

CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES  
OF WILD FAUNA AND FLORA



Eighteenth meeting of the Conference of the Parties  
Colombo (Sri Lanka), 23 May – 3 June 2019

CONSIDERATION OF PROPOSALS FOR AMENDMENT OF APPENDICES I AND II

A. Proposal

Inclusion of ***Achillides chikae hermeli*** in Appendix I, and adoption of Page and Treadaway (2004) as standard nomenclatural reference for Papilionidae in the Philippines to amend the current Appendix I listing of *Papilio chikae* to *Achillides chikae chikae*.

*Achillides chikae hermeli* closely resembles *Papilio chikae* (proposed to be renamed as *Achillides chikae chikae*), and therefore meets criterion A in Annex 2 b of Resolution Conf. 9.24 (Rev. CoP17) for an Appendix II listing. However, inclusion in Appendix I is proposed in order to avoid split-listing of subspecies in accordance with Annex 3 of Resolution Conf. 9.24 (Rev. CoP17), and in line with paragraph 2(b) of Resolution Conf. 12.11 (Rev. CoP17) on Standard Nomenclature.

B. Proponent

European Union, Philippines

C. Supporting statement

1. Taxonomy

1.1 Class: Insecta

1.2 Order: Lepidoptera

1.3 Family: Papilionidae

1.4 Genus, species or subspecies, including author and year: *Achillides chikae hermeli*  
(Nuyda, 1992)

An overview of the taxonomic history of the subspecies and its status under CITES is provided in the Annex.

1.5 Scientific synonyms: *Papilio chikae hermeli*, *Papilio hermeli*

1.6 Common names: English: Mindoro Peacock Swallowtail  
French:  
Spanish:

1.7 Code numbers: Based on nomenclatural changes identified in recent scientific publications, this proposal recommends adoption of Page and Treadaway (2004) as the CITES nomenclatural standard reference

for Papilionidae in the Philippines. Accordingly, *Papilio chikae* (currently listed in Appendix I) would be amended to *Achillides chikae chikae*. No further amendments to the CITES Appendices would be required based on adoption of Page and Treadaway (2004) as a standard nomenclatural reference.

*Papilio chikae* is therefore subsequently referred to in the proposal with [*Achillides chikae chikae*] in square brackets.

## 2. Overview

This proposal is to include the swallowtail butterfly *Achillides chikae hermeli*, an endemic to the island of Mindoro in the Philippines, in Appendix I. Although recently considered to be a subspecies of the Appendix I-listed *Papilio chikae* [*Achillides chikae chikae*], an endemic to the Philippine island of Luzon, *Achillides chikae hermeli* is not currently subject to the Appendix I listing for *P. chikae* [*Achillides c. chikae*], which restricted the listing to the population of Luzon only. *Achillides c. hermeli* closely resembles *P. chikae* [*Achillides c. chikae*] and in particular, the males are very difficult to distinguish. Illegal international trade is known to be occurring in Appendix I listed *P. chikae* (falsely declared as *P. hermeli*).

Whilst *A. c. hermeli* would qualify for inclusion in Appendix II by satisfying criterion A of Annex 2 b of Resolution Conf. 9.24 (Rev. CoP17): “*The specimens of the species in the form in which they are traded resemble specimens of a species included in Appendix II under the provisions of Article II, paragraph 2 (a), or in Appendix I, so that enforcement officers who encounter specimens of CITES-listed species are unlikely to be able to distinguish between them,*” an Appendix I listing is proposed to avoid split-listing the sub-species, in accordance with Annex 3 of Resolution Conf. 9.24) Rev. CoP17) and in line with paragraph 2(b) of Resolution Conf. 12.11 (Rev. CoP17), which indicates that where there are identification difficulties, entire species should be included within the same Appendix.

The adoption of Page and Treadaway (2004) as nomenclatural standard reference for the Papilionid butterflies of the Philippines will confirm the subspecies status of *hermeli* under *chikae*, and transfer both taxa to the genus *Achillides*, in agreement with current taxonomic treatments. This nomenclatural change does not alter the original scope or content of the existing listing of *Papilio chikae* in Appendix I when renamed as *Achillides chikae chikae*.

## 3. Species characteristics

### 3.1 Distribution

*Achillides chikae hermeli* is a swallowtail butterfly endemic to the island of Mindoro in the west-central Philippines (Treadaway, 1995; Bauer and Frankenbach, 1998; Hardy and Lawrence, 2017). It has only been reported from Mount Halcon (2580 m above sea level) in the north (Nuyda, 1992; Treadaway, 1995; Bauer and Frankenbach, 1998; Page and Treadaway, 2004; Treadaway and Schröder, 2012) and on Mount Baco (2488 m a.s.l.) in south Mindoro (Treadaway and Schröder, 2012). The holotype was collected on Mt. Halcon, northern Mindoro in 1992 (Nuyda, 1992).

The similar taxon, *Papilio chikae* [*Achillides chikae chikae*] was described in 1965 from Mount Santo Tomas (2258 m a.s.l.), in northern Luzon in the Philippines (Igarashi, 1965) and occurs in the Cordillera Central from Benguet Province to Ifugao and Mountain Provinces in northern Luzon (Page and Treadaway, 2004).

### 3.2 Habitat

*Achillides chikae hermeli* inhabits montane forest (Page and Treadaway, 2003) at altitudes above 1800 m a.s.l. (Nuyda, 1992; Page and Treadaway, 2004).

Mindoro Island is characterized by a central spine of mountains of which Mt. Halcon and Mt. Baco are the two main mountain masses (Gonzales *et al.*, 2000). Mt. Halcon, with its associated peaks, comprises the northernmost part of the mountainous spine (BirdLife International, 2001b).

According to BirdLife International (2001b), mossy forest is found on the eastern slopes of Mt. Halcon from around 1700 to 2200 m a.s.l., with alpine shrubs and heath around the mountain peaks, while the western slopes supports “parang” vegetation, with areas of dipterocarp forest and Mindoro pine stands. The western slopes were reported to have a seasonal climate with wet and dry seasons, while the eastern slopes have an “evenly distributed rainfall” (BirdLife International, 2001b). Mt. Baco dominates the central part of the Mts. Iglit-Baco National Park (Biodiversity Management Bureau, 2015); the main habitat types of Mts. Iglit-Baco National Park were reported to be grassland and evergreen forest (Biodiversity Management Bureau, 2015).

