

Tiny Indian Alysiinae (Insecta: Hymenoptera: Braconidae), collected by Ahmad Samiuddin

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Abstract

The following species of the tribe Alysiini of the subfamily Alysiinae are described as new: *Adelphenaldis cellabsentibus* sp.n., *Asobara pumilio* sp.n., *Aspilota pumiliformis* sp.n., *Dinotrema apudnaevium* sp.n., *Dinotrema rufitinctum* sp.n. They are compared with the taxonomically nearest species already known. Diverse morphological details are figured. The species-groups of the genera *Dinotrema* FOERSTER and *Aspilota* FOERSTER are summarized in keys.

Key words: Hymenoptera, Braconidae, Alysiinae, new species, India.

Zusammenfassung

Folgende Arten der Tribus Alysiini der Unterfamilie Alysiinae werden als neu beschrieben: *Adelphenaldis cellabsentibus* sp.n., *Asobara pumilio* sp.n., *Aspilota pumiliformis* sp.n., *Dinotrema apudnaevium* sp.n., *Dinotrema rufitinctum* sp.n. Sie werden mit den taxonomisch am nächsten stehenden bereits bekannten Arten verglichen. Verschiedene taxonomische Einzelheiten werden abgebildet. Die Artengruppen der Genera *Dinotrema* FOERSTER und *Aspilota* FOERSTER werden in Bestimmungsschlüsseln zusammengefasst.

Introduction

The base of the classification of the genera of the tribe Alysiini constitute the papers by FISCHER, 1971 and 1975. The so called *Aspilota*-group is a part of the Alysiini. The genera of the *Aspilota*-genus-group were summarized by VAN ACHTERBERG (1988). A synopsis of the European taxa was presented by FISCHER (1972, 1976). All other species of the Old World known to or described by FISCHER later have been incorporated in this system (which is a diagnostic one) or compared with taxa listed there. These emendations are published in several papers by FISCHER. Not included as yet are species described from several remote areas, e.g.: China by CHEN JIAHUA & WU ZHISHAN (1994); Mongolia by PAPP (1999, 2005); North Korea by PAPP (2001); Russian Far East by BELOKOBYSKIJ (2004); BELOKOBYSKIJ (2005); Russian Far East, Kazhakstan, Kamtchatka, Grusinia, Novgorod Territory, Leningrad territory by TOBIAS (2004); Russian Far East and Sotshi (Russian Black Sea Region) by TOBIAS (2004); Karelia by YAKOVLEV & TOBIAS (1992).

The species described below were collected by Ahmad Samiuddin by netting at day-time. The examples were taken in summers, with sunshine, mild to hot temperatures, and from green vegetation, with grasses and other plants.

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Abbreviations:

Antennae:	F, F1, F2, = flagellomere(s) Fm = median F Fp = penultimate flagellomere
Fore wings:	st = pterostigma r1, r2, r3 = the abscissae of the radial vein (r) cu = cubital vein cc1 = 1 st cubital cross vein nr = recurrent vein d = discoidal vein nv = nervulus np = parallel vein R = radial cell Cu2 = 2 nd cubital cell B = brachial vein
Hind wings:	M' = medial cell SM' = submedial cell r' = radial vein cu2' cubital vein beyond M'
Metasoma:	T1 = 1 st metasomal tergite

Genus *Adelphenaldis* FISCHER, 2003***Adelphenaldis cellabsentibus* sp.n. (Figs. 1 - 4)**

Material examined: India: Aligarh Uttar Pradesh, 4 ♀♀, 1 ♂, leg. Ahmad Samiuddin.

Holotype: ♀, Natural History Museum Vienna, Austria.

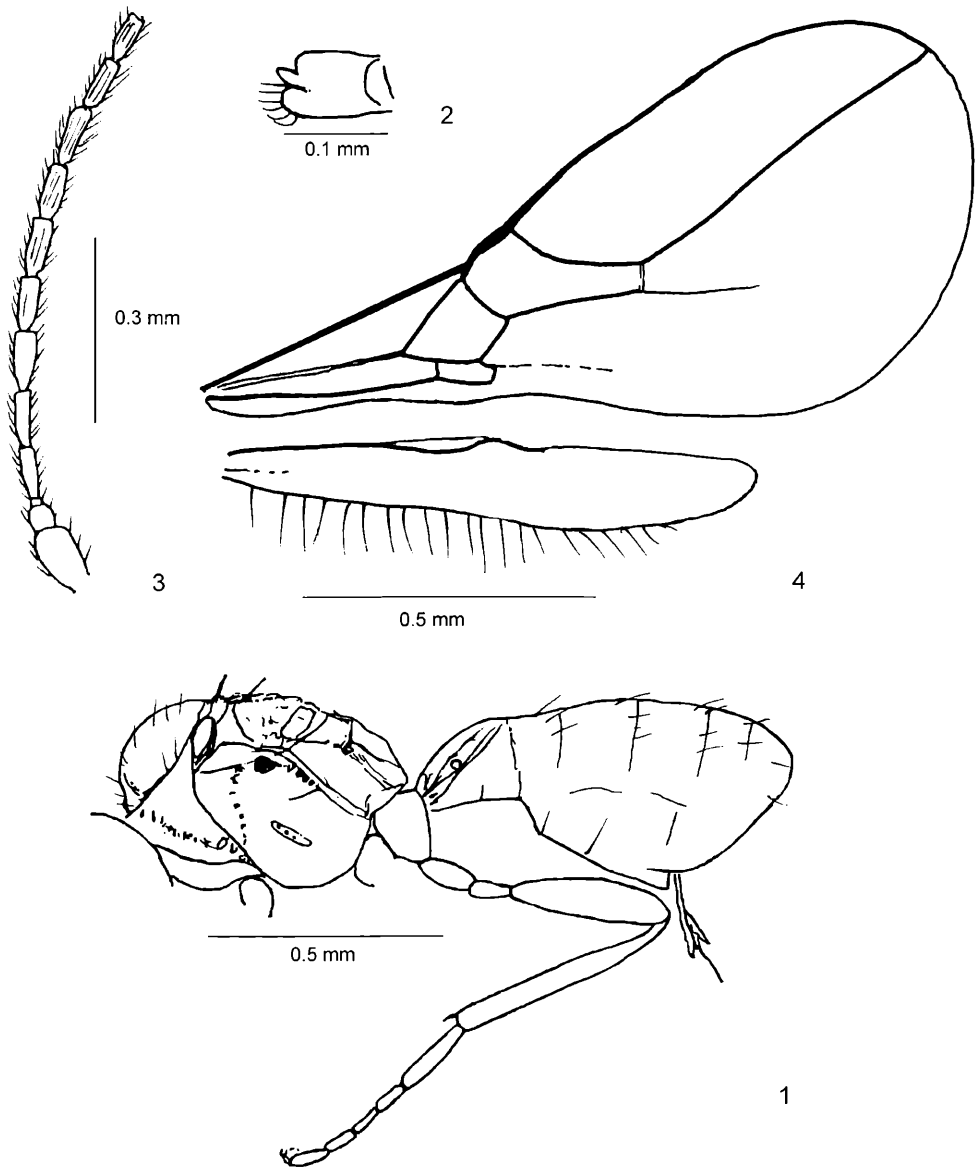
Distribution: India.

