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2017臺灣陸域爬行類 紅皮書名錄

The Red Lists of
Terrestrial Reptiles of Taiwan, 2017



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封面照片 /

Cuora flavomarginata
食蛇龜
Yellow-margined Box Turtle
B1b(iii,iv)c(iv)
林德恩 / 攝

目錄照片 /

Plestiodon chinensis leucostictus
中國石龍子白斑亞種
White-spotted Chinese Skinks
DD
林德恩 / 攝



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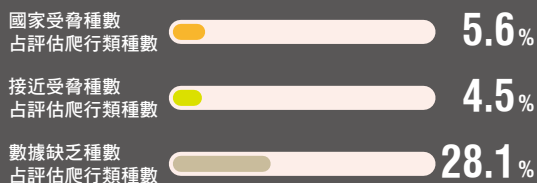
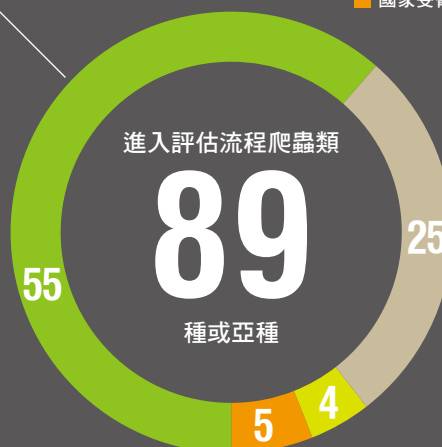
摘要

本報告為臺灣第一次依據國際自然保育聯盟 (International Union for Conservation of Nature) 建議類別與標準對所有原生陸域爬行類進行國家陸域爬行類紅皮書名錄評估。納入評估候選爬行類共 94 種，其中 5 種外來種不適用 (Not Applicable) 區域評估篩選門檻，89 種進入評估流程。結果臺灣有 5 種或亞種國家受脅 (Nationally Threatened) 爬行類，其中屬國家極危 (Nationally Critical) 類別有 1 種，屬國家瀕危 (Nationally Endangered) 類別有 2 種，屬國家易危 (Nationally Vulnerable) 類別有 2 種，有 4 種或亞種歸於國家接近受脅 (Nationally Near-threatened) 類別，另有 25 種或亞種屬於數據缺乏 (Data Deficient) 類別，其餘 55 種屬暫無危機 (Least Concern) 類別。國家受脅、接近受脅及數據缺乏爬行類種數分別占評估爬行類種數的 5.6%、4.5% 及 28.1%。另出現於臺灣的全球受脅爬行類有 7 種，其中 3 種屬國家受脅，1 種屬國家接近受脅，3 種列於暫無危機。

不適用區域評估
篩選門檻 5



■ 暫無危機類別
■ 數據缺乏類別
■ 接近受脅類別
■ 國家受脅類別





1. 前言

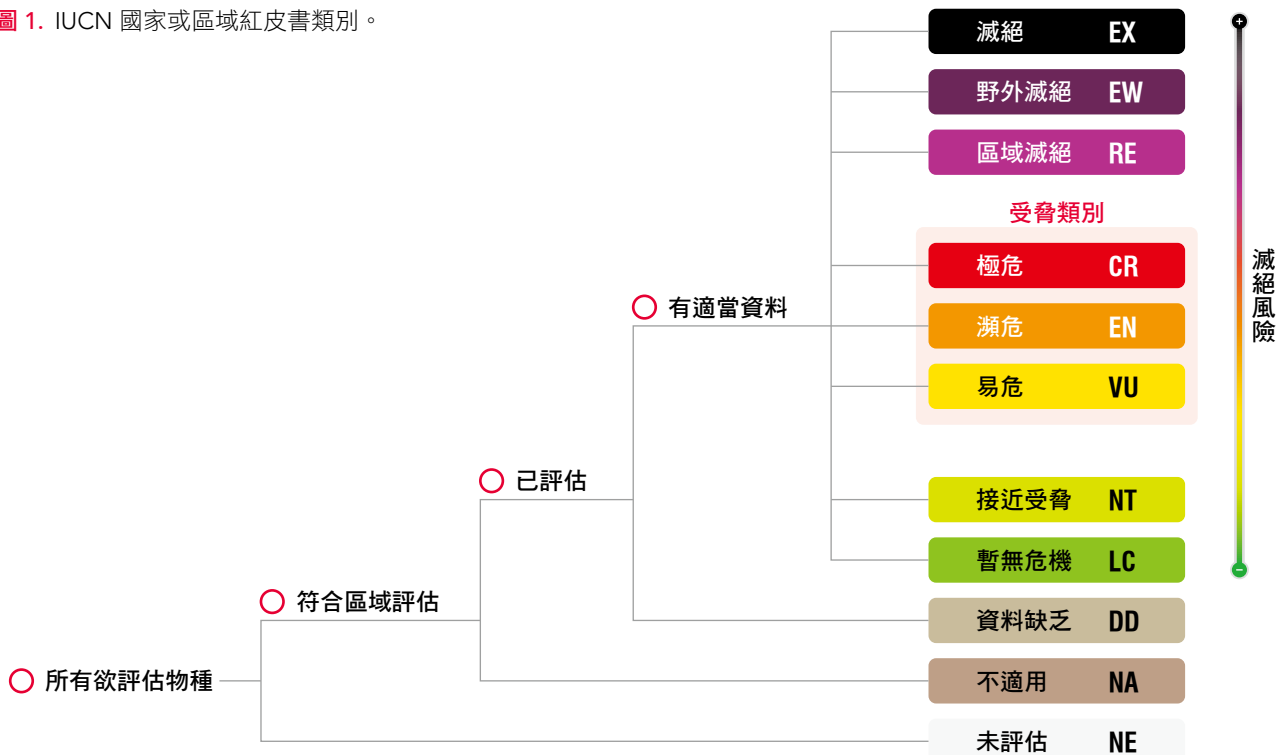
物種或分類群 (taxon) 面臨滅絕的風險是保育經營管理的重要課題。依據受威脅程度所列出的清單是復育計畫、研究、監測與保育措施排列優先順序的參考依據，同時也是爭取社會支持棲地保護及輔助資源分配決策的重要工具 (Townsend et al. 2007)。

由國際自然保育聯盟 (International Union for Conservation of Nature, IUCN) 物種存續委員會 (Species Survival Commission) 負責的 IUCN 紅皮書名錄 (IUCN Red List of Threatened Species)，自 1964 年開始發布以來，已逐步成為評估全球物種保育狀況與變化趨勢最重要的參考依據 (Rodrigues et al.

