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A new species in the praying mantis genus *Rhombomantis* Ehrmann & Borer (Mantodea: Mantidae) from Indochina

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taxonomy;
morphology;
Asia.

Abstract. – One new species, *Rhombomantis longipennis* sp. nov., is described and illustrated based on 34 specimens from China, India, Myanmar and Thailand. In addition, the diagnostic characteristics of genus *Rhombomantis* Ehrmann & Borer are compared with close relatives. A key to all known species of *Rhombomantis* Ehrmann & Borer is provided.

Wang Y., Ehrmann R. & Borer M., 2021. – A new species in the praying mantis genus *Rhombomantis* Ehrmann & Borer (Mantodea: Mantidae) from Indochina. *Faunitaxys*, 9(8) : 1 – 23.

ZooBank : <http://zoobank.org/1F7E6A16-F4D0-4728-8108-E8BFFA81E04A>

Introduction

The praying mantids (Mantodea) consist of over 2500 carnivorous species distributed in tropical and subtropical habitats of the world (Ehrmann, 2002). They play a very significant role in ecology (Patel & Singh, 2016). However, the praying mantises remain a largely understudied group; the alpha and beta taxonomy of this order still have a long way to go before an adequate description of its diversity will be in sight (Schwarz, Ehrmann & Shcherbakov, 2018). In recent years, numbers of new genera, new species and new synonyms have been described and reported (Rivera & Vergara-Cobian, 2017; Kolnegari & Shoushtari, 2018; Nisip *et al.*, 2019; Vermeersch & Unnahachote, 2020; Rivera *et al.*, 2020; Wang *et al.*, 2020), and the fauna of some countries or geographic area have been revised (Shcherbakov & Anisyutkin, 2018; Schwarz *et al.*, 2020).

The genus *Rhombomantis* Ehrmann & Borer, 2015 is a small genus in the order Mantodea. Based on the shape of the pronotum being dissimilar from those of the genus *Hierodula* Burmeister and *Rhombodera* Burmeister, Ehrmann & Borer (2015) established the genus *Rhombomantis* and transferred three species (*Rhombodera fusca* Lombardo, 1992, *Rhombodera butleri* Wood-Mason, 1878 and *Rhombodera woodmasoni* Werner, 1931) into it, and considered *Rhombomantis* should be placed between the genus *Hierodula* and *Rhombodera* in the systematic classification. In addition, *Hierodula brachynota* Wang & Dong, 1993 was designated as a synonym of *Rhombomantis fusca*. Nevertheless Patel and Singh (2016) still put *H. brachynota* Wang & Dong in the genus *Rhombodera* in their checklist of Mantidae. Later, *Hierodula (Rhombodera) tectiformis* Saussure 1870 is moved to this genus (Schwarz, Ehrmann, Borer *et al.* 2018). So far, the genus has 4 known species.

Recently, a new species of *Rhombomantis* Ehrmann & Borer was found in material from China, India, Myanmar and Thailand. Herein, *Rhombomantis longipennis* sp. nov. is described and illustrated, and a key to all known species of *Rhombomantis* is provided.

Materials and Methods

External morphology was studied by using an Olympus SZX 10 microscope. The last 3~4 segments of the abdomen were soaked in a 10% KOH solution for about 24 hours or heated by an alcohol burner in a 10% KOH solution for about 10 minutes, then rinsed 2~3 times with distilled water and finally with 75% alcohol. The external genitalia were studied on slides embedded in glycerol or euparal. Photographs of specimens were taken by Reinhard Ehrmann with a Canon PowerShot A630 digital camera, and processed using Adobe Photoshop 8.0.1. Morphological terminology follows Brannoch *et al.* (2017), but the male genital terminology follows Schwarz and Roy (2019).

The following abbreviations are used for male genitalia (Fig. 6):

- **afa**: anterior process of left phallomere = phalloid apophysis
- **aafa**: anterior lobe of phalloid apophysis
- **bm**: dextral extension (right phallomere)
- **fd**: main posterior lobe (right phallomere)
- **L4A**: sclerite extending over the ventral wall (left phallomere)
- **loa**: posteromesal (left phallomere)
- **map**: medial arm process
- **paa**: posterior process (left phallomere) = apical process of left phallomere = titillator
- **pafa**: posterior lobe of phalloid apophysis
- **pia**: process posterolateral to pva (right phallomere)
- **pva**: process anteromesal to pia (right phallomere)
- **sdp**: secondary distal process
- **sdpl**: lateral secondary distal process
- **sdpm**: median secondary distal process

Material examined is deposited in the following collections:

- **IZCAS**: Institute of Zoology, Chinese Academy of Sciences, Beijing, China
- **MBDS**: Private collection of M.B.D. Stiewe, XYZ, Germany
- **MCZMI**: Modern College Zoological Museum India, Pune, India
- **NMB**: Natural History Museum Basel, Switzerland
- **RBINS**: The Royal Belgian Institute of Natural Sciences, Brussels, Belgium
- **SMNK**: Staatliches Museum für Naturkunde, Karlsruhe, Germany
- **THNHM**: Thailand Natural History Museum, Pathum Thani, Thailand

Taxonomy

Order **Mantodea** Latreille, 1802

Family **Mantidae** Latreille, 1802

Subfamily **Hierodulinae** Brunner de Wattenwyl, 1893

Genus ***Rhombomantis*** Ehrmann & Borer, 2015

Rhombomantis Ehrmann & Borer, 2015: 238;

Type species: *Hierodula (Rhombodera) butleri* Wood-Mason, 1878: 580-581 (male and female), pl. 36, fig. 3, 3a-3b (female) (India).

Diagnosis. – Large, elongate, of the “common praying mantis” body type. Lower frons approximately pentagonal, width greater than height; no tubercle between eyes and antennae. Pronotum with a significant lateral expansion, lateral pronotal expansion extends ventrolaterally; metazona about two times as long as prozona; metazona with weak median longitudinal groove, prozona with a weak median longitudinal carina. Foreleg coxae with internal apical lobes convergent or divergent, coxae with 5~8 sharp and large denticles, femora with 4 discoidal spines and 4 posteroventral femoral spines and 15 anteroventral femoral spines, tibial spur groove near the middle appearing a little basally situated. Middle and hind femora with rounded genicular lobes and apical spines. Anterior border of forewing smooth, costal area densely reticulated, with stigma. Hindwing hyaline; discoidal vein with 2~4 branches. Supraanal plate transverse, trapezoidal. For male genitalia, L4A with a simple long distal process, sdpm absent; loa simple and not elongated, weakly sclerotized; afa weakly sclerotized, with largely rounded lobes.

Remarks. – This genus is well distinguished from *Hierodula* Burmeister by the short pronotum and significant lateral pronotal expansion.

It is very similar to *Rhombodera* Burmeister except:

- 1) the lateral pronotal expansion extends ventrolaterally, but the latter extends laterally;
- 2) metazona about two times as long as prozona, while the latter has metazona more than two times as long as prozona;
- 3) for male genitalia, afa weakly sclerotized and with largely rounded lobes, while the latter has afa distinctly sclerotized and both lobes with acute apex;
- 4) L4A with a simple long distal process and sdpm absent, while sdpm and sdpl are often retained in the latter.

Distribution. – China, India, Laos, Malaysia, Nepal, Myanmar, Thailand.

Rhombomantis longipennis sp. nov.

(Fig. 1-16)

ZooBank : <http://zoobank.org/D86CF9B6-D4ED-47E7-9D5C-C5949CAA7D5>

Holotype, ♂, Thailand-NW, Prov. Chiang Mai, Golden triangle, 20.21N-100.05E, leg. H. Lehmann, Sen., IV. 1979, SMNK-Mant 08220 (SMNK).

Allotype, ♀, Myanmar-SE, Prov. Kawthule, Dawna Range, Kokarit Mt. 2000 m, 16.50N-98.15E, leg. H. Lehmann & Sohn, III.-IV. 1994, SMNK-Mant-Cat.-Nr. 08184 (SMNK).

Paratypes (32 ex.)

– 1 ♀, Thailand-NW, Prov. Chiang Rai, leg. local collector, ded. Stephen Davies, ded. Achim Willsch, 01.IX.2012, QR-1421 (NMB);

– 1 ♀, India-NE, West Bengal, Kurseong (=Karsiyang), 25 km S Darjeeling, 15 N Shiliguri, 26.53N-88.16E, leg. Nr. 010 (RBINS);

– 1 ♀, Thailand-E, Pak Chong, 14°42'48.10"N - 101°25'28.16"E, 300 m, June 28-1935, Dajak Layang Gaddi, leg. Nr. 010a (RBINS);

– 1 ♂, India-NE, Exact locality unknown, leg. Student, V. 2000, Cat.-#002 (MCZMI);

– 1 ♂, Myanmar-SE, Prov. Kawthule, Dawna Range, Kokarit Mt. 2000 m, 16.50N-98.15E, leg. H. Lehmann & Sohn, III.-IV. 1994, SMNK-Mant-Cat.-Nr. 08183 (SMNK);

– 3 ♂ & 4 ♀, Thailand-NW, Prov. Chiang Mai, Chiang Mai, Doi Angkhang, 1600 m, leg. S. Löffler, 31.III. - 05.IV.2003 (SMNK);

– 2 ♀, Thailand-NW, Prov. Chiang Mai, Chiang Mai, 18.47N-98.59E, Umgeb. Doi Suthep, 1200 m, leg. S. Löffler, 17.IX.2001 (SMNK);

– 1 ♂ & 1 ♀, Thailand-NW, Prov. Chiang Mai, Chiang Mai, 18.47N-98.59E, Umgeb. Doi Suthep, 1400 m, (DS), leg. S. Löffler, X.2000 (SMNK);

– 3 ♂, Thailand-NW, Prov. Chiang Mai, Doi Kam, 19.32N-100.18E, 550 m, (DK), leg. S. Löffler, X.2000 (SMNK);

– 1 ♂, Thailand-NW: Prov. Chiang Mai, Chiang Mai, 18.47N-98.59E, Doi Pui, leg. H. Lehmann, III.1987 (SMNK);

– 1 ♂, Thailand-NW, Prov. Chiang Mai, Chiang Mai, 18.47N-98.59E, Samoeng, leg. S. Steinke, V.-VI.1986 (SMNK);

– 2 ♂ & 2 ♀, Thailand-NW, Prov. Chiang Rai, leg. local collector, ded. Stephen Davies, ded. Achim Willsch, 01.IX.2012 (SMNK);

– 1 ♂ & 1 ♀, Thailand-N, Umg. Chiang Mai, Doi Kam, 550 m, E9./A10., 2000, leg. S. Löffler (MBDS);

– 1 ♀, Myanmar-SE, Dawna, leg. H. Lehmann & Sohn, 04.IV.1990 (MBDS);

– 1 ♂ & 1 ♀, Thailand, Nan Prov., Bo Klua dist., Bo Klua Tai subdist., 1023 m. above sea level, leg. Thornthan Unnahachote, 31.III.2020 (THMHM);

– 1 ♀, Thailand, Chiang rai Prov., Wiang Pa Pao dist., Mae Jae Dee subdist., 1,013 m. above sea level, leg. Thornthan Unnahachote, 8.IV. 2019 (THMHM);

– 1 ♂, China, Yunnan, Mengla, Wangtianshu, 750m. 20.XI.2016, Chao Wu coll. (IZCAS).

