Russian Entomol. J. 34(3): 388–397

Aucomantis aetherius gen. et sp.n., a novel member of Leptomantellidae (Insecta: Mantodea) from Vietnam

Aucomantis aetherius gen. et sp.n., новый представитель Leptomantellidae (Insecta: Mantodea) из Вьетнама

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KEY WORDS: new genus, new species, Mantodea, Leptomantellidae, Vietnam.
КЛЮЧЕВЫЕ СЛОВА: новый род, новый вид, Mantodea, Leptomantellidae, Вьетнам.

ABSTRACT. *Aucomantis aetherius* **gen. et sp.n.**, a new genus and species of praying mantis is described based on specimens from Vietnam. The new genus belongs to Leptomantellidae, but is similar in appearance to some members of Nanomantidae, being characterized by relatively short pronotum, strong metazonal keel, four discoidal forefemoral spines and 7 posteroventral foretibial spines. Preliminary Red List Assessment indicates that the species should be considered Vulnerable (VU B1ab). The presence of only a membranous, setae-bearing process on the edge **pba** of the left phallomere can be considered to be an autapomorphy of Leptomantellidae. To ease the identification, I provide a key to the genera of Leptomantellidae.

РЕЗЮМЕ. *Aucomantis aetherius* **gen. et sp.n.**, новый род и вид богомолов, описан на основе экземпляров из Вьетнама. Новый род относится к семейству Leptomantellidae, однако сходен по облику с некоторыми членами Nanomantidae, обладая относительно короткой переднеспинкой, мощным метазональным килем, четырьмя дискоидальными шипами переднего бедра и 7 постеровентральными шипами передней голени. Предварительная оценка по критериям МСОП позволяет отнести вид к категории Уязвимых (VU B1ab). Присутствие лишь одного, мембранозного и покрытого волосками, выроста на грани **pba** левого фалломера может рассматриваться как аутапоморфия Leptomantellidae. Для облегчения определения приведен ключ к родам Leptomantellidae.

Introduction

The small family Leptomantellidae was created by Schwarz & Roy [2019] as part of their updated classification of the praying mantises (Mantodea). The family included four small, exclusively Oriental genera: the type genus *Leptomantella* Uvarov, 1940 (10 species), *Aetaella* Hebard, 1920 (previously a subgenus of *Leptomantella*, elevated by Schwarz & Roy [2019] to the genus level; 3 species), *Hebardia* Werner, 1921 (monotypic) and *Hebardiella* Werner, 1924 (2 species) (Anderson, 2025). The family was placed within the superfamily Nanomantoidea Brunner de Wattenwyl, 1893 sensu Schwarz & Roy, 2019, however only plesiomorphies were indicated as diagnostic characters, namely forefemur with 4 discoidal spines (*vs.* 3 in all other nanomantoids except *Epsomantis* Giglio-Tos, 1915) and 4 posteroventral spines (*vs.* 5 in *Epsomantis*). In addition, upon studying the historical types *Hebardia* and *Hebardiella* turned out to be synonyms of earlier described genera unrelated to *Leptomantella* and *Aetaella* [Shcherbakov & Encilia, in prep.].

In the present paper I describe a new genus of Leptomantellidae from Vietnam. The new genus differs remarkably from *Leptomantella* and *Aetaella* by its proportions and pronotal morphology and significantly expands the morphological diversity of the family.

Material and methods

Upon softening of the specimens within the water vapor camera, the male genitalia and terminalia were extracted; the genitalia were then macerated in 10% water solution of KOH for several hours to clear them from soft tissues and after that washed in water and 95% ethanol. The genitalia and terminalia are stored in grycerol together with the respective specimens. External morphology and male genitalia were studied using MBS-10 (Lomo-Eltem) stereomicroscope and photographed using Canon EOS 6D camera and Canon MPE65 mm F2.8 Macro lenses mounted on a macro set-up. Photo stacks were combined using Zerene Stacker 1.04 (Zerene Systems LLC).

How to cite this article: Shcherbakov E.O. 2025. *Aucomantis aetherius* gen. et sp.n., a novel member of Leptomantellidae (Insecta: Mantodea) from Vietnam // Russian Entomol. J. Vol.34. No.3. P.388–397. doi: 10.15298/rusentj.34.3.09

The terminology and abbreviations as well as the measurement standards follow Brannoch *et al.* [2017] and Brannoch [2019], except that head length includes the labrum, fore-tibiae were measured from the base to the tip of the claw along the main line of a tibia, and total length was measured from the vertex of the head to the tip of the abdomen.

Abbreviations. CSPC — personal collection of Christian J. Schwarz, Bochum; ESPC — personal collection of Evgeny Shcherbakov, Ramenskoye; KAPC — personal collection of Kris Anderson, Las Vegas; NMB: Natural History Museum of Basel, Basel; NMNS — National Museum of Natural Science, Taiwan, Taichung; ZIN — Zoological Institute of the Russian Academy of Sciences, St. Petersburg.

The material is deposited to ZIN, NMB, RBINS, NMNS, ESPC, CSPC and KAPC.

The map was created in SimpleMappr [Shorthouse, 2010].

Preliminary assessment of conservation category was performed in accordance with IUCN red listing standards [IUCN, 2001, 2017].

Systematic part

Order Mantodea Latreille, 1802
Family Leptomantellidae Schwarz et Roy, 2019
Genus ***Aucomantis* gen.n.**

TYPE SPECIES. *Aucomantis aetherius* **sp.n.**, by present designation.

