present assessment was conducted by the Taiwan Biodiversity Research Institute and the Forestry and Nature Conservation Agency of the Ministry of Agriculture. The first Red List of Terrestrial Mammals of Taiwan was published in 2017. After 7 years, a second assessment was performed to account for changes in taxonomic statuses and scientific names, alterations in species distributions because of emergent data, and shifts in population statuses because of recent biological surveys and studies. The present assessment clarified the threats and changing conditions faced by these species and addressed previous gaps in data to support continual conservation strategies and population recovery efforts.

2. Assessment process

The methods used to evaluate the extinction risks of terrestrial mammals in Taiwan are outlined below.

2.1 Defining the taxa to be included in the assessment

The scientific names used in this report are based on a study conducted by Burgin et al. (2020) and the Mammal Diversity Database (2024; maintained by the American Society of Mammalogists). Bats (Chiroptera), rodents (Rodentia), and insectivores (Eulipotyphla) were classified based on studies conducted by Cheng et al. (2022a), Lin et al. (2020), and Lin and Motokawa (2014), respectively. These references were used to compile the official list of Taiwan's terrestrial mammals, which was submitted to the Catalogue of Life in Taiwan (TaiCOL). Common English names were adopted from the Mammal Diversity Database (2024) and *A Photographic Guide to the Bats of Taiwan* (Fourth Edition) (Cheng et al. 2022a).

The present assessment included a newly recorded species discovered in Kinmen in 2018 (Chou et al. 2019): the Rickett's big-footed myotis (*M. pilosus*). In total, 86 terrestrial mammal species were listed for assessment. Based on the Guidelines for Application of the IUCN Red List Criteria at Regional and National Levels (IUCN 2012b), species such as *Cynopterus sphinx, Rousettus leschenaultii,* and *Scotophilus cf. heathii* were not identified to be long-term residents of Taiwan. Notably, the taxonomic statuses of *Pipistrellus* sp. 1 (*taiwanensis*) and *Pipistrellus* sp. 2 (*montanus*) remain unclear. *Rattus exulans* is classified as an invasive species. *Cervus nippon taiouanus* is a species reintroduced following regional extinction in the wild. Thus, the aforementioned seven species were not applicable for this regional assessment. The remaining 79 species within Taiwan's geographic scope were included in the formal assessment.



Neofelis nebulosa
雲豹 Indochinese clouded leopard
RE
鄭錫奇 / 攝

2.2 Data Collection and Preliminary Assessment

After the selection of species for assessment, data sheets were created for each taxon following IUCN assessment standards (IUCN 2012a; IUCN Standards and Petitions Committee 2024). The 2017 assessment data (Cheng et al. 2017) formed the baseline for the present assessment. Each data sheet was populated using information from academic publications, research reports, databases, and expert input. Experts provided crucial data, documented sources, and furnished necessary explanations to ensure the comprehensiveness of the assessment.

Since 2017, the use of camera traps has increased across various locations in Taiwan, providing vital reference data for the long-term monitoring and population trend analysis of medium and large mammals (Weng et al. 2023). Species occurrence data provided by the Taiwan Biodiversity Network supported the analysis of changes in distribution range. Data on bat species were sourced from long-term surveys conducted by the Taiwan Biodiversity Research Institute, Ministry of Agriculture. The Taiwan Ecological Network Establishment Project (2018), proposed conservation action plans for endangered species such as the leopard cat (*P. bengalensis*), Eurasian otter, (*L. lutra*), Formosan flying fox (*P. d. formosus*), and Formosan short-tailed pangolin (*M. p. pentadactyla*) (Cheng et al. 2022b; Chang 2023; Liu and Lin 2023; Sun 2023), further enriched the reference materials for this report.

The spatial scope of the present assessment covered the terrestrial regions under the jurisdiction of the Republic of China, including Taiwan's main island and surrounding islands such as Penghu, Orchid Island, and Green Island as well as Kinmen and the Matsu Islands near mainland China.

