

Redescription of *Charitopus cuprifrons* (Motschulsky, 1863) from Sri Lanka, and a new name for the genus *Sancarlosia* Trjapitzin et Myartseva, 2004 from Mexico (Hymenoptera: Encyrtidae)

Переописание *Charitopus cuprifrons* (Motschulsky, 1863) из Шри Ланки и новое название для рода *Sancarlosia* Trjapitzin et Myartseva, 2004 из Мексики (Hymenoptera: Encyrtidae)

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КЛЮЧЕВЫЕ СЛОВА: Hymenoptera, Encyrtidae, *Charitopus*, *Charitopus cuprifrons*, таксономия, переписание, замещающее название, новая комбинация, Шри Ланка, *Sancarlosia*, *Svetlana*, Мексика.

ABSTRACT. A diagnosis of the encyrtid genus *Charitopus* Förster, 1856 and a redescription of *Ch. cuprifrons* (Motschulsky, 1863) from Sri Lanka are given. According to the type of the scutellar sculpture, this species does not fit into either of the two species groups of *Charitopus* recognized by Sakhnov [1995]. Therefore, a third species group is defined here for *Ch. cuprifrons*. *Charitopus panchgania* (Mani et Saraswat, 1974) from India is not a synonym of *Ch. cuprifrons*. For the genus *Sancarlosia* Trjapitzin et Myartseva, 2004 (Hymenoptera: Encyrtidae) [non *Sancarlosia* Chiplonkar et Ghare, 1978 (Mollusca: Placenticeratidae)] a new name *Svetlana* Trjapitzin, **nom.n.** is proposed. As a result, a new combination — *Svetlana tamaulipeca* (Trjapitzin et Myartseva, 2004), **comb.n.** is established.

РЕЗЮМЕ. Даны характеристика рода *Charitopus* Förster, 1856 и переписание *Ch. cuprifrons* (Motschulsky, 1863) из Шри Ланки. По типу скульптуры щитика этот вид не принадлежит ни к одной из двух групп видов *Charitopus*, установленных Сахновым [Sakhnov, 1995]. Для *Ch. cuprifrons* выделяется третья самостоятельная группа видов. *Charitopus panchgania* (Mani et Saraswat, 1974) из Индии не является синонимом *Ch. cuprifrons*. Для рода *Sancarlosia* Trjapitzin et Myartseva, 2004 (Hymenoptera: Encyrtidae) [non *Sancarlosia* Chiplonkar et Ghare, 1978 (Mollusca: Placenticeratidae)] предлагается новое замещающее название *Svetlana* Trjapitzin, **nom.n.** В результате устанавливается новая комбинация *Svetlana tamaulipeca* (Trjapitzin et Myartseva, 2004), **comb.n.**

Introduction

Charitopus cuprifrons (Motschulsky, 1863) (Hymenoptera: Encyrtidae) was briefly described from Sri

Lanka (=Ceylon) by the well-known Russian entomologist V.I. Motschulsky (1810–1871) as the type species of monotypic genus *Leptorhopala* Motschulsky, 1863. Two females of *L. cuprifrons* were collected on “Mt. Patanas” (i.e., the montane grasslands — the so-called “patanas” — in the central highlands of Sri Lanka, in this case in the vicinity of Nuwara Eliya) by John Nietner, a German naturalist and an amateur entomologist, who owned a plantation in Ceylon, and sent by him, among other collections, to Motschulsky for identification. Descriptions of the nature of those montane parts of central Sri Lanka can be found in the book by Klingen [1960].

