

FOUR NEW SPECIES OF THE GENUS *ATHLOPHORUS*
BURMEISTER, 1847 FROM THE INDIAN HIMALAYAS
(HYMENOPTERA: SYMPHYTA: TENTHREDINIDAE:
ALLANTINAE) WITH A KEY TO INDIAN SPECIES

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Four new species of the genus *Athlophorus* BURMEISTER, 1847 are described and illustrated from the Indian Himalayas. This includes *Athlophorus smithi* sp. n. from Rongli (Sikkim), *A. taegeri* sp. n. from Cheerpapunji (Meghalaya), *A. weii* sp. n. from Phodong (Sikkim), and *A. toongensis* sp. n. from Toong (Sikkim). *Athlophorus cephalomaculus* SAINI et VASU is synonymised with *Athlophorus perplexus* (KONOW). With the addition of these four new records, the genus *Athlophorus* is now represented by 20 species from India. Apart from illustrating the genitalia and some other morphological attributes, these new species are distinguished from allied congeners. A key to the known Indian species is provided.

Key words: Hymenoptera, Symphyta, Tenthredinidae, Allantinae, *Athlophorus*, BURMEISTER, India

INTRODUCTION

Athlophorus was erected by BURMEISTER (1847) based on a single species, *A. klugii* BURMEISTER, described from Java. It is a good genus, based on quite stable characters. Morphological affinities, such as the basalis joining subcosta removed from the origin of cubitus, anellan cell in hind wings petiolate, mandible strongly bent, clypeus with anterior margin deeply incised, and hind wings without closed middle cells place it close to *Hemathlophorus* MALAISE (1945). From the latter it can be easily distinguished by the following combination of characters: abdomen distinctly constricted near base (not constricted in *Hemathlophorus*), the second of the present cubital cells measuring at least 2/3 of the length of first one (the second cubital cell not longer than half of the first one in *Hemathlophorus*) and mesopleura always coarsely punctured to reticulate above (impunctate in *Hemathlophorus*). In distribution, ecological adaptations, flight behaviour, body form and colour mimicry, this genus superficially resembles aculeates, rather than sawflies. From their day long activities, predilection for low altitude, xeric and hot habitats, these sawflies can easily be mistaken for ichneumonids (Apocrita).

The genus *Athlophorus* is restricted to SE Asia where 51 species are known (TAEGER *et al.* 2010). The species recorded from SE Asia are contributed by MALAISE 1947 (11 species); KONOW 1898, 1900, 1906 (7); SAINI and VASU 1996, 1997 (6); FORSIUS 1929, 1931, 1935 (4); WEI and NIE 2004 (3); HARIS 2002, 2007 (3); ENSLIN 1911, 1912 (3); WEI 2002, 2004 (2); BURMEISTER 1847 (2); TOGASHI 1979, 1988 (2); CAMERON 1899 (2); ROHWER 1911, 1916 (2); BENSON 1935 (1); HARIS and ROLLER 2007 (1); SAINI *et al.* 1986 (1) and SAINI and SINGH 1987 (1). MALAISE (1947) gave a key to 24 species and his treatment is the most complete for the genus to date (SAINI (2006) gave a key only to the Indian species).

In India, only 16 species of *Athlophorus* are known. Of these, five species are contributed by SAINI and VASU 1996, 1997; three species by KONOW 1898; two species each by FORSIUS (1931, 1936), CAMERON (1899) and MALAISE (1947); and a species each by SAINI *et al.* (1986) and SAINI and SINGH (1987). With the addition of these four new records, the genus *Athlophorus* is now represented by 20 species from India. *Athlophorus cephalomaculus* SAINI *et al.* is here synonymised with *A. perplexus* (KONOW). With this synonymy, the number of valid species from SE Asia is 50.

MATERIALS AND METHODS

Material for the present study was collected during different field trips to the high altitude regions of the north-eastern states of India. All the collections were made by hand nets. For this region, the most appropriate collection time is May, i.e., pre-monsoon time.

The morphological terminology proposed by SNODGRASS (1935), ROSS (1937, 1945), MALAISE (1945), SMITH (1969, 1970, 1972) and MATSUDA (1957, 1965, 1970) has generally been employed to describe various species. Relative lengths used in species discrimination are the actual ratio proportions, and the various measurements are made with a slide micrometer and oculometer. Illustrations were made under a stereoscopic microscope fitted with an ocular grid. Body length is from the anterior tip of head to the abdominal apex (excluding antenna, mouth parts, female and male genitalia). Specimen images were taken by using a digital camera (Canon EOS 5D MARK II). The type specimens are deposited in the museum of the Department of Zoology and Environmental Sciences, Punjabi University Patiala, India.

