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Review of the Indian Species of *Evania* (Hymenoptera: Evanioidea: Evaniidae)

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ABSTRACT

The Indian species of *Evania* Fabricius (Hymenoptera: Evaniidae) are revised. Only two species, *E. mukerjii* Mani, 1943 and the widespread species *E. appendigaster* (L., 1758), are valid. Eight species, namely, *Evania abrahami* Joseph, *E. agraensis* Joseph, *E. johni* Joseph, *E. nurseana* Cameron, *E. rubrofasciata* Brues, *E. simlaensis* Cameron, *E. trivandrensis* Joseph, and *E. unipunctata* Joseph, are synonymised under *E. appendigaster.* Redescribed the two recognized Indian species of *Evania, E. appendigaster and E. mukerjii*, with distribution and host data provided.

Key words: Synonymy, ensign wasps, hatchet wasps, India, distribution.

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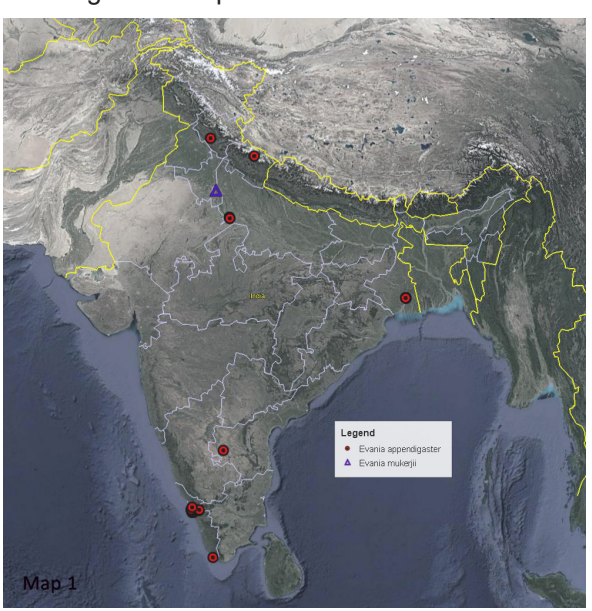
INTRODUCTION

Evaniidae (Hymenoptera), also known as ensign wasps or hatchet wasps, are most diverse in the tropics while found in relatively fewer numbers in temperate regions (Basibuyuk, Rasnitsyn, Fitton, & Quicke, 2002; Deans, 2005). Evaniids are primary parasitoids of cockroaches, and they lay their eggs on cockroach oothecae so that their larvae emerge as a solitary predator of cockroaches. In India, the family Evaniidae is represented by six genera, viz. *Evania* Fabricius (02 species), *Parevania* Kieffer (03 species), *Prosevania* Kieffer (17 species), *Vernevania* Huben & Deans (01 species), *Zeuxevania* Kieffer (06 species) and *Brachygaster* Leach (02 species). This study examines the genus *Evania* in India, which comprised ten species before this study (Kumar, Gopi, & Rajmohana, 2017). *On the other hand, Evania appendigaster* (L.) is a common and widely distributed species (Deans, 2005) and shows a high degree of variation in morphology. For this reason, many species have been described from different regions based on different morphotypes. Deans (2005) indicated many species of *Evania* are probable synonyms of *E. appendigaster*. However, based on the critical examinations of all the type specimens of Indian *Evania* and the specimens from National Zoological Collections, Zoological Survey of India, Kolkata, confirmed that only two species (*E. appendigaster* and *E. mukerjii*) are valid (Map 1). Remaining species, viz., *E. abrahami* Joseph, *E. agraensis* Joseph, *E. johni* Joseph, *E. nurseana* Cameron, *E. rubrofasciata* Brues, *E. simlaensis* Cameron, *E. trivandrensis* Joseph, *E. unipunctata* Joseph are synonymised with *E. appendigaster* (Linn.). Even though *E. appendigaster* is a widespread common species, and the available descriptions are not sufficient to recognize the species.



