

New Asilidae (Diptera) from Thailand: Contribution 2

by G. TOMASOVIC

Collaborateur scientifique à la Faculté universitaire des Sciences agronomiques, Unité d'Entomologie fonctionnelle et évolutive (Prof. E. Haubruge), Passage des Déportés 2, B-5030 Gembloux.

Abstract

Three new species of Asilidae, *Saropogon trispiculum* sp. nov., *Pegesimallus isanicus* sp. nov. and *Trigonomima penecyanella* sp. nov. are described from Thailand. *Saropogon dubiosus* THEODOR, 1980 is reported for the first time from Thailand.

Résumé

Trois nouvelles espèces d'Asilidae, *Saropogon trispiculum* sp. nov., *Pegesimallus isanicus* sp. nov. et *Trigonomima penecyanella* sp. nov. sont décrites de Thaïlande. *Saropogon dubiosus* THEODOR, 1980 est signalée pour la première fois de Thaïlande

Introduction

This note is the continuation of the study of the Asilidae collected by Dr. P. GROOTAERT, MR K. SMETS and J. CONSTANT in Thailand (TOMASOVIC & GROOTAERT, 2003).

Among recently collected material there were two species of the genus *Saropogon* LOEW, 1847, one species of the genus *Pegesimallus* LOEW, 1858 and one species of the genus *Trigonomima* ENDERLEIN, 1914.

All the specimens are deposited in the collections of the Royal Belgian Institute of Natural Sciences (Brussels).

Taxonomical part

Dasypogoninae : tribe Saropogonini

Genus *Saropogon* LOEW, 1847

This nearly worldwide distributed genus counts about 130 species, most of them in the southern Palaearctic.

In his catalogue of Oriental Asilidae, OLDROYD (1975) mentions 6 species for the Oriental region and states that this number is most probably underestimated. JOSEPH & PARUIS (1983) in their catalogue give 7 species and in 1995 they described the species *S. srilankaensis*.

THEODOR (1976) describes and illustrates the genitalia of the genus and states that *the*

aedaegus is conical, but shows marked differentiations, the dististylus and particularly the apical process of the gonopods, have a specific form in nearly every species examined.

Saropogon trispiculum sp. nov.

Figs 1-4

Derivatio nominis: the name is formed from *tri-* (Latin) = three and *spiculum* (Latin) = tip, and refers to the process on the gonopods.

Examined material:

Holotype ♂: "Coll. I.R.Sc.N.B., Thailand, Na Haeo, Malaise trap, 17-30.I.2004 (3), Leg. P. GROOTAERT"

Allotype ♀: idem

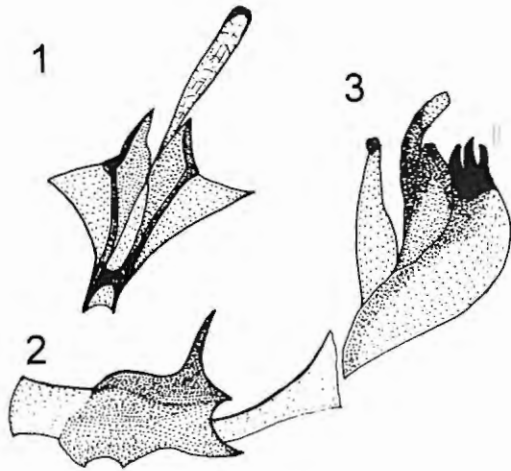
Paratypes (4): 1♂ + 1♀: "Coll. I.R.Sc.N.B., Thailand, Na Haeo, Malaise trap, 30.XI-13.XII.2003 (4), Leg. P. GROOTAERT" - 1♂: "Coll. I.R.Sc.N.B., Thailand, Na Haeo, Malaise trap, 4-7.I.2004 (3), Leg. P. GROOTAERT" - 1♀: "Coll. I.R.Sc.N.B., Thailand, Na Haeo, Malaise trap, 30.XI-13.XII.2003 (3), Leg. P. GROOTAERT"

Description

Body length (male): 10 mm.

General colour: mahogany.

Head: face red-brown; frons black with a few little yellowish hairs; occiput black with pale



Figs 1-3. *Saropogon trispiculum* sp. nov. Holotype male: 1. aedeagus in dorsal view; 2. aedeagus in lateral view; 3. gonocoxite and dististylus.



Fig. 4. *Saropogon trispiculum* sp. nov., habitus.

yellow tomentum and yellowish white setae and hairs; ocellar tubercle shining black with yellowish hairs; face beard with white setae and fine white hairs, reaching the base of the antennae; scape and pedicel reddish with short yellow hairs; funicule and arista black; palpi black with black hairs.

Thorax: pronotum and mesonotum shining black with mahogany spots and a short, yellowish pilosity; scutellum mahogany with a black spot at the base, yellow setae at the apical part and yellow hairs on the disk; pleura shining black with mahogany spots; sternopleuron and mesopleuron with golden stripes; hypopleuron, episternum and epimeron covered with golden tomentum and a little shining mahogany spot at the middle; subscutellum with whitish tomentum; wings brownish; legs brown with black setae and white hairs; median and posterior femora with black brown spot.

Abdomen: tergites mahogany with short white

hairs; sternites shining brown with some fine, long white hairs.

Male genitalia (Figs 1-3): shining mahogany with numerous white setae and hairs; aedeagus short and stout, with two subapical denticles; gonocoxite with a process bearing three tips; dististylus slender, curved apically.

***Saropogon dubiosus* THEODOR, 1980**

Fig. 5

The species is recorded from Jordan and Palestine.

For this species, THEODOR (1980) describes four different patterns and states:

This species varies markedly in coloration in different localities and appears in three distinct colours forms which differ so markedly that they would have been considered as different species in the past. The genitalia of all these forms are identical, except for minor differences. The forms differ mainly in the colour of the legs, the setae on the mesonotum and the abdomen.

Examined material:

17 specimens: 2: Na-Haero (Loei province) (bio station), 05-12.V.2001, secondary forest, leg. Constant & Grootaert – 1: idem, 05-12.V.2001, secondary forest, Malaise trap, leg. P. Grootaert – 1: idem, 13-20.V.2001, Malaise trap, leg. P. Grootaert – 2: idem, 05-12.V.2001, light trap, leg. Constant & Grootaert – 8: idem, 15-19.V.2003, day catch, leg. J. Constant, K. Smets & P. Grootaert – 1: idem, 16.V.2003, clearing, light trap, leg. J. Constant, K. Smets & P. Grootaert – 1: idem, 22.V.2003, Malaise trap 2, leg. P. Grootaert – 1: idem, 22.V.2000, station 20007, leg. P. Grootaert.

Note: station 20007 refers to the following data: dry deciduous forest, night catch.



Fig. 5. *Saropogon dubiosus* THEODOR, 1980, habitus.

Description of the specimens from Thailand

Body length (male): 9mm.

General colour: blackish with yellow setae and hairs.

Head: face reddish with light and sparse golden tomentum; face beard restricted to a single row of yellow setae on the epistome; frons and occiput black with yellow setae and hairs; antennae black; scape and pedicel with strong, yellow setae; flagellomere with microsegment and sensillum in a pit; palpi black with strong, yellow hairs.

Thorax: black with light yellowish tomentum on the sides of the pronotum, mesonotum and pleura; anterior part of the mesonotum with fine, short, yellow hairs and posterior part with strong, yellow setae; scutellum with two strong, yellow marginal setae; legs with yellow setae and hairs; femora yellow with a brown stripe; hind tibiae brown at the apex; tarsi yellow with apex brown; wings yellowish brown.

Abdomen: black with short yellow hairs on the tergites and some strong yellow setae at side of first tergite; sternites I and II with long, fine, yellow hairs and some long, fine, black hairs.

Male genitalia: identical to those illustrated in THEODOR (1980).

Female: similar to the male but with the first five tergites bearing an orange, median stripe.

Note: the specimens examined are very close to the specimens from Central Negev described by THEODOR (1980).

Genus *Pegesimallus* LOEW, 1858

LONDT (1980) has revised the genus *Pegesimallus* and synonymized the genera *Lagopodia* LOEW, 1858 and *Neopalarus* WILLISTON, 1889 with *Pegesimallus*.

The author states that most of the species occur in the Afrotropical region and a few species are known from the Oriental region.