Abbreviations used in text are: EL = eye length, IATS = inner apical tibial spur, IDMO = interocular distance at level of median ocellus, LID = lower inter-ocular distance, MB = metabasitarsus, OATS = outer apical tibial spur, OCL = ocello – occipital line, OOL = oculo ocellar line, POL = postocellar line.

Athlophorus BURMEISTER, 1847

Athlophorus BURMEISTER, 1847: 1–9; MALAISE, 1947: 5–6; ABE and SMITH, 1991: 11. 103; SAINI and SINGH, 1987: 27–29; SAINI and VASU 1997: 153–178.

Emphytoides KONOW, 1898: 275 (KONOW 1905).

Type species: *Athlophorus klugii* BURMEISTER 1847 (by monotypy).

KEY TO INDIAN SPECIES OF *ATHLOPHORUS*

- | | | |
|---|--|--|
| 1 | Forewing with a strongly infuscated spot covering most of radial cells. | 2 |
| – | Forewing hyaline without infuscated spot. | <i>A. caprae</i> FORSIUS, 1936 |
| 2 | At least one radial cell or a part may be hyaline. | 3 |
| – | Both radial cells entirely infuscated. | 8 |
| 3 | Second radial cell entirely hyaline. | 4 |
| – | Only apical half of 2nd radial cell hyaline. | 5 |
| 4 | Four apical metatarsal joints whitish. (Postocellar area convex with a faint indication of longitudinal carina; mesoscutellum pyramidally elevated in middle). | <i>A. alfkeni</i> FORSIUS, 1931 |
| – | All metatarsal joints piceous (First radial cell infuscated; depressed frontal area and mesoscutellum elevated into a thorn-like tip). | <i>A. bandatus</i> SAINI, SINGH et SINGH, 1986 |
| 5 | First radial cell entirely infuscated. | 6 |
| – | Only basal half of 1st radial cell infuscated. | <i>A. scutospinosus</i> SAINI et VASU, 1996 |
| 6 | Mesoscutellum subconvex. | 7 |
| – | Mesoscutellum strongly elevated into a thorn-like tip. | <i>A. spinicus</i> SAINI et VASU, 1997 |
| 7 | Labrum white; mesepisternum polished with minute, irregular, isolated, shallow but conspicuous punctures. | <i>A. placidus</i> (KONOW, 1898) |
| – | Labrum black; mesepisternum rugose with large, deep pit-like confluent punctures. | <i>A. scutocarinatus</i> SAINI et VASU, 1997 |
| 8 | Antenna entirely black. | <i>A. gracilis</i> (KONOW, 1898) |
| – | Antenna not entirely black. | 9 |
| 9 | Mesonotal middle lobe entirely black. | 12 |

- Mesonotal middle lobe not entirely black. 10
- 10 Mesonotal middle lobe entirely fuscoferruginous. 11
- Lateral margins of mesonotal middle lobe fuscoferruginous. 14
- 11 Postocellar area with a median longitudinal furrow at least in its anterior half; malar space $\frac{1}{2}$ the diameter of median ocellus; clypeus subrectangularly to roundly incised up to $\frac{1}{3}$ of its medial length; mesoscutellum with a median longitudinal carina at least in its posterior half. **A. smithi** sp. n.
- Postocellar area with a median longitudinal carina at least in its anterior half; malar space equal to diameter of median ocellus; clypeus circularly incised up to $\frac{1}{4}$ of its median length; mesoscutellum without any carina. **A. taegeri** sp. n.
- 12 Yellowish spot behind temple present; basal $\frac{1}{3}$ of metatibia yellowish white. *A. pilifrons* (CAMERON, 1899)
- Yellowish spot behind temple absent; metatibia entirely fuscous. 13
- 13 Tegula and posterodorsal margin of pronotum whitish; postocellar furrow shallow; mesoscutellum ecarinate. *A. meghalayaensis* SAINI et SINGH, 1987
- Tegula and posterodorsal margin of pronotum black; postocellar furrow sunken; mesoscutellum carinate posteriorly. *A. maculiventris* (CAMERON, 1899)
- 14 First cubital cell strongly infuscated; postocellar area with or without carina 18
- First cubital cell at least partly hyaline; postocellar area with a median longitudinal carina at least in its anterior half. 15
- 15 Posterior border of tergite 4 whitish yellow; malar space longer than the radius of median ocellus. 16
- Posterior border of tergite 4 fuscous; malar space not longer than radius of median ocellus. *A. fuscopodus* SAINI et VASU, 1997
- 16 Black spot on temple present; lateral margins of propodeum black; metafemur fuscous to ferruginous; mesoscutellum entirely fuscoferruginous. 17
- Black spot on temple absent; lateral margins of propodeum with 2 parallel stripes; metafemur testaceous; mesoscutellum with yellowish spots. *A. assamensis* MALAISE, 1947

