



Taxonomy/Taxinomie

An enigmatic new stick insect from the Philippine Islands
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ARTICLE INFO

Article history:

Received 11 May 2012

Accepted after revision 13 July 2012

Available online 22 August 2012

Keywords:

Phasmatodea

Insect morphology

Insect ultrastructure

Insect systematics

Scanning electron microscopy (SEM)

ABSTRACT

A new genus and species of stick insect is described and figured from Mount Halcon, on the Philippine island of Mindoro. *Conlephasma enigma* gen. et sp. n. is a stout, flightless, and apparently ground-dwelling species with vivid integumental colors. When disturbed, specimens spray a defensive secretion from the prothoracic exocrine glands. The systematic position of *Conlephasma* within Euphasmatodea is unclear. The elongated galealobulus and the trichome area located laterally in the galea, represent unusual apomorphic characters of the maxilla that could indicate affinities with Necrosciinae or Pseudophasmatinae. All tibiae exhibit the anareolate condition. Euplantulae are of two types: those of tarsomeres I–IV feature a nubby microstructure, whilst the one on the ventral side of the pretarsus is smooth. Males are characterized by the presence of a well-developed vomer on the tenth abdominal segment. A distinctive and apomorphic trait of female terminalia is represented by the elongated tenth abdominal tergum. *Conlephasma* can represent an interesting taxon for studies on the evolution of the stick and leaf insects.

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1. Introduction

Phasmatodea is an order of hemimetabolous Neoptera [1] with exclusively phytophagous feeding habits [2]. At the level of higher classification, it consists of two major monophyletic groups, namely Timematodea and Euphasmatodea, which can be considered of sub-ordinal rank [3]. Among extant taxa, Timematodea appear to bear the closest resemblance to the phasmatodean ancestry [4–9], and indeed display a set of plesiomorphic character states unknown from any other member of the order [9–15]. Furthermore, a low extant diversity (only 21 species in the single genus *Timema* Scudder, 1895), and a restricted geographic distribution (western North America) [16], indicate that Timematodea are a relict insect taxon. By contrast, Euphasmatodea (true stick and leaf insects) are a more recently evolved and abundant

group with a wide geographic distribution [3,4]: to date, over 3000 species have been described, and new taxa are frequently discovered in tropical areas.

The Philippine archipelago is considered the second “hottest hotspot” of biodiversity on Earth [17], and represents an area with potential high levels of euphasmatodean diversity and endemism. Motivated by this assumption, we have undertaken a series of taxonomic investigations in order to improve the knowledge of the stick and leaf insect fauna of the Philippines [18–23]. In our latest contribution we documented an interesting representative of the family Aschiphasmataidae, *Dallaiphasma eximius* Gottardo, 2011, from Mount Halcon on the island Mindoro in the western part of the archipelago [23]. In this locality, we have found another interesting stick insect, representing an unknown genus and species of unclear taxonomic affiliation within Euphasmatodea. The new taxon is a stout, flightless, and probably ground-dwelling form with anareolate condition of the tibiae. The objective of the current study is to provide a description of both

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sexes and the egg of the new taxon, along with a discussion of the most significant morphological characters.

2. Materials and methods

2.1. Source of animals

The type series of the new taxon consists of 58 ♂♂, 33 ♀♀, and 15 eggs. Specimens were preserved dried and pinned in the following collections: ZSMC: Zoologische Staatssammlung München, Germany; MSNG: Museo Civico di Storia Naturale “Giacomo Doria”, Genova, Italy; FH: personal collection of Frank H. Hennemann, Kaiserslautern, Germany; OC: personal collection of Oskar V. Conle, Bolsterlang, Germany; PH: personal collection of Philipp Heller, Buochs, Switzerland.

2.2. Morphological observations

Macro-photographs were taken with a Nikon D70 digital camera. Chromatic characters were described from live specimens. The study of the gross external morphology was carried out using a Zeiss Stemi DV4 stereo light microscope. Line drawings of terminalia were prepared with the aid of a camera lucida. For scanning electron microscopy (SEM), maxillae and legs were cut off the body, rehydrated and cleaned in distilled water, dehydrated in an ascending series of Ethanol, critical-point dried in a Balzers CPD 030 apparatus, mounted on aluminium stubs using double-sided adhesive carbon tape, gold-coated in a Balzers MED 010 sputtering device, and observed with a Philips XL20 scanning electron microscope operated at 10 kV.