### 3.3 Biological characteristics

*Achillides c. hermeli* can be found from February to September, a period that includes the dry season and extends well into the rainy season (Page and Treadaway, 2004). Species of *Achillides* feed on Rutaceae (Igarashi, 1984) and the larval foodplant of *A. c. hermeli* was considered probably *Euodia* spp. (Rutaceae) (Page and Treadaway, 2003).

Adult Papilionidae typically survive 20-30 days, and up to a maximum of four months (Owen, 1971 in: Collins and Morris, 1985). Predation and parasitism were reported to be high in all four phases of the life cycle (egg, larva, pupa, and butterfly), with only a small proportion reported to survive to the adult butterfly phase (Owen, 1971 in: Collins and Morris, 1985). Most species can produce several hundred eggs, which are typically laid on the underside of leaves of the species foodplant (Collins and Morris, 1985).

### 3.4 Morphological characteristics

*Achillides c. hermeli* is a long-tailed butterfly first described by Nuyda (1992), who noted its resemblance to *Papilio chikae* [*A. chikae chikae*]. The body was described as black, dusted with golden-green scales, with the males and female forewings and hindwings being described as follows:

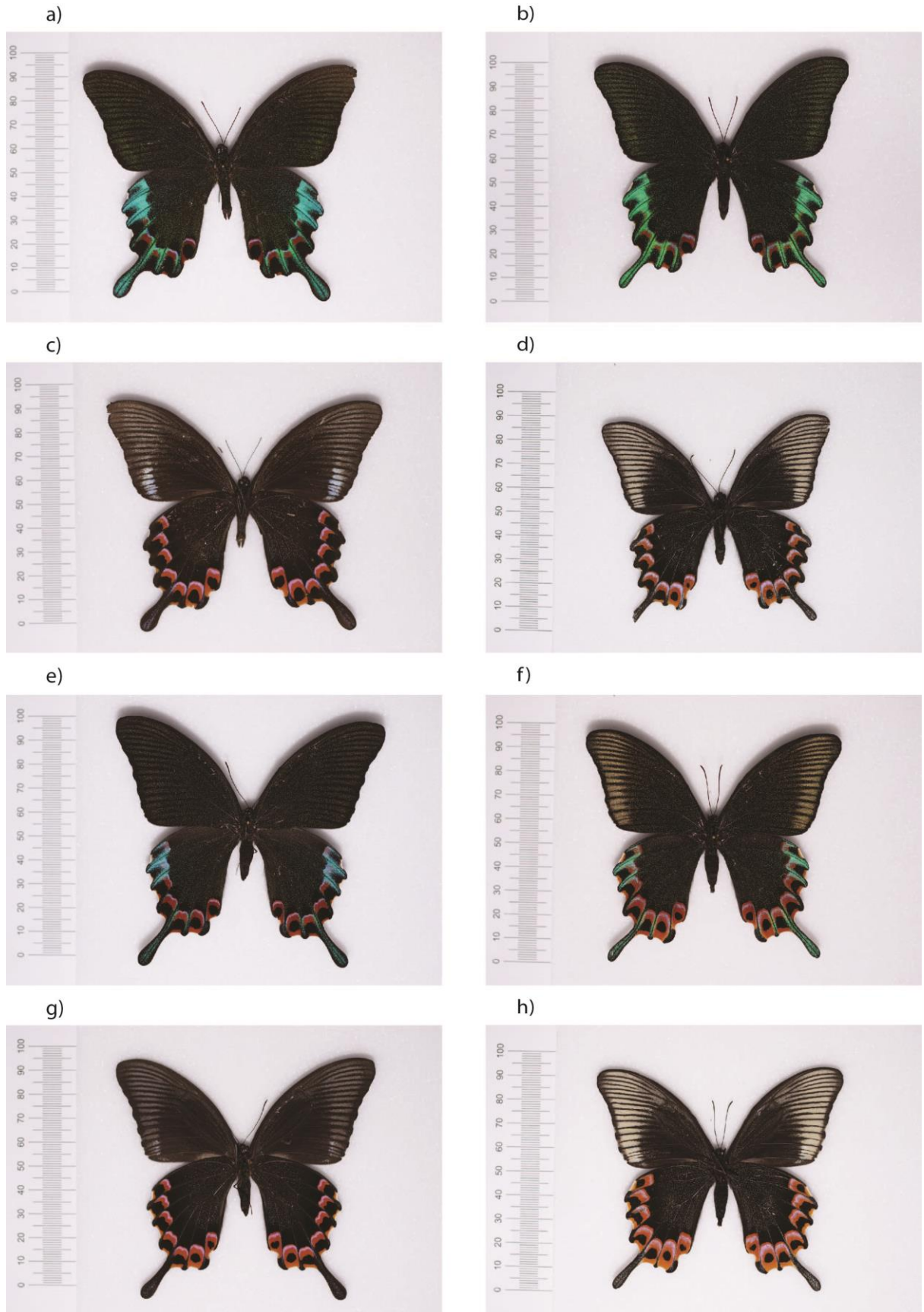
In females, the upperside of the forewing has an overall colour of fuscous black with scattered golden green and blue scales, and the thin outer marginal lining is black with golden green and blue metallic scales that are denser in the apical region<sup>1</sup>. The upperside has a dominant ochreous white interneural straight submarginal band from the tornal reaching the subapical area. The underside is black with scattered dusty white scales. The submarginal band is more defined, accentuated and much whiter with a slight tinge of metallic bluish white. The upperside of the female hindwing has a sombre black colour, speckled with green scales and blue metallic scales. A tinge of blue and a subdued green patch are visible on some veins. The submarginal series of red orange lunular spots on the hindwing are very distinct. The tails have blue scales becoming more compact on the upper area of the wingtail. The hindwing underside has the semblance of *Papilio chikae* having scattered white and a few blue scales. The submarginal lunules are larger and duller compared to the hindwing upperside. The dentate luminous purple tint on the inner margin of the lunules are broader and paler. The tail underside is black with a small number of scattered white and blue scales.

In males, the upperside of the forewing has a concentration of diffused metallic bluish scales. The underside has the same markings as the female; slightly smaller in scale. The tail is almost covered with blue scales. The hindwing upperside has a dull orange submarginal lunular spots with a clearly defined blue patch. The dentate luminous purple tint on the inner margin of the lunules crosses the lunular spots.

The males of the two subspecies appear almost indistinguishable, with the exception of the whitish-grey bands on the lower forewing, which in *chikae*, appear less distinctive and taper to pale blue in the inner margin. Images of the males and females of the subspecies, alongside males and females of *Papilio chikae* [*A. c. chikae*] which illustrate similar features, are found in Figure 1.

