

between leaves and petals in the situation of the colours; and the location of the colours of the petals in the rete, a fact hitherto unnoticed, and one which may hereafter throw light on some interesting points of vegetable physiology.

Reference was made to another kind of colours, also found in the leaves and petals. These, with their peculiarities, which may prove not devoid of practical interest, together with some other matters connected with the subject or suggested by it, remain to be brought forward at some future time.

London, June 9, 1845.

V.—*Descriptions of Coleopterous Insects collected by Charles Darwin, Esq., in the Galapagos Islands.* By GEORGE R. WATERHOUSE, Esq.

THE insects here described are nearly all of small size, and none of them display any brilliant colouring. Some of the species are referable to a little group found in Chile and Peru,—the genus *Ammophorus*, a genus hitherto only found in those parts; others appertain to a genus (*Anchonus*) which is almost confined to the West Indian islands and the northern parts of South America. Again, in the collection under consideration are species of genera which are found all over the world or nearly so, such as *Feronia*, *Notophus* and *Oryctes**; and, lastly, there are species

* It is from genera like these, which have a very wide geographical range, that the minor, local groups appear as it were to radiate. Those genera which are confined to comparatively limited districts, often containing but few species, and also often presenting very remarkable abnormal modifications of structure, are in most cases referable to some family which has representatives in most parts of the world. Groups of high value, such as classes, are never confined to any particular quarter of the globe; and even when we descend to families, restricted as they now are by naturalists, it is comparatively rare to find them so defined as not to embrace species from widely separated localities. Genera may be arranged under three principal categories as regards their geographical distribution. First may be noticed those of universal range, such as *Cicindela*; secondly, those which occur in both hemispheres but affect particular zones, such as *Megacephala*, which is confined to the tropical zone; and thirdly, those which are restricted to a comparatively small district, such as *Manticora*, which is confined to South Africa. These genera all belong to the same family of beetles, and of this family *Manticora* presents certainly one of the most aberrant forms. The genus *Cicindela* would by most entomologists be regarded as the typical genus of the family *Cicindelidae*, and here we find, as in many other cases, the presumed typical genus has a universal range; it may be inquired, therefore, whether such is not generally the case.

I must here observe that Mr. Swainson has expressed the opinion that typical genera have a great geographical range; I was not aware, however, of this fact until after the idea had been suggested to me by a tabular arrangement which I had formed of the Mammalian order Rodentia, in which

which cannot be located in any known *genus*, but which appertain to *families* having representatives in most parts of the world, such as the *Pedinidae*, *Tentredinidae*, *Anthribidae* and *Halticidae*.

But four species amongst the Galapagos Coleoptera occur, so far as I have been able to ascertain, in any other quarter, and of these, two (*Dermestes vulpinus* and *Corynetes rufipes*) are insects which, feeding upon dried meat and such substances, have been carried to all parts frequented by ships; the third is a wood-feeding insect (genus *Apatel*), and might be transported for a considerable distance by floating timber; and the fourth is a water-beetle which appears to me to be clearly identical with the *Hydrophilus lateralis* (genus *Tropisternus* of Solier), an insect found in the United States, Mexico, and some of the West Indian islands. I should observe, moreover, there is in the collection a second, minute, species of *Hydrophilus* closely resembling the *Philhydrus affinis* of our English collections, but which is rather smaller, less distinctly punctured, and of a darker hue. I have in my collection a species from North America from which the Galapagos *Philhydrus* differs only in being of a darker colour; perhaps this little *Hydrophilus* should therefore be incorporated amongst the species which are not peculiar to the Galapagos Islands. Some of the insects of the collection have labels attached, from which may be ascertained the particular island of the Galapagos group from which they were procured, and where this was the case I have not found any species which is common to two or more of the islands.

both the classification of the minor divisions and their geographical distribution were displayed at the same time. After working out the affinities of the groups of the Carnivorous quadrupeds, the idea again occurred to me; five out of the six great divisions I had formed from the consideration of characters furnished by the skull and dentition combined, had a typical form of very great geographic range. In the order Rodentia I had made three great divisions, and had pointed out the distinguishing characters of a fourth, though I hesitated to raise that fourth to the rank of the other three. Were the geographical range to be taken into consideration, there would be four great families of Rodents. In the order *Pachydermata*, the various species appear all to approach more or less to four principal forms, typified by the genera *Equus*, *Tapir*, *Sus* and *Mastodon*, and these genera, or very nearly related genera, are found either living or in a fossil state in all the principal quarters of the globe, Australia excepted, where only the last has been found. What is characteristic of part of a small group might also be characteristic of part of a larger group. I have noticed that in a certain family, *Cicindelidae*, one genus is confined to a tropical zone; so might we find in an order of animals, a family which is confined to the tropical zone—the *Psittacidae* among Birds is nearly a tropical family; and in the class *Mammalia* we have an instance (certainly a rare one) of an order (the *Quadrumania*) which is almost confined to the tropical zone. The sections of water insects have generally a wider range than most others, and the above generalizations, as regards the distribution of groups, will not apply to parasitic insects.

Section GRODEPHAGA.

Family FERONIIDÆ.

Feronia Calathoides. Fer. nigra oblongo-ovata, nitida; antennis piceo-rubris; pedibus piceis; thorace subquadrato, subplano, foveis duabus oblongis postice impressis, clytris sulcato-striatis.—Long. corp. $4\frac{1}{2}$ lin.; lat. $1\frac{3}{4}$ lin.

This insect very much resembles the *Calathus cistelloides*; its head however is rather longer, and both thorax and elytra are rather shorter; the latter, moreover, are much more deeply striated, and the interstices between the striæ are convex. With the exception of being a trifle shorter, the thorax resembles that of *Calathus cistelloides* in being nearly quadrate and but little convex: the sides are nearly straight and parallel behind, but slightly contracted in front; the posterior angles are right angles; the dorsal channel is distinct, and midway between the dorsal channel and either side of the thorax is a narrow, impunctate, longitudinal groove, in length occupying fully the basal third of the thorax. The elytra are of an oblong-ovate form, and rather broader than the thorax; the somewhat deep striæ with which they are marked are smooth, but a few punctures are observable on the outer margin of each elytron. The legs are sometimes pitchy and sometimes pitchy-red.