Map 1. Map showing distribution of *Evania* species in India.

MATERIALS AND METHODS

The present study was based on exiting and freshly collecting specimens in the Hymenoptera section, Zoological Survey of India, Kolkata. Specimens were collected by net sweeping, killed in ethyl acetate, and stored in 70% ethyl alcohol. They were later dried and pinned. Specimens were studied using a Leica M205A stereo zoom microscope and photographs and relative measurements (in mm.) were taken using a Nikon SMZ 25. The genus is identified using the key provided by Mani & Muzaffer (1943), Deans & Kawada (2008). Voucher specimens are deposited in the National Zoological Collections of Zoological Survey of India, Kolkata, India. The terminology is followed after Crosskey (1951) and Kawada (2011).

The following abbreviations are used in the text: F - Female; M - Male; F1-13 - Funicle segments 1-13; OOL - Minimum distance between the posterior ocellus and eye margin; POL - Minimum distance between the two posterior ocelli; AOL - Minimum distance between the posterior ocellus and anterior ocellus; BMNH - The Natural History Museum, London, United Kingdom; IARI - Division of Entomology, Indian Agriculture Research Institute, Pusa, New Delhi, India; LSUK - The Linnaean Society of London, Burlington House, Piccadilly, London, United Kingdom; MNHN - Museum National d'Histoire Naturelle, Paris, France.

RESULTS

Taxonomy

Evania Fabricius, 1775

Evania Fabricius, 1775: 345. Type species: *Sphex appendigaster* (Linnaeus), by designation of Latreille, 1810: 297.

Diagnosis. Head in frontal view wider than long and in lateral view slightly compressed; clypeus convex; mandibles bidentate; median ridge between antennal insertion extending almost to anterior ocellus; antennal sockets within upper third of head; fore wing extending beyond petiole, with six cells enclosed by tubular or nebular veins, and fore wing vein RS+M present, separating 1st submarginal and 1st subdiscal cells; distance between fore and mid coxae nearly equal to distance between mid and hind coxae; female metasoma in lateral view triangular, metasomal tergite VIII expanded dorsally (Deans & Huben, 2003)

Hosts. Species of *Evania* are primary parasitoids of cockroach ootheca (Blattidae: Blattinae) (Roth, 1989; Westwood, 1843; Lit, 1988; Yeh & Mu, 1994; Fox et al, 2012). Although with this revision only two species of the genus are now recognized from India, the hosts of only one species, *E. appendigaster*, are known.

Species and distribution. The genus *Evania* is worldwide in distribution, with 27 valid species known plus 32 names that are *incertae sedis*. The distribution of valid species and *incertae sedis* (in brackets) is as follows: Oriental, 11 (10); Palearctic, 7 (3); Afrotropical, 2 (1); Ethiopian, 6 (1); Neotropical, 4 (12); Australian, 2 (3); and Nearctic,

1 (0). At least two species, *E. appendigaster* and *E. dimidiate* Spinola are known from more than one zoogeographical region (Deans, Yoder, & Dole, 2020; Jennings, 2020).

***Evania appendigaster* (Linnaeus)** (Fig. 1)

Ichneumon appendigaster Linnaeus, 1758: 566 [type lost, LSUK]. Dalla Torre 1902: 1076, catalog. Townes 1949: 527- 528].

Sphex appendigaster Linnaeus 1767: 930, 943. Gmelin 1789: 2723, redescription. Christ 1791: 301, diagnosis. catalog.

Evania appendigaster de Geer 1773: 594-596.

Ichneumon niger de Geer, 1773: 594. Synonymized by Olivier 1792: 453.

Evania laevigata Olivier, 1792: 452. Synonymized by Schletterer 1886: 12.

Evania unicolor Say, 1824: 57-58. Synonymized by Dalla Torre 1902: 1077.

Evania desjardinsi Blanchard, 1840: 299. Male, Mauritius, (? MNHN). Synonymized by Schletterer 1886: 12.

Evania fuscipes: Spinola 1840: 246 . Synonymized by Dalla Torre 1902: 1077.

Evania affinis Le Guillou, 1841: 326. Hawaii, Maui, Hamoa (? MNHN). Synonymized by Schletterer 1886: 12.

Evania desjardinsii {sic}: Westwood 1843: 242. Synonymized by Dalla Torre 1902: 1077-1078.

Evania cubae Guérin-Méneville, 1844: 405. Cuba, type(s) lost?. Synonymized by Cresson 1865: 8.

Evania peringueyi Cameron, 1906: 19-20. ♂, ♀, Cape Town, Cape colony (NHM, Female, type # 3.a.291). Synonymized by Brues 1924: 8.

Evania abrahami Joseph, 1952: 52. ♀. Holotype ♀: India, Uttar Pradesh, Agra (IARI). **Syn. nov.** (Type examined) (Fig. 2)

Evania agraensis Joseph, 1952: 47-48. ♀. Holotype ♀: India, Uttar Pradesh, Agra (IARI). **Syn. nov.** (Type examined) (Fig. 3)

Evania johni Joseph, 1952: 48-49. ♀. Holotype ♀: India, Uttar Pradesh, Agra (IARI). **Syn. nov**. (Type examined) (Fig. 4)

Evania nurseana Cameron, 1906: 99-100. ♀, ♂. Syntype male, female: Pakistan, Quetta (? BMNH). **Syn. nov.** (Type photographs not examined)

Evania rubrofasciata Brues, 1916: 718-719. ♂, ♀. Type not designated Male, Female: India, Tamil Nadu, Vellore (=North Arcot district) (? Type lost). **Syn. nov.**

Evania simlaensis Cameron, 1909: 660-661. ♀. Holotype ♀: India, Himachal Pradesh, Shimla(=Simla) (? BMNH). **Syn. nov.** (Type photographs examined www.evanioidea.info)

Evania trivandrensis Joseph, 1952: 45-46. ♂. Holotype ♂: India, Kerala, Trivandrum (IARI). **Syn. nov.** (Type examined) (Fig. 5)

Evania unipunctata Joseph, 1952: 50-51. ♀. Holotype ♀: India, Uttar Pradesh, Agra (IARI). **Syn. nov.** (Type examined) (Fig. 6)

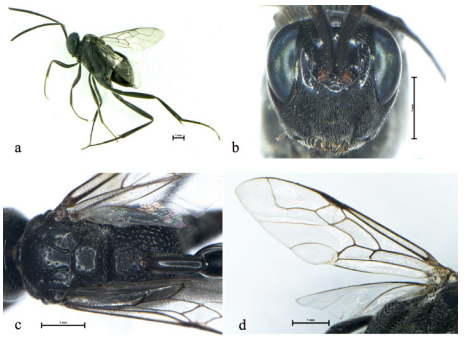


Fig 1. *Evania appendigaster* (L.). a) Habitus, lateral; b) Head, frontal view; c) Mesosoma, dorsal view; d) Fore wings.

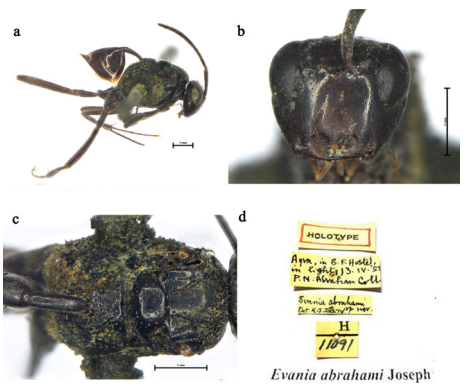


Fig 2. *Evania abrahami* Joseph. a) Lateral habitus; b) Head, front view; c) Mesosoma, dorsal view; d) Original label.

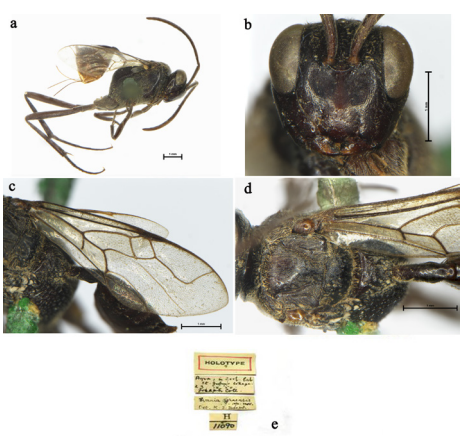


Fig 3. *Evania agraensis* Joseph. a) Lateral habitus; b) Head, front view; c) Fore wing; d) Mesosoma, dorsal view; e) Original label.

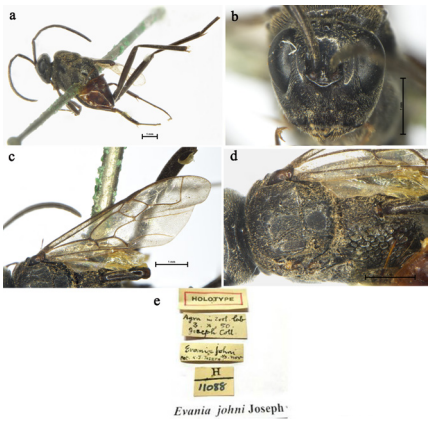


Fig 4. *Evania johni* Joseph. a) Lateral habitus; b) Head, front view; c) & d) Mesosoma, dorsal; e) Original label.

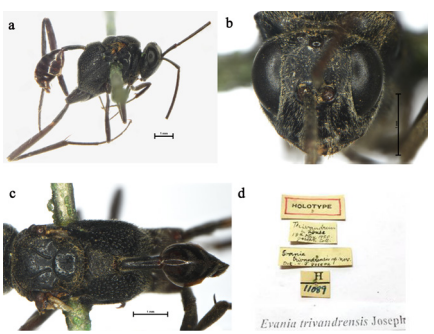


Fig 5. *Evania trivandrensis* Joseph. a) Lateral habitus; b) Head, front view; c) Mesosoma and metasoma, dorsal view; d) Original Label.

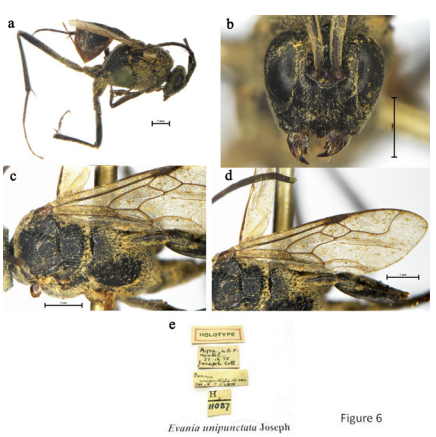


Fig 6. *Evania unipunctata* Joseph. a) Lateral habitus; b) Head, front view; c) Mesosoma, dorsal view; d) Fore wing; e) Original label.

Diagnosis. Female. Body length 7.1-7.9 mm. Body dark brown to black; head, frontovertex and antenna dark brown with silvery eyes; ocellus nitid brown; antennal socket nitid brown; tegula nitid brown; wing hyaline, venation nitid dark brown; all legs dark brown to black; ¼ basal of metasoma, exserted part of ovipositor nitid brown.

Head. Head high as wide; frontovertex smooth with silvery setae, 0.6 × head width and 1.7× scape length; mandibles bidentate; malar space about 0.4× eye length; OOL 0.5× POL; ocelli enlarged; face without distinct shallow longitudinal depression on each side of median line; clypeus convex with silvery setae; antennal scape 5.8× as long as broad; F1 longer than F2; pedicel 1.5× as long as broad; median ridge between antennal insertion, reaching almost to anterior ocellus; antennal socket almost middle of head. Relative measurements: head width (length), 2.3(2.3); frontovertex width, 1.4; distance between two posterior ocelli, 0.2; distance between posterior ocellus and eye margin, 0.4; eye length (width), 1.3(0.75); malar space length, 0.5; scape length(width), 1.7(0.3); pedicel length (width), 0.3(0.2).

Mesosoma. Weakly punctuate; mesoscutum 0.6× longer than wide; parapsidal furrow widening posteriorly, not touching posterior margin; scutellum sparsely areolate, 1.5× wider than long; propodeum foveae; legs covered with minute setae; hind tibia slightly shorter than hind femora, almost equal to combined length of hind tarsomere(1-5); internal spur of hind tibia almost equal to or slightly shorter than external spur; tarsal claws each with two teeth; length of 5th tarsomere 1.6× length of claws length. Relative measurements: mesosoma length, 3.9; mesoscutum length (width), 1.3(2.0); scutellum length (width), 0.8(1.2); hind femur length, 4.0; hind tibia length 3.8; hind tarsal length, 3.9; hind tibia internal spur, 0.6; hind tibia external spur, 0.5; 5th tarsomere length, 0.5; tarsal claws length, 0.3.

Wings. Hyaline; setose, but more so apically; veins C, Sc+R, 1M, RS+M, 2RS, M+CU, 1CU-a, 1A, 2A, 2CU, 2Mb, 3M, 2CU-a and 3A present; fore wing and hind wing both 2.9× longer than wide; 13 hamuli; jugal lobe present. Relative measurements: fore wing length (width), 6.5(2.2); hind wing length (width), 4.1(1.4).

Metasoma. Triangular, 1.1× longer than wide; petiole about half of metasoma, carinate, 3.7× longer than wide and 0.4× length of metasoma; ovipositor slightly exserted. Relative measurements: Metasoma length (width), 3.1(2.6); petiole length (width), 1.5(0.4).

Male. Body finely punctate except propodeum and metasoma; head 1.07 × wider than long; frons and facial area surrounding antennal sockets densely setose with short white hairs and sparsely punctate with shallow punctures; ocelli dark brown, nearly equal in size, OOL 1.7 × as long as POL; clypeus convex; densely setose; posterior margin of clypeus not defined; head width 1.6 × width of frontovertex; gena flat, densely setose; mandibles bidentate; median ridge between antennal insertion, reaching almost to anterior ocellus; pre-orbital antennal carina running with median groove; antennal groove depressed and with two lateral depressions on either side of antennal groove and eyes; antennal sockets within upper third of the head; scape pedicel and flagellomeres black; scape covered with minute setae with white hairs, 3.2 × length of pedicel.

Mesosoma. Black, weakly punctate anteriorly, broadly foveolate posteriorly; pronotum setose, and with sparse, large punctures; propleuron with anterior and ventral portions smooth, but transversely rugose posteriorly; mesoscutum 1.2× wider than long, densely setose with white hairs, and with scattered, wide punctures; parapsidal furrow widening posteriorly, not extending to posterior margin of mesoscutum; scutellum 2.0× wider than long, sparsely aerolate, and densely setose with white hairs; metanotum with single row of concentric foveae; mesopleuron swollen except for rugose part posteriorly; metapleuron densely foveolate, setose; propodeum shiny, with scattered foveae dorsally and sides concentrically strigate-areolate. Legs black, covered with setae; hind tibia slightly longer than hind femur; hind tibia 1.03× combined length of tarsomeres 1–5; tibial spur black, length of interior spur 1.6× length of exterior spur; each tarsomere with stiff spines apically; tarsal claws each with two teeth, 14.6× length of tarsomere 5.

Wings. Hyaline; setose, but more setose apically; veins black, C, Sc+R, 1M, RS+M, 2RS, M+CU, 1CU-a, 1A, 2A, 2CU, 2Mb, 3M, 2CU-a and 3A present; 10 hamuli (9 apically and 1 basally); jugal lobe present.

Metasoma. Elliptical, setose dorsally; petiole 4.2× longer than wide, arching dorsally and setose; metasomal tergites II-IX, ovoid, nitid.