ETYMOLOGY. Named after a *tiên* Âu Cơ, the immortal wife of Lạc Long Quân in the Vietnamese creation myth. According to the myth, Âu Cơ gave birth to an egg sac. After six or seven days, the egg sac hatched. Without having to be breastfed, the children grew up on their own, looking strangely beautiful, every single one was wise and brave, and people respected them and thought they were extraordinary. These children are known collectively as Bách Việt, ancestors to the Vietnamese people. Âu Cơ, who lived high in the mountains, is often honored as the mother of the Vietnamese civilization.

TAXONOMIC PLACEMENT. The genus fits the current diagnosis of the superfamily and family by virtue of having elongated last cercomere, 4 posteroventral and 4 discoidal spines on the forefemur. The genus is also extremely similar to *Leptomantella* in the presence of 7 posteroventral foretibial spines, wing shape and venation and the structure of male genitalia, such as single distal process of the ventral phallomere, single membranous process on edge **pba** and very simple, finger-like process **pva**.

DIAGNOSIS. Lightly built, medium sized praying mantis of pale green color. Head large, transverse, wider than pronotal supracoxal dilatation and situated prognathously at rest. Lower frons strongly transverse. Pronotum moderately elongated, with weak supracoxal dilatation and strong carina in posterior half of prozona and in metazona. Fore coxa longer than metazona of pronotum. Fore femur with 4 discoidal and 4 posteroventral and 12–16 anteroventral spines arranged as iIiIiIiIiIiIiiiI, where no longer spine particularly longer than another. Fore tibia with 11–13 gradually elongating anteroventral and 7 (in extremely rare cases 6 on one tibia) posteroventral spines arranged as i_IiiIII, where the 2nd and 7th spines noticeably longer than neighboring spines. Fore wings widened towards apical third.

DIFFERENTIAL DIAGNOSIS. *Aucomantis* **gen. n.** readily differs from *Leptomantella* and *Aetaella* in pronotum being short and strongly carinated (*vs.* long and smooth or barely carinated). In contrast to even those *Leptomantella* species that have a shorter pronotum, the apices of fore coxae at rest reach at least the caudal margin of the furcasternum (*vs*. not reaching). *Aucomantis* **gen.n.** is habitually similar to the Asian genus *Pliacanthopus* Giglio-Tos, 1927 (subgenus *Malayamantis* Koçak et Kemal, 2008), and the Australian genus *Kongobatha* Hebard, 1920, both of which belong to Nanomantidae. *Aucomantis* **gen.n.** readily differs from them in having 4 (*vs.* 3) discoidal spines. Nymphs of *Aucomantis* **gen.n.** might also be confused with sympatric *Sinomantis* Beier, 1933 which also belongs to Nanomantidae and from which *Aucomantis* **gen.n.** can therefore be distinguished by having 4 (*vs.* 3) discoidal spines, as well as much less prognathous head with barely developed juxtaocular tubercles (*vs.* extremely prognathous, compressed head with strongly developed juxtaocular tubercles).

***Aucomantis aetherius* sp.n.**

Figs 1–24.

MATERIAL. All specimens were collected and observed in Vietnam only. The type series consists of 29 males and 12 females. Holotype: male (Fig. 1), "Gia Lai-Kon Tum prov., 20 km N. Kan Nack vill., Boun Luoi", [today lake Hồ Buôn Lưới, K'Bang district, Gia Lai prov., 14°16'24.6" N, 108°34'56.6" E] 22–31.iii.1995, A.V. Gorochov leg., ESZI010 (ZIN). Paratypes: 1 female, "Gia Lai-Kon Tum prov., Tây Nguyên plateau, Boun Luoi env.", [today lake Hồ Buôn Lưới, K'Bang district, Gia Lai prov., 14°16'24.6" N, 108°34'56.6" E] 25.iv.1995, parasitized by Nematoida, A.V. Gorochov leg., ESZI012; 1 male, "Gia Lai-Kon Tum prov., 20 km N. Boun Luoi (Tram Lap)", 21.xi.1988, A.V. Gorochov leg., ESZI013; 1 male, Quana Binh prov., Phong Nha National Park, 5–14.iv.2004, S. Ryabov leg., ESZI014; 1 female Thừa Thiên Huế Prov., Bạch Mã National Park, 18.II.2005, N. Zinenko leg., ESZI011 (ZIN); 1 male, 2 females, Kon Tum prov., Ngoc Linh Mountain, 1900 m, i.2017, "leg. local people", PT1–PT3 (NMB); 17 males, 1 female, Quảng Nam Prov., Tây Giang, A Xan, 1300 m, vii.2020, Thanh Luong Le leg., CTHC-101–CTHC-118 (NMNS); 5 males, 3 females (Fig. 2), Quảng Nam Prov., Tây Giang, A Xan, 1300m, iii.2019, Van Dang leg. ESPC0125–ESPC0132 (ESPC); 1 male, 3 females, Quảng Nam Prov., Tây Giang, A Xan, 1300 m, iii.2019, Thanh & Hanh leg., AM, AF0–AF2 (KAPC); 1 male, Quảng Nam Prov., Tây Giang, A Xan, 1300 m, iii.2019, leg. local collector, CS2, genital preparation slide: Schwarz # 466; 1 female, same data, CS3; 1 male, Thừa Thiên Huế prov., Bạch Mã National Park, top area, 16°11'39" N, 107°51'12" E, 1250–1400 m, lux, 5–9.v.2019, M. Hartmann leg., CS1, genitalia preparation slide: Schwarz # 485 (CSPC).