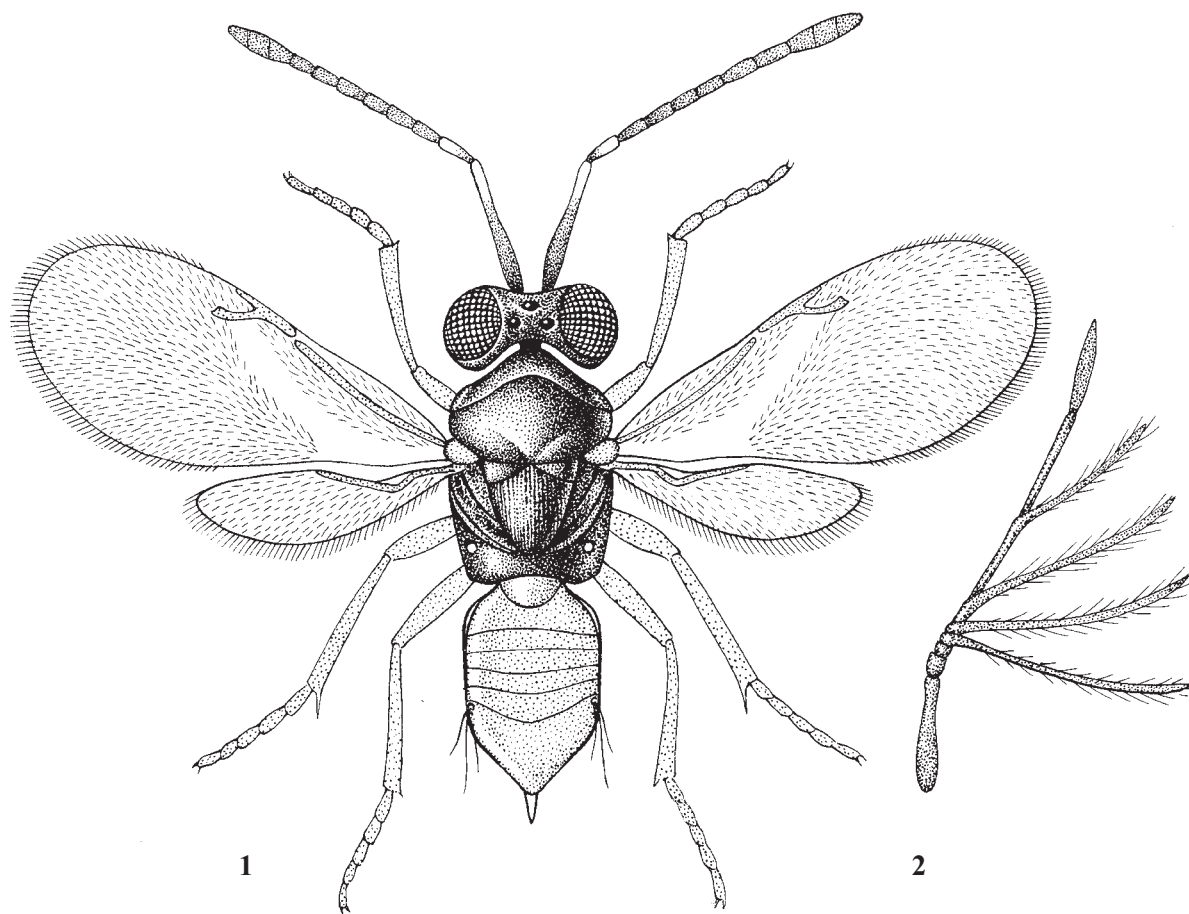
Many years ago I studied the syntypes of *L. cuprifrons*, received from the Zoological Museum of the Moscow State University, and referred this species to the genus *Charitopus* Förster, 1856, thus synonymizing *Leptorhopala* with *Charitopus* [Trjapitzin, 1964]. However, *Ch. cuprifrons* has never been redescribed, and that is done here with designation of the lectotype. Besides, a diagnosis of *Charitopus* and some information on the genus are also given.

Taxonomy

I. Genus *Charitopus* Förster, 1856

Type species: *Ectroma fulviventris* Förster, 1856, by monotypy through subsequent reference by Förster [1860: 112].