Hosts. Cockroach ootheca of the subfamily Blattinae (Blattidae) (Westwood, 1843; Roth, 1989; Westwood, 1843; Lit, 1988, Yeh & Mu, 1994).

Distribution. Widely distributed throughout Afrotropic, Indomalayan, Palearctic (Greece, Turkey and north of Sweden except eastern Russia), Australasia, Nearctic and Neotropical except Antarctica.

Material examined: INDIA: UTTARAKHAND, Chamoli dist., Joshimara, 1♀, 16.09.1979, Coll. S.K. Gupta & Party; ANDHRA PRADESH, Sadwal, 1♂, 14.12.1987, Coll. B. Nauri & Party; Ananthapur dist., Amegundapalayam, 1♀, 20.08.2014, Coll. S. Prabakaran & Party. KERALA, Kozhikode dist., ZSI Campus, 1♀, 16.02.2005, 1♀, 27.09.2010, Coll. Madhavan; 4♀♀, 1♂, 30.vi.2005, Coll. K.C. Gopi; Kozhikode dist., East Hill, 1♀, 28.viii.2006, Coll. K.C. Gopi; Kozhikode dist., Malapparamba, 1♀, 23.02.2010, Coll. Mercy; Thiruvannur, 4♀♀, 1.09.2005, Coll. K. Rajmohona; Malappuram dist., Nilambur, 1♀, 10.02.2006, Coll. K. Rajmohona; Malappuram dist., Mampad, 1♂, 1♀, 31.xii.2007, Coll. S. Santosh; Calicut, 1♂, 15.12.2006, 1M, 9.05.2008, 1♀, 15.09.2008, Coll. K.C. Gopi; Kozhikode dist., Nanminda, 1♂, 12.01.2007, 1♀, 5.10.2011Coll. Girish Kumar, P.; Calicut, 1♀, 9.05.2008, Coll. K.C. Gopi; Calicut University Campus, Malappuram dist., 1♂, 28.12.2007; Kadalundi, 1♂, 28.11.2008, Coll. K.G. Emmeliamma; Trivandram, 1♀, 18.05.1950, Coll. Joseph; WEST BENGAL, Kolkata, Lake Gardens, 1♀, 12.05.2007, Coll. Girish Kumar, P; Kolkata, 1♀, 25.06.2008, 1♂, 27.06.2008, 1♀, 9.07.2008, 1♂, 9.08.2008, Coll. Girish Kumar, P.; Kolkata dist., Southern Avenue, 1♂, 16.04.2009, 1M, 26.04.2009, 1♀, 9.09.2009, Coll. Girish Kumar, P.; Kolkata dist., New Alipore, ZSI Campus, 1♂, 15.06.2018, 1♀, 18.06.2018, Coll. Paromita Mandal; 1♀, 3.08.2018, 1♂, 16.07.2018, 1♀, 25.08.2018, 1♂, 31.07.2018, Coll. Shankhamala Ghosh; 1♀, 9.07.2018, Coll. Chandan Bera; 1♂, 13.06. 2019, Coll. S. I. Kazmi; UTTAR PRADESH, Agra,B. F. Hostel, 1♀, 13. 04. 1951, Coll. P. N. Abraham;1♀, 27.09.1950, Coll. Joseph; Agra, St. John's College, Zoology lab.,1♀, 23.09.1950, 1♀,3.10.1950, Coll. Joseph.

Remarks. After examining the type materials, photographs (except *E. nurseana*) (www.evanioidea.info) and original descriptions of *E. abrahami*, *E. agraensis*, *E. johni*, *E. nurseana*, *E. rubrofasciata, E. simlaensis*, *E. trivandrensis*, *E. unipunctata,* it is found that all the above-mentioned species are synonyms of *Evania appendigaster*. Deans (2005) also indicated this synonymy.

***Evania mukerjii* Mani** (Fig. 7)

Evania mukerjii Mani, 1943:13-14. ♂. Holotype ♂, India: Delhi (IARI), (Type examined).