Etymology: the specific name *cellabsentibus* means an abbreviation for "cellis absentibus" (lat., ablative "with absent cells"), and refers to the absence of the cells M' and SM' of the hind wing.

Taxonomic position: The species belongs to the group A of the genus *Adelphenaldis* FISCHER, 2003, in the system presented by FISCHER (2003b). It can be inserted in the key at couplet 2, and differs from the subsequent species (*magnareata* (FISCHER), *trematosa* (FISCHER), *georgica* (FISCHER)) by the absence of the cells M' and SM'

Description: ♀. - Length of body: 1.3 mm.

Head: Twice as wide as long, 1.5 times as wide as the face, 1.4 times as wide as meso-scutum, 3.3 times as wide as T1; eyes little protuberant, eyes and temples rounded in a common curve, eyes 1.5 times as long as temples, antennal sockets little protuberant, distance between them shorter, distance from eyes greater than their diameter, occiput only slightly excavated, upper side nearly bare, epicranial suture absent; ocelli in an equilateral triangle, distance between them as long as their diameter, distance of an ocellus from an eye hardly longer than the width of the ocellar area. Face 1.33 times as wide as high, evenly convex, smooth and shining, median carina in upper half, a few outstanding



Figs. 1 - 4: *Adelphenaldis cellabsentibus* sp.n.: (1) mesosoma, metasoma, hind leg lateral; (2) mandible; (3) antenna, basal half; (4) fore and hind wing.

long hairs at the lower edges of the eyes and along the middle line; eye margins parallel. Paraclypeal areas extended as far as eyes, more than twice as wide as high, upper and lower edge parallel. Clypeus 4 times as wide as high, weakly arched, shining; lower edge evenly curved, epistomal suture smooth; labrum little protruding. Mandible about 1.8 times as long as wide, narrowed towards apex, tooth 1 vertical to the outer surface,

rounded and retracted, tooth 2 pointed, tooth 3 as long as tooth 2, but wider and rounded at its apex, a strong incision between tooth 2 and 3, a right angle between tooth 1 and 2; maxillary palpi as long as the head is high. Antennae little shorter than the body, 13-articulated; F1 2.5 times, F2 twice, F3 and the followings 1.5 times as long as wide, Fp nearly twice as long as wide; the F clearly separated from each other, 2 or 3 sensillae recognizable in lateral view, the few hairs half erect and as long as F wide.

Mesosoma: 1.4 times as long as high, upper side slightly convex, nearly plain in the middle. Mesoscutum 1.2 times as wide as long, evenly rounded in front of tegulae, only a trace of notauli on the declivity, reaching the lateral furrow, the latter with only a few cross folds in front; some inconspicuous hairs on the declivity and some longer ones on the imaginary course of the notauli on the disc. Prescutellar furrow divided, lateral areas as long as wide and smooth, rounded in front. Axillae narrow, with carinae laterally and behind. Postaxillae and lateral areas of the metascutum prevailing smooth. Propodeum with broad, pentagonal area, basal carina and costulae, the areas smooth, spiracles rather great. Anterior furrow of side of pronotum crenulated, posterior furrow hardly crenulated. Sternaulus shortened on either side, with some cross folds; prepectal furrow crenulated, anterior mesopleural furrow smooth, posterior mesopleural furrow crenulated especially above mesopleural stigma. Metapleuron with its furrows smooth. Hind femora 4 times as long as wide.

Fore wing: st linear, slightly narrowing towards tip of wing, r arising a little behind base of st, r1 not separated from r2, passing in a bow into r2, r3 nearly 3 times as long as r1+r2 and nearly straight, R reaching apex of wing, d only a little longer than nr, nv post-furcal by its own length, B closed, the indication of np arising above middle of outer side of B as if interstitial with d. - Hind wing with a vein only along proximal part of anterior edge, all other veins absent, M' and SM' therefore missing.

Metasoma: T1 3 times as long as wide, behind only a little wider than in front, smooth, basal excision longer than wide, spiracles comparatively great, situated in the middle of the sides; dorsal carinae difficult to detect, but double curved and ending before hind edge. The posterior T folded above. Ovipositor up curved, short, not reaching beyond apex of metasoma, hypopygium ending far before apex of metasoma.

Colouration: Black. Yellow: base of the antennae as far as F1, mouth parts, all legs, tegulae and wing venation. Wing membrane hyaline.