- 17 Mesoscutellum obtusely, convexly raised and ecarinate; appendage without carina. *A. perplexus* (KONOW)
- Mesoscutellum subconvex and faintly carinate; appendage with carina. *A. subconvexus* SAINI et VASU, 1996
- 18 Postocellar area with a distinct carina; mesoscutellum either obtusely roundly raised or elevated in to a distinct tip. 19
- Postocellar area without carina; mesoscutellum almost flat with slight bulge at its posterior slope. *A. mimicarius* MALAISE, 1947
- 19 Clypeus roundly incised up to 1/3 of its medial length with roundly pointed lateral teeth; mesoscutellum elevated in to a distinct tip and with a distinct median longitudinal carina. **A. toongensis** sp. n.
- Clypeus rectangularly incised up to 1/2 of its medial length with triangular lateral teeth; mesoscutellum obtusely roundly raised with a distinct median longitudinal carina at least in its posterior half. **A. weii** sp. n.

DESCRIPTIONS

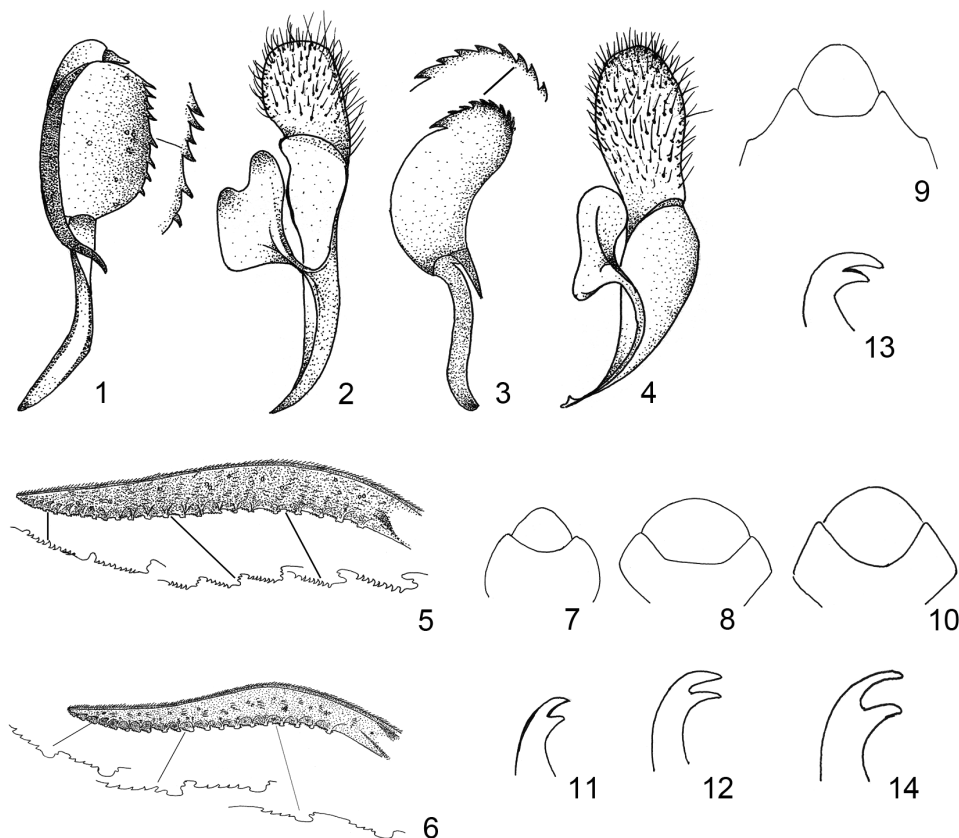
***Athlophorus taegeri* sp. n.**

(Figs 1–2, 7, 11, 16)

