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S. V. Triapitsyn. TAXONOMIC NOTES ON *CAMPTOPTERA* FOERSTER, 1856 (HYMENOPTERA: MYMARIDAE). – Far Eastern Entomologist. 2017. N 332: 7-18.

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Summary. Based on study of the type material, taxonomic notes are given on four little known species of the genus *Camptoptera* Foerster, 1856 from India, and also relevant illustrations are provided. *Camptoptera kloptera* Triapitsyn, 2014, **syn. n.**, described from Primorskii krai (Russian Far East), is synonymized under *C. matcheta* Subba Rao, 1989, previously known only from India.

Key words: Chalcidoidea, Mymaridae, taxonomy, synonymy, India, Russian Far East.

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Резюме. На основании изученного типового материала приведены таксономические заметки о четырех малоизвестных видах рода *Camptoptera* Foerster, 1856 из Индии, а также соответствующие иллюстрации. *Camptoptera kloptera* Triapitsyn, 2014, **syn. n.**, описанная из Приморского края (Дальний Восток России), синонимизирована с *C. matcheta* Subba Rao, 1989, ранее известному из Индии.

INTRODUCTION

This is a follow-up to my revision (Triapitsyn, 2014) of the Palaearctic species of the fairyfly genus *Camptoptera* Foerster, 1856 (Hymenoptera: Mymaridae). In the diagnosis of *C. kloptera* Triapitsyn, 2014, known only from the Russian Far East, I inadvertently omitted a necessary comparison with the very similar Oriental species, *C. matcheta* Subba Rao, 1989 from India, to which affect I was kindly alerted by T. Rehmat (personal communication). That prompted me to borrow from the Natural History Museum in London, England, UK (BMNH) the nicely slide-mounted (by J.S. Noyes), dissected paratypes of the four little-known species of this genus described by Subba Rao (1989) from India, all of which were described also based on the card-mounted holotypes. I had examined the dry-mounted holotypes of *C. matcheta* and also of *C. brevifuniculata* Subba Rao, 1989, *C. dravida* Subba Rao, 1989 and *C. kannada* Subba Rao, 1989 during a visit to the BMNH, and also more recently received their habitus digital images (Figs 1, 2, 9, 10, 16, 17, 20, 21) courtesy of N. Dale-Skey Papilloud. These were also compared with several recently slide-mounted specimens of *Camptoptera* from the Oriental region in the collection of the Entomology Research Museum, University of California, Riverside, California, USA (UCRC). Both type and non-type specimens of *C. matcheta* were thoroughly compared with the holotype and paratypes of *C. kloptera*, resulting in the proposed synonymy. Using this opportunity, I also provide brief diagnoses and relevant illustrations of these four aforementioned Subba Rao's species to facilitate their recognition and to complement, and often correct, those given in the original descriptions, which are quite poor and have many inconsistencies. They all also need to be

compared, to check for further possible synonymies, with the types of several species of *Camptoptera* described by Viggiani (1978) from India and Sri Lanka.

Like in *Arescon mudigerensis* Subba Rao, 1989 (Triapitsyn, 2016), upon a thorough examination some of the slide-mounted paratypes of the *Camptoptera* species, described in the same publication by Subba Rao (1989), were found not to match the dry-mounted holotypes (or even other paratypes) of the same named species. Thus, such practice of describing a minute fairyfly species from a dry-mounted holotype specimen while providing detailed description and illustrations of that taxon based mainly on a slide-mounted paratype (or paratypes), should be discouraged. Rather, the would-be holotype can be first properly dry-mounted on a point or a card and then photographed and measured (at least body length and also, preferably, head length in dorsal view), with descriptive notes on color taken, followed by its slide-mounting using the technique described by Huber (2015). Then a thorough description and appropriate illustrations can be made from this slide-mounted specimen, which can be further measured in detail; assessment of variation, if any, can be added for the paratype(s).

In Triapitsyn (2014, pp. 38 and 49), I also did not provide a more detailed justification as to why the 11 females and 2 males in the Insect Collection of the National Center for Insect Biodiversity, Natural History Museum, University of Oslo, Oslo, Norway (ZMUN) were treated by me as "apparently non-type specimens" of *C. strobilicola* Heqvist, 1956. More recently, Forshage *et al.* (2016, p. 120) noted that not considering them (as "2 females and 1 male") types was "probably erroneous". Indeed, these specimens came from the type locality and were collected by the same person as indicated in the original description (Heqvist, 1956), who (p. 39) also specified that specimens of the type series "hatched from some spruce cones which were collected March 17, 1954". So it is possible that the specimens in ZMUN, whose collecting dates are May 1954 for one male and ?spring of 1954 for 11 females and one male, were part of the type series (most likely paratypes), but direct evidence for that is lacking. Even if they were part of the type series, it would be impossible to decide which of the females, if any, is the holotype. More to the point, however, designation of a neotype would be not justified under the ICZN (Article 75) in this case, at least until and unless the synonymy of *C. strobilicola* under *C. magna* Soyka, 1946 by Triapitsyn (2014) is challenged (D. Yanega, pers. comm.).