Description of the male (Fig. 1-6 & 10-14)

General aspect. – Large to very-large size. Antenna filiform (Fig. 2, 3). Eyes oval in lateral view. Lower frons pentagonal quintessentially and a little wider than the height (Fig. 3). Pronotum ovate approximately in dorsal view, lateral pronotal expansion lamellar and extends ventrolaterally; metazona about 2.0 times as long as prozone; prozone with lateral margin denticulate (Fig. 1, 14). Both fore- and hindwings exceeding the apex of abdomen; forewing with discoidal area transparent, but costal area opaque; stigma relatively long and narrow (Fig. 1, 2). Forecoxa equal to the length of metazona; lower margin with 6~8 sharp and large denticles put forth from the inner submargin; having two rows of rounded protuberance in the anteroventral half part. Forefemur with 4 posteroventral femoral spines (pvfs) and 15 anteroventral femoral spines (avfs); the pattern of avfs ranged as iiiiilililililil. Foretibia with 11 posteroventral tibial spines (pvts) and 13~14 anteroventral tibial spines (avts) (Fig. 2, 3).

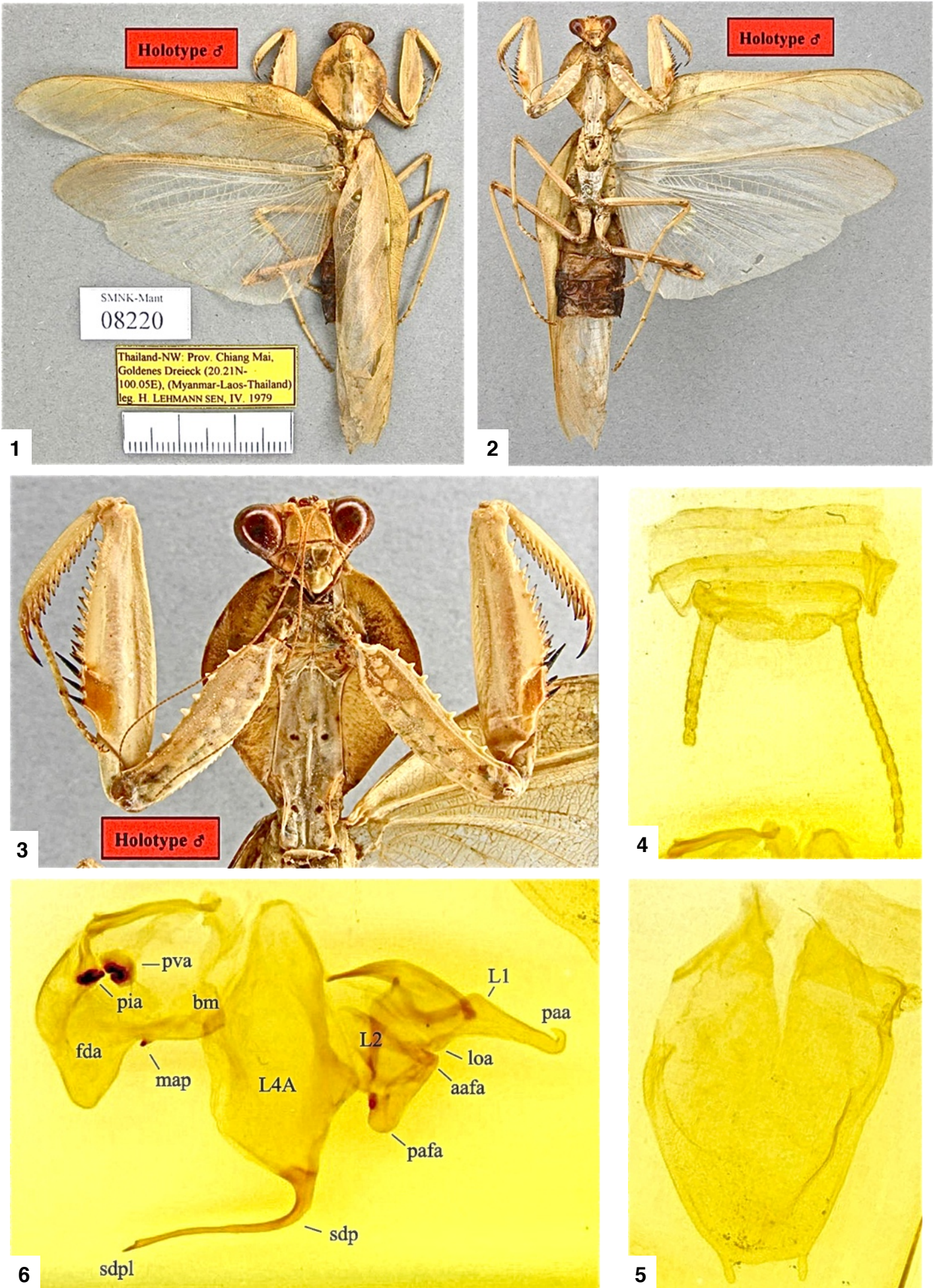


Fig. 1-6. *Rhombomantis longipennis* sp. nov., ♂, holotype.

1) Habitus, dorsal view; 2) Habitus, ventral view; 3) Head, prothorax and foreleg, ventral view; 4) Supra-anal plate and cercus; 5) Subgenital plate; 6) Genitalia, ventral view (abbreviations are listed in the materials and methods section).

Coloration. – General colored green. Ocelli yellow. Forefemur with a rufous patch around and behind the tibial spur groove (tsg), the area along anteroventral margin reddish slightly; discoidal spines black; the 1st small avfs and large avfs black or blackish; only tip of other spines black (Fig. 3, 10, 12). The anteroventral half part of forecoxa blue-green (Fig. 3, 10, 12). Prosternum with 4 black-brown speckles at the base part. Mesothorax, metathorax and abdomen plenty of irregular dark brown speckles in ventral view (Fig. 2, 10).

Male genitalia. – Sclerite L4A irregularly pentagonal, with slender sdp; sdp strongly curved dorsolaterally at the base and then straight (Fig. 6). Sclerite L4B spoon-shaped, sclerotized weakly. Sclerite L2 narrow, strongly curved like an “S” along its left edge and with a sclerotized apical process paa, and paa curved dorsally at approximately 90° relative to the rest of the phallomere. Sclerite L1 triangular, simple (Fig. 6). afa weakly sclerotized, with largely rounded lobes, aafa and pafa covered by numerous fine setae; the base of aafa sclerotized (Fig. 6). Lobe fda more or less triangular, but elongated anteriorly to the left and dilated at the end of this elongation; map thumb-shaped, located at middle margin of fda (Fig. 6). Process pia plateau-shaped, pva strongly curved like a “C” (Fig. 6).

Description of the female (Fig. 7-9). – Body somewhat larger than male. Other characteristics same as in male, showed in Fig. 7-9.

Life aspect and others. – Life aspect photos and ootheca are showed in Fig. 10-11, 15 & 16. 14 paratype specimens are photographed, and all figures showed in Appendix material.

Measurement (mm).

– Body length, ♂: 68.0~73.2

– Body length, ♀: 66.0~82.6

Details showed in Table 1 and Table 2.

Etymology. – The specific epithet “*longipennis*” refers to the long wings of both sexes, which clearly distinguishes them from the other species of *Rhombomantis* (Latin *longus* = long, Greek *penna* = wing).

Distribution. – China, India, Myanmar and Thailand.

Remarks. – This species is well distinguished from others in the genus by the forecoxae having two rows of rounded protuberance in the anteroventral half part, and the area around these protuberances is blue-green.

It is similar to *R. butleri* (Wood-Mason, 1878) except:

- 1) the pronotum is more broad than the latter;
- 2) prosternum with 4 black-brown speckles at the base part, mesothorax, metathorax and abdomen plenty of irregular dark brown speckles in ventral view, while the latter without these speckles;
- 3) the discoidal spines of femur dark-brown, while in the latter it is not as above.

Rhombomantis tectifformis is the closest species to *R. longipennis* sp. nov. based on the external morphology, but it differs in:

- 1) lateral margin of pronotum strongly denticulate;
- 2) no rounded protuberant spots on the anteroventral part of coxa;
- 3) inner margin of forecoxa with 13-16 large and small alternating denticules.

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Key to species of *Rhombomantis* Ehrmann & Borer (males)

1. Body colored olive brown or green, with plenty of irregular dark brown speckles in dorsal view; outside of foreleg femur with 3 dark brown transverse stripes 2
 — Body colored green, without speckles in dorsal view; outside of foreleg femur without dark brown stripes 3
2. Pronotum rhombic in dorsal view; inner side of foreleg femur with large ochre brown stripe along the ventral half *R. woodmasoni* (Werner, 1931)
 — Pronotum long ovate approximatively in dorsal view; inner side of foreleg femur without large ochre brown stripe along the ventral half *R. fusca* (Lombardo, 1992)
3. Lateral margin of pronotum strongly denticulate; inner margin of forecoxa with 13-16 denticules alternating in length *R. tectifformis* (Saussure, 1870)
 — Lateral margin of pronotum is not denticulate; inner margin of forecoxa with alternating denticules less than 10 4
4. Forecoxae having two rows of rounded protuberance in the anteroventral half part; the discoidal spines of femur black-brown; prosternum with 4 black-brown speckles at the base part, mesothorax, metathorax and abdomen plenty of irregular dark brown speckles in ventral view *R. longipennis* sp. nov.
 — Not as above *R. butleri* (Wood-Mason, 1878)

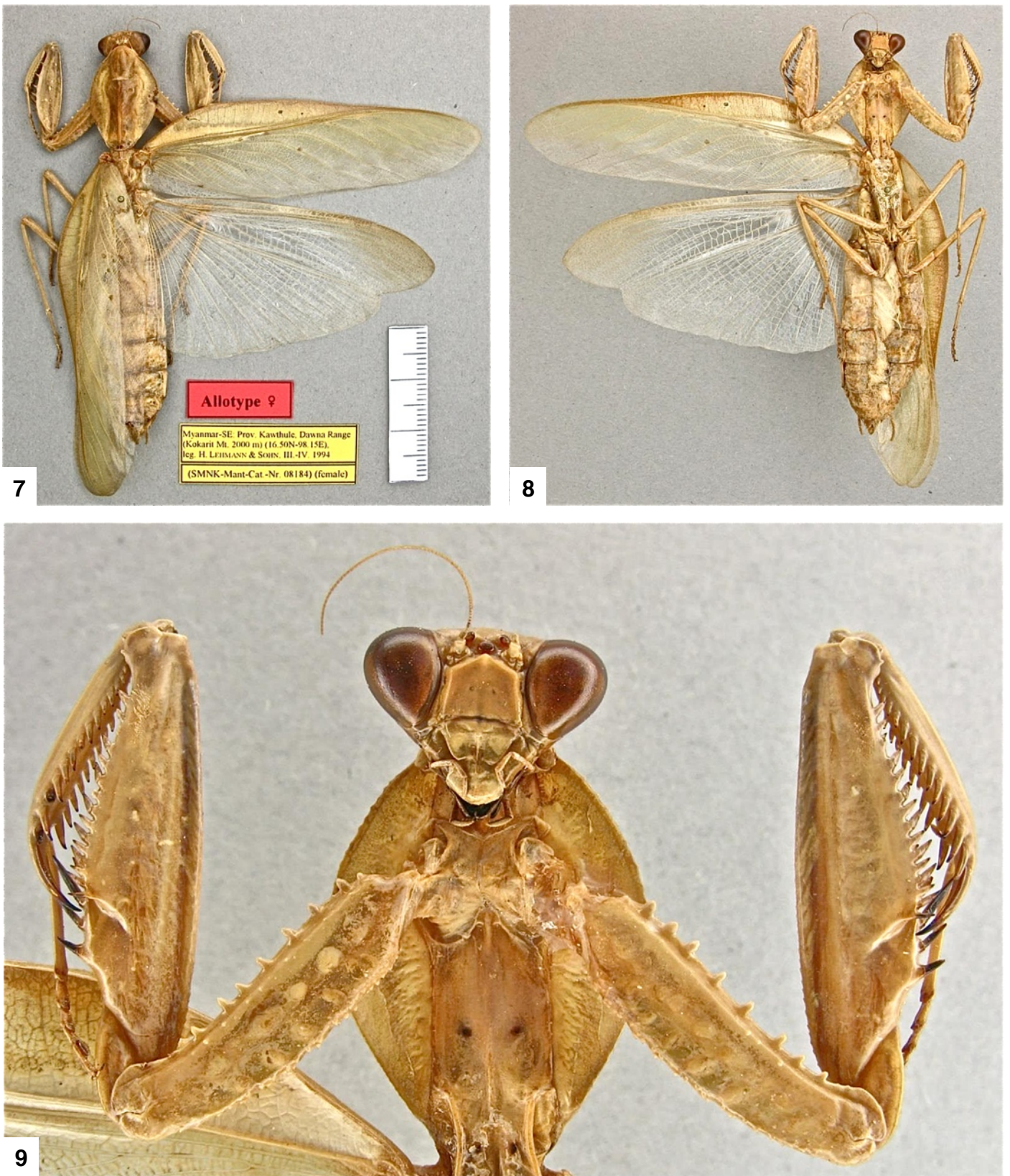


Fig. 7-9. *Rhombomantis longipennis* sp. nov., ♀, allotype.

