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REVIEW OF THE ORIENTAL MUTILLID WASPS OF THE SUBFAMILY TICOPLINAE (HYMENOPTERA, MUTILLIDAE)

A. S. Lelej[1] and K. V. Krombein[2]

1) *Institute of Biology and Soil Sciences , Far Eastern Division of the Russian Academy of Sciences, Vladivostok-22, 690022, Russia*

2) *Department of Entomology, National Museum of Natural History, Smithsonian Institution, Washington, DC 20560-0165, U.S.A.*

Subfamily Ticoplinae is newly recorded for Oriental region. *Eosmicromyrmilla* Lelej et Krombein, **gen. n.** (type species – *E. srilankiensis* Lelej et Krombein, **sp. n.**, Sri Lanka), *E. chinensis* Lelej, **sp. n.** (China, Yunnan), *Cameronilla* Lelej, **gen. n.** (type species – *Mutilla oedipus* Cameron, 1897, India), *Hindustanilla* Lelej, **gen. n.** (type species – *H. indica* Lelej, **sp. n.**, South India) and *H. nathani* Lelej, **sp. n.** (South India) are described. Key to Oriental and Palaearctic genera of tribe Smicromyrmillini is given.

KEY WORDS: Mutillidae, Ticoplinae, new taxa, Oriental region.

А. С. Лелей[1], К. В. Кромбайн[2]. Обзор ос-немок подсемейства Ticoplinae (Hymenoptera, Mutillidae) Ориентальной области // Дальневосточный энтомолог. 2001. N 99. С. 1-18.

Подсемейство Ticoplinae впервые указывается для Ориентальной области. Описываются новые таксоны: *Eosmicromyrmilla* Lelej et Krombein, **gen. n.** (типовой вид – *E. srilankiensis* Lelej et Krombein, **sp. n.**, Шри Ланка), *E. chinensis* **sp. n.** (Китай, Юньнань), *Cameronilla* Lelej, **gen. n.** (типовой вид – *Mutilla oedipus* Cameron, 1897, Индия), *Hindustanilla* Lelej, **gen. n.** (типовой вид – *H.*

indica Lelej, **sp. n.**, Южная Индия), и *H. nathani* Lelej, **sp. n.** (Южная Индия). Дана определительная таблица палеарктических и ориентальных родов трибы Smicromyrmillini.
1) *Биолого-почвенный институт, Владивосток-22, 690022, Россия*.
2) *Департамент энтомологии, Национальный музей естественной истории, Вашингтон*, *DC 20560-0165, США.*

INTRODUCTION

Ticoplinae is a small subfamily among the lower mutillids (Brothers, 1975; Lelej & Nemkov, 1997; Brothers, 1999). Its some morphological characters as well as natural history (parasite of chrysomelid beetles) are exceptional among Mutillidae (Argaman, 1988). Ticoplinae has been described by C. Nagy (1970) in Heterogynidae but later D. Brothers (1975) removed it to Mutillidae. F. Suárez (1975) proposed subfamily Nanomutillinae (for the genus *Nanomutilla* André, 1900) which was synonymized with Ticoplinae by Q. Argaman (1988). In spite of synonymy the type genus *Ticopla* Nagy, 1970 with *Nanomutilla* André, 1900 (Mitchel & Brothers, 1998) family-group name Ticoplinae is valid versus of Nanomutillinae according to article 40.1 of International Code of Zoological Nomenclature (1999). Following to Q. Argaman (1988) Ticoplinae consists of two tribes: Ticoplini Nagy, 1970 with *Nanomutilla* André, 1900 (=*Ticopla* Nagy, 1970) and Smicromyrmillini Argaman, 1988 with *Smicromyrmilla* Suárez, 1965. Both genera are distributed in Palaearctic and Afrotropical region. Afrotropical genus *Areotilla* Bischoff, 1920 has been placed in tribe Ticoplini later (Lelej & Nemkov, 1997; Mitchel & Brothers, 1998).

Subfamily Ticoplinae distributed in Palaearctic (2 genera, 6 species), Afrotropical (3 genera, 23 species) and Oriental (3 genera, 4 species) regions. G. Nonveiller (1980) announced the description of nine new *Smicromyrmilla* species from Cameroon. Probably some of them, especially with apterous males, are representatives of the distinct genus, as I saw from material which has been kindly send me by G. Nonveiller. If the distribution of the tribe Ticoplini limited by the Palaearctic and Afrotropical regions, the tribe Smicromyrmillini distributed in Oriental region also. During revisional study of Oriental Mutillidae three genera (all are new) and four species (three are new) of tribe Smicromyrmillini have been discovered in Sri Lanka, India and South China.

Sources of material. Taxonomic data based on Sri Lankan Mutillidae collected in 1976-1981 of the Smithsonian's "Ceylon Insect Project" and visit in 1993 by K. V. Krombein and B. B. Norden [deposited in USNM], Indian Mutillidae collected by P. S. Nathan in 1950 [USNM] and by L. Bartolozzi, A. Sforzi, K. Werner and L. Lorenz in 1995-1996 [MSNF], Chinese Mutillidae collected by Soviet-Chinese expeditions in 1955-1957 [ZMMU]. Collecting localities in Sri Lanka mostly repeat ones described and mapped by K. Krombein and W. Pulawski (1994). Physical features and climate of Sri Lanka are taken from P. Brinck et al. (1971) and K. Krombein (1982).

Material depositories. Institutional collections in which the examined material is deposited are abbreviated in the text as follows:

IBPV - Institute of Biology and Soil Sciences, Russian Academy of Sciences, Vladivostok, Russia;

MSNF - Museo Zoologica de la «La Specola», sezione del Museo di Storia Naturale, Firenze, Italy;

USNM - National Museum of Natural History, Smithsonian Institution, Washington DC, U.S.A.;

ZMMU - Zoological Museum of Moscow University, Russia.

KEY TO THE ORIENTAL AND PALEARCTIC GENERA OF TRIBE SMICROMYRMILLINI

1. Male 2
– Female (unknown for *Cameronilla*) 5
2. Alate 3
– Apterous. - Mesosoma dorsally without evident suture, propodeum dorsally with long medial spine ... 4
3. Ratio of flagellomeres 1-3 is 1.1:2.0:2.3 (Fig. 4). Propodeum laterally with one long (basal) and two shorter teeth (Fig. 2). Gastral sternum 6 with medial narrow emargination (Fig. 8). Wide part of medial emarination of hypopygium 2/3 of hypopygium medial length (Fig. 5). Body black with mesosoma mostly red . . . . . ***Eosmicromyrmilla* gen. n.**
– Ratio of flagellomeres 1-3 is 1.0:1.5:2.0. Propodeum laterally without teeth. Gastral sternum 6 without medial emargination. Wide part of medial emarination of hypopygium 5/6 of hypopygium medial length. Body black . . . . . ***Smicromyrmilla***[1)]
4. Head large with small eyes, not narrowed behind the eyes, the part behind the eyes more than 2x longer their length. Ocelli probably absent. Lateral propodeal sides with three large and one short spine . . . . . ***Cameronilla* gen. n.**

[1)] There are two Palaearctic species of the genus *Smicromyrmilla* Suárez, 1965: *S. ariasi* (André, 1896), ♀(? Spain [probably North Africa], type species of the genus); *S. ariasi gasciapavoni* Suárez, 1975, ♀(Morocco) and *S. miranda* Nonveiller et Gros, 1996, ♂ (Spain). We compare the female and male of *Eosmicromyrmilla* gen. n. with detail redescription of *S. ariasi*, which is known from female (Suárez, 1965) and description of *S. miranda*, which is known from male (Nonveiller & Gros, 1996). Quite possible that the latter may be the opposite sex of *S. ariasi*, because only these species of *Smicromyrmilla* are known in Spain. Numerous Afrotropical species of tribe Smicromyrmillini which placed in the genus *Smicromyrmilla* (Nonveiller, 1973; 1980) are needed in generic revision, which is preparing by G. Nonveiller (personal communication).

