

EXPLANATION OF PLATES V. & VI.

PLATE V.

*Hydroptila stellifera*.—Fig. 1, apex of abdomen of male from beneath; 2, do., from side.

*H. fortunata*.—Fig. 1, apex of abdomen of male from beneath; 2, do., from side (in outline); 3, penis; 4, apex of penis (more enlarged).

*H. uncinata*.—Fig. 1, apex of abdomen of male from beneath; 2, do., from side.

*Oxyethira distinctella*.—Superior appendages.

*O. unidentata*.—Fig. 1, apex of abdomen of male from beneath; 2, do., from side.

*O. spinosella*.—Fig. 1, apex of abdomen of male from side, obliquely; 2, do., from above; 3, ventral plate and penis; 4, 5 and 6, various aspects of penis.

*O. falcata*.—Fig. 1, apex of abdomen of male, in front (fig. inverted); 2, ventral plate; 3, outline of apex of abdomen from side, continued beneath to show ventral lobe; 4, 5, 6 and 7, aspects of penis.

PLATE VI.

*Hydroptila Maclachlani*.—Fig. 1, apex of abdomen of male from beneath; 2, penis.

*Stactobia atra*.—Fig. 1, apex of abdomen of male from beneath; 2, do., latero-ventral view; (a) obtuse process, (b) pieces produced into spine at apex, (c) downturned lobes, (d) inferior appendages (?) (cf. McLach., Mon. Rev., 1st Additional Supplement, p. 72); 3, venation of anterior wing.

*Oxyethira costalis*.—Fig. 1, apex of abdomen of male from beneath; 2, hook above ventral plate.

*O. ecornuta*.—Fig. 1, apex of abdomen of male from beneath; 2, do., in front; 3, do., from side; 4, hook above ventral plate; 5, apex of penis.

*O. Frici*.—Fig. 1, apex of abdomen of male from beneath; 2, same from side; 3, penis from above.

catalogued

V. *Descriptions of new genera and species of Neotropical Rhynchota.* By W. L. Distant, F.E.S.

[Read December 7th, 1892.]

The following descriptions were written eight years ago at the request of Mr. Whymper for inclusion in the Natural History Appendix to his 'Travels amongst the Great Andes of the Equator.' This publication appeared in the spring of the present year, and my species and genera are only indicated by name, as I was refused an opportunity of correcting proof with the woodcuts inserted in the text, and therefore declined to allow the sheets to go to press. It thus becomes a duty I owe to my brother students of the order to publish the full descriptions, while the above explanation will serve as comment to a footnote which Mr. Whymper has chosen to place to the first page of my contribution. I also correct some errors in what was thus printed without my supervision.

DESCRIPTIONS AND CORRECTIONS.

Suborder HETEROPTERA.

Fam. PENTATOMIDÆ.

Subfam. PENTATOMINÆ.

✓ *Nezara nebulosa*, in Whymper's Travels Great Andes, Append., p. 112 (1892).

I originally considered a specimen collected by Mr. Whymper in the "Forests above the Bridge of Chumbo" as sufficiently distinct from *N. stictica*, Dall., to be indicated as *N. nebulosa*, n. sp., but the subsequent examination of a long series of specimens collected throughout Central America proved the character to be of a varietal nature only (Biol. Central Am. Rhynchot. Heterop., p. 338, "1890").

This is one of the errors to which I have referred, and *N. nebulosa* as a new species would have disappeared in the correction of the proof.

## Fam. COREIDÆ.

Division *Spartoceraria*.

*Sephina culta*, n. sp., Dist. MS., in Whym. Travels  
Great Andes, Append., p. 112, n. 6 (1892).

Black; a central longitudinal fascia to both corium and scutellum, and a spot on disk of corium, ochraceous; eyes greyish; abdomen above dull reddish, the base and apex more or less black, connexivum with some oblique black spots; membrane dark olivaceous. Body beneath black; lateral margins and central basal margin of mesosternum, and two central discal spots to abdomen, ochraceous; lateral margins of abdomen pale castaneous. Antennæ finely pilose, first and second joints subequal in length, third shortest; basal joint and apex of third joint incrassated; pronotum with the lateral angles acutely produced; posterior femora armed beneath with some short obtuse spines near apex.

