

Four new species of robber flies (Diptera: Asilidae) from the Oriental Region

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Abstract

Four new species of Asilidae are described: *Heligmonevra fuscinalonga* sp. nov. from Cambodia, *Heligmonevra singaporensis* sp. nov., *Michotamia singaporensis* sp. nov. from Singapore, and *Dichaetothyrea loei* sp. nov. from Thailand. *Heligmonevra sula* OLDROYD, 1972 is reported from Cambodia for the first time. A photo of the abdomen of *Amphiscolpos impiger* (WULP, 1872) is given.

Keywords: Asilidae, Oriental region, new species, *Amphiscolpos*, *Ancylorhynchus*, *Dichaetothyrea*, *Heligmonevra*, *Michotamia*.

Résumé

Quatre espèces nouvelles d'Asilidae sont décrites: *Heligmonevra fuscinalonga* sp. nov. du Cambodge; *Heligmonevra singaporensis* sp. nov. et *Michotamia singaporensis* sp. nov. de Singapour et *Dichaetothyrea loei* sp. nov., de Thaïlande. *Heligmonevra sula* OLDROYD, 1972 est signalé pour la première fois au Cambodge. Le mâle d'*Ancylorhynchus cambodgiensis* TOMASOVIC, 2006 est décrit pour la première fois. Une photo de *Amphiscolpos impiger* (WULP, 1872) est fournie. Les structures internes des genitalia mâles de toutes ces espèces sont illustrées.

Introduction

This note is the continuation of the study of the Asilidae collected in Thailand, Cambodia and Singapore by the team of Dr. P. GROOTAERT (RBINS) (TOMASOVIC & GROOTAERT, 2003, TOMASOVIC, 2005a, 2005b, 2006a, 2006b).

Taxonomic part

Asilinae: Asilini

Genus *Amphiscolpos* HULL, 1962

HULL (1962) establishes the genus *Amphiscolpos* with four species that have the following main characteristics, "a pair of stout, flattened spines or spinous bristles on the lateral margin of the sixth tergite". JOSEPH & PARUIS (1983) cite three species of *Amphiscolpos*: *A. areolis* (WALKER, 1860), *A. mendax* (WALKER, 1857) = *A. areolatus* (WALKER, 1861) from Sulawesi and *A. complens* (WALKER, 1861) = *A. nigritulus* (WULP, 1872) from the Moluccas.

Amphiscolpos impiger (WULP, 1872) (Figs 1-5)

Eccoctopus impiger WULP, 1872. Tijdschrift voor Entomologie, 15: 234.

Heligmonevra impiger (WULP, 1872) OLDROYD (1975). A Catalog of the Diptera of the Oriental Region, 2: 143.

Amphiscolpos impiger (WULP, 1872) TOMASOVIC (2006). Bulletin de la Société royale belge d'Entomologie, 142 : 139.

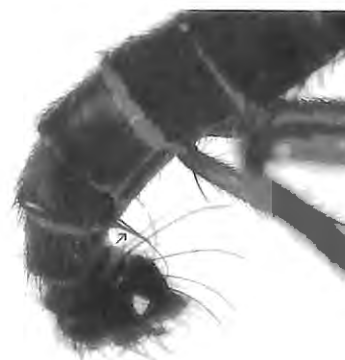
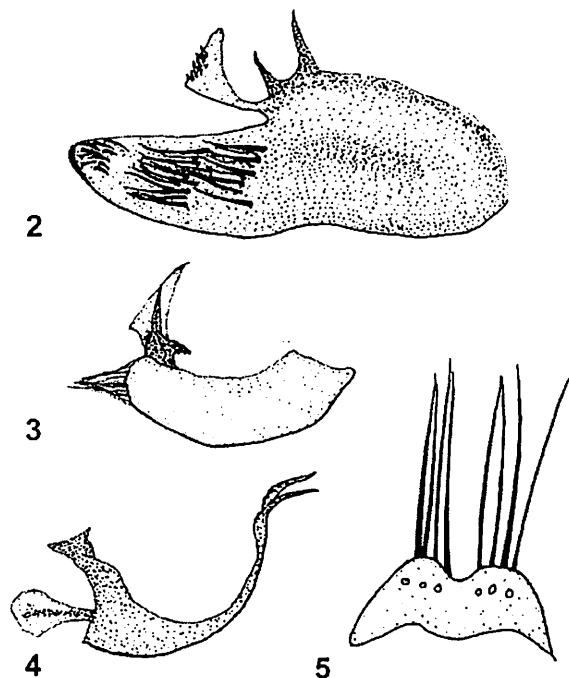


Fig. 1. *Amphiscolpos impiger*, Stout spines on the tergite 6



Figs 2-5. *Amphiscolops impiger*. 2: Epandrium, inner view; 3. Gonocoxite and gonostylus, external view; 4. Aedeagus, lateral view; 5. Hypandrium, inner view.

Material examined:

Lectotype ♂, Rosenberg, Celebes, Soemalatt as *Eccoctopus impiger* VAN DER WULP (Naturalis, Leiden).

TOMASOVIC (2006) transferred *impiger* WULP to *Amphiscolops* HULL, 1962. Thanks to Dr. K. VAN ACHTERBERG (National Museum of Natural History of Leiden) we had the opportunity to the male genitalia of *Eccoctopus impiger* WULP, 1872. They are illustrated and a photo is added of the abdomen showing the stout spines on the sixth tergites that are identical to the illustration of WULP (1872).

Genus *Heligmonevra* BIGOT, 1858

The genus *Heligmonevra* is known at present from the following regions; the Afrotropical region with 26 species, the Australasian region with 3 species, the Neotropical with 1 species and the Oriental with 35 species (GELLER-GRIMM, 2007). Within the Oriental region the genus has the largest number of species in India (21), but only 3 species of *Heligmonevra* are known from Southeast Asia: *H. debilis* (WALKER, 1857) from Malaysia, *H. yenpingensis* (BROMLEY, 1928) from China and *H. calceolaria* SCARBROUGH & DUNCAN, 2004 from Thailand (SCARBROUGH & DUNCAN, 2004). OLDROYD (1972), JOSEPH and PARUI

(1980, 1984, 1986, 1987a, 1987b, 1993) give illustrations of the external male genitalia of Oriental *Heligmonevra*, but the inner structures of the complex phallus of the males are only given by LONDT (2002) for the African species.

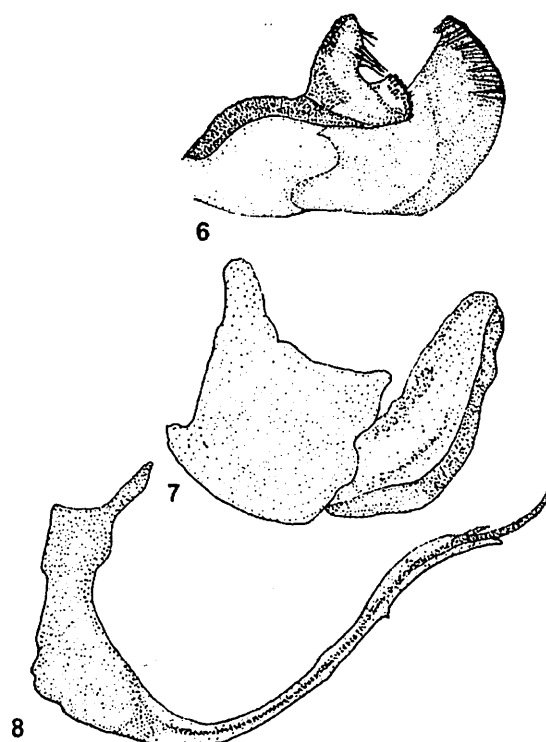
***Heligmonevra sula* OLDROYD, 1972
species new for Cambodia
(Figs 6-8)**

Material examined:

Cambodia, ♂: Prek Toal (Tonle Sap Lake), 25-V-2003. Leg. J. CONSTANT, K. SMETS & P. GROOTAERT; Angkor, 4♂, 6♀, 2-15-VI-2003, 2♂, 4♀, IX-2003; Angkor Thom, 2♂, 1♀, 21-XI-2004; Siem Reap, 2♂, 1♀, 28-V-2003; 2♂, 3♀, VII-2003. LEG. D. R. JUMP. (Coll. RBINS).

H. sula was only known from the Philippines (GELLER-GRIMM, 2007). Now we report it for the first time from Cambodia. OLDROYD (1972) illustrates only the external male genitalia and here we illustrate also the internal structures. The same author in his key of the species *Heligmonevra* from Philippines has doubts on the status for the species *seminuda* OLDROYD, 1972 and *sula* OLDROYD, 1972 he also indicates in brackets *Amphiscolops*.

However, and it is doubtful that *Heligmonevra* or *Amphiscolops* are the right genera for *sula* OLDROYD, 1972.



Figs 6-8. *Heligmonevra sula*. 6: Epandrium of, inner view; 7: Gonocoxite and gonostylus, external view, without chaetotaxy; 8: Aedeagus, lateral view.

Heligmonevra fuscinalonga sp. nov.

(Figs 9-11)

Holotype ♂: Singapore, Nee Soon Swamp Forest, 16-III-2005 (sample 25017, leg. P. GROOTAERT).
Allotype ♀: Singapore, Nee Soon Swamp Forest (station 25155 Malaise trap 3. Leg. P. GROOTAERT).
Paratype: 2♂: Singapore, Nee Soon Swamp Forest, station 25017; 1♂: 6-V-2005 (sample 25140, leg. P. GROOTAERT); 2♂: Cambodia: Prov. Siam Reap, Kbal Spean, 15-VIII-2005 and 15-VIII-2006. Leg. D. JUMP (RBINS).

Derivatio nominis: the name is formed from *fuscina* (Latin for a fork with three teeth) and *longa* (Latin) = long, which refers to the shape of the aedeagus.

Description

General colour: Blackish with yellowish legs and iridescent wings infuscated at the tip.

Examined material:

Head: face yellow, mystax white. Palpus yellow with fine and long yellowish setae. Antennae: scape and pedicel yellow with smaller yellowish setae; scape twice as long as pedicel; postpedicel brown, short, oval shorter than scape; style black as long as the 3 basal segments combined, tip of stylus flattened. Occiput black with white tomentum and with black setae and white hairs. Palpus yellow with fine, long and yellow setae.

Thorax: pronotum black with yellow setae. Scutum black with spots of yellowish tomentum. Setae: 2 notopleurals, 1 supra-alar, 2 postalars, dorsocentrals reaching the transverse suture.

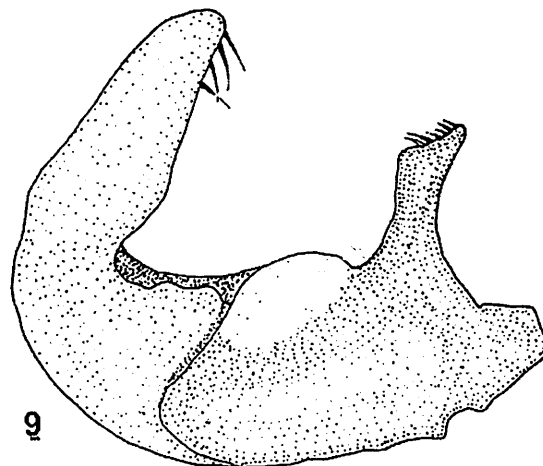
Scutellum yellow with a ridge, 2 marginal scutellar setae. Katatergal setae fine, long and yellow, metepisternum with 1 long fine yellow seta.

Wings iridescent, distal 1/3 with microtrichia.

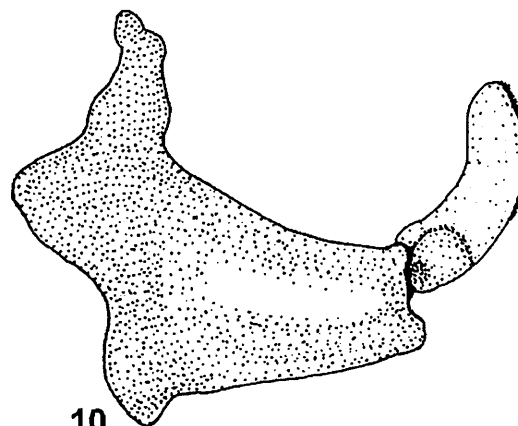
Legs yellow with majority of black setae. Femur posteriorly with a brown stripe. Tarsomeres blackish. Fore femur with 4 long fine setae, middle femur with more numerous and stronger setae. Posterior femur with some smaller and finer setae.

Abdomen: tergites black-grey with a distal yellow stripe, middle centre tergites with whitish short hairs and white setae on the lateral slope. Sternites greyish with fine setae.

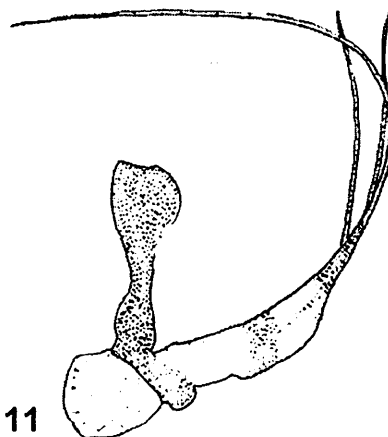
Male genitalia: epandrium deeply cleft with strong setae at the upper inner side. Gonocoxite thick, larger at base; gonostylus short, parallel-



9



10



11

Figs 9-11. *Heligmonevra fuscinalonga* sp. nov. 9: Epandrium, external view, without chaetotaxie; 10: Gonocoxite and gonostylus, external view, without chaetotaxie; 11: Aedeagus, lateral view.

sided, slightly curved with thick denticle at the dorsal margin. Aedeagus with very long slender prongs, the median longer.