2006；IUCN 2016)，另其類別 (圖 1) 及評估標準 (criteria)，乃至後續發布的 IUCN 紅皮書名錄地區及國家級評估標準應用指南，亦成為許多國家評估其國境內受脅物種名錄的首要參考依據 (Townsend et al. 2007；IUCN 2012a)。藉此標準化的評估方法，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)。


如果一個國家或地區稱其國家或區域紅皮書的產生是依據 IUCN 系統，那麼就必須無偏差地根據 IUCN 紅皮書類別及標準 (IUCN Red List Categories and Criteria) 進行評估 (IUCN 2012b)。而所謂區域 (region) 指的是地球範圍

圖 1. IUCN 國家或區域紅皮書類別。



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 2012a)。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，或如先前曾經分布，但已局部滅絕的區域現象 (IUCN 2012a)。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 2012b)。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調整建議 (IUCN 2012a)。

臺灣現有 89 種原生陸域爬行類當中，有 36 種列於 IUCN 紅皮書 (IUCN 2016) 評估名單，所占比例僅四成；然而，無論臺灣、東亞乃至於全球的生物多樣性變化劇烈，亟需建立及更新臺灣所有爬行類的受脅狀態。本報告主要蒐集臺灣所有原生陸域爬行類的分布範圍，並配合推估可能的族群趨勢、數量與受脅原因等資訊，依據 IUCN 類別與標準評估各爬行類的最新受脅狀態。

 *Japalura swinhonis*
斯文豪氏攀蜥 Taiwan Japalure
LC
林德恩 / 攝





■ *Hypsiglossus plumbeus*
鉛色水蛇 Boie's Mud Snake
NVU B1b(iii,iv)c(iii)
陳元龍 / 攝

2. 評估流程

本報告臺灣各陸域爬行類種或亞種受脅狀態的評估流程與方法簡述如下：

2.1 界定納入評估之分類群

以 2016 年 The Reptile Database (Uetz et al. 2016) 為基礎，參酌「臺灣兩棲爬行類圖鑑」(向等 2009) 及「蛇類大驚奇：55 個驚奇主題 & 55 種臺灣蛇類圖鑑」(杜 2004)，將分布於臺灣之 94 種陸域爬行類列入候選評估。其次依據 IUCN 紅皮書名錄地區及國家級評估標準應用指南 (IUCN 2012a) 的建議流程，排除外來物種，包括紅耳泥龜 *Trachemys scripta elegans*、多線真稜蜥 *Eutropis multifasciata*、沙氏變色蜥 *Anolis sagrei*、綠鬣蜥 *Iguana iguana* 及中國水龍 *Physignathus cocincinus* 等 5 種。IUCN Red List 全球受脅物種，包含極危

(Critically Endangered, CR)、瀕危 (Endangered, EN) 及易危 (Vulnerable, VU) 類別，同樣依據表 1 標準進行篩選。94 種中，有 5 種不適用 (Not Applicable) 於區域評估篩選門檻，89 種進入評估流程。

評估的分類群原則為「種」，但國土範圍內同時有特有亞種及其他亞種出現時則分別評估。另繁殖與訪問 (遷徙且無繁殖) 族群可區分時，亦依據 IUCN 紅皮書名錄地區及國家級評估標準應用指南 (IUCN 2012a) 之建議分別評估。若同時有外來種與原生種族群分布於國土範圍內，僅針對原生種族群進行評估。

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 2012b) 製作每一受評估分類群的資料表。資料表各欄位就所需資訊，盡量蒐集既有學術報告、研究報告、資料庫及相關專家意見等，除填列數據同時載明資料來源並進行必要說明。

本報告評估的空間範圍為中華民國實質控制的陸、海領域，包括臺灣本島及周遭島嶼，如澎湖、蘭嶼及綠島，及鄰近中國大陸的金門及馬祖。

每一受評分類群均依照 IUCN 紅皮書名錄類別與標準使用指南：12 版進行評估 (IUCN Standards and Petitions Subcommittee 2016)。評估流程係由包括：A. 快速族群下降 (Rapid population reduction)、B. 分布侷限、碎裂化，同時存在族群下降或嚴重波動 (Small range and fragmented, declining, or extreme fluctuations)、C. 小族群且持續下降 (Small population and declining)、D. 非常小的族

群 (Very small population)，以及 E. 量化分析 (Quantitative analysis) 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)。每個分類單元都會依所有標準進行評估，只要符合任一條標準者，即列入受脅物種的類別，並在文件報告中列出符合類別的標準及對應之次要標準。至於若無法符合極危、瀕危及易危的類別，但已很接近或未來可能達到易危類別時，則列入接近受脅 (Near-threatened, NT) 類別。某一物種經過評估後，無法符合國家極危 (Nationally Critically Endangered, NCR)、國家瀕危 (Nationally Endangered, NEN) 及國家易危 (Nationally Vulnerable, NVU) 的類別，但已很接近或未來可能達到國家易危類別時，可列入國家接近受脅 (Nationally Near-threatened, NNT)。由於 IUCN 紅皮書名錄類別與標準並無明確的接近受脅 (NT) 標準定義，本報告根據前述原則設定本報告國家接近受脅的標準 (表 1)。

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 Subcommittee (2016)

物種紅皮書受脅類別判定標準	極危 (CR)	瀕危 (EN)	易危 (VU)	接近受脅 (NT)
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A. 族群量下降 (時間區間為 10 年或 3 個世代，以較長者為優先)

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：
- 直接觀察。[A3 除外]
 - 適合該分類群的物種豐度指數。
 - 分布範圍、占有面積或棲地品質減少或下降。
 - 實際或潛在的開發破壞。
 - 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 所列舉任何方式所預估、推測或懷疑物種族群未來近期內會降低 (時間最長為 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。



物種紅皮書受脅類別判定標準	極危 (CR)	瀕危 (EN)	易危 (VU)	接近受脅 (NT)
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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 平方公里	< 5,000 平方公里	< 20,000 平方公里	< 20,000 平方公里
B2. 占有面積 (AOO)	< 10 平方公里	< 500 平方公里	< 2,000 平方公里	< 2,000 平方公里

且族群需遭遇以下至少兩種情況 (至少一種狀況適用於 NT 等級)

(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
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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 年或下一代 下降 25%	5 年或下二代 下降 20%	10 年或下三代 下降 10%	10 年或下三代 下降 10%
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C2. 經由觀察、推估或預估，能繁殖之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佔比例	90%	95%	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
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與／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等級 (此準則只用於評估易危及接近受脅等級)。	NA	NA	D2. 占有面積 < 20km ² 或分布地點 ≤ 5	D2. 占有面積 < 50km ² 或分布地點 ≤ 10
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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%	20 年內或五個世代內 在野外絕種之機率 超過 20%	100 年內在野外絕種之 機率超過 10%	100 年內在野外絕種之 機率超過 5%
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3. 臺灣陸域爬行類評估結果

評估結果有 1 種為國家極度瀕危，2 種為國家瀕危，2 種為國家易危，合計有 5 種為國家受脅，另有 4 種或亞種屬國家接近受脅及 25 種或亞種資料缺乏 (Data Deficient)，分別占評估爬行類種數 89 種的 5.6%、4.5% 及 28.1%，

其餘 55 種屬暫無危機 (Least Concern) 類別。各分類群的學名及英文俗名原則依據 The Reptile Database (Uetz et al. 2016)。本報告所有爬行類評估資料及結果請聯繫通訊作者索取。

3.1 國家極度瀕危 (NCR) 類別陸域爬行類名錄 (1 種)

分類群	評估標準	全球紅皮書類別	臺灣占全球數量百分比
<i>Mauremys reevesii</i> (Gray, 1831) 金龜	B1ab(iii,iv)	EN	<1

3.2 國家瀕危 (NEN) 類別陸域爬行類名錄 (2 種)