Feronia galapagoensis. Fer. angusta, nigro-ænea, nitidiuscula; antennis rufescentibus, pedibus piceis; thorace subquadrato, subplano, postice angustiore; foveis duabus postice impressis; clytris elongatis, lateribus subparallelis, leviter striatis.—Long. corp. $5\frac{1}{2}$ lin.; lat. $1\frac{3}{4}$ lin.

This species is equal in size to the *Calathus cistelloides*, but is of a narrower and much more elongated form. The broadest part of the thorax is rather in front of the middle, and from this point they are gradually contracted before and behind; in front in such a manner as to give to the sides a slightly rounded outline, but behind, the margins are nearly straight, and converge in no very marked degree. The elytra are elongated, but little broader than the thorax; the shoulders are obtusely rounded, and the sides form a very gentle curve, so that they might be compared to a very long oval; they have delicate simple striæ: on the second stria are two punctures rather remote from each other and situated on the hinder half of the elytron; and on the third stria is another puncture situated on the anterior half: besides these, there are a few punctures on the outer margin. The legs vary in colour from pitchy-black to pitchy-red. The æneous tinge on the body is nowhere very distinct.

These two insects will not associate well with any of the sub-

divisions of the great Feronian group; possessing the essential characters of *Feronia*, they have the general form and aspect of the species of *Calathus*: so like indeed is one of the species to *Calathus cistelloides*, that I could scarcely doubt its belonging to the same genus, and was somewhat surprised to find the claws of the tarsi destitute of the usual denticulations. The dilated tarsi of the males have the joints triangular, as in *Feronia*.

FAMILY HARPALIDÆ.

Selenophorus (?) *galapagoensis*. Sel. piccus, marginibus thoracis elytrorumque rufescentibus; antennis, palpis, pedibusque ferrugineis; thorace transverso-quadrato, postice paululum angustiore, angulis posticis obtusis, foveis duabus postice obsolete impresso; elytris striatis, striis 2^a, 5^a et 7^a punctis remotis, indistinctis, impressis; interstitiis levibus.—Long. corp. $4\frac{1}{4}$ lin.; lat. $1\frac{1}{4}$ lin.

But one specimen of this species was brought home by Mr. Darwin, and that being a female, I cannot feel certain that it belongs to the genus *Selenophorus*; it agrees in general aspect with the species of that genus, and in having no tooth in the emargination of the mentum.

Amblygnathus (?) *obscuricornis*. Ambl. niger subobscurus; antennis fuscis, articulis basalibus nigris apicibus piccis, palpis rufescentibus, tarsis picco-rufis; thorace transverso, subquadrato, postice paulo angustiore, supra convexo, angulis posticis rotundatis; elytris subparallelis, convexis, striatis, striis 2^a, 5^a et 7^a punctis remotis obsolete impressis, interstitiis convexis.—Long. corp. $4\frac{1}{2}$ lin.

This insect like the last is a female, there being but one specimen in Mr. Darwin's collection; it is almost destitute of any gloss, and has a slight silky appearance. In general aspect it greatly resembles a *Cratognathus*, having the same convex form of body; the mandibles however are obtuse at the apex, the labrum much less narrow in the antero-posterior direction, the head smaller, and the anterior tibiae less dilated. Both in this and the preceding insect there are three or four short spines on the outer side of the anterior tibiae.

The thorax has the ordinary two impressions behind, but they are extremely indistinct: the elytra are distinctly striated; and the striae are impunctate, if we except the second, fifth and seventh from the suture, in each of which are a few punctures which are widely separated and by no means distinct: at the apex of the elytron, near the outer margin, is a series of five or six tolerably distinct and large punctures; the interspaces between the striae are rather strongly convex on the hinder part of the elytra, and but slightly convex on the anterior part.

I am not acquainted with Dejean's genus *Amblygnathus*, except through his description, and with that the present insect

will not agree in all respects; like *Amblygnathus*, it has no tooth to the mentum, and the antennæ short, but the eyes must be more prominent. The tarsi are short.

Family BEMBIDIDÆ.

Notaphus galapagoensis. Not. æneus, nitidus, antennis nigrescentibus, ad basin, pedibusque testaceis; thorace transverso, postice utrinque fovea oblonga impressa, lineaque longitudinali elevata notato; elytris punctato-striatis, fasciis duabus arcuatis, rufescentibus, ornatis.—Long. corp. $1\frac{1}{2}$ lin.

Body rather short and broad. Thorax broad and transverse, moderately convex, the sides boldly rounded and but slightly sinuated near the posterior angles, which are nearly right angles; dorsal channel distinct, and continued from the base to the apex of the thorax; a narrow oblong fovea is situated on each side behind, rather nearer the lateral margin, or angle, than the mesial line, and extending from the angle is a ridge which is about one-third of the length of the thorax and parallel with the mesial line, and hence, although the ridge springs from the angle, it is somewhat remote from the lateral margin at its apex,—the margin being bowed outwards; the disc of the thorax is smooth, but the lateral and posterior margins are coriaceous. The elytra are rather broad, of a brownish æneous hue, distinctly punctate-striated; rather in front of the middle is an irregular, transverse, yellowish band, which is subinterrupted in parts, and does not extend to the suture; it descends obliquely downwards as it runs in from the outer margin, where it is met by a humeral pale mark: there is a faint trace of two pale spots above this band: about the hinder third of each elytron is a curved mark which commences on the second interstice from the suture, runs outwards to the margin, and forming a segment of a circle, extends to the apex of the elytra. A largeish depression is observed on the third interstice from the suture on the anterior third of each elytron. The whole of the basal joint, and the base of the second, third and fourth joints of the antennæ are yellow; the rest of the joints are blackish.

This species is from James' Island.



Section HYDRADEPHAGA.

Family DYTISCIDÆ.