– Head usual with large eyes, strongly narrowed behind the eyes, the part behind the eyes more than 2x shorter their length. Ocelli developed. Lateral propodeal sides with two large spines and two small tubercles . . . . ***Hindustanilla* gen. n.**

5. Smooth medial part of gastral tergum 6 not touch the base (tergum punctured basally and laterally). Lateral pronotal border shorter than mesonotal one. Gastral tergum 1 laterally without silver patch . . . . . ***Smicromyrmilla***

– Smooth medial part of gastral tergum 6 touch the base (tergum punctured laterally only). Lateral pronotal border longer than mesonotal one. Gastral tergum 1 laterally with silver patch 6

6. Medial smooth part of gastral tergum 6 laterally weakly bordered and narrowed basally. Lateral propodeal sides strongly reticulate. Mid and hind tibia dorsally with stronger spines . . . . . ***Hindustanilla* gen. n.**

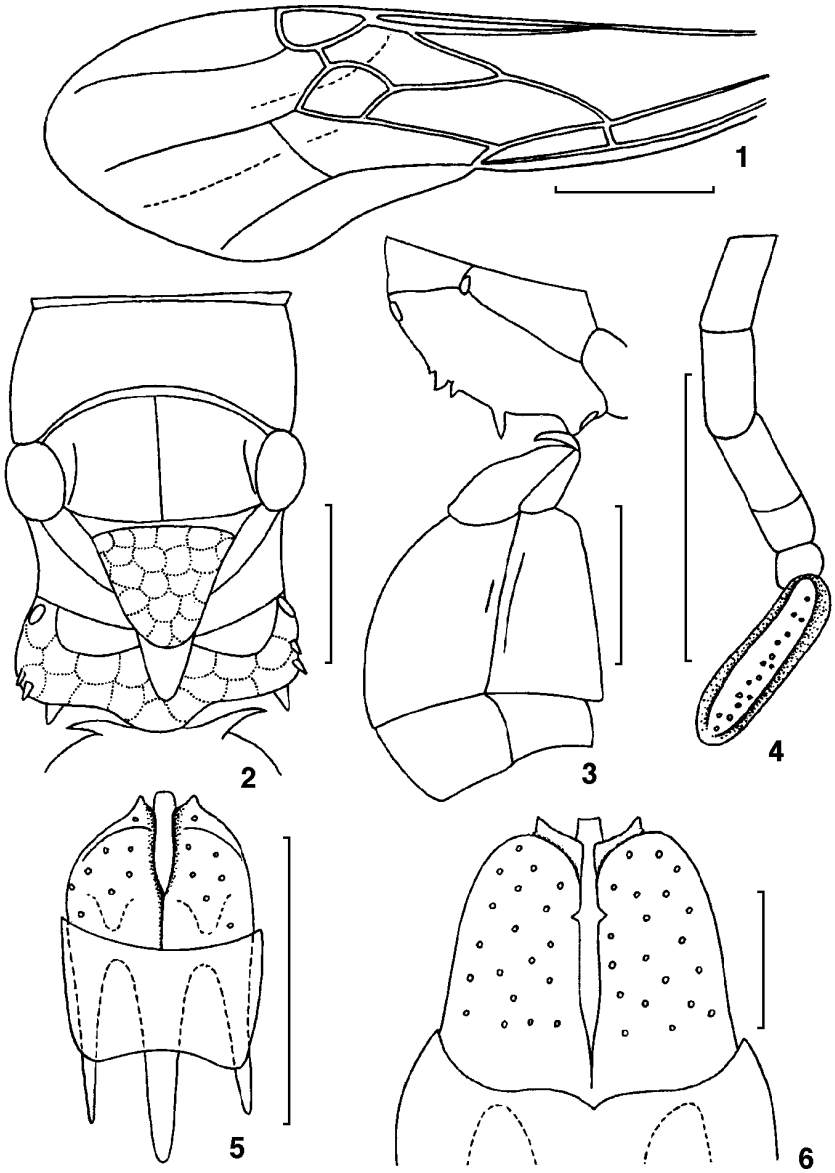
– Medial smooth shiny part of gastral tergum 6 laterally not bordered. Lateral propodeal sides microsculptured, not reticulate. Mid and hind tibia dorsally with weak spines . . . . . ***Eosmicromyrmilla* gen. n.**

Genus *Eosmicromyrmilla* Lelej et Krombein, gen. n.

TYPE SPECIES. *Eosmicromyrmilla srilankiensis* Lelej et Krombein, sp. n.

DIAGNOSIS. MALE. Head 1.1x maximal pronotal width, very short with large eyes; behind the eyes strongly convergent. Vertex with distinct medial concavity bordered laterally by two short ridges from occipital carina to posterior ocelli. Eyes with rare short setae visible under large magnification. Mandible tridentate, unarmed outside basally. Scape bicarinate beneath, the space between carinae partly punctured. Flagellomere 1 very short (Fig. 4). Hypostomal carina non modified. Pronotum and mesoscutum carinated anterad. Pronotum with humeral angles acuminated, medially shorter than mesoscutum. Mesoscutum with admedian line and two weak parapsids, without notauli. Scutellum carinated laterally, reticulate, rounded posterad, overlapped behind over the metanotum. Metanotum medially longitudinally carinated. Propodeum divergent posterad, laterally carinate with larger basal and two smaller dorsal teeth (Fig. 2). Forewing venation see Fig. 1. Gastral segment 1 rather long, wide; tergum 1 not constricted posterad with long baso-lateral tooth (Fig. 2); segment 2 with long lateral felt lines on sternum and short ones on tergum (Fig. 3); sternum 6 posterad concave with medial narrow emargination (Fig. 8); sternum 7 hidden, not emarginated medially (Fig. 5). Sternum 8 (hypopypium) with medial longitudinal emargination carinated laterally and narrowed basally to the line, which divides hypopygium in two lobes, lateral lobe acuminated apically; medial long narrow processus cover the emargination dorsally (Fig. 5). Gonostyli rather short, strongly curved down, volsella with basal rather large lobe-like digitus (Fig. 11). Basal ring (gonocardo) a little bit longer than gonostyli (Fig. 9).