As the new taxon is a monotypic genus the generic diagnosis only summarizes the main morphological features, while a complete and more detailed account is presented with the description of the species.

3. Results

Order: PHASMATODEA Jacobson & Bianchi, 1902
Suborder: EUPHASMATODEA *sensu* Bradler 1999
Genus: **Conlephasma** gen. n.

3.1. Diagnosis of the new genus

Conlephasma gen. n. is characterized by a broad and robust body in both sexes. The integument is smooth. The head is prognathous and somewhat oval. The vertex is rounded. Antennae are elongated, but slightly shorter than the body length (Table 1). Ocelli are lacking. A gula is absent on the ventral side of the head capsule. In the prothorax, the ana- and coxopleurite are fused, and paranota are well developed. The tegmina and the hind wing are lacking. Femora are quadrate in cross-section, with two dorsal and three ventral carinae. The fore femur is straight, not curved or compressed at head level. Tibiae are carinate, without area apicalis. The five-segmented tarsus has the tarsomere I shorter than combined length of tarsomeres II–IV. The first abdominal tergum (or median segment) is longer than metanotum. The male genital region exhibits a short sternum IX, which is transversely divided into two sternites by a faint furrow. The distal sternite (or poculum) is about four-fifths the total length of sternum IX. The tergum X is semicircular and rather dorsoventrally flattened. Its ventroposterior margin is equipped with thorn pads which have their tip curved anteriorly. The vomer is well developed. The female genital region is characterized by the absence of a praeopercular organ on sternum VII. The sternum VIII only moderately extends behind tergum IX, and covers entirely the gonapophyses. The tergum X is distinctly elongated posteriorly.

Etymology: The new genus-group name is a patronymic dedicated to Oskar V. Conle (Bolsterlang, Germany), for giving us the possibility to study the interesting phasmatodean material preserved in his collection. The Greek word “Phasma” (meaning, ghost) is a typical genus-group names ending in stick insects.

Type species: *Conlephasma enigma* sp. n., by present designation.

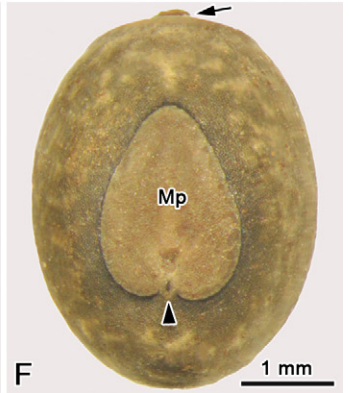
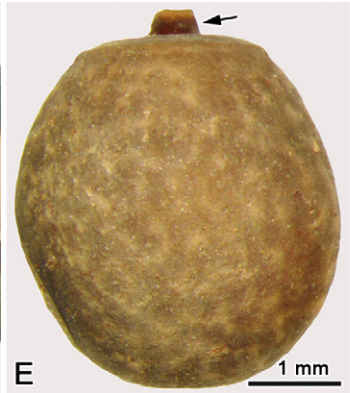
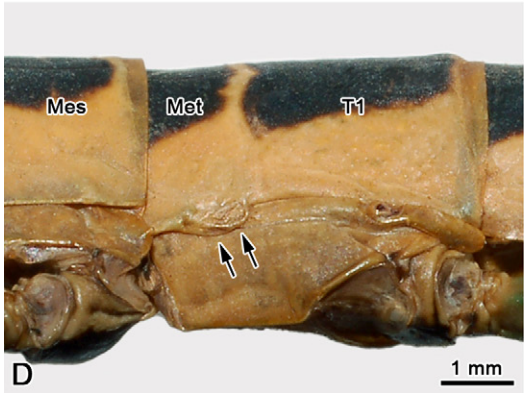
3.2. Description of the new species

C. enigma sp. n. (Figs. 1–3, Table 1).

Type material: Holotype, ♂, Philippinen, Mindoro Island, Mt. Halcon, 6.–8.2006, ex. Coll. O. Conle (depository:

Table 1
Morphometric data for the type specimens of *Conlephasma enigma* gen. et sp. n. from Mindoro island, Philippines.