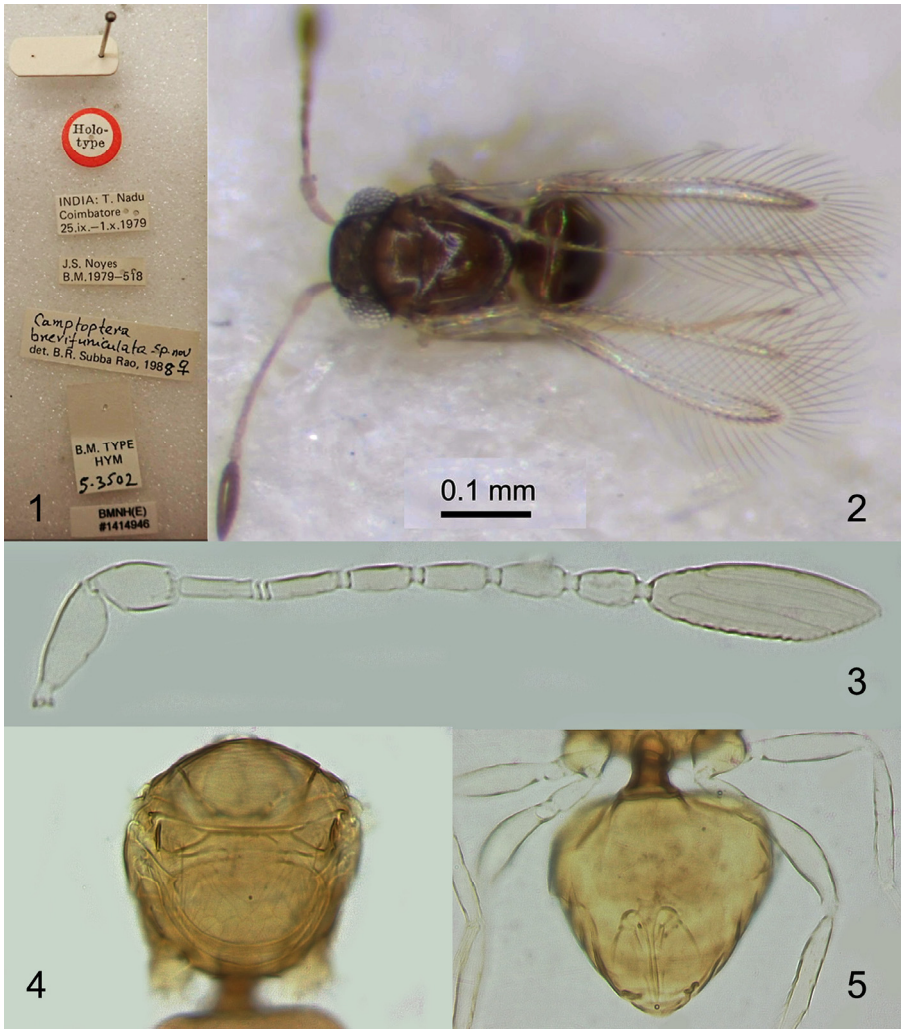
TAXONOMY

***Camptoptera brevifuniculata* Subba Rao, 1989**
Figs 1–8

Camptoptera brevifuniculata Subba Rao, 1989: 161 (key), 162–163, 183 (illustrations). Type locality: Coimbatore, Tamil Nadu, India.

TYPE MATERIAL EXAMINED. Holotype ♀ (Fig. 2) on card [BMNH], labeled (Fig. 1): 1. "INDIA: T. Nadu Coimbatore 25.ix–1.x.1979", 2. "J.S. Noyes B.M. 1979–518", 3. [inside a red circle] "Holo-type", 4. "*Camptoptera brevifuniculata* sp.nov ♀ det. B.R. Subba Rao, 1988", 5. "B.M. TYPE HYM 5.3502", 6. "BMNH(E) #1414946". Paratypes: 2 ♀ and 2 ♂ [BMNH] on individual slides, labeled: 1. "INDIA: T. Nadu Coimbatore 25.ix-1.x.1979 J. S. Noyes BM 1979-518 4 Mar 87 [the date they were slide-mounted]" (also include BMNH barcodes), 2. "1988 Para-type [inside a yellow circle] *Camptoptera brevifuniculata* sp. nov. [female or male symbol] B. R. Subba Rao det.".

DISTRIBUTION. India (Subba Rao, 1989).