Long. 22 millim. Exp. lat. ang. pron. 8 millim.

*Hab.* Milligalli (height unknown).

*S. culta*, by its peculiar markings, is nearest allied to *S. geniculata*, Dist., a Costa Rican species.

Division *Corearia*.

*Margus tibialis*, n. sp., Dist. MS., in Whym. Trav.  
Great Andes, Append., p. 113, n. 7 (1892).

Brownish grey, thickly and finely punctured with brown; head with the eyes and ocelli pale castaneous, the antenniferous tubercles obtuse, not spined; antennæ concolorous, the basal joint more or less black-speckled, especially beneath; the apical joint fuscous with its base paler, the second joint slightly longer than the third; extreme lateral margins of the pronotum ochraceous, spotted with fuscous, the rounded lateral angles narrowly fuscous or black; scutellum with the apex luteous, and with an indistinct pale central longitudinal line; nervures of the corium pale, spotted with reddish brown; membrane fuscous; abdomen above blackish, the connexivum reddish brown, indistinctly banded with luteous at the segmental incisures; body beneath pale brownish; abdomen with two central and a lateral row of small fuscous spots; legs ochraceous, the femora very thickly spotted and annulated with black, the tibiæ with a few blackish spots, the apices of the tarsi black; rostrum, especially in apical half, more or less clouded with piceous.

Long. 7 to 8 millim.

*Hab.* Eastern side of Corazon (12,000 ft.), eastern side of Pichincha (12,000 ft.), Hacienda of Guachala (9217 ft.), Machachi (9—10,000 ft.), Pacific slopes (7—8000 ft.).

This species is allied to both *M. pectoralis* and *M. pallipes* of Dallas.

Division *Harmostaria*.

*Harmostes corazonus*, n. sp., Dist. MS., in Whym. Trav.  
Great Andes, Append., p. 113, n. 8 (1892).

Fuscous, thickly and closely punctate; head dark fuscous, eyes pale ochraceous; antennæ with the basal and apical joints reddish brown, the last with its base ochraceous, second and third joints ochraceous speckled with brown, third a little longer than second; pronotum with a central longitudinal line, and the posterior margin very narrowly ochraceous, the lateral margin broadly ochraceous, punctured with brown, the punctures confluent at lateral angles; scutellum dark fuscous (*marked with pin*), the lateral margins narrowly ochraceous, with a pale spot on disk; corium with a distinct double series of fuscous spots on costal margin, and the nervures spotted with reddish brown; membrane pale hyaline; abdomen above black, the connexivum and a large apical spot ochraceous, the last containing two smaller black spots; body beneath more reddish brown than above, disk of mesosternum and central sulcation to metasternum black; femora reddish brown, thickly and darkly punctate; tibiae and tarsi pale ochraceous speckled with brown, apices of the tarsi black; posterior femora with some apical spines beneath, of which two are long, ochraceous, and apically black; rostrum ochraceous, with the apex black.

Long. 5½ millim.

*Hab.* Eastern side of Corazon (12,000 ft.).

This species is apparently allied to the Chilean *H. raphimerus*, Spin.

*Harmostes montivagus*, n. sp., Dist. MS., in Whym. Trav.  
Great Andes, Append., p. 113, n. 9 (1892).

Ochraceous, the head, pronotum, and scutellum thickly punctured with brown; antennæ ochraceous speckled with brown, the apical joint darker, pilose, and with its base ochraceous; third joint longer than second; pronotum with the margins (anterior and posterior narrowly) and a central longitudinal line ochraceous; scutellum with the margins and a central longitudinal line ochra-

ceous, the apex blackish; corium with some black punctures on costal margin, and a large brown patch near apical margin; the clavus brown-punctate; membrane pale hyaline, mottled with pale brownish; abdomen above ochraceous, the base, a transverse fascia about centre followed by two shorter fasciæ on each side, black; body beneath and femora ochraceous, punctured with reddish brown; tibiæ and tarsi luteous thickly speckled with fuscous, apices of the tarsi black, femora spined beneath at apex, two spines being prominent, long, and with their apices fuscous; rostrum ochraceous with its apex fuscous.