Each taxon was assessed using version 16 of the Guidelines for Using the IUCN Red List Categories and Criteria (IUCN Standards and Petitions Committee 2024). The assessment process was conducted according to a logic tree comprising five primary criteria and their subcriteria and qualifiers (Table 1), which are (A) Population size reduction; (B) Geographic range in the form of either extent of occurrence and/or area of occupancy; (C) Small population size and decline; (D) Very small or restricted population; (E) Quantitative analysis. Regarding assessment standards, the category representing the highest extinction risk was adopted as the assessment outcome. If a species met any of the aforementioned five criteria for the Critically Endangered category, it was classified as a Nationally Critically Endangered (NCR) species. If a species met the criteria for the Endangered category, it was classified as a Nationally Endangered (NEN) species. If a species met the criteria for the Vulnerable category, it was classified as a Nationally Vulnerable (NVU) species. If a species met the criteria for the Near Threatened category or indicated a potential to reach the threatened category, it was classified as a Nationally Near Threatened (NNT) species. Species not meeting any of the indicated criteria were classified as Nationally Least Concern (NLC) species, and those lacking sufficient data on distribution or population status for a direct or indirect extinction risk assessment were classified as data deficient (DD) species.

Table 1. A simplified overview of Red List criteria adopted in this study. Modified from IUCN Standards and Petitions Committee (2024)

Use any of the criteria A-E	Critically Endangered	Endangered	Vulnerable	Near Threatened
A. Population size reduction (declines measured over the longer of 10 years or 3 generations)				
A1	≥ 90%	≥ 70%	≥ 50%	≥ 30%
A2, A3 & A4	≥ 80%	≥ 50%	≥ 30%	≥ 20%
A1. Population reduction observed, estimated, inferred, or suspected in the past where the causes of the reduction are clearly reversible AND understood AND have ceased, based on and specifying any of the following: (a) direct observation. [except A3] (b) an index of abundance appropriate to the taxon. (c) a decline in area of occupancy (AOO), extent of occurrence (EOO) and/or habitat quality. (d) actual or potential levels of exploitation. (e) effects of introduced taxa, hybridization, pathogens, pollutants, competitors or parasites.				
A2. Population reduction observed, estimated, inferred, or suspected in the past where the causes of the reduction may not have ceased OR may not be understood OR may not be reversible.				
A3. Population reduction projected, inferred or suspected to be met in the future (up to a maximum of 100 years) [(a) cannot be used for A3]				
A4. An observed, estimated, inferred, projected or suspected population reduction where the time period must include both the past and the future (up to a max. of 100 years in the future), and where the causes of reduction may not have ceased OR may not be understood OR may not be reversible.				
B. Geographic range in the form of either B1 (extent of occurrence) AND/OR B2 (area of occupancy)				
B1. Extent of occurrence (EOO)	< 100 km²	< 5,000 km²	< 20,000 km²	< 20,000 km²
B2. Area of occupancy (AOO)	< 10 km²	< 500 km²	< 2,000 km²	< 2,000 km²
AND at least 2 of the following 3 conditions (one for Near-threatened category):				
(a) Severely fragmented OR # locations	= 1	≤ 5	≤ 10	≤ 10
(b) Continuing decline observed, estimated, inferred or projected in any of: (i) extent of occurrence; (ii) area of occupancy; (iii) area, extent and/or quality of habitat; (iv) number of locations or subpopulations; (v) number of mature individuals				
(c) Extreme fluctuations in any of: (i) extent of occurrence; (ii) area of occupancy; (iii) number of locations or subpopulations; (iv) number of mature individuals				
C. Small population size and decline				
Number of mature individuals	< 250	< 2,500	< 10,000	< 20,000
AND at least one of C1 or C2				
C1. An observed, estimated or projected continuing decline of at least (up to a max. of 100 years in future):	25% in 3 years or 1 generation (whichever is longer)	20% in 5 years or 2 generations (whichever is longer)	10% in 10 years or 3 generations (whichever is longer)	10% in 10 years or 3 generations
C2. An observed, estimated, projected or inferred continuing decline AND at least one of the following 3 conditions:				
a(i) Number of mature individuals in each subpopulation	≤ 50	≤ 250	≤ 1,000	≤ 1000
a(ii) % of mature individuals in one subpopulation =	90-100%	95-100%	100%	100%
(b) Extreme fluctuations in the number of mature individuals				



Use any of the criteria A-E	Critically Endangered	Endangered	Vulnerable	Near Threatened
D. Very small or restricted population:				
D. Number of mature individuals	< 50	< 250	D1. < 1,000	D1. < 2,500
AND/OR				
D2. Only applies to the VU and NT category. Restricted area of occupancy or number of locations with a plausible future threat that could drive the taxon to CR or EX in a very short time.	-	-	AOO < 20 km² or number of locations ≤ 5	AOO < 50 km² or number of locations ≤ 10
E. Quantitative analysis				
Indicating the probability of extinction in the wild to be:	≥ 50% in 10 years or 3 generations (100 years max.)	≥ 20% in 20 years or 5 generations (100 years max.)	≥ 10% in 100 years	-



2.3 Expert opinions

The assessment results were reviewed by mammalogy experts to ensure data accuracy and fill in any gaps. The assessment was finalized in November 2024. Then, a public consultation meeting was arranged to gather feedback from experts, the general public, and government representatives. The final report was prepared using the most up-to-date information available.