♂: Antennae 16-articulated, Fm as far as Fp twice as long as wide.

Genus *Asobara* FOERSTER, 1862

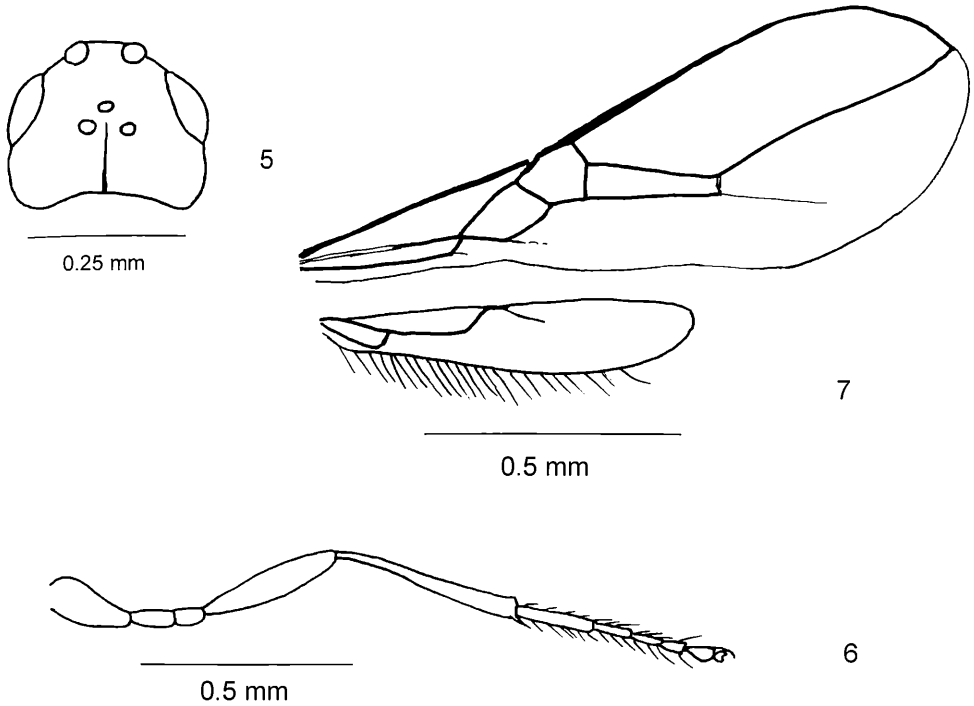
***Asobara pumilio* sp.n. (Figs. 5 - 7)**

Material examined: India, Azamgarh Uttar Pradesh, 01.04.2000, 1 ♀.

Holotype: ♀, Natural History Museum Vienna.

Distribution: India.

Etymology: pumilio (lat.) means dwarf, because it is an extremely small species.



Figs. 5 - 7: *Asobara pumilio* sp.n.: (5) head dorsal; (6) hind leg; (7) fore and hind wing.

Taxonomic position: The key by FISCHER (2003a, p. 83) for identification of some species from Asia, Oceania and Peru leads to *orientalis* VIERECK, 1913 and *pleuralis* (ASHMEAD, 1905) at couplet 6. There are some differences as follows. Redescriptions of *orientalis* and *pleuralis* see FISCHER (1988).

- 1 st extremely narrow, r arising behind base of st by the length of r1; r1 much longer than st wide. r2 at least 4 times as long as cc1. Distance of cu between nr and cc1 as long as cc1. Eyes (dorsal view) nearly as long as temples. Head between temples as wide as between eyes, eyes and temples not rounded in a common curve. 1 mm. India *pumilio* sp.n., ♀
- st less narrow, wedge shaped distally, r arising beyond middle. r1 shorter than st wide. r2 1.6 – 1.7 times as long as cc1. Distance between nr and cc1 much shorter. Eyes 4 times as long as temples, eyes and temples rounded in a common curve. 1.9 mm. Philippine Islands *pleuralis*, ♀ ♂, and 1.8 mm, India: *orientalis*, ♀ ♂

The key by FISCHER (2003a, p. 82) to European species and one from Australia leads to *apicalis* FISCHER, 2003 at couplet 4. The species can be distinguished as follows:

- 1 st nearly linear. Distance of cu between nr and cc1 as long as cc1. Head (dorsal view) about 1.6 times as wide as long, temples nearly as long as eyes, between temples as wide as between eyes, eyes and temples not rounded in a common curve. 1 mm. India *pumilio* sp.n., ♀

st narrow, but not linear. Distance of cu between nr and cc1 much shorter. Head (dorsal view) about twice as wide as long, eyes 2.5 times as long as temples, narrowed behind eyes, eyes and temples rounded in a common curve. 1.5 mm. South Africa *apicalis*, ♀ ♂

Description: ♀. - Length of body: 1 mm.