Parameter	♂ holotype (ZSMC)	♂ paratypes (OC)	♀ paratypes (OC)
<i>Measurement (mm)</i>			
Body length	47.0	43.2–56.5	57.0–71.5
Antenna length	> 17.0	32.0–35.0	43.0–48.0
Pronotum length (PL)	3.1	3.1–4.2	4.4–5.3
Mesonotum length (MOL)	8.0	7.4–9.1	11.1–13.9
Metanotum length (MAL)	2.2	1.9–2.6	2.8–3.4
Median segment length (MSL)	3.3	3.0–3.8	3.8–5.0
Fore femur length	7.7	7.4–10.1	9.8–11.7
Fore tibia length	7.6	7.4–11.3	10.2–13.0
Mid femur length	6.1	6.0–8.5	8.6–10.5
Mid tibia length	6.4	6.3–8.9	8.9–10.5
Hind femur length	8.1	8.0–11.1	11.5–13.7
Hind tibia length	9.0	9.0–12.4	12.2–14.7
<i>Morphometric ratios</i>			
MOL divided by PL	2.58	2.17–2.38	2.52–2.62
MAL divided by MOL	0.28	0.26–0.29	0.24–0.25
MSL divided by MAL	1.50	1.46–1.58	1.36–1.47



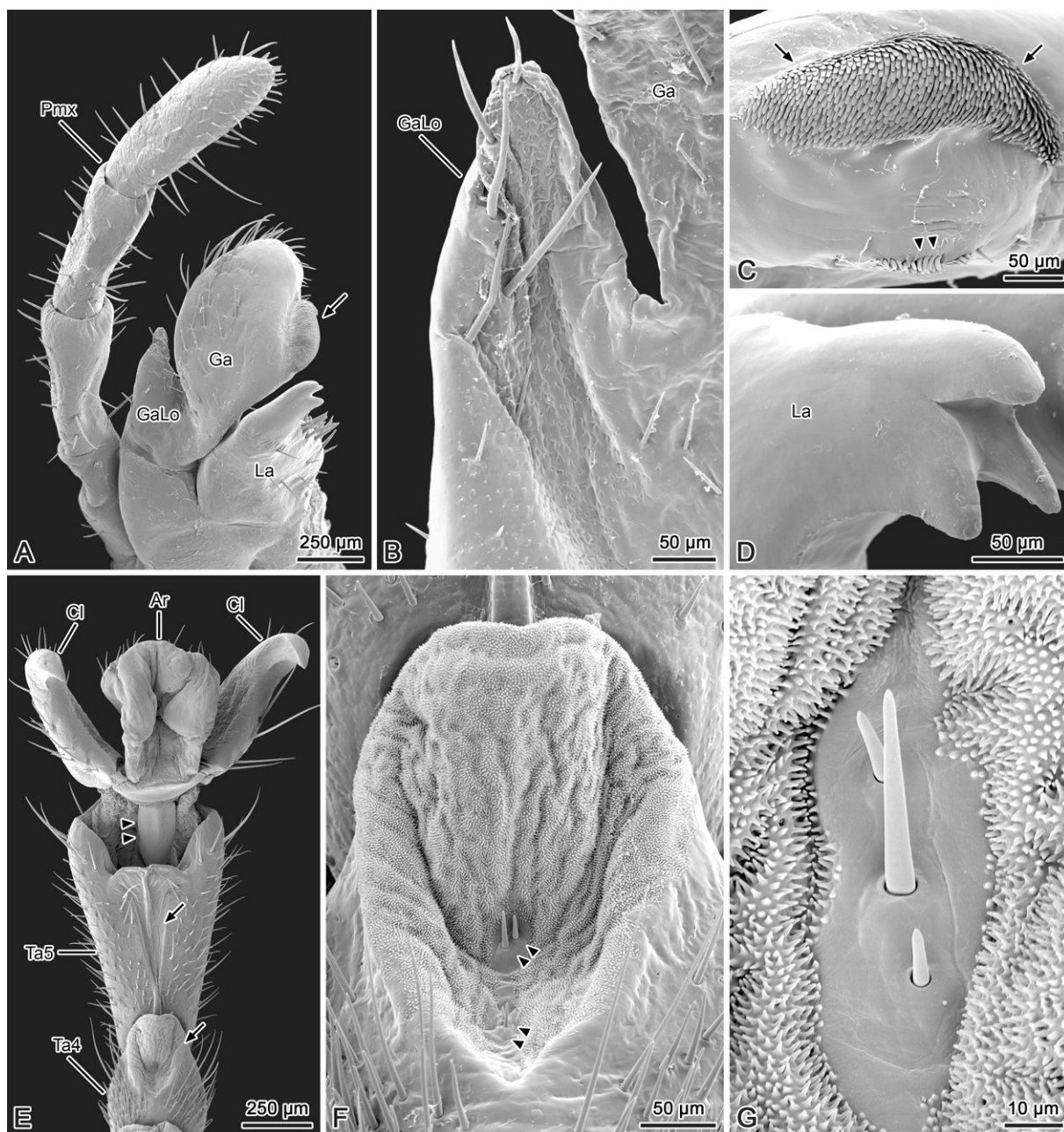


Fig. 2. *Conlephasma enigma* gen. et sp. n. (Phasmatodea). Scanning electron micrographs of a paratype male. A. Right maxilla in lateral view. Note the flattened palpomeres of the maxillary palpus (*Pmx*) and the lancet-shaped galealobulus (*GaLo*). The galea (*Ga*) extends beyond the lacinia (*La*), and features the area of medially-directed trichomes in lateral position (*arrow*). B. Detailed view of the galealobulus (*GaLo*). C. In the galea, the flattened trichomes are distributed into a prominent band (*arrows*) adjacent to a small narrow area occupied by sensory bristles (*arrowheads*). D. The lacinia (*La*) has three distal teeth. E. Distal part of the fore tarsus in ventral view, showing the tarsomere IV (*Ta4*) and the pretarsus (*Ta5*) with the respective euplantulae (*arrows*). *Arrowheads* indicate the unguittractor plate. *Ar*: arolium; *Cl*: pretarsal claw. F. Detailed view of the euplantula of tarsomere IV, showing the nubby surface of the cuticle. Note the presence of short bristles (*arrowheads*) possibly representing sensilla for mechanoreception. G. The surface of the euplantula is densely covered with short processes responsible for the nubby appearance of the cuticle. Around the sensory bristles the cuticular surface is smooth.