Plecotus taivanus
臺灣長耳蝠 Taiwan long-eared bat
NNT B1b(i)
陳家鴻 / 攝



Pteropus dasymallus formosus
臺灣狐蝠 Formosan flying fox
NCR C2a(i)b
張義榮 / 攝

3. Assessment results of terrestrial mammal species of Taiwan

The assessment included two, three, and six species in the Nationally Critically Endangered, Nationally Endangered, and Nationally Vulnerable categories, respectively. Thus, 11 species were included in the Nationally Threatened category, representing 13.9% of all assessed species. Nine species were included in the NNT category, representing 11.4% of all assessed species. According to Chiang et al. (2015), the Indochinese clouded leopard (*N. nebulosa*) is considered to be Regionally Extinct (RE) in Taiwan. Compared with the 2017 list, the 2024 list features some notable changes. The extinction risk increased for the Taiwan long-eared bat (*P. taivanus*), which was reclassified from NLC to NNT. The risk decreased for the small Indian civet (*V. indica*), which was reclassified from NVU to NNT, and also for the Formosan serow (*C. swinhoei*) and Formosan crab-eating mongoose (*U. u. formosana*), which were reclassified from NNT to NLC. Furthermore, three species that were previously classified as data deficient species—the Lesser hairy-winged bat (*H. harpia*), Reddish myotis (*M. soror*), and Lesser Taiwanese brown-toothed shrew (*C. sodalis*)—were reclassified as NNT species. A newly recorded species, the Rickett's big-footed myotis (*M. pilosus*), was added to the NNT category. The following catalog tables present the assessment categories from the 2017 and 2024 lists, facilitating a comparison between the two assessments. The tables also include the 2024 IUCN Global Red List categories as a reference for cross-scale assessments. Comprehensive information on all assessed terrestrial mammals is available from the corresponding author.

3.1 List of Nationally Critically Endangered terrestrial mammal taxa in Taiwan

Taxon	Common name	Criteria	Taiwan Red List Category, 2017	Global Red List Category, 2024
Lutra lutra (Linnaeus, 1758)	Eurasian otter	C2a(i)b; D	NCR	NT
Pteropus dasymallus formosus Sclater, 1873	Formosan flying fox	C2a(i)b	NCR	VU

3.2 List of Nationally Endangered terrestrial mammal taxa in Taiwan

Taxon	Common name	Criteria	Taiwan Red List Category, 2017	Global Red List Category, 2024
Prionailurus bengalensis (Kerr, 1792)	Leopard cat	C1; E	NEN	LC
Ursus thibetanus formosanus Swinhoe, 1864	Formosan black bear	C2a(i)	NEN	VU
Vespertilio sinensis (Peters, 1880)	Asian particolored bat	A2(acd); B1ab(iii,iv,v)c(iv); C2b	NEN	LC

3.3 List of Nationally Vulnerable terrestrial mammal taxa in Taiwan

Taxon	Common name	Criteria	Taiwan Red List Category, 2017	Global Red List Category, 2024
Martes flavigula chrysospila Swinhoe, 1866	Yellow-throated marten	C2a(i)	NVU	LC
Mustela nivalis formosana Lin et al., 2010	Formosan least weasel	B1ab(iii, iv); D2	NVU	LC
Coelops frithii formosanus Horikawa, 1928	Formosan tailless leaf-nosed bat	C2a(i)b	NVU	NT
Myotis formosus flavus Shamel, 1944	Hodgson's myotis	A2(ad); B2b(iii)c(iii); Ca(i)b	NVU	NT
Chimarrogale leander Thomas, 1902	Leander's water shrew	B1ab(iii)c(iii,iv)	NVU	LC
Manis pentadactyla pentadactyla Linnaeus, 1758	Formosan short-tailed pangolin	C2b	NVU	CR