分類群	評估標準	全球紅皮書類別	臺灣占全球數量百分比
<i>Hebius miyajimae</i> (Maki, 1931) 金絲蛇	B1ab(iii,iv)	VU	100
<i>Myrrophis chinensis</i> (GRAY, 1842) 唐水蛇	B1ab(iii,iv)c(iii)	LC	<1

3.3 國家易危 (NVU) 類別陸域爬行類名錄 (2 種)

分類群	評估標準	全球紅皮書類別	臺灣占全球數量百分比
<i>Cuora flavomarginata</i> (Gray, 1863) 食蛇龜	B1b(iii,iv)c(iv)	EN	20
<i>Hypsiscopus plumbea</i> (Boie, 1827) 鉛色水蛇	B1b(iii,iv)c(iii)	LC	<1



3.4 國家接近受脅 (NNT) 類別陸域爬行類名錄(4 種 / 亞種)

分類群	評估標準	全球紅皮書類別	臺灣占全球數量百分比
<i>Mauremys mutica mutica</i> Cantor, 1842 柴棺龜	B1ab(iii,iv)	EN	20
<i>Japalura makii</i> Ota, 1989 牧氏攀蜥	B1a	NE	100
<i>Emoia atrocostata</i> (Lesson, 1830) 沿岸島蜥	B1ab(iii)	NE	<1
<i>Sinonatrix percarinata suriki</i> (Maki, 1931) 白腹遊蛇	B1ab(iii)	LC	100

3.5 數據缺乏 (DD) 類別陸域爬行類名錄(25 種 / 亞種)

分類群	評估標準	全球紅皮書類別	臺灣占全球數量百分比
<i>Dopasia harti</i> (Boulenger, 1899) 哈特氏蛇蜥	—	NE	<5
<i>Japalura luei</i> Ota, Chen & Shang, 1998 呂氏攀蜥	—	NE	100
<i>Gehyra mutilata</i> (Wiegmann, 1834) 截趾虎	—	NE	<1
<i>Gekko kikuchii</i> (Oshima, 1912) 菊池氏壁虎	—	DD	100
<i>Hemiphyllodactylus typus</i> Bleeker, 1860 半葉趾虎	—	NE	<1
<i>Lepidodactylus lugubris</i> (Duméril & Bibron, 1836) 鱗趾虎	—	NE	<1
<i>Lepidodactylus yami</i> Ota, 1987 雅美鱗趾虎	—	NE	100

3.5 數據缺乏 (DD) 類別陸域爬行類名錄(25 種 / 亞種)(續)

分類群	評估標準	全球紅皮書類別	臺灣占全球數量百分比
<i>Takydromus formosanus</i> Boulenger, 1894 臺灣草蜥	—	NE	100
<i>Takydromus lueyanus</i> Lue & Lin, 2008 鹿野草蜥	—	NE	100
<i>Takydromus sauteri</i> Van Denburgh, 1909 梭德氏草蜥	—	NE	100
<i>Takydromus septentrionalis</i> (Günther, 1864) 北草蜥	—	NE	<1
<i>Takydromus viridipunctatus</i> Lue & Lin, 2008 翠斑草蜥	—	NE	100
<i>Ateuchosaurus chinensis</i> Gray, 1845 中國光蜥	—	NE	<1
<i>Eutropis cumingi</i> (Brown & Alcalá, 1980) 庫氏真稜蜥	—	NE	<1
<i>Eutropis multicaudata borealis</i> (Brown & Alcalá, 1980) 多稜真稜蜥	—	NE	<1
<i>Plestiodon chinensis chinensis</i> (Gray, 1838) 中國石龍子指名亞種	—	NE	<1
<i>Plestiodon chinensis leucostictus</i> Hikida, 1988 中國石龍子白斑亞種	—	NE	100
<i>Gonyosoma frenatus</i> (Gray, 1853) 灰腹綠錦蛇	—	NE	<1
<i>Oligodon ornatus</i> Van Denburgh, 1909 赤腹松柏根	—	LC	<5
<i>Pareas atayal</i> You, Poyarkov & Lin, 2015 泰雅鈍頭蛇	—	NE	100
<i>Pareas formosensis</i> (Van Denburgh, 1909) 臺灣鈍頭蛇	—	LC	100



3.5 數據缺乏 (DD) 類別陸域爬行類名錄(25 種 / 亞種)(續)

分類群	評估標準	全球紅皮書類別	臺灣占全球 數量百分比
<i>Pareas komaii</i> (Maki, 1931) 駒井氏鈍頭蛇	—	NE	100
<i>Plagiopholis styani</i> (Boulenger, 1899) 福建頸斑蛇	—	LC	<1
<i>Sinonatrix annularis</i> (Hallowell, 1856) 赤腹遊蛇	—	NE	<1
<i>Python molurus</i> (Linnaeus, 1758) 緬甸蟒	—	NE	<1

Hebius miyajimae
 金絲蛇 Maki's Keelback
 NEN B1ab(iii,iv)
 陳元龍 / 攝



3.6 暫無危機 (LC) 類別陸域爬行類名錄(55 種 / 亞種)

分類群	評估標準	全球紅皮書類別	臺灣占全球數量百分比
<i>Mauremys sinensis</i> (Gray, 1834) 斑龜	—	EN	20
<i>Pelodiscus sinensis</i> (Wiegmann, 1835) 中華鱉	—	VU	<5
<i>Japalura brevipes</i> Gressitt, 1936 短肢攀蜥	—	NE	100
<i>Japalura polygonata xanthostoma</i> Ota, 1991 黃口攀蜥	—	NE	100
<i>Japalura swinhonis</i> Günther, 1864 斯文豪氏攀蜥	—	NE	100
<i>Gekko hokouensis</i> Pope, 1928 鉛山壁虎	—	LC	<5
<i>Hemidactylus bowringii</i> (Gray, 1845) 無疣蜥虎	—	NE	<5
<i>Hemidactylus frenatus</i> Duméril & Bibron, 1836 疣尾蜥虎	—	LC	<1
<i>Hemidactylus stejnegeri</i> Ota & Hikida, 1989 史丹吉氏蜥虎	—	NE	20
<i>Takydromus hsuehshanensis</i> Lin & Cheng, 1981 雪山草蜥	—	NE	100
<i>Takydromus kuehnei kuehnei</i> Van Denburgh, 1909 古氏草蜥	—	LC	<5
<i>Takydromus stejnegeri</i> Van Denburgh, 1912 蓬萊草蜥	—	NE	100
<i>Eutropis longicaudata</i> (Hallowell, 1857) 長尾真稜蜥	—	NE	<5
<i>Plestiodon chinensis formosensis</i> Van Denburgh, 1912 中國石龍子臺灣亞種	—	NE	100