7) Habitus, dorsal view; 8) Habitus, ventral view; 9) Head, prothorax and foreleg, ventral view.

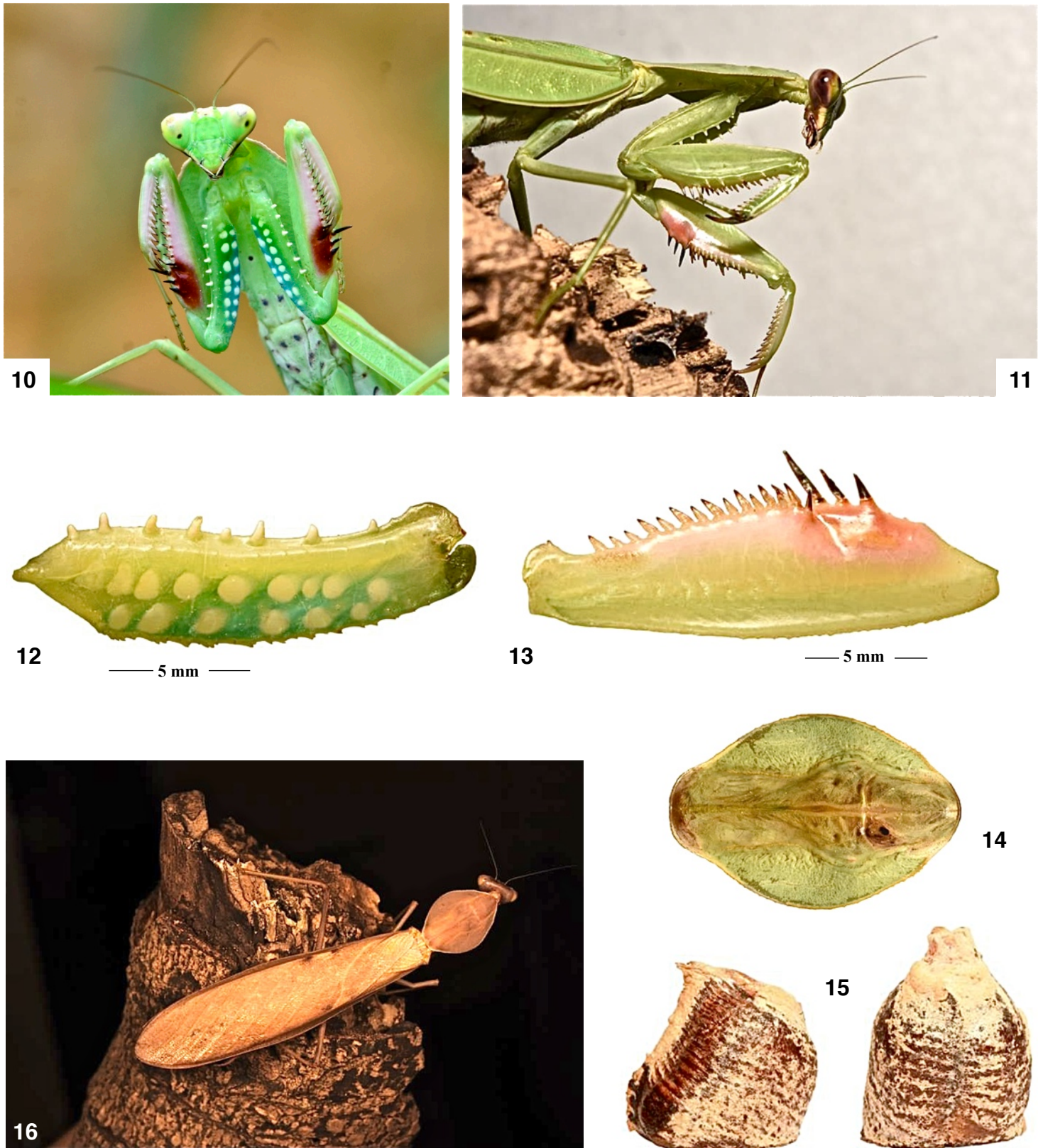


Fig. 10-16. *Rhombomantis longipennis* sp. nov.

10) Life aspect from China by Chao Wu; **11 & 16)** Life aspect from Thailand; **12)** Forecoxa, anterior view; **13)** Forefemur, anterior view; **14)** Pronotum, dorsal view; **15)** Ootheca.

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Résumé

Wang Y., Ehrmann R. & Borer M., 2021. – Une nouvelle espèce du genre *Rhombomantis* Ehrmann & Borer (Mantodea: Mantidae) décrite d'Indochine. *Faunitaxys*, 9(8) : 1 – 23.

Une nouvelle espèce, *Rhombomantis longipennis* **sp. nov.** est décrite et illustrée à partir de 34 spécimens provenant de Chine, d'Inde, du Myanmar et de Thaïlande. Les caractéristiques diagnostiques du genre *Rhombomantis* Ehrmann & Borer sont comparées à celles de taxa proches. Une clé de toutes les espèces connues de *Rhombomantis* Ehrmann & Borer est fournie.

Mots-clés. – Insecta, Mantodea, Hierodulinae, taxonomie, morphologie, Asie.

Table 1. *Rhombomantis longipennis* sp. nov., measurements (mm) of type specimens part I.

NO.	Specimen information	GL	KOB+L	PL	ML	PBmax	PBmin	TL	TB	TC	AL	atCl	atFe	atFeb	atTi
1	NMB-QR-1421 (f) Thailand (PT)	67.0	9.4+7.2	18.3	11.8	12.8	5.3	64.0	16.8	6.2	57.0	14.6	/	4.6	11.3
2	RBINS-Nr.10 (f) India-NE (PT)	76.5	10.7+8.4	20.4	13.4	16.8	4.5	58.5	19.5	6.2	62.0	14.6	/	4.6	11.3
3	SMNK-08183 (m) Myanmar (PT)	72.0	9.2+7.2	18.0	12.3	13.0	5.3	60.7	15.8	5.1	53.5	14.3	/	4.6	10.5
4	SMNK-08184 (f) Myanmar (AT)	82.6	10.6+8.4	21.0	14.3	14.6	5.7	71.5	20.0	7.0	63.0	17.0	19.6	5.8	13.4
5	SMNK-08188 (f) Thailand (PT)	78.9	10.1+7.7	20.0	13.4	13.5	5.5	66.3	17.8	6.1	58.4	16.1	17.8	5.4	12.5
6	SMNK-08189 (f) Thailand (PT)	72.3	10.4+8.2	20.8	13.9	14.5	6.0	73.0	18.6	6.9	64.2	17.0	19.1	6.0	13.5
7	SMNK-08203 (m) Thailand (PT)	71.8	9.1+6.8	19.5	12.5	12.4	5.5	60.0	16.6	5.0	53.3	15.0	18.1	5.0	12.0
8	SMNK-08220 (m) Thailand (HT)	68.0	8.3+6.8	16.8	12.0	13.1	4.2	57.5	16.0	5.2	50.7	12.9	15.5	4.6	10.6
9	SMNK-12193 (m) Thailand (PT)	73.2	9.5+7.2	20.2	13.3	13.3	5.2	67.4	17.0	5.8	57.0	15.5	18.3	5.2	12.6
10	SMNK-12195 (f) Thailand (PT)	76.7	10.6+8.3	22.0	14.6	14.0	5.8	77.6	20.7	7.0	6.5	17.3	21.0	5.5	13.6
11	SMNK-12199 (f) Thailand (PT)	66.0	9.2+6.8	18.0	11.2	12.1	5.1	63.8	17.0	5.8	54.4	13.8	17.2	4.8	11.5
12	MBDS-Cat.007 (m) Thailand (PT)	68.0	8.9	17.8	12.1	11.1	4.6	55.6	14.5	4.7	49.8	14.0	16.5	3.9	12.6
13	MBDS-Cat.008 (f) Thailand (PT)	68.0	10.3	20.2	13.7	13.2	6.0	68.4	19.4	5.6	59.5	16.3	18.6	5.1	14.0
14	MBDS-Cat.009 (f) Thailand (PT)	78.0	10.6	21.7	14.7	13.9	6.3	72.0	21.8	7.2	65.3	17.4	20.0	5.3	13.9

GL = total length;

KOB+L = head width + length;

PL = pronotum length;

ML = metazona length;

PBmax = pronotum max.width; **PBmin** = pronotum min. width;

TL = tegmen length; **TB** = tegmen width; **TC** = tegmen costal area;

AL = ala length;

atCl = fore coxa length;

atFe = anterior femur length; **atFeb** = anterior femur width;

atTi = anterior tibia length.

Table 2. *Rhombomantis longipennis* sp. nov., measurements (mm) of type specimens part II and quantity of the leg spines.