Male. Colour – Head fuscoferruginous, black are: dorsal side of scape, tip of antennal segment 5, segments 6–9 entirely; tip and base of mandible; clypeus except its lateral margins; supraclypeal area except a medial spot in between the antennal basis; broad frontal spot laterally not touching the eye margins and leaving the supraantennal tubercles and frontal ridges except a spot in their middle; a spot on the posterior side of lower 1/2 of hind orbit. Yellowish white are: ventral side of scape; labrum; lateral margins of clypeus; a spot in the middle of supraclypeal area; middle of mandible; spot on supra-antennal tubercle; broad lower 1/2 of inner orbit; a spot on the anterior side of the lower 1/2 of hind orbit. Thorax fuscoferruginous, yellowish white are: narrow anterodorsal, lateral and extreme posterodorsal margins of pronotum; extreme posterodorsal margin of mesepimeron. Black are: an irregular medial spot on pronotum; seams of mesonotal middle lobe; a broad lateral spot on mesonotal lateral lobe joined medially in front of mesoscutellum; appendage; spot before propodeum; mesepisternum except narrow strip along its posterior margins; mesepimeron except its posterior border; metapleuron; mesosternum and metasternum. Abdomen fuscous, black are: propodeum except extreme narrow posteromedial margins; narrow anterior margin of tergite 2; tergite 3 entirely; anterior 1/2 of tergite 4; anterior 3/4 of tergites 5–6; lateral small spot on tergite 9. Reddish yellow are: posteromedial spot on propodeum; tergite 2 except its anterior margins, 4–9 except their blackish parts; deflexed posterolateral margins of tergites 2, 3 and 4; sternites 1–3 entirely. Legs fuscous, yellowish white are: lateral sides of all coxae; inner sides of all trochanters and adjoining parts of all femora more or less. Fuscoferruginous are: ventral sides of all femora; pro-, meso-, and metatibia; all tarsal

joints more or less. Wings hyaline except an infuscated spot below stigma covering radial cells and most part of 1st and 2nd cubital cells; costa and stigma fuscoferruginous; rest of venation piceous.

Structure – Length 7 mm. Antenna slightly incrassated in middle, $1.8\times$ head width; scape twice as long as its apical width, pedicel as long as its apical width, segment 3 longer than 4 as 4:3; clypeus (Fig. 7) circularly incised up to $\frac{1}{4}$ of its medial length with triangular lateral teeth; labrum broader than long as 2:1, with roundly pointed anterior margin; malar space equal to diameter of median ocellus; LID:IDMO:EL = 5:6:5; frontal area at the level of eyes; supra-antennal tubercles and frontal ridges insignificant; median fovea almost wanting; Postocellar furrow deep, inter- and circumocellar furrows deep and distinct; lateral furrows distinct, excurved and reaching up to the hypothetical hind margin of head; postocellar area as long as broad, with distinct medial longitudinal carina in its anterior $\frac{1}{4}$; head slightly converging behind eyes; OOL:POL:OCL = 2.2:1.5:2.0; mesoscutellum roundly raised, appendage ecarinate; tarsal claw (Fig. 11) with subapical tooth shorter than apical one; metabasitarsus shorter than the following joints combined; IATS:MB:OATS = 2.0:5.5:1.5.



Figs 1–14. *Athlophorus* spp. *A. taegeri* sp. n.: 1 = penis valve, 2 = gonoforceps, 7 = clypeus, 11 = tarsal claw. *A. weii* sp. n.: 3 = penis valve, 4 = gonoforceps, 8 = clypeus, 12 = tarsal claw. *A. smithi* sp. n.: 5 = lancet, 9 = clypeus, 13 = tarsal claw. *A. toongensis* sp. n.: 6 = lancet, 10 = clypeus, 14 = tarsal claw

Male genitalia: Penis valve (Fig. 1); gonoforceps (Fig. 2).

Sculpture and pubescence – Head rugose, punctures more distinct on and around frontal area; hind orbital area with small, irregular and confluent punctures, surface sub shining; mesonotum with deep, dense and distinct punctures surface sub shining; mesoscutellum with large, dense but shallow punctures, surface dull; appendage with moderate, distinct punctures with interspaces between them, surface sub shining; mesepisternum rugose with large, dense, pit-like confluent punctures; mesosternum with dense, minute, shallow punctures, surface shining with general oily lustre; propodeum with dense, minute confluent punctures, rest of abdomen densely micropunctated, surface dull. Body covered with a mixed golden and brownish pubescence, except for blackish parts where it appears to be silvery.

Female – Unknown.

Material examined – Holotype: male, India: Meghalaya, Cheerapunji, 1450 m, 30.iv.1994, collected by M. S. SAINI.