Redescription. Male. Body length 8.0 mm.

Head. Dark brown and smooth; ocelli and eyes black; genae smooth; face with silvery hair; antennal segments dark brown. Head wider than long; frontovertex smooth, about half of head width, 1.8× scape length; POL 2× OOL and AOL posterior ocelli bulges; malar space slightly longer than POL, equal to scape length; eyes 2.1× longer than wide; mandible 2-dentate; face convex with a median longitudinal ridge connecting anterior margin of clypeus; antennal sockets present upper third of head; antennal segments longer than broad; F1 slightly longer than scape and pedicel combined; scape 2.5× longer than broad; pedicel almost quadrate. Relative measurements (in mm) - Head width (height), 1.7(2.0); frontovertex width, 0. 9; POL, 0.4; AOL, 0.2; OOL, 0.2; eye length (width), 1.3 (0.6); malar space length, 0.5; scape length (width), 0.5 (0.2); pedicel length (width), 0.15(0. 2); F1 length, 0.7.

Mesosoma. Orange, weakly foveate on dorsal side; tegulae orange brown; parapsidal furrow present; mesoscutum 0.8× longer than broad; scutellum 0.58× longer than broad; scutellum and propodeum separated by a deep groove on dorsal side; mesopleuron with minute puncture. Legs: brown to dark brown; hind tibia longer than hind femur, 1.3× longer than mesosoma hight; spines present on dorsal surface of hind tibia; longer spur of hind tibia slightly less than half length of metatarsus. Relative measurements (in mm) - Mesosoma height, 2.2; mesoscutum length (width), 1,2 (1.5); scutellum length (width), 0.7(1.2); hind coxa length, 1.0; hind trochenter length, 1.1; hind femur length (width), 2.6 (0.4); hind tibia length (width), 3.0 (0.3).

Wings. Hyaline; 7 complete cells; RS+M, 3M, CU vein present; fore wing 3.0× longer than wide. Relative measurements: fore wing length (width), 6.0(2.0).

Metasoma. Dark brown, elliptical, smooth nitid, about 2.0×longer than broad; petiole smooth, anterior half or more red, posterior half dark brown, 0.52× broader than metasoma, 4.3× longer than broad. Relative measurements (in mm) - Petiole length (width), 1.3(0.3); metasoma length (width), 2.5(1.3).

Female. Unknown.

Hosts. Unknown.

Distribution. Indomalayan region (INDIA: Delhi).

Material examined: Holotype. INDIA: Delhi, IARI campus, 1 ♂, 4.viii. 1939, Coll. Mukerjii.

Remarks. *E. mukerjii* was recorded from India by Mani (1943) based on the male. Unfortunately, during the survey, we were unable to collect the specimen. However, after examining the holotype and original description by one of us (SIK), it clearly shows that this species is very distinct from male *E. appendigaster* mainly by body colour, the ratio between intraocular space and ocellocular space, petiole sculpture and ratio between a longer spur of hind tibia and metatarsus.

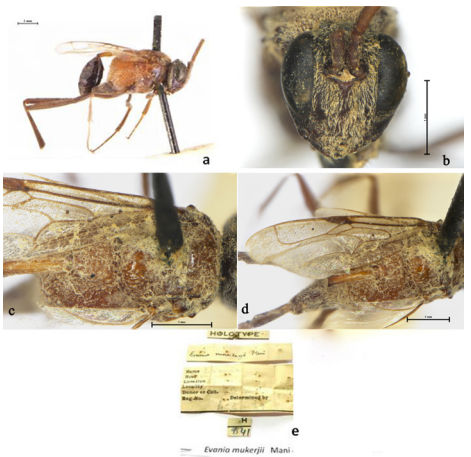


Fig 7. *Evania mukerjii* Mani. a) Lateral habitus; b) Head, front view; c) Mesosoma, dorsal view; d) Fore wing; e) Original label.