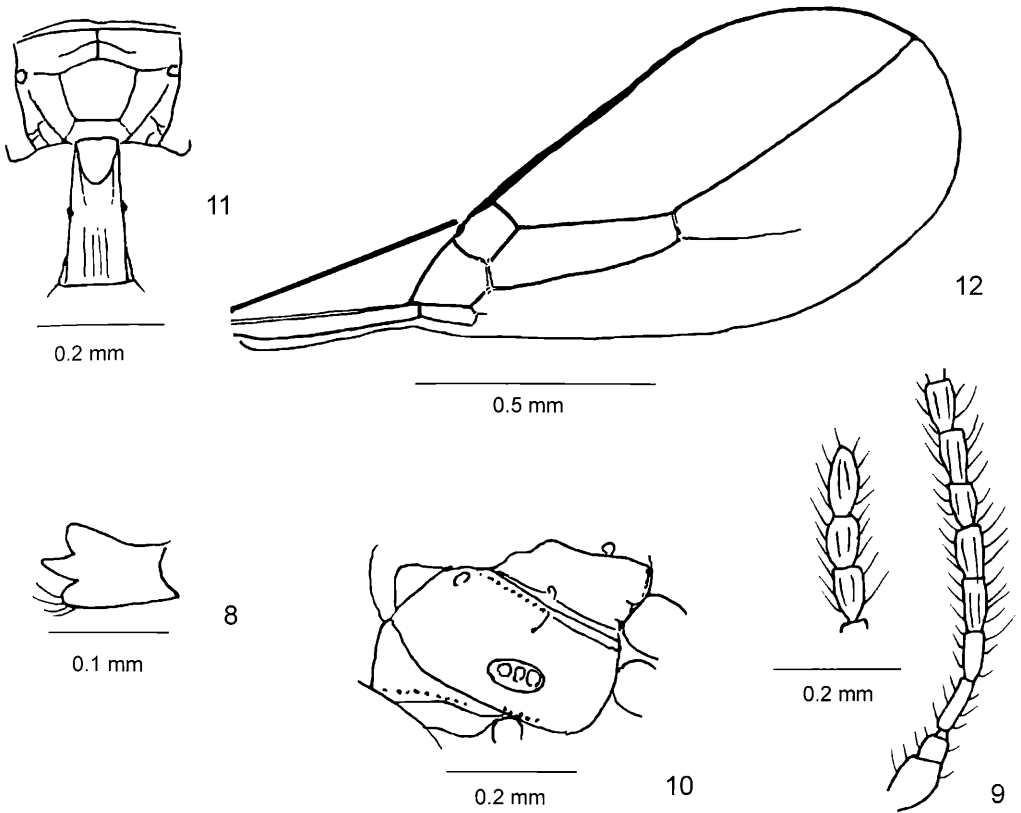
Head: 1.6 times as wide as long, 1.8 times as wide as face, 1.33 times as wide as mesoscutum, 3 times as wide as T1; temples nearly as long as eyes, between temples as wide as between eyes, eyes and temples not rounded in a common curve, distance of toruli from each other and from eyes only very little greater than their diameter, occiput strongly excavated, epicranial suture reaching between ocelli, the latter small, distance between them about as great as their diameter, distance between ocelli and eyes as well as distance of ocelli from the occiput greater than the ocellar area wide; upper side nearly bare, eyes hairy. Face as wide as high, strongly arched, middle elevation scarcely developed, with very few fine hairs, eye margins parallel. Clypeus 2.5 times as wide as high, rounded below, epistomal suture smooth, distance between tentorial pits twice as great as their distance from eyes. Mandible nearly twice as long as wide, with parallel sides in basal half, distally wider, teeth prong like, tooth 2 protruding, incisions between the teeth, from tooth 3 originating a lamella reaching near base of mandible, outer surface shining. Antennae a little shortened, 16 articles present, probably only a few articles missing, little longer than body; F2 1.33 times as long as F1, the followings as long as F2, the Fm becoming gradually shorter, F1 3 times, F2 5 times, Fm about 3.5 times, the last F 3 times as long as wide, sensillae hardly visible in lateral few, the hairs about as long as F wide.

Mesosoma: Nearly 1.5 times as long as high, upper side only slightly curved. Mesoscutum 1.4 times as wide as long, evenly curved before tegulae, notauli developed only in front, vertical on declivity, crenulations hardly recognizable, missing on disc, sides margined only near tegulae, dorsal fovea slightly elongated. Prescutellar fovea divided, lateral areas smooth, deep, little widened lateral. Scutellum as wide as long, parallel sided in front, rounded behind. Postaxillae smooth. Lateral areas of metascutum smooth. Propodeum smooth, with basal carina and narrow areola in posterior two thirds and incomplete costulae, sides margined, spiracles small, situated before middle. Furrows of side of mesosoma smooth, sternaulus weakly impressed and greatly shortened on either side. Hind femur 5 times as long as wide.

Fore wing: st extremely narrow. r1 much longer than st wide, a blunt angle between r1 and r2, r2 at least 4 times as long as cc1, r3 hardly curved, twice as long as r2, R reaching tip of wing, distance between nr and cc1 as long as cc1 or r1, Cu2 narrow, nearly parallel sided, d as long as nr, B wanting (veins around B absent). – Hind wing: r' nearly missing, cu2' absent, SM' half as long as M', hairs on lower edge as long as hind wing wide.

Metasoma: T1 1.5 times as long as apically wide, behind 1.5 times as wide as in front, sides straight and evenly converging, prevailing shiny, dorsal carinae reaching as far as hind edge. Projecting part of ovipositor as long as metasoma. Hypopygium pointed and reaching tip of metasoma.

Colours: Reddish: head, mesosoma and T1. Rest of metasoma and flagellum dark.



Figs. 8 - 12: *Aspilota pumiliformis* sp.n.: (8) mandible; (9) base and apex of antenna; (10) lower part of mesosoma lateral; (11) propodeum and T1 dorsal; (12) fore wing.

Yellow: base of antennae, mouth parts, legs, tegulae and wing venation. Wing membrane hyaline.

♂: Unknown.

Genus *Aspilota* FOERSTER, 1862

Species-groups of the genus *Aspilota* FOERSTER

- 1 Mesoscutum with dorsal fovea (sometimes very small). In the sense of FISCHER 1969 and 1976 Section B (Until now species only from Nearctic Region): *miraculosa*-group
- Mesoscutum without any trace of a dorsal fovea 2
- 2 T1 as long as apically wide or only very little longer. Dorsal carinae reaching as far as hind edge and diverging backwards (Nearctic Region): *divergens*-group
- T1 at least a third longer than apically wide. Dorsal carinae rarely diverging backwards, and then weak or disappearing in the sculpture 3

- 3 Tooth 1 of the mandible short, small, developed only as a corner, more or less forming a right angle from tooth 2, and hardly visible in optimal view on tooth 2: *fasciatae*-group
- Tooth 1 normally developed, at least little smaller than tooth 3, not forming a right angle with tooth 2, as a rule visible in optimal view on tooth 2: *lobidens*-group

***Aspilota pumiliformis* sp.n.** (Figs. 8 - 12)

Material examined: India: Aligarh, Uttar Pradesh, 20.04. 1996, leg. Ahmad Samiuddin, 1 ♀.