---

<sup>1</sup> The area at or adjacent to the tip of the wing.



**Figure 1.** a) *A. c. chikae* male; b) *A. c. hermeli* male c) *A. c. chikae* male underside and d) *A. c. hermeli* male underside; e) *A. c. chikae* female; f) *A. c. hermeli* female; g) *A. c. chikae* female underside and h) *A. c. hermeli* female underside (Produced with permission from Malcolm Page).

### 3.5 Role of the species in its ecosystem

No information

## 4. Status and trends

### 4.1 Habitat trends

Gonzales *et al.* (2000) reported that according to historical accounts, Mindoro was once covered entirely by rainforests, however, based on estimates made in 1988, only around 870 km<sup>2</sup> of tropical forest remained in 1999. In 1990, the remaining forests were reported to be largely montane forest located on Mt. Halcon and Mt. Baco (Gonzales *et al.*, 2000) and in 2012, the remaining natural forests on Mt. Halcon were reported to be fragmented and largely confined to higher altitudes (Gatumbato, 2012).

### 4.2 Population size

No information

### 4.3 Population structure

No information

### 4.4 Population trends

*Achillides c. hermeli* was reported to be 'very rare' by Treadaway (1995) and Treadaway and Schröder (2012). Whilst the subspecies has not been assessed by the IUCN, Treadaway (in: Danielsen and Treadaway, 2004) assessed the subspecies as vulnerable, using the categories and criteria of the IUCN (version 2.3) (IUCN, 1995), and considered the population to be 'probably stable'.

The nominate subspecies *A. c. chikae* has however, been classified as Endangered (as *Papilio chikae*) by the IUCN since 1985 (the latest assessment from 1996 (version 2.3) is annotated as needing updating) (Dixon, 1996), and was included in the 1997 Philippine Red Data Book (Philippine Red Data Book, 1997). *A. c. chikae* was reported to be 'rare' by Treadaway (1995) and Treadaway and Schröder (2012). In 2004, Treadaway (in: Danielsen and Treadaway, 2004) assessed *A. c. chikae* as lower risk-conservation dependent and the population was considered probably stable.

Danielsen and Treadaway (2004) cautioned that knowledge of the distribution, status and biogeography of Philippine butterflies is limited, and considered it uncertain whether existing records and assigned conservation status "accurately reflect the true distribution and status" of the taxa included in the study..

### 4.5 Geographic trends

Until 2012, *A. c. hermeli* had been reported from Mt. Halcon only (Treadaway, 1995; Bauer and Frankenbach, 1998; Page and Treadaway, 2004). However in 2012, the subspecies was also reported from Mt. Baco (Treadaway and Schröder, 2012), representing an extension of its known range.

*Achillides* was considered likely to have originated in Sundaland and Wallacea around 19 Ma ago (Condamine *et al.*, 2013). *P. chikae* [*A. c. chikae*] was considered to be a glacial relict of continental origin (Collins and Morris, 1985).

## 5. Threats

*Achillides* are considered popular among collectors, naturalists and researchers (Condamine *et al.*, 2013). *Papilio chikae* [*A. c. chikae*] (which *hermeli* closely resembles) was reported to be among

the most beautiful and desirable members of Papilionidae (Collins and Morris, 1985). Due to its slow flight and attraction to decoys, it was considered to be easily captured (Tsukada and Nishiyama, 1982). Over-collection was considered the main threat to *P. chikae* [*A. c. chikae*] by Treadaway (1984, *in litt.* Collins and Morris, 1985). Illegal trade in *P. chikae* (traded as *P. hermeli*) is also a threat – see section 6.4.

Specific threats to *A. c. hermeli* have not been documented. However, threats to the Iglit-Baco Mountains Important Bird Area (IBA) were reported to include cattle ranching, upland farming and collection of firewood, resulting in rapid deforestation, both within and outside of Mts. Iglit-Baco National Park (BirdLife International, 2001a). In 1992, extensive logging up to 700 m altitude on the north slopes of Mt. Baco was reported (BirdLife International, 2001b). It was noted that the remoteness of some of the remaining forest areas within the IBA provided protection to these habitats (BirdLife International, 2001a), however, it has been remarked that accessibility to Mts. Iglit-Baco National Park is increasing (Biodiversity Management Bureau, 2015).

The remaining forests on Mt. Halcon were reported to be under threat from illegal logging, charcoal production, land conversion, slash and burn agriculture, and small scale mining (Gatumbato, 2012). “Very large areas” were reported to have been cleared from the slopes of Mt. Halcon and in 1991, shifting cultivation was reportedly found to be “penetrating far up most accessible valleys” (BirdLife International, 2001b). The majority of the Halcon range was reported to be difficult to access and therefore difficult to patrol (BirdLife International, 2001b). In 2001, the forest cover on Mt. Halcon was considered to be in a “fairly good condition” due to its remoteness and the Mt. Halcon IBA was reported to support the largest remaining area of montane forest on Mindoro (BirdLife International, 2001b). The mountains in the IBA were reported to be popular with mountaineering clubs and Mt. Halcon was considered a popular mountaineering destination (BirdLife International, 2001b).

## 6. Utilization and trade

### 6.1 National utilization

No information

### 6.2 Legal trade

### 6.3 Parts and derivatives in trade

All swallowtail butterflies in the Philippines are protected under the Wildlife Resources Conservation and Protection Act of 2001, and any collection and trade must be managed through a permitting system (see section 7.1). No permits for trade in *A. c. hermeli* have been approved by the Government of the Philippines (CITES Management of Philippines *in litt.* to European Commission, 2018).

Few records of legal international trade in the similar taxon *P. chikae* [*A. c. chikae*] have been reported. According to the CITES trade database, no direct trade in *P. chikae* [*A. c. chikae*] has been reported by the Philippines since the taxon was listed in Appendix I in 1987. However, the United States reported eight source I (confiscated or seized) bodies traded directly from the Philippines for commercial purposes in 2005.

Indirect trade in *P. chikae* [*A. c. chikae*] comprised a total of nine bodies, reported by importers only in 1990, 1995, 2004 and 2010 (Table 1). All trade was reported as source I (confiscated or seized), pre-Convention or without a source specified.

**Table 1.** Indirect trade in *Papilio chikae* [*A. c. chikae*] 1987-2016. All trade was in bodies reported by number and was only reported in 1990, 1995, 2004 and 2010.

Origin	Exporter	Importer	Purpose	Source	Reported by	1990	1995	2004	2010
India	Germany	Switzerland	-	-	Importer	1			
					Exporter				
Unknown	China	United States	T	I	Importer		1		
					Exporter				

	Philippines	Spain	-	I	Importer			2	
					Exporter				
	San Marino	Italy	P	O	Importer				5
					Exporter				

#### 6.4 Illegal trade

Despite being nationally protected in the Philippines, both *A. c. hermeli* and *P. chikae* [*A. c. chikae*] have been found for sale on the internet. A short survey of online trade in *A. c. hermeli* and *P. chikae* [*A. c. chikae*] was undertaken on 10 October 2018, with 18 offers of sale found from sellers within the Philippines, Europe, US and Canada, Taiwan, Thailand and the Russian Federation. Full results of the survey can be found in Annex 2. Sale of specimens of *P. chikae* [*A. c. chikae*] offered as *hermeli* has been discussed on an online hobbyist website<sup>2</sup>.

In recent years, EU Member State Authorities have come across multiple cases where traders offered to import in the EU specimens of *Papilio chikae* [*A. c. chikae*] disguised as *A. c. hermeli* due to the inability of customs officers to distinguish the subspecies during border controls. One Philippine trader reported that 300-500 individuals of *P. chikae* could be sourced annually; other traders, showing photographs of *P. chikae*, indicated that many specimens were held. Two specimens of *A. c. chikae* falsely described as *hermeli* were confiscated by UK police in 2018, and are in the process of being formally seized by UK Border Force (Roberts, pers. comm. to UNEP-WCMC, 2018). The difficulties in identifying specimens of the subspecies were highlighted by UK enforcement officers, and it was noted that in many cases specimens are unset and with the wings closed, hiding the distinguishing blue bands of *Papilio chikae* [*A. c. chikae*] on the lower hindwing (Roberts, pers. comm. to UNEP-WCMC, 2018). Illegal trade in *P. chikae* [*A. c. chikae*] under the name of *P. hermeli* was also reported by the Swedish CITES Management Authority (Diemer, *in litt.* to European Commission, 2017). The magnitude of this illegal trade is currently unclear.

#### 6.5 Actual or potential trade impacts

No specific information on the actual effects of international trade on *P. chikae* [*A. c. chikae*] and *A. c. hermeli* was located. However, any illegal trade in the Endangered *P. chikae* [*A. c. chikae*] (e.g. documented as *A. c. hermeli*) is likely to be having a detrimental effect on the population of that subspecies. In addition, the reputed 'very rare' status of *A. c. hermeli* in Mindoro may not sustainably support wild collection for international trade.

### 7. Legal instruments

#### 7.1 National

All wildlife in the Philippines, including swallowtail butterflies, are protected under Republic Act 9147 (Wildlife Resources Conservation and Protection Act) of 2001 (Republic of the Philippines, 2001), which regulates the collection and trade of wildlife through a permitting system.

Republic Act 7586 (1992) prohibits the hunting, destruction, disturbance or possession of any plants or animals, or derived products, from protected areas without a permit from the Management Board; violations are subject to a fine of P5000-500 000, or imprisonment for between 1-6 years, or both (Philippines, 1992).

Executive Order No. 247 (1995) establishes the regulatory framework for the prospecting (collection, research and use) of biological and genetic resources, their by-products and derivatives, for scientific, commercial and other purposes, and requires collectors or researchers to obtain Prior Informed Consent (PIC) from the concerned local communities, and to enter into a research agreement with the Philippine Government (Philippines, 1995).

<sup>2</sup> <http://insectnet.proboards.com/thread/4459/papilio-chikae> [Accessed 05 November 2018].

The management of the ancestral domain of the Mangyans in Mt. Halcon is governed by the Indigenous Peoples' Rights Act of 1997 (Republic Act No 8371) (Gatumbato, 2012), which mandates that management of ancestral domains lies primarily with Indigenous Cultural Communities/Indigenous Peoples (ICCs/IPs), with participation from government agencies (Philippines, 1997).

Since 1994, the Philippines has prohibited the export for commercial purposes of wild-caught specimens of terrestrial fauna. Only specimens bred in captivity by breeders authorized and registered by the CITES Management Authority (the Department of Environment and Natural Resources (DENR)) may be exported (CITES Notif. No. 2010/038).

*Papilio chikae* is listed as Endangered on the US List of Endangered and Threatened Wildlife.

## 7.2 International

*Achillides c. hermeli* is at present not subject to the provisions of international conventions, treaties or regulations. Its close relative *P. chikae* [*A. c. chikae*] has been included in CITES Appendix I since 1987.

## 8. Species management

### 8.1 Management measures

No information

### 8.2 Population monitoring

No population survey or monitoring efforts have been reported.

### 8.3 Control measures

#### 8.3.1 International

#### 8.3.2 Domestic

### 8.4 Captive breeding and artificial propagation

No information on captive breeding facilities in the Philippines was located. According to the CITES Trade Database, no live specimens of *P. chikae* [*A. c. chikae*] were reported legally exported since listing in Appendix I in order to establish breeding facilities elsewhere (see section 6.3).

### 8.5 Habitat conservation

Danielsen and Treadaway (2004) reported that *A. c. hermeli* does not occur in any of the existing 18 priority protected areas in the Philippines. However, this study was published prior to the report of the subspecies occurrence on Mt. Baco by Treadaway and Schröder (2012). Mt. Iglit-Baco was included within the list of the 18 priority sites, although it was assessed as highly vulnerable by Danielsen and Treadaway (2004). Based on the number of threatened or conservation-dependent species or subspecies of butterflies confined to (or possibly confined to) the site and the extent of deforestation as indicative of the risk of the area being transformed by extractive uses, Mt. Halcon was identified as an area with high values of both irreplaceability and vulnerability (Danielsen and



Treadaway, 2004). It was therefore recommended that the area be prioritised for conservation action (Danielsen and Treadaway, 2004).

Originally established as a game refuge and bird sanctuary, Mts. Iglit-Baco was declared a National Park in 1970 by virtue of Republic Act 6148 and its area coverage increased to 75 445 hectares (ASEAN Centre for Biodiversity, 2014). In 1984, Mts. Iglit-Baco National Park (MIBNP) was also declared an ASEAN Heritage Site (ASEAN Centre for Biodiversity, 2014) and in 2006, the park was included in the Tentative List of sites that the Philippines intend to consider for nomination to the World Heritage List (World Heritage Centre, 2018). The Park is managed by a Protected Area Management Board under the Department of Environment and Natural Resources (DENR) (ASEAN Centre for Biodiversity, 2014). According to the World Database on Protected Areas (WDPA), a management plan for the park had not been reported<sup>3</sup> (UNEP-WCMC and IUCN, 2018).

BirdLife International has classified Mt. Halcon (BirdLife International, 2001b) and the Iglit - Baco Mountains (BirdLife International, 2001a) as Important Bird Areas (IBAs), and in 2006, both Mt. Halcon and Iglit-Baco Mountains were declared Key Biodiversity Areas (KBAs) (Gatumbato, 2012). Mt. Halcon has also been identified by the Mindoro Biodiversity Conservation Foundation, Inc. (MBCFI) as one of its 10 priority conservation sites on Mindoro Island (Gatumbato, 2012).

Mount Halcon has not been designated as a protected area (Gonzales *et al.*, 2000; Gatumbato, 2012). However, Executive Order No. 47 issued by the provincial government provided a mandate for development of a management plan and the Mt. Halcon Conservation and Management Plan (2012-2022) was produced (Gatumbato, 2012). The plan aims to guide stakeholders in the management of the area as an important biodiversity and cultural site and is structured around four main goals, including conservation of Mt. Halcon's biodiversity through the protection of species, habitats, and ecosystems (Gatumbato, 2012).

## 8.6 Safeguards

*Achillides c. hermeli* has been genetically barcoded and COI<sup>4</sup> sequences are available online (Fontanilla *et al.*, 2014), including seven published records deposited with two institutions (GenBank and Environment Canada) accessible via the Barcode of Life Data System (BOLD) (BOLD Systems, 2018).

## 9. Information on similar species

Species of *Achillides* are morphologically similar, with black wings covered with bright green scales (Shimogori, 1997, and Bauer and Frankenbach, 1998 in: Yagi *et al.*, 2006). Treadaway (1995) reported that *A. c. hermeli* was "closely related to *P. chikae* [*A. c. chikae*], but apparently differs slightly in the genitalia". However, it was later noted by Page and Treadaway (2004) that no significant difference in the male or female genitalia could be found. A "very strong" resemblance in female genitalia of the *chikae* species group (including both *chikae* and *hermeli*) to the *Papilio bianor* group has also been noted (Page and Treadaway, 2004). *P. chikae* [*A. c. chikae*] were considered very similar or indistinguishable to males of *A. c. hermeli* by Diemer (*in litt.* to European Commission, 2017). The "*Illustrated identification guide to insects protected by the CITES and Wildlife Conservation Law of Taiwan, R.O.C.*" published by the Council of Agriculture in 2000, advises that *P. chikae* [*A. c. chikae*] is distinguishable from *A. c. hermeli* by a less developed lunate pattern on its hindwing (Yen and Yang, 2001).

## 10. Consultations

The European Union consulted with the Philippines in July and November 2018.

---

<sup>3</sup> The WDPA record for the park was last updated in 2015.

<sup>4</sup> Cytochrome c oxidase subunit I gene (COI), which can be used to aid species identification (Fontanilla *et al.*, 2014).

## 11. Additional remarks

Inclusion in Appendix I of *A. c. hermeli* would complement the current listing of *P. chikae* [*A. c. chikae*] and resolve any enforcement challenges arising from similarity in appearance to an Appendix I taxon.

## 12. References

- ASEAN Centre for Biodiversity 2014. *The ASEAN Heritage Parks: A journey to the natural wonders of Southeast Asia*. Los Baños, Philippines. 310 pp.
- Bauer, E. and Frankenbach, T. 1998. Papilionidae I - *Achillides*, *Bhutanitis*, *Teinopalpus*. In: Bauer, E. and Frankenbach, T. (Eds.). *Butterflies of the World. Part 1*. Goecke & Evers, Keltern. [Reported as *Papilio hermeli*]
- Biodiversity Management Bureau 2015. *Guidebook to Protected Areas of the Philippines*. Philippines. 100 pp.
- BirdLife International 2001a. *Important Bird Areas factsheet: Iglit - Baco Mountains*. Available at: <http://datazone.birdlife.org/site/factsheet/iglit--baco-mountains-iba-philippines>. [Accessed: 26/10/2018].
- BirdLife International 2001b. *Important Bird Areas factsheet: Mount Halcon*. Available at: <http://datazone.birdlife.org/site/factsheet/mount-halcon-iba-philippines/text>. [Accessed: 17/10/2018].
- BOLD Systems 2018. *Public data portal - record list: Papilio hermeli*. Barcode of Life Data System v4. Available at: <http://www.boldsystems.org/index.php>. [Accessed: 18/10/2018].
- CITES Management Authority of the Philippines. *in litt.* to European Commission, 16 July 2018.
- Collins, M. and Morris, M.G. 1985. *Threatened Swallowtail butterflies of the world. The IUCN Red Data Book*. IUCN, Gland, Switzerland and Cambridge, UK.pp.
- Collins, M. 2017. Mark Collins (Chairman, UK Swallowtail and Birdwing Butterfly Trust) *pers. comm.* to UNEP-WCMC, 19 December 2017.
- Condamine, F.L., Sperling, F.A.H., Wahlberg, N., Rasplus, J.Y. and Kergoat, G.J. 2012. What causes latitudinal gradients in species diversity? Evolutionary processes and ecological constraints on swallowtail biodiversity. *Ecology Letters*, 15: 267–277.
- Condamine, F.L., Toussaint, E.F.A., Cotton, A.M., Genson, G.S., Sperling, F.A.H. and Kergoat, G.J. 2013. Fine-scale biogeographical and temporal diversification processes of peacock swallowtails (*Papilio* subgenus *Achillides*) in the Indo-Australian Archipelago. *Cladistics*, 29(1): 88–111. [Reported as *Papilio hermeli*]
- Danielsen, F. and Treadaway, C.G. 2004. Priority conservation areas for butterflies (Lepidoptera: Rhopalocera) in the Philippine islands. *Animal Conservation*, 7(1): 79–92.
- Diemer, D. 2017. Michael Diemer (CITES MA, Swedish Board of Agriculture) *in litt.* to European Commission and UNEP-WCMC, 29 September 2017.
- Dixon, G. 1996. *Papilio chikae*. The IUCN Red List of Threatened Species 1996. Available at: <https://www.iucnredlist.org/species/15986/5341006#assessment-information>. [Accessed: 19/10/2018].
- Fontanilla, I.K.C., Torres, A.F., Angela, J., Cañasa, D.G., Yap, S.L. and Ong, P.S. 2014. State of animal DNA barcoding in the Philippines: A review of COI sequencing of Philippine native fauna. *Philippine Science Letters*, 7(1): 104–137. [Reported as *Papilio hermeli*]
- Gatumbato, E.A. 2012. *Mount Halcon Conservation and Management Plan (2012-2022)*. 115 pp.
- Gonzales, J.C.T., Dans, A.T.L. and Afuang, L.E. 2000. *Mindoro: Island-wide Survey of Fauna and Flora and Field Inventory of Selected Sites for Priority Conservation*. Muntinlupa City. 121 pp.
- Hardy, P.B. and Lawrence, J.M. 2017. *Field guide to butterflies of the Philippines*. Siri Scientific Press. 448 pp. [Reported as *Papilio hermeli*]
- Häuser, C.L., de Jong, R., Lamas, G., Robbins, R.K., Smith, C. and Vane-Wright, R.I. 2005. *Papilionidae – revised GloBIS/GART species checklist (2nd draft)*. Available at: <http://www.insects-online.de/frames/papilio.htm>. [Accessed: 18/10/2018]. [Reported as *Papilio hermeli*]
- Igarashi, S. 1965. *Papilio chikae*, an unrecorded Papilionid butterfly from Luzon island, the Philippines. *Tyo To Ga*, 16: 41–49.
- Igarashi, S. 1984. The classification of the Papilionidae mainly based on the morphology of their immature stages. *Trans. Lepido. Soc. Japan (Tyo To Ga) To Ga*, 34: 41–96.
- Igarashi, S. and Fukuda, H. 2000. *The Life Histories of Asian Butterflies, Vol. 2*. Tokai University Press, Tokyo.
- IUCN 1995. *IUCN Red List Categories. As approved by the 40th meeting of the IUCN Council, 30 November 1994*. Gland, IUCN Species Survival Commission (SSC).