Copelatus (?) *galapagoensis*. Cop. ovatus, parum convexus, piceus; capite, marginibus lateralibus thoracis et elytrorum, antennis pedibusque rufo-testaceis; thorace disco nigro, punctis minutissimis subremotis impressis; elytris distincte sed anguste striatis.—Long. corp. $2\frac{3}{4}$ lin.

This is a small insect, and might be mistaken for a species of

Hydroporus before examined; it however belongs to the *Dytiscidæ* as defined by Aubé, and agrees with Erichson's genus *Copelatus*, excepting that its posterior tarsi are not ciliated. The hinder tarsi are provided with a few spines only: the three basal joints have each two large spines at the apex, and there are besides some few very minute spines on other parts. I have seen several species presenting this structure; among others I may notice the *Colymbetes elegans* of Babington, an insect which I have had sent to me with the name *Copelatus posticatus* attached. Another species was brought by Mr. Darwin from the Mauritius; they all possess the sharp distinct striae to the elytra which are mentioned as characteristic of the genus *Copelatus*, and neither of the four specimens here alluded to have the slightest trace of dilatation of the anterior tarsi.

The Galapagos species differs from the *Colymbetes elegans* of Babington (which is found both in Rio de Janeiro and in Colombia) in being smaller and proportionately rather narrower; in having the legs of a paler hue (these being pitchy-black in *C. elegans* and pale testaceous in *C. galapagoensis*), and the striae of the elytra more perfect. In *C. elegans* the second stria from the suture is obliterated on the hinder half of the elytron; the fourth, sixth, eighth and tenth are also obliterated, but continued for the most part to the hinder third (or rather beyond that point) of the elytra. In *C. galapagoensis* the same striae are abbreviated, but the second and others mentioned, all terminate on the same line or nearly so, that line being about the posterior fourth of the elytron. The thorax presents extremely delicate punctures, and numerous minute longitudinal scratches, requiring a tolerably powerful lens to perceive them; they are most distinct towards the sides and hinder part of the thorax. Should this little section of water-beetles be not already characterized, I think it deserves the rank of a sub-genus, which might be called *Chatosphyrus*, from *χαίτη*, a *bristle*, and *σφύρα*, the *ankle*; the spines at the base of the foot being much developed. I may further add, that all the species have the anterior tibiae somewhat dilated at the apex, and obliquely truncated on the outer side at the same part; the truncated portion is provided with three or four spines.

Section BRACHELYTRA.

Creophilus, nov. spec. ?—Three specimens found under a dead bird in Chatham Island. These specimens approach very nearly in size and form to the *Cr. maxillosus* of Europe, and the *C. villosus* of North America. They have scarcely any hairs either on the head, thorax or elytra, and are but sparingly clothed on the meso- and metasternum; the hairs on these last parts are how-

ever entirely black, a character in which it approaches nearer to the European species, for the same part is white at the sides in *C. villosus*, and grayish black in the *C. maxillosus*. The few hairs which I can perceive of the elytra are perfectly black; they occur however almost entirely on the hinder margin of the elytron. It is possible that the insect may have had pale markings (which have been rubbed off) on these parts, but I cannot trace any pale hairs in either of the three specimens.

The abdomen is clothed throughout with hairs, but they are rather less dense than in *C. villosus* and *C. maxillosus*; on the upper surface of the abdomen the hairs are black, excepting on the second and third visible segments, where they are yellowish white, but interrupted with black on the middle of each segment: on the under surface the hairs are black on the first segment, and yellow-white on the second and third segments throughout; the remaining segments are rusty white in the middle only, and the pale hairs are almost confined to the posterior margin, the sides being black in all the specimens. In *C. maxillosus* I find the fourth segment white throughout beneath, with the exception of a small black dot on each side. *C. villosus* agrees with the Galapagos insect in having the side of the fourth segment black.

Section STERNOXI.

Family ELATERIDÆ.

Physorhinus (?) *galapagoensis*. Phys. oblongus sublinearis; piceofuscus, pube pallida tectus; capite rugoso-punctato, antice flavo; thorace rugoso-punctato, linea longitudinali leviter impresso; elytris punctato-striatis, interstitiis punctatis; antennis pedibusque flavescentibus; abdomine fusco.—Long. corp. $4\frac{1}{2}$ lin.; lat. $1\frac{1}{2}$ lin.

I have placed this Galapagos *Elater* in a genus founded by Eschscholtz, with which it agrees very closely in many of its characters; as Germar's definition of the genus* in question does not, however, in all respects apply to the insect before me, it will be necessary to notice the points of disagreement; but I will first observe, that the Galapagos insect agrees with *Physorhinus* in having the tarsi apparently but four-jointed, the fourth joint being very small; in having the third joint short, and produced on the under surface into a long, undivided, membranous lobe: the lobe in the insect before me is equal in length to more than half that of the terminal joint. The fourth joint is exceedingly small; forming a mere node, as it were, at the base of the claw-joint: the basal joint is long. The antennæ are rather less than half the length of the body, and composed of longish, conical, and

* The account I refer to will be found in Dr. Germar's 'Zeitschrift für die Entomologie,' Part 2 for 1840, p. 244.

slightly compressed joints; the first joint is rather stouter than the rest, and perhaps a trifle longer; the second and third joints are short, but the third rather exceeds the second in length; the remaining joints are very nearly equal. There is an agreement also in the form of the thorax, the length of which is about equal to the breadth behind; the fore-part contracted, and of the same width as the head; the posterior angles produced posteriorly, and acute; the antennal groove beneath, short, and confined to the anterior part of the præsternum, which has its point bent inwards. The mesosternum has a small hollow with raised margins in front. The metasternum is produced posteriorly so as partially to cover the trochanter. In all these characters the Galapagos insect appears to me to agree with the type of the genus *Physorhinus*; but, on the other hand, it differs in having the head rather shorter, presenting when viewed from above very nearly a semicircular outline, but slightly inclining to a conical form,—whilst Germar says of the genus *Physorhinus*, the head is longer than broad; and it differs also in having the terminal joint of the tarsus (as it would appear from the figure) rather longer, so that although the basal joint is long, it is not quite equal to the other four taken together, as it is said to be in *Physorhinus*. The claws are slender and simple, and the tarsi very hairy.