Holotype: ♀, Natural History Museum Vienna.

Distribution: India.

Etymology: The name refers to a dwarf-like figure.

Taxonomic position: The species belongs to the *lobidens*-group. The most similar species seems to be *Aspilota minima* THOMSON, described from Sweden. The two species can be separated from each other as follows:

- 1 Propodeum fine, closely reticulated, on either side near the anterior margin with a smooth area. Mandible nearly parallel-sided. Lateral areas of the prescutellar furrow with a small fold in the depth. Sternaulus reaching nearly as far as the anterior edge. 1.5 mm. Sweden: *minima*, ♀ ♂
- Propodeum with great, pentagonal areola, basal carina and costulae. Upper edge of the mandible a little directed upwards. Lateral areas of the prescutellar furrow nearly entirely smooth. Sternaulus clearly shortened on either side. 1.2 mm. India: *pumiliformis* sp.n., ♀

Description: ♀. - Length of body: 1.2 mm.

Head: 1.8 times as wide as long, 1.5 times as wide as the mesoscutum, 3 times as wide as T1; eyes as long as the temples, across temples wider than across eyes, antennal sockets protruding, the distance from each other as long as their diameter, the distance from the eyes a trifle greater, occiput a bit excavated; upper side only with a few hairs near occiput and eye margins; ocelli small, the distance between them as great as their diameter, the distance of an ocellus from the eye clearly greater than the ocellar area is wide; epicranial suture not discernable. Face about 1.5 as wide as high, evenly convex, shining, no median elevation, eye margins little curved. Paraclypeal areas extended as far as the eyes, little widened towards sides, upper and lower edge straight. Clypeus 3 times as wide as high, weakly arched, lower edge nearly straight, epistomal furrow evenly curved and smooth, with a few outstanding hairs. Labrum little protruding beyond clypeus; mandible 1.5 times as long as wide, tooth 2 pointed and projecting, tooth 1 and 3 rounded and of equal width, tooth 3 with some curved hairs, outer side smooth and shining; maxillary palpi as long as the head is high. Antennae as long as the body, 13-segmented; F1 3 times as long as wide, narrower than the followings, F2 2.6 times, F4 twice, the followings 1.5 times as long as wide; the F clearly separated from each other, the hairs half erect and as long as the width of the F, 2 sensillae visible in lateral view.

Mesosoma: 1.25 times as long as high, upper side evenly convex. Mesoscutum 1.33 times as wide as long, evenly rounded in front of the tegulae, notauli developed only on

declivity and passing into the lateral furrow, the latter and the notauli by way of suggestion crenulated, dorsal fovea absent, a few inconspicuous hairs only on declivity, at sides and along the imaginary course of the notauli. Prescutellar furrow divided, lateral areas smooth, as long as wide and rounded behind. Axillae narrow. Scutellum triangular, as wide as long. Postaxillae prevailing smooth. Lateral areas of metascutum prevailing smooth. Propodeum with a broad pentagonal areola, basal carina and costulae, the areas smooth and only with some indications of faint folds, spiracles moderately large. Anterior furrow of side of pronotum crenulated, posterior furrow simple. Sternaulus crenulated, but greatly shortened on either side, prepectal furrow crenulated, anterior mesopleural furrow smooth, posterior mesopleural furrow crenulated in upper half. Metapleuron completely smooth, the furrows simple. Hind femora 4 times as long as wide.

Fore wing: st linear, slightly narrowing towards apex of wing, r1 much longer than st wide, forming an angle with r2, r2 3 times as long as cc1, r3 straight, 2.5 times as long as r2, R reaching apex of wing, nr postfurcal by its own length, d twice as long as nr, nv postfurcal, B closed, an indication of np originates above middle of outer side of B. – Hind wing: r' and cu2' absent, SM' half as long as M', fimbria on hind edge as long as the wing is wide.

Metasoma: T1 twice as long as wide, straight lined narrowing towards base, basal incision longer than wide, spiracles on very small tubercles, dorsal carinae only indicated, dorsal surface prevailing smooth, only with a faint indication of a longitudinal striation behind. The last T folded above. Ovipositor not longer than the T1 is long.

Colouration: Black. Yellow: scape, pedicel, anellus, mouth parts, legs, tegulae and the wing venation. T1 to T3 brownish. Wing membrane hyaline.

♂: Unknown.

Genus *Dinotrema* FOERSTER, 1862

- 1 Mandible parallel-sided, with a cross bulge between upper and lower edge:
 *orthostigmoides*-group
- Mandible without such a cross bulge 2
- 2 Mesoscutum without dorsal fovea: *fulvicornis*-group
- Mesoscutum with dorsal fovea, which is sometimes very small 3
- 3 Head nearly or entirely as wide as long, respectively between temples and antennal sockets fully as long as wide, temples fully 1.5 times as long as eyes (North America):
 *cubiceps*-group
- Head wider than long, temples at most a little longer than the eyes 4
- 4 Propodeum entirely smooth and shining, without a trace of a carina
 *columbianum*-group
- Propodeum at least with median carina or median longitudinal rugose stripe, or with areola or other extended sculpture 5
- 5 All femora with a longitudinal furrow on the lower side; lateral from this furrow

	near apex with 3 or 2 (fore femur) spines (India)	<i>bovefemora</i> -group	
	Femora without such characters		6
6	Propodeum with median longitudinal carina, or a rugose longitudinal stripe, smooth for the rest. Costulae at most in the center more or less clearly developed, laterally shortened		7
	Propodeum with extended sculpture, or carinae otherwise arranged, at least with complete costulae. If costulae absent, then at least propodeum prevailing roughly sculptured, smooth areas surrounded by rugosity		9
7	Spiracles of the propodeum great and protruding, their diameter, if at all, only a little smaller than their distance from the anterior edge	<i>erythrope</i> -group	
	Spiracles of the propodeum small to inconspicuous		8
8	Occiput with a blunt tubercle on each side (dorsal view)	<i>occipitale</i> -group	
	Occiput without such tubercles	<i>nigricorne</i> -group	
9	wings strongly reduced	cf. genus <i>Panerema</i> FOERSTER	
	wings normally developed	<i>cratocera</i> -group	

Dinotrema apudnaevium sp.n. (Figs. 13 - 16)

Material examined: India: Aligarh, Uttar Pradesh, 20.04.1996, leg. Ahmad Samiuddin, 1 ♂. - Azamgarh, Uttar Pradesh 13.3.2001, leg Ahmad Samiuddin, 1 ♂.

Holotype: ♂, from Aligarh, Natural History Museum Vienna.

Distribution: India.

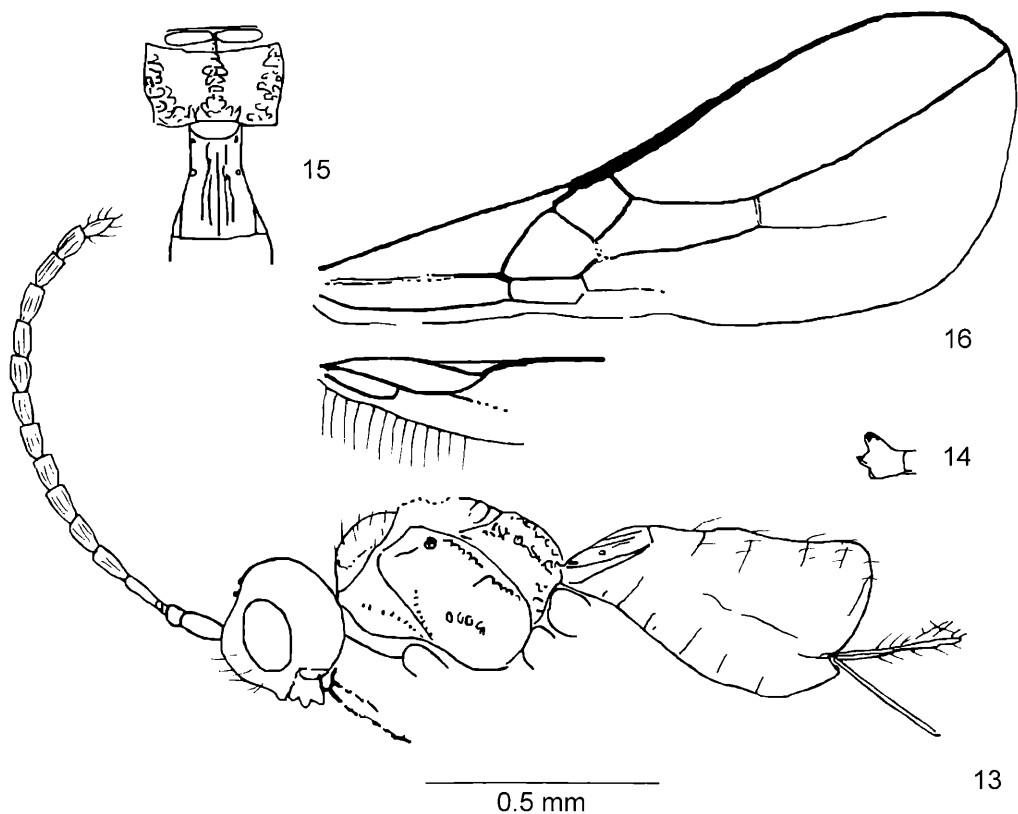
Etymology: The name *apudnaevium* consist of *apud* (lat., preposition with accusative), and *naevius*, -a, -um (lat., adj.), with birthmark or mole, the name of the comparative species. (It is unknown to us, why the latter was named this way.)

Taxonomic position: The species runs in the *cratocera*-group to *Dinotrema naevium* (TOBIAS). It can be distinguished as follows:

- | | | |
|---|---|-----------------------------|
| 1 | Tentorial pits small, round, the distance from the eyes twice as great as their diameter. Propodeum laterally shining as far as lateral margins. Sternaulus reaching anterior edge, but not as far as middle coxa. T1 twice as long as apically wide. 2.5 mm. Russia (near St. Petersburg) | <i>naevium</i> , ♀ |
| | Tentorial pits greater, oval (above and below nearly straight and parallel), their distance from the eyes smaller than their greater diameter. Propodeum prevailing with rough sculpture, also near lateral margins, between the lateral and the median sculpture shining areas. Sternaulus reaching neither front margin nor middle coxa. T1 1.5 times as long as apically wide. 1.5 mm. India | <i>apudnaevium</i> sp.n., ♀ |

Description: ♀. - Length of body: 1.5 mm.