NO.	Specimen information	walking legs – length (mm)						spiny - spinous – thorny (number)					
		mesoFe	mesoTi	postFe	postTi	metaTa	postTa	VCS	VFSin	VFSex	DISCO	VTSin	VTSex
1	NMB-QR-1421 (f) Thailand (PT)	15.8	11.9	17.0	17.0	5.0	10.2	7	14	4	4	14	13
2	RBINS-Nr.10 (f) India-NE (PT)	17.8	14.7	21.0	20.6	6.8	12.5	8	15	4	4	14/15	12/11
3	SMNK-08183 (m) Myanmar (PT)	14.3	12.4	17.5	17.5	5.0	9.9	7	15	4	4	14	12
4	SMNK-08184 (f) Myanmar (AT)	20.6	14.4	20.2	21.0	6.4	12.5	7	14	4	4	14	11
5	SMNK-08188 (f) Thailand (PT)	15.9	13.0	18.8	18.3	5.3	11.5	8	13	4	4	14	11
6	SMNK-08189 (f) Thailand (PT)	16.6	13.2	19.3	19.3	5.7	11.6	8	14	4	4	14	11
7	SMNK-08203 (m) Thailand (PT)	15.8	13.1	18.3	18.6	5.8	10.2	8	16	4	4	14	12
8	SMNK-08220 (m) Thailand (HT)	14.7	12.2	17.3	17.3	5.0	10.4	7	13	4	4	14	13
9	SMNK-12193 (m) Thailand (PT)	16.6	13.8	19.8	19.6	6.5	12.6	7	13	4	4	14	13
10	SMNK-12195 (f) Thailand (PT)	18.0	15.6	22.2	21.5	5.9	13.5	8	15	4	4	14	13
11	SMNK-12199 (f) Thailand (PT)	14.4	12.3	17.7	18.0	5.2	10.5	7	15	4	4	14	13
12	MBDS-Cat.007 (m) Thailand (PT)	/	/	16.8	17.9	5.6	11.6	7/6	15	4	4	14	11
13	MBDS-Cat.008 (f) Thailand (PT)	/	/	19.2	19.6	5.8	12.0	8	15	4	4	15	11
14	MBDS-Cat.009 (f) Thailand (PT)	/	/	20.0	20.3	5.9	12.4	8	15	4	4	15	11

mesoFe = mesofemur length;

mesoTi = mesotibia length;

postFe = post. femur length;

postTi = post. tibia length;

metaTa = metatarsus post. length;

postTa = post. tarsus length;

VCS = fore coxa-spiny;

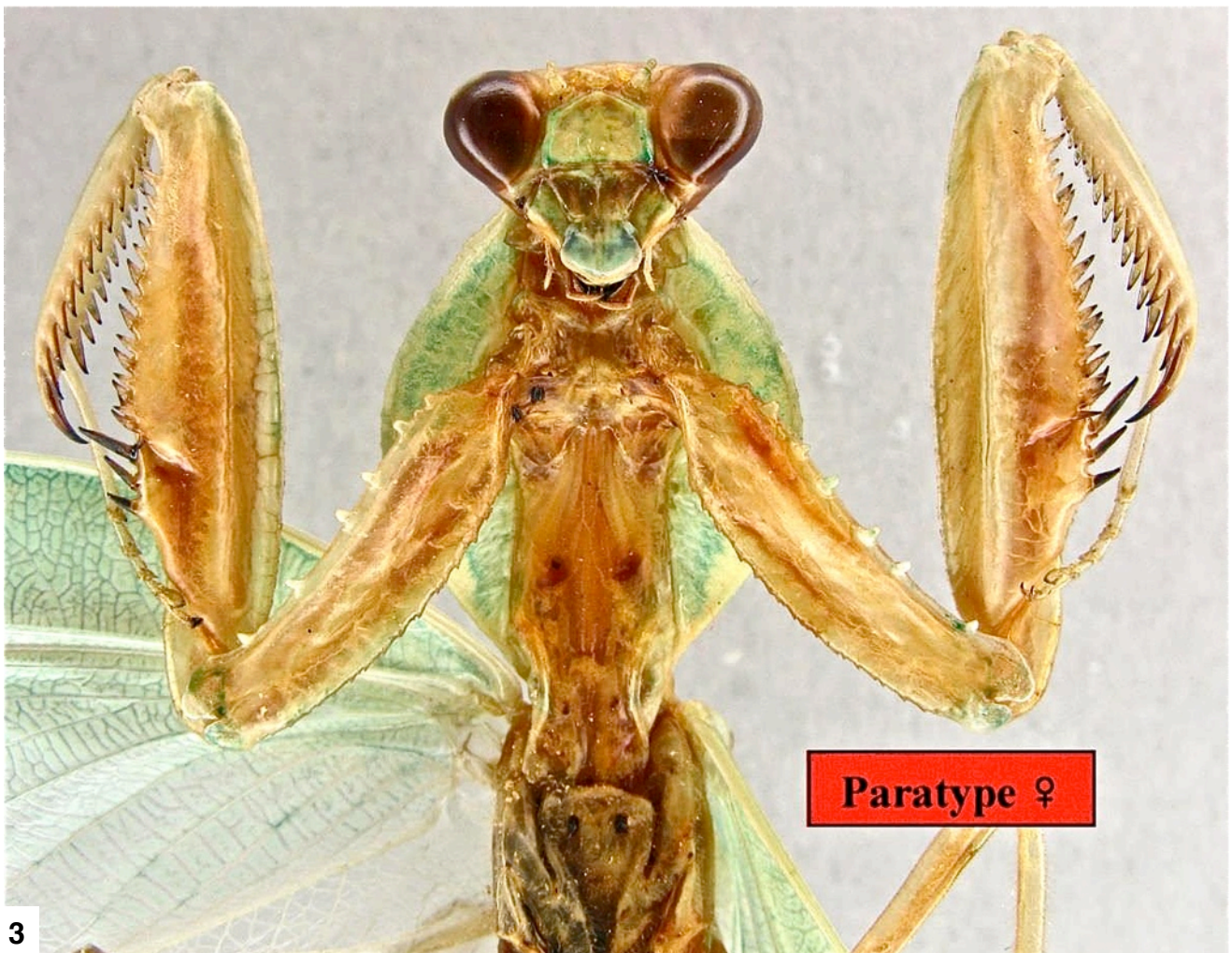
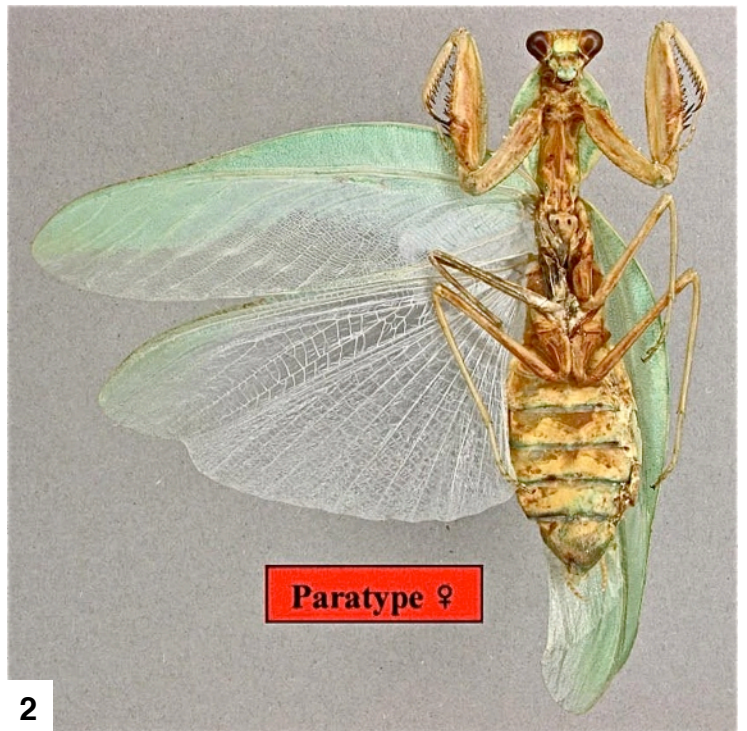
VFSin = fore femur-spiny;

VFSex = fore femur-spiny ex;

DISCO = Discoidal-spiny;

VTSin = fore tibia-spiny in;

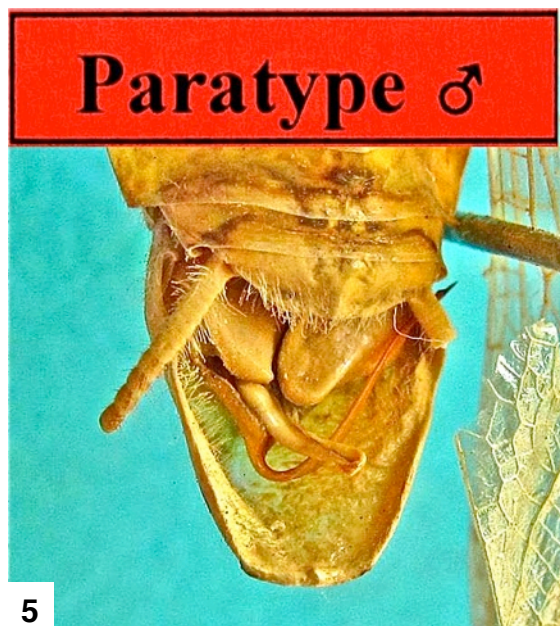
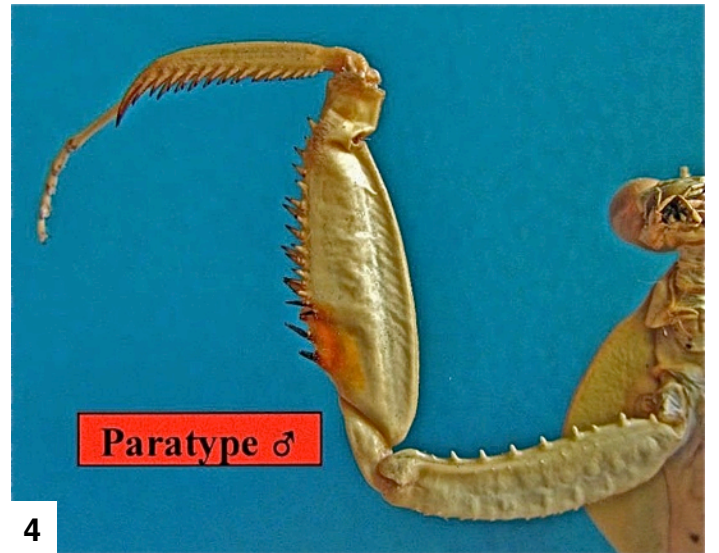
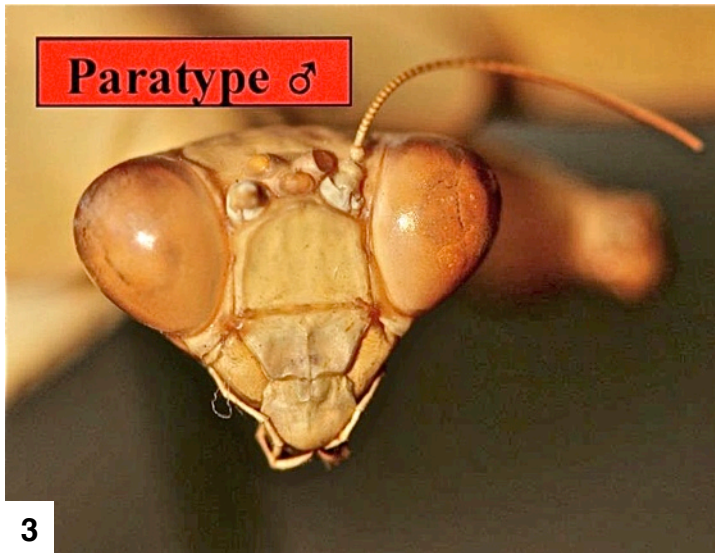
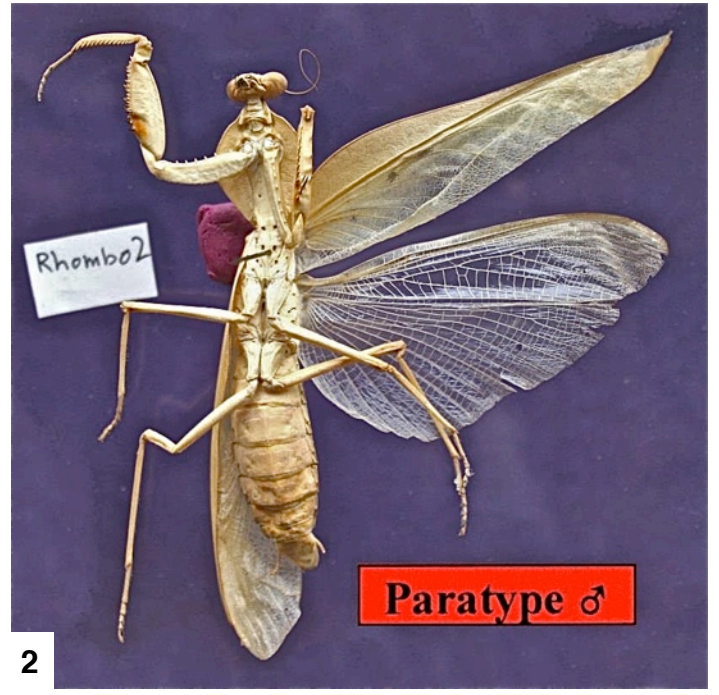
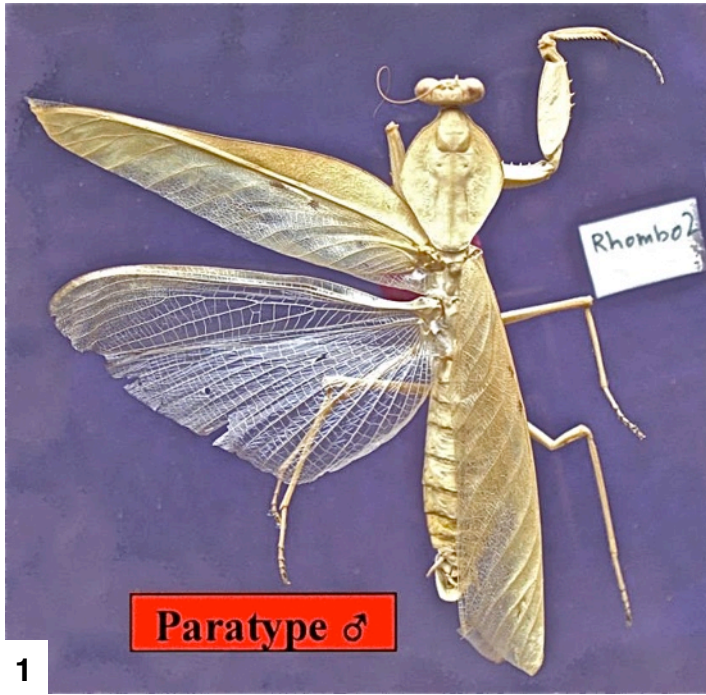
VTSex = fore tibia-spiny ex.