In addition, the citizen science website iNaturalist.org contains four life observations: 1 female, Gia Lai prov., K'Bang District, Kon Chu Rang Nature Reserve, 25.x.2022, id 139957100, documented by E. Popov (user "epopov"); 1 male, Thừa Thiên Huế prov., Phú Lộc district, Lộc Trì, Bach Mã, 9.iv.2024, id 164111063, documented by user "paulsuth"; 2 males, same locality, but 17 and 18.iii.2024, ids 216252463 and 217162669, documented by L. Fung (user "avocat").

DESCRIPTION.

Male. Body length 24–29 mm (Fig. 1).

Head (Fig. 11) triangular, dorsoventrally depressed, 2.05–2.66 times as wide as the supracoxal dilatation, without processes, situated prognathously at rest. Clypeus nearly trapezoidal, with lower half sharply depressed and bordered by ventral transverse, medially interrupted carina. Lower frons very short and transverse, arc-shaped, about 4 times as wide as high, nearly flat, slightly elevated on sides. Antennae filiform, reaching approximately the middle of abdomen. Scapus barrel-shaped, slightly depressed in the middle, about twice as

Figs 1–2. *Aucomantis aetherius*, **gen. et sp.n.**, habitus: 1 — holotype male; 2 — female ESPC0125. Scale bar 5 mm.
Рис. 1–2. *Aucomantis aetherius*, **gen. et sp.n.**, габитус: 1 — самец, голотип; 2 — самка ESPC0125. Длина масштабной линейки 5 мм.

long as wide. Pedicellus shorter and narrower than the scapus, goblet-shaped. Third antennomere about as long as the scapus, cylindrical. Fourth antennomere about 1/3 of the third's length, each subsequent antennomere a little longer than the preceeding one. Area along circumantennal and frontal sulci deeply depressed. Area between circumantennal sulcus and compound eye smooth or with barely discernible elevation. Compound eyes oval, exophthalmic. Ocellar plateau raised, ocelli large, widely oval, forming angle of about 60° between each other. Vertex short, smooth, with very slightly elevated central part. Parietal sutures apparent only near the posterior edge of the head capsule. Juxtaocular bulges extremely weak, posterior edge of the head straight, almost level with the imaginary line connecting posterior surfaces of the eyes.

Prothorax (Fig. 13) elongated, 4.05–5.00 times as long as its maximum width, triangular in cross-section, its narrow lamellar edges with very small spaced tubercles with adjacent short setae. Metazona of pronotum 2.32–2.75 times as long as prozona, its posterior edge straight to very weakly medially concave. Supracoxal dilatation elongated oval, rather weak. Posterior half of prozona and metazona with strong medial keel interrupted by supracoxal sulcus. Additionally, prozona with feeble paramedial parabolical carinae, metazona with very feeble paramedial depressions at supracoxal dilatation and medial bulge adjacent to posterior edge level with medial keel. Otherwise, pronotum smooth. Cervicalia complete. Anterior ventral cervical sclerite wide and thin, posterior one about twice thicker, slightly W-shaped. Lateral and intercervical sclerites similar to Mantidae in shape and structure, with very elevated lamellar boundary between them, intercervical sclerites medially touching with prominent torus intercervicalis. Postcervical plate short, not longer than the lateral cervical sclerites, smooth, sharply medially elevated, with smoothed paramedial carinae. Gustifolium organ very prominent, in the shape of long, narrowly rounded tubercle with several long setae. Furcasternite with medial elevation, starting as carina from gustifolium organ and becoming level with surrounding cuticle in the posterior half, additionally pair of paramedial grooves present running along the medial elevation.

Metathorax with cyclopean ear of DK type.

Forelegs. Forecoxa oval in cross-section, with anterior apical lobes short, divergent. Its dorsal edge and ventral surface with very small sparse tubercles and adjacent setae, otherwise smooth. Forefemur (Figs 7–8) very slender, its narrow, somewhat lamellar and almost smooth dorsal edge in its basal half with sparse small tubercles and adjacent setae, which become much smaller distally. Forefemoral armament as follows. Four posteroventral spines on short sockets, elongated, slightly curved inwards, with very slight differences in length: second the longest, first and fourth the shortest. Two basalmost posteroventral spines situated closer to each other, than any of other pairs. Four discoidal spines, the second 1.3 times the length of the first, the third twice the second, the fourth as the first. Basalmost discoidal spine shifted to anteroventral row, but still situated more basally along femur's length than the next discoidal spine. Thirteen to 14, very rarely 12 or 16 anteroventral spines, of which the first 10 typically composed of alternating large and small spines, starting with a small one, then a row of 2–3 small spines, ending with large spine, the resulting arrangement being iIiIiIiIiIiiiI in a typical case. Both genicular spines present on short sockets, posterior one relatively long, thick, curved distad, anterior one similar to posterior one, but much smaller. Ventral surface of femur with oval pit at the center of triangle formed by two basalmost posteroventral spines and distalmost discoidal spines, this pit accommodates distalmost posteroventral tibial spine. Area from this pit to distalmost posteroventral spine with carina adjacent to sockets of posteroventral spines and linearly covered with small but high cylindrical tubercles and adjacent setae. Foretibia (Figs 3–4) straight. Foretibial armament as follows. Eleven to 13 anteroventral spines (not counting tibial spur), gradually elongating distally. Seven, very rarely six, posteroventral spines, of which the distalmost the longest, the second basalmost longer than the surrounding, with gaps between the first basalmost spine and tibia basis and the first and the

second basalmost spines. Tibial spur thin, curved, half the tibia in length. Foretarsus posteriorly inserted, longer than foretibia, basitarsus almost twice the length of remaining tarsomeres combined. Ungues without peculiarities, basally dilated.