Head: Twice as long as wide, 1.5 times as wide as the face, 1.5 times as wide as meso-scutum, 4 times as wide as the T1; eyes 1.1 times as long as the temples, across eyes as wide as across the temples, antennal sockets protruding, the distance between them as long as their diameter, the distance from the eyes also as long as their diameter, occiput



Figs. 13 - 16: *Dinotrema apudnaevium* sp.n.: (13) head with antenna, mesosoma and metasoma lateral; (14) mandible; (15) propodeum and T1 dorsal; (16) fore wing and part of hind wing.

nearly straight; distance of the ocelli from each other as great as their diameter, the distance of the ocelli from the eyes about as great as the width of the ocellar area; epicranial suture visible between the ocelli. Face 1.8 times as wide as high, evenly convex, smooth, with very fine hairs in the central part, some erect hairs near the lower edge of the eyes, hair points hardly recognizable, median elevation nearly absent, eye margins parallel. Clypeus arched, 3 times as wide as high, upper and lower edge nearly parallel, with a few outstanding hairs. Tentorial pits oval, as wide as the distance from the eyes. Mandible as long as wide, lower edge straight, upper edge bent upwards, tooth 2 pointed and protruding, tooth 1 blunt, tooth 3 broad and rounded, some bent hairs on its distal edge, incisions between the teeth, outer surface smooth. Maxillary palpi shorter than the height of the head. Antennae 15-articulated, little shorter than the body; F1 3 times as long as wide and narrower than the others, F2 twice, Fm and Fp 1.5 times as long as wide; the F clearly separated from each other, most hairs as long as the width of the F, 2 or 3 sensillae visible in lateral view.

Mesosoma: 1.33 times as long as high, upper side convex. Mesoscutum clearly wider

than long, evenly rounded in front of the tegulae, lateral margins finely crenulated in anterior half and curved a little upwards in front, notauli absent for the rest, dorsal fovea little elongate; with long, scattered hairs on the declivity and along the imaginary course of the notauli. Prescutellar furrow divided, lateral areas as long as wide and with a longitudinal fold, little rounded in front. Axillae narrow. Tegulae as long as wide. Postaxillae faintly crenulated behind. Lateral areas of metascutum prevailing smooth. Propodeum with median longitudinal rugose stripe, the same along longitudinal margins, smooth and shining for the rest, spiracles of moderate size. Side of pronotum with crenulated anterior and posterior furrow. Sternaulus crenulated, shortened on either side. Prepectal furrow, anterior and posterior mesopleural furrow crenulated. Metapleuron smooth, without crenulated furrow. Hind femora 5 times as long as wide.

Fore wing: st linear, slightly narrowing towards apex, r1 longer than the width of st, forming an obtuse angle with r2, r2 twice as long as cc1, r3 2.3 times as long as r2, very weakly bent forwards (nearly straight), R reaching apex of wing, nr postfurcal, Cu2 distad a little narrowed, d twice as long as nr, nv postfurcal by its own length, B closed, np indicated as a fold and arising from the middle of the outer side of B. – Hind wing: r' absent, cu2' indicated as a fold, SM' half as long as M', the fimbria on the basal half of the hind edge as long as the width of the hind wing.

Metasoma: T1 1.5 times as long as wide, straight lined narrowing towards base, basal excision as long as wide, weakly longitudinally striated, dorsal carinae merging into the striation, spiracles inconspicuous. Only the apex little compress. Ovipositor sheaths as long as T1, little up curved.

Colouration: Black. Yellow: scape, pedicel, anellus, mouth parts, legs, tegulae, wing venation, and the T1. Wing membrane hyaline.

♂: Unknown.

Dinotrema rufitinctum sp.n. (Fig. 17)

Material examined: India: Aligarh, Uttar Pradesh, leg. Ahmad Samiuddin, 1 ♀.

Holotype: ♀, Natural History Museum, Vienna.

Distribution: India.

Etymology: The specific name refers to the reddish colouration of the body.

Taxonomic position: The key by FISCHER to the species of *Dinotrema* FOERSTER keys out at couplet 19 in the *cratocera*-group with *affinis* (FISCHER). The species can be separated as follows. (The *Dinotrema* key comprises mostly palearctic species among some from the rest of the Old World. The species recently described from the Russian Far East are not included.)

- 1 Body black. Propodeum with median keel, weakly pointed near the base, near edges and a small area in the middle rugose, the rest smooth. Both furrows of the sides of pronotum narrowly crenulated. Hind mesopleural furrow entirely crenulated. 2.9 mm. Austria *affine*, ♀ ♂
- Body entirely light red. Propodeum with reticulated sculpture all over. Only the anterior furrow of the side of pronotum crenulated; only upper half of the posterior mesopleural furrow crenulated. 1.8 mm. India *rufitinctum* sp.n., ♀