Section CLAVICORNES.

Dermestes vulpinus, Auct.

Corynetes rufipes, Auct.

From James' Island.

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Section PALPICORNES.

Tropisternus (lateralis, Fab.).

Philhydrus —?

Section LAMELLICORNES.

Oryctes galapagoensis. *Oryct. castaneus nitidus*; capite punctato, carina transversa tri-emarginata obsito; ante oculos lobis subtrigonis productis; clypeo producto, antice recurvo, constricto, subemarginato; thorace punctis distinctis remotis, impresso; elytris latis, punctis minutissimis remote adspersis, rugisque indistincte notatis; stria punctarum apud suturam.—Long. corp. 10 lin.; lat. thoracis 4½ lin.; lat. elytrorum 5½ lin.

Head with large irregular scattered punctures; these most numerous, and confluent, on the fore-part; the vertex flat and smooth; the sides produced into an obtuse angle immediately in front of the eyes; the fore-part with a distinctly elevated ridge, which is most prominent in the middle, and has a deep notch; it becomes gradually less prominent towards the sides, but is there produced

again into an obtuse angle. Clypeus broader than long, contracted and slightly recurved at the apex, which is indistinctly emarginated. Thorax convex, with the sides rather boldly rounded; the posterior margin also rounded, but forming a segment of a larger circle; the fore-part emarginated; anterior angles slightly acute, posterior obtusely rounded; the surface above with distinct punctures, but these remote from each other—most numerous on the fore-part; there is moreover a fovea on each side about midway between the anterior and posterior angles, and a little removed from the lateral margins. Scutellum triangular, slightly rounded at the tip. Elytra convex, much broader than the thorax, and broadest at the posterior third; the humeral angles obtusely rounded, the hinder part very obtusely rounded; they have a few exceedingly minute scattered punctures, some indistinct little rugæ, and one or two longitudinal larger impressions. The sutural stria is composed of a subinterrupted series of distinct punctures. The body beneath is well-clothed with yellow hairs, and so are the legs: the terminal segment of the abdomen, like the elytra, has exceedingly minute scattered punctures; it is convex, rounded at the extremity, and its transverse diameter is about three times greater than the antero-posterior; the penultimate segment above is tolerably well-clothed with yellow hairs (the last has but few hairs), presents a distinct longitudinal furrow in the middle, and this furrow is bounded on either side by a slightly elevated ridge. The legs are short and stout, and the anterior tibiae have three tooth-like processes on the outer side. The insect is very glossy and of a bright chestnut-brown colour.

Section HETEROMERA.

Family TENTYRIDÆ.

Genus *Stomion** (nov. gen.).

Clypeus truncated in front, its lateral boundaries indicated by two slightly impressed longitudinal grooves.

Labrum prominent, transverse, and slightly emarginated in front.

Mandibles projecting beyond the clypeus when closed, covered at the apex by the labrum, but with the sides exposed when the head is viewed from above; they are bidentate at the apex.

Mentum broad and transverse and very nearly semicircular, the rounded part being in front.

Maxillary palpi moderate; the terminal joint triangular, at least as long as broad: *labial palpi* short.

* *Στόμιον*, a little mouth; having allusion to a peculiar conformation of the mouth of this and some allied genera, viz. that of having the mouth closed beneath by a large mentum, by the sides of which there does not exist the usual emarginations for the maxilla, which are therefore hidden.

Head small, in width not equal to more than half that of the thorax ; inclosed in the thorax as far as the eyes ; the outline of the part in front of the eyes, including the mandibles and labrum, is conical, but taking the arch formed by the outline of the clypeus, it is nearly semicircular ;—slightly indented on each side of the clypeus.

Antennæ of moderate length ; if extended backwards would scarcely reach the base of the thorax ; slender, the joints of a long obconic form ; the second joint short, the third long, but not equal in length to the two following joints taken together ; the last three joints dilated ; the antepenultimate and penultimate present a triangular outline ; the last joint is about equal in size to these, but of an oval form.

Eyes tolerably large and moderately convex, kidney-shaped, being very slightly encroached upon in front by the lateral ridge of the head.

Thorax transverse, narrower before than behind, rather deeply emarginated in front, rounded at the sides and bisinuated behind, where it is closely applied to the thorax : the upper surface is convex, and there is an impressed line (not very distinct) following the margins, but interrupted in the middle of the anterior margin : the angles are acute in front and right angles behind,—or nearly right angles.

Scutellum rather small, but distinct ; rounded behind.

Elytra soldered together, very convex, broader than the thorax and of an ovate form, but sinuated in front, where the curved outline corresponds to that of the hinder margin of the thorax ; the humeral angles somewhat obtuse.

Præsternum with its hinder margin obtuse, notched, and not produced posteriorly beyond the anterior coxæ.

Abdomen but little inclosed at the sides by the elytra.

Legs slender and moderately long ; the tibiæ nearly cylindrical, and terminated by two small spines : tarsi slender ; the hinder tarsi equal in length to more than two-thirds of that of the tibia.

In general appearance the species of this genus greatly resemble those of the genus *Helops*, and more particularly those shorter-bodied species of which our common *Helops striatus* may be said to form the type. In size and general form, the *Stonion lævigatus* (hereafter described) greatly resembles the insect just mentioned, but its thorax and elytra are more convex. The *Stonion galapagoensis* is half as large again as the *H. striatus*, and of a much broader form and more convex above : the third species of *Stonion* known to me is considerably less than the *H. striatus*, and of a shorter and broader form. The structure of the mouth,

however, shows that the present insects are in affinity remote from the *Helops* group, and indeed belong to the *Tentyriidæ*.

