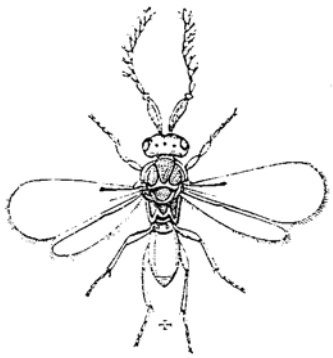
side of a small projection or tooth; and each of the lateral keels has a much larger lunate or reniform eye, *a a*, facetted like the eyes of insects generally, and firmly soldered into the substance of the shield, like the dead-eyes on the deck of a ship, but partially concealed by the keel, of which they may be said to form a part. The second section of the shield (2) is much narrower than the first, and also narrower behind than before; it terminates in a concave posterior margin; its circumscription is somewhat triangular, but very obscurely so; the sides are oblique, and each bears twelve sharp teeth, six of which, placed alternately, are fixed, and constitute an absolute portion of the shield itself, while the other six are longer, and are articulated to the shield, but the articulation is rigid, and imperceptible when the animal has been dead for some time. The third section is a narrow, solid, trigonal, scabrous, bayonet-like, instrument, having the appearance of a tail, and gradually tapering to a point (3).

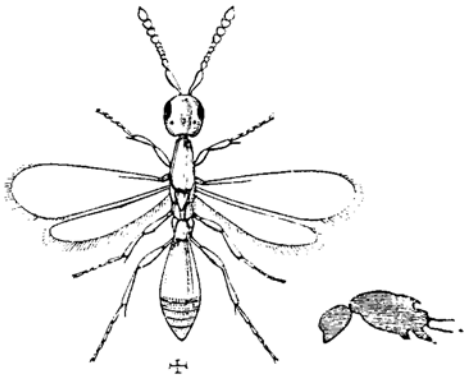
EDWARD NEWMAN.

Notes on the Oxyura.—Family 1. *Platygasteridæ.*

By FRANCIS WALKER, Esq.

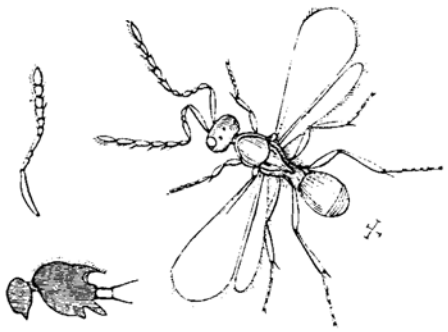


IPHITRACHELUS LAR, male.

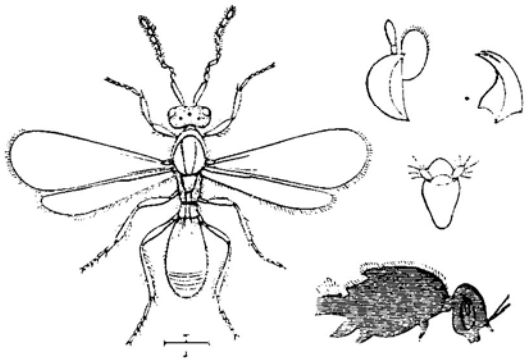


PLATYGASTER CATILLUS, female; thorax, vertical section.

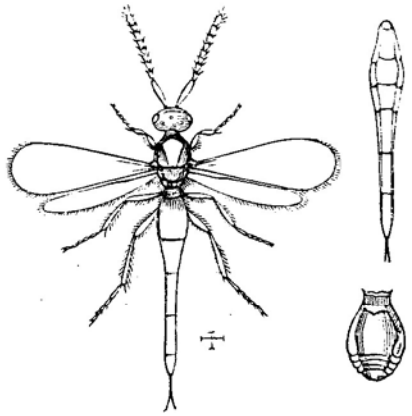
PLATYGASTER COCHLEATUS, vertical section. PL. VELUTINUS, antenna of male; antenna of female.



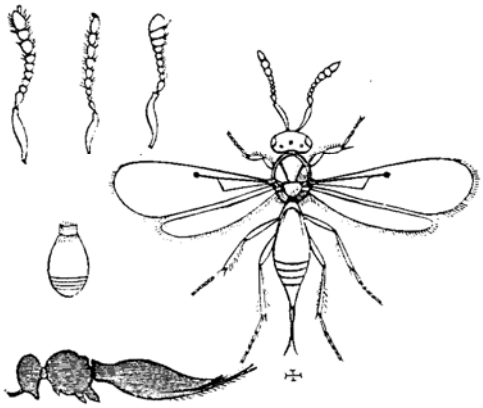
PLATYGASTER TIPULÆ, male; female, antenna; female, thorax, vertical section.



PLATYGASTER RUFICORNIS, male; thorax, vertical section; trophi.



PLATYGASTER ATTENUATUS, female; abdomen of a male and female Platygaster.



INOSTEMMA AREOLATA, female; antenna of female; antenna of male; antenna of I. scrutator; abdomen of male I. areolata, vertical section.

THE wing-structure of the Platygaster tribe is quite different from that of the Mymaridæ: in the latter the vein or bone takes the initiative, and the membrane is wholly wanting or is only slightly developed; in the former the vein is generally not existent, or is merely rudimentary. Platygaster appears in most parts of the world, and is dependent on Cecidomyzidæ for its means of subsistence between the egg-state and the perfect-state: it is much more abundant in North Europe than in South Europe, and may, like many other minute Hymenoptera and Diptera, have been partly expelled from the latter region by the multitude of minute ants which occur in the vegetation. Prof. Foerster's synopsis of the genera is translated as follows:—

A. Submarginal vein with a knob at the tip.
a. Tarsi 4-jointed. - - - - IPHITRACHELUS.
b. Tarsi 5-jointed.
* Antennæ 9-jointed, serrated in the male. - ALLOTROPA.
** Antennæ 10-jointed, not serrated in the male.
† Wings with a basal and middle vein.
‡ Three last joints of the flagellum much larger than the preceding joints, forming a club. - - - - - METACLISIS.

‡‡ The last joint only of the flagellum larger than the preceding joints. - - MONOCRITA.
†† Wings with no basal and submarginal vein.
‡ Lateral ocelli nearer to the third one than to the inner border of the eyes. - - ISOSTASIUS.
‡‡ Lateral ocelli nearer to the inner border of the eyes than to the third ocellus.
§ Female with a horn on the first abdominal segment. - - - - INOSTEMMA.
§§ Female with no horn on the first abdominal segment. - - - - ACEROTA.
B. Submarginal vein with no knob at the tip.
a. Scutellum more or less elongated, not semicircular, or when shortened then always compressed on the sides, with a pointed wart-like tip.
* Thorax compressed on the sides. - - PIESTOPLEURA.
** Thorax not compressed on the sides.
† Scutellum elongated, without a spine-shaped or wart-like tip.
‡ Furrows of the parapsides deep. Club of the antennæ of the female not determinate; two last joints distinct. - - - XESTONOTUS.
‡‡ Furrows of the parapsides indistinct or wanting. Club of the antennæ of the female 4-jointed; two last joints as one. - AMBLYASPIS.
†† Scutellum elongated, with a spine-shaped or wart-like tip.
‡ Scutellum ending in a more or less stout spine.
§ Lateral ocelli nearer to the inner border of the eyes than to the third one. Club of the antennæ in the female 4-jointed. - LEPTACIS.
§§ Lateral ocelli not nearer to the inner border of the eyes than to the third one. Club of the antennæ of the female 3-jointed. Head rhomboidal when seen in front. - ISORHOMBUS.
‡‡ Scutellum somewhat shortened and compressed on the sides, pointed or wart-like at the tip.
‡ Abdomen very much elongated. - - ECTADIUS.
‡‡ Abdomen not unusually elongated.
§ Second ventral segment much contracted in the female. - - - - SACTOGASTER.
§§ Second ventral segment not contracted in the female. - - - - SYNOPEAS.

b.	Scutellum not elongated, usually semicircular or cylindrical.	
*	Scutellum quite flat. - - -	ANOPEDIAS.
**	Scutellum not flat.	
†	Head cubical. - - - -	ISOCYBUS.
††	Head not cubical.	
‡	Scutellum with a hair-tuft at the tip. -	TRICHASIS.
‡‡	Scutellum with no hair-tuft at the tip.	
§	Border of the abdomen with a very broad rim. - - - - -	HYPOCAMPSIS.
§§	Border of the abdomen with no broad rim.	
×	Scutellum separated from the scutum by a deep suture. - - - -	POLYGNOTUS.
××	Scutellum not separated from the scutum by a deep suture. - - - -	PLATYGASTER.

The genera are thus twenty-one in number, and, without expressing an opinion whether they are or are not needlessly numerous, a few remarks may be made on them with reference to the British species which are included in them. Iphitrachelus, Inostemma, and Platygaster, are already known as British genera. Allotropa is founded on Inostemma Mecrida, Metaclisis on I. areolata, and Monocrita on I. Atinas. The next genus, Isostasius, includes Platygaster punctiger, a species that is of much importance in agriculture, by appropriating to itself Cecidomyia Tritici, a fly that is very injurious to wheat. The genera Acerota, Xestonotus, Isorhombus, Synopeas, and Anopedias, may be passed over till more can be said of the species which they include: these are not mentioned by Foerster. The genus Piestopleura is founded on Platygaster Catillus; Amblyaspis is represented by Platygaster Larides, P. Nereus, and P. Roboris; Leptacis includes P. Tipulæ, P. Nydia, P. Laodice, and P. Nice; P. Craterus is the typical species of the next genus Ectadius, which is followed by the genus Sactogaster: in the latter there are two described British species, P. Osacer and P. ventralis; and Foerster mentions that he has four more, one of which is parasitic on Cecidomyia Pisi: these four are very likely also British, and therefore the characters of them are translated in anticipation of their discovery. P. ruficornis, P. Erato, P. Matuta, and P. Cotta represent Isocybas; and Trichasis claims P. Pisis, P. Remulus, and P. Didas. A species of Hypocampsis is parasitic on Cecidomyia Strobi. P. striolatus is the type of

Polygnotus. Last comes Platygaster, which formerly included all the above genera, but Foerster does not mention any of the species which it still retains. Platygaster Siphon of Foerster, described and figured in one of his earlier works, may be placed under Acerota. Thomson's synopsis of the genera is here abbreviated; it does not seem equal to that of Foerster.

A. Subcostal vein abruptly clavate before the middle of the wing. Petiole of the female with a recurved horn at the base. - INOSTEMMA.

B. Wings with no subcostal vein. Abdomen of the female with no horn.

a. Antennæ in both sexes with a 4-jointed club; funiculus slender; vertex of the head narrow, bordered. Ocelli nearly contiguous to the eyes. Dorsal lines of the mesothorax obsolete, or none. Scutellum with a slender apical spine. Abdomen subsessile, convex above; first segment wholly, second at the base, covered with thick gray down. - SYNOPEAS.

b. Abdomen petiolated.

* Head twice as broad as the compressed thorax. Club of the antennæ 4-jointed. Scutellum with an apical spine. - - - PIESTOPLEURA.

** Head not or hardly broader than the thorax. Scutum with obsolete dorsal lines.

† Scutellum with no basal groove, parted from the scutum by a slight transverse line.

‡ Scutellum attenuated into an acicular spine. Abdomen almost orbicular in both sexes. - LEPTACIS.

‡‡ Club of the antennæ of the female 4-jointed; two last joints connate. Scutellum pubescent, conical, depressed. Abdomen woolly at the base. - - - - - AMBLYASPIS.

†† Scutellum with a distinct basal groove, parted from the scutum by a rather deep transverse line. - - - - CERATACIS.

** Vertex of the head with a rim. Scutum with two lines. Scutellum thickly pubescent at the tip. - - - TRICHASIS, ANOPEDIAS.

*** Vertex of the head rather thick, without a rim. Scutum with two lines.

ISOCYBAS, HYPOCAMPSIS, PLATYGASTER.

The species of Sactogaster are distinguished as follows:—

A. Third and following abdominal segments much shortened, and together not much longer than the second. - - - - -	Osaces.
B. Third and following abdominal segments much longer than the second.	
a. Segments from the third to the sixth much curved.	curvicauda.
b. Segments from the third to the sixth almost straight.	
* Scutum sharply divided from the neck.	
† Fifth abdominal segment slightly shorter than the sixth. - - - - -	subæqualis.
†† Fifth abdominal segment two-thirds as long as the sixth. - - - - -	Pisi.
** Scutum coalescing with the neck.	
† Second abdominal segment round, when seen sideways. - - - - -	longicauda.
†† Second abdominal segment not round, when seen sideways. - - - - -	ventralis.

FRANCIS WALKER.

Notes on Southern Indian Lepidoptera.

By WILLIAM WATKINS.

(Continued from p. 509.)

I ARRIVED in Secunderabad the latter end of February, 1871, and was much disappointed to find that the surrounding country was one vast plain, almost devoid of vegetation, a few palm-topes being the only relief. The hot season commenced in March and lasted until August, during which time we had no rain: everything was fearfully parched and dry, and there appeared hardly any insect-life; indeed, I despaired of getting anything at all, as I could see no traces of food-plant. The first rains set in on the 26th of August, and two days afterwards insects were abundant. I was astonished at their sudden appearance, and could hardly believe myself: hitherto I had strolled out to the most inviting place and found literally nothing; yet on the 29th of the month I started, net in hand, to a place some three miles distant from the cantonment of Tremulgherry, named Moulali, which consists