3.4 List of Nationally Near Threatened terrestrial mammal taxa in Taiwan

Taxon	Common name	Criteria	Taiwan Red List Category, 2017	Global Red List Category, 2024
Rusa unicolor swinhoii (Sclater, 1862)	Formosan sambar	B1c(iv)	NNT	VU
Viverricula indica (É. Geoffroy Saint-Hilaire, 1803)	Small Indian civet	B1c(iv)	NVU	LC
Plecotus taivanus Yoshiyuki, 1991	Taiwan long-eared bat	B1b(i)	NLC	NT
Myotis soror Ruedi et al., 2015	Reddish myotis	B1c(iii)	DD	DD
Myotis pilosus (Peters, 1869)	Rickett's big-footed myotis*	C2a(i)	--	VU
Harpiocephalus harpia (Temminck, 1840)	Lesser hairy-winged bat	B1c(iii)	DD	LC
Chodsigoa sodalis Thomas, 1913	Lesser Taiwanese brown-toothed shrew	B1b(iii)	DD	DD
Eothenomys colurnus (Thomas, 1911)	Zhejiang red-backed vole	B1c(iv)	NNT	LC
Alexandromys kikuchii (Kuroda, 1920)	Taiwan vole	B1c(iv)	NNT	LC

* New record species in this version of Red List and not evaluated in 2017.



Capricornis swinhoei
臺灣野山羊 Formosan serow
NLC
鄭錫奇 / 攝

3.5 List of Nationally Least Concern terrestrial mammal taxa in Taiwan

Taxon	Common name	Taiwan Red List Category, 2017	Global Red List Category, 2024
Capricornis swinhoei Gray, 1862	Formosan serow	NNT	LC
Muntiacus reevesi micrurus (Sclater, 1875)	Formosan reeves's muntjac	NLC	LC
Sus scrofa taivanus (Swinhoe, 1863)	Eurasian wild pig	NLC	LC
Urva urva formosana (Bechthold, 1936)	Formosan crab-eating mongoose	NNT	LC
Melogale subaurantiaca (Swinhoe, 1862)	Formosan ferret-badger	NLC	LC
Mustela sibirica taivana Thomas, 1913	Formosan siberian weasel	NLC	LC
Paguma larvata (C. H. Smith, 1827)	Masked palm civet	NLC	LC
Hipposideros armiger terasensis Kishida, 1924	Formosan leaf-nosed bat	NLC	LC
Miniopterus fuliginosus (Hodgson, 1835)	Asian long-fingered bat	NLC	NE
Tadarida insignis (Blyth, 1862)	East Asian free-tailed bat	NLC	DD
Rhinolophus formosae Sanborn, 1939	Formosan greater horseshoe bat	NLC	LC
Rhinolophus monoceros Andersen, 1905	Formosan lesser horseshoe bat	NLC	NE
Kerivoula furva Kuo et al., 2017	Dark woolly bat	NLC	LC
Harpiola isodon Kuo et al., 2006	Golden-tipped tube-nosed bat	NLC	LC
Murina bicolor Kuo et al., 2009	Yellow-chested tube-nosed bat	NLC	LC
Murina gracilis Kuo et al., 2009	Taiwan little tube-nosed bat	NLC	LC
Murina puta Kishida, 1924	Taiwan tube-nosed bat	NLC	LC

3.5 List of Nationally Least Concern terrestrial mammal taxa in Taiwan (cont.)

Taxon	Common name	Taiwan Red List Category, 2017	Global Red List Category, 2024
Murina recondita Kuo et al., 2009	Taiwan faint-golden little tube-nosed bat	NLC	LC
Myotis fimbriatus taiwanensis Ärnbäck-Christie-Linde, 1908	Taiwan hairy-legged myotis	NLC	LC
Myotis frater Allen, 1923	Long-tailed whiskered myotis	NLC	LC
Myotis laniger (Peters, 1870)	Chinese water myotis	NLC	LC
Myotis rufoniger (Tomes, 1858)	Reddish-black myotis	NLC	LC
Myotis secundus Ruedi et al., 2015	Taiwan long-toed myotis	NLC	LC
Submyotodon latirostris (Kishida, 1932)	Taiwan broad-muzzled bat	NLC	LC
Barbastella darjelingensis (Hodgson, 1855)	Eastern barbastelle	NLC	LC
Eptesicus pachyomus horikawai Kishida, 1924	Oriental serotine	NLC	LC
Nyctalus plancyi (Gerbe, 1880)	Chinese noctule	NLC	LC
Pipistrellus abramus (Temminck, 1838)	Japanese pipistrelle	NLC	LC
Scotophilus kuhlii Leach, 1821	Lesser Asian yellow bat	NLC	LC
Thainycteris torquatus (Csorba and Lee, 1999)	Necklace sprite	NLC	LC
Crocidura tadae Tokuda and Kano, 1936	Kuroda's white-toothed shrew	NLC	DD
Crocidura shantungensis hosletti Jameson and Jones, 1977	Hoslet's shantung shrew	NLC	LC
Crocidura tanakae Kuroda, 1938	Taiwanese gray white-toothed shrew	NLC	LC
Suncus murinus (Linnaeus, 1766)	Asian house shrew	NLC	LC