Female is similar to male with the ovipositor characteristic for the genus.

Remarks: We must emphasize that the epandrium of *H. fuscinalonga* resembles that of

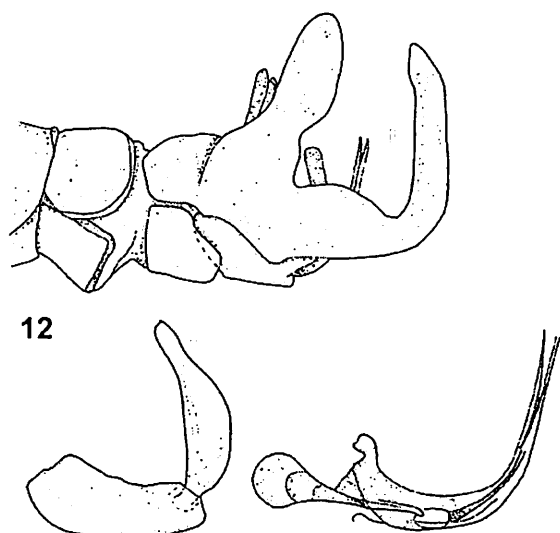


Fig. 12. *Heligmonevra laevis*. Genitalia, after Londt (2002).

H. laevis (WALKER, 1861), from Namibia, Malawi, and the Democratic Republic of Congo, but the gonocoxite and gonostylus of *H. laevis* are entirely different (Fig. 12 after LONDT 2002).

***Heligmonevra singaporensis* sp. nov.**
(Figs 13-15)

Material examined:

Holotype ♂: Singapore, Bukit Timah, 27-VII-2005, Mal. trap. (sample 25274, Leg. P. GROOTAERT).

Derivatio nominis: the name refers to the region where the species has been collected.

Description

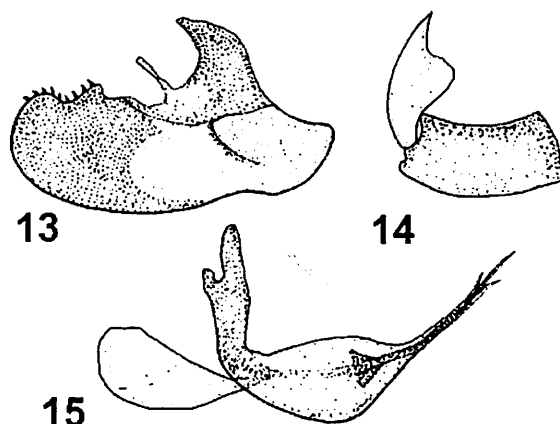
General colour: Blackish with yellowish legs and iridescent wings infuscated at the tip

Length: 14 mm.

Head: face yellow, at half-height of head face less than a tenth of the width of the head. Mystax yellowish. Palpus brown-yellow with fine and long yellowish setae. Antennae: scape and pedicel yellow with short yellow setae; scape twice as long as pedicel; postpedicel brown, oval a little shorter than scape; style black longer than the 3 basal segments combined, tip of stylus flattened. Occiput black covered with yellow tomentum and yellowish setae and hairs.

Thorax: pronotum black with curly setae. Scutum black with spots of yellow tomentum. Setae: 2 notopleurals, 2 supra-alars, 2 postalars, dorsocentral reaching the transverse suture.

Scutellum black with a ridge, 2 scutellar



Figs 13-15. *Heligmonevra singaporensis* sp. nov. 13: Epandrium; 14: Gonocoxite and gonostylus; 15: Aedeagus, external view, without chaetotaxy.

setae. Anepisternum and katepisternum with a wide black stripe. Katatergal setae fine, long and yellow, menepisternum with 1 long and fine yellow seta. Wings iridescent, distal third with microtrichia. Legs, yellow with yellow setae. Median and posterior femora with brown stripe. Tarsomeres, yellow-brown.

Abdomen: tergites black with a distal yellow stripe; tergites centrally with yellow short hairs and yellow setae on the lateral slope. Sternites yellow with long and fine yellow setae.

Male genitalia: Epandrium, large with rounded end that bears strong spines at dorsal margin; a remarkable fine tongue process in the middle of the dorsal margin and a large pointed process at the superior beginning. Gonocoxite rectangular, gonostylus slender at base, wider at middle and pointed at apex. Aedeagus with wide sheath, prongs short, median prong longer than lateral prongs.

Remarks: The species of *Heligmonevra* are often difficult to distinguish by the dichotomous key only. But they are very easy to separate using the illustrations of the inner structures of the male genitalia and it is particularly true for the two new species.

Ommatiinae: Ommatiini
***Michotamia* MACQUART, 1838**

= *Allocotosia* SCHINER, 1866

The species of this genus are readily distinguished from the other Ommatiini by the elongate postpedicel, which is at least four times the combined length of the scape and pedicel. It is separated from *Ommatius* WIEDEMANN, 1821

by the long, attenuated, first flagellomere together with the short style (JOSEPH and PARUI, 1998). Actually there are 24 species known in the world, two are Afrotropical, two are Australasian GELLER-GRIMM (2007) and 20 are Oriental (OLDROYD 1975; JOSEPH & PARUI, 1980; TOMASOVIC & GROOTAERT, 2003; GELLER-GRIMM, 2007). Only one species, *M. latifascia* (WALKER, 1857), is known from Singapore and Malaysia (DANIELS, 1989).

Michotamia singaporensis sp. nov.
(Figs 16-18)

Material examined:

Holotype ♂: Singapore: Nee Soon swamp forest, 6-V-2005. Malaise trap 3 (sample 25140, leg. P. GROOTAERT).

Description

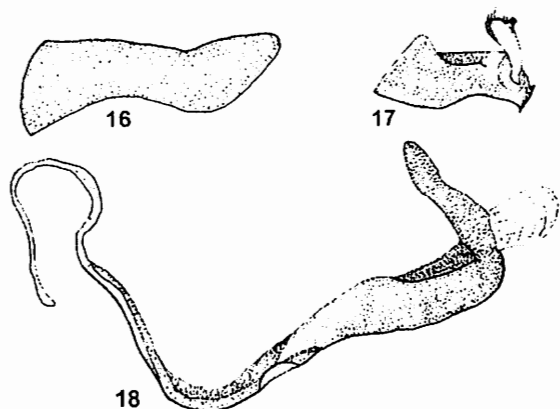
Body length: 13 mm.

General colour: black and yellow

Head: face, frons and occiput with golden tomentum; ocellar tubercle shining black with 2 very small black setae; facial beard with long and yellowish setae. Antennae: scape, postpedicel and arista black, pedicel fawn; palpus black with black setae.

Thorax: mesonotum with yellowish tomentum and a broader median black stripe with a fine yellow median stripe. Setae black: 2 notopleural, 1 supra-alar, 1 postalar, 3 pairs of dorsocentral. Scutellum with yellowish tomentum and 2 scutellar bristles. Pleura with yellowish tomentum. Legs with black setae, fore and middle femora yellow, hind femora with a median black spot, tibia yellow, tarsi black. Wings brown yellow.

Abdomen: tergites 1-5 yellow with black



Figs 16-18. *Michotamia singaporensis* spec. nov. 16: Epandrium; 17: Gonocoxite and gonostylus; 18: Aedeagus.

markings, the other black, first tergite with lateral black and yellow setae, tergites 2-5 with yellow lateral marginal setae, the hind tergites with black lateral setae. Sternites yellow.

Male genitalia: black with yellow setae and hairs. Epandrium with rounded apex slightly curved. Aedeagus very long and slender, broader at the lower part and a small hollow at the beginning of the narrow part. Apodeme small. Gonocoxites short and broad. Dististylus slightly rounded apically, with a dorsal process and long hairs in the apical part.

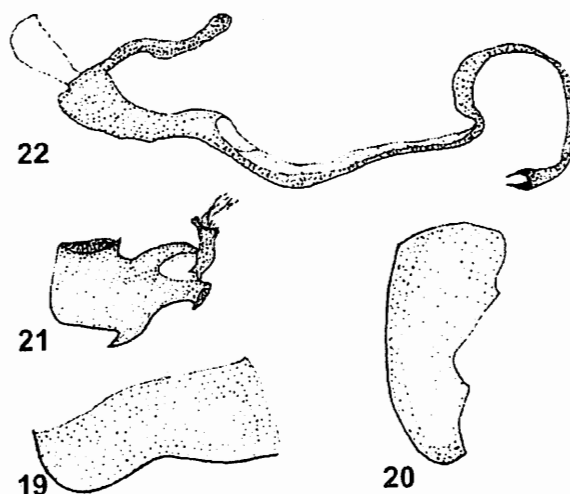
Remarks: *M. singaporensis* sp. nov. differs from *M. latifascia* (WALKER, 1857) in having the face golden, the mystax yellowish, the pedicel fawn and the base of the abdomen yellow. It is also very similar to *M. annulata* BIGOT, 1878 and *M. fusciformis* JOSEPH and PARUI, 1984 but it differs by the details of colouration and especially by the male genitalia.

Michotamia praeacuta (VAN DER WULP, 1898)
(Figs 19-22)

= *Allocotosia praeacuta* WULP, 1898. Tijdschr. Ent., 41: 151.

WULP (1899) notes for *A. praeacuta* the type specimen is in Brussels « Een enkel ♂, van Java (FRUHSTORFER) in het Brusselsche Museum

We examined this male that wears four labels: Java FRUHSTORFER- *Allocotosia praeacuta* VAN DER WULP det. 1899- cf. Tijdschrift Entomologie 41-1898(1899) p. 151-152 pl 5, figs 15-16. Type. Coll. I.R.Sc.N.B. We studied the genitalia of this male and give the illustrations of the inner structures (Figs.19-22).



Figs 19-22. *Michotamia praeacuta*. 19: Epandrium, lateral view; 20: Epandrium, dorsal view; 21: Gonocoxite and gonostylus; 22: Aedeagus.

Laphriinae: Atomosiini

***Dichaetothyrea* DE MEIJERE, 1914**

The tribe of Atomosiini is almost worldwide in distribution, but they appear to be scarce except in the Neotropical region. The genus *Dichaetothyrea* contains only two species: the type of the genus, *D. punctulosa* (Meijere, 1911) from Java and *D. clavifrons* LONDT, 1982 from Madagascar. For *D. punctulosa* the form of the head and particularly the antennae are well illustrated by HULL (1962) and for *D. clavifrons* by LONDT (1982). For this last species only the female is known.

***Dichaetothyrea loei* sp. nov.**
(Figs 23-24)

Material examined:

Holotype ♂: Thailand, Loei province, Na Haeo, Nam Kring Tok, 19.V.2003 (sample 23043, leg. P.Grootaert, RBINS). Paratypes: 1♂, Thailand, Loei province, Na Haeo, Nam Khring Tok, 12.V.2001 (sample 21.057, leg. P.Grootaert); 1♂, Na Haeo, Chang Tok, 17.V.2003 (sample 23.035, leg. P.Grootaert); 21♀, Nam Kring Tok, 19.V.2003 (sample 23043, leg. P.Grootaert, RBINS).

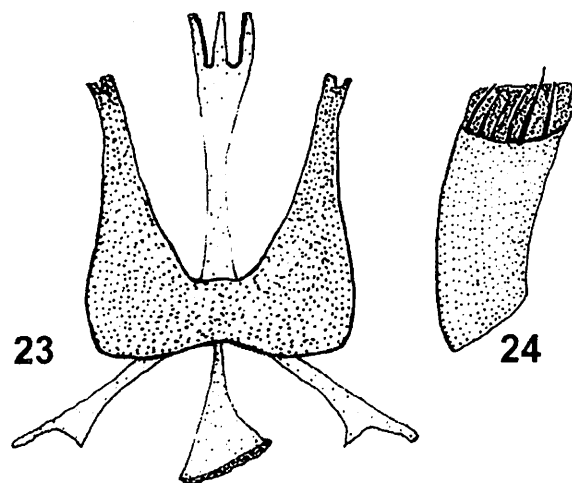
Derivatio nominis: the name refers to the Loei province in Thailand where the species has been collected.

Description

Body length: 7-8 mm.

General colour: shiny black

Head: face narrow and covered like frons and occiput with white tomentum. Mystax with 4-5 long white and fine setae. Antennae black:



Figs 23-24. *Dichaetothyrea loei* spec. nov. 23: Aedeagus, dorsal view; 24: Epandrium.

scape shorter than pedicel with some fine setae; pedicel with setae longer; postpedicel slightly longer than the 2 first segments with a single seta at base of style; style longer than scape. Ocellar tubercle with 2 long, black setae.

Thorax: scutum with 2 yellowish small patches of tomentum situated anterolaterally, the remaining scutum bare, shiny black with 2 central lines punctuated, punctures more numerous on the posterior part and on the disc of the scutellum which has the border yellowish. Lateral thorax with a yellowish micro-pubesence. Halteres dull white. Wings, slightly blackish and entirely covered with microtrichia. Legs: fore and mid legs yellow brown. Hind femora black, a ring more clearly at the base and at the tip, ventrally a fringe of long fine yellow hairs, tibia black with a yellowish ring at the base and the same fringe as the femora, tarsi black brown. All tibiae and tarsi with long, fine black setae.

Abdomen: tergites shiny black, strongly punctuated with a sparse yellowish pilosity. Tergites 1-2 with lateral setae.

Male genitalia: very small, black with short, fine and yellowish hairs. Aedeagus with three apical tubes and two long horns on the sheath lateral like *Aphestia annulipes* (MACQUART, 1838) from Brazil (THEODOR, 1980). Gonopod rectangular with some short, strong black setae on the superior 1/5.

Female: Like the males, with a lateral long, fine black setae on the tergites 7-8.

Key to the species of *Dichaetothyrea* adapted from LONDT (2002)

- 1 Frons uniformly pruinose 2
- Frons with basal third silvery pruinose
..... *clavifrons* LONDT
- 2 Antennal style shorter than scape
..... *puctulosa* de MEIJERE
- Antennal style longer than scape
..... *loei* sp. nov.

Stenopogoninae: Stenopogonini

***Ancylorhynchus* BERTHOLD, 1827**

The species of *Ancylorhynchus* are distinguishable from other Asilidae by the short, curved proboscis (like a beak of parrot). The genus currently contains 47 species among those only two species are known from the Oriental region: *A. percheronii* (MACQUART,

1834) from Sumatra and *A. cambodgiensis* TOMASOVIC, 2006 from Cambodia, known only by a female, TOMASOVIC (2006).

Ancylorhynchus cambodgiensis TOMASOVIC,
2006

(Figs 25-28)

Bulletin de la Société royale Belge d'Entomologie 142: 137-139; female.

Type-locality: Cambodia, Angkor Thom (RBINS).

Material: allotype, ♂, Cambodia, Siam Reap Prov. Front of Phnom Bakeng, Malaise trap, 07/III-14/III/2005, Leg. I. VAR (RBINS).

Description

Male

General colour: black, white and reddish.

Head: face not prominent, with white tomentum. Mystax white, short, reaching almost antennal insertion. Palp black short, inflated with strong white setae. Proboscis black, parrot bill-shaped. Antennae black: scape with white bristles on frons, pedicel very small, postpedicel very long and very flattened, like a ribbon, with an apical microscopic pit.

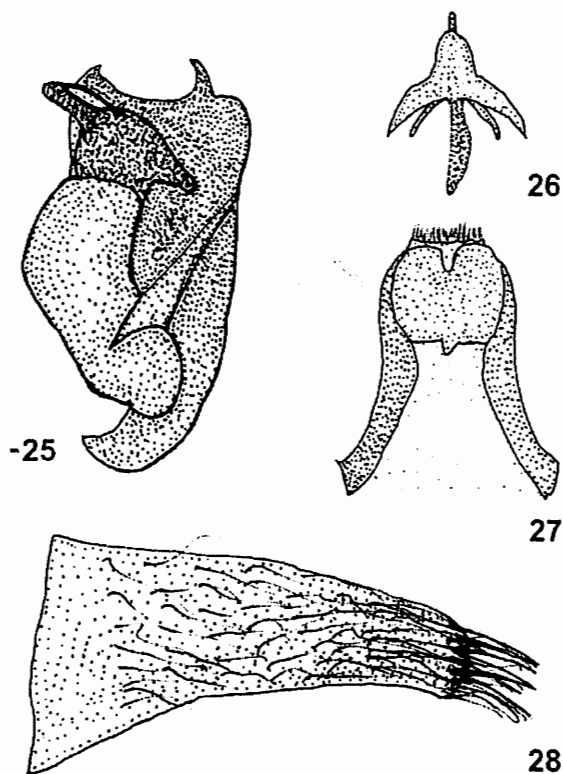
Thorax: anterior antepronotum black with long, close hairs and setae, posterior antepronotum with white tomentum and numerous hairs. Presutural area of scutum black bearing marks of white tomentum. 4 notopleural setae black. Scutellum with white tomentum and the margin with more than 12 fine mixed yellowish hairs and setae. Wings black-brown on distal 2/3 and whitish at the base.

Legs black with whitish hairs and setae. Femora not swollen.

Abdomen: Tergite 1 with white tomentum and white hairs on the lateral slopes. Tergite 2, anterior 1/2 white, posterior 1/2 black, other tergites reddish with short white hairs. Sternite 1 black, the other sternites reddish with white hairs.

Male genitalia: black with yellowish hairs. Parts of epandrium slender, with rounded end. Gonocoxites and dististylus complicated. Aedeagus small.

The male resembles the female but the abdominal tergite 3 is narrower than the following tergites and it has more white tomentum on the scutum and especially on the pleurae.



Figs 25-28. *Ancylorhynchus cambodgiensis*. 25: Gonocoxite and gonostylus, inner view; 26: Aedeagus, lateral view; 27: Proctiger, dorsal view; 28: Epandrium.

Acknowledgements

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Bibliographie

- DANIELS, G., 1989.- 37. Family Asilidae. Catalog of the Diptera of Australasian and Oceanian Regions. - In: Evenhuis, N.L. (Ed): *Honolulu: Bishop Museum Press*, 86: 326-374.
- GELLER-GRIMM, F., 2007.- <http://www.geller-grimm.de/catalog/species.htm>.
- HULL, F.M., 1962. - Robber flies of the world. The Genera of the Family Asilidae. *United States National Museum, Bulletin*, 224 (1-2): 1-907.
- JOSEPH, A.N.T. & PARUI P., 1980.- New and little-known India Asilidae (Diptera) IV Key to Indian *Heligmoneura* Bigot with descriptions of ten new species. *Entomologica scandinavica*, 11: 281-290.
- JOSEPH A.N.T. & PARUI P. 1983. - A review of the Asilidae (Diptera) from the Oriental region. *Oriental Insects*, 17: 269-393.
- JOSEPH A.N.T. & PARUI P., 1984. - Studies on the Asilidae (Diptera) collections made by Dr.

- Ghorpade. *Records of the Zoological Survey of India*, 66: 1-140.
- JOSEPH A.N.T. & PARUI P., 1986. - Some Asilidae (Diptera) present in the British Museum (Natural History) from India and Bangladesh. *Records of the Zoological Survey of India*, 83(3-4): 83-106.
- JOSEPH A.N.T. & PARUI P., 1987a. - On some Asilidae (Diptera) from India. *Bulletin of the Zoological Survey of India*, 8(1-3): 89-109.
- JOSEPH A.N.T. & PARUI P., 1987b. - On some Asilidae (Diptera) from India present in the Smithsonian Institution. *Oriental Insects*, 21: 147-162.
- JOSEPH A.N.T. & PARUI P., 1993. - Asilidae (Diptera) from Andaman Islands. *Records of the Zoological Survey of India*, 93(1-2): 295-311.
- JOSEPH A.N.T. & PARUI P., 1998. - The Fauna of India and the adjacent countries (Diptera Asilidae). General Introduction and Tribes Leptogasterini, Laphriini, Atomosini and Ommatini. *Zoological Survey of India*, 1: 1-278.
- LONDT J.G.H., 2002. Afrotropical Asilinae (Asilidae): A provisional key to genera, with a review of the status of *Neomochtherus* Osten Sacken, 1878, and descriptions of new genera and species. *African Invertebrates*, 43: 11-92.
- OLDROYD H., 1975. Family Asilidae. - In : Delfinado, M.D. & Hardy, E.: A catalog of the Diptera of the Oriental region. Vol.II. Honolulu: University Press of Hawaii: 99-156.
- SCARBROUGH A.G. & DUNCAN A., 2004. - New Asilinae Species (Diptera: Asilidae) of *Heligmoneura* Bigot and *Orophotus* Becker from Thailand. *Transactions of the American Entomological Society*, 30(2+3): 221-231.
- THEODOR O., 1976. - On the Structure of the Spermathecae and Aedeagus in the Asilidae and their Importance in the Systematics of the family. *Jerusalem*. 175 pp.
- TOMASOVIC G. & GROOTAERT P., 2003. - New Asilidae (Diptera) from Thailand: contribution 1. *Bulletin de la Société royale belge d'Entomologie* 139(VII-XII): 252-258.
- TOMASOVIC G., 2005a. - New Asilidae (Diptera) from Thailand: Contribution 2. *Bulletin de la Société royale belge d'Entomologie* 141 (VII-XII): 163-167.
- TOMASOVIC G., 2005b. - Genus *Nusa* Walker, 1851: three new species from Cambodia and notes on the genus (Diptera : Asilinae : Laphriinae). *Bulletin de la Société royale belge d'Entomologie* 141(VII-XII): 168-173.
- TOMASOVIC G., 2006a. - Etude sur les genres d'Asilidae (Diptères) recensés de 2003 à 2005 sur le site d'Angkor (Cambodge). *Belgian Journal of Entomology*, 8(1): 11-15.
- TOMASOVIC G., 2006b. - Note on the Oriental Asilidae: description of *Ancylorhynchus cambodgiensis* n. sp. from Cambodia and taxonomic changes (Diptera). *Bulletin de la Société royale belge d'Entomologie*
- WALKER F., 1857. - Characters of undescribed Diptera in the collection of W.W.Saunders. *Transactions of the Entomological Society of London*, 4: Asilidae: 127-130.
- WULP F.M. van der 1898-99. - Aanteekeningen Betreffende Oost-Indische Diptera. *Tijdschrift voor Entomologie*, 39: 115-160.