Fig. 1. *Conlephasma enigma* gen. et sp. n. (Phasmatodea). A. Live habitus of a paratype male. B. Lateral habitus of preserved paratype male. C. Lateral habitus of preserved paratype female. D. Detail of the meso- and metathoracic segments of a paratype male in lateral view. A small flattened lobe (*arrows*) is present on both lateral margins of the metathorax. It likely represents a highly reduced hind wing. *Mes*: mesonotum; *Met*: metanotum; *T1*: first abdominal tergum. E, F. Lateral (E) and dorsal (F) views of the egg. At the anterior pole, the operculum shows an undetachable cylindrical capitulum (*arrows*). The micropylar cup (*arrowhead*) is located at the posterior margin of the micropylar plate (*Mp*).

ZSMC). Paratypes: one ♂, one ♀, Philippines, Mindoro Island, Mt. Halcon, 6.-8.2006, ex. coll. O. Conle (ZSMC); three ♂♂, one ♀, Philippines, Mindoro Island, Mt. Halcon, 6.-8.2006, ex. coll. O. Conle (coll. PH); one ♂, Philippines, Mindoro Island, Mt. Halcon, 6.-8.2006, ex. coll. O. Conle (MSNG); five ♂♂, one ♀, Philippines, Mindoro Island, Mt. Halcon, 6.-8.2006, ex. coll. O. Conle (coll. FH); one ♂, ex Zucht O. Conle 2007, Zuchtstamm: Philippines, Mindoro Island, Mt. Halcon (coll. FH); 45 ♂♂, 30 ♀♀, 15 eggs, Philippines, Mindoro Island, Mt. Halcon, 6.-8.2006 (coll. OC); one ♂, ex Zucht O. Conle 2007, Zuchtstamm: Philippines, Mindoro Island, Mt. Halcon (coll. OC).

Etymology: The specific name “*enigma*” (from Latin *aenigma*, mystery) refers to the unclear systematic position of the new taxon.

Geographic distribution: This species is until now known only from the type locality: Mount Halcon, Baco municipality, Oriental Mindoro province, Mindoro Island, Philippines.

Remarks: During the year 2006 Oskar V. Conle has reared two males of this species from eggs laid by females collected at the type locality. The two specimens were fed with bramble (*Rubus* spp.) as alternative foodplant. When disturbed, they were observed to spray a secretion with a strong smell from the prothoracic exocrine glands.