Appendix 1. *Rhombomantis longipennis* sp. nov., paratype, ♀ (NMB).

Thailand-NW, Prov. Chiang Rai, leg. local collector, ded. Stephen Davies, ded. Achim Willsch, 01. IX. 2012, QR- 1421.

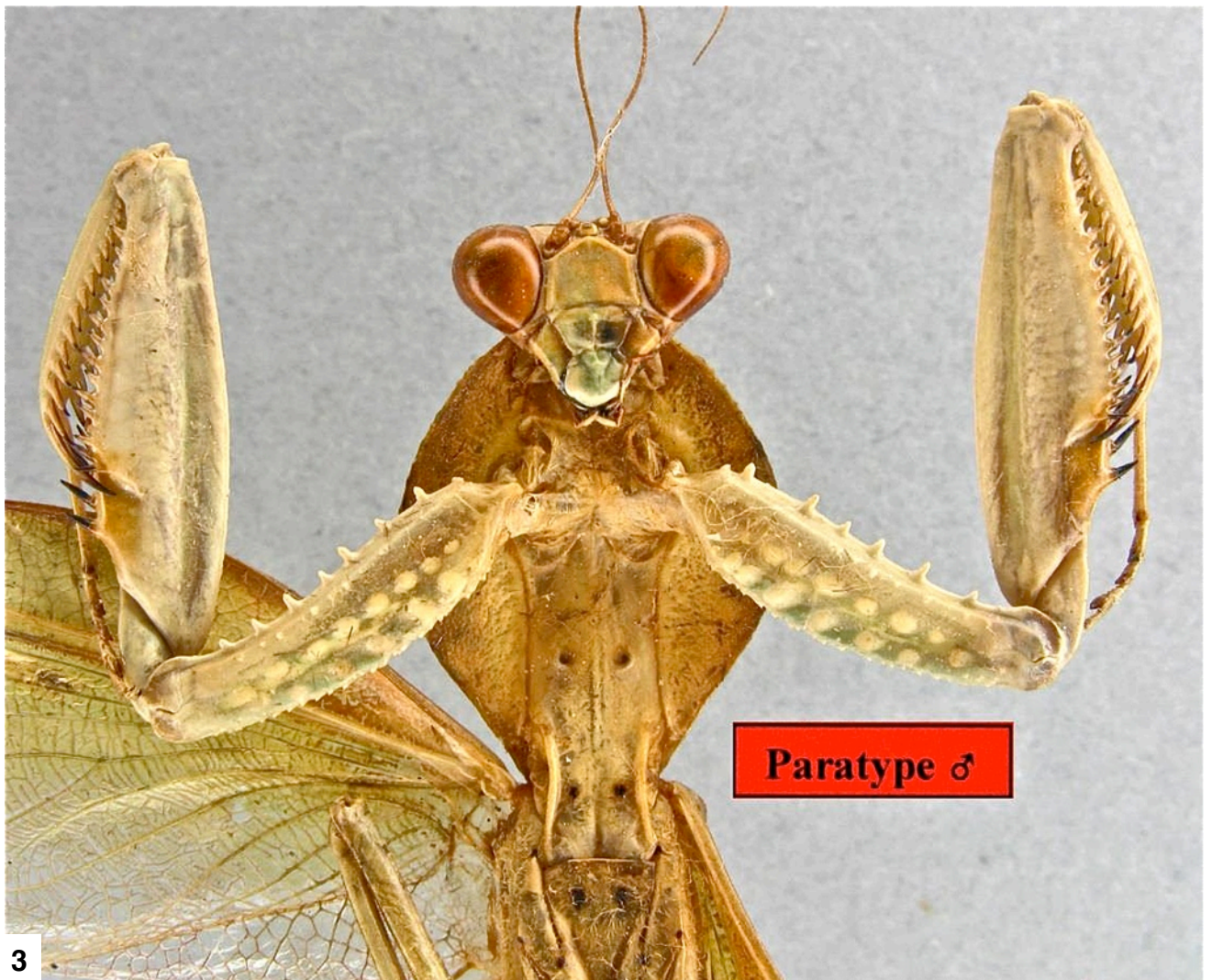
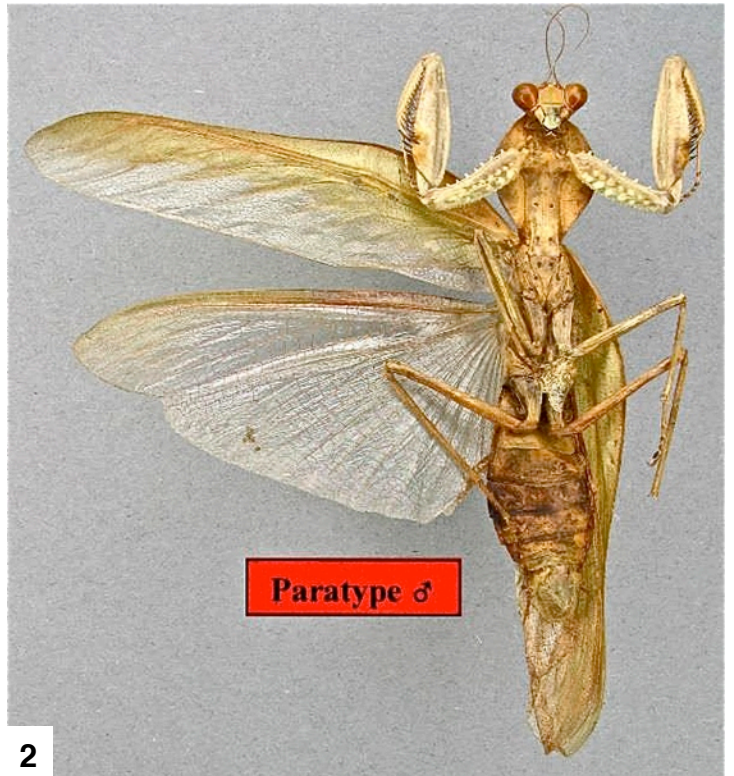
1) Habitus, dorsal view; 2) Habitus, ventral view; 3) Head, prothorax and foreleg, ventral view.



Appendix 2. *Rhombomantis longipennis* sp. nov., paratype, ♂ (MCZMI).

India-NE, exact locality unknown, leg. Student, V. 2000, Cat.- #002.

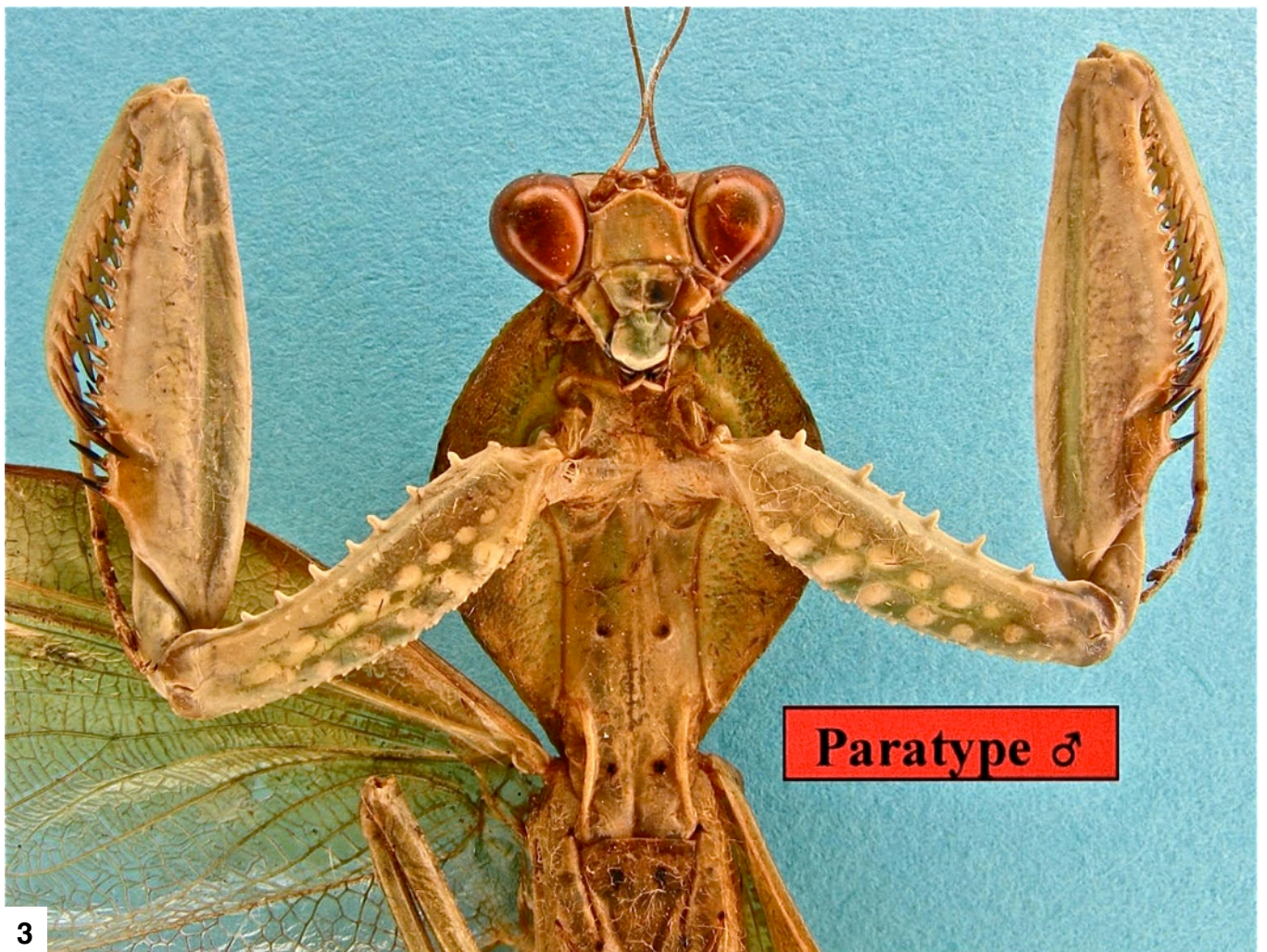
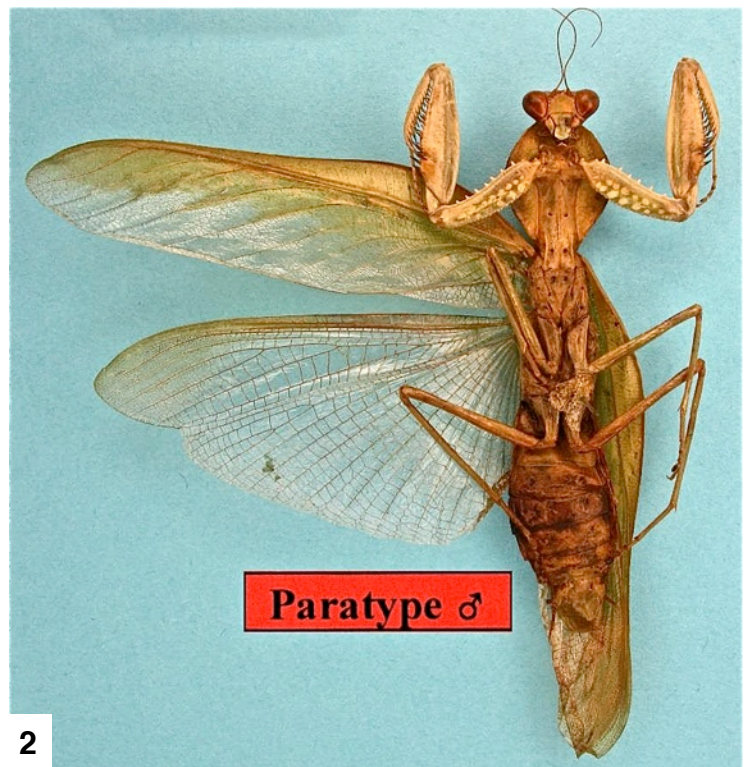
1) Habitus, dorsal view; 2) Habitus, ventral view; 3) Head, anterior view; 4) Foreleg, ventral view; 5) Apex abdomen, dorsal view.