In having a distinct scutellum, the eyes transverse and not covered by the lateral ridge of the head, the mentum truncated, and the tibiae simple, the genus *Stomion* approaches to *Anatolica*, and yet the general form of the species of *Stomion* is very different to that of the species of *Anatolica*; the more slender antennæ with the terminal joints incrassated, and the absence of emargination to the mentum, would alone, however, serve to distinguish *Stomion* from *Anatolica*. Perhaps Eschscholtz's genus *Eurymetopon* is more nearly allied to our present genus; the species of *Eurymetopon* are represented by Eschscholtz, however, as having the head broad, the thorax nearly as broad as the elytra, the eye small, and the tibiae very short, all of which characters will not well apply to *Stomion*. The approach, on the other hand, is evinced, as it would appear, in the structure of the antennæ and the truncated form of the clypeus.

Stomion galapagoensis. Stom. ater, obscurus, antennis palpisque piccis, pedibus piceo-nigris; corpore ovato, convexo; capite thoraceque crebre punctulatis; elytris seriatim punctatis, interstitiis convexis, punctis minutissimis adpersis.—Long. corp. $5\frac{1}{2}$ lin.; lat. $2\frac{3}{4}$ lin.

The body is very convex, of a broad ovate form, and dull black colour; the head is flat above or slightly concave in the middle and thickly punctured; the thorax is broader than long, and narrower before than behind, slightly emarginated in front, where the angles are somewhat acute; evenly and gently rounded at the sides, and indistinctly sinuated behind; the posterior angles are right angles; the upper surface is distinctly convex, and very thickly and rather finely punctured; an impressed line runs parallel with, and close to the posterior and lateral margins, and is also continued on the anterior margin, but is interrupted in the middle. The scutellum is small and transverse; the elytra are very convex; at the base they are scarcely broader than the thorax, but in the middle they are considerably wider, and at the apex they are pointed; they have series of punctures forming the ordinary striae, but these punctures are by no means strong; the interstices are convex and covered with very minute scattered punctures. The mentum is distinctly punctured, and the thoracic segments are strongly punctured in the middle beneath: the abdominal segments have fine scattered punctures.

Two specimens in Mr. Darwin's collection agree with this description; there are others of a much smaller size, being about four lines in length, and in which the notch on each side of the fore-part of the head, marking the outer boundary of the clypeus,

is scarcely perceptible; these notches are tolerably distinct in the large specimens; in other respects they all agree.

Stomion Helopoides. Stom. fusco-piceus, antennis pedibusque fuscescentibus; corpore ovato, convexo; capite sat crebre punctato; elytris seriatim punctatis, interstitiis planis punctis minutis adspersis.—Long. corp. 3—3½ lin.; lat. 1½ lin.

The punctures forming the striae on the elytra of this species are less distinct, and those on the interstices are more distinct than in the *St. galapagoensis*; the interstices moreover are flat, or sometimes, the one or two nearest the suture are very slightly convex. The thorax is transverse, evenly rounded at the sides, and of equal width before and behind, or very nearly so; the angles are slightly obtuse; the upper surface is pretty thickly covered with smallish punctures; the under surface is smooth at the sides, but presents small rugæ and a few punctures near the base of the legs. The punctures which are arranged in rows on the elytra are by no means strong, and are distinctly separated; and the smaller punctures on the interstices are moderately numerous. The abdomen is finely punctured.

Two specimens in Mr. Darwin's collection agree with this description; there is a third individual which agrees in other respects, but is rather larger and almost of a black colour, and has the legs of a pitchy hue.

Stomion lævigatus. Stom. ater nitidus, antennis, palpis, pedibusque piccis; corpore valde convexo, oblongo-ovato; capite punctulato; thorace punctis minutissimis impressis; elytris lævibus.—Long. corp. 4 lin.; lat. 1½ lin.

Both the antennæ and legs are rather shorter and a trifle thicker in proportion in this species than in others of the genus here described; the form of the body is more oblong, and the thorax is not sensibly broader behind than in front; the head moreover is larger. The insect is very glossy, and to the naked eye its thorax and elytra appear to be perfectly smooth. The head is distinctly and thickly punctured: the thorax is but little broader than long, has the sides nearly parallel and very indistinctly rounded; its upper surface is very convex and rather thickly punctured, but the punctures are extremely minute: the elytra are very convex and but little broader than the thorax; sometimes they exhibit excessively minute punctures arranged in striae, and there are a few punctures in the interstices; it requires however a tolerably powerful lens to perceive these punctures: the thoracic segments are punctured beneath, and so is the mentum; the abdomen is smooth, or most indistinctly punctured.

Family TAGENIDÆ (TAGENITES, *Solier*).

Ammophorus galapagoensis. Amm. ater, nitidus, antennis pedibus-

que rufo-piceis, vel piceis; capite thoraceque crebre punctatis, punctis oblongis, prope latera plerumque confluentibus, interstitiis angustissimis longitudinaliter parum elevatis; thorace angulis anticis acutis, posticis subacutis; clytris sulcatis, sulcis catenato-punctatis, interstitiis costatis; corpore subtus profunde punctato.—Long. corp. $2\frac{1}{2}$ — $2\frac{3}{4}$ lin.

This species is smaller and proportionately rather shorter than the *Amm. peruvianus*. The head is thickly covered with narrow oblong punctures which run into each other, so as to leave very narrow, irregularly longitudinal ridges. The thorax is moderately convex above, rather broader than long, moderately rounded at the sides, and but slightly sinuated near the posterior angles, which are nearly right angles, but slightly acute; the anterior angles are prominent, project forwards, and are somewhat acute. The elytra are rather broader than the thorax and of an oblong form, rounded at the apex, and moderately convex; the humeral angles are produced laterally into an acute angle (more prominent and distinct than in *Amm. peruvianus*); each elytron presents eight sulci, in each of which are a series of impressions or largeish shallow punctures; the interstices form narrow ridges, on which a few very minute punctures are scattered. The mentum is rugose and has two oblong depressions; the thoracic segments present a few large, irregular punctures beneath; the abdominal segments are very coarsely punctured, if we except the last two; the penultimate has a transverse groove, and like the terminal segment is rather finely punctured. The palpi are red; the legs and antennæ pitchy-red, and sometimes pitchy.

Found by Mr. Darwin under stones upon a hill in Chatham Island.