3.2.1. Male morphology

Males of *C. enigma* gen. et sp. n. are rather small in size (Table 1). The basic colour of the body is bright orange (Fig. 1A). The head is slightly longer than wide, and appears roundly rectangular in dorsal view. Its dorsal and lateral surface is dark bluish-green (Fig. 1A). The gena is about one and a half times broader than the greatest diameter of the compound eye. The antenna is plain orange, fairly filiform, and if extended posteriorly reaches to the centre of abdominal tergum V. The scape is rather rectangular, one and a half times longer than wide, and appears oval in cross-section. The pedicel is cylindrical, slightly longer than wide, and much shorter than scape. The first flagellomere is about one and a half times longer than the pedicel. The compound eye is dark brown, circular, and protrudes hemispherically (Fig. 1A). The ventral surface of the head is mainly black. The pentamerous maxillary palpus has the palpomeres slightly flattened dorsoventrally (Fig. 2A). The galealobulus is rather elongated, with a slender and acutely pointed apex (Figs. 2A, B). The distal portion of the galea is broadly rounded, and distinctly extends beyond the lacinia (Fig. 2A). The area of medially-directed trichomes of the galea is located laterally (Fig. 2A), and consists of a prominent band of strongly flattened trichomes (Fig. 2C). Adjacent to this area, a narrow strip consisting of short cylindrical bristles is present (Fig. 2C). The lacinia features three distal teeth (Figs. 2A, D). The palpomeres of the trimerous labial palpus are similar to those of the maxillary palpus.

The prothorax (Figs. 1A, B) is shorter than the head, and slightly widens towards the posterior end. The pronotum is dark greenish-orange, flat, with a faint cross-shaped incision in the center. The front margin of the pronotum is concave, and features a prominent semicircular glandular area at each anterolateral corner. The hind margin of the

pronotum is orange and straight. The prothoracic coxopleurite is dark bluish-green and almost bell-shaped. The prothoracic sternum is evenly dark orange. The mesothorax is moderately elongated (Table 1), rectangular, and indistinctly widens from the anterior to the posterior end (Figs. 1A, B). The mesonotum is about twice as long as wide, with a median black triangle-shaped mark. The mesothoracic episternum is narrow and almost as long as the mesonotum, whilst the epimeron is very short and somewhat semicircular; the two sclerites are mainly mid orange, and the pleural suture is discernible. The mesothoracic sternum is slightly widened posteriorly, with the basisternite much longer than the furcasternite. The metathorax and the first abdominal segment are fused. The resulting segment is shorter than the mesothorax, of about the same width. The metanotum is short (Fig. 1D), only one quarter the length of the mesonotum, and approximately four times wider than long. Its colour pattern is similar to that of the mesonotum. The metathoracic episternum is broad and rather rectangular; the epimeron is small and narrow. The metathoracic sternum has the basisternite and the furcasternite of equal length. On the mesothorax no tegmina is present. On the metathorax a tiny lateral flattened lobe is visible (Fig. 1D), which likely represents a residual hind wing pad.

Legs (Figs. 1A, B) are mainly dark bluish-green, robust and quite short. The hind leg moderately projects beyond the abdominal tergum VII (Fig. 1B). Coxae are mid orange dorsally, and vivid black ventrally. Trochanters are short and fused to femora. Femora have a stout structure. They have unarmed dorsal and medio-ventral carinae. The ventro-anterior and ventroposterior carinae bear up to six distal spines, which are more distinctly developed on the hind femora. The hind femur reaches at best the center of the fourth abdominal tergum (Fig. 1B). Tibiae are unarmed. The tarsus is less than half the length of the corresponding tibia. Tarsomeres I–IV feature a nail-shaped euplantula on their ventral surface (Fig. 2E), which is equipped with few short bristles on the proximal half (Figs. 2F, G). The cuticle of these euplantulae has a nubby surface (Fig. 2F) and at high magnification appears densely covered with minute processes or nubs (Fig. 2G). The pretarsus is characterized by the presence of an elongated smooth euplantula, simple pretarsal claws, and a pan-shaped distal arolium (Fig. 2E).