Appendix 3. *Rhombomantis longipennis* sp. nov., paratype, ♂ (SMNK).

Myanmar-SE, Prov. Kawthule, Dawna Range, Kokarit Mt. 2000 m, 16.50N-98.15E, leg. H. Lehmann & Sohn, III-IV. 1994, SMNK-Mant-Cat.-Nr. 08183.

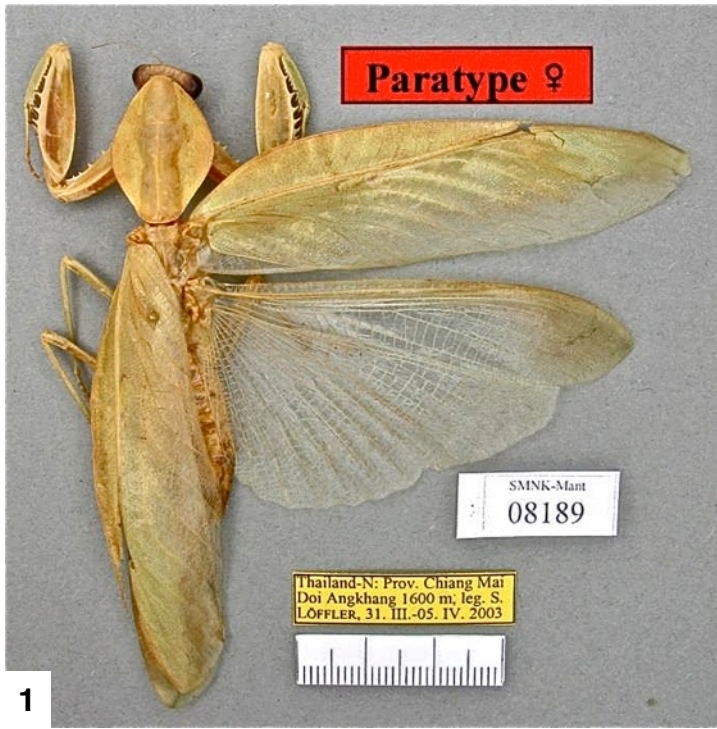
1) Habitus, dorsal view; 2) Habitus, ventral view; 3) Head, prothorax and foreleg, ventral view.



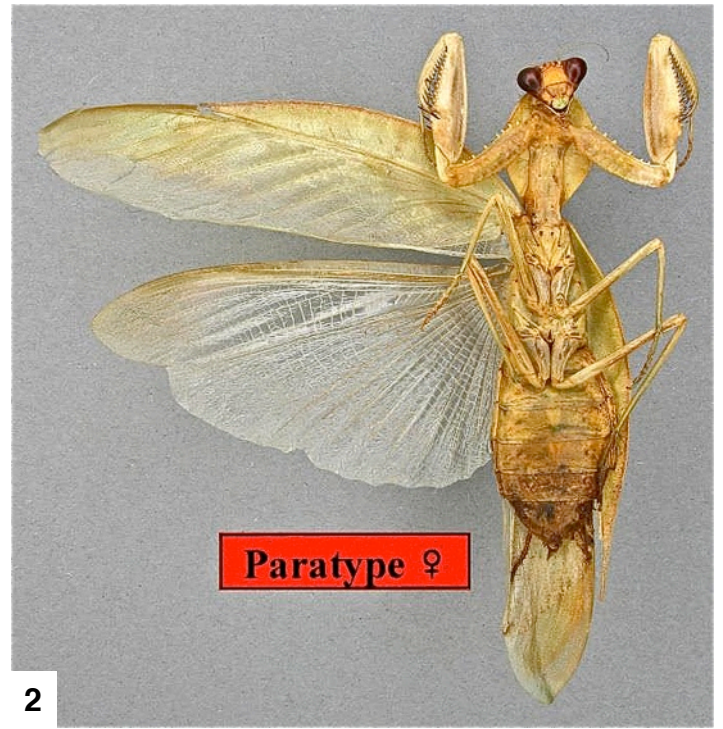
Appendix 4. *Rhombomantis longipennis* sp. nov., paratype, ♂ (SMNK).

Thailand-NW, Prov. Chiang Mai, Chiang Mai, Doi Angkhang, 1600 m, leg. S. Löffler, 31.III. - 05. IV. 2003, SMNK-Mant- Cat.-Nr. 08188.

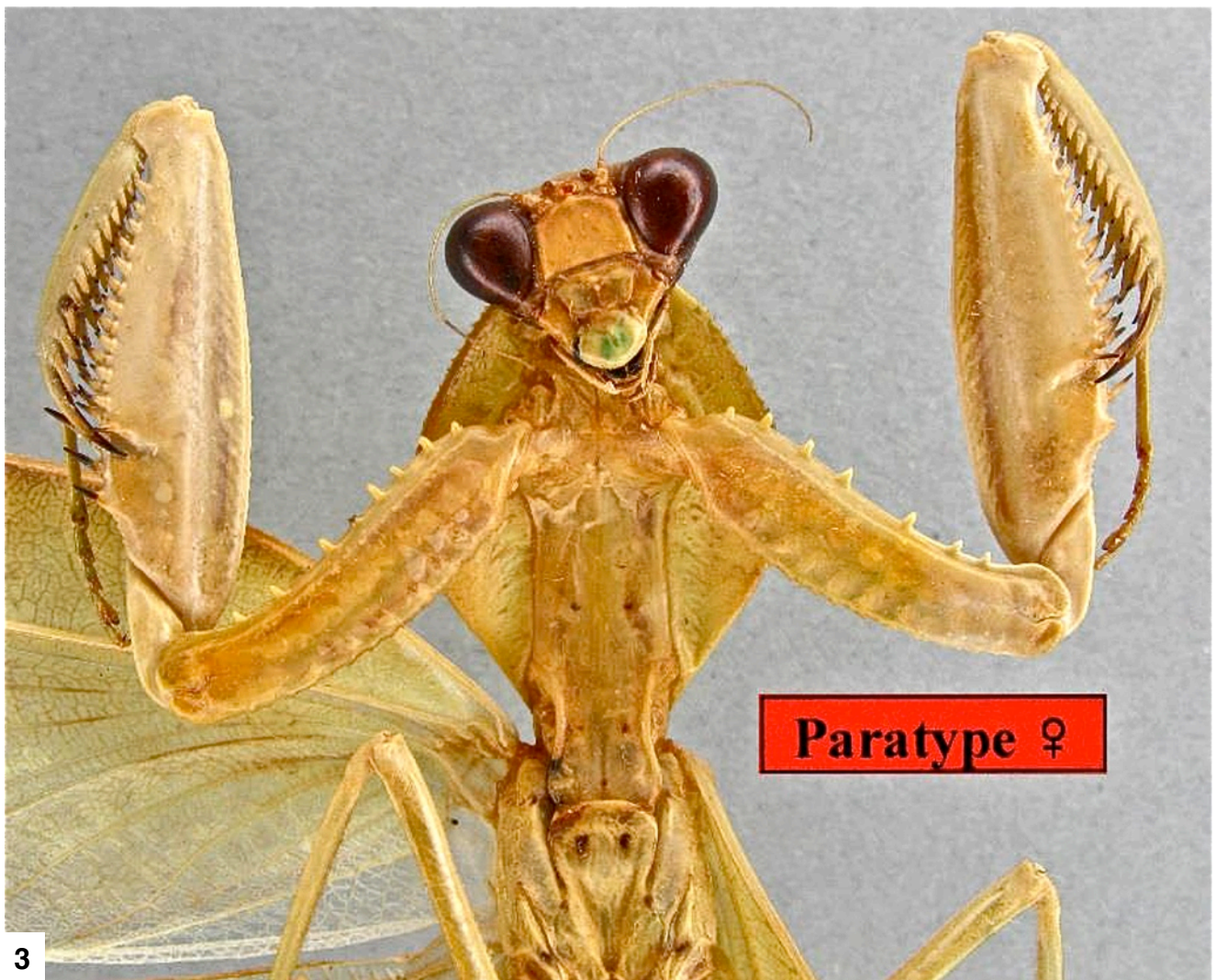
1) Habitus, dorsal view; 2) Habitus, ventral view; 3) Head, prothorax and foreleg, ventral view.