**3.6 暫無危機 (LC) 類別陸域爬行類名錄(55 種 / 亞種)(續)**

分類群	評估標準	全球紅皮書類別	臺灣占全球 數量百分比
<i>Plestiodon elegans</i> (Boulenger, 1887) 麗紋石龍子	—	NE	<5
<i>Scincella formosensis</i> (Van Denburgh, 1912) 臺灣滑蜥	—	NE	100
<i>Sphenomorphus incognitus</i> (Thompson, 1912) 股鱗蜓蜥	—	NE	<5
<i>Sphenomorphus indicus</i> (Gray, 1853) 印度蜓蜥	—	NE	<5
<i>Sphenomorphus taiwanensis</i> Chen & Lue, 1987 臺灣蜓蜥	—	NE	100
<i>Indotyphlops braminus</i> (Daudin, 1803) 鉤盲蛇	—	NE	<1
<i>Achalinus formosanus formosanus</i> Boulenger, 1908 臺灣標蛇	—	LC	100
<i>Achalinus niger</i> Maki, 1931 標蛇	—	LC	100
<i>Amphiesma stolatum</i> (Linnaeus, 1758) 花浪蛇	—	NE	<5
<i>Boiga kraepelini</i> Stejneger, 1902 大頭蛇	—	LC	<5
<i>Calamaria pavementata pavementata</i> Duméril, Bibron & Duméril, 1854 鐵線蛇	—	LC	<5
<i>Cyclophiops major</i> (Günther, 1858) 青蛇	—	LC	<5
<i>Elaphe carinata</i> (Günther, 1864) 王錦蛇	—	NE	<5
<i>Euprepiophis mandarinus</i> (Cantor, 1842) 玉斑錦蛇	—	LC	<5

3.6 暫無危機 (LC) 類別陸域爬行類名錄(55 種 / 亞種)(續)

分類群	評估標準	全球紅皮書類別	臺灣占全球數量百分比
<i>Hebius sauteri</i> (Boulenger, 1909) 梭德氏遊蛇	—	LC	<5
<i>Lycodon rufozonatus rufozonatus</i> (Cantor, 1842) 紅斑蛇	—	NE	<1
<i>Lycodon ruhstrati ruhstrati</i> (Fischer, 1886) 白梅花蛇	—	LC	<5
<i>Macropisthodon rudis rudis</i> Boulenger, 1906 擬龜殼花	—	LC	<5
<i>Oligodon formosanus</i> (Günther, 1872) 赤背松柏根	—	LC	<5
<i>Oreocryptophis porphyraceus kawakamii</i> (Oshima, 1911) 紅竹蛇	—	NE	<1
<i>Orthriophis taeniurus friesi</i> (Werner, 1927) 臺灣黑眉錦蛇	—	NE	100
<i>Psammodynastes pulverulentus</i> (Boie, 1827) 茶斑蛇	—	NE	<1
<i>Pseudoxenodon stejnegeri stejnegeri</i> Barbour, 1908 史丹吉氏斜鱗蛇	—	LC	100
<i>Ptyas dhumnades</i> (Cantor, 1842) 過山刀	—	NE	<5
<i>Ptyas korros</i> (Schlegel, 1837) 細紋南蛇	—	NE	<5
<i>Ptyas mucosa</i> (Linnaeus, 1758) 南蛇	—	NE	<1
<i>Rhabdophis swinhonis</i> (Günther, 1868) 斯文豪氏頸槽蛇	—	LC	100
<i>Rhabdophis tigrinus formosanus</i> (Maki 1931) 虎斑頸槽蛇臺灣亞種	—	NE	100



3.6 暫無危機 (LC) 類別陸域爬行類名錄(55 種 / 亞種)(續)

分類群	評估標準	全球紅皮書類別	臺灣占全球數量百分比
<i>Sibynophis chinensis chinensis</i> (Günther, 1889) 黑頭蛇	—	LC	<5
<i>Xenochrophis piscator</i> (Schneider, 1799) 草花蛇	—	NE	<1
<i>Bungarus multicinctus multicinctus</i> Blyth, 1861 雨傘節	—	LC	<5
<i>Naja atra</i> Cantor, 1842 眼鏡蛇	—	VU	<5
<i>Sinomicrurus hatori</i> (Takahashi, 1930) 羽鳥氏帶紋赤蛇	—	NE	100
<i>Sinomicrurus macclellandi swinhoei</i> Van Denburgh, 1912 環紋赤蛇	—	NE	100
<i>Sinomicrurus sauteri</i> (Steindachner, 1913) 梭德氏帶紋赤蛇	—	LC	100
<i>Daboia siamensis</i> (Smith, 1917) 鎖蛇	—	LC	<5
<i>Deinagkistrodon acutus</i> (Günther, 1888) 百步蛇	—	NE	<5
<i>Ovophis makazayazaya</i> (Takahashi, 1922) 瑪家山龜殼花	—	LC	<5
<i>Protobothrops mucrosquamatus</i> (Cantor, 1839) 龜殼花	—	LC	<5
<i>Trimeresurus gracilis</i> Oshima, 1920 菊池氏龜殼花	—	LC	100
<i>Trimeresurus stejnegeri stejnegeri</i> Schmidt, 1925 赤尾青竹絲	—	NE	<5

4. 臺灣全球受脅陸域爬行類(7種 / 亞種)

本報告納入評估候選之 89 種陸域爬行類中有 7 種為全球受脅陸域爬行類，其中 3 種屬國家受脅，1 種屬國家接近受脅，其餘 3 種在臺灣列於暫無危機 (LC)。

分類群	國家紅皮書類別	全球紅皮書類別	臺灣占全球數量百分比
<i>Cuora flavomarginata</i> (Gray, 1863) 食蛇龜	VU	EN	20
<i>Mauremys mutica mutica</i> Cantor, 1842 柴棺龜	NT	EN	20
<i>Mauremys reevesii</i> (Gray, 1831) 金龜	CR	EN	<1
<i>Mauremys sinensis</i> (Gray, 1834) 斑龜	LC	EN	<5
<i>Pelodiscus sinensis</i> (Wiegmann, 1835) 中華鱉	LC	VU	<5
<i>Hebius miyajimae</i> (Maki, 1931) 金絲蛇	EN	VU	100
<i>Naja atra</i> Cantor, 1842 眼鏡蛇	LC	VU	<5

Mauremys sinensis
 斑龜 Chinese Striped-necked Turtle
 LC
 陳元龍 / 攝





5. 謝誌

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■ *Mauremys reevesii*
金龜 Reeves' Turtle
NCR Blab(iii,iv)
陳元龍 / 攝