Ammophorus bifoventus. *Amm. ater*, nitidus; antennis pedibusque piceo-nigris; capite punctato; thorace angulis anticis acuminatis, posticis acutis, extorsum productis, supra punctulato, foveis duabus et rugis tenuibus impressis; elytris crenato-striatis, interstitiis angustis elevatis.—Long. corp. 3 lin.

The *Amm. bifoventus* is so named from its having two largeish but shallow depressions, situated, one on each side, about the middle of each lateral half of the thorax: the thorax is moderately convex, broader than long, broadest in the middle, and about equally contracted before and behind; the sides are contracted rather suddenly near the angles, which are prominent; the hinder angles, which are most prominent, are acute: the surface of the thorax is rather finely punctured, and presents numerous little longitudinal rugæ, which are most distinct on the sides, hinder part, and in the foveæ described; two grooves, more distinct and longer than the rest, are observed on the middle of the thorax, where they are separated by a narrow ridge. The elytra are broader than the thorax, oblong, and have the humeral angles

produced laterally into small acute processes; the ordinary interstices of the striae of the elytra are very narrow and elevated; the punctures of the striae are large, transverse, and separated from each other by narrow spaces. A few large punctures are seen on the under surface of each of the thoracic segments; the abdominal segments are more thickly punctured; the penultimate however is nearly smooth, and the last is very delicately punctured. The abdomen is depressed in the middle.

Two specimens from James Island present the above characters; some other specimens in the collection which cannot otherwise be separated, display the thoracic fovea rather less distinctly, and the double ridge on the disc is sometimes wanting.

Ammophorus obscurus. *Amm.* ater, obscurus; antennis pedibusque piceis; capite thoraceque rugoso-punctatis; angulis thoracis acutis extrorsum productis; elytris crumato-striatis, interstitiis angustis elevatis.—Long. corp. $2\frac{1}{2}$ lin.

This species has the thorax narrower than in either of the preceding, from which it may moreover be distinguished by its dull colour, the thorax being rugosely punctured: the sculpture of the elytra is rather more decided, and the suture is not raised as in the other species. In *Amm. guatemalensis* the suture is fully as much raised as the ridged interspaces of the striae; in *Amm. bifoveatus* the suture is also distinctly raised, but not quite so much as the ridges between the striae; in the present species the suture is flat. Like *Amm. bifoveatus*, the angles of the thorax are produced, and as in both the preceding species; the humeral angle of the elytra is produced and acute. The ordinary interstices of the elytra form very narrow and considerably elevated ridges, in the grooves between which are large transverse impressions, and similar impressions are observed on each side of the suture; not extending quite to the suture, they give that part the appearance of being slightly raised, and indeed it is so on the hinder part of the elytra.

The three species of *Ammophorus* here described have the third joint of the antennae shorter in proportion than in *Amm. peruvianus*, but they agree in this respect with *Amm. costatus* and *Amm. rubripes* of Solier, with which they also agree in size; they all have the interstices of all the striae of the elytra elevated, whilst in one only of the Chilian species (*A. costatus*) are any of these interstices distinctly ridged, and here it is only the alternate spaces between the striae which present that condition.

Family PSEPHIDÆ.

*Pedonarcus**, nov. gen.

Clypeus distinctly emarginated.

Labrum small, transverse.

* From *πίδα*, the ground, and *ναρκα*, to inhabit.
The Complete Work of Charles Darwin Online

- Mandibles* short and obtuse, bidentate at the extremity, and hidden by the clypeus, when the head is viewed from above.
- Mentum* small, ovate, concave externally.
- Maxillary palpi* moderate; the terminal joint securiform: *labial palpi* short; the terminal joint swollen.
- Head* considerably narrower than the thorax; the visible portion broader than long; the fore-part in front of the eyes forms nearly a semicircle, but is emarginated in front; no indentation marks the posterior or lateral boundaries of the clypeus: the lateral ridge of the head, which protects the basal portion of the antennae, is well-developed, and runs backwards so as to divide the eye into two parts; the upper portion of the eye is rather large and round, or very nearly so; the lower portion is nearly of equal size with the upper, and also nearly round.
- Antennae* moderate; if extended backwards would reach the base of the thorax; the joints of a shortish obconic form; the second joint short; the third nearly as long as the two following taken together; the last three joints incrassated, and fully as broad as long; the terminal joint is round, and as large as the penultimate.
- Thorax* subquadrate, but little broader than long, emarginated in front, and with the anterior angles rather prominent and somewhat acute; the sides are indistinctly rounded, and the hinder part is but little broader than the front; the posterior margin is distinctly bisinuated, and the posterior angles are right angles, or somewhat acute: the surface is moderately convex, and there is a distinct impressed line running parallel with, and close to, both the lateral and posterior margins.
- Scutellum* distinct, triangular.
- Elytra* soldered together, oblong, convex, rounded at the extremity: the humeral angles nearly right angles, but somewhat obtuse, and presenting a slightly concave triangular surface in front, against which the thoracic angles are applied.
- Pronotum* rather contracted, pointed behind, and but little produced beyond the cover of the anterior legs.
- Abdomen* with the penultimate segment very narrow in the antero-posterior direction; the last segment semicircular and depressed, or concave, in the middle.
- Legs* moderate; the tibiae straight, very little compressed, and but slightly dilated at the apex: the four anterior tarsi dilated in the male sex, the anterior pair distinctly so, the width of the second or third joint being nearly equal to the length of the four basal joints taken together; the first and fourth joints are small, the second and third equal or very nearly so; the three basal joints only appear to be covered with the velvet-like substance beneath: the middle pair of tarsi are less distinctly dilated.
- Ann. & Mag. N. Hist. Vol. xvi.*

lated; the claw-joint of each tarsus is nearly equal in length to the four basal joints taken together.

In general appearance, in the structure of the head and of the tarsi, the species of this genus approach very nearly to the members of Dejean's genus *Blapstinus*; they have the legs however rather longer, the thorax less distinctly transverse, and the elytra more convex; these are moreover soldered together, and there are no wings as in *Blapstinus*. Judging from the definitions of the various genera of *Pedinidae*, the present genus presents a combination of characters not hitherto noticed. Those genera of the family of which I possess examples in my own collection I find are capable of being distinguished from each other by the following characters, which it will be observed are not peculiar to either sex, and are therefore preferable, as it appears to me, to those which have hitherto been pointed out, and which are chiefly derived from the variations in the structure of the tarsi of the male.