3.5 List of Nationally Least Concern terrestrial mammal taxa in Taiwan (cont.)

Taxon	Common name	Taiwan Red List Category, 2017	Global Red List Category, 2024
Anourosorex yamashinai Kuroda, 1935	Taiwanese mole shrew	NLC	LC
Pseudosoriculus fumidus (Thomas, 1913)	Taiwanese brown-toothed shrew	NLC	LC
Mogera insularis (Swinhoe, 1863)	Formosan mole	NLC	LC
Mogera kanoana Kawada et al., 2007	Kano's mole	NLC	NE
Lepus sinensis formosus Thomas, 1908	Formosan hare	NLC	LC
Macaca cyclopis Swinhoe, 1863	Taiwanese macaque	NLC	LC
Apodemus agrarius (Pallas, 1771)	Striped field mouse	NLC	LC



Belomys pearsonii kaleensis
小鼯鼠 Formosan hairy-footed flying squirrel
NLC
鄭錫奇 / 攝

3.5 List of Nationally Least Concern terrestrial mammal taxa in Taiwan (cont.)

Taxon	Common name	Taiwan Red List Category, 2017	Global Red List Category, 2024
Apodemus semotus Thomas, 1908	Taiwan field mouse	NLC	LC
Bandicota indica (Bechstein, 1800)	Greater bandicoot rat	NLC	LC
Micromys minutus (Pallas, 1771)	Red-eared harvest mouse	NLC	LC
Mus formosanus Kuroda, 1925	Formosan mouse	NLC	LC
Mus musculus Linnaeus, 1758	House mouse	NLC	LC
Niviventer coninga (Swinhoe, 1864)	Spiny Taiwan white-bellied rat	NLC	LC
Niviventer culturatus (Thomas, 1917)	Soft-furred Taiwan white-bellied rat	NLC	LC
Rattus losea (Swinhoe, 1871)	Losea rat	NLC	LC
Rattus norvegicus (Berkenhout, 1769)	Brown rat	NLC	LC
Rattus tanezumi (Temminck, 1844)	East Asian house rat	NLC	LC
Callosciurus erythraeus thaiwanensis (Bonhote, 1901)	Formosan red-bellied squirrel	NLC	LC
Dremomys pernyi owstoni (Thomas, 1908)	Formosan long-nosed squirrel	NLC	LC
Tamiops maritimus (Bonhote, 1900)	Maritime striped squirrel	NLC	LC
Belomys pearsonii kaleensis (Swinhoe, 1863)	Formosan hairy-footed flying squirrel	NLC	DD
Petaurista lena Thomas, 1907	Taiwan giant flying squirrel	NLC	LC
Petaurista grandis (Swinhoe, 1863)	Formosan giant flying squirrel	NLC	LC

3.6 List of Data Deficient terrestrial mammal taxa in Taiwan

Taxon	Common name	Taiwan Red List Category, 2017	Global Red List Category, 2024
Hypsugo pulveratus (Peters, 1871)	Chinese pipistrelle	DD	LC

4. Globally Threatened terrestrial mammal species of Taiwan

Of the 79 terrestrial mammal species assessed in this assessment, 6 are listed as globally threatened mammals on the IUCN Red List (IUCN 2024). The present assessment indicated one species as RE in Taiwan, three as Nationally Threatened (Critically Endangered, Endangered, and Vulnerable), and two as NNT.

Taxon	Common name	Taiwan Red List Category, 2017	Global Red List Category and Criteria, 2024
Manis pentadactyla pentadactyla Linnaeus, 1758	Formosan short-tailed pangolin	NVU C2b	CR A3d+4d
Neofelis nebulosa (Griffith, 1821)	Indochinese clouded leopard	RE	VU A2cd+4cd
Ursus thibetanus formosanus Swinhoe, 1864	Formosan black bear	NEN C2a(i)	VU A2cd
Pteropus dasymallus formosus Sclater, 1873	Formosan flying fox	NCR C2a(i)b	VU A4cd; B2ab(iii,iv,v); C1
Myotis pilosus (Peters, 1869)	Rickett's big-footed myotis	NNT C2a(i)	VU A4c
Rusa unicolor swinhoii (Sclater, 1862)	Formosan sambar	NNT B1c(iv)	VU A2cd+3cd+4cd

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