Middle and hindlegs long and thin, cursorial. Meso- and metacoxa triangular in cross-section but without significant carina. Meso- and metafemora without apical spines. Meso- and metatibia straight, with two apical spines and a triangular extension. Both meso- and metatibia and femora covered by relatively long, thin setae. Metabasitarsus 1.76–2.33 times as long as remaining tarsomeres combined.

Wings. Both pairs (Fig. 15) fully developed, surpassing the end of abdomen. Forewing 3.0–3.8 times as long as its maximum width distad clavus, significantly widening towards its distal third. ScP long, straight and simple, terminating before apex. Costal field gradually narrowing, filled with parallel cross-veins. R simple, with translocated anterior branch of M. M proper forked in its distal third (in 1 specimen simple). CuA with two branches, each forked (in 1 specimen the anterior branch with 3 successive branches, while in another specimen the posterior branch simple). CuP simple, slightly curved, not reaching posterior edge. Clavus very narrow, almost parallel-

Figs 3–14. *Aucomantis aetherius*, **gen. et sp.n.**, details of the external morphology: 3 — foretibia and foretarsus, male ESPC0127, posterior view; 4 — same, but anterior view; 5 — foretibia and foretarsus, female ESZI011, posterior view; 6 — same, but anterior view; 7 — forefemur, male ESPC0127, posterior view; 8 — same, but anterior view; 9 — forefemur, female ESZI011, posterior view; 10 — same, but anterior view; 11 — head, male ESZI013; 12 — head, female ESZI012; 13 — pronotum, holotype male; 14 — pronotum, female ESPC0125. Scale bars: *a* — 1 mm for 3–10; *b* — 1 mm for 11–12; *c* — 1 mm for 13–14.

Рис. 3–14. *Aucomantis aetherius*, **gen. et sp.n.**, детали внешнего строения: 3 — передняя голень и лапка, самец ESPC0127, вид сзади; 4 — то же, но вид спереди; 5 — передняя голень и лапка, самка ESZI011, вид сзади; 6 — то же, но вид спереди; 7 — переднее бедро, самец ESPC0127, вид сзади; 8 — то же, но вид спереди; 9 — переднее бедро, самка ESZI011, вид сзади; 10 — то же, но вид спереди; 11 — голова, самец ESZI013; 12 — голова, самка ESZI012; 13 — переднеспинка, самец, голотип; 14 — переднеспинка, самка ESPC0125. Длина масштабных линеек: *a* — 1 мм для 3–10; *b* — 1 мм для 11–12; *c* — 1 мм для 13–14.

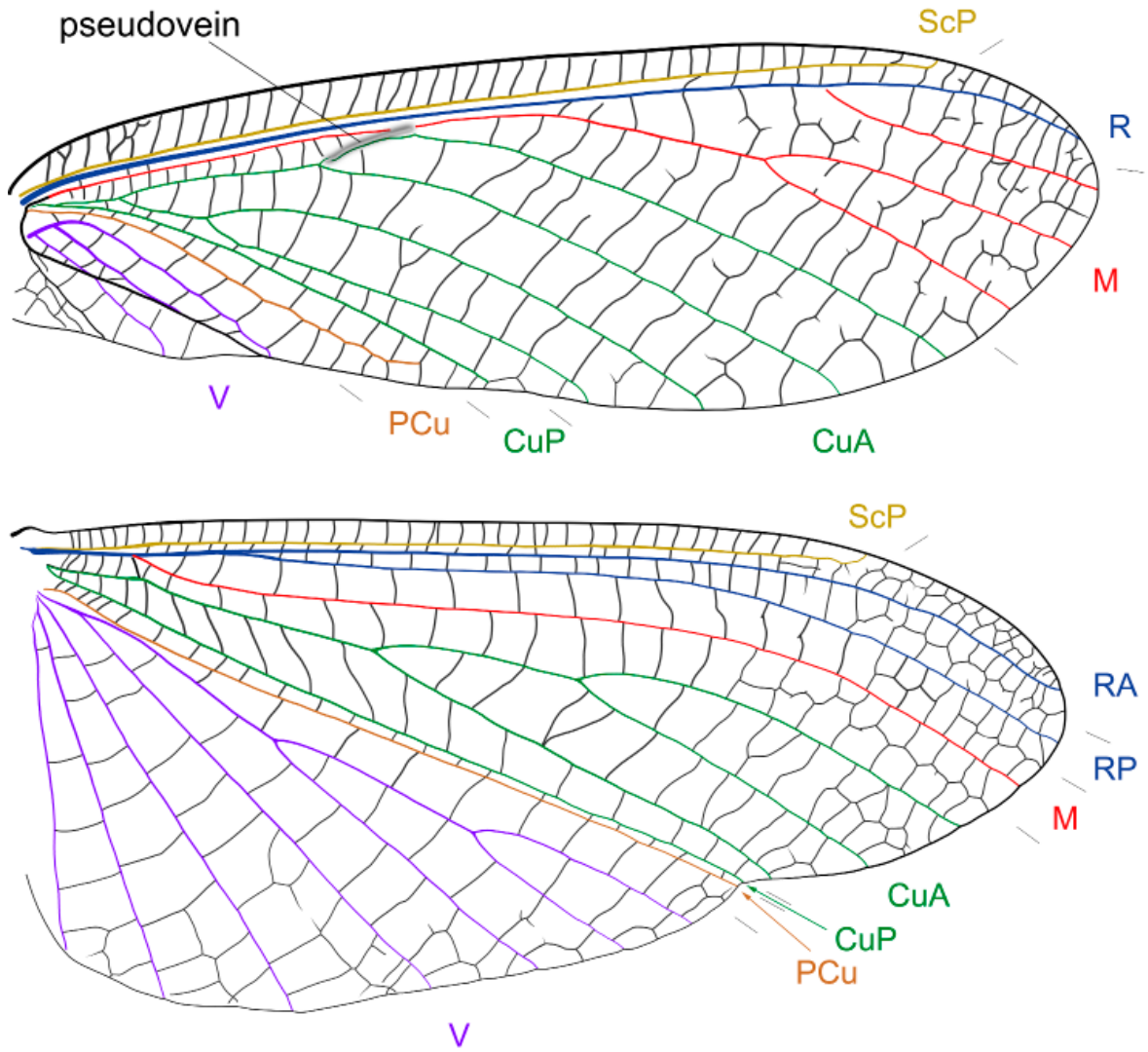
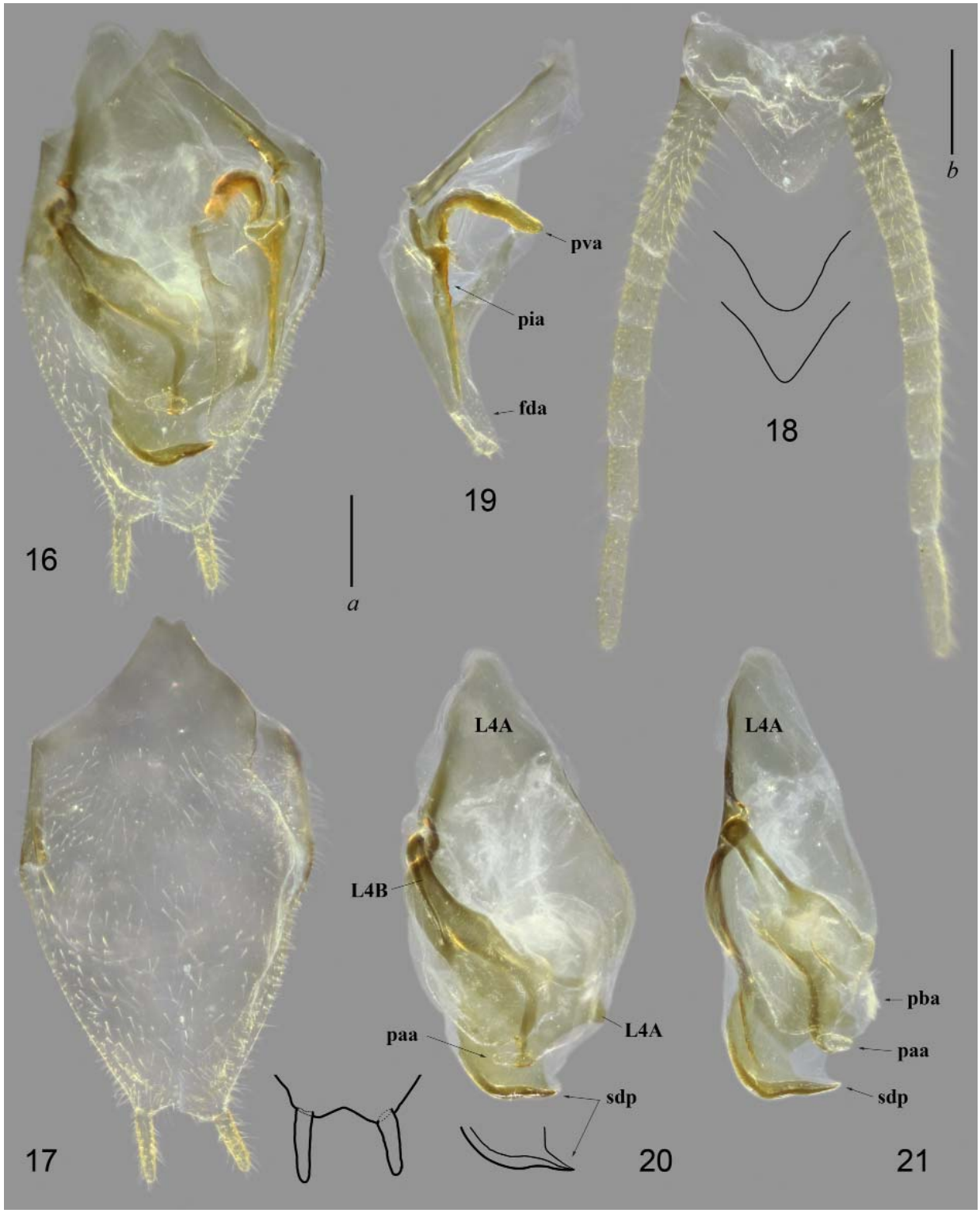


Fig. 15. *Aucomantis aetherius*, **gen. et sp.n.**, wing venation, male ESPC0126.
Рис. 15. *Aucomantis aetherius*, **gen. et sp.n.**, жилкование, самец ESPC0126.

sided and barely convex. PCu sigmoid, not reaching posterior edge. V1 strongly curved posteriad, with three branches, the basalmost of which crosses jugal fold. Pseudovein short, very narrow, diagonal, semiopaque, situated along anteriormost branch of CuA, interrupting it and reaching M. Cross-veins form single-row network, sometimes transitional to double-row network, with cells stretched in antero-posterior direction. with Hindwing elongated triangular, with narrowly rounded apex and small vannus. ScP very long, terminating anteriorly not reaching apex. RA simple. RP simple, stemming from RA significantly distad of the arculus. M and the arculus not connected to R stem directly, their bases in very close proximity to each other. M simple. CuA with three branches. CuP simple. PCu simple, strongly arched near its base, before running in close proximity to anterior branch of V1. V[1] absent. Cross-vein network similar to forewing, except distalmost parts where it becomes irregularly double-row.

Abdomen depressed dorso-ventrally, with ten tergites and eight visible coxosternites (II–IX). Coxosternites II–VIII of equal width, rectangular, coxosternites II–V longer than wide, the rest progressively shorter than wide. Coxosternite IX (subgenital plate, Figs 16–17) gradually narrowing towards the apex, without peculiarities and with long styli. Tergite X (supra-anal plate) (Fig. 18) triangular, its apex from pointed to rounded. Cerci with 11–12 cylindrical cercomeres; basalmost cercomere subdivided. Cercomeres gradually elongating towards apex, ultimate cercomere twice as long as penultimate one.

Genitalia. Ventral phallomere (Figs 20–21) elongated, irregularly rhomboidal, process **sdp** singular, short, triangular, quite wide posteriorly in dorsoventral dimension and directed to the right, lobe **bl** undeveloped. Part of sclerite **L4A** situated on **sdp** and adjacent area separated by a sharp line from the rest of the sclerite. Left phallomere with strong narrow and elongated bump running diagonally, supported by anterior edge of sclerite **L4B** and mostly covered by diminutive spine-like microtrichia. Another compact patch of same microtrichia restricted to left-posterior edge of left phallomere. Process **paa** short, Γ-shaped with apex directed to the left. Edge **pba** with a



Figs 16–21. *Aucomantis aetherius*, **gen. et sp.n.**, male genitalia and terminalia: 16 — genitalia on genital plate, holotype; 17 — genital plate, holotype, to the right is outline of apex in ESPC0130; 18 — tergite 10 and cerci, holotype, below are outlines of tergite 10 apex in ESPC0129, top, and ESPC0128, bottom; 19 — right phallomere, holotype, right view; 20 — left complex, holotype, dorsal view, below is outline of apex in ESPC0128; 21 — same, but left view. Scale bars: *a* — 0.5 mm for 16–17, 19–21; *b* — 0.5 mm for 18.

Figs 16–21. *Aucomantis aetherius*, **gen. et sp.n.**, гениталии и терминалии самца: 16 — гениталии на генитальной пластинке, голотип; 17 — генитальная пластинка, голотип, справа контур вершины у ESPC0130; 18 — тергит 10 и церки, голотип, ниже контуры вершины тергита 10 у ESPC0129, сверху, и ESPC0128, снизу; 19 — правый фалломер, голотип, вид справа; 20 — левый комплекс, голотип, вид сверху, ниже контур вершины у ESPC0128; 21 — то же, но вид слева. Длина масштабных линеек: *a* — 0,5 мм для 16–17, 19–21; *b* — 0,5 мм для 18.

Figs 22–23. *Aucomantis aetherius*, **gen. et sp.n.**, life aspect: 22 — male from Lộc Trì, photo by Lindy Fung (avocat) (iNaturalist, observation 216252463), published with permission; 23 — female from Kbang District, photo by E.S. Popov (iNaturalist, observation 139957100), published with permission.
Рис. 22–23. *Aucomantis aetherius*, **gen. et sp.n.**, живые особи: 22 — самец из Лок Три, фото Линди Фунг (avocat) (iNaturalist, наблюдение 216252463), опубликовано с разрешения; 23 — самка из района К'Банг, фото Е.С. Попова (iNaturalist, наблюдение 139957100), опубликовано с разрешения.

single very short, flap-like membranous process dorsally covered by long setae. Pouch **pne** very narrow, with small opening to dorsal wall of left phallomere to the left of process. Sclerite **L1** limited to pouch **pne**, shifting from left to right at a near constant width from its dorsal wall to its ventral wall. Lobe **fda** of right phallomere (Fig. 19) elongated, narrow, parabolic and slightly curved to the left. Medial arm continues outline of lobe **fda**. Ventral plate **pia** very long and narrow, ventral tooth **pva** long, finger-shaped, smooth.

Fig. 24. *Aucomantis aetherius*, **gen. et sp.n.**, distribution map.
Рис. 24. *Aucomantis aetherius*, **gen. et sp.n.**, карта находок.

Coloration. General color in life (Fig. 22) light green to whitish green. Lower frons and middle parts of compound eyes yellow, creating a transverse yellow band. Dorsal parts of compound eyes and ocelli dark-red. Pronotal keel white. Apices of spines and tarsi reddish. Both pair of wings transparent with green veins. Pseudovein pale. Preserved specimens much discolored, losing contrast as well as yellow and red colors.

Female. As male, slightly larger (body length 28–31 mm) and more robust, with following differences.

Head (Fig. 3) 2.12–2.57 times as wide as the supracoxal dilatation. Antennae not reaching the end of the pterothorax. Scapus and pedicellus as in the male, but third antennomere very long, about as long as the scapus and more than 4 times as long as the next antennomere. Ocelli small, forming an obtuse angle between each other.

Pronotum with metazona 2.21–2.60 times as long as prozona. Gustifolium organ more obtuse, paramedial grooves on furcasternum absent, as a result cross-section of metazona rhomboidal.

Forelegs (Figs 5–6, 9–10) as in male, but proportionally larger.

Hindlegs with hind basitarsus 1.55–2.05 times as long as remaining tarsomeres combined.

Abdomen fusiform, depressed dorso-ventrally, with ten tergites and six visible coxosternites (II–VII). Coxosternite VII (subgenital plate) typical for the group, without peculiarities, other coxosternites rectangular.

Coloration (Fig. 23). Vertex with small yellowish spot. Band along pronotal medial keel wider and brighter, white at its center and yellow to orange laterally. Forewings semi-opaque, costal field evenly divided into contrasting white an-

Table 1. *Aucomantis aetherius*, **gen. et sp.n.**, measurements of the type series, mm.
Таблица 1. *Aucomantis aetherius*, **gen. et sp.n.**, промеры типовой серии, мм.

specimen code	sex	T	TW	H	P	M	D	FC	FF	FFw	FT	FTs
ESZI010	M	25		3.8	7.7	5.4	1.7	5.4	6.2	1.0	4.0	4.8
ESZI013	M			3.9	7.4	5.2	1.6	5.1	6.0	1.0	3.8	4.5
ESZI014	M	28	31	3.7	7.5	5.3	1.6	5.1	6.2	1.0	3.9	4.8
ESPC0126	M	27	32	3.7	7.5	5.3	1.8	5.2	6.1	1.0	3.8	5.2
ESPC0127	M	28	31	3.8	7.5	5.3	1.8	5.2	6.1	1.0	3.9	4.8
ESPC0128	M	28	32	4.0	7.9	5.6	1.8	5.5	6.4	1.1	4.1	4.8
ESPC0129	M	28		3.9	8.1	5.7	1.7	5.6	6.5	1.1	4.1	4.9
ESPC0130	M	29	31	3.9	7.9	5.5	1.7	5.5	6.6	1.1	4.1	5.0
AM	M	28		4.0	7.5	5.5	1.5	5.5	6.5		2.5	4.5
CTHC-101	M	24	31	3.7	7.4	5.2	1.6	5.4	6.2	1.1	3.3	4.6
CTHC-102	M	26	32	3.9	8	5.6	1.7	5.5	6.5	1.1	3.4	4.7
CTHC-103	M		30	3.6	7.3	5.1	1.6	5.2	6.1	1.1	3.3	4.5
PT3	M	27		4.0	8.2	6.8	1.8	6.7	6.8	1.2	4.2	
ESZI011	F	30		4.6	9.2	6.5	2.1	6.7	7.9	1.5	5.0	5.2
ESZI012	F	28	33	4.2	8.5	6.0	1.9	5.9	7.4	1.4	4.5	4.8
ESPC0125	F	29	34	4.4	9.0	6.3	2.0	6.5	7.7	1.4	4.8	4.6
ESPC0131	F			4.4	9.1	6.4	2.0	6.5	7.6	1.5	4.9	5.1
ESPC0132	F		34	4.3	9.2	6.5	2.0	6.3	7.5	1.4	4.7	4.9
AF0	F	28		4.5	9.0	6.5	2.0	6.0	7.5		3.5	4.0
AF1	F	28		4.5	9.0	6.5	2.0	6.0	7.5		3.5	4.5
AF2	F	31		4.5	9.0	6.5	2.0	6.5	8.0		3.5	
PT1	F	28		4.9	8.9	6.2	2.0	6.5	7.7	1.4	4.9	
PT2	F	28	31	4.9	9.0	6.2	1.9	6.3	7.5	1.4	4.8	

Abbreviations: T — total length from vertex to the end of abdomen, TW — total length from vertex to wing tips, H — maximum head width, P — pronotum length, M — metazona length, D — supracoxal dilatation width, FC — forecoxa length, FF — forefemur lengh, FFw — forefemur maximum width, FT — foretibia length, FTs — foretarsus length.

terior part and green posterior part with cross-veins within the field white within the former and dark-red within the latter.

Measurements are given in Tables 1 and 2.

ETYMOLOGY. The species name means "ethereal" in Latin, owing to fragile habitus of the animal and its light coloration.

DISTRIBUTION. Putative endemic of Central Annamite Range. The distribution map is shown on Fig. 24.

PRELIMINARY RED LIST ASSESSMENT. Calculated extent of occurrence (EOO) based on the polygon connecting the outlying localities is approximately 18200 km^2. The ecology of the species is currently completely unknown, however those specimens for which the detailed locality data are known were collected in primary forest. The area of primary forest in Vietnam is constantly shrinking; in fact, the exact type locality of *Aucomantis aetherius* **gen. et sp. n.** has been deforested some time after the collection of the holotype [E. Rybaltovsky, N. Poyarkov, pers. comm.]. Therefore, together these criteria allow to assign *Aucomantis aetherius* **gen. et sp.n.** the category Vulnerable (VU B1ab).

Key to the genera of the family Leptomantellidae

1. Pronotum short and strongly carinated, the apices of fore coxae at rest reach at least the caudal margin of the furcasternum ..... *Aucomantis* **gen.n.**
– Pronotum long and smooth or barely carinated, the apices of fore coxae at rest do not reach the caudal margin of the furcasternum 2
2. Foretibia with 6 posteroventral spines .... *Aetaella* Hebard, 1920
– Foretibia with 7 posteroventral spines .... *Leptomantella* Uvarov, 1940

Discussion

As recent years have shown, the Greater Mekong region remains the El Dorado for the Mantodea taxonomists, with new genera and species being continuously described [Stiewe, Shcherbakov, 2017; Schwarz, Ehrmann, 2017; Shcherbakov, 2017; Schwarz *et al.*, 2018; Vermeersch, 2018; Vermeersch *et al.*, 2019; Shcherbakov, Vermeersch, 2020; Unnahachote *et al.*, 2021 and more]. There are two peculiar characteristics about most of these new taxa. First, they are newly discovered in the field or among the unsorted material, not erected out of the known genera or species. Some are quite abundant in their habitats (e.g. *Chlorocalis maternaschulzei* Stiewe, Vermeersch et Shcherbakov, 2019, which lives even in