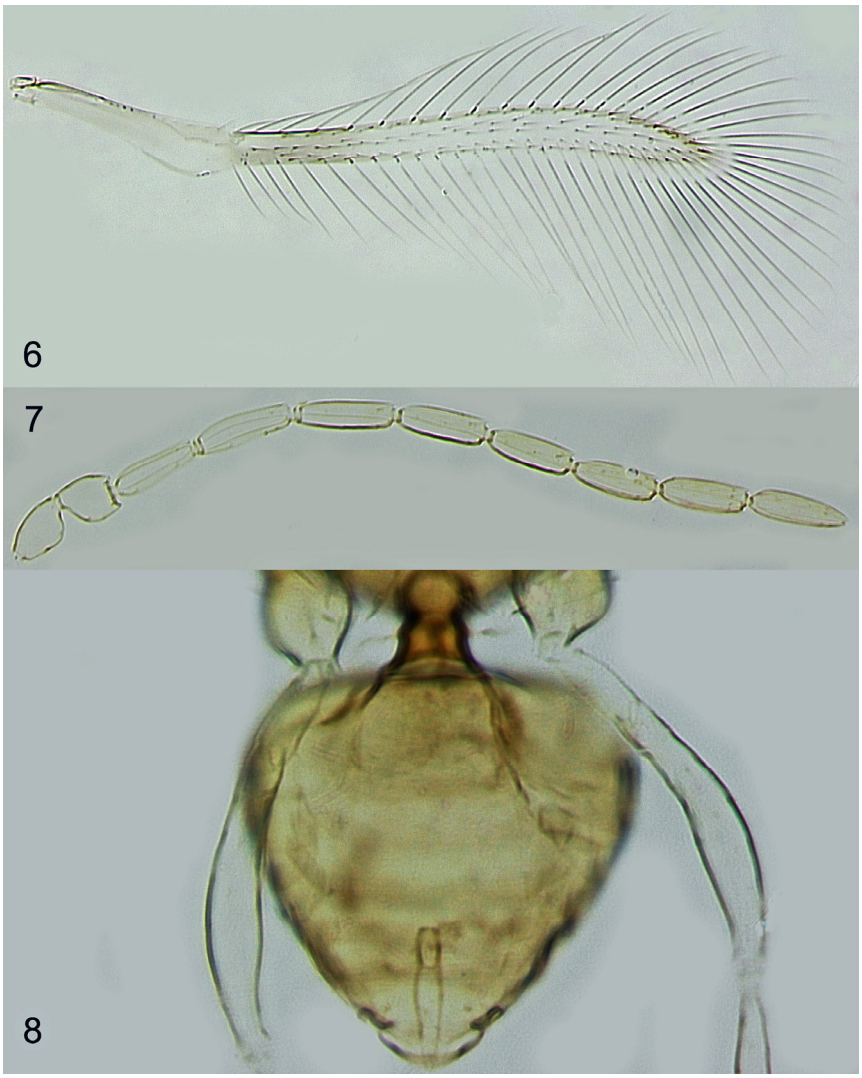


Figs 1–5. *Camptoptera brevifuniculata*, ♀. 1 – labels, 2 – habitus, dorsal view, 3 – antenna, 4 – mesosoma, 5 – metasoma. 1, 2 – holotype, 3–5 – paratype.

BRIEF DIAGNOSIS AND REMARKS. Female (paratypes). Face smooth, vertex transversely striate. Antenna (Fig. 3) with flagellum 7-segmented; F1 as long as F3, F2 ringlike, clava 2.7–3.0× as long as wide. Midlobe of mesoscutum transversely striate, frenum of scutellum with mostly longitudinal sculpture cells, propodeum mostly smooth (Fig. 4). Fore wing (Fig. 6) 14.0–15.6× as long as wide; disc notably infuscate just beyond venation and at apex, setose beyond venation, with 1 to 3 row of setae besides the admarginal rows; longest marginal seta 5.5–6.1× maximum wing width. Hind wing about 22× as long as wide; disc slightly infuscate just beyond venation and at apex, with complete admarginal rows of setae. Petiole (Fig. 5) with a lateral lamella close to its base; ovipositor 0.46–0.52× length of

metatibia. Body length of the holotype about 0.3 mm. Male (one paratype only matching the females) similar to female except as follows: flagellum of antenna (Fig. 7) 10-segmented, F2 and F4 ringlike; fore wing 13.2× as long as wide; genitalia as in Fig. 8.

The other male paratype does not belong to *C. brevifuniculata* but rather to an undetermined species of *Camptoptera* very similar to the common Holarctic species *C. papaveris* Foerster, 1856, to which it even can be possibly conspecific (its flagellar segments, however, are rather short).

