

it be not identical. The only distinction appears to be in *Eucopia* having the posterior two pairs of pereopoda filiform, whereas *Chalaraspis* has only the posterior pair filiform. But Dana says that his specimen, which was taken from the stomach of a penguin, had the last "four partly broken."

Willemoes-Suhm says "the last pair of pereopods . . . very hairy and without branchiæ. Three branches of branchiæ on the base of the gnathopoda and first four pereopoda, two of which are covered by the carapace." These branchiæ he figures as dendrobranchiate. Dana remarks of his species *Eucopia australis*:—"Branchiæ attached to the base of thoracic legs, irregularly foliaceous, in many folds."

Chalaraspis unguiculata, Willemoes-Suhm.

Length 35-37 millim.

Taken in the South Atlantic in from 350 to 2500 fathoms of water. "Common, with as wide a geographical as bathymetrical distribution."

EXPLANATION OF THE PLATES.

PLATE XI.

- Fig. 1.* *Penæus setiferus*, L., male. *c*, portion of flagellum of first pair of antennæ; *p*, petasma and base of first pair of pleopoda; *T*, telson.
Fig. 2. *Penæus monoceros*, Fabricius, female.
Fig. 3. *Penæus brevicornis*, Milne-Edwards, male. *p*, petasma and base of first pair of pleopoda.
Fig. 4. *p*, petasma and first pair of pleopoda of *Penæus Bocagei*, Johnson, male.

PLATE XII.

- Fig. 5.* *Penæus indicus*, M.-Edwards, female. *v p*, ventral plate.
Fig. 6. *Penæus affinis*, M.-Edwards, male. *m*, *n*, *o*, third, fourth, and fifth pereopoda; *v*, outer plate of rhipidura.

XX.—*Notes on Longicorn Coleoptera.—Revision of the Ærénicides and Amphionychides of Tropical America.*
 By H. W. BATES, F.R.S., F.L.S.

[Continued from p. 152.]

AMPHIONYCHA.

Amphionycha, Leseleuc in Guérin, Mag. Zool. 1844, t. 138; Lacordaire, Gen. Col. ix. p. 890 (1872).

After the withdrawal of its more aberrant constituents, this genus still remains exceedingly numerous and polymorphic. It comprehends all species of cylindric or linear form, with

cylindrical or at most slightly rounded thorax and high elytral epipleuræ surmounted by carinæ, and antennæ in which the joints are slender and filiform, sparsely ciliated beneath, chiefly along the basal half, and with the third joint conspicuously longer than the following. The head is retracted beneath, often to a remarkable degree, the mouth resting on the strongly exerted anterior haunches, and the prosternum greatly contracted; but the occipital development varies greatly, this part in some species being much elongated and exerted, in others retractile nearly up to the eyes within the thorax. The relative volume of the head is often a sexual character, the head in the male being small or normal, triangularly depressed between the antennæ, and in the female enlarged and gibbous, with plane and elongated forehead and much elongated mandibles. The species in many cases admit of combination in natural groups, which I have indicated in the catalogue at the end of this paper.

Amphionycha charis.

Breviter subcylindrica, castaneo-fulva, subtiliter tomentosa, thorace vitta utrinque laterali (postice angustata), scutello et elytris utrinque maculis quatuor (prima obliqua suturali basin versus, secunda discoidali post medium, tertia parva subsuturali posteriore, quarta minuta laterali) cretaceis; antennis scapo articulisque cæteris apice nigris, pedibus melleo-flavis; subtus pro- et mesosterno vitta lata laterali abdominisque segmento primo macula magna laterali, secundo et tertio maculis parvis, cretaceis: capite lato, inter antennis paullo depresso, fronte magna, fere plana; thorace lateribus rectis; elytris apice rotundatis, dorso vix convexis, basin versus punctulatis, carina laterali flexuosa.

Long. 6 lin. ♀.

Ecuador (*Buckley*).

Amphionycha albiventris.

A. chariti proxime affinis, at differt corpore subtus omnino cretaceo etc. Oblongo-cylindrica, castaneo-fulva, tenuiter ochraceo tomentosa, thoracis lateribus (striga angusta episterni excepta) cretaceis, scutello, elytris maculis utrinque sex (prima parva basali, secunda magna suturali basin versus, tertia paullo minore rotundata discoidali post medium, quarta transversa lata fasciiformi prope apicem, quinta et sexta marginalibus) cretaceis; antennis omnino rufo-castaneis; pedibus melleo-flavis: capite lato, fusco, genibus postice canis, fronte magna fere plana; thorace cylindrico, ante basin paullo constricto; elytris apice rotundatis obtusissime subtruncatis, carina laterali flexuosa.

Long. $6\frac{1}{2}$ lin. ♀.

Venezuela.

Amphionycha leucodryas.

A. chariti et *albiventri* proxime affinis, at differt forma multo angustiore. Gracilis, fulvo-castanea, corpore subtus (medio nigro-fusco excepto) cretaceo; supra macula utrinque post oculum, thorace toto (linea angusta dorsali et altera utrinque episternali exceptis), scutello elytrisque utrinque maculis sex (prima minuta indistincta basali, secunda maxima quadrangulata suturali, tertia rotundata discoidali post medium, quarta prope apicem suturali quadrata, quinta et sexta parvis marginalibus) cretaceis; antennis melleo-flavis, apicem versus fuscescentibus, scapo nigro; pedibus melleo-flavis: capite parvo, inter antennis concavo et impresso-lineato, fronte convexa; thorace cylindrico, ante basin paullo constricto; elytris apice rotundatis, obtusissime truncatis, carina laterali flexuosa.

Long. $4\frac{1}{2}$ lin. ♂.

New Granada.

In its slender form similar to *A. sexguttata* (Lucas) of the same group, which, however, is only 7 millim. long, and has the chalky-tomentose markings of its elytra reduced to six rounded spots.

Amphionycha tribalteata.

Gracilis, tomento niveo compacto vestita, elytris fasciis angustis tribus carinulaque laterali castaneis, prima carinulam haud attingente; antennis griseo-nigris; pedibus melleo-flavis: capite (♂) inter antennis haud depresso, fronte fusca; thorace cylindrico, basi valde depresso, paullo angustato, punctis disci duobus, altero utrinque laterali, nigris; elytris apice rotundatis, carina laterali flexuosa.

Long. 5 lin. ♂.

Chanchamoyo, Peru (*Dr. Thamm*).

Amphionycha læta.

Parva, gracilis, rufo-fulva, albo-tomentosa, antennis fulvis, pedibus albo-testaceis; thorace lineis duabus, elytris fasciis duabus, denuclatis: capite inter antennis vix concavo, fronte convexa, pilosa; thorace fere cylindrico; elytris obtuse truncatis, apicem versus interdum nigrescentibus; antennis quam corpus dimidio longioribus laxè ciliatis.

Long. 4 lin.

New Granada, Venezuela, and Peru.

A common insect long known in collections under the name I have adopted.

Amphionycha spilota.

A. scalaris (Pasc.) similis. Parva, supra alba, elytris marginibus fasciisque utrinque quatuor suturam haud attingentibus claviculos simulantibus (prima prope basin magis curvata) nigris; thorace vitta laterali (e medio ramum in discum emittente) et maculis medianis duabus (prima juxta marginem anteriorem, secunda dorsali) nigris: capite inter antennis depresso, fascia verticis fronteque nigris; antennis (♀) corpore dimidio longioribus, fulvo-rufis, articulis primo et secundo nigris, tertio ad quintum apice fuscis; subtus cinereo-nigra, lateribus albis; pedibus fulvis. Long. 4 lin. ♀.

Rio Grande do Sul, Brazil.

Closely resembling *A. scalaris* (Pascoe) from New Granada and Panama. The black markings of the elytra are in the same position; but the four belts are narrower near their commencement at the black border, and are dilated at their termination at a short distance from the suture; the epipleuræ are black and shining, except that there is a white spot under the shoulder and another after the first black fascia. The lateral carina is more strongly elevated than it is in *A. scalaris*.

Amphionycha sexlineata.

Major, cylindrica, cretaceo-tomentosa, elytris utrinque lineis tribus parallelis (a basi usque longe ultra medium continuatis) maculisque tribus transversis prope apicem nigris; fronte nigra opaca; capite postice punctis quatuor, thoraceque punctis sex sic (: : :) dispositis, nigris; antennis nigris; corpore subtus cinereo-nigro, vitta lata laterali cretacea; pedibus fulvis: capite inter antennis paullo concavo, oculis infra magnis; thorace breviter cylindrico; elytris apice obtusissime truncatis, carina laterali subrecta.

Long. 8½ lin. ♀?

Constancia, Rio de Janeiro (*Rev. Hamlet Clark*).

Amphionycha theaphia.