I. Apterous; elytra soldered together at the suture.

A. Eye divided by the lateral ridge of the head.

a. Anterior tibiae distinctly dilated at the apex.

a *. Antennae short, submoniliform..... *Heliophilus*.

a **. Antennae with the joints, most of them, obconic.

a * 1. Middle tibiae dilated at the apex . *Pedinus*.

a * 2. Middle tibiae not dilated at the apex *Isocerus*.

b. Anterior tibiae not dilated at the apex *Pedonaxces*.

B. Eye uncovered (not divided by the lateral ridge of the head).

a. Clypeus truncated or slightly rounded in front ... *Platyscelis*.

a *. Clypeus emarginated in front.

a * 1. Antennae distinctly incrassated at the apex *Eurynotus*†.

a * 2. Antennae with the terminal joints oblong, not broader than the rest. *Dendarus*.

II. Winged; elytra free.

A. Eye divided by the lateral ridge of the head..... *Blapstinus*.

B. Eye uncovered at the sides *Opatriinus*.

† The mentum in *Eurynotus* is distinctly trilobed, having a central principal portion and two lateral wings; these wings or lateral lobes diverge as they part from the base of the mentum and are acutely pointed at the extremity; they are separated from the mesial lobe by a deep hollow on each side. In the great Indian species, which Dejean arranges under the head *Platynotus*, the same structure of mentum is observable as well as in *Opatriinus*; but the lateral lobes do not exist in *Heliophilus*, or at least they are here exceedingly minute and curved inwards, as I have observed to be the case in the mentum of *Blaps*; *Dendarus* appears to agree with *Heliophilus* in this respect. *Platynotus* of Dejean must undoubtedly be placed near to

Pedonæces galapagoensis. Ped. ater, nitidus; antennis pedibusque nigro-piceis; capite thoraceque confertim punctulatis; elytris subsulcato-punctatis, interstitiis convexis punctis minutissimis adpersis.—Long. corp. 3 lin.; lat. $1\frac{1}{2}$ lin.

Var. β. Elytris sulcato-punctatis, interstitiis convexioribus, quarto et sexto elevatis, subcostatis.

This species has the general form of the *P. costatus*, but the thorax is rather longer in proportion; here the interstices of the striae of the elytra are simply convex, and do not form narrow ridges as in *P. costatus*. The legs have minute yellow spiny hairs as in that species, and on the under surface of all the femora is a small brush of yellow hairs.

Pedonæces costatus. Ped. niger, parum nitidus; antennis pedibusque rufo-piceis; corpore oblongo, convexo; capite crebre punctato; thorace confertim punctato, punctis longitudinaliter confluentibus; elytris sulcato-punctatis, interstitiis subcarinatis, alternis elevatioribus, costatis.—Long. corp. $2\frac{2}{3}$ lin.; lat. 1 lin.

This species, which is from James' Island, is easily distinguished from the *Ped. galapagoensis* by the sharp keel-like ridges formed by the alternate interstices of the striae of the elytra, and by the narrowness of the other interstices: the thorax, moreover, is more strongly and more thickly punctured, and the punctures are oblong, and the greater portion of them are confluent, joining each other in such a way as to leave little, narrow, irregularly longitudinal ridges for the interspaces. The thorax is rather broader than long, subquadrate, the sides but slightly rounded, and indistinctly sinuated near the posterior angle, which is nearly a right angle; the posterior margin is sinuated, presenting a convex outline in the middle, and a slightly concave emargination on either side near the angles. The elytra are scarcely broader than the thorax, of an oblong form, but little broader in the middle than at the base, and at the apex they are rounded. The legs, which, like the antennæ, are of a pitchy colour, have very small spiny yellowish hairs, and these become more dense and rather longer on the under side of the middle part of the hinder femora. The three terminal joints of the antennæ are pitchy-red. The body is distinctly punctured beneath throughout.

Eurynotus. In two species of *Platynotus* before me (one of which appears to be the *P. gigas*) I find the scutellum is scarcely to be seen, whilst in *Eurynotus* it is distinct; this, combined with the sinuated sides to the thorax of the former, and the thorax being broadest behind in the *Eurynotus*, will help to distinguish the two genera. I may add, the mesial lobe of the mentum is distinctly emarginated in *Platynotus* and truncated in *Eurynotus*: the structure of the tarsi and antennæ also differ in these genera.

Pedonates pubescens. Ped. oblongo-ovatus, supra modice convexus; picco-niger, pilis brevissimis, adpressis, fuscis, obsitus; antennis pedibusque piccis; capite thoraceque creberrime punctulatis; elytris punctato-striatis, striis non pilosis, interstitiis convexis.—Long. corp. $3\frac{1}{4}$ lin.

The thorax is rather broader than long, has the sides slightly rounded, the anterior margin rather narrower than the posterior, the hinder angles right angles: the elytra are of an oblong form, scarcely broader in the middle than elsewhere, and very little broader than the thorax; the pale brownish minute hairs have a tendency to a linear arrangement, and are confined to the interstices of the striæ, which under a strong lens have a coriaceous appearance; the punctures of the striæ are by no means deep, and distinctly separated from each other.

Mr. Darwin found this species under stones on a hill in Chatham Island in the month of September.

Section XYLOPHAGI, Latreille.

Genus *Apate*, Fabricius.

In Mr. Darwin's collection are three specimens of a species of this genus which are about equal in size to the *Apate capucinus* of authors, but differ in being of a black or pitchy-black colour, in having the elytra more convex in the transverse direction, with the punctures rather less deep and more distinctly separated; the hinder portion is obliquely truncated, but descends more suddenly than in *A. capucinus*, and each elytron is somewhat humped towards the apex: the upper surface of the thorax is covered with small flattened, polished tubercles which are extremely close together; the fore-part is covered with angular or acutely pointed tubercles of large size, and is produced into two largeish conical protuberances, the points of which are bent downwards and overhang the head; these protuberances are not only covered with tubercles, but have numerous pale hairs*: the mesial portion of the head, between the eyes, is smooth and polished; the anterior part is rough; the under parts are clothed with whitish hairs. I have an insect in my own collection from a part of the world which is much better known (Colombia), and which is undoubtedly the same species as the Galapagos insect. From the wide range which it has, it is no doubt known and described.