DIAGNOSIS. **Female.** Body elongate (Figs 1, 5). Head hypognathous. Frontovortex broad. Occipital margin more or less rounded. Toruli near mouth margin. Antennal scape long, swollen basally; funicle 6-segmented, not broadened, with elongate segments; clava 3-segmented, short. Mandible 3-dentate, with middle tooth the longest. Mesosoma not convex. Pronotum short. Mesoscutum with parapsidal lines.



Figs 1–2. *Charitopus mingoae*: 1 — female, habitus; 2 — antenna of male [after Sakhnov, 1995].
Рис. 1–2. *Charitopus mingoae*: 1 — самка, габитус; 2 — антенна самца [по Sakhnov, 1995].

Wings well developed, but sometimes strongly abbreviated; parastigma without triangular expansion; marginal, postmarginal, and stigmal veins rather long; borders of linea calva undifferentiated. Mesotibial spur usually very short. Pygostyli usually at level of apical third of gaster. Paratergites present, connected with IX abdominal tergite in the type species. Hypopygium (= VII abdominal sternite) reaching apex of gaster. Ovipositor sheaths thin, either not exerted or, if exerted, not longer than 1/4 of gaster length. Body with metallic luster. Gaster more or less yellow, sometimes completely dark. Wings hyaline.

Male. Antennal funicle with 4 long branches on 2nd–5th segments (Fig. 2).

REMARKS. *Charitopus* belongs to the subfamily Tetracneminae Howard, 1892, tribe Miraini Ashmead, 1904. Its synonyms are: *Leptorhopala* Motschulsky, 1863, *Eupelmomorpha* Girault, 1915, and *Diversicornia* Mercet, 1916.

Keys to the Palearctic species of *Charitopus* were published by Trjapitzin [1989] and Sakhnov [1995], and a key to the Indian species by Hayat [2006].

The world fauna of *Charitopus* includes 17 described species, nine of them occur in the Palearctic region (of these, *Ch. fulviventris* was also recorded from the Republic of South Africa), two in the Afrotropical region, three in Australia, and three in the Oriental region [Noyes, 2003]. One undescribed species of *Charitopus* was mentioned from the Nearctic region [Noyes et al., 1997].

Hosts are known for one described species, *Ch. panchgania* (Mani et Saraswat, 1974) — *Icerya pilosa* Green, 1896 (Hemiptera: Margarodidae) in India [Noyes, 2003], and also for one undescribed species, *Charitopus* sp. — *Peliococcus mesasiaticus* Borchsenius et Kozarzhevskaya, 1966 (Hemiptera: Pseudococcidae) in Georgia [Sakhnov, 1993].

Charitopus cuprifrons (Motschulsky, 1863)

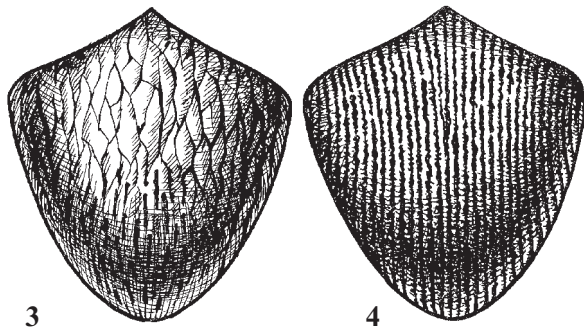
Fig. 5

Leptorhopala cuprifrons Motschulsky, 1863: 60–61.

Charitopus cuprifrons (Motschulsky): Trjapitzin, 1964: 242.

TYPE MATERIAL: The better preserved specimen out of the two original syntypes was chosen as the lectotype, as follows. Lectotype female (on point) [Zoological Museum of the Moscow State University, Moscow, Russia (ZMUM)], here designated to avoid confusion about the status of the type specimens of this species, with the following labels: 1. [yellow, in Motschulsky's hand] "*Leptorhopala cuprifrons* Motsch. I[sland] of Ceyl[an]. M^r Pat[annas]"; 2. [red] "*Leptorhopala cuprifrons* Motsch. Design. V. Trjapitzin 1981, Lectotypus"; 3. [white] "*Charitopus cuprifrons* (Motschulsky), ♀. Trjapitzin det.". Paralectotype female (on point) [ZMUM], with a very small quadrate red label and a small round yellow label (both in Motschulsky's hand), with the same original data as the lectotype.