- Nuyda, J.S. 1992. A new Papilionid butterfly from Mindoro Island, Philippines (Lepidoptera: Papilionidae). *Butterflies*, 3: 34-35.
- Owen, D.F. 1971. *Tropical Butterflies*. Clarendon Press, Oxford. 214 pp.
- Page, M.G.P. and Treadaway, C.G. 2003. Papilionidae IX. Papilionidae of the Philippines Islands. In: Bauer, E. and Frankenbach, T. (Eds.). *Butterflies of the World, Part 17*. Verlag Goecke & Evers. 71.
- Page, M.G.P. and Treadaway, C.G. 2004. Papilionidae of the Philippine Island. In: Bauer, E. and Frankenbach, T. (Eds.). *Butterflies of the world, Supplement 8*. Goecke & Evers, Keltern. 58.
- Philippine Red Data Book 1997. *Philippine Red Data Book. Red list of threatened animals*. Wildlife Conservation Society of the Philippines, Inc. Bookmark, Makati City, Philippines. 262 pp.
- Philippines 1995. *Executive Order prescribing guidelines and establishing a regulatory framework for the prospecting of biological and genetic resources, their by-products and derivatives, for scientific and commercial purposes, and for other purposes (No. 247 of 1995)*.
- Philippines 1997. *Indigenous Peoples Rights Act 1997 (Republic Act No. 8371 of 1997)*.
- Philippines 1992. National Integrated Protected Areas System Act 1992 (Republic Act No. 7586). *Official Gazette No. 29, 20 July 1992, pp. 4641-4653.*
- Republic of the Philippines 2001. *Wildlife Resources Conservation and Protection Act. (Republic Act No. 9147)*.
- Roberts, A. 2018. Alan Roberts, UK National Wildlife Crime Unit. pers. comm. to UNEP-WCMC, 13<sup>th</sup> December, 2018.
- Shimogori, Y. 1997. *Achillides butterflies. Endless Collection Series 6*. ESI, Tokyo (in Japanese).
- Treadaway, C.G. 1995. Checklist of the butterflies of the Philippine Islands (Lepidoptera: Rhopalocera). *Nachr. entomol. Ver. Apollo, Suppl.*, 14: 7-118. [Reported as *Papilio hermelii*]
- Treadaway, C.G. and Schröder, H.G. 2012. Revised checklist of the butterflies of the Philippine Islands (Lepidoptera: Rhopalocera). *Nachrichten des Entomologischen Vereins Apollo, Supplement*: 64.
- Tsukada, E. and Nishiyama, J. 1982. *Butterflies of the South East Asian Islands. Vol.1, Papilionidae*. Plapac Co. Ltd, Tokyo.
- UNEP-WCMC and IUCN 2018. *Protected Planet: Mts. Iglit-Baco National Park in Philippines; The World Database on Protected Areas (WDPA)*. Available at: <https://www.protectedplanet.net/mts-iglit-baco-national-park-national-park>. [Accessed: 26/10/2018].
- World Heritage Centre 2018. *Mt. Iglit-Baco National Park*. Tentative Lists. Available at: <https://whc.unesco.org/en/tentativelists/5036/>. [Accessed: 25/10/2018].
- Yagi, T., Sasaki, G. and Omoto, K. 2006. Phylogeny, biogeography and wing pattern convergence of the subgenus *Achillides* (Lepidoptera, Papilionidae, *Papilio*) revealed by a mitochondrial DNA sequence analysis. *Trans. lepid. Soc. Japan*, 57(2): 137-147. [Reported as *Papilio hermelii*]
- Yen, S.-H. and Yang, P.-S. 2001. *Illustrated identification guide to insects protected by the CITES and Wildlife Conservation Law of Taiwan, R.O.C.* 179 pp. [Reported as *Papilio hermelii*]

## Annex

### ***Achillides chikae hermeli* taxonomy**

The taxon was originally described as *Papilio hermeli* by Nuyda, 1992, from Mindoro, in the Philippines, and accepted as a species by Treadaway (1995), Bauer and Frankenbach (1998) and Häuser *et al.* (2005). However, Page and Treadaway (2004) revised the status of *hermeli* and reduced its taxonomic status to a subspecies of *chikae* Igarashi, 1965. The authors noted that while *hermeli* “was described as, and is frequently treated as, a separate species from *chikae* [...] we can find no significant difference in the male or female genitalia that would support such separation” (Page and Treadaway, 2004). DNA analysis of the subgenus *Achillides* undertaken by Condamine *et al.* (2013) clarified some taxonomic ambiguities at the species level. However, *chikae* was not included in the analysis (Condamine *et al.*, 2013).

*Achillides* was considered a subgenus of *Papilio* by Yagi *et al.* (2006), Condamine *et al.* (2012) and Condamine *et al.* (2013). However, Page and Treadaway (2004) considered it a separate genus from *Papilio* on the basis that it lacks the typical Papiliochrome wing pigments (Page, unpublished) and due to “peculiarities of the larval and pupal morphology” (Igarashi and Fukuda, 2000 in: Page and Treadaway, 2004). Given the lack of consensus among taxonomists working on the group regarding the status of *hermeli* as a full species or as a subspecies of *P. chikae*, and considering the guidance provided in Annex 3 of Resolution Conf. 9.24 (Rev. CoP17) to avoid listing sub-species in more than one Appendix in view of the enforcement problems it creates, this proposal treats *hermeli* as a subspecies of *chikae*. Listing of *A. chikae hermeli* in Appendix I is also consistent with paragraph 2(b) of Resolution Conf. 12.11 (Rev. CoP17) that specifies where there are identification difficulties, the problem can be approached by including an entire species in the relevant Appendix.

### **Current status under CITES**

*Papilio chikae* [*A. c. chikae*] was included in CITES Appendix I on 22/10/1987. In response to queries in 2017 and 2018 regarding the status of *A. c. hermeli* under CITES, the Nomenclature Specialist of the Animals Committee concluded that the Appendix I listing does not include *A. c. hermeli*, despite subsequent taxonomic changes to treat *A. c. hermeli* as a subspecies of *P. chikae*, on the basis that:

1. The original proposal to CoP6 (which in the absence of a designated standard taxonomic reference under CITES for the genus *Papilio* (Annex to Resolution Conf. 12.11 (Rev. CoP17)) provides the only definition of the scope of the listing) restricted *P. chikae* [*A. c. chikae*] to the population inhabiting Luzon; and
2. *Achillides c. hermeli* inhabits Mindoro and was originally described as a full separate species (i.e., *Papilio hermeli*) by Nuyda in 1992 and was explicitly not considered a range extension of the CITES-listed taxon *P. chikae* [*A. c. chikae*] in any way.

*Achillides c. hermeli* was therefore not part of the original CITES listing, and a subsequent taxonomic reassignment to subspecies of *P. chikae* cannot be considered to represent an expansion of the original listing.

**Table 1.** Online trade in *A. c. hermeli*.

Taxon (common name)	Quantity	Price	Country of seller	Country of origin (region of origin)	Description (including source of specimen and date of advert, if specified)	URL
<i>Papilio hermeli</i>	2	USD 200	Philippines	Not specified	Facebook group: Insect classifieds. <i>Papilio hermeli</i> pair offered for sale. Date of advert: 23/02/2018.	<a href="https://www.facebook.com/search/top/?q=papilio%20hermeli">https://www.facebook.com/search/top/?q=papilio%20hermeli</a>
<i>Papilio chikae</i> (Luzon Peacock Swallowtail)	1	USD 109.99	USA	Philippines	<i>Papilio chikae</i> entomology collectible in shadowbox frame.	<a href="https://www.amazon.com/Papilio-Butterfly-Entomology-Collectible-Shadowbox/dp/B00ATUWYCI?keywords=Papilio+chikae&amp;qid=1539167463&amp;sr=8-2-spell&amp;ref=sr_1_2">https://www.amazon.com/Papilio-Butterfly-Entomology-Collectible-Shadowbox/dp/B00ATUWYCI?keywords=Papilio+chikae&amp;qid=1539167463&amp;sr=8-2-spell&amp;ref=sr_1_2</a>
<i>Papilio chikae</i> (Luzon Crested Butterfly)	1	1M / 1400 with shipping	Taiwan	Philippines (Luzon)	Source: Captive-bred. Date of advert: 28/08/2016.	<a href="http://insectforum.no-ip.org/gods/cgi-bin/topic.cgi?forum=6&amp;topic=82637">http://insectforum.no-ip.org/gods/cgi-bin/topic.cgi?forum=6&amp;topic=82637</a>
<i>Papilio hermeli</i>	1	EUR 225	Germany	Philippines (Mindoro)	Male <i>Papilio hermeli</i> , ca. 9.5 cm. Quality: A1. Dead specimen (spring form) prepared on a needle.	<a href="https://www.ebay.co.uk/itm/132780937273">https://www.ebay.co.uk/itm/132780937273</a>
<i>Papilio hermeli</i> <sup>5</sup>	1	GBP 22	UK	Philippines (Luzon)	A1 specimen of <i>Papilio hermeli</i> from Luzon. Source: Wild-sourced. Date of advert: 03/10/2018.	<a href="https://www.ebay.co.uk/itm/401610937733">https://www.ebay.co.uk/itm/401610937733</a>
<i>Papilio hermeli</i>	1	USD 65	USA	Philippines	Framed <i>P. hermeli</i> male.	<a href="https://www.ebay.co.uk/itm/322198232804">https://www.ebay.co.uk/itm/322198232804</a>
<i>Papilio hermeli</i>	>1	USD 69	Russian Federation	Philippines (Mindoro)	Dead and dried male <i>Papilio hermeli</i> . Size varies. Source: Wild-sourced.	<a href="https://www.ebay.com/itm/Papilio-hermeli-MALE-Mindoro-Philippines-RARE-/292763744160?oid=292252832227">https://www.ebay.com/itm/Papilio-hermeli-MALE-Mindoro-Philippines-RARE-/292763744160?oid=292252832227</a>
<i>Papilio hermeli</i>	1	USD 51	Not specified	Not specified	Framed <i>Papilio hermeli</i> .	<a href="https://www.ebay.co.uk/itm/Papilio-hermeli-in-the-frame-of-expensive-breed-of-real-wood/232955690733?hash=item363d3dbeed:g:cW4AAOSwK~RZ-x1u">https://www.ebay.co.uk/itm/Papilio-hermeli-in-the-frame-of-expensive-breed-of-real-wood/232955690733?hash=item363d3dbeed:g:cW4AAOSwK~RZ-x1u</a>
<i>Papilio hermeli</i> (Luzon Peacock Swallowtail)	1	GBP 79.07	USA	Philippines	Entomology Collectible Butterfly In Shadowbox. Date of advert: 27/07/2018.	<a href="https://www.etsy.com/uk/listing/631848023/very-rare-luzon-peacock-papilio-hermeli?ga_order=most_relevant&amp;ga_search_type=all&amp;ga_view_type=gallery&amp;ga_search_query=papilio%20hermeli&amp;ref=sr_gallery-1-1&amp;organic_search_click=1&amp;more_colors=1">https://www.etsy.com/uk/listing/631848023/very-rare-luzon-peacock-papilio-hermeli?ga_order=most_relevant&amp;ga_search_type=all&amp;ga_view_type=gallery&amp;ga_search_query=papilio%20hermeli&amp;ref=sr_gallery-1-1&amp;organic_search_click=1&amp;more_colors=1</a>
<i>Papilio chikae</i>	1	GBP 18	UK	Not specified	Framed Luzon Peacock Swallowtail ( <i>Papilio chikae</i> ).	<a href="https://www.etsy.com/uk/listing/603892696/framed-luzon-peacock-swallowtail-">https://www.etsy.com/uk/listing/603892696/framed-luzon-peacock-swallowtail-</a>