The specimens above referred to were found by Mr. Darwin in the branches of a dead Mimosa tree in Chatham Island, and that gentleman states in his notes that the whole length of the bough was perforated by them.

* These protuberances are less developed than in the *Apate cornuta*,

Section RHYNCOPHORA.

Family ANTHRIBIDÆ.

*Ormiscus**, nov. gen.

Rostrum very short, transverse, truncated in front; the mandibles rather prominent and sharply pointed.

Head shorter than broad, its vertex on the same plane with the rostrum.

Eyes large, prominent, converging in front, and contracting the forehead to about half the width of the head; emarginated below.

Antennæ springing from a little round cavity immediately beneath the eye; if extended backwards they would reach the posterior margin of the thorax, or extend perhaps slightly beyond that part; the joints most of them slender; the first joint nearly hidden; the second thicker than the following six joints, and nearly globose; the third joint slender and the longest, but shorter than the two following joints taken together; the fourth to the eighth inclusive obconic, becoming successively shorter; the three terminal joints dilated, closely joined, and together forming an ovate club.

Thorax rather broader than long; contracted, and subtruncated in front, broadest near the posterior margin, and convex in the transverse direction; with an obtuse ridge at the side, but confined to the hinder part, and a curved transverse ridge behind; this ridge is very distinct; in the mesial line of the thorax it nearly touches the hinder margin, but from that part it ascends as it runs outwards, so that it is somewhat distant from the posterior angle; the hinder margin straight, and the posterior angles right angles.

Scutellum very small.

Elytra rather broader than the thorax; short, subcylindrical, rounded at the apex, and with the humeral angles obtuse.

Legs moderate; tarsi as long as the tibiae; the first and fourth joints long and nearly equal; the second and third rather short, the latter distinctly bilobed at the extremity; the lobes equal.

Ormiscus variegatus. Orm. ater flavescenti-tomentosus; capite thoraceque rugosis; clytris xancho-micantibus, indistincte punctato-striatis, pube alba, flava et fusca variegatis; postice macula fusca communi cordiformi; singulo prope medium fascia obliqua ornato; antennis articulis basalibus ad basin, tibiisque flavescens; femoribus piceis, ad basin pallidioribus.—Long. corp. 1 lin.

Var. β. Elytris rufescentibus, marginibus maculaque transversa prope medium nigrescentibus.

* *Ogmiscus*, a small necklace, a collar. The little insect here described has a curved ridge crossing the back part of the thorax, a character not peculiar to it, but which is more distinct here than in most others of the Anthribidæ.

Amongst the numerous genera of *Anthribidæ* defined by Schönherr, I have found none presenting the combination of characters which are above pointed out. *Orniscus* approaches most nearly perhaps to *Aræocerus*, but may be distinguished by the different form of the eyes, which have the long diameter considerably greater than the transverse, and are much narrower in front than behind; the position of the antennæ is also different, and the form of the joints, which are shorter, and especially the form of the club, which is considerably shorter, and has not the joints distinctly separated.

The teneous tint of the elytra is only seen in parts where the pubescence has apparently been rubbed off: at the base of each elytron near the scutellum is a slight hump, which, wanting the pubescence, always presents a dark hue; on the outer side of this is an oblong patch of a pale yellowish colour, and this is not due to the colour of the pubescence only, for the elytron itself appears to be pale at this part: in the middle is a broad brownish band, which as it parts from the suture to the outer margin slightly descends: on the outer margin is a broad dusky patch, and there is a brownish heart-shaped spot on the suture, about midway between the central fascia and the apex of the elytra: the tibiae are somewhat dusky at the apex.

Mr. Darwin found this insect amongst others when sweeping the herbage in the high central parts of Charles' Island, in the month of October.

See p 40 + 39

Family OTIORHYNCHIDÆ.

Otiorthynchus cuneiformis. Ot. ater, fusco-cinereo-squamosus, setis brevibus adspersis; antennis pedibusque piceis.

Caput breve subconvexum, fronte longitudinaliter rugosa; oculi fere globosi; rostrum capite vix longius sed angustius, apice modice dilatatum, supra fere planum longitudinaliter rugosum. Antennæ mediocres, funiculo articulis primo et secundo subæqualibus; clava breviter ovata, apice acuminata. Thorax æque longus ac latus, subcylindricus, apice truncatus, angustior, lateribus pone medium parum ampliatis; basi leviter bisinuatus; supra rugosus. Scutellum apice rotundatum. Elytra oblongo-subovata, antice thoracis basi haud latiora, supra convexa, lateribus pone medium ampliata, apicem versus subacuminata, ad apicem rotundata; rude punctato-striata, interstitiis parum elevatis impunctatis, seriatim setosis. Pedes mediocres.—Long. corp. $2\frac{3}{4}$ lin.; lat. $1\frac{1}{4}$ lin.

This insect is so thickly clothed with mud-coloured scales that it is difficult to see the sculpturing. It is considerably smaller than the *Otiorthynchus raucus*, and the elytra being broadest rather behind the middle, the thorax but little rounded at the sides, and narrower in front than behind, where it is equal in width to the base of the elytra, gives to the general outline a

wedge-form, or at least an approach. It departs from other species of the genus in having the lateral processes of the rostrum, forming the lower boundary of the groove for the antennæ, rather less prominent, the eyes more convex, and the antennæ shorter. It is not without considerable hesitation that I place this insect in the genus *Otiorhynchus*.

From Charles' Island. Found in sweeping the herbage in the high central parts of the island.

Family ERIRHINIDÆ.

Genus *Anchonus*, Schönh.

Anchonus galapagoensis. