

IV SOME ORIENTAL SAWFLIES IN THE INDIAN MUSEUM.

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In the fall of 1912 the writer received, on his request, the unnamed sawflies of the Indian Museum for study. This collection contained some new species and genera and certain species previously described. A report of the named species and descriptions of the new species and genera will be found on the following pages. With permission of the authorities of the Indian Museum certain duplicates were retained; these have been placed in the collections of the United States National Museum. Thanks are due the authorities of the Indian Museum for the privilege of studying this collection, for their generosity in giving duplicates, and for the extending of the original time limit.

Superfamily *SIRICOIDEA*.

Genus *Sirex*, Linnaeus.

Sirex imperialis, Kirby.

One male from Shillong, Assam (*La Touche*).

This male has the apical margins of the tergites rufous and the wings more yellowish than the description of the female indicates.

Genus *Xiphydria*, Latreille.

Xiphydria orientalis, Westwood.

One female from Kurseong, East Himalayas, collected May 21-29, 1906, at an altitude of 5,000 feet (N. A.).

This specimen differs from the original description in the antefurcal second recurrent vein, but is no doubt Westwood's species. The mandibles are quadridentate; the head around the ocelli is striato-punctate.

Superfamily *TENTHREDINOIDEA*

Family *CIMBICIDAE*.

Genus *Abia*, Leach.

Abia melanoceros, Cameron.

One male from Khasi Hills, Assam.

Family ARGIDAE.

Genus *Cibdela*, Konow.*Cibdela janthina* (Klug)

One male from Sadiya, Assam.

Genus *Athermantus*, Kirby.

In 1882 (List Hym. Brit. Mus., vol. I, p. 54) Kirby characterized his genus *Athermantus* for *Hylotoma imperialis*, Smith. Kirby's description is brief and the figure is in part incorrect, so this genus has not been well understood. Konow in his table in the Genera Insectorum (fasc. 29, 1905, p. 13) separates Kirby's genus from the other Argini without a superapical spur on the hind tibiae, by the compressed hind tibiae. In his table of the genera of Argidae in Zeit. Hym. Dipt., vol. 7, 1907, p. 185, Konow abandons the character of compressed hind tibiae and separates *Athermantus* from the other genera on venational characters. Due to the inaccuracy of the artist and the probability that Konow had never seen a specimen of *Athermantus*, this separation cannot be used. Mr. Meade-Waldo has kindly examined the type of *Athermantus imperialis* (Smith) and from his notes and the descriptions there can be no doubt that the specimen before me is correctly determined. The following descriptive notes are given to more properly establish the identity of this genus:—

Closely allied to *Cibdela*, Konow, but may be separated from that genus by the following comparison:—

ATHERMANTUS, Kirby.

Facial quadrangle much broader than the length of the eye.

Posterior orbits much broader than the cephalo-caudad diameter of the eye.

Malar space longer than the length of pedicellum.

Postocellar area well defined.

Lateral ocelli behind the supra-orbital line.

Propodeum without a median furrow.

Posterior tibiae compressed.

CIBDELA, Konow.

Facial quadrangle with its width subequal or but little greater than the length of the eye.

Posterior orbits much narrower than the cephalo-caudad diameter of the eye.

Malar space narrower than the length of pedicellum.

Postocellar area obsolete.

Lateral ocelli with their anterior margins on the supra-orbital line.

Propodeum with a faint median furrow.

Posterior tibiae not compressed.

In Konow's table in Zeit. Hym. Dipt., vol. 7, 1907, p. 185, this should fall next to *Cibdela*, but would be separated by the above comparison.

Athermantus imperialis (Smith).

One female from Kurseong, East Himalayas, collected August 6, 1909, at an altitude of 6,000 feet (*E. D'Abreu*). Indian Museum No. $\frac{4630}{19}$.

Genus **Arge**, Schrank.**Arge fumipennis** (Smith).

Two females from Almora, Kumaon, collected September 3-12, 1911, at an altitude of 5,500 feet (*C. Paiva*).

Arge luteiventris (Cameron).

Fourteen specimens, males and females, from Shillong, Assam (*La Touche*).

Arge xanthogastra (Cameron).

Two specimens from Almora, Kumaon, collected June 27, 1911, at an altitude of 5,500 feet (*C. Paiva*).

Arge albocincta (Cameron).

Hylotoma albocincta, Cameron, Trans. Ent. Soc. London, 1876, p. 459.

It may be advisable to make a new genus for this characteristic species which has the large eyes almost touching the base of the mandibles, but until more material has been studied the author feels loath to propose such a genus. The following characters apply to the specimen at hand: Emargination of the clypeus sub-V-ed; supraclypeal foveæ deep, elongate; frontal basin well defined, two and one-third times as long as its dorsal width; a shallow depression in front of the anterior ocellus; postocellar furrow angulate anteriorly; postocellar area not defined laterally; head and thorax shining, with sparse, fine punctures; basal vein almost the length of the intracostal vein basad of cubitus; second cubital cell parallel-sided, about three times as long as apical width; apical abdominal segment with dense white hair.

One female, Shillong, Assam (*La Touche*) in the Indian Museum Collection No. $\frac{4709}{19}$.

Genus **Pampsilota**, Konow.**Pampsilota sinensis** (Kirby).

Hylotoma microcephala, Cameron, Trans. Ent. Soc. London, 1876, p. 460. (*nec* Vollenhoven).

Hylotoma sinensis, Kirby, List Hym. Brit. Mus., vol. I, 1882, p. 72, pl. 5, fig. 2.

Eight specimens, males and females, from Assam (Sadiya, 5 specimens, "Sibs" (Sibsagar) N.E. Assam 1 specimen, and 2 without definite locality) forwarded by the Indian Museum, agree well with Cameron's and Kirby's accounts. They belong to the

genus *Pampsilota* which easily explains Kirby's inability to detect superapical spurs.

***Pampsilota nigriceps*, sp. n.**

This species is probably more closely allied to *sinensis* (Kirby) than any other described species of this genus, but it may be differentiated from Kirby's species by the black legs and black tergites.

Female.—Length 11 mm. Anterior margin of the clypeus very slightly incurved; supraclypeal area black; frontal fovea open below, extending parallel until it reaches the anterior margin of the anterior ocellus, with an accentuated triangular-shaped depression opposite the upper margin of the antennae; postocellar line distinctly shorter than the ocellocular line; postocellar furrow well defined, about the width of the posterior ocellus behind the posterior ocelli; postocellar area strongly convex, slightly parted by a median furrow; antennae typical for the genus, extending to the posterior margin of the scutellum. Rufo-ferrugineous; head except the palpi black; scutellum, metanotum, tergites except the lateral margin and the apical portion of the posterior ones, the sheath above, mesosternum and legs black; the anterior legs beneath are piceous; wings dusky hyaline, venation black.

Male.—Length 8 mm. What appears to be the male of this species has the frontal fovea closed below and differs in colour in having the scutum and the basal portion of the prescutum black, and in the piceous stigma and paler wings.

India. Described from two females, one type, and one male, allotype: the type female from Mungphu, Sikkim; the paratype female from Sikkim, May 1912; the allotype from Sadon, Upper Burma, collected at an altitude of 7,000 feet, April, 1911 (*E. Colenso*).

Type and allotype in Indian Museum, type No. $\frac{7921}{8}$, allotype $\frac{4760}{19}$.

Paratype—(Female) Type Cat. No. 18530, U.S.N.M.

Family TENTHREDINIDAE.

Genus *Xenapates*, Kirby.

Xenapates incerta (Cameron).

Two females from Sikkim, East Himalayas; collected May, 1912. One female from Ghumti, Darjiling district, East Himalayas, collected July, 1911, at a calculated altitude of 4,000 feet, by F. H. Gravely. One male from Kurseong, East Himalayas, collected June 29, 1910, at an altitude between 4,000 and 8,000 feet (*N. Annandale*). One female from Sadiya, Assam.

***Monostegidea*, gen. n.**

This genus belongs to the tribe Allantini where it is related to *Monostegia*, Costa and *Monsoma*, MacGillivray. It may be

separated from both of these by having the antennae long and slender and the third and fourth joints subequal.

Malar space distinct; clypeus arcuately emarginate (the depth of the emargination varies considerably); antennal furrows complete but not strong; orbital carina obsolete; posterior orbits narrower than or subequal with cephalo-caudad diameter of the eye; antennae long and slender, pedicellum wider than long, third and fourth joints subequal; head and thorax shining, almost impunctate; tarsal claws cleft, inner tooth shorter; first transverse cubitus present; nervulus its length from the basal; hind wings with one discal cell, nervellus at right angles with the anal vein; apical joints of the hind tarsi shorter than the two preceding.

Type.—*Poecilosoma nigriceps*, Cameron.

***Monostegidea nigriceps* (Cameron) Rohwer.**

Poecilosoma nigriceps, Cameron, Jn. Bombay Nat. Hist. Soc., Vol. XIV, 1902, p. 442.

This species is represented in material received from the Indian Museum from the following localities:—

Darjiling, altitude 7,000 feet. Two males collected by C. Paiva. Kurseong, altitude 5,000 feet. Two females and three males; collector not given.

Siliguri, base of the East Himalayas. Three females collected by Museum collector.

Ghumti, altitude 4,000 feet. One female collected by F. H. Gravely.

***Monostegidea leucomelaena*, sp. n.**

This resembles to some extent *Taxonus fulvipes* as described by Cameron, but it is not in agreement with Cameron's description in many characters. It can readily be separated by the pale spot on the scutellum.

Female.—Length 6 mm. Anterior margin of the clypeus deeply, narrowly, arcuately emarginate, the lobes broad, obtusely rounded apically; supraclypeal area rectangular in outline, strongly convex; supraclypeal foveae greatly reduced, below the antennal fovea; middle fovea crescent-shaped; antennal furrows uninterrupted, not complete dorsally; no depression in front of the anterior ocellus; postocellar furrows distinctly defined, angulate anteriorly; postocellar line less than one half as long as the ocellocular line, shorter than the ocellocipital line; third, fourth and fifth antennal joints subequal; stigma gently rounded on the lower margin; transverse radius joining the radius slightly beyond the middle of the third cubital cell; sheath straight above, obtuse at apex and obliquely rounded below. Black with white markings; head black; mouth parts except the apices of the mandibles, face below the antennae, inner orbits to the top of the eye, posterior orbits to above the upper margin of the eye, white; pronotum

black; tegulae white; mesoscutum black; scutellum black with a small white spot anteriorly; mesepisternum white except along the dorsal margin; entire ventral part of the insect white; abdomen black above, except the narrow lateral margin of the segments; venter white; legs yellowish; white posterior tarsi dusky; antennae black; wings hyaline, iridescent; venation dark brown, stigma pale brown, paler at base.

Male.—Length 5 mm. Agrees with female except in the sexual characters.

Darjiling, East Himalayas. Described from one female and six males collected at an altitude of 7,000 feet, May 25-29 (*E. Brunetti*).

Type, allotype and paratype in the Indian Museum. Type No. $\frac{4873}{19}$; and allotype, No. $\frac{4683}{19}$.

Paratype in U.S.N.M.

Genus *Tenthredella*, Rohwer.

Tenthredella assamensis (Konow).

One female from the Khasi Hills, Assam, which agrees very well with the original description. The basin is shallow, bounded by low rounded walls; clypeal lobes obtusely triangular; post-ocellar area slightly wider than long.

Tenthredella carinifrons (Cameron).

One female from Darjiling, collected May 28, 1910, at an altitude of 7,000 feet (*E. Brunetti*).

Tenthredella segregata (Konow).

Two females from Sikkim, Eastern Himalayas.

Tenthredella turneri, Rohwer.

One female from Shillong, Assam.

Tenthredella xanthoptera (Cameron).

One female from Kurseong, East Himalayas, collected September 7, 1909, at an altitude of 5,000 feet.

This specimen, which agrees well with the original description, has the scutellum pyramidal; anterior ocellus in a well defined, shining basin which is deeper than the rest of the frontal basin; labrum longer than wide, rounded apically; sheath subparallel-sided, with apex regularly rounded; mesepisternum strongly angulate below.

Tenthredella annandalei, sp. n.

This species may be readily separated from the other species of this group by the black posterior tibiae, the pale posterior

femora, the pyramidal scutellum, and in having the postocellar area broader than long.