Long. 6 millim.

*Hab.* Machachi (9—10,000 ft.), eastern side of Corazon (12,000 ft.).

Fam. LYGÆIDÆ.

Division *Orsillaria*.

*Nysius procerus*, n. sp., Dist. MS., in Whym. Trav.  
Great Andes, Append., p. 113, n. 10 (1892).

Greyish, spotted and marked with fuscous and black. Head coarsely punctate, with a broad fascia between the eyes, interrupted in the centre; the lateral margins and the margins of the central lobe blackish; antennæ fuscous, second joint a little longer than the others, third and fourth subequal in length; eyes fuscous; pronotum coarsely punctate, with a broad transverse blackish fascia near anterior margin, and from which five narrow fuscous fasciæ radiate to posterior margin; lateral angles (excepting apex) dark fuscous and moderately nodulose; scutellum coarsely and blackly punctate, with a central black levigate cruciform impression, and the apex pale greyish ochraceous; corium longitudinally spotted with fuscous along the veins, and with three dark fuscous elongate spots on apical margin; membrane greyish, obscurely spotted with pale fuscous. Body beneath imperfectly seen owing to specimen being carded; legs pale ochraceous, femora spotted with dark fuscous, extreme base of tibiæ and apices of tarsi fuscous.

Long. 4 millim.

*Hab.* Machachi (9—10,000 ft.).

This species should be nearest allied to the Colombian *N. nubilis*, Dall., the type of which is no longer to be found in the British Museum.

Fam. CAPSIDÆ.

Subfam. CAPSINÆ.

Division *Miraria*.

*NEOMIRIS*, gen. nov., Dist. MS., in Whym. Trav.  
Great Andes, Append., p. 113 (1892).

Allied to *Miris*, and differing from that genus principally in having the posterior margin of the pronotum slightly emarginate and not covering the base of the scutellum, which is punctate, thus differing from *Megalocerea* and allies.

Head moderately long, scarcely or not deflected in front, and with a distinct and narrow longitudinal sulcation on basal half; antennæ about as long as the body, with the first joint robust, strongly pilose, and considerably longer than the pronotum; second joint finely pilose, and about twice the length of the first; third joint one-third shorter than second, and considerably longer than fourth. Pronotum coarsely punctate, longer than broad, the anterior margin slightly concave, the lateral margins more strongly concave, the lateral angles subnodulose, and with a somewhat faint transverse constriction near anterior margin, the basal margin emarginate and not covering the base of the scutellum. Scutellum coarsely punctate. Rostrum reaching or slightly passing the intermediate coxæ.

In the same year (1884) as I wrote the description of this genus, Dr. Reuter founded his *Dolichomiris* for the reception of a West African species; and I am obliged to Dr. Bergroth for informing me that a species of the same genus has since been received from Venezuela. *Neomiris* is closely allied to *Dolichomiris*, but differs by the coarsely punctured pronotum and scutellum; the subnodulose lateral angles to the pronotum, &c.

*Neomiris præcelsus*, n. sp., Dist. MS., in Whym. Trav.  
Great Andes, Append., p. 113, n. 11 (woodcut),  
(1892).

Body above brownish ochraceous; head with a broad black streak in front of each eye, and continued along margin to apex; antennæ with the apical half of the second joint more or less castaneous, the third and fourth joints fuscous. Pronotum coarsely punctate, with a central pale levigate longitudinal line, a large black spot at each anterior angle, extending to near middle of pronotum, and sometimes narrowly and more faintly continued to basal margin, which is also (excluding angles) blackish. Scutellum

coarsely punctate, with the apex and a central longitudinal line pale and levigate, and with a large black spot near each basal angle; corium finely punctate and pilose, the lateral margins and cuneus ochraceous; the clavus also *sometimes* paler; membrane fuscous; legs ochraceous, apices of the tarsi black. Body beneath imperfectly seen owing to the specimen being carded.

Long. 8 millim.

*Hab.* Hacienda of Antisana (13,300 ft.).

#### Division *Phytocoraria*.

*DIONYZA*, gen. nov., Dist. MS., in Whym. Trav. Great Andes, Append., p. 114 (1892).

Allied to *Compsocerocoris*, Reuter, but differing by the greater length of the basal joint of the antennæ, which is as long as the head and pronotum together; head more robust, wider and somewhat gibbous between the eyes; pronotum much flatter, not deflected from basal half.

*DionYZa variegata*, n. sp., Dist. MS., in Whym. Trav. Great Andes, p. 114, n. 12; woodcut facing p. 13 (1892).

Dull ochraceous, more or less mottled with dark fuscous; head with two dark fuscous spots near apex, and with a central longitudinal line, crossed by a lunate line between eyes, pale fuscous; eyes dark greyish; antennæ dull ochraceous, apex of the first joint narrowly whitish, before which is a short obscure pale fuscous annulation; second joint with a blackish annulation near base and apex, both of which are whitish; third joint pale fuscous, the extreme base and apex paler (fourth joint mutilated); pronotum thickly mottled with fuscous, the anterior and posterior margins ochraceous, and with a large central quadrate greyish spot; scutellum with a broad central fascia and the apex dark fuscous; corium mottled with pale fuscous, the apex of the clavus and some costal spots dark fuscous; cuneus pale ochraceous, the apex, a spot at each basal angle, and one on inner margin, dark fuscous; membrane ochraceous, mottled with fuscous. Body beneath and legs ochraceous, the margins more or less dark fuscous; femora annulated with fuscous on their apical halves; tibiæ annulated with fuscous near their extreme base and apex, apices of the tarsi dark fuscous; rostrum ochraceous, its apex fuscous.

Long. 7 millim.

*Hab.* Eastern side of Corazon (12,000 ft.).

*Calocoris montanus*, n. sp., Dist. MS., in Whym. Trav. Great Andes, p. 114, n. 13 (1892).

Brownish ochraceous, mottled with greyish; eyes fuscous; antennæ brownish ochraceous, apex of first joint whitish, second joint about twice the length of the first, its apex whitish preceded by a blackish annulation, base of the third joint whitish (fourth mutilated); membrane brownish ochraceous, mottled with fuscous. Body beneath brownish ochraceous, margins reddish castaneous; legs brownish ochraceous, femora with their apices annulated with fuscous, apices of the tibiæ and tarsi fuscous.

Long. 7 millim.

*Hab.* La Dormida, Cayambe (11,800 ft); Pacific slopes (7—8000 ft.).

Only one perfectly developed specimen of this species was captured, the others being immature examples. As observed in these the upper surface of the abdomen is reddish castaneous.

#### Division *Capsaria*.

*Lygus collinus*, n. sp., Dist. MS., in Whym. Trav. Great Andes, p. 114, n. 14 (1892).

Ochraceous, with blackish markings; head rather darker, with the eyes dark grey; antennæ with the second joint twice as long as the first, the apex blackish, apex of the third and the whole of the fourth joint fuscous; pronotum with the anterior margin greyish white, the lateral and basal margins (the last very broadly) blackish; scutellum blackish, the lateral margins from a little beneath basal angles and the apex pale ochraceous and levigate; corium with the disk infuscated, the clavus more or less infuscated, with the outer margin dark fuscous; cuneus infuscated, its inner margin dark fuscous; membrane dark fuscous. Body beneath obscurely seen, owing to specimen being carded; legs mutilated.

Long. 6 millim.

*Hab.* Hacienda of Guachala (9217 ft.).

*Lygus sublimatus*, n. sp., Dist. MS., in Whym. Trav. Great Andes, Append., p. 114, n. 15 (1892).

Ochraceous, covered with golden pubescence; eyes castaneous; antennæ black, first and second joints with an ochraceous annulation, that of the first central and of the second subbasal; scutellum with the basal margin and disk more or less blackish; corium with two blackish streaks, one on claval margin occupying its apical

half, the other commencing about middle of costal margin, and terminating at inner basal angle of cuneus; cuneus brownish; membrane pale fuscous, the cellular margin paler. Body beneath with the sternum fuscous, the abdomen ochraceous, legs ochraceous; femora with their apices speckled with fuscous; apices of the tarsi blackish.

Long. 5 millim.

*Hab.* La Dormida, Cayambe (11,800 ft.).

*Lygus excelsus*, n. sp., Dist. MS., in Whym. Trav.  
Great Andes, Append., p. 114, n. 16 (1892).

Ochraceous, marked and spotted with blackish; antennæ ochraceous, the apex of the second joint and the whole of the third and fourth joints fuscous; pronotum with two large basal central wedge-shaped spots, and a small spot at lateral angles, blackish; scutellum with the centre of the basal margin blackish; clavus more or less shaded with blackish, except at apex; corium with a broad irregular central transverse blackish fascia; cuneus ochraceous; membrane pale fuscous, spotted with darker fuscous at base and apex. Body beneath pale brownish ochraceous, with a central blackish fascia; legs mutilated.

Var. Paler than the typical form as here described; the spots on the pronotum smaller; clavus pale and unicolorous; the transverse fascia to corium smaller and more indistinct.

Long. 5 millim.

*Hab.* Eastern side of Corazon (12,000 ft.).

#### Division *Bryocoraria*.

LYDE, gen. nov., Dist. MS., in Whym. Trav. Great Andes, Append., p. 114 (1892).

Allied to *Ania*, but differing by the shorter and more ovate body; the basal joint of the antennæ much shorter, very little longer than the head; the second joint half as long again as the first; pronotum relatively shorter and broader.

*Lyde translucida*, n. sp., Dist. MS., in Whym. Trav.  
Great Andes, Append., p. 114, n. 17; woodcut facing p. 113 (1892).

Head dull ochraceous, with a black spot behind the eyes, which are greyish; antennæ ochraceous, the outer margin of the basal joint, the apex of the second, the apical third of third, and the whole

of the fourth joint, fuscous; pronotum pale ochraceous, the punctures on the basal half dark and pale brownish, the anterior collar greyish and margined with black both above and beneath, the preceding constriction dark ochraceous, the lateral angles subnodulose and dark fuscous; scutellum black; corium pale hyaline, base of costal margin and an oblique linear spot near inner apex blackish; cuneus pale hyaline; membrane pale hyaline, very slightly infuscated; anterior legs pale ochraceous, remainder mutilated. Body beneath pale ochraceous, sternum with two blackish marginal oblique spots.

Long. 4½ millim.

*Hab.* Pichincha (12,000 ft.).

Fam. ARADIDÆ.

Subfam. BRACHYRHYNCHINÆ.

Division *Brachyrhyncharia*.

*Cinyphus? obscurus*, n. sp., Dist. MS., in Whym. Trav.  
Great Andes, Append., p. 114, n. 18; woodcut,  
p. 115 (1892).

Fuliginous brown; legs and antennæ darker and more fuscous; apex of the last joint of antennæ and bases of the tibiae ochraceous; eyes obscure greyish; apex of the corium pale fuscous; body beneath very dark fuscous; coxæ ochraceous, tarsi beneath with their bases distinctly ochraceous; rostrum brownish ochraceous, its apex somewhat pitchy. The head has a long prominent spine on each side in front of the eyes at the base of the antennæ, and a second more obtuse spine behind the eyes; antennæ with the basal joint globosely incrassated and reaching apex of head, which is cleft; third joint slightly longer than first; fourth globosely incrassated, and subequal to, or a little shorter than, second; pronotum with the anterior angles lobately produced, behind which the lateral margins are concavely sinuated, convexly round at middle, and then obliquely truncated to lateral angles; basal margin slightly concave before base of scutellum, disk of anterior lobe with two central stout obtuse tubercles; scutellum with two central large and deep foveæ; corium slightly and lobately produced at base of costal margin.

Long. 8 millim.

*Hab.* Forests above the Bridge of Chimbo (1—300 ft.).

I have provisionally retained this species in the genus *Cinyphus*, to which it has the strongest affinities. It differs, however, in the structure of the antennæ, and

will doubtless eventually necessitate the creation of a new genus for its reception.

*Aneurus flavomaculatus*, n. sp., Dist. MS., in Whym. Trav. Great Andes, Append., p. 115, n. 19 (1892).

Black; membrane with a large irregular dull ochraceous spot at base; basal joint of the antennæ short, very globosely incrassated, and not reaching apex of head; second and third joints subequal, apical joint very much the longest; pronotum with the anterior angles rounded, the lateral margins acutely sinuate near centre, lateral angles rounded. The head, pronotum, and scutellum are very coarsely punctate. Body beneath black, the coxæ and disk of abdomen castaneous.

Long. 6 millim.

*Hab.* Eastern slopes of Pichincha (12,000 ft.).

Fam. REDUVIIDÆ.

Subfam. STENOPODINÆ.

*Stenopoda scutellata*, n. sp., Dist. MS., in Whym. Trav. Great Andes, Append., p. 116, n. 23, woodcut (1892).

Pale ochraceous; eyes black; head with a central longitudinal fascia on basal third, interrupted at eyes and forked anteriorly; pronotum with three central fasciæ, widened and fused posteriorly; a shorter and narrower fascia on each side, and a narrow marginal line; scutellum, excluding apex, a broad central streak to clavus—widened posteriorly—a basal spot and a larger and irregularly bifid central spot to membrane, a series of linear, marginal, and oblique spots to connexivum, irregular spots and markings to anterior femora, apices of intermediate and posterior femora, a central annulation to posterior femora, two broken annulations to tibiæ—one at and the other near base—apices of tibiæ and tarsi, a marginal line to prosternum, an oblique lateral line to meso- and metasternum, a submarginal fascia to abdomen, a series of spiracular spots and connexivum, with the markings as above, dark fuscous or blackish; antennæ with the basal joint pale ochraceous, with a broad central fuscous annulation; second joint fuscous, with a subapical pale annulation; third joint ochraceous, remainder mutilated; scutellum with a small suberect nodulosity on each side near base.

Long. 20 millim.

*Hab.* Guayaquil (indoors).

*Prohirmus whymperi*, n. sp., Dist. MS., in Whym. Trav. Great Andes, Append., p. 117, n. 24, woodcut (1892).

Pale ochraceous, marked and shaded with fuscous; head with the lateral margins, a central longitudinal line on the post-ocular portion, and two lines with a common base on the ante-ocular portion, fuscous; antennæ ochraceous, the basal joint mottled with brownish; eyes fuscous; pronotum with a central longitudinal fascia, widened posteriorly, on each side of which are two other more obscure narrower fasciæ, fuscous; scutellum fuscous; corium infuscated, with the veins ochraceous; membrane pale fuscous; connexivum spotted with fuscous. Body beneath and legs ochraceous; anterior femora mottled with brownish, and with a distinct subapical brownish annulation; intermediate and posterior femora mottled with brownish, with black apical annulations (the intermediate in some varieties with a second black annulation); anterior and intermediate tibiæ biannulated with brownish; the lateral angles of the pronotum are obtusely nodulose; the scutellum has a deep central basal longitudinal sulcation.

Long. 13 to 14 millim.

*Hab.* La Mona (100 ft.).

Fam. ACANTHIADÆ.

*Acanthia andensis*, n. sp., Dist. M.S., in Whym. Trav. Great Andes, Append., p. 118, n. 26, woodcut (1892).

Shining black; apex of the head, costal margin of corium, excepting base, and terminating in a spot at apex and a spot near base, membrane, excluding cellular margins, coxæ, and legs, ochraceous; some small obscure greyish spots on disk of corium, and two spots of the same colour at apical margin, the largest and outermost with a black centre; antennæ castaneous, the two apical joints more or less fuscous; margins and veins of the membrane fuscous; eyes greyish, mottled with dark fuscous; apices of the tibiæ and tarsi dark fuscous; rostrum pale castaneous; the membrane possesses four normal cells, a fifth and innermost being more or less rudimentary; the antennæ are strongly hirsute, the second joint longest (almost twice the length of the first), the third a little shorter than the fourth.

Long. 4 millim.

*Hab.* Machachi (9—10,000 ft.).

## Suborder HOMOPTERA.

## Fam. CICADIDÆ.

*Carineta fimbriata*, n. sp., Walk. MS., in Brit. Mus.;  
Dist. MS., in Whym. Trav. Great Andes, Append.,  
p. 119, n. 31, woodcut (1892).

Head and pronotum above ochraceous; the abdomen castaneous; the former moderately pilose, the last strongly so; ocelli red; eyes sometimes greyish, sometimes black; pronotum with two contiguous central black spots at anterior margin, united posteriorly and extending in a central line to edge of posterior margin; on each side of these is a rounded black spot, followed by an oblique looped marginal spot; mesonotum with four obconical black margined spots at base, the two central shortest, behind which is a black spot, subquadrate in shape, with a central lanceolate production; abdomen thickly covered with greyish pile. Body beneath strongly pilose, the sternum more or less ochraceous, the abdomen dark castaneous; legs ochraceous, the anterior femora subannulated at base and apex with blackish, the intermediate and posterior femora streaked beneath with blackish; anterior tarsi blackish, intermediate and posterior tarsi with the bases and apices blackish; rostrum castaneous, the apical half castaneous; tegmina and wings pale hyaline; tegmina with the basal half of the venation more or less ochraceous, the remainder fuscous; costal area and membrane ochraceous; a spot at the end of radial area, a spot at the base of second and third apical areas, a small spot beneath radial area, and the "limbus enervis" from apex of lower ulnar area to base, fuscous; some obscure marginal spots on apical third of costal and on the whole of outer margins; wings with a central fuscous spot, and the abdominal area margined with the same colour.

Long. 21 millim.; exp. tegm. 70 millim.

*Hab.* Nanegal (3—4000 ft.), Quito (9350 ft.), Machachi (10,000 ft.).

I had previously received this species from Ecuador, where it seems to be of a somewhat abundant character. It is named *C. fimbriata*, Walk., in the collection of the British Museum, but I have failed to find any published description of the species.

## Fam. CERCOPIDÆ.

## Subfam. CERCOPINÆ.

*Sphenorhina ruida*, n. sp., Dist. MS., in Whym. Trav.  
Great Andes, Append., p. 119, n. 32 (1892).

Dark brownish ochraceous, very thickly and finely punctured; head paler ochraceous; the eyes, antennæ, and a broad central longitudinal fascia, black; tegmina with a distinct greyish white spot on costal margin at about one-third from base; a much more obscure and less pale mark at base, and the apical half of tegmina also more or less paler in hue. Body beneath pale ochraceous; the upper half of face black, margins and apex of abdomen castaneous; legs pale greenish, ochraceous beneath, brownish ochraceous above; apices of the femora, bases and apices of the tibiæ, and the tarsi, fuscous; rostrum brownish, with the apex black.

Long. 8 millim.

*Hab.* Forests above the Bridge of Chimbo (1—3000 ft.).

*Sphenorhina tullia*, n. sp. (*S. jullia*, sic), Dist. MS., in  
Whym. Trav. Great Andes, Append., p. 119, n. 33  
(1892).