FEMALE (Figs 18, 19). Head 1.1x maximal pronotal width, very short, strongly narrowed behind the eyes; with rare short setae visible under large magnification. Antennae flattened, flagellomere 1 very short, 1.1-1.2x as long as pedicel and shorter



Figs 1-6. Smicromyrmillini. 1-5) *Eosmicromyrmilla srilankiensis*, ♂, paratypes: 1) forewing, 2) mesosoma, dorsal aspect, 3) propodeum and gastral segments 1-3, lateral aspect, 4) scape, pedicel and flagellomeres 1-4, 5) gastral sterna 7 and 8 (hypopygium), ventral aspect; 6) *Hindustanilla indica*, ♂, holotype, gastral sternum 7 and 8 (hypopygium), vental aspect. Scale line 1 mm for Figs 1-5 and 0.25 mm for Fig. 6.

than flagellomere 2. Mandible tridentate, preapial teeth weak. Vertex with distinct concavity bordered laterally by parallel carinae from occipital one to vertex. Pronotum carinated anterad, humeral angles acuminate. Propodeum widened posterad, wider than pronotum, dorsally with medial biapical strong scutellar scale or two approached teeth, laterally carinated with strong basal and smaller upper tooth. Gastral segment 1 long wide, not constricted posterad; sternum 2 with long lateral felt lines; tergum 6 with wide smooth shiny part throughout whole length, not bordered laterally, basolateral parts punctured and haired. Gastral tergum 2 posterad with pale band widened medially and laterally, if the band is narrow than can be deviled into three transversal spots.

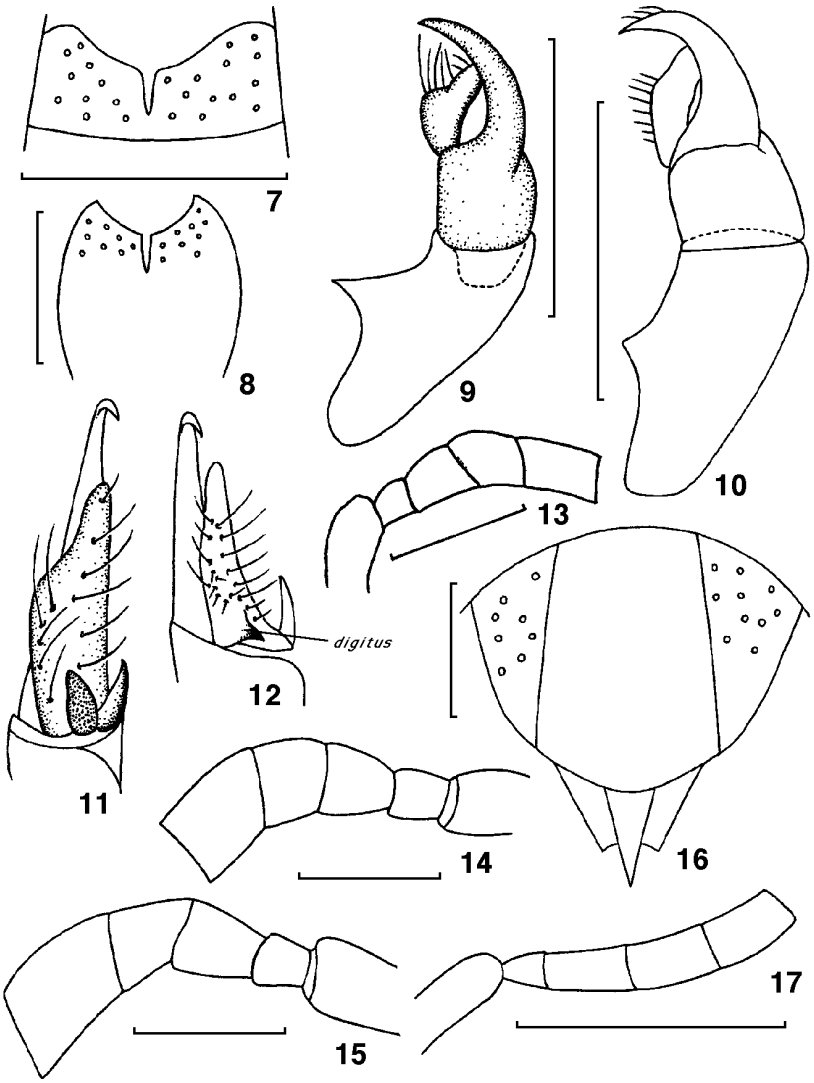
SPECIES INCLUDED. Besides type species which is known in both sexes we include in this genus *E. chinensis* Lelej, sp. n. which is known in female only. The latter is very distinct from type species by lacking basal clypeal tubercle, by another pale gastral design (Fig. 18 vz. Fig. 19) and by longer mesosoma but till discovering of male it is better includes it in *Eosmicromyrmilla*.

DISCUSSION. The male of new genus is similar with *Smicromyrmilla* but differs by wing venation (in *Eosmicromyrmilla* radial cell length almost 3x less than distance between it and wing apex versus almost 2x in *Smicromyrmilla*), by armed propodeal side (unarmed in *Smicromyrmilla*), by emarginated gastral sternum 6 (nonemarginated in *Smicromyrmilla*). The female of new genus differs from one of *Smicromyrmilla* by shorter flagellomere 1 (in *Smicromyrmilla* 1.5x longer than pedicel and a little bit longer than flagellomere 2), by longer smooth shiny part of gastral tergum 6 (in *Smicromyrmilla* basal part punctured), by lateral silver patch on gastral tergum 1 (lacking in *Smicromyrmilla*). The differences between females of *Eosmicromyrmilla* gen. n. and *Hindustanilla* gen. n. are given in the key above.

ETYMOLOGY. *Eosmicromyrmilla* is a combination of *Eos* (Greek Goddess of daybreak) with reference to Oriental region and *Smicromyrmilla*.