REDESCRIPTION: Female. Frontovortex 1.5× as long as wide, its width about 0.4× maximum head width. Antennal scape almost 8× as long as its maximum width, its greatest broadening approximately at level of 1/3 of scape length (from



Figs 3–4. Types of scutellar sculpture in *Charitopus*: 3 — coriaceous; 4 — striate [after Sakhnov, 1995].

Рис. 3–4. Типы скульптуры щитика у *Charitopus*: 3 — шагреневая; 4 — бороздчатая [по Сахнов, 1995].

the base); pedicel about 1/3 length of scape and almost 3× as long as its own greatest width (at apex) (8:3); all funicle segments longer than wide; clava somewhat more than 2× as long as its greatest width. Pronotum very short, its posterior margin smoothly concave. Mesoscutum 1.5× as wide as long. Scutellum a little longer than mesoscutum and somewhat longer than wide. Wings not abbreviated; forewing almost 3× as long as its greatest width; submarginal vein weakly curved, about 2/5 of wing length; costal cell very narrow; marginal vein 3/10 length of submarginal vein; stigmal vein curved, 2/3 of marginal vein length and broadening at apex (uncus present); postmarginal vein a little shorter than stigmal vein. Gaster more than 2× as long as wide, somewhat shorter than mesosoma and head combined. Ovipositor sheaths slightly exerted.

Frontovertex with a weak bluish-greenish-violet metallic luster. Scape black, with light apical quarter; pedicel light; flagellum dark. Mesoscutum with bright bluish-bronze green luster. Tegula black. Scutellum with greenish-bronze-violet luster. Forewing beyond linea calva slightly infumate; venation light. Legs yellow. Gaster yellow, with black side borders up to 1/2 of its length from the base. Exserted part of ovipositor sheaths yellow-brown.

Frontovertex, mesoscutum and scutellum with reticulate-cellulate sculpture (cells larger on mesoscutum); sculpture of scutellum similar to that on mesoscutum, with cells not longitudinal.

Forewing before linea calva with sparse pubescence, whereas beyond it rather densely and uniformly setose; linea calva broad, “closed” posteriorly, and not reaching posterior margin of forewing (by about 1/3 of maximum wing width).

Body length 1.6 mm.

Male unknown.

Biology unknown.

COMMENTS. Sakhnov [1955] separated the Palaearctic species of *Charitopus* into two informal groups: 1) with a coriaceous sculpture of the scutellum (Fig. 3); and 2) with a longitudinally reticulate or longitudinally striate sculpture of the scutellum (Fig. 4). To the first species group he referred *Ch. obscurus* (Erdős, 1946) and *Ch. manukyani* Sakhnov, 1993, and to the second — *Ch. fulviventris* Förster, 1860, *Ch. trjapitzini* Hoffer, 1980, *Ch. desertus* Myartseva, 1981, *Ch. marshakovi* Sharkov, 1984, and *Ch. mingoae* Sakhnov, 1995. I place into the second group also *Ch. panchgania* (Mani et Saraswat, 1974) from India. *Charitopus cuprifrons* does not fit into either of these two species groups because the sculpture of its scutellum is reticulate-cellulate (Fig. 5) and not longitudinal, resembling the sculpture of the mesoscutum. Among the