To date three species are reported from South East Asia: *P. volcatus* (WALKER, 1849), a species very widely distributed throughout the Oriental region and two species from Sri Lanka: *P. srilankensis* LONDT, 1980 and *P. yerburyi* LONDT, 1980.

The author states about these species: "A remarkably constant species showing little variation of any kind".

Pegesimallus isanicus sp. nov.

Figs 6-10

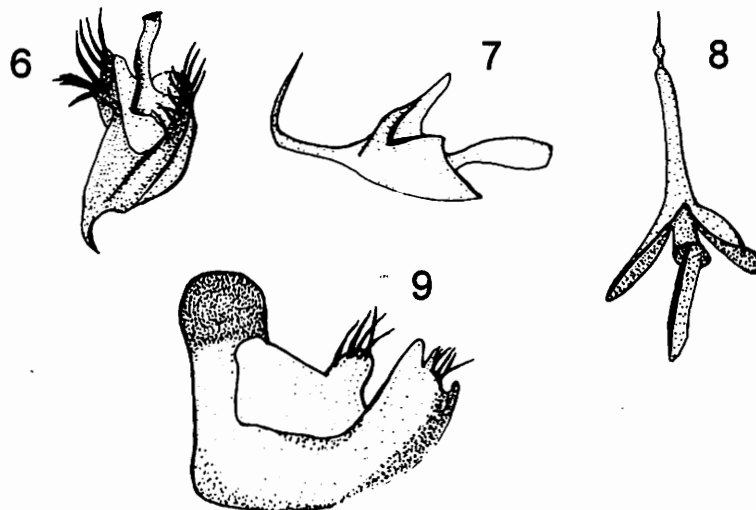
Derivatio nominis: the name refers to the region of Isan in North-Eastern Thailand where the species has been collected.

Examined material:

Holotype ♂: "Coll. I.R.Sc.N.B., Thailand (Loei), Na Haeo, 22.V.2003, Malaise trap 2. Leg. P. GROOTAERT".

Allotype ♀: "Coll. I.R.Sc.N.B., Thailand (Loei) Na Haeo (field res stat), 15-19.V.2003, Light trap, Leg. J. CONSTANT, K. SMETS & P. GROOTAERT".

Paratype: 1♀: "Coll. I.R.Sc.N.B., Thailand (Loei) Na Haeo (bio. station), 5-12.V.2001, Leg. J.



Figs 6-9. *Pegesimallus isanicus* sp. nov. Holotype male : 6. gonocoxite and dististylus; 7. aedeagus in lateral view; 8. aedeagus in dorsal view; 9. genitalia: lateral view.

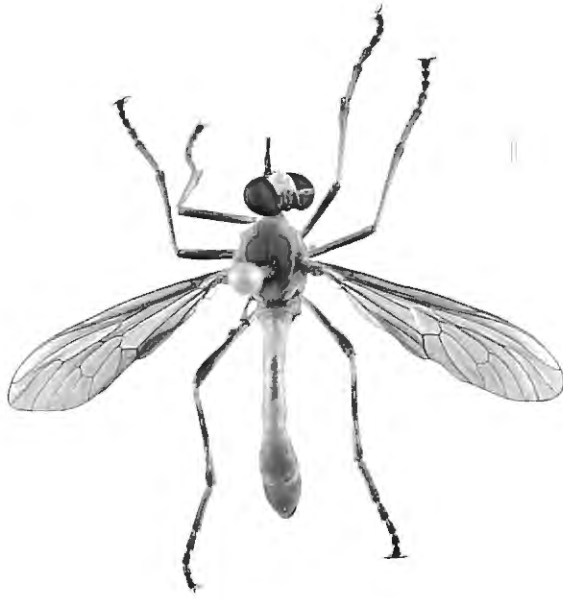


Fig. 10. *Pegesimalus isanicus* sp. nov., habitus.

CONSTANT & P. GROOTAERT" "Pitfall station 3, Bamboo; very short ground vegetation, thin litter. Recently burnt".

Description

Body length (male): 18 mm.
General colour: olive greenish yellow.

Head: face silky yellowish white; frons flat, yellowish brown; occiput dull white with two yellow occipital setae; face beard with only two pale yellow setae; antennae yellow, segment I a little shorter than segment II, the latter with one long, yellow seta and short, black hairs; segment III a little longer than the two first segments together; palpi black with long, fine black hairs.