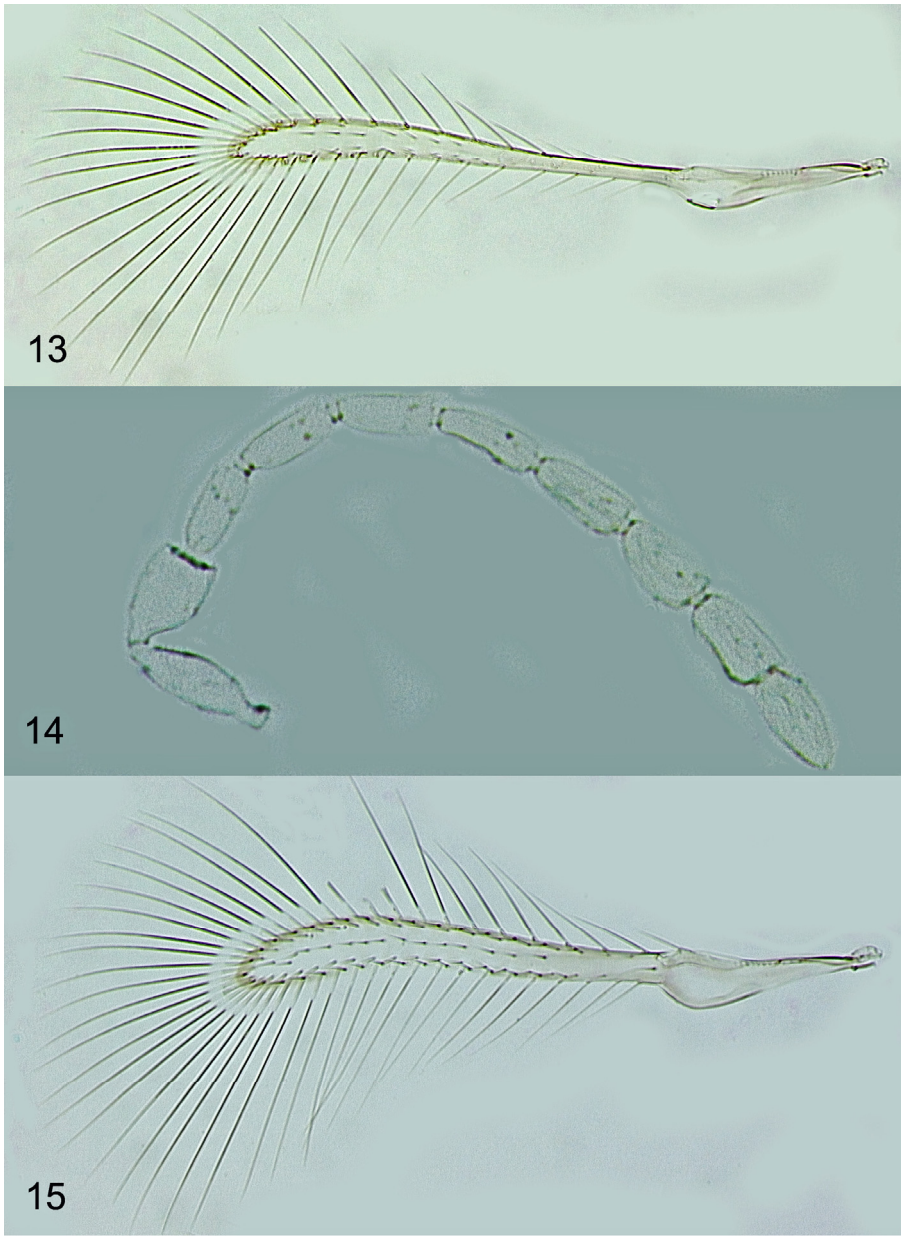


Figs 6–8. *Camptoptera brevifuniculata*, paratypes. 6 – fore wing, ♀, 7 – antenna, ♂, 8 – metasoma, ♂.

***Camptoptera dravida* Subba Rao, 1989**
Figs 9–15

Camptoptera dravida Subba Rao, 1989: 161 (key), 163, 182 (illustrations). Type locality: Mudigere, Karnataka, India.

Figs 9–12. *Camptoptera dravida*, ♀. 9 – labels, 10 – habitus, lateral view, 11 – antenna, 12 – mesosoma and metasoma. 9, 10 – holotype, 11, 12 – paratype.



Figs 13–15. *Camptoptera dravida* (paratypes of *C. dravida*; ♂ not conspecific to ♀). 13 – fore wing, ♀, 14 – antenna, ♂, 15 – fore wing, ♂.

TYPE MATERIAL EXAMINED. Holotype ♀ (Fig. 10) on card [BMNH], labeled (Fig. 9): 1. "INDIA: Karnataka Mudigere 26.x–4.xi.1979", 2. "J.S. Noyes B.M. 1979–518", 3. [inside a red circle] "Holo-type", 4. "*Camptoptera dravida* sp.nov. ♀ det. B.R. Subba Rao, 1988", 5. "B.M. TYPE HYM 5.3503", 6. "BMNH(E) #1414945". Paratypes: 1 ♀ and 1 ♂ [BMNH] on slides, labeled: 1. "INDIA: T. Nadu Coimbatore 25.ix-1.x.1979 J. S. Noyes BM 1979-518 25 Feb 87 " (also include BMNH barcodes), 2. "1988 Para-type [inside a yellow circle] *Camptoptera dravida* sp. nov. [female or male symbol] B. R. Subba Rao det.".

DISTRIBUTION. India (Subba Rao, 1989).