The Red List of Terrestrial Reptiles of Taiwan, 2017

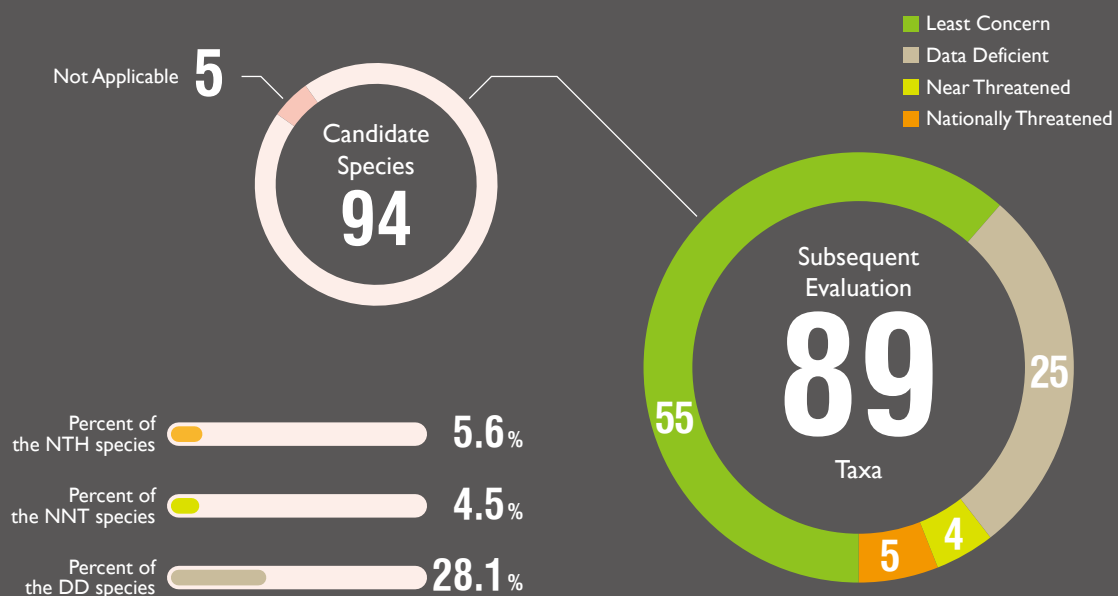
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Abstract

This report is the first to adopt the categories and criteria suggested by the International Union for Conservation of Nature (IUCN) to evaluate terrestrial reptile species listed in the Red List of Reptiles of Taiwan. The 94 reptile species on the red list were adopted as candidates for evaluation. Five of the species were excluded because they were listed as "not applicable" for region-based evaluations. Therefore, a total of 89 species were selected for evaluation. The outcomes highlighted five species or subspecies as nationally threatened (NTH), one in the nationally critically endangered (NCR) category, two in the nationally endangered (NEN) category, and two in the nationally vulnerable (NVU) category. Four species or subspecies were placed in the nationally near-threatened (NNT) category, 25 species or subspecies were placed in the data deficient (DD) category, and 55 species or subspecies were placed in the least concern (LC) category. The species in the NTH, NNT, and DD categories comprised 5.6%, 4.5%, and 28.1% of all the species evaluated. Seven species were discovered to be globally threatened: three in the NTH category, 1 in the NNT category, and 3 in the LC category.





1. Introduction

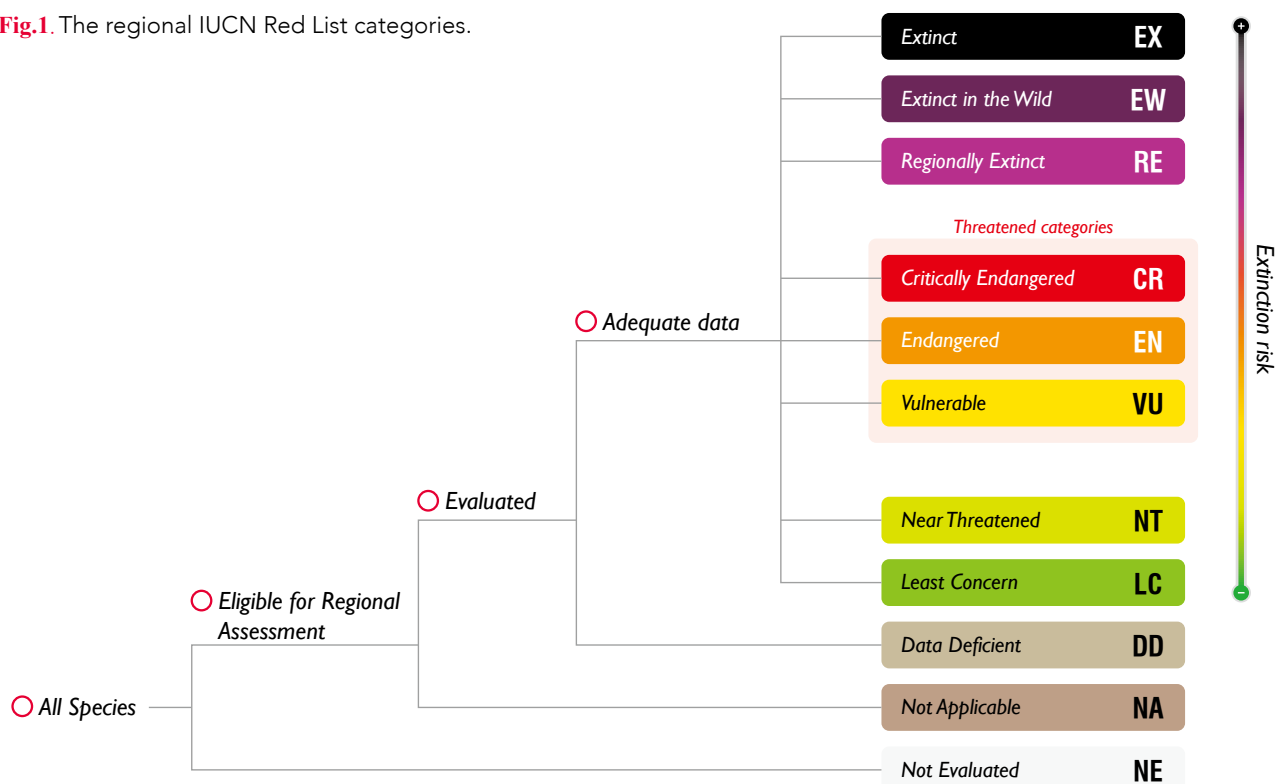
Taxa at risk of extinction are the key focus of conservation management. Lists compiled based on threat level are crucial references for the prioritization of restoration projects, research, monitoring, and conservation measures. These lists are also essential tools to garner societal support for habitat conservation and to formulate decisions concerning the allocation of supplementary resources (Townsend *et al.* 2007).

The Species Survival Commission of the International Union for Conservation of Nature (IUCN) is responsible for compiling the IUCN Red List of Threatened Species. Since its first publication in 1964, the list has gradually become a key reference for assessing the conditions and trends of threatened species on a global scale (Rodrigues *et al.* 2006; IUCN 2016). Moreover, the

categories (Fig 1), assessment criteria as well as the regional guidelines published by the IUCN have been adopted by many countries as the primary basis for listing threatened species in their own territories (Townsend *et al.* 2007; IUCN 2012a). Standardized evaluation methods not only help countries form and enforce laws but also enhance the comprehensiveness of the assessment of species on the red list (Rodrigues *et al.* 2006).

Countries that establish national and regional red lists based on the IUCN system inevitably conduct relevant evaluations based on the IUCN Red List Categories and Criteria (IUCN 2012b). A region is any clearly defined space on the planet, such as a stretch of land, a country, or a province (IUCN 2012a). When the status assessment is redirected from the global scale to

Fig.1. The regional IUCN Red List categories.



a local level, issues such as native or alien species, breeding or nonbreeding populations, and locally extinct species naturally emerge (IUCN 2012a). This report adopts the evaluation criteria and categories listed in the IUCN Red List Categories and Criteria:Version 3.1 (IUCN 2012b). However, when these criteria are applied to species that are not found only in the defined spatial area, the evaluation procedures and standard thresholds may become inappropriate and require adjustment. Adjustment suggestions are proposed in the Guidelines for Application of IUCN Red List Criteria at Regional and National Levels (IUCN 2012a).