1



2

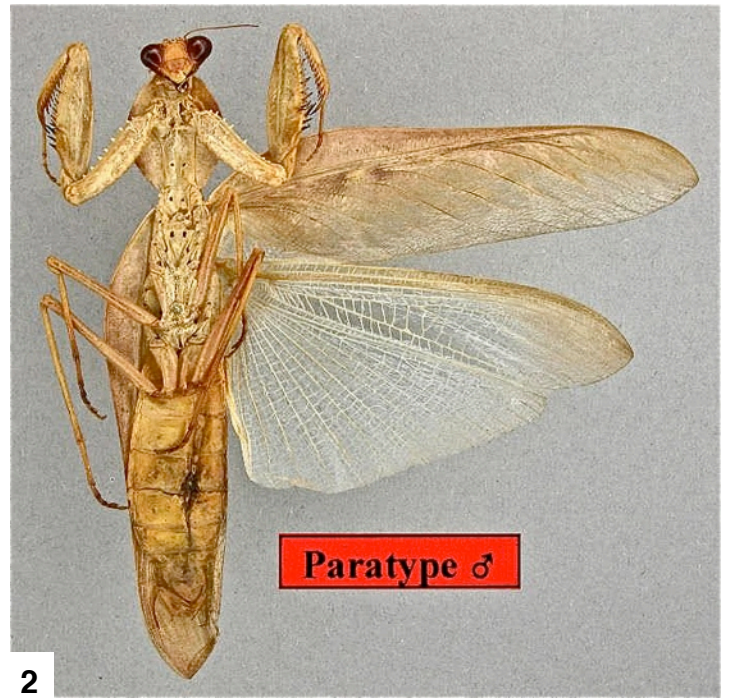
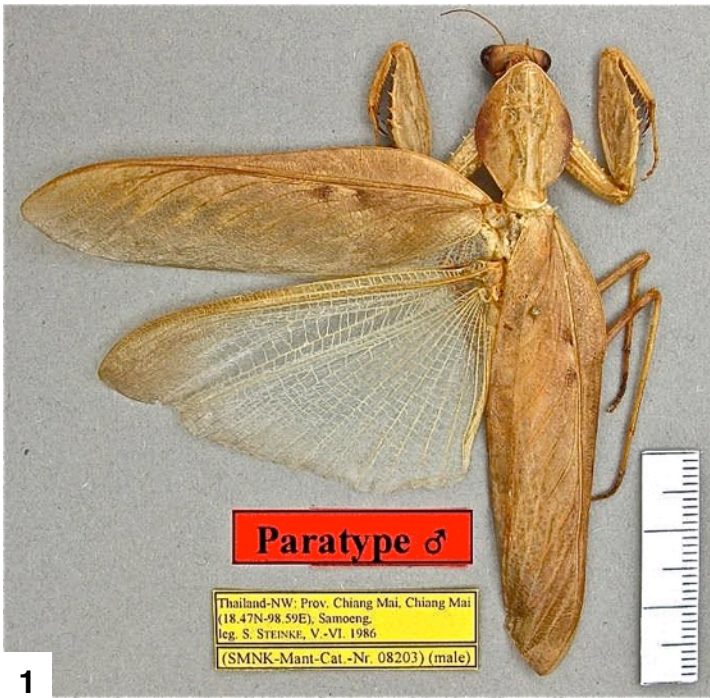


3

Appendix 5. *Rhombomantis longipennis* sp. nov., paratype, ♀ (SMNK).

Thailand-NW, Prov. Chiang Mai, Chiang Mai, Doi Angkhang, 1600 m, leg. S. Löffler, 31.III. - 05. IV. 2003, SMNK-Mant-Cat.-Nr. 08189.

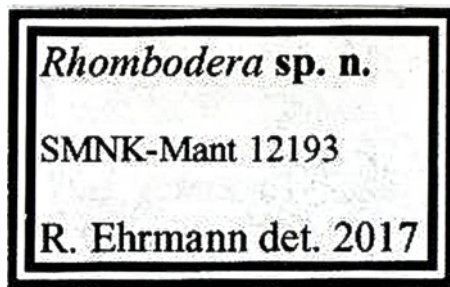
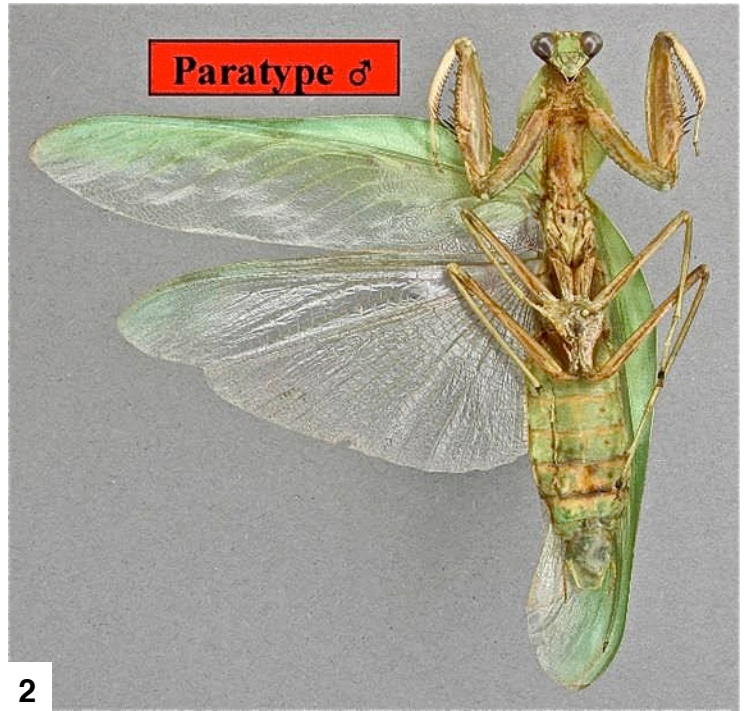
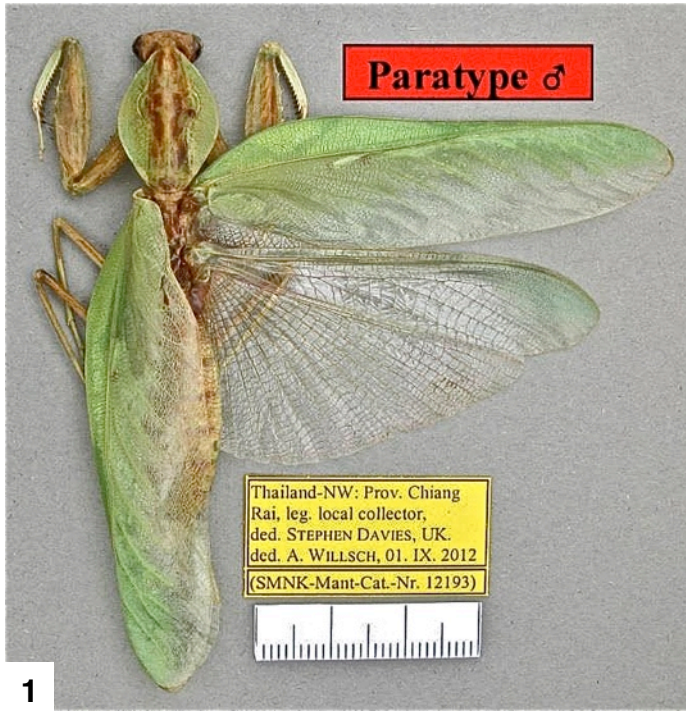
1) Habitus, dorsal view; 2) Habitus, ventral view; 3) Head, prothorax and foreleg, ventral view.



Appendix 6. *Rhombomantis longipennis* sp. nov., paratype, ♂ (SMNK).

Thailand-NW, Prov. Chiang Mai, Chiang Mai, 18.47N-98.59E, Samoeng, leg. S. Steinke, V.-VI. 1986, SMNK- Mant-Cat.- Nr. 08203.

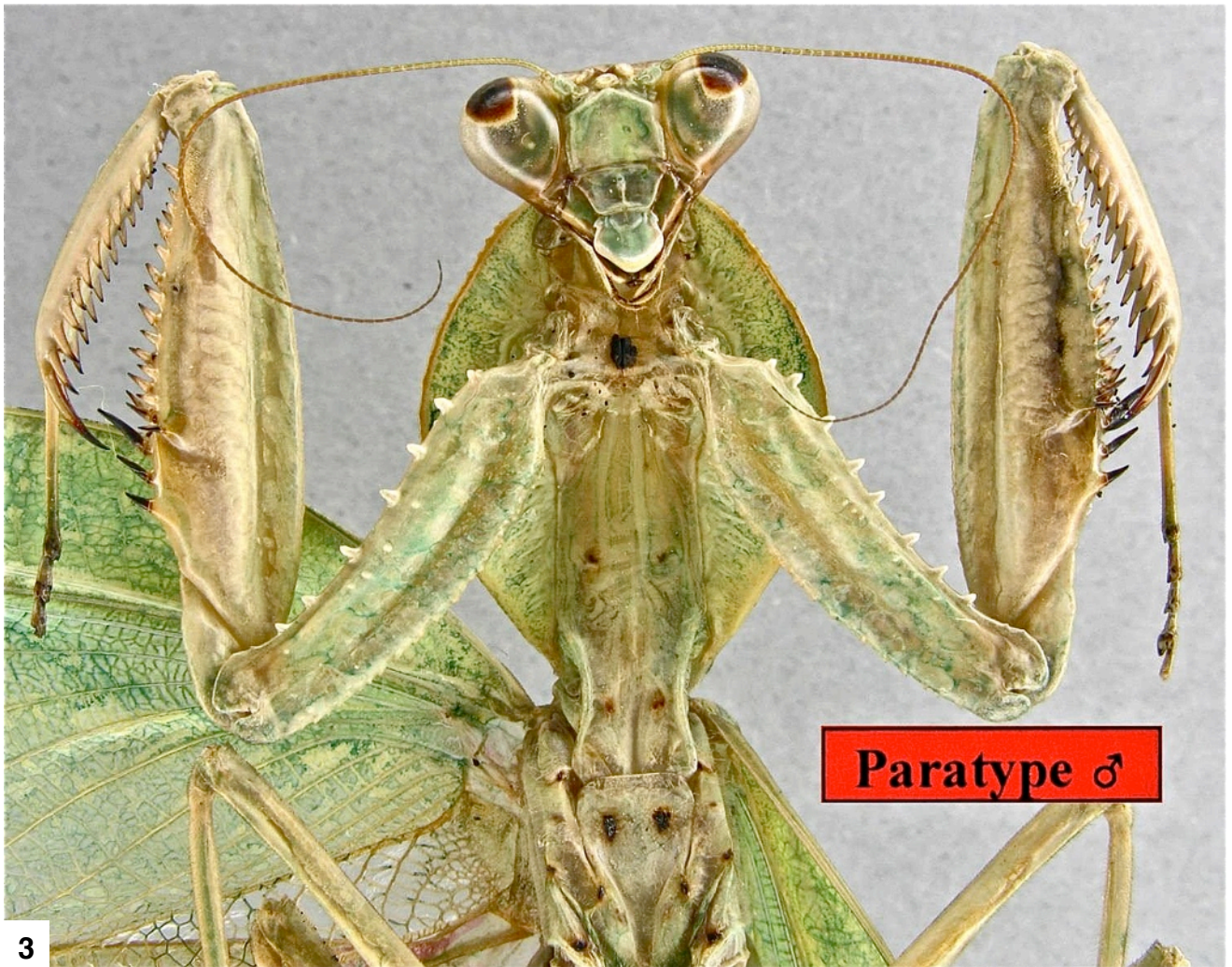
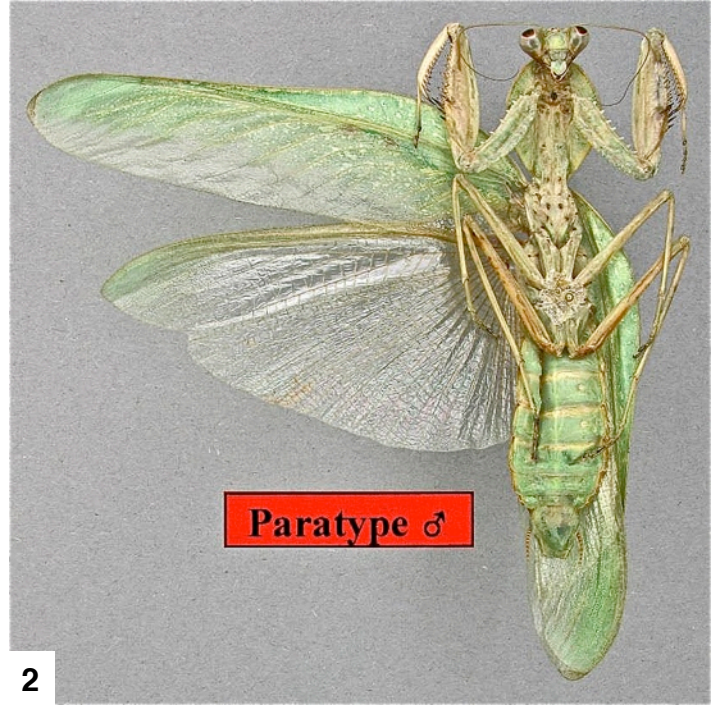
1) Habitus, dorsal view; 2) Habitus, ventral view; 3) Apex of abdomen, dorsal vie.