The abdomen (Figs. 1A, B) is about one and a half times longer than the head and thorax combined, and very moderately narrows from the anterior to the posterior end. Abdominal terga display a black median triangle-shaped marking. The first abdominal tergum is twice as long as the metanotum; the boundary between these two terga is very faintly delimited (Fig. 1D). Abdominal segments II–VII are oval in cross-section. Abdominal terga II–VII are quadrate; terga VIII–X are slightly broader than long. Abdominal sterna I–VIII are bright orange and smooth. The tergum X (or anal segment) is slightly longer than tergum IX. In dorsal view, the posterior half of tergum X shows a longitudinal median carina (Fig. 3A). The hind margin of tergum X is thickened, with a small median indentation. Ventrally (Fig. 3B), the hind margin is armed with about 30 black toothlike projections. The vomer is roughly triangular, with an elongated and upcurving pointed apex.

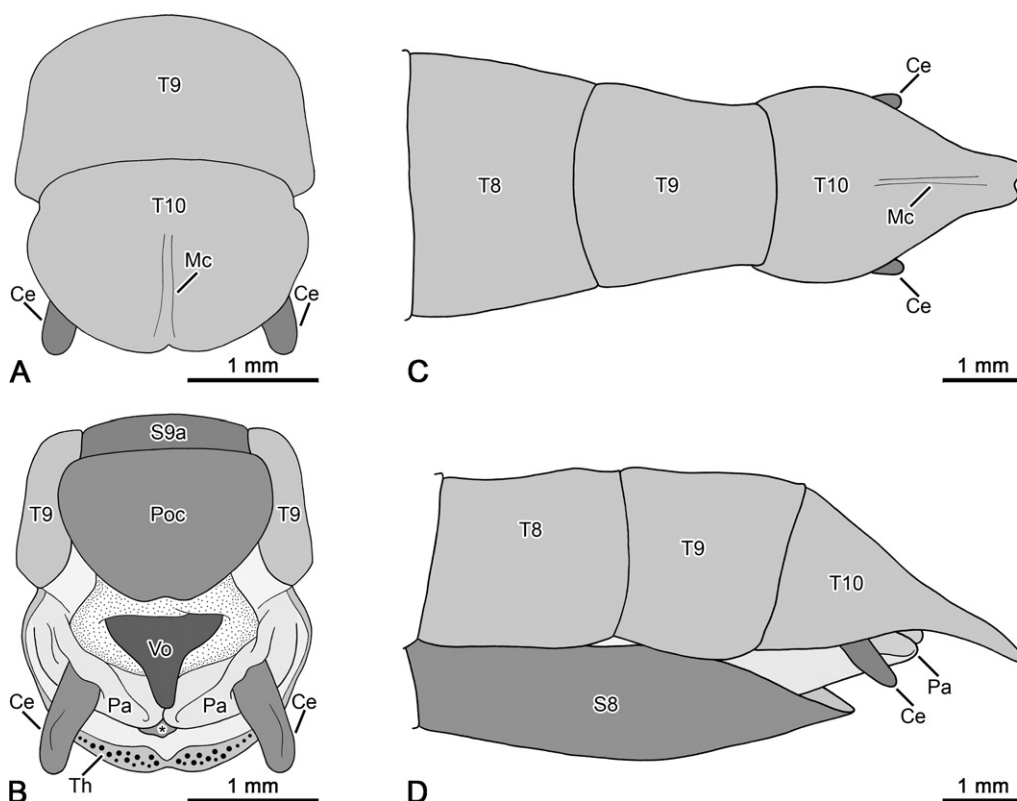


Fig. 3. *Conlephasma enigma* gen. et sp. n. (Phasmatodea). Schematic drawings of terminalia. A. Paratype male, dorsal view. B. Paratype male, ventral view. The asterisk indicates the small epiproct. C. Paratype female, dorsal view. D. Paratype female, lateral view. Ce: cercus; Mc: median carina; Pa: paraproct; S8: abdominal sternum VIII; S9a: anterior portion of sternum IX; Poc: poculum, posterior portion of sternum IX; T8–T10: abdominal terga VIII–X; Th: thorns; Vo: vomer.

Paraprocts are clove-shaped. The epiproct is very small, and does not extend beyond the hind margin of tergum X. The cercus is straight, moderately flattened, and appears oval in cross-section. It is about half the length of tergum X. Its width slightly narrows from base to apex, with a blunt distal tip which projects over the posterior margin of the anal segment. The sternum IX (or male subgenital plate) is rather flat, only slightly longer than sternum VIII, and does not extend over tergum IX (Fig. 3B). The lateral margins of the poculum are parallel-sided in the anterior half; they then taper to a rounded posterior end, which has a small median notch (Fig. 3B).