Female.—Length 14 mm.; length of the antennae 10.5 mm. Labrum broadly rounded, surface subopaque with a few large setigerous punctures; clypeus shining with a deep, narrow, arcuate emargination, the lobes broad, truncate; supraclypeal foveae deep, punctiform; supraclypeal area flat, slightly carinate dorsally; head concave in front; a deep longitudinal depression from the base of the antenna to the anterior ocellus, but below the anterior ocellus broadens into a diamond-shaped area which meets immediately behind the anterior ocellus; antennal furrows poorly defined; ocelli little less than an equilateral triangle; postocellar area sharply defined laterally, and defined anteriorly by shallow postocellar furrow, one-fifth longer than the latrad width; head shining, practically impunctate; antennae slender, the third and fourth joints subequal; thorax shining; scutellum pyramidal; stigma long and narrow, tapering apically; transverse radius strongly curved, received in the third cubital cell distinctly beyond the middle but not in the apical third; third cubital cell on the radius longer than the first and second; second recurrent vein strongly bullated, joining the cubitus a little less than the length of the curved second transverse cubitus beyond the base of the third cubital cell; spurs of the posterior tibiae of equal length, about half as long as the posterior basitarsus; sheath straight above, apex rounded, the lower margin convex. Rufo-ferruginous with distinct, erect black hairs; clypeus, labrum, mandibles except apices, inner orbits of the eyes and tegulae rufo-stramineous; antennae black; scape stramineous beneath; apical three abdominal segments black; legs colour of the body except the posterior tibiae beyond the basal third and the posterior tarsi which are black; wings yellow hyaline, strongly dusky beyond the apex of the stigma; most of the venation colour of the wing but the median and basal veins black; stigma yellow.

Kurseong, East Himalayas. Described from one female collected at an altitude between 4,500 and 5,000 feet, on June 22, 1910 by Dr. N. Annandale, after whom the species is named.

Type.—Indian Museum No. $\frac{4698}{1}$.

Genus *Parastatis*, Kirby.

This is hardly more than a species group of *Tenthredo*, Linnaeus.

Parastatis indica, Kirby.

Four specimens from Sikkim.

Genus *Pëus*, Konow.

Pëus privus, Konow.

One female from Kurseong, East Himalayas, collected August 14, 1909, at an altitude of 6,000 feet (*D'Abreu*).

Genus *Fethalia*, Cameron.

Konow in the *Genera Insectorum*, 1905, Fasc. 29, p. 132, places the genus *Fethaila*, Cameron, as a synonym of *Tenthredo* (*Allantus*), but a careful examination of Cameron's description indicates that this genus is good and is more closely allied to the genera *Pëus*, Konow, and *Jermakia*, Jakovlev. Cameron says that there is no "blotch" on the abdomen. This is taken to mean that the first tergite is without a longitudinal furrow. The three genera of the Tenthredinini which do not have longitudinal furrows are *Jermakia*, *Fethalia* and *Pëus*. *Jermakia* can be readily separated from *Fethalia* and *Pëus* by the obsolete malar space. The only character in Cameron's description which will separate *Fethalia* from *Pëus* is the short antennae. Until examination of Cameron's type has been made these two genera had best be regarded as distinct. It may be, however, that they are not separable as the relative length of the antennae when taken alone can hardly be considered as a generic character in this group.

Genus *Pachyprotasis*, Hartig.*Pachyprotasis versicolor*, Cameron.

Three females and four males from Darjiling, East Himalayas, collected May 25, 1910, at an altitude of 7,000 feet (*E. Brunetti*).

Genus *Athalia*, Leach.*Athalia infumata* (Marlatt).

One male from Bijrani, Naini-Tal District, base of West Himalayas, collected March 10, 1910.

Athalia proxima (Klug).

Six specimens from Calcutta; two from Shillong, Assam (*La Touche*); one from Mangaldai, Assam; two from Bangalore, South India; and one from Sonali, Purneah District, Behar.

Genus *Anapeptamena*, Konow.*Anapeptamena viridipes* (Cameron).

One female from Siliguri, base of East Himalayas, collected July 18-20, 1907.