Thorax: mesonotum with lateral margins paler and three longitudinal stripes on the anterior half, the central stripe very fine; one presutural and one supra-alar yellow setae; wings yellowish brown; legs yellow; femora with a pale brown stripe; apical two tarsomeres black. Abdomen yellow with the apical third black.

Male genitalia: (Figs 6-9) gonocoxites with thick black or yellow hairs at the distal part of the two process; aedeagus plain, with a long, narrow, curved, pointed apical part.

Female: similar to the male, with the apical half of the abdomen black.

Differential diagnosis

This species looks much like *P. volcatus* (WALKER, 1849) but it can be separated by the entirely yellow antennae and legs and (male) by

the distal part of the epandrium that bears a little spine below the superior, distal, rounded process.

The female is similar to the male but the black tergites cover up the distal half of the back.

Genus *Trigonomima* ENDERLEIN, 1914

We have examined 8 specimens of the genus *Trigonomima* that are close to *T. cyanella* OSTEN-SACKEN, 1882 from the Philippines. For this last species, OLDROYD (1972) states: "it seems very probable that *T. apipes* and *T. canifrons* are synonymous with *cyanella*, which fortunately has priority". He notes that the fauna of the Philippines forms a continuous link among all the island groups but he mentions nothing about the forms from Indochina or even the continental part of the Oriental Region.

BROMLEY (1945) notices mimicry between a number of genera of Oriental Asilidae and some Hymenoptera and mentions particularly *Trigonomima canifrons* and the stingless bee *Trigona canifrons*. Moreover, the genus *Trigonomima* shows also morphologic convergence with some species of the genus *Empis* LINNÉ, 1758 (Diptera Empididae).

Trigonomima penecyanella sp. nov.

Fig. 11

Derivatio nominis: the name is formed from prefix *pene-* (Latin)= almost, and *cyanella* the name of the most closely related species of *Trigonomima*.

Examined material:

Holotype ♂: "Coll. I.R.Sc.N.B., Thailand: Loei, Na Haeo National Park, 07.V.2001, Leg. Constant & Grootaert"

Paratypes (6): 5♀♀: "Coll. I.R.Sc.N.B., Thailand, Loei, Na Haeo 24/V/2000, Station 2022. Leg. P. Grootaert"; 1♀: "Coll. I.R.Sc.N.B., Cambodia, 8 Km N of Sre Noi (road to Anlong Vaeng) 29-30.V.2003, Dry Dipteroc. forest, day, Leg. J. Constant & K. Smets"

Description

Length of body 5-6 mm.

Male:

Head: broader than the thorax. Face with whitish tomentum and a fine black stripe in the middle. Mystax with fine white hairs above and short stout black hairs below. Bristles of



Fig. 11. *Trigonomima penecyanella* sp. nov., habitus.

ocellarium black. Occiput with greyish tomentum and black hairs. Antennae black, segment 1 and 2 with stiff black bristles, segment 1 short, segment 2 rounded and broader than segment 1, segment 3 twice as long as the combined length

of scape and pedicel, flagellomere with a distal, long, filiform process and a spine. Palpi and proboscis black with black hairs.

Thorax: brownish black with yellowish grey mark. Mesonotum covered with fine hairs, white on the anterior part, then black and longer and more numerous at the base. Scutellum bare with 6-8 bristles arising from disc. Halteres brown with white head.

Legs: black with black hairs and crew-cut on the posterior legs. Basitarses of posterior legs reddish-brown and longer than the 3 following segments.

Wings: blackish, venation typical of the genus.

Abdomen: black, tergites with laterally fine, long black hairs

Terminalia: dark with pale hairs.

The new species can be separated from *T. cyanella* OSTEN-SACKEN using the characters in the following table:

<i>Trigonomima cyanella</i> OSTEN-SACKEN, 1882	<i>Trigonomima penecyanella</i> sp. nov
Mystax with black hairs	Mystax with white and black hairs
Scutellum with 2 bristles	Scutellum with 6-8 bristles
Abdomen with purple metallic reflections	Abdomen dull
Hind tarsus black	Hind tarsus reddish-brown
Wings with basal half black, apical half pale	Wings wholly blackish

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