3.2.2. Female morphology

Females are larger and broader than males (Fig. 1C, Table 1), and differ in the following morphological features: The basic colour of the body is bright olive green. Black markings on the thorax and abdomen are weakly developed and can even be absent (Fig. 1C). The pronotum is much darker green. The mesothorax is distinctly broadened medioposteriorly (Fig. 1C). The mesonotum is one and a half times longer than wide. Spines of the ventral femoral carinae are less distinct, and can also be absent. The hind femur reaches to the anterior margin of the fifth abdominal tergum. The hind leg hardly projects over the abdominal tergum X. Abdominal segments IV and V are distinctly broadened, whilst

segments VI–IX are increasingly narrowed. Abdominal terga II–VIII are broader than long, whereas the tergum IX is almost quadrate. The tergum X is longer than tergum IX. It is characterized by the noticeable elongation of its posterior margin, which regularly tapers to a medially notched tip (Fig. 3C). The cercus is more distinctly triangular, about one quarter the length of tergum X, and features a pointed tip. The sternum VIII is spoon-shaped (Fig. 3D). It has a blunt longitudinal median keel and a sharply rounded hind margin.

3.2.3. Eggshell morphology

The external chorion of *C. enigma* gen. et sp. n. is plain mid to dark brown in colour. In lateral aspect the egg has a nearly spherical shape (Fig. 1E), with a length of 3.8–3.9 mm, and a height of 3.3–3.4 mm. Both in dorsal and ventral aspect, the capsule appears decidedly oval (Fig. 1F), with a width of 2.8–2.9 mm. The operculum, located at the anterior pole, is oval and very moderately convex. Externally, it is equipped with an undetachable cylindrical capitulum (Figs. 1E, F). The opercular angle is almost zero. The whole external surface of the capsule is covered with small rounded granules. The dorsal surface of the capsule appears slightly acutely-shaped medially (Fig. 1E). It features the micropylar plate in the basal two thirds, extending for a length of 1.7–1.9 mm. The micropylar plate is longer than wide, and externally is delimited from the

remainder of the capsule by a faint dark brown rim. Usually this specialized region of the eggshell is distinctly heart-shaped (Fig. 1F), but in certain eggs it appears from oval to nearly round. The micropylar cup is located at the posterior margin of the plate, in a median position (Fig. 1F). The median line is not present. The ventral surface of the capsule is regularly rounded (Fig. 1E). The posterior pole is simple.

4. Discussion

The present morphological study showed that *Conlephasma* gen. n. is characterized by a peculiar suite of character states. One of the most interesting traits concerns the morphology of the maxillae. According to Bradler [9], in the ground pattern of Euphasmatodea the lacinia has three apical teeth, the galea bears a small galealobulus, and the area of medially-directed trichomes is located on the apex of the distal part of the galea. While the lacinia of *Conlephasma* gen. n. agrees with the typical euphasmatodean condition, the galea exhibits apomorphic character states of particular interest. First, the galealobulus is rather elongated. Second, the trichome area is placed laterally at about middle length of the distal part of the galea. Both character states are unusual and show strong similarity with the condition described for species of the New World subfamily Pseudophasmatinae by Crampton [24] and Bradler [9]. An elongated galealobulus has been reported also in *Diesbachia tamyris* (Westwood, 1859) [9], a member of the Old World subfamily Necrosiinae. It is conceivable that *Conlephasma* gen. n. may be related to one of the above-mentioned euphasmatodean subfamilies. However, the geographical distribution appears to support a relationship with the Necrosiinae since this group is widely distributed in the Oriental Region including the Philippines, whereas the Pseudophasmatinae are not found in Asia.