Among the 89 terrestrial reptiles native to Taiwan, 36 appear on the IUCN Red List of Threatened Species (IUCN 2016), which is approximately 40% of the native species. However, the diversity of species in Taiwan, East Asia, and the world is currently undergoing a drastic change. Therefore, the threat to Taiwanese reptile species should be assessed and updated. This study determined the distribution of native terrestrial reptile species in Taiwan, examined potential population trends and sizes, identified why these species were threatened, and adopted IUCN categories and criteria to evaluate the latest threat conditions of various reptile species.

■ *Deinagkistrodon acutus*
百步蛇 Chinese Moccasin
LC
陳元龍 / 攝





2. Assessment process

The method and procedures used to evaluate the threat levels of various Taiwanese terrestrial reptile species and subspecies are described herein.:

2.1 Defining the Taxa to Be Included in the Evaluation

Based on the 2016 Reptile Database (Uetz *et al.*, 2016), *Colored Illustrations of Amphibians and Reptiles of Taiwan* (Hsiang *et al.*, 2009), and *Big Surprises Concerning Snakes: Fifty-Five Surprising Themes and Fifty-Five Kinds of Snakes in Taiwan* (Tu 2004), 94 terrestrial reptiles from all over Taiwan were adopted as the candidates for evaluation. The evaluation procedures suggested in the *Guidelines for Application of IUCN Red List Criteria at Regional and National Levels* (IUCN 2012a) were used to exclude invasive species, including the *Trachemys scripta elegans*, *Eutropis multifasciata*, *Anolis sagrei*, *Iguana iguana*, and *Physignathus cocincinus*. The IUCN characterizes the global threat to its red list species as critically endangered (CR), endangered (EN), or vulnerable

(VU) (Table 1). Among the 94 species, 5 were listed as “not applicable” for region-based evaluations. Therefore, 89 species were selected for evaluation.

“Species” was adopted as the unit of classification. However, endemic subspecies were evaluated independently. Moreover, breeding and visiting (migration without mating) populations that were clearly distinguishable were evaluated separately, as suggested in the *Guidelines for Application of IUCN Red List Criteria at Regional and National Levels* (IUCN 2012a). Only the native population were evaluated when both native and invasive populations were located in the same region.

■ *Emoia atrocostata*
沿岸島蜥 Mangrove Skink
NNT
范孟雯 / 攝



2.2 Data collection and preliminary evaluation

After the species for evaluation were confirmed, a data table was created for each targeted species according to the IUCN criteria (IUCN 2012b). Relevant data from academic papers, research reports, databases, and expert opinions were entered into the datasheet and necessary explanations were recorded.

The spatial scope evaluated in this report was the terrestrial area where the Republic of China exerts substantial dominance, namely Taiwan Island and its outlying islands and island groups such as Penghu, Orchid Island, Green Island, Kinmen, and Matsu; the latter two islet groups are geographically proximate to China.

Each taxon was evaluated in accordance with the Guidelines for using the IUCN Red List Categories and Criteria Version 12 (IUCN Standards and Petitions Subcommittee 2016). The evaluation items were compiled into a logic tree comprising five major criteria (A. Rapid population reduction; B.

Small range and fragmented, declining, or extreme fluctuations; C. Small population and declining; D. Very small population; and E. Quantitative analysis) and numerous sub-criteria and qualifiers (Table 1). Each taxon was analyzed against each criterion and listed as endangered if they satisfied one or more of the criteria. The taxa were then listed under the appropriate categories, and corresponding criteria and sub-criteria were listed under each taxon. Taxa that did not belong to the CR, EN, or VU categories but approximated or may potentially reach the VU level were listed in the near-threatened (NT) category. Taxa that did not belong to the NCR, NEN, or NVU (nationally CR, EN, or VU) categories but approximated or may potentially reach the NVU level were listed in the nationally near-threatened (NNT) category. Because the IUCN Red List Categories and Criteria does not provide a clear standard for NNT, the aforementioned criteria established in this report were used to create the NNT criteria (Table 1).

Table 1. A simplified overview of Red List criteria adopted in this study. Modified from IUCN Standards and Petitions Subcommittee (2016)

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%
<p>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:</p> <p>(a) direct observation. [except A3]</p> <p>(b) an index of abundance appropriate to the taxon.</p> <p>(c) a decline in area of occupancy (AOO), extent of occurrence (EOO) and/or habitat quality.</p> <p>(d) actual or potential levels of exploitation.</p> <p>(e) effects of introduced taxa, hybridization, pathogens, pollutants, competitors or parasites.</p> <p>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.</p> <p>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]</p> <p>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 future), and where the causes of reduction may not have ceased OR may not be understood OR may not be reversible.</p>				



Use any of the criteria A-E	Critically Endangered	Endangered	Vulnerable	Near Threatened
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B. Geographic range in the form of either B1 (extent of occurrence) AND/OR B2 (area of occupancy)

B1. Extent of occurrence (EOO)	< 100 km ²	< 5,000 km ²	< 20,000 km ²	< 20,000 km ²
B2. Area of occupancy (AOO)	< 10 km ²	< 500 km ²	< 2,000 km ²	< 2,000 km ²

AND at least 2 of the following 3 conditions (at least 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
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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	20% in 5 years or 2 generations	10% in 10 years or 3 generations	10% in 10 years or 3 generations
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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	≤ 1000	≤ 1000
a(ii) % of mature individuals in one subpopulation =	90%	95%	100%	100%

(b) Extreme fluctuations in the number of mature individuals

D. Very small or restricted population Either:

D. Number of mature individuals	< 50	< 250	D1. < 1000	D1. < 2500
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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.	NA	NA	D2. AOO < 20 km ² or number of locations ≤ 5	D2. AOO < 50 km ² or number of locations ≤ 10
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E. Quantitative Analysis

Indicating the probability of extinction in the wild to be:	≥ 50% in 10 years or 3 generations (100 year max.)	≥ 20% in 20 years or 5 generations (100 year max.)	≥ 10% in 100 years	≥ 5% in 100 years
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3. Assessment results of terrestrial reptile species of Taiwan

The outcomes highlighted five species or subspecies as nationally threatened: one in the NCR category, two in the NEN category, and two in the NVU category. Four species or subspecies were placed in the NNT category and 25 species or subspecies were placed in the DD category. Thus, of the 89 species evaluated, the NTH, NNT, and DD

categories comprised 5.6%, 4.5% and 28.1%. The remaining 55 species or subspecies were in the LC category. The scientific and common names of the taxa were obtained from the Reptile Database (Uetz *et al.*, 2016). The evaluation data and outcomes summarized in this report are available from the corresponding author.