BRIEF DIAGNOSIS AND REMARKS. Female (paratype). Face and vertex with faint transversely striate sculpture. Antenna (Fig. 11) with flagellum 7-segmented; F3 longer than F1 and the longest funicular segment, F2 very short and about as long as wide, clava 5.6× as long as wide. Midlobe of mesoscutum, frenum of scutellum and propodeum transversely striate (Fig. 12). Fore wing (Fig. 13) 13.1× as long as wide and very narrow; disc almost hyaline, with 1 short, incomplete row of 7 setae closer to anterior margin besides the admarginal rows; longest marginal seta 5.6× maximum wing width. Hind wing about 36× as long as wide, very narrow; disc with a complete admarginal row of setae only along anterior margin. Petiole (Fig. 12) apparently without a lateral lamella, a little wider than long; gaster mostly pale except brownish at apex; ovipositor 0.9× length of metatibia. Body length of the holotype about 0.31 mm.

The examined male paratype most likely does not belong to this species because it has a different fore wing (Fig. 15) which has a complete median row of setae on the disc; its antenna (Fig. 14) has a 10-segmented flagellum with F2 and F4 ringlike.

***Camptoptera kannada* Subba Rao, 1989**
Figs 16–19, 27, 29

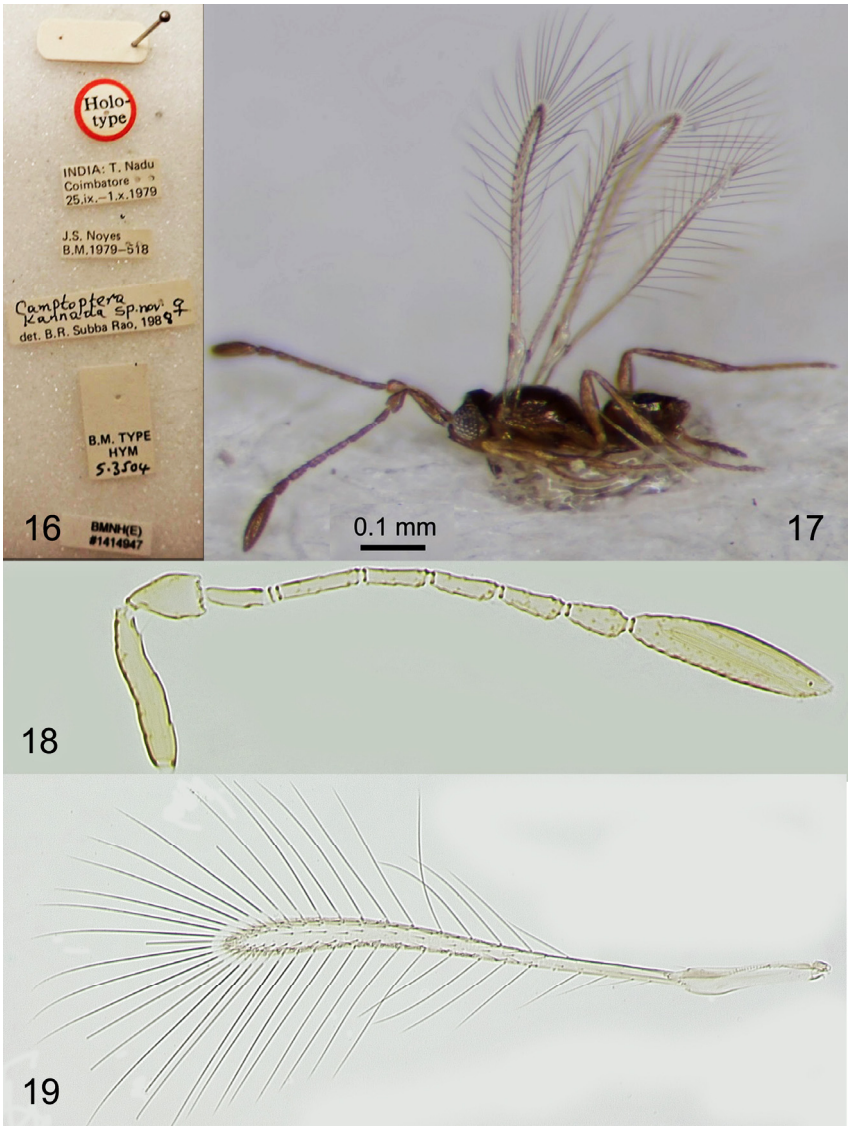
Camptoptera kannada Subba Rao, 1989: 161 (key), 163–164, 184 (illustrations). Type locality (as indicated in the original description): Mudigere, Karnataka, India. However, the card-mounted specimen in the BMNH, labeled as the holotype, is from Coimbatore, Tamil Nadu, India. Subba Rao (1989, p. 164) also indicated an incorrect date for the slide-mounted paratype from Mudigere ("2.x.4.xi.1979") instead of 26.x–4.xi.1979, for both the holotype (in fact collected on a different date, as indicated below) and the paratype. Because Subba Rao (1989, p. 164) unambiguously indicated that the paratype was slide-mounted, and all the holotypes of his species described in this publication were card-mounted, according to ICZN Article 73.1.2 I correct the published data for the holotype female of *C. kannada* to be Coimbatore, Tamil Nadu, India for the type locality and 25.ix–4.x.1979 for the date of collection.