DISCUSSION

To date, two species of *Evania* have been recognized in India. Descriptions of both species are provided here. The cosmopolitan species of *Evania appendigaster* (L.) is misidentified as a new species by various authors in different periods due to variations. Many species described under the genus *Evania* from India are either synonymy or transferred to other genera. A few other genera are currently being analyzed further and will hopefully yield species identifications or new species descriptions.

Evania abrahami: The original description of this species was based upon a single female holotype, and the distinguishing characters were longer spur of the hind tibia about 2/5th (*versus* about 1/3rd) length of the metatarsus, hind wing with 11 (*versus* 13) hamuli, and malar space half (*versus* slightly less than half) the length of eye length. The same is the case of *E. agraensis* where it was described based on a single female with distinguishing characters as the long spur of the hind tibia about 2/5th the length of the metatarsus, the hind wing with ten hamuli, and the malar space more than half the eye length; *E. johni* differs from *E. appendigaster* in having a long spur of the hind tibia about 2/5th the length of the metatarsus, the hind wing with ten hamuli, and the malar space more than half the length of eye length. After examining the type specimens of *E. abrahami*, *E. johni*, the characters mentioned are not supportive of making it different from *E. appedigaster.*

Evania agraensis: This species was described from a single female holotype and is indistinguishable from *E. appendigaster*. The differences between these two species are very few and fall within the range of variation of the species. The holotype of *E. agraensis* differs from other examined specimens of *E. appendigaster* in having the long spur of the hind tibia about 2/5th the length of the metatarsus, the hind wing with ten hamuli, and the malar space more than half the eye length.

Evania johni: The original description of this species was based upon a single female holotype, which is indistinguishable from *E. appendigaster*. The differences between these two species are very few and fall within the range of variation of this species. The holotype of *E. johni* differs from other examined specimens of *E. appendigaster* in having a long spur of the hind tibia about 2/5th the length of the metatarsus, the hind wing with ten hamuli, and the malar space more than half the length of eye length, as for the holotype of *E. agraensis*.

Evania nurseana: The species was described from both female and male specimens. *Evania nurseana is* very similar to other examined specimens of *E. appendigaster*, differing in having the interocular space about twice the ocellar space (*versus* one and a half times the ocellar space), malar space half the eye length (*versus* slightly less than half eye length), and longer spur of the hind tibia about half-length (*versus* about 1/3rd length) of the metatarsus.

Evania rubrofasciata: The original description of *E. rubrofasciata* was based on a single female and male and left no doubt that *E. rubrofasciata* and *E. appendigaster* are the same species. Given the wide distribution of species, it is not surprising that the species shows some variation in antennomeres' dimensions and the relative length of the hind tibial spur and metatarsus. In *E. rubrofasciata* the malar space is 1/3rd (*versus* slightly less than half) eye length, and the long spur of the hind tibia is 1/3rd (*versus* about 1/3rd) the length of the metatarsus.

Evania simlaensis: This species was incompletely described by Cameron based on a single female. The description of *E. simlaensis* is very close to that of *E. appendigaster*. However, it differs from *E. appendigaster* in having the malar space half the eye length (*versus* malar space slightly less than half) and the long spur of the hind tibia less than 1/3rd (*versus* about 1/3rd) length of the metatarsus.

Evania trivandrensis: The original description of this species was based on a single male and is virtually indistinguishable from *E. appendigaster*. The differences between the two species are minor and fall within the range of variation of this species. The holotype of *E. trivandrensis* differs from other examined males of *E. appendigaster* in having the interocular space about twice (*versus* 1.5 times) the ocellar space, the hind wing with 10 (*versus* 13) hamuli, and the malar space half (*versus* slightly less than half) the length of an eye.

Evania unipunctata: The original description of this species was based upon a single female and is indistinguishable from *E. appendigaster*. The holotype of *E. unipunctata* differs from other examined females of *E. appendigaster* in having interocular space about twice (versus 1.5 times) the ocellar space, the hind wing with 12 (versus 13) hamuli, and the malar space 1/3rd (versus slightly less than half) the eye length.

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