In the original description, fifth line from the bottom of page "second" should be changed to "third", and in the fourth line from bottom of page "third" should be changed to "second".

Busarbidea, gen. n.

Type.—*Busarbidea himalaiensis*, new species.

Clypeus arcuately emarginate; malar space wanting; inner margins of the eyes parallel; pentagonal area large, well defined

and with a transverse carina from its lateral margin to near inner margin of eye; posterior orbits rather narrow, with a strong, well defined carina; antennae slender, the third joint distinctly longer than the fourth; pedicellum subequal in length with the scape, much longer than wide; basal vein curved, joining the subcosta well basad to the origin of the cubitus, somewhat divergent with the first recurrent; nervulus at about middle of cell; costa enlarged apically; lanceolate cell with a nearly straight cross-vein; hind wings with two discal cells and a petiolate anal cell; claws cleft, inner tooth shorter; hind basitarsus subequal with following joints.

This genus, which belongs to the Selandriinae, is very closely related to *Anapeptamena*, Konow, but may be distinguished by the presence of a cross-vein in the lanceolate cell.

***Busarbidea himalaiensis*, sp. n.**

Female.—Length 5 mm. Anterior margin of the clypeus depressed, rather deeply arcuately emarginate, basal portion convex; supraclypeal area uniformly convex; supraclypeal foveae deep, punctiform; middle fovea nearly quadrate in outline, not sharply separated from the pentagonal area; pentagonal area broader on its ventral margin than the dorsad-ventrad length; from its dorsal margin is a short rather poorly defined carina which extends posteriorly one-third the length of the postocellar area; postocellar area sharply defined laterally narrowing anteriorly; posterior margin subequal with the median cephalo-caudad length; postocellar line one-fifth shorter than the ocellocular line; antennae distinctly compressed beyond the fifth joint; fourth and fifth joints subequal; the third slightly longer than the fourth; head and thorax shining, impunctate; stigma evenly rounded below; second cubital cell shorter on both radius and cubitus than the third; transverse radius strongly curved, received at the apical third; third transverse cubitus twice as long as the second; sheath robust, straight above, obtuse apically, oblique beneath. Black; clypeus, labrum, palpi, first two joints of the flagellum, tegulae, posterior angles of the pronotum, legs yellowish; wings hyaline, faintly dusky; venation dark brown; head and thorax with short black hair.

Male.—Length 4 mm. Differs from the description of the female in having the body markings piceous; hypopygidium truncate apically, the angles rounded.

East Himalayas. Described from one female (type) collected at Siliguri, April 18-20, 1907, by a Museum collector, and from one male (allotype), and one female (paratype) from Kurseong, at an altitude of 5,000 feet.

Type and *allotype* in the Indian Museum. Type No. $\frac{4600}{9}$, allotype $\frac{2601}{12}$.

Paratype in U.S.N.M.

Genus *Aneugmenus*, Hartig.*Aneugmenus annandalei*, sp. n.

This species is related to the European *morio* but may be separated from it by head characters, judging from specimens of *morio* determined by Konow, now in the National Museum.

Female.—Length 5 mm. Labrum truncate, convex; clypeus convex; anterior margin shallowly arcuately emarginate, its surface with scattered punctures; supraclypeal area low, flat; supraclypeal elongate, not connected with the antennal foveae; middle fovea well defined, quadrate in outline; frontal foveae punctiform, deep, lower margin slightly below the line drawn tangent to the dorsal margin of the middle fovea; pentagonal area indicated by a U-shaped raised area the dorsal margin of which is inside of the lateral ocelli; posterior orbits and genae without carinae; postocellar area convex, poorly defined laterally by short furrows, not defined anteriorly; postocellar line subequal with the ocellocular line; pedicellum wider apically, longer than its apical width; third antennal joint little shorter than the fourth and fifth; head and thorax shining; nervulus less than its length from the end of the cell; first transverse cubitus obsolete; stigma broad, uniformly rounded beneath; transverse radius oblique, joining the radius at about the apical third or a little beyond that; third transverse cubitus about three times as long as second; lanceolate cell of the hind wings petiolate, petiole half as long as the nervellus; posterior basitarsus somewhat shorter than the following joints; claws cleft. Black; palpi and legs, except the infusate apical joints of the tarsi, yellow; head and thorax with short gray hair; wings dusky hyaline; venation black.