TYPE MATERIAL EXAMINED. Holotype ♀ (Fig. 17) on card [BMNH], labeled (Fig. 16): 1. "INDIA: T. Nadu Coimbatore 25.ix–1.x.1979", 2. "J.S. Noyes B.M. 1979–518", 3. [inside a red circle] "Holo-type", 4. "*Camptoptera kannada* sp.nov ♀ det. B.R. Subba Rao, 1988", 5. "B.M. TYPE HYM 5.3504", 6. "BMNH(E) #1414947". Paratype: 1 ♀ [BMNH] on slide, labeled: 1. "INDIA: Karnataka Mudigere 26.x-4.xi.1979 J. S. Noyes BM 1979-518 4 Mar 87" (also includes a BMNH barcode), 2. "1988 Para-type [inside a yellow circle] *Camptoptera kannada* sp. nov ♀. B. R. Subba Rao det.".

MATERIAL EXAMINED. India, Karnataka, near Dandeli Reserve, 15°24'43''N 74°48' 43''E, 604 m, 17.XI 2003, J.M. Heraty [1 ♀, UCRC].

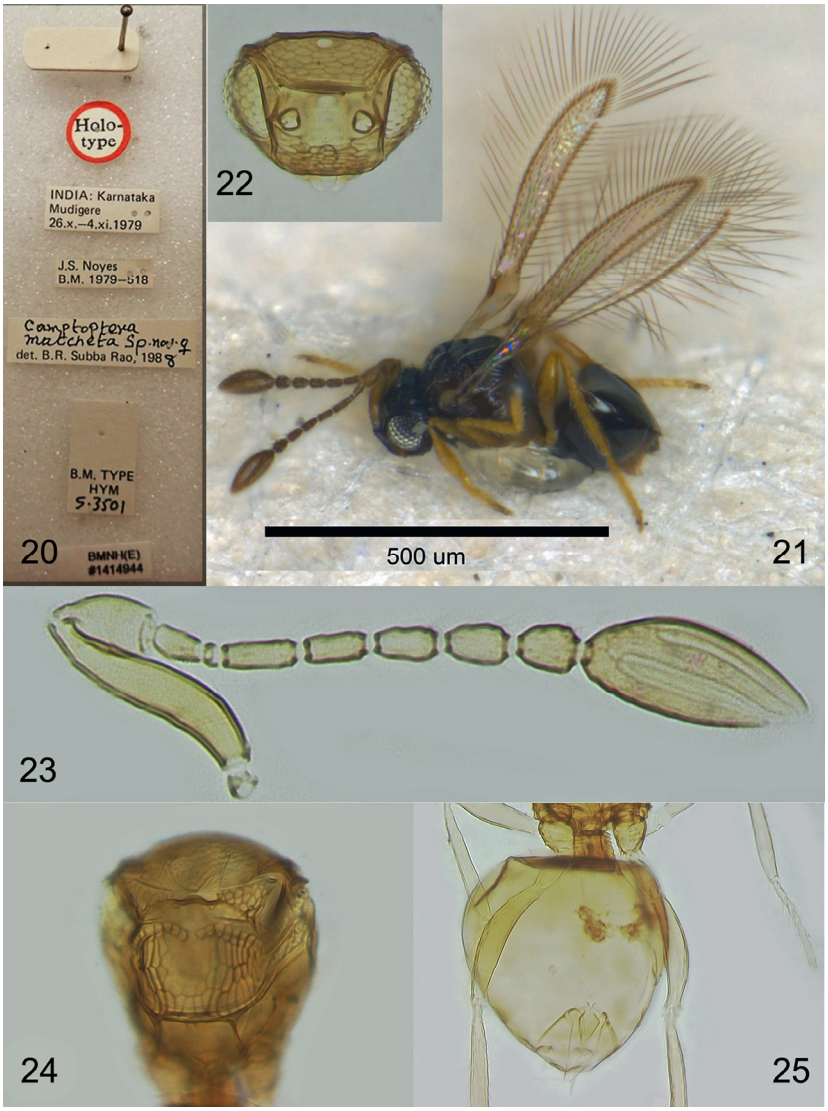
DISTRIBUTION. India (Subba Rao, 1989).

BRIEF DIAGNOSIS AND REMARKS. Female (paratype). Face with faint, inconspicuous transversely striate sculpture, vertex with faint cell-like sculpture. Antenna (Fig. 18) with flagellum 7-segmented; F3 longer than F1 and the longest funicular segment, F2 ringlike, clava 4.2× as long as wide. Midlobe of mesoscutum with faint, and frenum of scutellum and propodeum with even less conspicuous cell-like sculpture so appearing almost



Figs 16–19. *Camptoptera kannada*, ♀. 16 – labels, 17 – habitus, lateral view, 18 – antenna, 19 – fore wing. 16, 17 – holotype, 18, 19 – paratype.

smooth, the latter without submedian carinae (Fig. 29). Fore wing (Fig. 19) 16.5× as long as wide, narrow; disc slightly infuscate, with 1 incomplete median row of 10 setae besides the admarginal rows; longest marginal seta 6.8× maximum wing width. Hind wing about 36× as long as wide, very narrow; disc with admarginal rows of setae only. Petiole (Fig. 27) without a lateral lamella, a little wider than long; ovipositor about 0.5× length of metatibia. Body length



Figs 20–25. *Camptoptera matcheta*, ♀. 20 – labels, 21 – habitus, dorsolateral view, 22 – head, frontal view, 23 – antenna, 24 – mesosoma, 25 – metasoma. 20, 21 – holotype, 22–25 – paratype.

of the holotype about 0.37 mm, and that of the critical-point dried, non-type female from Karnataka (before being slide-mounted) 0.33 mm. The latter has the clava 3.8× as long as wide and the fore wing 16.0× as long as wide, with only 6 setae in the median row.

This Oriental species belongs to the informal *cardui* species group of *Camptoptera*, as defined by Triapitsyn (2014). Its female differs from that of the common Holarctic species *C. cardui* (Foerster, 1856) in the absence of any submedian carinae on the propodeum, thus being more similar to the eastern Palaearctic *C. zagvozdka* Triapitsyn, 2014. The latter, however, has a wider (at most 14.9× as long as wide) and notably more setose fore wing (fig. 127, p. 79 in Triapitsyn, 2014).

***Camptoptera matcheta* Subba Rao, 1989**
Figs 20–26, 28, 30

Camptoptera matcheta Subba Rao, 1989: 160 (key), 161–162, 185 (illustrations). Type locality: Mudigere, Karnataka, India.

Camptoptera kloptera Triapitsyn, 2014: 9 (key), 36–38. Type locality: Gornotayozhnoye, Primorskii krai, Russia. Holotype female [Zoological Institute, Russian Academy of Sciences, Saint Petersburg, Russia (ZIN)] and 2 paratype females [UCRC], examined (Triapitsyn, 2014). **Syn. n.**

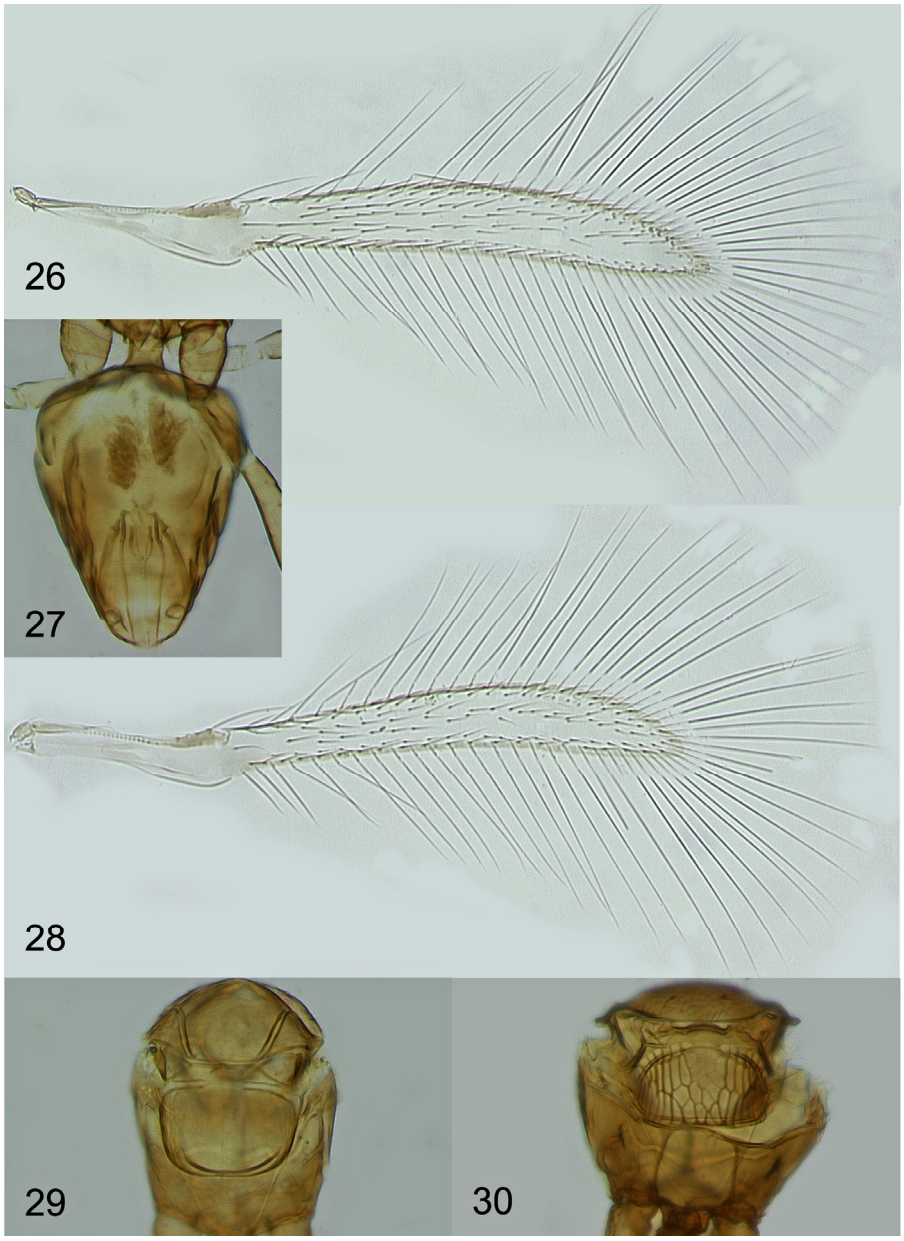
TYPE MATERIAL EXAMINED. Holotype ♀ (Fig. 21) on card [BMNH], labeled (Fig. 20): 1. "INDIA: Karnataka Mudigere 26.x–4.xi.1979", 2. "J.S. Noyes B.M. 1979–518", 3. [inside a red circle] "Holo-type", 4. "*Camptoptera matcheta* sp. nov. ♀ det. B.R. Subba Rao, 1988", 5. "B.M. TYPE HYM 5.3501", 6. "BMNH(E) #1414944". Paratypes: 1 ♀ and 1 ♂ [BMNH] on slides, labeled: 1. "INDIA: Karnataka Mudigere 26.x-4.xi.1979 J. S. Noyes BM 1979-518 4 Mar 87" (also include BMNH barcodes), 2. "1988 Paratype [inside a yellow circle] *Camptoptera matcheta* sp. nov. [female or male symbol] B. R. Subba Rao det.".