Eosmicromyrmilla srilankiensis **Lelej et Krombein, sp. n.**
Figs 1-5, 8, 9, 11, 14, 18

TYPE MATERIAL (63♀, 96♂). Holotype - ♂, Sri Lanka, Amparai District: Dehiattekandiya, 07°38'N, 81°04'E, 23-24.VII 1993 (K. V. Krombein, P. B. Karunaratne, A. W. Norden, B. B. Norden) [USNM]. Paratypes. Sri Lanka: Jaffna District: Kilinochchi, 25.I 1977, 1♀; 16 km S of Pooneryn, 7.XI 1976, 24-26.I 1977, 2♀. Mannar District: Ma Villu, a tank, 17-21.II 1979, 1♂; 16-19.IX 1980, 1♂, 4♀; 11-12.IV 1981, 1♂; 0.8 km NE of Kokmotte Bungalow, Wilpattu National Park, 21-25.V 1976, 1♂, 3♀; 22-23.I 1977, 2♀; 6-7.X 1977, 2♂; 15-16.II 1979, 1♀. Anuradhapura District: Padaviya, 12-15.III 1976, 1♀; 18.V 1976, 4♂; 11-14.X 1977, 1♀; 20-23.VII 1978, 8♀, 4♂; Hunuwilagana near Wilpattu, 22-26.V 1976, 2♀. Trincomalee District: Trincomalee, 13-17. V 1976, 2♀; 8-11.X 1977, 2♂;



Figs 7-17. Smicromyrmillini. 7, 10, 12, 17) *Hindustanilla indica*, ♂: 7) sternum 6, ventral aspect, 10) genitalia, lateral aspect, 12) volsella and apical part of gonostylus, vental aspect, 17) pedicel and flagellomeres 1-3; 8, 9, 11, 14) *Eosmicromyrmilla srilankiensis* (8, 9, 11 - ♂, 14 - ♀): 8) sternum 6, ventral aspect, 9) genitalia, lateral aspect, 11) volsella and apical part of gonostylus, ventral aspect, 14) pedicel and flagellomeres 1-3; 13, 16) *H. nathani*, ♀: 13) pedicel and flagellomeres 1-3, 16) gastral tergum 6; 15) *E. chinensis*, ♀, pedicel and flagellomeres 1-3. Scale line 1 mm for Figs 7-10, 17 and 0.25 mm for Figs 13-16.

26.II 1979, 1♀, 2♂. Amparai District: Dehiattekandiya, 23-24.VII 1993, 4♂, 4♀; Ekgal Aru, 9-11.VI 1976, 12♂, 2♀; 12.VI 1976, 1E, 2♂; 19-23.II 1977, 1♀; 11-15.IX 1977, 2♂; 4-7.VII 1978, 19♂, 2♀; 9-11.III 1979, 2♀; Lahugala Sanctuary, 15.VI 1976, 3♂. Matale District: Kibissa, 0.8 km W of Sigiriya, 28.VI-4.VII 1978, 16♂, 2♀; 28.VI-3.VII 1978, 1♀. Kandy District: Hasalaka, 22-25.XI 1970, 1♂; 7.2 km W Maskeliya, 20-21.X 1977, 1♀. Ratnapura District: Uggalkaltota, 20.VI 1976, 3♂. Badulla District: Ulhitiya Oya, 24 km NNE of Mahiyangana, 5-5.IX 1980, 1♀. Monaragala District: Angunakolapelessa, 27-28.III 1980, 1♀; 27-28.III 1980, MT, 2♂; 8-9.X 1980, 9♀. Hambantota District: Palatupana, 27-29.IX 1977, 1♂; 21-22.VI 1978, 2♀; 24-26.VIII 1980, in leaf litter, 1♀, 2♂; 6-7.X 1980, 2♀; 29.III-2.IV 1981, 8♀, 4♂. Paratypes deposited in USNM, several ones - in IBPV.

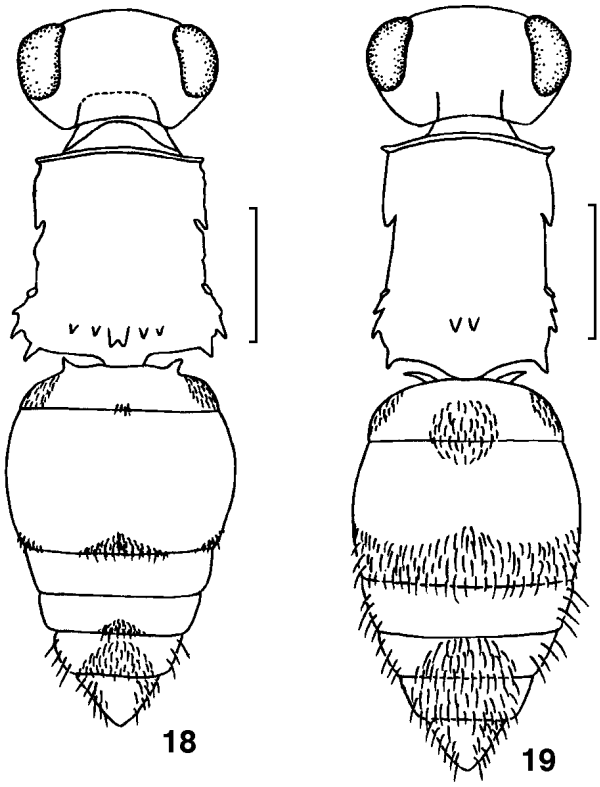
DESCRIPTION. MALE. Length 5.0-6.0 mm. Body black, mesosoma dorsally ferruginous-red, lateral sides of pronotum and propodeum brownish-red, tegulae yellowish-red, mandibles brownish-red with dark apex, antennae below somewhat reddish, palps brownish-red; legs reddish-brown to black with whitish spurs.

Clypeus with dense recumbent silver hairs, frons, vertex, genae, mandible and scape with sparser whitish ones. Mesosoma with sparse erect and subappressed whitish hairs, which more denser on mesopleurae. Legs with mixed subappressed and erect whitish hairs, denser than on mesosomal dorsum. Gaster with mixed erect and subappressed whitish hairs which formed on terga 1-5 and sterna 2-5 the fringe much denser on terga; terga 6-7 with erect sparse black setae. Felt lines with whitish setae.

Ocelli medial size, ratio postocellar distance / oculo-ocellar distance is 0.5-0.6. Flagellomere 1very short, the ratio of pedicel and flagellomeres 1-3 is 1.0:1.1:2.0:2.3. Clypeus with transversal preapical groove carinated dorsally, without basal tubercle. Ocellar triangle shiny, other head sculpture hidden under pubescence. Vertex medially with distinct concavity bordered laterally by weak carinae from occipital one to ocellar triangle. Pronotum reticulate, size of cells less than scutellar one, lateral side micropunctate. Mesoscutum shiny with a few small punctures only; mesopleural disc reticulate; tegulae shiny with a few punctures posterad; scutellum reticulate (size of cells larger than pronotal ones); propodeum reticulate with large triangle and two transversal basal cells, the latter covered subappressed short silver pubescence, lateral sides reticulate; metapleurae shiny.

Forewings infuscate, free from the cells in apical third, with two radiomedial and two discoidal cells, radial cell truncate, very short, second radiomedial cell petiolate, second recurrent vein weak, vein RS_2, *M* and *Cu* almost touch the wing border (Fig. 1).

Gastral segment 1 wide and long with strong somewhat curved up tergal latero-basal tooth, tergum 1 not constricted posterad. Disc of tergum 2 weakly flatten with sparse small punctures, which are larger and denser to the borders; tergum 7 with convex smooth shiny medial part throughout whole length, sterna 6-8 as Figs 5, 8. Genitalia - Fig. 9.



Figs 18, 19. Dorsal view of female body. 18) *Eosmicromyrmilla srilankiensis*. 19) *E. chinensis*. Scale line 1 mm.

FEMALE. Length 3.0-4.5 mm. Head, mesosoma, legs, scape, pedicel and flagellomeres 1-2, mandibles, palps ferruginous-red; mandibles with dark apex; fore femora and tibia sometimes reddish-brown; other part of antennae from reddish-brown to black; gaster black, spurs whitish, scutellar scale unicolor with dorsum or darker.

Head, mandibles, scape, mesosoma and legs with sparse short subappressed and long erect hairs, the ones anterad scutellar scale brownish or black; gastral tergum 1 with sparse long erect and subappressed whitish setae, postero-laterally they are silver shorter and form patch, usually postero-medially without any patch, rare with indefinite patch; tergum 2 posterad with medial transversal larger and lateral transversal smaller whitish spots; terga 3-5 with lateral whitish patches, tergum 4 medially with whitish spot or with a few pale setae only; tergum 5 with more or less large medial white spot; tergum 6 laterally with long pale setae; gaster ventrally with sparse pale setae which form the fringe on sterna 2-5.

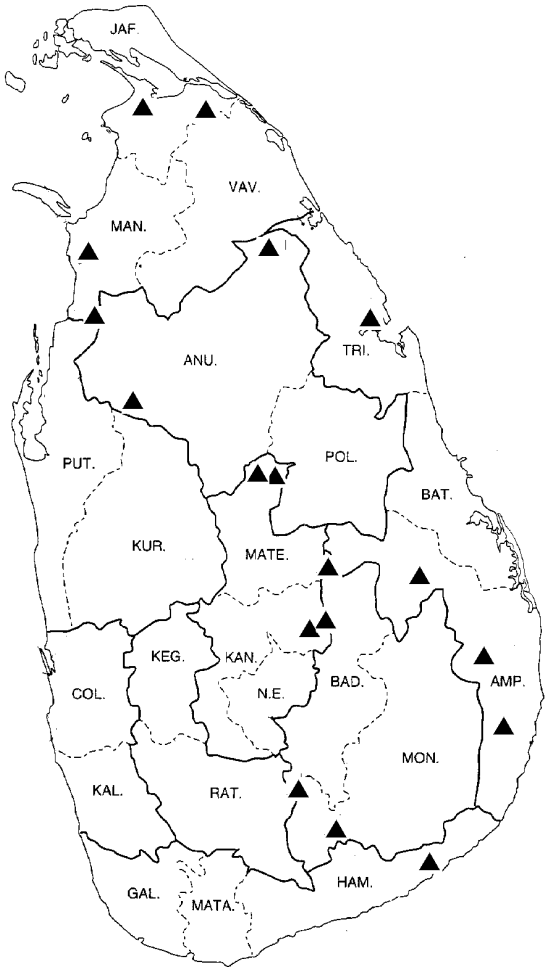


Fig. 20. Map of Sri Lanka showing division of country into Provinces (solid lines) and Districts (dashed lines), and the localities at which specimens of *Eosmicromyrmilla srilankiensis* have been collected.

Clypeus with transversal preapical groove carinated dorsally and with medial basal tubercle; ratio of pedicel and flagellomeres 1-3 is 0.6:0.7:1.0:1.3; face distinctly reticulate. Mesosoma 1.2x longer than its pronotal width; pronotal lateral border longer than mesonotal one; mesonotum slightly narrower than pronotum; propodeum widest, rather short, dorsally with medial biapical strong scutellar scale. Mesosoma dorsally reticulate, laterally (including propodeum) microsculptured; upper part of propodeal posterior side tuberculate. Gastral tergum 2 laterally from densely (in larger specimens) to sparsely (in smaller ones) punctured; sternum 2 with larger dense punctures.

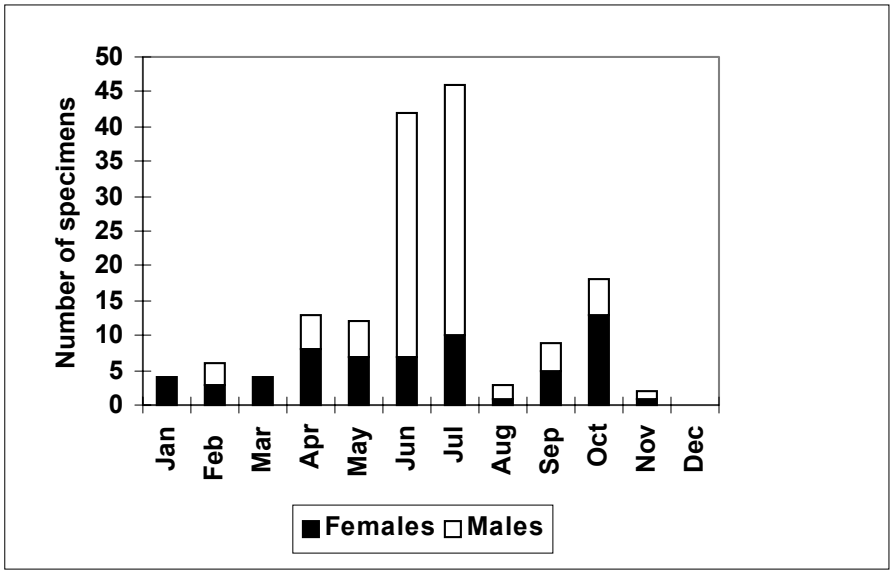


Fig. 21. Occurrence per months of 159 specimens of *Eosmicromyrmilla srilankiensis*, collected in Sri Lanka during eight years.

DISTRIBUTION. Sri Lanka.

ETYMOLOGY. *Srilankiensis* is a Latin adjective derived from Sri Lanka, the country where the species is distributed. We used here the manuscript specific name which has been proposed by late B. Petersen.

NATURAL HISTORY. This abundant species is widespread in the Dry Zone, mostly at low elevations (Fig. 20). One female and two males have been collected in leaf litter in Hambantota District. The occurrence per months of 159 specimens collected in 1970, 1976-1981, 1993 see Fig. 21.

***Eosmicromyrmilla chinensis* Lelej, sp. n.**
Figs 15, 19

TYPE MATERIAL (2♀). Holotype - ♀, China, Yunnan, 50 km SW Mojiang [currently Jiulian], 1000 m, 1.IV 1955 (O. Kryzhanovskij) [ZMMU]. Paratype - ♀, Yunnan, vicinities of Simao, 1300 m, 5.IV 1957 (D. Panfilov) [ZMMU].

DESCRIPTION. FEMALE. Length 3.4-4.0 mm. Head and gaster black, antennal tubercles, mandibles, palps, mesosoma, coxae and trochanters ferruginous-red; mandibles with dark apex; legs reddish-brown, femorae below much paler, antennae black, reddish-brown below; spurs whitish, two scutellar tubercles darker than dorsum of mesosoma.