Table 2. *Aucomantis aetherius*, **gen. et sp.n.**, measurements of the type series, mm (continued).
Таблица 2. *Aucomantis aetherius*, **gen. et sp.n.**, промеры типовой серии, мм (продолжение)

specimen code	sex	HF	HT	HTs	HBt	FW	FWw	FAVS	TAVS
ESZI010	M	6.9	7.6	5.3	3.6	20	6.0	iIiIiIiIiIiiiI/ iIiIiiiIiIiiiI	11
ESZI013	M	6.9	7.2	5.2	3.4	19	6.0	iIiIiIiIiIiiiI/ IIiIiIiIiiiI	12
ESZI014	M	7.2	7.6			20		iIiIiIiIiIiiiI	11
ESPC0126	M	7.3	7.9	5.5	3.8	21	6.7	iIiIiIiIiIiiiI	12
ESPC0127	M	7.2	7.6	5.6	3.6	20		iIiIiIiIiIiiiiI/ iIiIiIiIiIiiI	12
ESPC0128	M	7.3	7.7	5.8	3.7	22		iIiIiIiIiIiiiI	12
ESPC0129	M	7.7	8.2	5.7	3.9	20	6.2	iIiIiIiIiIiiI/ iIiIiIiIiIiiiI	12
ESPC0130	M							iIiIiIiIiIiiI/ iIiIiIiIiIiiiI	12/11
AM	M	6.5	7.0	5.0	3.5	21	5.5	iIiIiIiIiIiiI	12/13
CTHC-101	M	7.0	6.8	5.4	3.5	20	5.8	iIiIiIiIiIiiiI	13/12
CTHC-102	M	7.3	7.0	5.4	3.5	20	6.1	iIiIiIiIiIiiiI	11
CTHC-103	M	7.3	6.8	5.2	3.5	19	6.2	iIiIiIiIiIiiiI	12/11
PT3	M	7.5	7.9	5.7	3.7	20		iIiIiIiIiIiiiI	12
ESZI011	F	8.3	8.7	5.8	3.7	23	7.2	iIiIiIiIiIiiiI	12
ESZI012	F	7.6	8.0	5.2	3.5	21		iIiIiIiIiIiiiI	12/11
ESPC0125	F	7.7	8.3	5.6	3.6	22	6.8	iIiIiIiIiIiiiI	12
ESPC0131	F	7.9	8.2	5.7	3.6			iIiIiIiIiIiiiI	12
ESPC0132	F	7.9	8.1	5.7	3.5		7.0	iIiIiIiIiIiiiI	12
AF0	F	7.5	8.0	4.5	3.0	23	5.5	iIiIiIiIiIiiiI	12/13
AF1	F	8.0	7.5	5.5	3.5	22	6.0	iIiIiIiIiIiiiI	12
AF2	F	8.0	8.0	5.5	3.5	23	6.0	iIiIiIiIiIiiiI	13
PT1	F	7.7	8.3			20		iIiIiIiIiIiiiI	12
PT2	F	7.7	8.2			22		iIiIiIiIiIiiiI	12

Abbreviations: HF — metafemur length, HT — metatibia length, HTs — metatarsus length, HBt — metabasitarsus length, FW — forewing length, FWw — forewing maximum width, FAVS — arrangement of forefemoral anteroventral spines, TAVS — number of foretibial anteroventral spines (left/right).

degraded habitats — Vermeersch *et al.*, 2019). Yet all are completely absent in the material collected in the same general area before 1980s or even before 2000s. This circumstance alone is worth of a historical entomological investigation. Another common feature is that almost each of these new taxa significantly enhances our knowledge of the order, be it morphology or ecology. At the same time, the evident paucity of our knowledge about praying mantids of the area together with the unprecedented rate of its deforestation makes a complete inventory of the Greater Mekong Mantodea a priority task.

The new genus extends the phenotypical range of Leptomantellidae to the "short-bodied" leaf-planking ecomorph, more typical of Nanomantidae [Brannoch, 2019]. A potential autapomorphy of the family is the presence of only a membranous, setae-bearing process on edge **pba** of the left phallomere, which could either be **loa** with **afa** reduced or typically strongly sclerotized **afa** becoming membranous. Accordingly, the extension of sclerite **L1** is restricted in the family by parts of the wall of pouch **pne**. The status of Leptomantellidae as a sister-group to the remaining Nanomantoidea was corroborated by the molecular phylogenetic studies of Svenson & Whiting [2009], Liu *et al*. [2023] and Ma *et al*. [2023] but not by Brannoch [2019] who focused specifically on Nanomantoidea. However, all these studies sampled *Leptomantella* only. Without any doubts, inclusion of *Aucomantis* **gen.n**. will be instrumental in further phylogenetic studies of this group.

Acknowledgements. The author would like to express his sincere gratitude to the many people without whom this work would not have been possible. I thank Leonid Anisyutkin, Andrei Gorochov (ZIN) and Matthias Borer (NMB) for facilitating the study of the respective collection material, Valentin Pilipenko (Lomonosov Moscow State University, Moscow) for his help with the macro photography of the specimens, Chih-Ting Hsu (National Chung Hsing University) and Kris Anderson (Cornell University) for imaging and providing data on additional specimens, Nikolay Poyarkov (Lomonosov Moscow State University) for helping locating the exact type locality, Eugene Popov (Komarov Botanical Institute of the Russian Academy of Sciences) and Lindy Fung (avocat on iNaturalist) for kindly permitting to use their photos and data. Last but not least, I am incredibly grateful to Encilia Encilia and Djunijanti Peggie (Museum Zoologi, Bogor) for their invaluable efforts to locate and image the type material of *Hebardia* and *Hebardiella*. The study was conducted under the state assignment of Lomonosov Moscow State University.

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