<sup>5</sup> Assumed to actually be *P. chikae* based on the distribution given in the description.

(Luzon Peacock Swallowtail)					Date of advert: 05/10/2018.	<a href="https://www.ebay.com/search?ga_order=most_relevant&amp;ga_search_type=all&amp;ga_view_type=gallery&amp;ga_search_query=papilio%20chikae&amp;ref=sr_gallery-1-1&amp;organic_search_click=1">papilio?ga_order=most_relevant&amp;ga_search_type=all&amp;ga_view_type=gallery&amp;ga_search_query=papilio%20chikae&amp;ref=sr_gallery-1-1&amp;organic_search_click=1</a>
<i>Papilio chi Achillides</i> <sup>6</sup> species	>1	USD 49	Russian Federation	Philippines (Luzon)	Unmounted dead, dried and papered male specimen. Quality: A1. Size varies.	<a href="https://www.ebay.co.uk/itm/Papilio-chi-Achillides-species-male-Philippines-RARE/292753862150?hash=item44297d6e06:g:HBkAAOSwbYZXdryi">https://www.ebay.co.uk/itm/Papilio-chi-Achillides-species-male-Philippines-RARE/292753862150?hash=item44297d6e06:g:HBkAAOSwbYZXdryi</a>
<i>Papilio hermeli</i> (Swallowtail butterfly)	1	USD 29.99	Thailand	Philippines (Mindoro)	Unmounted male <i>Papilio hermeli</i> , dried and papered specimen. Quality: A1/A1-. Fresh May 2014. Date of advert: 17/12/2017.	<a href="https://www.ebay.com/itm/UNMOUNTED-BUTTERFLY-PAPILIO-HERMELI-1-PC-/221636910488?nordt=true&amp;orig_cvip=true&amp;rt=nc&amp;_trksid=p2047675.m43663.110137">https://www.ebay.com/itm/UNMOUNTED-BUTTERFLY-PAPILIO-HERMELI-1-PC-/221636910488?nordt=true&amp;orig_cvip=true&amp;rt=nc&amp;_trksid=p2047675.m43663.110137</a>
<i>Papilio hermeli</i>	2	GBP 89.99	France	Philippines (Mt. Halcon, Mindoro)	Taxidermy dried insects <i>Papilio hermeli</i> pair. Male and female. Quality: A1 Source: Wild-sourced. Date of advert: 02/05/2018.	<a href="http://vi.vipr.ebaydesc.com/ws/eBayISAPI.dll?ViewItemDescV4&amp;item=123099827139&amp;t=0&amp;tid=310&amp;category=10868&amp;seller=alainalanscollectibles&amp;excSoj=1&amp;excTrk=1&amp;lsite=3&amp;itenable=false&amp;domain=ebay.co.uk&amp;descgauge=1&amp;cspheader=1&amp;oneClick=1&amp;secureDesc=0">http://vi.vipr.ebaydesc.com/ws/eBayISAPI.dll?ViewItemDescV4&amp;item=123099827139&amp;t=0&amp;tid=310&amp;category=10868&amp;seller=alainalanscollectibles&amp;excSoj=1&amp;excTrk=1&amp;lsite=3&amp;itenable=false&amp;domain=ebay.co.uk&amp;descgauge=1&amp;cspheader=1&amp;oneClick=1&amp;secureDesc=0</a>
<i>Papilio hermeli</i> (Luzon Peacock)	1	GBP 94.95	UK	Philippines	Male <i>Papilio hermeli</i> collectable. A1. Source: Captive-bred. Date of advert: 03/10/2018.	<a href="https://www.ebay.co.uk/itm/Luzon-Peacock-Papilio-hermeli-SET-x1-A1-Male-Scarce-collectable-butterfly-art-/263270489313">https://www.ebay.co.uk/itm/Luzon-Peacock-Papilio-hermeli-SET-x1-A1-Male-Scarce-collectable-butterfly-art-/263270489313</a>
<i>Papilio hermeli</i>	1	USD 85	USA	Philippines (Mindoro)	Unmounted <i>Papilio hermeli</i> specimen.	<a href="http://iannibutterfly2.net/index.php?option=com_mijoshop&amp;route=product/product&amp;product_id=7754&amp;search=Papilio&amp;page=2&amp;limit=100">http://iannibutterfly2.net/index.php?option=com_mijoshop&amp;route=product/product&amp;product_id=7754&amp;search=Papilio&amp;page=2&amp;limit=100</a>
<i>Papilio hermeli</i>	1	USD 100	Canada	Philippines (Mindoro)	Male, 12.0 cm. Quality A1/A1-.	<a href="http://www.thornesinsects.com/catalog-insect-1135517/Papilio_hermeli">http://www.thornesinsects.com/catalog-insect-1135517/Papilio_hermeli</a>
<i>Papilio hermeli</i>	1	USD 150	Canada	Philippines (Mindoro)	Male, 12.0 cm. Quality: A1.	<a href="http://www.thornesinsects.com/catalog-insect-1108235/Papilio_hermeli">http://www.thornesinsects.com/catalog-insect-1108235/Papilio_hermeli</a>
<i>Papilio hermeli</i>	1	USD 125	Canada	Philippines (Mindoro)	Male, 12.0 cm. Quality: A1/A1- ++.	<a href="http://www.thornesinsects.com/catalog-insect-1122352/Papilio_hermeli">http://www.thornesinsects.com/catalog-insect-1122352/Papilio_hermeli</a>

Accessed online on 10 October 2018.

<sup>6</sup> Assumed to be *P. chikae* based on the distribution given in the description.