Head below, mandibles, scape and legs with sparse short subappressed and long erect hairs, such hairs on head face and mesosomal dorsum black, recumbent ones on frons and vertex yellowish or reddish; gastral tergum 1 with sparse long erect and

subappressed whitish setae, with large medial yellowish spot; tergum 2 posterad with wide yellowish band widened medially and laterally; terga 3-4 laterally with sparse long erect pale setae; tergum 4 medially with large yellowish spot; tergum 5 with yellowish band; tergum 6 laterally with long pale setae; gaster ventrally with sparse pale setae which form the fringe on sterna 2-5.

Clypeus without medial basal tubercle; ratio of pedicel and flagellomeres 1-3 is 0.6:0.9:0.7:1.2; face distinctly reticulate, frons with indistinct medial line. Mesosoma 1.4x longer than its pronotal width; pronotal lateral border a little bit longer than mesonotal one; mesonotum evidently narrower than pronotum; propodeum widest, not shortened, dorsally with two medial strong scutellar tubercles. Mesosoma dorsally reticulate, laterally smooth and shiny, propodeal sides postero-dorsally weakly sculptured, upper part of propodeal posterior side reticulate; gastral tergum 2 laterally sparsely punctured; sternum 2 with large sparse punctures.

MALE unknown.

DISTRIBUTION. China (Yunnan).

DISCUSSION. The female of new species differs from one of type species by the lacking of basal clypeal tubercle, by longer mesosoma (in *E. srilankiensis* 1.2x its pronotal width), by large medial pale spot on gastral tergum 1 (in *E. srilankiensis* at most a few pale setae).

ETYMOLOGY. *Chinensis* is a Latin adjective derived from China, the country where the species is collected.

NATURAL HISTORY. Both specimens have been collected in Yunnan in early April (dry hot season) at the altitude 1000-1300 m, higher than tropical rainforest (Panfilov, 1961).

Genus *Cameronilla* Lelej, gen. n.

TYPE SPECIES. *Mutilla oedipus* Cameron, 1897.

DIAGNOSIS. MALE [based on Cameron's (1897) description]. Apterous. Head large, wider than mesosoma, the part behind the eyes more than 2x longer their length, closely covered with white pubescence. Mesosoma not twice the length of the head, gradually narrowed to the propodeum, which bulges out, so that it is as wide as pronotum. The propodeum with a sharp spine in the center, laterally with three large and one short spine. The pale gastral design consists of square medial spot on tergum 1, three large ones on the apex of tergum 2, a small medial one on tergum 3, a larger medial one on tergum 4 and the band on tergum 5.

FEMALE unknown.

SPECIES INCLUDED. Type species only.

DISCUSSION. *Mutilla oedipus* in some characters is very similar with *Spilomutilla* species (subfamily Myrmillinae) and even regarded as the opposite sex of *S. rothneyi* (Cameron, 1897) (Bingham, 1897; Hammer, 1962). Strong dorsal medial spine of propodeum and especially large lateral propodeal spines mentioned

by P. Cameron are definitely connect *M. oedipus* with the tribe Smicromyrmillini (subfamily Ticoplinae) where it closes to *Hindustanilla*, other Oriental genus with apterous male. The differences between them are given in the key above. In his description P. Cameron (1897) nothing says about the ocelli. Probably they are absent or indistinguish under dense pubescence. The apterous male without ocelli has been known among Mutillidae only for *Brachymutilla* André, 1901, South Africa in the subfamily Dasylabrinae (André, 1901; Bischoff, 1920-1921; Cetković & Nonveiller, 1992).

ETYMOLOGY. A. Lelej takes great pleasure in naming this unusual mutillid for Peter Cameron who described many Oriental mutillids including the type species of this new genus.

***Cameronilla oedipus* (Cameron, 1897), comb. n.**

Mutilla oedipus Cameron, 1897: 53, pl. 4, Fig. 13, ♂ (type locality "Barrackpore", India); 1898: 6.

Mutilla contracta Bingham, 1897: 27, ♂, nom. nudum; Cameron, 1898: 6.

Mutilla rothneyi: Bingham, 1897: 27, ♂ non ♀ (Bengal).

Spilomutilla oedipus: Hammer, 1962: 1, ♂ non ♀ (Calcutta).

DISTRIBUTION. India (West Bengal).

Genus *Hindustanilla* Lelej, gen. n.

TYPE SPECIES. *Hindustanilla indica* Lelej, sp. n.

DIAGNOSIS. MALE. Apterous. Mesosoma without suture traces dorsally and laterally, with weak trace between metanotum and propodeum and strong scutellar scale. Head 1.1x maximal pronotal width, with large eyes; behind the eyes strongly convergent, the part behind the eyes more than 2x less their length. Eyes with rare short setae visible under large magnification. Mandible tridentate, unarmed outside basally. Scape curved, punctured beneath, with indistinc carinae. Flafellomere 1 very long (Fig. 17). Hypostomal carina not modified. Clypeus with transversal preapical furrow carinaed dorsally, basally with short longitudinal carina. Pronotum carinated anterad and laterad, lateral border evidently longer than mesonotal one; humeral angles acuminated. Mesopleurae concave. Propodeum widest, divergent posterad, laterally carinate with larger basal and smaller upper teeth, behind the spiracle with three or four small tubercles (Fig. 23). Gastral segment 1 rather long, wide, tergum 1 not constricted posterad with long baso-lateral tooth (Fig. 23); segment 2 with lateral felt lines on sternum and tergum; sternal one approximately 0.3x sternum length, located in the middle; tergal one much shorter and located in the anterior corner. Sternum 6 posterad concave with medial narrow emargination posterad (Fig. 7); sternum 7 hidden, weakly emarginated medially (Fig. 6). Sternum 8 (hypopypium) with medial longitudinal emargination narrowed basally, which divides hypopygium into two lobes; lateral lobe with apical acute tubercle, preapically

distinctly swollen; medial long narrow processus cover the emargination dorsally (Fig. 6). Gonostyli rather short, strongly curved down, volsella with basal small tooth-like digitus (Fig. 12). Basal ring (gonocardo) a little bit longer than gonostyli (Fig. 10).

FEMALE. Head 1.1x maximal pronotal width, strongly narrowed behind the eyes; with rare short setae visible under large magnification. Antennae flattened, flagellomere 1 1.6x as long as pedicel and shorter than flagellomere 2. Clypeus with transversal preapical furrow strongly carinated dorsally, basally with short longitudinal carina. Mandible tridentate, preapial teeth weak. Pronotum carinated anterad and laterad, humeral angles acuminated. Propodeum widened posterad, wider than pronotum, dorsally with two medial large wide scutellar teeth and two small tubercles laterad of them, laterally carinated with strong basal and smaller upper teeth; lateral sides strongly reticulate. Gastral segment 1 wide and long, not constricted posterad; sternum 2 with long lateral felt lines located in basal half; tergum 6 with smooth shiny medial part throughout whole length, laterally weakly carinated and narrowed basally, basolateral parts punctured and haired. Gastral tergum 2 posterad with three pale spots.

SPECIES INCLUDED. Besides type species which is known in male we include *H. nathani* Lelej, sp. n., which is known in female. Quite possible that they are the opposite sexes of the same species, because both are collected in South India, where is no other species of Ticoplinae.