Appendix 7. *Rhombomantis longipennis* sp. nov., paratype, ♂ (SMNK).

Thailand-NW, Prov. Chiang Rai, leg. local collector, ded. Stephen Davies, ded. Achim Willsch, 01. IX. 2012, SMNK-Mant- Cat.-Nr. 12193.

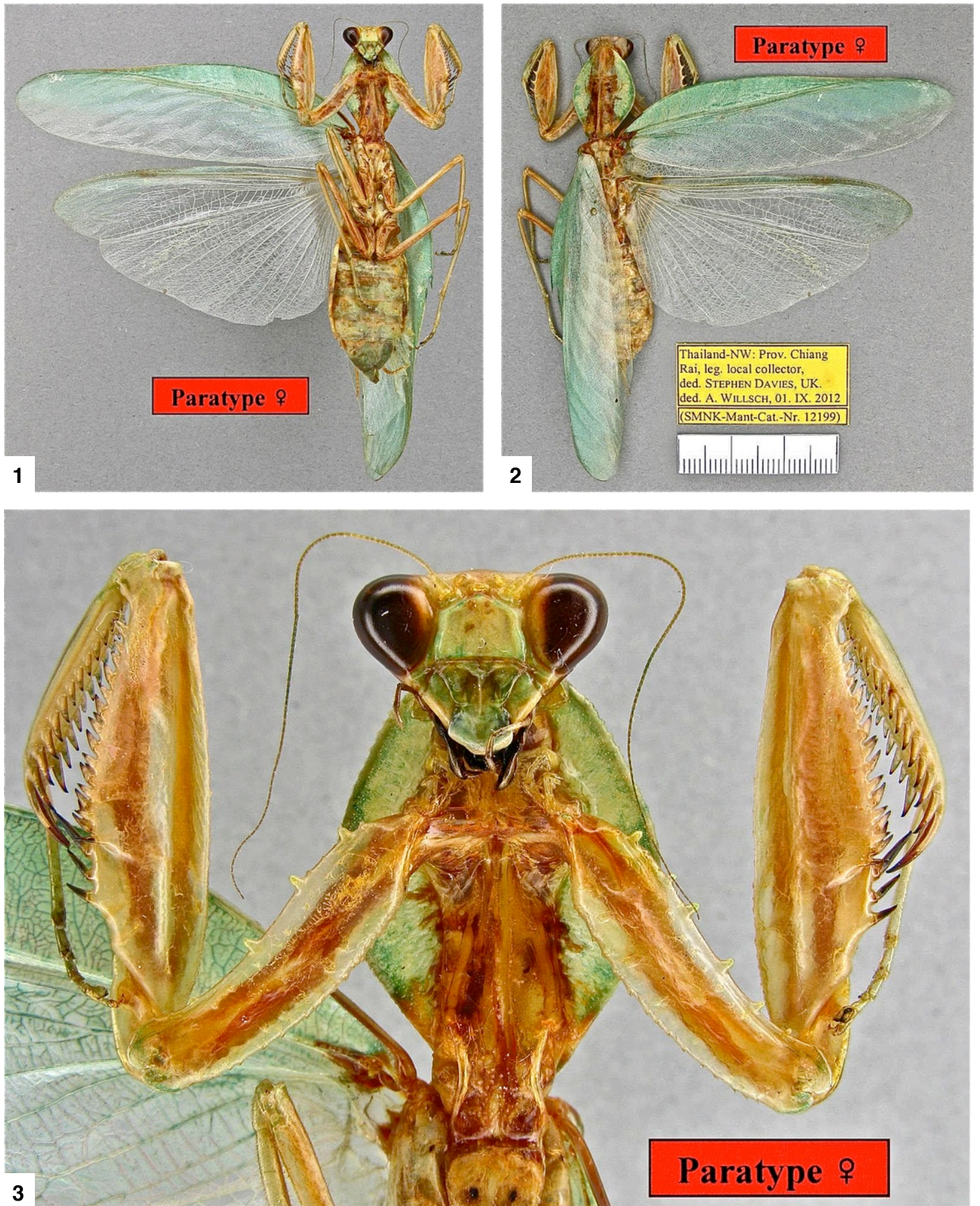
1) Habitus, dorsal view; 2) Habitus, ventral view; 3) Supra-anal plate and cercus, subgenital plate, genitalia, ventral view; 4) Head, anterior view.



Appendix 8. *Rhombomantis longipennis* sp. nov., paratype, ♂ (SMNK).

Thailand-NW, Prov. Chiang Rai, leg. local collector, ded. Stephen Davies, ded. Achim Willsch, 01. IX. 2012, SMNK-Mant- Cat.-Nr. 12197.

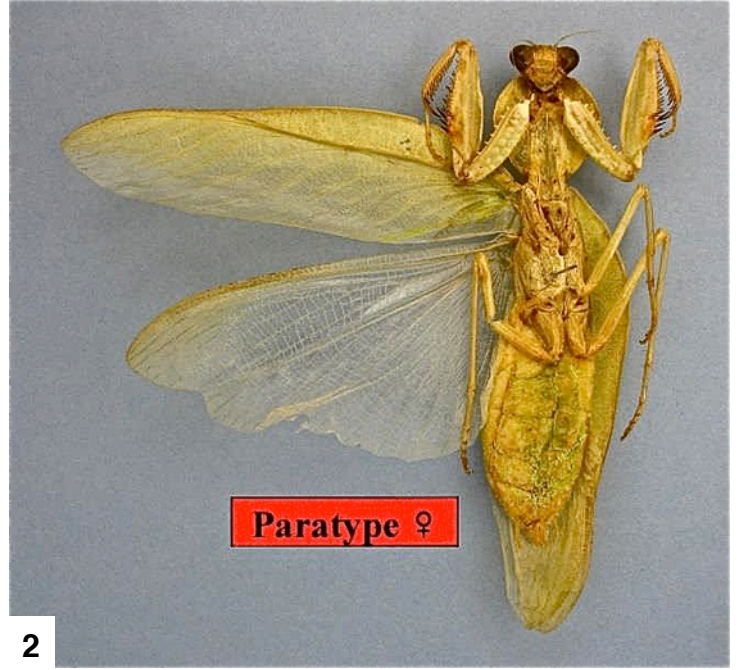
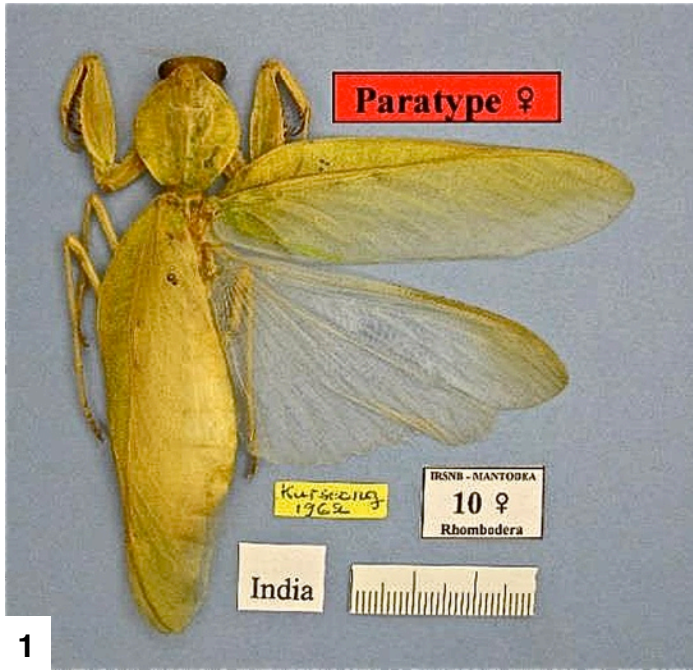
1) Habitus, dorsal view; 2) Habitus, ventral view; 3) Head, prothorax and foreleg, ventral view.



Appendix 9. *Rhombomantis longipennis* sp. nov., paratype, ♀ (SMNK).

Thailand-NW, Prov. Chiang Rai, leg. local collector, ded. Stephen Davies, ded. Achim Willsch, 01. IX. 2012, SMNK-Mant- Cat.-Nr. 12199.

1) Habitus, dorsal view; 2) Habitus, ventral view; 3) Head, prothorax and foreleg, ventral view.



Appendix 10. *Rhombomantis longipennis* sp. nov., paratype, ♀ (RBINS).

India-NE, West Bengal, Kurseong (=Karsiyang), 25 km S Darjeeling, 15 N Shiliguri, 26.53N-88.16E, leg. Nr. 010.

1) Habitus, dorsal view; 2) Habitus, ventral view; 3) Head, prothorax and foreleg, ventral view.



Appendix 11. *Rhombomantis longipennis* sp. nov., paratype, ♀ (RBINS).

Thailand-E, Pak Chong, 14°42'48.10"N - 101°25'28.16"E, 300 m, June 28-1935, Dajak Layang Gaddi, leg. Nr. 010a.

1) Habitus, dorsal view; 2) Habitus, ventral view; 3) Label; 4) Head, prothorax and foreleg, ventrolateral view.



Appendix 12. *Rhombomantis longipennis* sp. nov., paratype, ♂ (MBDS).

Thailand-N, Umg. Chiang Mai, Doi Kam, 550 m, E9./A10., 2000, leg. S. LÖFFLER, leg. Cat. 007.

1) Habitus, dorsal view; 2) Habitus, ventral view; 3) Head, prothorax and foreleg, ventral view; 4) Apex of abdomen, dorsal view.



Appendix 13. *Rhombomantis longipennis* sp. nov., paratype, ♀ (MBDS).

Thailand-N, Umg. Chiang Mai, Doi Kam, 550 m, E9./A10., 2000, leg. S. LÖFFLER, leg. Cat. 008.

1) Habitus, dorsal view; 2) Habitus, ventral view; 3) Head, prothorax and foreleg, ventral view.



Appendix 14. *Rhombomantis longipennis* sp. nov., paratype, ♀ (MBDS).

Myanmar-SE, Dawna, leg. H. Lehmann & Sohn, 04. IV. 1990, leg. Cat. 009.

1) Habitus, dorsal view; 2) Habitus, ventral view; 3) Head, prothorax and foreleg, ventral view.

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Couverture: *Rhombomantis longipennis* **sp. nov.** dans son milieu naturel (Mengla, Yunnan, China) (Chao Wu, IZCAS, China, 12/10/2013, NIKON D7000).

Crédits photos:

Fig. 1-9, Appendix 1, 3-10 & 12-14: © **Reinhard Ehrmann**

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Fig. 11-16 : © **Thorntan Unnahachote**

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