Distribution – India (Meghalaya).

Diagnosis – This species runs close to *A. assamensis* MALAISE but can be distinguished from the latter by the mesonotal middle lobe fuscoferruginous except blackish seams (blackish except lateral margins in *A. assamensis*); mesoscutellum with large, dense but shallow punctures, appendage with moderate, distinct punctures with interspaces between them, surface sub shining (mesoscutellum with deep scattered punctures, appendage impunctate and polished in *A. assamensis*); tarsal claw without basal lobe (with a small basal lobe in *A. assamensis*); propodeum blackish except extreme narrow posteromedial margins (with 2 parallel stripes on lateral margins in *A. assamensis*); mesoscutellum entirely fuscoferruginous (mesoscutellum with yellowish spots in *A. assamensis*).

Etymology – This species is named after Dr. A. TAEGER, SDEI, Müncheberg, Germany, who played a key role in developing the Electronic Catalogue of World Symphyta.

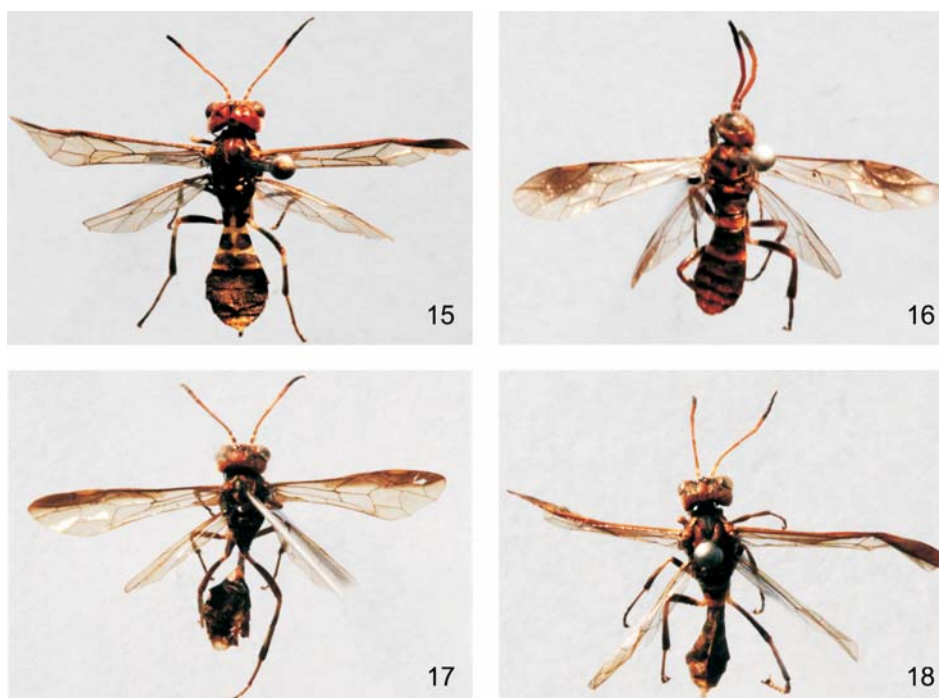
***Athlophorus weii* sp. n.**

(Figs 3–4, 8, 12, 17)

Male. Colour – Head fuscoferruginous, black are : dorsal sides of scape and pedicel, apical ¼ and entire ventral side of antennal segment 5, segments 6–9 entirely; extreme tip and base of mandible; anterior ½ and extreme base of clypeus; supraclypeal area continuous with the frontal spot that covers anterior half of median fovea laterally not touching eye margin and posterolaterally joining a prominent temple spot; post-, inter-, and circumocellar furrows; a spot on lower 1/3 of posterior ½ of hind orbit. Yellowish white are: ventral sides of scape and pedicel; medial spot on mandible; labrum; middle of clypeus; broad lower ½ of inner orbit. Thorax fuscoferruginous, yellowish white are: extremely narrow anterodorsal, anterolateral and posterodorsal margins of pronotum; extreme posterodorsal margins of mesepimeron. Black are : pronotum except extreme margins; mesonotal middle lobe except lateral margins; an oval lateral spot on mesonotal lateral lobes continuous with

each other in front of mesoscutellum; appendage; a spot before propodeum; mesepisternum; mesosternum; mesepimeron except its posterior border; metapleuron and metasternum. Abdomen fuscous, black are: propodeum; anterior 2/3 of tergite 2, posterior 2/3 of tergites 3 and 4, tergites 5–8 entirely and lateral sides of tergite 9. Yellowish white are: tergites 2, 3, 4 and 9 except their blackish parts. Legs fuscous, yellowish white are: lateral stripe on meso- and metacoxae; anterior aspects of protibia. Fuscoferruginous are: pro-, meso- and metalegs except their yellowish white parts. Wings hyaline except an infuscated longitudinal stripe running obliquely from extreme apex where it is covering the entire radial cells and most of the cubital cells, towards its anterior corner; costa and stigma fuscoferruginous, rest of venation piceous.