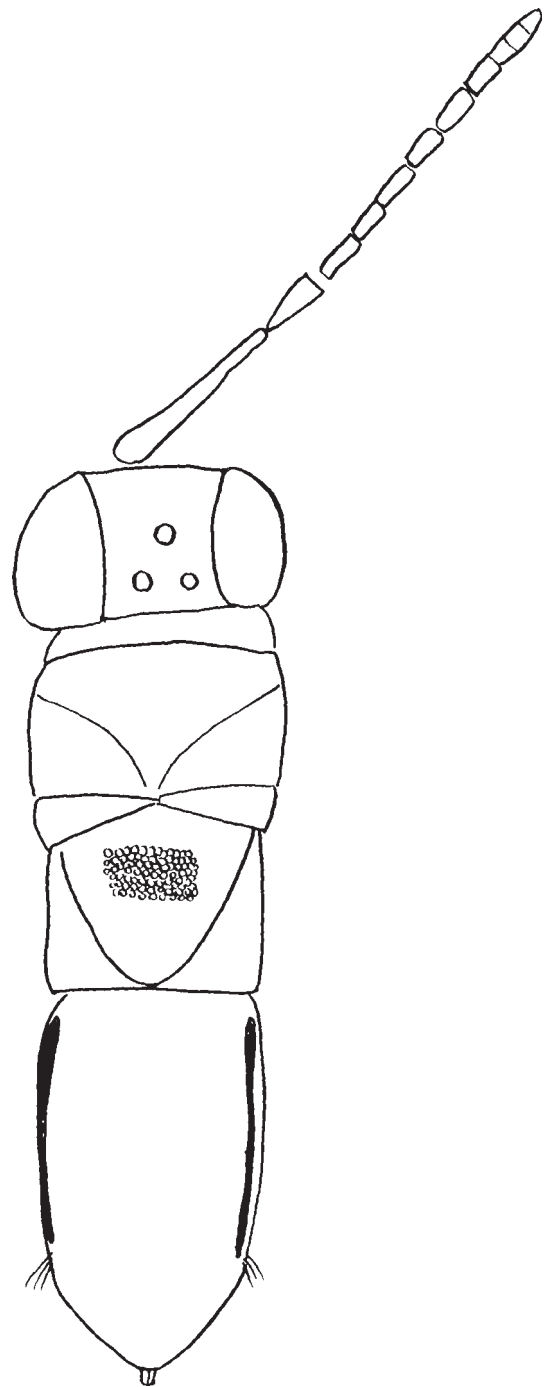


Fig. 5. *Charitopus cuprifrons*, female (lectotype).

Рис. 5. *Charitopus cuprifrons*, самка (лектотип).

species of *Charitopus* known to me, such type of the scutellar sculpture occurs only in one Indian species, *Ch. apicatus* (Mani et Saraswat, 1974), but the latter species does not belong to the *Ch. cuprifrons* group because it has incomplete parapsidal lines on the mesoscutum. Thus, the systematic position of *Ch. cuprifrons* is unique within this genus. Hayat [1999] supposed that *Ch. panchgania* might be a synonym of *Ch. cuprifrons*, however that is not true because these two species have different types of the scutellar sculpture.

II. A new generic replacement name
for *Sancarlosia* Trjapitzin et Myartseva, 2004
non *Sancarlosia* Chiplonkar et Ghare, 1978

The generic name *Sancarlosia* Trjapitzin et Myartseva, 2004 (Hymenoptera: Encyrtidae) [Trjapitzin & Myartseva, 2004] was preoccupied by *Sancarlosia* Chiplonkar et Ghare, 1978 (Mollusca: Placenticeratidae) [Chiplonkar & Ghare, 1978]. Hence I propose here *Svetlana* Trjapitzin, **nom.n.** as a new replacement name for *Sancarlosia* Trjapitzin et Myartseva, 2004, and also a new combination for its type species, as *Svetlana tamaulipeca* (Trjapitzin et Myartseva, 2004), **comb.n.**

The new name [gender: feminine] is given in honor of Professor Svetlana Nikolaevna Myartseva, a well-known Russian entomologist and co-author of the type species of this genus.

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