MATERIAL EXAMINED. India, Karnataka, W of Mudigere, 13°07'05''N 75°30'20''E, 850 m, 24-25.XI 2003, J.M. Heraty [1 ♀, UCRC].

DISTRIBUTION. India (Subba Rao, 1989) and Russian Far East (Triapitsyn, 2014 [as *C. kloptera*]).

BRIEF DIAGNOSIS AND REMARKS. Female (paratype). Upper face almost smooth and lower face with a reticulate sculpture, vertex reticulate (Fig. 22). Antenna (Fig. 23) with flagellum 7-segmented; pedicel much longer than F1, F3 longer than F1 and the longest funicular segment, F2 ringlike, clava 2.3× as long as wide. Midlobe of mesoscutum and axilla reticulate, frenum of scutellum with large cell-like sculpture except in the middle where it is faint and inconspicuous, propodeum with widely separated submedian carinae but otherwise almost smooth (Fig. 24). Fore wing (Fig. 26) 9.5× as long as wide, rather wide; disc slightly infuscate, with 3 or 4 median rows of setae besides the admarginal rows; longest marginal seta 3.8× maximum wing width. Hind wing about 21× as long as wide; disc with 2 admarginal rows of setae only along anterior margin. Petiole (Fig. 25) strongly transversely ridged, without a lateral lamella, about as wide as long; ovipositor almost 0.6× length of metatibia. Body length of the holotype is about 0.43 mm, and that of the critical-point dried, non-type female from Karnataka (before being slide-mounted) was 0.33 mm. The latter has the clava 2.5× as long as wide and the fore wing 10.3× as long as wide, with 2 or 3 rows of setae besides the admarginal rows.

The examined male paratype does not belong to *C. matcheta* but rather to an undetermined species of *Camptoptera* because its fore wing (13.9× as long as wide, with only 1 complete, median row of discal setae besides the admarginal rows) and petiole (notably wider than long and far less ridged) are completely different.



Figs 26–30. *Camptoptera* spp., ♀. 26 – *C. matcheta*, paratype, fore wing, 27 – *C. kannada*, paratype, metasoma, 28 – *C. matcheta* (paratype of *C. kloptera*), fore wing, 29 – *C. kannada*, paratype, mesosoma, 30 – *C. matcheta* (paratype of *C. kloptera*), mesosoma.

The female paratype of *C. matcheta* differs from the holotype and paratype females of *C. kloptera* in having the fore wing more densely setose (compare Figs 26 and 28 as well as fig. 58, p. 38 in Triapitsyn 2014) and about 9.5× as long as wide (relatively less setose and 10.0–10.6× as long as wide in the latter nominal species), and also frenum of the scutellum with 3 rows of sculpture cells posterior to the frenal line of large foveae (Fig. 24) compared with 2 or 3 rows of such sculpture cells in *C. kloptera*, many of these being somewhat relatively longer (Fig. 30 and fig. 56, p. 37 in Triapitsyn 2014). However, because the fore wing of a smaller non-type female of *C. matcheta* from Karnataka is very similar in proportions and chaetotaxy to that of *C. kloptera*, the latter is hereby synonymized under the former species.

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