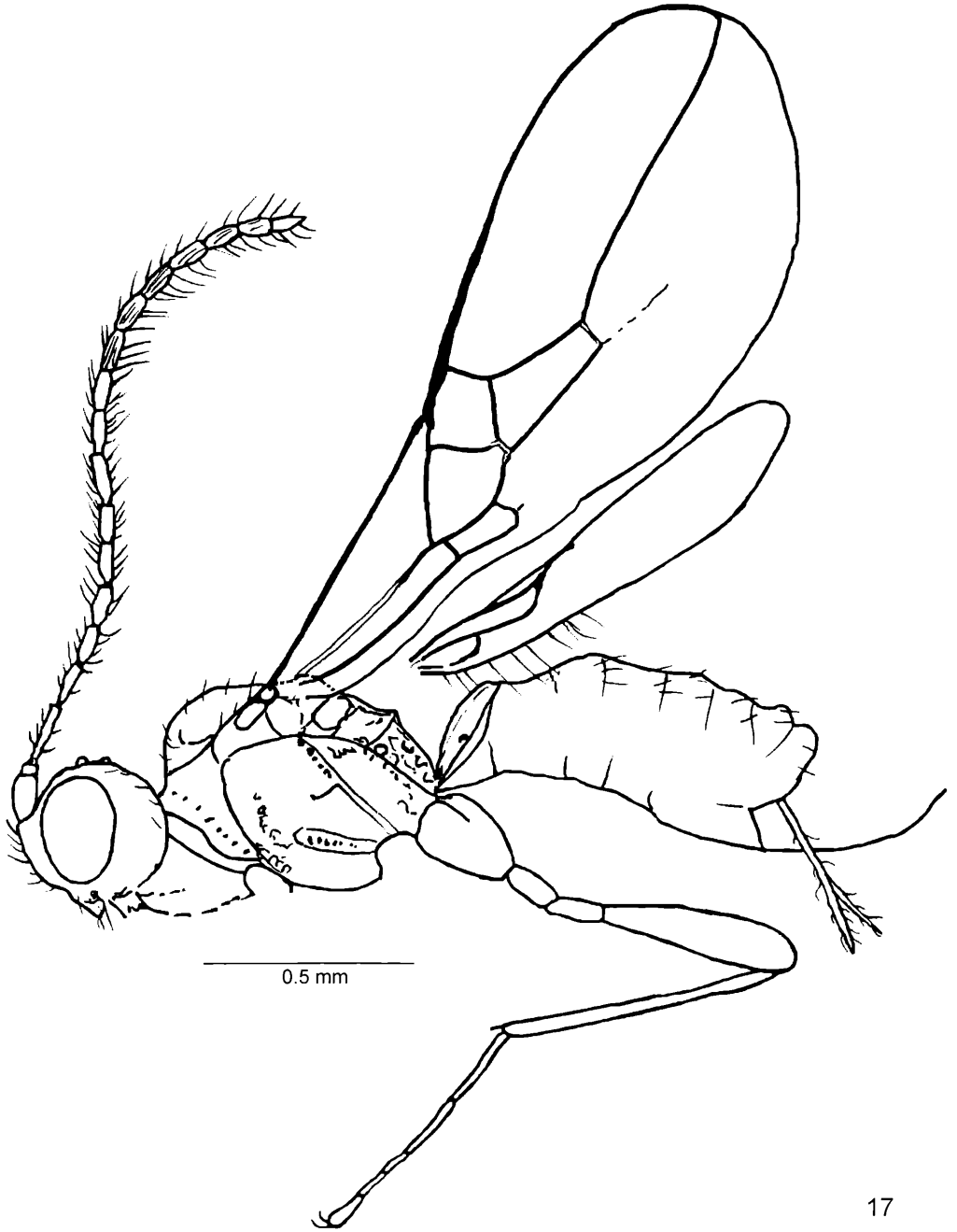


Fig. 17: *Dinotrema rufitinctum* sp.n., body lateral.

Description: ♀. - Length of body: 1.8 mm.

Head: Twice as wide as long, 1.5 times as wide as the face, 1.25 times as wide as mesoscutum, 3 times as wide as T1; eyes 1.25 times as long as temples, across temples as wide as across eyes, antennal sockets a bit protuberant, the distance between them and the distance from the eyes as great as their diameter, occiput little excavated; upper side nearly bare, distance between ocelli as great as the diameter of an ocellus, distance between an ocellus and an eye as great as the width of the ocellar area, epicranial suture very faint. Face evenly convex, middle elevation indicated only above, with very fine upwards bent hairs, hair points hardly recognizable, some long erect setae near eye margins on either side. Clypeus trapezoidal, evenly convex, standing off a little from the face, upper and lower edge parallel, with long, erect hairs. Tentorial pits great, their diameter greater than the distance from the eyes. Mandible 1.5 times as long as wide, lower edge straight, upper edge bent upwards, tooth 1 and tooth 3 about of equal width and rounded apically, tooth 2 narrower, pointed, hardly protruding, outer surface smooth, some long, curved hairs on tooth 3, incisions between the teeth; maxillary palpi as long as the head is high. Antenna about as long as the body, 18-segmented; F1 3 times, F2 2.5 times as long as wide, the followings becoming slightly shorter, Fm twice, Fp 1.5 times as long as wide; the F clearly separated from each other (e.g. slightly narrowed at base), especially the apical hairs outstanding and at least as long as the F wide, in lateral view 2 or 3 sensillae recognizable.

Mesosoma: 1.3 times as long as high, upper side slightly convex. Mesoscutum a little wider than long, rounded in front of the tegulae, middle lobe rather straight, notauli developed on the declivity, weakly crenulated, passing into the lateral furrows, which are weakly crenulated in front, absent on disc, dorsal pit small, nearly bare with only very inconspicuous hairs on sides and along the imaginary course of the notauli. Prescutellar furrow smooth, divided, lateral areas as long as wide, with a very faint fold each. Axillae on sides and behind with a sharp lamellae, which end at the lateral areas of the prescutellar furrow with a small spine. Scutellum as long as wide. Postaxillae sculptured in the interior corner. Lateral areas of the metascutum inconspicuously crenulated. Propodeum with basal keel and costulae, with many cells behind the cross carina and laterally. Anterior furrow of a side of the pronotum crenulated, posterior furrow smooth. Sternaulus crenulated, reaching as well as nearly anterior margin, and middle coxa. Prepectal furrow with some small grooves. Posterior mesopleural furrow crenulated above mesopleural stigma. Hind femora 4 times as long as wide.

Fore wing: st nearly linear, r arising from the base of st by the distance of the length of r1, r1 much longer than width of st, forming an obtuse angle with r2, r2 1.3 times as long as cc1, r3 weakly bent outwards, 2.5 times as long as r2, R reaching tip of wing, nr postfurcal, Cu2 delimited by straight abscissas of the relevant veins, nv postfurcal by its own length, B closed, its outer side broken in the middle, np nearly absent. – Hind wing: r' and cu2' of hind wing absent, SM' half as long as M', fimbria on the hind edge of hind wing as long as the latter is wide.

Metasoma: T1 circa 1.8 times as long as apically wide, straight lined narrowed towards base, more or less smooth, dorsal carinae reaching as far as hind edge. The T of the posterior half folded above. Ovipositor sheaths little longer than T1, up curved.

Colouration: Yellowish red. Yellow: scape, pedicel, tegulae, wing venation, all legs. Wing membrane hyaline.

♂: Unknown.

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