3.1 Nationally Critically Endangered Terrestrial Reptile Taxa in Taiwan (One Specie)

Taxon name	Criteria	Global Red List Category	Proportion (%) of Global Population
<i>Mauremys reevesii</i> (Gray, 1831) Reeves' Turtle	B1ab(iii,iv)	EN	<1

3.2 Nationally Endangered Terrestrial Reptile Taxa in Taiwan (Two Species)

Taxon name	Criteria	Global Red List Category	Proportion (%) of Global Population
<i>Hebius miyajimae</i> (Maki, 1931) Maki's Keelback	B1ab(iii,iv)	VU	100
<i>Myrrophis chinensis</i> (GRAY, 1842) Chinese Mud Snake	B1ab(iii,iv)c(iii)	LC	<1

3.3 Nationally Vulnerable Terrestrial Reptile Taxa in Taiwan (Two Species)

Taxon name	Criteria	Global Red List Category	Proportion (%) of Global Population
<i>Cuora flavomarginata</i> (Gray, 1863) Yellow-margined Box Turtle	B1b(iii,iv)c(iv)	EN	20
<i>Hypsiscopus plumbea</i> (Boie, 1827) Boie's Mud Snake	B1b(iii,iv)c(iii)	LC	<1



3.4 Nationally Near-Threatened Terrestrial Reptile Taxa in Taiwan (Four Species/Subspecies)

Taxon name	Criteria	Global Red List Category	Proportion (%) of Global Population
<i>Mauremys mutica mutica</i> Cantor, 1842 Yellow Pond Turtle	B1ab(iii,iv)	EN	20
<i>Japalura makii</i> Ota, 1989 Ota's Japalure	B1a	NE	100
<i>Emoia atrocostata</i> (Lesson, 1830) Mangrove Skink	B1ab(iii)	NE	<1
<i>Sinonatrix percarinata suriki</i> (Maki 1931) Eastern Water Snake	B1ab(iii)	LC	100

3.5 Taiwan Terrestrial Reptile Taxa in the Data Deficient Category (25 Species/Subspecies)

Taxon name	Criteria	Global Red List Category	Proportion (%) of Global Population
<i>Dopasia harti</i> (Boulenger, 1899) Hart's Glass Lizard	—	NE	<5
<i>Japalura luei</i> Ota, Chen & Shang, 1998 Lue's Japalura	—	NE	100
<i>Gehyra mutilata</i> (Wiegmann, 1834) Four-clawed Gecko	—	NE	<1
<i>Gekko kikuchii</i> (Oshima, 1912) Botel Gecko	—	DD	100
<i>Hemiphyllodactylus typus</i> Bleeker, 1860 Tree Gecko	—	NE	<1
<i>Lepidodactylus lugubris</i> (Duméril & Bibron, 1836) Mourning Gecko	—	NE	<1
<i>Lepidodactylus yami</i> Ota, 1987 Lanyu Scaly-toed Gecko	—	NE	100

3.5 Taiwan Terrestrial Reptile Taxa in the Data Deficient Category (25 Species/Subspecies) (cont.)

Taxon name	Criteria	Global Red List Category	Proportion (%) of Global Population
<i>Takydromus formosanus</i> Boulenger, 1894 Formosa Grass Lizard	—	NE	100
<i>Takydromus luyeanus</i> Lue & Lin, 2008 Lueyea Grass Lizard	—	NE	100
<i>Takydromus sauteri</i> Van Denburgh, 1909 Koshun Grass Lizard	—	NE	100
<i>Takydromus septentrionalis</i> (Günther, 1864) China Grass Lizard	—	NE	<1
<i>Takydromus viridipunctatus</i> Lue & Lin, 2008 Grass Lizard	—	NE	100
<i>Ateuchosaurus chinensis</i> Gray, 1845 Chinese Short-limbed skink	—	NE	<1
<i>Eutropis cumingi</i> (Brown & Alcala, 1980) Cuming's Mabuya	—	NE	<1
<i>Eutropis multicaudata borealis</i> (Brown & Alcala, 1980) Multi-keeled Mabuya	—	NE	<1
<i>Plestiodon chinensis chinensis</i> (Gray, 1838) Chinese Blue-tailed Skink	—	NE	<1
<i>Plestiodon chinensis leucostictus</i> Hikida, 1988 White-spotted Chinese Skink	—	NE	100
<i>Gonyosoma frenatus</i> (Gray, 1853) Gray-bellied Green Rat Snake	—	NE	<1
<i>Oligodon ornatus</i> Van Denburgh, 1909 Ornate Kukri Snake	—	LC	<5
<i>Pareas atayal</i> You, Poyarkov & Lin, 2015 Atayal Slug-eating Snake	—	NE	100



3.5 Taiwan Terrestrial Reptile Taxa in the Data Deficient Category (25 Species/Subspecies) (cont.)

Taxon name	Criteria	Global Red List Category	Proportion (%) of Global Population
<i>Pareas formosensis</i> (Van Denburgh, 1909) Formosa Slug Snake	—	LC	100
<i>Pareas komaii</i> (Maki, 1931) Komai's Slug Snake	—	NE	100
<i>Plagiopholis styani</i> (Boulenger, 1899) Chinese Mountain Snake	—	LC	<1
<i>Sinonatrix annularis</i> (Hallowell, 1856) Ringed Water Snake	—	NE	<1
<i>Python molurus</i> (Linnaeus, 1758) Indian Rock Python	—	NE	<1

3.6 Taiwan Terrestrial Reptile Taxa in the Category of Least Concern (55 Species/Subspecies)

Taxon name	Criteria	Global Red List Category	Proportion (%) of Global Population
<i>Mauremys sinensis</i> (Gray, 1834) Chinese Striped-necked Turtle	—	EN	20
<i>Pelodiscus sinensis</i> (Wiegmann, 1835) Chinese Softshelled Turtle	—	VU	<5
<i>Japalura brevipes</i> Gressitt, 1936 Short-legged Japalure	—	NE	100
<i>Japalura polygonata xanthostoma</i> Ota, 1991 Ryukyu Japalure	—	NE	100
<i>Japalura swinhonis</i> Günther, 1864 Taiwan Japalure	—	NE	100
<i>Gekko hokouensis</i> Pope, 1928 Kwangsi Gecko	—	LC	<5

3.6 Taiwan Terrestrial Reptile Taxa in the Category of Least Concern (55 Species/Subspecies) (cont.)

Taxon name	Criteria	Global Red List Category	Proportion (%) of Global Population
<i>Hemidactylus bowringii</i> (Gray, 1845) Sikkimese Dark-spotted Gecko	—	NE	<5
<i>Hemidactylus frenatus</i> Duméril & Bibron, 1836 Common House Gecko	—	LC	<1
<i>Hemidactylus stejnegeri</i> Ota & Hikida, 1989 Stejneger's Leaf-toed Gecko	—	NE	20
<i>Takydromus hsuehshanensis</i> Lin & Cheng, 1981 Hsuehshan's Grass Lizard	—	NE	100
<i>Takydromus kuehnei kuehnei</i> Van Denburgh, 1909 Kuhne's Grass Lizard	—	LC	<5
<i>Takydromus stejnegeri</i> Van Denburgh, 1912 Stejneger's Grass Lizard	—	NE	100
<i>Eutropis longicaudata</i> (Hallowell, 1857) Longtail Mabuya	—	NE	<5
<i>Plestiodon chinensis formosensis</i> Van Denburgh, 1912 Formosan Chinese Skink	—	NE	100
<i>Plestiodon elegans</i> (Boulenger, 1887) Shanghai Elegant Skink	—	NE	<5
<i>Scincella formosensis</i> (Van Denburgh, 1912) Van Denburgh's Ground Skink	—	NE	100
<i>Sphenomorphus incognitus</i> (Thompson, 1912) Taiwan Smooth Skink	—	NE	<5
<i>Sphenomorphus indicus</i> (Gray, 1853) Indian Forest Skink	—	NE	<5
<i>Sphenomorphus taiwanensis</i> Chen & Lue, 1987 Taiwan Alpine Skink	—	NE	100