Male.—Length 3.5 mm. Differs from the female in having the bases of the coxae black.

Bangalore, South India. Described from one female (type) and one male (allotype) collected at a calculated altitude of 3,000 feet, October 15, 1910 by Dr. N. Annandale, after whom the species is named.

Type.—In the Indian Museum No. $\frac{4750}{19}$.

Allotype in U.S.N.M.

Genus *Nesoselandria*, Rohwer.*Nesoselandria rufiventris*, sp. n.

Readily separated by the fulvous abdomen.

Female.—Length 4 mm. Anterior margin of the clypeus truncate; supraclypeal area convex; supraclypeal foveae obsolete; middle fovea transverse, well defined; lateral foveae punctiform with their lower margin tangent with the upper margin of the middle fovea; head above the antennae without transverse carinae; pentagonal area obsolete; postocellar area indicated anteriorly by punctiform foveae; ocellocipital line distinctly longer

than the intraocellar line; postocellar line a trifle longer than the ocellocular line; fourth antennal joint slightly longer than the fifth; stigma gently rounded below, broader at the basal third; sheath subacuminate, narrow. Black; apical margin of the clypeus, legs and abdomen fulvous; wings dusky hyaline; venation dark brown; head and thorax with thin gray hairs.

Male.—Length 3.75 mm. Differs from the above description of the female in having the apical three abdominal segments black and having the clypeus entirely black; hypopygidium nearly rounded apically.

India and Assam. Described from two females, one type, from Calcutta, collected November 22, 1907, and from one male collected at Mazbat, Mangaldai, Assam, January 8, 1911 (*S. W. Kemp*). One male from Margherita, Assam.

Type and *allotype* in Indian Museum; type No. $\frac{4596}{190}$; allotype No. $\frac{4686}{190}$.

Paratype.—Cat. No. 18910, U.S.N.M.

Genus *Neostromboceros*, Rohwer.

Neostromboceros coeruleiceps (Cameron).

One female from the Assam-Bhutan Frontier, Mangaldai District, N.E., collected December 26, 1910 (*S. W. Kemp*); two males from the same locality collected by the same collector January 1-2, 1911; and two males from Sadiya, Assam.

Neostromboceros similis, sp. n.

From *trifoveatus*, Cameron, to which this species runs in Enslin's table, this species may be separated by the white labrum.

Female.—Length 7 mm. Anterior margin of the labrum broadly rounded; anterior margin of the clypeus truncate; supraclypeal area rectangular in outline, flat; supraclypeal foveae connected with the antennal foveae; median fovea a U-shaped depression around a median tubercle, the ends of the U deeper; frontal foveae punctiform, their lower margins tangent to a line drawn through the median fovea; antennal furrow distinct above crest; postocellar area wider posteriorly, the anterior lateral part sharply defined, the posterior lateral part poorly defined; flagellum somewhat flattened; first transverse cubitus wanting; sheath truncate apically; inner tooth of claws smaller than outer. Blue-black; labrum, posterior margin of pronotum, tegulae and perapteron white; palpi whitish, infuscate; legs yellowish white, bases of coxae and femora, and the posterior tarsi more or less infuscate; wings hyaline, slightly dusky; venation dark brown; head and thorax with short gray hair.

Male.—Length 6 mm. Hypopygidium broadly rounded apically. Very like female.

Mazbat, Mangaldai, Assam. Described from three females (one type) and two males (one allotype) collected January 8, 1911 (*S. W. Kemp*).

Type, allotype and paratype in Indian Museum; type No. $\frac{4741}{19}$, allotype No. $\frac{4736}{19}$, paratype $\frac{4734}{19}$.

Paratypes (male and female) in U.S.N.M.

Genus *Stromboceros*, Konow.

Stromboceros tarsalis (Rohwer).

Three females from Sadiya, Assam; and two females from Margherita, Assam.

This is a good species.

Stromboceros phaleratus, Konow.

One male from Sikkim collected by Knyvett; and one male from Margherita, Assam.

Stromboceros ruficornis, sp. n.