Pale brownish ochraceous, thickly and finely punctured; head ochraceous; eyes, antennæ, and a broad central longitudinal fascia to head black; pronotum with two obscure ochraceous discal spots near anterior margin; scutellum with the apex ochraceous; tegmina with a pale ochraceous spot at base of clavus, a transverse fascia (somewhat fractured by the veins) at about one-fourth from base, and two longitudinal fasciæ on basal half also pale ochraceous; abdomen above brownish ochraceous, the apex pale. Body beneath and legs pale ochraceous, the abdomen brownish ochraceous, with the apex pale; upper portion of the face black; anterior and intermediate tibiæ, apices of the posterior tibiæ, and the tarsi, fuscous.

Long. 9 millim.

*Hab.* Forests above the Bridge of Chimbo (1—3000 ft.).

## Fam. JASSIDÆ.

## Subfam. TETTIGONINÆ.

*Tettigonia medusa*, n. sp., Dist. MS., in Whym. Trav.  
Great Andes, Append., p. 120, n. 36 (1892).

Head black; anterior margin, inner margin of eyes, lateral portions of posterior margin divided by a subquadrate spot, yellow; pronotum with the anterior portion black, the posterior area choco-

late-brown, with two large central spots and a small intervening spot yellow; scutellum black, with four yellow spots, the two anterior longitudinal and curved, the two posterior transverse; tegmina pale chocolate-brown, the inner claval margin and two discal longitudinal fasciæ, the outermost connected with the costal margin by a spot near apex, very pale creamy stramineous; the centre of the costal margin narrowly yellowish. Body beneath black; the inner margin of eyes, face—interrupted by a black line—some spots at lateral margin of pronotum, yellow; abdomen with the connexivum orange spotted with black, the apex and posterior margin of the abdominal segments yellowish; legs ochraceous, the tarsi and the tibial spines black.

Long. 8 millim.

*Hab.* Machachi (9—10,000 ft.).

This species is allied to the *T. Walkeri*, Sign., a species received from Quito.

*Tettigonia duplicaria*, n. sp., Dist. MS., in Whym. Trav. Great Andes, Append., p. 120, n. 37, woodcut (1892).

Black; head with the eyes and a large central frontal spot (sometimes divided) greyish; tegmina with the apical half more or less irregularly ochraceous, traversed by an irregular longitudinal black fasciæ, the claval margin also black; wings pale hyaline; body beneath and legs black.

Var. Tegmina with the apical half irregularly greyish instead of ochraceous.

Long. 8 millim.

*Hab.* Machachi (9—10,000 ft.), Hacienda of Guachala (9217 ft.).

VI. *On some neglected points in the structure of the pupæ of Heterocerous Lepidoptera, and their probable value in classification; with some associated observations on larval protegs.* By Dr. THOMAS ALGERNON CHAPMAN, M.D., F.E.S.

[Read February 22nd, 1893.]

DESULTORY and unrecorded observations of many years on pupæ were recently thrown into order and invested with a meaning by a study of the earlier stages of the *Adelidæ*, and I have since taken more accurate notes of the structure of the pupæ of many species. Such accurate record, however, is a tedious and laborious process, and to go over the whole ground, or even a large fraction of it, will involve many years' work, and require the combined energies of a number of observers. I have therefore thought it better to bring the subject forward in its present imperfect state, in order to direct attention to it, rather than wait an indefinite time for the comparatively small additions I should myself be able to make; and, whilst apologising for the want of a larger mass of material, I may say that the indefinite and unnoted work of many years enables me to handle the material I have with more confidence than its own amount might appear to justify.

Descriptions of pupæ are often very minute in various particulars, but it is curious that they are usually silent on the points that I desire to draw attention to. One consequence of this is, that almost every fact that I here report has had to be observed by myself, with no assistance from any published description. The reference to the pupa of *Nascia ciliaris*, described by Mr. W. H. B. Fletcher, is, indeed, almost the only exception, though I am indebted to various correspondents for materials for observation. This is one excuse for calling attention to the subject as early as possible. It is very desirable that these omissions may in the future be supplied, and