Further significant features of *Conlephasma* gen. n. are found in the legs. For example the structure of the fore femur, which is straight at the head level. Euphasmatodea mostly include canopy-dweller insects with cryptic morphology and behaviour such as stick-like forms. Usually, their fore femora show an adaptation for crypsis: they are curved at base, forming a notch to host the head during the resting posture [25]. Certain lineages, however, lack this specialized feature having basally straight fore femora. This is the case of some species that have adapted to the leaf-litter environment (i.e. ground-dwelling forms, like species of Eurycanthinae and Heteropteryginae) or that have evolved active chemical defence in combination with aposematic colouration (e.g. members of Oreophoetini) [26]. These conditions appear to be secondarily derived, and *Conlephasma* gen. n. likely falls amongst these cases as also suggested by the bright colours and the production of a distinct defensive secretion. Concerning the structure of the tibiae, the absence of the area apicalis represents another apomorphic character state at the euphasmatodean level. In fact, the area apicalis is still present in extant phasmatodean taxa belonging to basal branches, whereas it became lost in several subordinate euphasmatodean taxa [9,26]. The tarsi of *Conlephasma* gen.

n. are characterized by a short basitarsus, a further characteristic frequently present in phasmatodeans with ground-dwelling habits [9]. The euplantulae show an interesting combination of features. Those of tarsomeres I–IV have a nubby surface constituted by a dense coverage of minute processes, probably acanthae or microtrichia, whilst the euplantula present on the pretarsus is smooth without sculpturing. The nubby microstructure has been reported also in the euplantulae of *Timema*, *Arctiaon asperrimus* (Redtenbacher, 1906), *Neohirasea maerens* (Brunner von Wattenwyl, 1907), and *Carausius morosus* (Sinéty, 1901) [27,28], and might be part of the phasmatodean ground plan. Conversely, the euplantulae of the aschiphasmatine *Dallaiphasma eximius* have a honeycomb microsculpture [23], whilst those of the Clitumninae species *Medauroidea extradentata* (Brunner von Wattenwyl, 1907) are completely smooth [28]. In Phasmatodea there appears to be a certain diversity concerning the character state distribution for the euplantulae, which deserves further investigations in other stick insect taxa.

One important characteristic of the terminalia is the presence of a well-developed vomer in the tenth abdominal segment of the male, a typical ground-plan character state of Phasmatodea. This condition implies that *Conlephasma* gen. n. is not subordinate to those euphasmatodean subgroups characterized by the secondary loss of the vomer. These comprise members of the subfamilies Clitumninae, Eurycanthinae and Lonchodinae (forming the clade Schizodecema *sensu* Bradler [9]) and the representatives of the family Phasmatidae *sensu stricto* [29] (or clade Lanceocercata according to Bradler [9,30]). In the female terminalia, an apomorphic character state is represented by the elongated tenth abdominal tergum (or anal segment). A similar condition is reported in other euphasmatodean taxa where females have evolved beak-like secondary ovipositors for digging and underground egg-laying behaviour. For example, females with a prominently elongated tenth abdominal tergum are found in the members of Eurycanthinae, in *Hoploclonia* Stål, 1875 among the Heteropteryginae, and in *Rhamphosipyloidea* Redtenbacher, 1908 among the Necrosiinae [3,9,31]. This character state is not known to occur within the Pseudophasmatinae [32]. The functional significance of the long anal segment of *Conlephasma* gen. n. females is uncertain. This feature might suggest that eggs are deposited into the ground, but our observations on the egg morphology contradict this hypothesis. Usually, phasmatodean eggs adapted to deposition into the soil are elongated (in *Conlephasma* gen. n. they are globular) and lack a capitulum (in *Conlephasma* gen. n. it is present), which supposedly serves as an attractor for ants inducing aboveground egg dispersal. It seems more likely that eggs of this species are dropped to the ground by females.

5. Conclusions

The enigmatic stick insect described in this article further underpins the high degree and uniqueness of biodiversity in general, and also in Phasmatodea, reported from Philippine archipelago [17–23]. At this time, the taxonomic position of *C. enigma* gen. et sp. n. within

Euphasmatodea remains questionable. Provisionally, the new taxon can be considered as a Euphasmatodea *incertae sedis*. More precise phylogenetic hypotheses may result by information from molecular analyses, once properly fixed material will be available. Given the interesting combination of features observed in the present morphological investigation, *Conlephasma* gen. n. can represent an important taxon for future studies on the systematics, phylogeography, and evolution of ecomorphs in Phasmatodea.

Disclosure of interest

The authors declare that they have no conflicts of interest concerning this article.

Acknowledgements

The authors thank Oskar V. Conle and Frank H. Hennemann, who made available valuable specimens and photographs of the stick insect taxon reported in this article.

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