Structure – Length 8.5 mm. Antenna slightly incrassated in middle, 1.8× head width; scape four times as long as its apical width; pedicel 1.5× its apical width; segment 3 longer than 4 as 4.5:4.0; clypeus (Fig. 8) rectangularly incised up to 1/2 of its medial length with triangular lateral teeth; labrum broader than long as 2.5:1.5 with roundly pointed anterior margin; malar space 1/2 the diameter of median ocellus; LID:IDMO:EL = 5.0:5.7:4.2; frontal area at the level of eyes; supra-antennal tubercles and frontal ridges insignificant; median fovea shallowly indicated in its anterior half and posteriorly not reaching median ocellus; postocellar furrow deep, interocellar furrow deep and distinct, circumocellar furrow shallowly indicated, lateral furrows distinct, excurved and reaching up to the hypothetical hind margin of head; postocellar area longer than broad as 2.7:2.0 with distinct medial longitudinal carina in its anterior 3/4; head converging behind eyes; OOL:POL:OCL = 2.0:1.5:2.8; mesoscutellum obtusely roundly raised with a distinct median longitudinal carina at least in its poste-



Figs 15–18. *Athlophorus* adults in dorsal view: 15 = *A. smithi* sp. n., female, 16 = *A. taegeri* sp. n., male, 17 = *A. weii* sp. n., male, 18 = *A. toongensis* sp. n., female

rior half; appendage carinated; metabasitarsus longer than the following joints combined; IATS: MB:OATS = 1.5:7.0:1.3. Male genitalia: Penis valve (Fig. 3); gonoforceps (Fig. 4).

Sculpture and pubescence – Head with dense, irregular and confluent punctures, surface sub shining; mesonotum punctured like head, surface shining; mesoscutellum with large, dense and shallow punctures, surface sub shining; appendage with few scattered punctures; mesepisternum rugose with large, dense and pit-like confluent punctures; mesosternum with small and insignificant punctures, surface shining; propodeum with dense, minute and confluent punctures on its anterior part but with large, shallow punctures on its lateral parts; tergite 3 with few scattered, shallow punctures, tergites 4–9 densely micro punctured, surface shining with general oily lustre. Body covered with golden pubescence.

Female – Unknown.

Material examined – Holotype male, India: Sikkim, Phodong, 1800 m, 15.v.1995, collected by M. S. SAINI.

Distribution – India (Sikkim).

Diagnosis – This species runs close to *A. puncticeps* Benson but can be distinguished from the latter by the malar space $\frac{1}{2}$ the diameter of median ocellus (malar space as long as diameter of median ocellus in *A. puncticeps* ocellus; clypeus rectangularly incised up to $\frac{1}{2}$ of its medial length with triangular lateral teeth (clypeus in shape strongly arched, the front margin being deeply emarginate, almost excised in *A. puncticeps*); temple area behind the eyes without any carina behind (temples behind the eyes with a well marked carina behind in *A. puncticeps*); mesoscutellum obtusely roundly raised with a median longitudinal carina at least in its posterior half (scutellum raised into a pyramid in *A. puncticeps*)

Etymology – The species name is after Dr. WEI MEICAI of China who made praise worthy contributions to the systematic of Chinese sawfly fauna.

***Athlophorus smithi* sp. n.**

(Figs 5, 9, 13, 15)