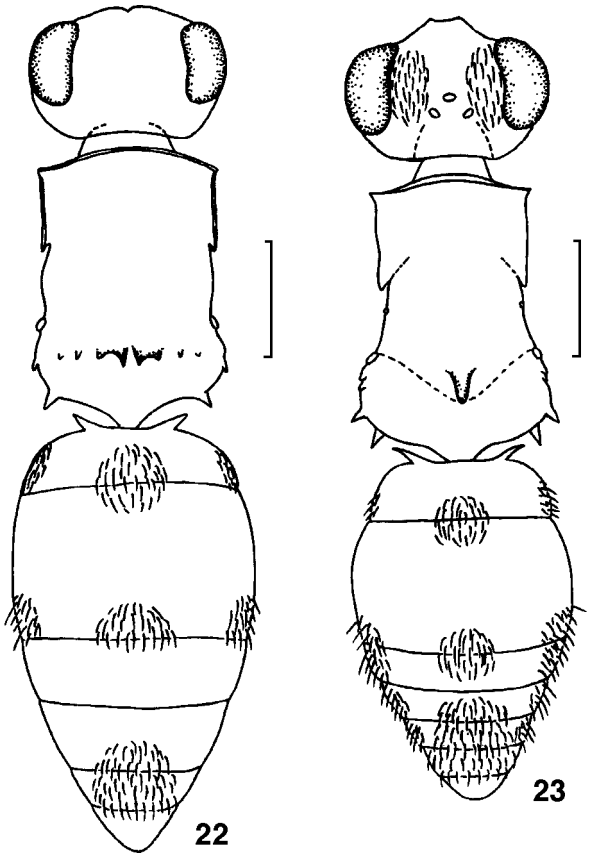
DISCUSSION. The male of new genus is similar with *Eosmicromyrmilla* gen. n. by the hypopygium and genitalia shape but differs besides apterosity, mesosoma shape and long flagellomere 1 by more curved gonostyli (Fig. 10 vz. Fig. 9), by longer volsella with much smaller digitus (Fig. 12 vz. Fig. 11). The differences between apterous male of new genus and one of *Cameronilla* and female of *Hindustanilla* and ones of *Eosmicromyrmilla* and *Smicromyrmilla* are given in the key above.

ETYMOLOGY. *Hindustanilla* is a combination of *Hindustan*, peninsula name, where the new genus is distributed, and *illa* (part of *Mutilla*).

***Hindustanilla indica* Lelej, sp. n.**
Figs 6, 7, 10, 12, 17, 23

TYPE MATERIAL (2♂).Holotype - ♂, South India, Tamil Nadu, boscalia c/o confine [border of the forest], N of Peyar Nat. Reserve, 23.X 1997 (A. Sforzi, L. Bartolozzi), (num. Mag. 2091) [MSNF]. Paratype. South India, Karnataka, 15 km N Bangalore, KT, 23-24.VII 1996, 1♂ (K. Werner, L. Lorenz) [MSNF].

DESCRIPTION. MALE. Length 5.5-6.0 mm. Head and gaster black, mesosoma ferruginous-red, lateral sides brownish to black; mandibles ferruginous-red with dark apex; antennae black, below somewhat brownish, palps brownish; legs reddish-brown to black with whitish spurs.



Figs 22, 23. Dorsal view of body. 22) *Hindustanilla nathani*, ♀; 23) *H. indica*, ♂. Scale line 1 mm.

Face with two oval yellowish spots; vertex, genae, clypeus, mandible and scape with sparser whitish recumbent and erect hairs; frons with long erect black setae. Mesosoma dorsally and posterad with sparse erect and subappressed whitish hairs, erect setae on the dorsum black. Lower half of meso- and metapleurae with dense subappressed glistering silver pubescence. Legs with mixed subappressed and erect whitish hairs. Gasral tergum 1 with long erect whitish setae, posterad recumbent silver hairs form medial and two lateral spots (Fig. 23); terga 2-5 laterally with silver patch narrowed towards posterad; terga 2, 4 and 5 with medial silver spot widened towards posterad; tergum 6 with sparse whitish hairs. Gaster ventrally with sparse pale setae which form the fringe on sterna 2-6. Felt lines with whitish setae.

Ocelli medial size, ratio postocellar distance / oculo-ocellar distance is 0.75, ocellar riangle weakly elevated. Flagellomere 1 long, the ratio of pedicel and flagellomeres 1-3 is 0.9:1.8:1.8:1.8. Frons and genae reticulate, genal bridge transversally striolate. Mesosoma dorsally and posterad and lateral propodeal sides reticulate; lateral pronotal sides, meso- and metapleurae smoth and shiny with a few sparse small punctures on pronotal sides.

Gastral segment 1 wide and long with strong somewhat curved up tergal latero-basal tooth, tergum 1 not constricted posterad. Disc of tergum 2 weakly flattened with dense punctures, which are larger and sparser laterally; tergum 7 with smooth shiny medial part throughout whole length, sterna 6-8 as Figs 6, 7. Genitalia - Fig. 10.

FEMALE unknown.

DISTRIBUTION. South India (Karnataka, Tamil Nadu).

ETYMOLOGY. *Indica* is a Latin adjective derived from India, the country where the species is distributed.

Hindustanilla nathani **Lelej, sp. n.**
Figs 13, 16, 22

TYPE MATERIAL (2♀). Holotype - ♀, South India, Nilgiri Hills, 3400 ft [1037 m], Cherangode, Oct. 1950 (P. S. Nathan) [USNM]. Paratype - ♀, same locality and collector as holotype but Nov. 1950 [USNM].

DESCRIPTION. FEMALE. Length 5.2-5.8 mm. Head and mesosoma red, gaster black, genae brownish, scape and pedicel reddish-brown; flagellum black, somewhat brownish beneath; coxae and trochanters ferruginous-red; mandibles with dark apex; legs reddish-brown, femorae below much paler, spurs whitish, two scutellar tubercles darker than dorsum of mesosoma.

Head below, mandibles, scape and legs with sparse short subappressed and long erect hairs, such hairs on head face and mesosomal dorsum black, recumbent ones on frons and vertex yellowish; lower part of meso- and metapleurae with recumbent silver hairs; gastral tergum 1 with sparse long erect and subappressed whitish setae, with medial and lateral silver spots; tergum 2 posterad with three silver spots; terga 3-5 laterally with sparse long erect pale setae; tergum 4 medially
with silver spot; tergum 5 with larger silver one; tergum 6 laterally with long black setae; gaster ventrally with sparse pale setae which form the fringe on sterna 2-5.

Ratio of pedicel and flagellomeres 1-3 is 0.8:1.3:1.2:1.5; frons with indistinct medial line, coarsely reticulate sometimes striolate; genal bridge transversally striolate. Mesosoma 1.5x longer than its pronotal width; pronotal lateral border longer than mesonotal one; mesonotum almost the same width as pronotum; propodeum widest, not shortened. Mesosoma dorsally and posterad reticulate, pronotal sides punctured; mesopleurae with weak carina from precoxal part to first spiracle, posterad of carina punctured; metapleurae (except upper third) weakly

transversally striolate; gastral tergum 2 laterally sparsely punctured; sternum 2 with large sparse punctures.