3.6 Taiwan Terrestrial Reptile Taxa in the Category of Least Concern (55 Species/Subspecies) (cont.)

Taxon name	Criteria	Global Red List Category	Proportion (%) of Global Population
<i>Indotyphlops braminus</i> (Daudin, 1803) Brahminy Blindsnake	—	NE	<1
<i>Achalinus formosanus formosanus</i> Boulenger, 1908 Formosa Odd-scaled Snake	—	LC	100
<i>Achalinus niger</i> Maki, 1931 Black Odd-scaled Snake	—	LC	100
<i>Amphiesma stolatum</i> (Linnaeus, 1758) Buff Striped Keelback	—	NE	<5
<i>Boiga kraepelini</i> Stejneger, 1902 Square-headed Cat Snake	—	LC	<5
<i>Calamaria pavementata pavementata</i> Duméril, Bibron & Duméril, 1854 Brown Reed Snake	—	LC	<5
<i>Cyclophiops major</i> (Günther, 1858) Greater Green Snake	—	LC	<5
<i>Elaphe carinata</i> (Günther, 1864) Taiwan Stink Snake	—	NE	<5
<i>Euprepiophis mandarinus</i> (Cantor, 1842) Mandarin Ratsnake	—	LC	<5
<i>Hebius sauteri</i> (Boulenger, 1909) Sauter's Keelback	—	LC	<5
<i>Lycodon rufozonatus rufozonatus</i> (Cantor, 1842) Red-banded Snake	—	NE	<1
<i>Lycodon ruhstrati ruhstrati</i> (Fischer, 1886) Rushstrat's Wolf Snake	—	LC	<5
<i>Macropisthodon rudis rudis</i> Boulenger, 1906 False Habu	—	LC	<5

3.6 Taiwan Terrestrial Reptile Taxa in the Category of Least Concern (55 Species/Subspecies) (cont.)

Taxon name	Criteria	Global Red List Category	Proportion (%) of Global Population
<i>Oligodon formosanus</i> (Günther, 1872) Formosa Kukri Snake	—	LC	<5
<i>Oreocryptophis porphyraceus kawakamii</i> (Oshima, 1911) Red Bamboo Snake	—	NE	<1
<i>Orthriophis taeniurus friesi</i> (Werner, 1927) Taiwan Beauty Snake	—	NE	100
<i>Psammodynastes pulverulentus</i> (Boie, 1827) Common Mock Viper	—	NE	<1
<i>Pseudoxenodon stejnegeri stejnegeri</i> Barbour, 1908 Stejneger's Bamboo Snake	—	LC	100
<i>Ptyas dhumnades</i> (Cantor, 1842) Keel-backed Rat Snake	—	NE	<5
<i>Ptyas korros</i> (Schlegel, 1837) Indo-Chinese Rat Snake	—	NE	<5
<i>Ptyas mucosa</i> (Linnaeus, 1758) Oriental Ratsnake	—	NE	<1
<i>Rhabdophis swinhonis</i> (Günther, 1868) Taiwan Keelback	—	LC	100
<i>Rhabdophis tigrinus formosanus</i> (Maki 1931) Formosan Tiger Keelback	—	NE	100
<i>Sibynophis chinensis chinensis</i> (Günther, 1889) Chinese Many-tooth Snake	—	LC	<1
<i>Xenochrophis piscator</i> (Schneider, 1799) Asiatic Water Snakes	—	NE	<1
<i>Bungarus multicinctus multicinctus</i> Blyth, 1861 Many-banded Krait	—	LC	<5



3.6 Taiwan Terrestrial Reptile Taxa in the Category of Least Concern (55 Species/Subspecies) (cont.)

Taxon name	Criteria	Global Red List Category	Proportion (%) of Global Population
<i>Naja atra</i> Cantor, 1842 Chinese Cobra	—	VU	<5
<i>Sinomicrurus hatori</i> (Takahashi, 1930) Hatori's Chinese Coral Snake	—	NE	100
<i>Sinomicrurus macclellandi swinhoei</i> Van Denburgh, 1912 MacClelland's Coral Snake	—	NE	100
<i>Sinomicrurus sauteri</i> (Steindachner, 1913) Oriental Coral Snake	—	LC	100
<i>Daboia siamensis</i> (Smith, 1917) Eastern Russell's Viper	—	LC	<5
<i>Deinagkistrodon acutus</i> (Günther, 1888) Chinese Moccasin	—	NE	<5
<i>Ovophis makazayazaya</i> (Takahashi, 1922) Taiwan Mountain Pitviper	—	LC	<5
<i>Protobothrops mucrosquamatus</i> (Cantor, 1839) Brown Spotted Pitviper	—	LC	<5
<i>Trimeresurus gracilis</i> Oshima, 1920 Taiwan Pit Viper	—	LC	100
<i>Trimeresurus stejnegeri stejnegeri</i> Schmidt, 1925 Chinese Green Tree Viper	—	NE	<5

Japalura makii
牧氏攀蜥 Ota's Japalure
NNT
林德恩 / 攝



4. Globally Threatened Terrestrial Reptile Taxa of Taiwan (Seven Species/Subspecies)

A total of 89 terrestrial reptile species were adopted as candidates for evaluation, among which seven were globally threatened: three in the NTH category, one in the NNT category, and three in the LC category.

Taxon name	National Red List Category	Global Red List Category	Proportion (%) of Global Population
<i>Cuora flavomarginata</i> (Gray, 1863) Yellow-margined Box Turtle	VU	EN	20
<i>Mauremys mutica mutica</i> Cantor, 1842 Yellow pond Turtle	NT	EN	20
<i>Mauremys reevesii</i> (Gray, 1831) Reeves' Turtle	CR	EN	<1
<i>Mauremys sinensis</i> (Gray, 1834) Chinese Striped-necked Turtle	LC	EN	<5
<i>Pelodiscus sinensis</i> (Wiegmann, 1835) Chinese Softshelled Turtle	LC	VU	<5
<i>Hebius miyajimae</i> (Maki, 1931) Maki's Keelback	EN	VU	100
<i>Naja atra</i> Cantor, 1842 Chinese Cobra	LC	VU	<5

I *Takydromus sauteri*
梭德氏草蜥 ♀ Koshun Grass Lizard
DD
林德恩 / 攝





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封底照片 /

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2
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1 | *Japalura swinhonis*

斯文豪氏攀蜥 Taiwan Japalure

LC

林德恩 / 攝

2 | *Takydromus sauteri*

梭德氏草蜥 Koshun Grass Lizard

DD

林德恩 / 攝

3 | *Mauremys mutica mutica*

柴棺龜 Yellow Pond Turtle

NNT

陳元龍 / 攝

4 | *Deinagkistrodon acutus*

百步蛇 Chinese Moccasin

LC

陳元龍 / 攝