E majoribus: elongata, postice attenuata, tomento compacto albo-sulphureo vestita, vitta laterali ab oculo usque ad elytrorum apicem ducta (dentes duos in dorsum elytrorum emittente), linea tenui verticis et thoracis dorsi fronteque tota umbrinis; corpore subtus albo-sulphureo, vitta centrali pedibusque umbrinis; antennis umbrinis, articulis primo et secundo nigris: capite inter antennis (♀?) depresso, fronte abbreviata vix convexa, oculis maximis; thorace paullo elongato, cylindrico, basi constricto, lateribus ante stricturam subtuberculatis; elytris versus apicem angustatis subacuminatis, apice breviter truncatis, carina laterali nulla, epipleuris verticalibus tenuiter tomentosis, punctulatis.

Long. 9½ lin. ♀?

Ecuador (*Buckley*).

Amphionycha dilaticeps.

Brevis, subcylindrica, postice angustata, fulvo-rufa, pedibus melleo-flavis, antennis apice fuscis; thorace lateribus, elytris utrinque maculis vel fasciis duabus magnis (una ante, altera post medium) albo-tomentosis: capite vix exserto sed latissimo et fronte longissima, mandibulisque valde elongatis; oculis ut in gen. *Tetraope* divisis; thorace antice lato, postice angustato, dorso gibboso, basi constricto; antennis basi ciliatis, scapo longissimo, clavato; elytris apice rotundatis, carina laterali acuta, valde flexuosa.

Long. $4\frac{1}{2}$ lin. ♀.

Santa Marta, New Granada.

Amphionycha dimidiata.

Elongata, subcylindrica, flava, elytrorum dimidio apicali, pectore abdominisque apice, nigris: capite angusto, retracto, inter antennis declivi (tuberibus antenniferis elevatis), fronte convexa, epistomate nigro, occipite maculis tribus, genibus utrinque una, nigris; thorace antice angustato, basi latiore, disco anteriore maculis duabus, episternis utrinque una, nigris; elytris parallelis, apice late rotundatis, dorso versus apicem subito declivi, carinis lateralibus utrinque duabus; antennis (♀) corpore multo brevioribus, gracilibus.

Long. 8 lin. ♀.

New Granada.

Amphionycha bisellata.

Cylindrica, nigra opaca, thorace supra (macula rotunda dorsali margineque anteriore medio exceptis), elytris fascia recta subapicali metasternoque macula utrinque laterali flavis: capite subtus valde retracto, inter antennis depresso, fronte brevi, plana; thorace transverso, medio rotundato, ante basin fortiter constricto; elytris parallelis, convexis, apice late obtuse rotundatis, carina laterali obtusissima, epipleuris altis; antennis quam dimidium corporis paullo longioribus, sparsim ciliatis.

Long. 8 lin. ♀?

Macas, Ecuador (*Buckley*).

A peculiar species in form, colour, and clothing, but not sufficiently different to be separated generically from *Amphionycha*, its peculiarities being those of *A. dimidiata* carried a little further. The lateral carina is marked as a distinct angle separating the dorsal surface of the elytra from the epipleura; but it does not form a rib; or if it does, the elevation is concealed by the dense black pile of the elytra. The yellow colour of the thorax and apical belt of the elytra is associated with pilosity of a very peculiar nature, which I have not noticed in any other species; it resembles the texture

of a blanket or sponge, and is formed of coarse loosely-felted short hairs.

Amphionycha suturata.

Modice elongata, cinereo-nigra, thorace dorso (vitta mediana postice dilatata excepta), elytris sutura et lateribus (haud usque apicem) fronteque vittis duabus albis; pedibus et antennis fulvis, tibiis tarsisque apice, scapo articuloque tertio, quarto apice, quinto ad undecimum totis nigro-fuscis: capite inter antennis concavo, fronte convexa, vertice nudo grosse punctato; thorace antice angustato, angulis posticis prominulis; elytris apice obtuse rotundatis, dorso punctulatis, carina laterali simplici, subrecta, elongata; antennis (♂) corpore dimidio longioribus.

Long. $5\frac{1}{4}$ lin.

Brazil.

Amphionycha pubicornis.

Angustior, cylindrica, passim setosa, castaneo-fusca, subtiliter cinereo pubescens, capite, thorace antice, elytrorum sutura marginibusque et pedibus (tibiis tarsisque fusciscentibus) testaceo-fulvis, thorace utrinque linea obliqua antennarumque articulis quarto et quinto albo-testaceis: capite inter antennis profunde concavo, fronte valde convexa, vertice ♂ plano, ♀ valde convexo, geni dilatatis, mandibulis magnis; thorace antice angustato, post medium paululum dilatato, deinde iterum angustato, angulis posticis prominulis; elytris apice truncatis, angulo exteriori dentiformi, dorso lineatim punctulatis, carina laterali subrecta apicem fere attingente.

Long. 4 lin. ♂ ♀.

Lower Amazons (*H. Smith*).

Although very closely allied to *A. suturata*, this species differs in many important points. The depression between the antennæ exists in both sexes, and takes the form of a very deep fovea. The erect pubescence extends over the whole body, including legs and antennæ, fine erect hairs clothing the latter organs on all sides from base to apex, but replaced underneath the basal joints by the usual long cilia characteristic of the genus. The sexual differences in the size and convexity of the head and development of the mandibles it has in common with many allied species.

Amphionycha postilenata.

Subcylindrica, nigro-fusca, subtiliter pubescens, vix pilosa, fronte, thorace fasciaque postica elytrorum sulphureis, elytris apice griseis: antennis tenuibus, scapo elongato paululum clavato, articulo tertio valde elongato, infra sparsim longe ciliato; scapo subtus, articulo tertio quartoque basi fulvo-testaceis; capite antice

modice convexo, inter antennis late concavo, apud oculos quam thorax multo latiore; thorace medio rotundato-dilatato, angulis posticis productis acutis; elytris apice obtusissime truncatis, carina laterali subrecta; palpis flavis; corpore subtus griseo, femoribus subtus flavo-testaceis.

Long. $5\frac{1}{4}$ lin. ♂.

Rio Janeiro, Novo Friburgo.

Allied to *A. colligata*, Redt. (*clathrata*, Dej. Cat.).

Amphionycha rectilinea.

Gracilis, supra planata, erecte pilosa, griseo-nigra, capite antice, thorace lateribus elytrisque marginibus et apice canis; femoribus et tibiis melleo-flavis: capite (♂) inter antennis depresso, macula frontali, altera post oculum et vertice, nigris; thorace breviter cylindrico, medio rotundato-dilatato, angulis posticis productis acutis; dorso plaga magna (medio linea cinerea) vittaque marginali nigris; elytris apice subacute conjunctim rotundatis, carina laterali acutissima, recta, apicem fere attingente; antennis (♂) corpore dimidio longioribus, pilosis, articulis primo ad sextum infra ciliatis.

Long. 4 lin. ♂.

Minas Geraes, Brazil.

Amphionycha longipennis.

Linearis, valde elongata, subplanata, sparsim pilosa, cinereo-nigra, fronte, linea laterali thoracis, sutura marginibusque elytrorum flavo-cinereis; femoribus basi testaceo-flavis: capite (♂) parvo, inter antennis late et valde concavo; thorace antice angustato, basi latissimo, angulis posticis productis acutis, medio paullulum rotundato, dorso punctato, nitido; elytris relative elongatis, parallelis sed lateribus apicem versus paullo dilatato-explanatis, apice sinuato-truncatis, dorso subcrebre punctulatis, carina laterali acutissima subrecta, apicem fere attingente; antennis nigris, articulis basi anguste (quartoque medio) flavo-testaceis.

Long. 6 lin. ♂.

Rio Macas, Ecuador (*Buckley*).

Amphionycha fenestrata.

Nigra, elytris utrinque medio macula alba oblonga suturam haud attingente: capite ♀ lato, inter antennis plano, occipite valde convexo; ♂ normali, inter antennis concavo; genis albis; thorace curto, medio paullo dilatato, ♀ basi constricto, supra inæquali; elytris apice singulatim rotundatis, crebre punctulatis, carina laterali recta, acuta, mox ante apicem subito terminata; antennis utroque sexu corpore paullo longioribus, sparsim ciliatis, articulo tertio quam quartus ♂ paullo, ♀ multo longiore.

Long. 5 lin. ♂ ♀.

Rio Janeiro, Novo Friburgo.

A species remarkable for the sexual differences in the head, thorax, and antennæ.

The male agrees in many respects with the genus *Isomerida*, whilst the female has the characters of *Amphionycha*; the antennæ of the male, however, are sparsely ciliated, and not furnished with tufted pencils of hair as in *Isomerida*. The whole insect is deep black, except a streak under each eye and on the epistome, and a large oblong spot on each elytron, which are hoary white.

Amphionycha fuscipennis.

Cylindrico-oblonga, flavo-testacea (abdomine metasternoque interdum fuscis), capite antennisque nigris, elytris piceo-fuscis, tenuiter pubescentibus, thorace tomento compacto flavescente tecto: capite (cum oculis) quam thorax utroque sexu vix latiore, inter antennas concavo, fronte convexa; thorace medio utrinque prominulo, antice leviter angustato, postice subconstricto; elytris convexis, ante apicem subito declivibus, apice late subtruncato-rotundatis, dorso seriatim punctulatis, carina laterali subrecta, longe ante apicem terminata; antennis nigris; pedibus nigris, femoribus (apice exceptis) flavis.

Long. 5-6 lin. ♂ ♀.

Yungas of La Paz, Bolivia (*Buckley*); Chanchamayo, Peru (*Dr. Thamm*).

The Peruvian specimens have the under surface of the body wholly pallid; in one from Bolivia the abdomen and sides of the metathorax are blackish. The Bolivian specimens are 5 lines long, that from Peru 6.

Amphionycha fulvicornis.

Modice elongata, nigra, antennis melleo-fulvis, scapo apice, articulisque secundo et apicalibus fuscis; thorace vitta (antice dilatata) laterali alba: capite ♀ magno, occipite valde convexo; ♂ normali, inter antennas concavo; thorace basi valde constricto, disco nitido; elytris apice rotundatis, supra crebre punctatis; carina laterali recta, apicem fere attingente; antennis utroque sexu corpore paullo longioribus, sparsim ciliatis, articulo tertio quam quartus ♂ paullo, ♀ multo longiore.

Long. $4\frac{1}{2}$ -5 lin. ♂ ♀.

Rio Janeiro, Novo Friburgo.

In structure similar to *A. fenestrata*, and agreeing with that species in the sexual differences as to the size of the head and the length of the third antennal joint. In colours it is totally different.

Amphionycha discicollis.

Robusta, rufo-testacea, vertice utrinque post oculum elytrisque (sutura et apice exceptis) fusco-nigris, griseo tenuiter pubescenti-

bus, thorace medio plaga magna nigra nitida: capite (cum oculis) quam thorax utroque sexu vix latiore, inter antennis depresso; thorace antice paullo angustiore, disco quinetuberculato; elytris elongato-oblongis, convexis, ante apicem paullo subito declivibus, apice subtruncato-truncatis, dorso punctulatis, carina laterali recta acuta, longe ante apicem terminata, carinula accessoria carinæ parallela, minus elevata sed longius prolongata; antennis nigris, scapo subtus et apud apicem rufo, articulo quarto albo; pedibus nigris, femoribus vel totis vel subtus tantum flavis.

Long. $7\frac{1}{2}$ lin. ♂ ♀.

Ecuador (*Buckley*).

Amphionycha rubra.

Oblongo-cylindrica, postice angustata, rufa, antennis nigris: capite (♂) magno, exserto, infra retracto, inter antennis depresso, vertice valde convexo, fronte elongata, planata, oculis parvis; thorace breviter cylindrico; elytris apice late truncatis, angulo exteriore paullulum producto, medio dorso planato, apice declivi, carina laterali subrecta, abbreviata, carina accessoria flexuosa, longiore.

Long. 6 lin. ♀.

Novo Friburgo, Rio Janeiro, Brazil.

Amphionycha urocosmia.

Gracilis, flavo-testacea, subnuda, metathorace (medio), abdomine elytrisque dimidio apicali nigris, his plaga magna subapicali canotomentosa; antennis (♀) corpore longioribus, cinereo-nigris, articulo quarto flavo; capite exserto, inter antennis planato, fronte convexa, lateribus paullo rotundatis; thorace cylindrico, basi constricto; elytris apice subsinuatim truncatis, angulis productis, dorso sublineatim punctulatis, epipleuris nitidis, carinis duabus æqualiter acutis.

Long. $4\frac{1}{2}$ lin. ♀.

New Granada.

[To be continued.]

XXI.—*On a Collection of Crustacea made by Baron Hermann-Maltzam at Goree Island, Senegambia.* By EDWARD J. MIERS, F.L.S., F.Z.S.

[Plates XIII., XIV., XV., & XVI.]

THE collection that forms the subject of the present Report, which will be continued in the two succeeding numbers of the 'Annals,' is of very considerable interest, as having been made in a locality hitherto scarcely visited by the carcino-