MALE unknown.

DISTRIBUTION. South India (Kerala).

ETYMOLOGY. The specific name is dedicated to P. S. Nathan who collected both type specimens.

ACKNOWLEDGMENTS

Thanks to Short-Term Visitor travel grant of Smithsonian Institution (Washington DC) A.S. Lelej was able to study the Oriental Mutillidae in USNM. We thank Pietro Lo Cascio [MSNF] and Dr. A.V. Antropov [ZMMU] for kindly loaned specimens, Prof. G. Nonveiller (Yugoslavia, Zemun), Dr. D. Brothers (South Africa, Pietermaritzburg) and late F. Suárez and B. Petersen for valuable comparative material. A.S. Lelej grateful K.V. Krombein and B.B. Norden for their kind hospitality and help during visit to Smithsonian and G. Sinelnikova [IBPV] for the help in preparing Figures. We are grateful B. B. Norden for the comments and critical reading of manuscript.

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SHORT COMMUNICATION

V. A. Mutin. NEW DATA ON THE TAXONOMY OF THE PALAEARCTIC HOVER-FLIES (DIPTERA, SYRPHIDAE). - Far Eastern entomologist. 2001. N 99: 19-20.

В. А. Мутин. Новые сведения о таксономии палеарктических мух-журчалок (Diptera, Syrphidae) // Дальневосточный энтомолог. 2001. N. 99. С. 19-20.

One new species from Honshu (Japan) is described and two new synonyms are proposed below. I wish to express my sincere thanks to Claus Claussen (Flensburg, Germany) and Tore Nielsen (Sandnes, Norway) for the valuable exchange of European hover-flies.

***Microdon nigrodorsatum* sp. n.**

TYPE MATERIAL. Holotype - ♂, Japan, Niigata-ken, Susagamine, 1200 m, Myoko-kogen, 26.VII 1993 (A. Lelej) [holotype is deposited in the Entomological Institute, Hokkaido University, Sapporo, Japan].

DESCRIPTION. MALE. Body length 12.1 mm, wing length 9.0 mm. Head: face black, weakly shiny, pale pilose; frons black, mainly with short black pile, minimal width/head width ratio - 1:5; vertex mainly densely pale pilose, with some shorter black pile on ocellar triangle. Antenna: scape shorter than pedicel and basoflagellomere combined; basoflagellomere 2 times as long as pedicel. Thorax: black, with weak blue-iron tinge, mainly pale pilose, with large spot of subapressed black pile on mid scutum; scutellum rather distinctly bifurcated apically, with a pair of long apical dents; wing weakly infuscated. Legs: pale pilose; coxae, trochanters and femorae black; tibiae yellow except apical half darkish anterodorsally; tarsi brownish dorsally. Abdomen: black, weakly shining; terga mainly with pale pilose; terga 3 and 4 more or less densely black pilose basally. Genitalia as in Fig. 1. FEMALE unknown.

DISTRIBUTION. Japan: Honshu.

DIAGNOSIS. The new species is similar to West Palaearctic *M. devius* Linnaeus, 1758 but differs by darker legs (in *M. devius* tibiae and tarsi almost entirely yellow), by more extensive and denser black pilose of terga 3 and 4, by shape of epandrium theca and surstyli (Fig. 1 vs. Fig. 2).

REMARKS. The comparison of European specimen of *M. devius* Linnaeus, 1758 with one recorded me from Japan [1] shows the considerable differences between them. New species differs distinctly from other Japanese *Microdon* species [2] by the pilose coloration of thoracic dorsum.

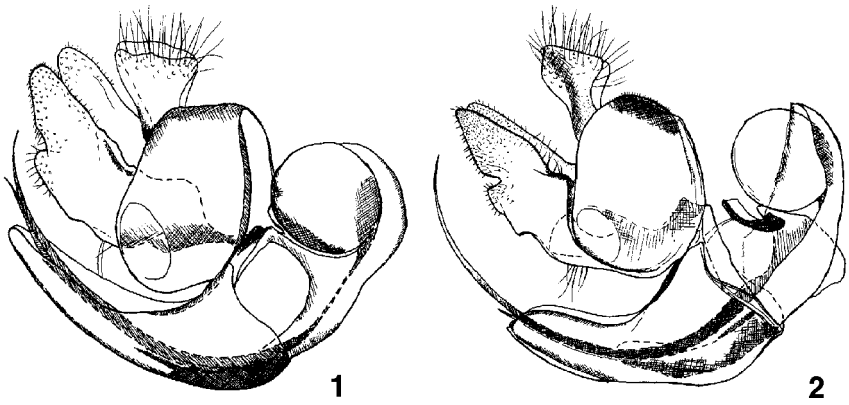
***Sphegina (Sphegina) alaoglui* Hayat, 1997**

Sphegina (Sphegina) alaoglui Hayat, 1997: 110 [holotype - ♂, NE Turkey: Artvin Province, Karagol near Borcka, 1350 m, 8.VIII 1994 (Hayat)]

Sphegina (Sphegina) pontica Mutin, 1998: 239 [holotype - ♂, Russia: W Caucasus, Krasnaya Polyana, 14.VIII 1952 (Zhelochovtsev)], **syn. n.**

DISTRIBUTION. NE Turkey, Russia (W Caucasus).

REMARKS. The study of the holotype of *S. pontica* [3], the original description of *S. alaoglui* [4], as well as the drawings of holotype male genitalia of *S. alaoglui*, which have been sent me by Claus Claussen, shows the identity of these taxa.



Figs 1-2. Male genitalia, lateral aspect: 1) *Microdon nigrodorsatum*; 2) *M. devius.*

Paragus (Paragus) gulangensis **Li et Li, 1990**

Paragus (Paragus) gulangensis Li et Li, 1990: 15, 120 [holotype - ♂, China: Gansu, Gulang, Xiangling Temple, 22.VII 1984 (Li)].

Paragus (Paragus) dauricus Mutin, in Mutin & Barkalov, 1999: 373 [holotype - ♂, Russia: Chita, Pestshanka, 27.VII 1984 (Lelej)], **syn. n.**

DISTRIBUTION. China (Gansu), Russia (Chita region). W Caucasus.

REMARKS. The study of holotype of *P. dauricus* [1] and the original description of *P. gulangensis* including color photo and drawings of male genitalia [5] shows the identity of these taxa. *P. gulangensis* differs from similar *Paragus* species by shape of hypandrium upper lobe.

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Author's address:
Komsomolsk-on-Amur State Pedagogical University,
Komsomolsk-on-Amur, 681000, Russia

Address: Institute of Biology and Soil Sciences, Far East Branch of Russian Academy of Sciences, 690022, Vladivostok-22, Russia.
FAX: (4232) 310 193 E-mail: entomol@online.marine.su