This species is readily separated from all other species of *Stromboceros* occurring in the oriental region by having the basal joints of the flagellum rufous.

Female.—Length 8 mm. Anterior margin of the clypeus depressed, the middle very slightly emarginate, the basal portion subconvex; supraclypeal area flat; supraclypeal foveae oblique, deep, not connected with the antennal foveae; middle fovea represented by an inverted U-shaped furrow around a flattened tubercle; frontal foveae deep, rounded, the lower margins tangent to a line drawn across the top of the median tubercle; postocellar area well defined laterally, not defined anteriorly; postocellar line but little more than half the length of the ocellular line; head shining, impunctate; antennae slightly tapering apically; the third joint slightly longer than the fourth; thorax shining; stigma uniformly rounded below; first transverse cubitus obsolete; nervulus slightly basad of the middle; transverse radius oblique, received at the apical third; third transverse cubitus oblique at about the same angle as the transverse radius, slightly more than twice as long as the second transverse cubitus; posterior basitarsus subequal in length with the following joints. Black; three basal joints of the flagellum rufous; anterior knees, bases of the posterior coxae, posterior trochanters and the band on the posterior tibiae white; head and thorax with dense gray hair; wings hyaline; venation black.

Darjiling, Eastern Himalayas. Described from one female collected May 27, 1910, at an altitude of 7,000 feet (*E. Brunetti*),

Type.—In the Indian Museum No. $\frac{4682}{19}$.

Genus *Canonias*, Konow.*Canonias assamensis*, sp. n.

This species differs in minor colour characters from *inopinus*, Konow.

Female.—Length 8 mm. Anterior margin of the clypeus slightly arcuately emarginate, the angles sharp; supraclypeal area flat; supraclypeal foveae elongate, deep; antennal foveae obsolete, middle fovea quadrate in outline, open above; pentagonal area well defined, from its broadest portion there is a transverse carina which touches the inner margin of the eye; postocellar area depressed, sharply defined laterally by deep foveae, not defined anteriorly, about four times as wide as the cephal-caudad length; postocellar line about one-fourth longer than the ocellocular line; antennae long and slender, tapering apically; third joint distinctly shorter than the fourth; head and thorax shining, impunctate; stigma broadest at middle, tapering each way; transverse radius strongly oblique joining the radius slightly before the apical third; second cubital cell longer on both radius and cubitus than cubital third. Black; scape, pedicellum, sixth, seventh and eighth antennal joints, tergite, posterior margin of the angles of the pronotum, tegulae, perapteron, palpi, anterior legs, intermediate legs (except a fuscous band on the tibiae and the basitarsus), the posterior legs (except the tibiae and basitarsus) *white* or *yellowish white*; venter and the sides of the tergites and the apical two tergites fulvous; wings hyaline, iridescent; venation dark brown; head and thorax without pubescence.

Margherita, Assam. Described from three females (one type).

Type and *paratype* in Indian Museum; type No. $\frac{260}{9}$, paratype No. $\frac{261}{9}$.

Paratype in U.S.N.M.

Genus *Beleses*, Cameron.*Beleses nigriceps*, sp. n.

This species is readily separated from the other species of this genus by the black head. As far as the males and females have been associated it is the only species in which colour antigeny occurs. Except for the colour of the legs and having only one discal cell in the hind wings the female agrees with Cameron's *Sunoxa purpureifrons*.

Female.—Length 6 mm. Anterior margins with the clypeus truncate, surface coarsely irregularly punctured; supraclypeal area flat, narrow; supraclypeal foveae deep, confluent with the antennal foveae; middle fovea represented by the shallow transverse impression; front and posterior orbits shining, impunctate; postocellar area sharply defined laterally but not defined anteriorly; postocellar line subequal with the ocellocular; flagellum gradually thickened until it reaches the apex of the second joint; the second joint one-fourth longer than the third; the fourth and following

joints compressed; thorax shining, impunctate; stigma gently rounded below; second cubital cell longer on both radius and cubitus than third, which is twice as wide apically as basally; the transverse radius curved, joining the radius about the same distance from the second transverse cubitus as the second recurrent is from the same vein; claws cleft with the inner teeth exceeding the outer; sheath straight above, truncate apically, oblique below. Head and posterior femora beyond middle, four posterior tarsi and the antennae black, the rest of the insect rufous; head and thorax covered with short gray hairs; wings distinctly hyaline, venation dark brown.

Male.—Length 5 mm. Differs from the above description of the female in having the abdomen, thorax and legs, except the anterior tibiae and the trochanter which are fulvous, dark piceous and the hairs on the thorax and the head blackish; hypopygidium rounded apically.

South India. Described from one female from Marikuppam, collected October 19, 1910, at an altitude of 3,500 feet; and from two males, one allotype, from Bangalore, collected September 12, 1910, at an altitude of 3,000 feet.

Type and *allotype* in the Indian Museum; type No. $\frac{4756}{19}$, allotype No. $\frac{4753}{19}$.

Paratype.—Cat. No. 18909, U.S.N.M.

Genus *Entomostethus*, Enslin.

Entomostethus assamensis (Rohwer).

One male and two females from Ghumti, Darjiling District, East Himalayas, collected July 1911, at an altitude of 4000 feet (*F. H. Gravely*); five females and four males from Kurseong, East Himalayas, collected July 1908, at an altitude of 5,000 feet; five females and eleven males from Darjiling, East Himalayas, collected September 29, 1908, at an altitude of 6,000 feet (*E. Brunetti*); nine females and ten males from the same locality, collected May 29, 1910, at an altitude of 7,000 feet (*E. Brunetti*); one female collected at the same locality and elevation, August 11, 1909 (*J. T. Jenkins*); one male from the same locality and elevation, collected August 9, 1909 (*C. Paiva*); and one male from Gangtok, Sikkim, collected September 8, 1909, at an altitude of 6,750 feet.

Two males from Kurseong have the legs slightly darker than typical; and all the specimens indicate that the basitarsi are usually black. The female has the sheath straight above and broadly rounded from the tip.

This species differs from *laticarinatus*, Cameron, which may belong to the same genus, by the colour of the legs, as Cameron's species is said to have the femora pale beneath.

Entomostethus hirticornis (Rohwer).

One female from Kurseong, East Himalayas, collected September 7, 1909, at an altitude of 5,000 feet; four females from Ghumti,

Darjiling District, East Himalayas, July 1911, at a calculated altitude of 4,000 feet (*F. H. Gravely*); one female from Gangtok, Sikkim, collected September 9, 1909, at an altitude of 6,150 feet; and one female from Kurseong, East Himalayas, collected July 3, 1908, at an altitude of 5,000 feet.

Genus *Cladius*, Rossi.

Cladius orientalis, Cameron.

One female from Simla, collected July 20, 1911, at an altitude of 7,000 feet (*N. Annandale*).

Genus *Hemichroa*, Stephens.

Hemichroa major, sp. n.

This species is readily separated from all the other species of *Hemichroa* by its larger size, general colour and yellow wings.

Female.—Length 11.5 mm.; length of the anterior wings 12 mm. Labrum obtusely pointed; clypeus obtusely, arcuately emarginate, the arcuation conforming in outline with the obtusely triangular lobes, surface shining; supraclypeal area more convex dorsally; median fovea rectangular in outline, open above, being confluent with the ocellar basin, the middle with a small punctiform pit; ocellar basin pentagonal in outline, well defined, meeting on the postocellar line, in front of the anterior ocellus it has a shallow, poorly defined depression; head shining with only setigerous punctures; postocellar area well defined laterally but not well differentiated anteriorly as the postocellar furrow is subobsolete and angulate anteriorly; postocellar line subequal with ocellocular line; antennae strongly tapering, the third joint distinctly longer than the fourth; thorax shining; inner tooth of the claws longer than the outer; stigma broader at base, gradually tapering to the apex; third cubital cell nearly parallel-sided, one-fourth longer than its apical width; nervellus in the middle of the cell; sheath stout, straight above; truncate apically, tapering below, the upper angle sharp, the lower angle rounded. Rufo-ferrugineous; head and antennae piceous; thorax beneath and on the sides black to piceous; legs black; wings bright yellow, venation ferrugineous.

Darjiling, Eastern Himalayas. Described from one female.

Type.—Indian Museum No. $\frac{5666}{5}$.