Female. Colour – Head fuscoferruginous, black are: apical $\frac{1}{2}$ of antennal segment 5, segments 6–9 entirely; spot on dorsal side of scape; mandible base; lateral spot on supraclypeal area not extending above the base of antennae; a spot on supra-antennal pit; small triangular spot on temple; spot on lateral sides of lateral ocelli connected with a medial rectangular spot on postocellar area in the form of an arrow head; spot on lower hind orbit. Yellowish white are: scape except dorsal black spot; labrum; broad lower $\frac{1}{2}$ of inner orbit. Thorax fuscoferruginous, yellowish white are: anterodorsal and narrow posterodorsal margins of pronotum. Black are: an irregular medial spot on pronotum; an oval large spot on mesonotal lateral lobe; posterior and lateral sides of mesoscutellum; appendage; spot before propodeum; propodeum except a narrow medial line and a posterior rectangular spot; meso and metapleuron and sternum entirely. Abdomen blackish, Yellowish white are: narrow medial stripe and a posterior-medial rectangular spot on propodeum; anterior and posterior

margins of tergites 2, 3 and 4 widening along the lateral sides connected by a medial stripe; narrow posterior margins of tergites 5–8; tergite 9 entirely; sternites 2–4 entirely. Legs fuscoferruginous, yellowish white are: lateral spot on all coxae; trochanters of metaleg and adjoining parts of all femora more or less; entire protibia anteriorly; basal 1/5 of meso- and metatibia. Wings hyaline except an infuscated spot below stigma covering radial cells and most of cubital cells; costa and stigma fuscoferruginous; rest of venation piceous.

Structure – Length 10.5 mm. Antenna slightly incrassated in middle, 2× head width; scape thrice as long as its apical width; pedicel twice as long as its apical width; segment 3 longer than 4 as 4.8:4.0; clypeus (Fig. 9) subrectangularly to roundly incised up to 1/3 of its medial length with triangularly pointed lateral teeth; labrum broader than long as 2:1, with rounded anterior margin; malar space half the diameter of median ocellus; LID:IDMO:EL = 7.0:7.5:6.0; frontal area at the level of eyes; supra-antennal tubercles and frontal ridges insignificant; median fovea in the form of broad deep ditch like in its anterior half, shallowly reaching median ocellus; postocellar furrow deep; inter- and circumocellar furrows indicated; lateral furrows distinct, excurved and reaching up to the hypothetical hind margin of head; postocellar area longer than broad as 1.5:1.0, with distinct medial longitudinal furrow in its anterior 3/4; head parallel behind eyes; OOL:POL:OCL = 2.3:1.5:3.5; mesoscutellum obtusely roundly raised with a median longitudinal carina at least in its posterior half; appendage ecarinate; tarsal claw (Fig. 13) with subapical tooth shorter than apical one; metabasitarsus longer than the following joints combined; IATS:MB:OATS = 2.0:8.5:1.5. Lancet (Fig. 5) with 23 serrulae.

Sculpture and pubescence – Head covered with, dense, irregular, confluent punctures, surface sub shining; mesonotum punctured like head, surface sub shining; mesoscutellum with large, dense, deep punctures; appendage with deep dense punctures surface still shining; mesepisternum rugose with large, deep, dense, pit-like confluent punctures; mesosternum with few scattered minute punctures, surface shining with general oily lustre; propodeum with dense, deep confluent punctures; tergite 2nd with few, scattered, shallow punctures, tergites 3–9 densely micro punctured, surface dull. Body covered with golden pubescence,

Male – Unknown.

Material examined – Holotype female, India, Sikkim, Rongli, 800m, 15.v.2010, collected by Muzamil Ahmad.

Distribution – India (Sikkim).

Diagnosis – This species runs close to *A. weii* sp. n. but can be distinguished from the latter by the mesonotal middle lobe entirely fuscoferruginous (only lateral margins in *A. weii*); mesoscutellum fuscoferruginous except the posterior and lateral sides which are blackish (mesoscutellum entirely fuscoferruginous in *A. weii*); postocellar area longer than broad as 1.5:1.0, with distinct medial longitudinal furrow in its anterior 3/4 (postocellar area longer than broad as 2.7:2.0 with distinct medial longitudinal carina in its anterior 3/4 in *A. weii*); clypeus subrectangularly to roundly incised up to 1/3 of its medial length (clypeus rectangularly incised up to 1/2 of its medial length in *A. weii*); tarsal claw with subapical tooth shorter than apical one (tarsal claw with subapical tooth almost equal to apical one in *A. weii*).

Etymology – The species is named after Dr. D. R. SMITH of USNM, an established signature in the field of sawfly systematics.

Athlophorus toongensis sp. n.

(Figs 6, 10, 14, 18)

Female. Colour – Head fuscoferruginous, black are: dorsal spot on scape, antennal segments 6–9 entirely; extreme mandibular tip; apical margins and basal $\frac{1}{4}$ of clypeus; supraclypeal area; broad frontal spot anteriorly continuous with supraclypeal area and posteriorly covering an anterior half of median fovea; a spot on supra-antennal pit extending along supra-antennal furrow up to lateral ocellus laterally not touching eye margins; post-, inter-, and circumocellar furrows; an oblique spot on temple; spot on lower $\frac{1}{2}$ of posterior $\frac{1}{2}$ of hind orbit. Yellowish white are: labrum; clypeus except apical margin and basal $\frac{1}{4}$ portion; narrow inner and hind orbits. Thorax fuscoferruginous, blackish are: an irregular medial spot on pronotum; mesonotal middle lobe except lateral margins; a broad spot before mesoscutellum; appendage; spot before propodeum; mesepisternum except its posterior margin; mesosternum; meso- and metepimeron except their posterior margins and metasternum. Abdomen fuscoferruginous, black are: propodeum except posteromedial spot; anterior margins of tergite 2 broadened in the middle; anterior $\frac{2}{3}$ of tergites 3–5; anterior $\frac{1}{4}$ of tergites 6–8; broad lateral spot on tergite 9. Yellowish white are: posteromedial spot on propodeum; tergites 2 except narrow anterior margins; tergites 3–9 except their blackish anterior margins; posterior $\frac{1}{2}$ of tergites 8 and 9; sternites 1 and 2 entirely. Legs fuscous, yellowish white are: lateral sides of all coxae; all trochanters and adjoining parts of all femora; anteromedial elongated spots on all femora; basal $\frac{1}{4}$ of all tibiae; ventral side of protibia. Wings hyaline except an infuscated longitudinal stripe running obliquely from extreme apex of front wing towards its anterior basal corner covering the entire radial cells and most of the all cubital cells; costa and stigma fuscoferruginous, rest of venation piceous.

Structure – Length 8 mm. Antenna slightly incrassated in the middle, $2.2\times$ head width; scape and pedicel twice as long as their apical width; segment 3 longer than 4 as 5:4; clypeus (Fig. 10) roundly incised up to $\frac{1}{3}$ of its medial length with roundly pointed lateral teeth; labrum broader than long as 2.5:1.5, with roundly pointed anterior margin; malar space half diameter of median ocellus; LID:IDMO:EL = 5:6:5; frontal area at the level of eyes; supra-antennal tubercles and frontal ridges insignificant; median fovea shallowly indicated in its anterior half with deep pit and posteriorly not reaching median ocellus; post- and interocellar furrows shallowly indicated, circumocellar furrow merely indicated, lateral furrows distinct, excurved and reaching hypothetical hind margin of head; postocellar area longer than broad as 3:2, with distinct medial longitudinal carina in its anterior $\frac{3}{4}$; head parallel behind eyes; OOL:POL:OCL = 2.0:1.7:3.0; mesoscutellum elevated into a distinct tip with distinct median longitudinal carina; appendage also carinate; tarsal claw (Fig. 14) with sub apical tooth almost equal to apical one; metabasitarsus slightly longer than the following joints combined; IATS:MB:OATS = 1.7:7.0:1.2. Lancet (Fig. 6) with 20 serrulae.

Sculpture and pubescence – Head with, dense, irregular and confluent punctures, surface sub shining; mesonotum punctured like head, surface shining; mesoscutellum with dense, shallow punctures, surface polished; appendage with dense, minute punctures, surface polished; mesepisternum rugose with large, dense, pit-like confluent punctures; mesosternum with shallow and minute punctures, surface sub shining; propodeum with dense, minute and confluent punctures on its anterior and posterior blackish parts; tergites 2–9 densely micro punctured, surface sub shining. Body covered with golden pubescence.

Male – Unknown.

Material examined – Holotype female, India: Sikkim, Toong, 1300 m, 10.v.1995, collected by M. S. SAINI.

Distribution – India (Sikkim).

Diagnosis – This species runs close to *A. weii* sp. n. but can be distinguished from the latter by the following characters: antennal segments 6–9 are entirely black (dorsal side of pedicel, apical ¼ and entire ventral side of antennal segment 5 and segments 6–9 are entirely black in *A. weii*); clypeus roundly incised up to 1/3 of its medial length with roundly pointed lateral teeth (clypeus rectangularly incised up to ½ of its medial length with triangular lateral teeth in *A. weii*); mesoscutellum elevated into a distinct tip (mesoscutellum obtusely roundly raised in *A. weii*); black are: propodeum except posteromedial spot, anterior margins of tergite 2 broadened in the middle (black are: propodeum entirely, anterior 2/3 of tergite 2 in *A. weii*).

Etymology – The specific epithet pertains to its type locality.

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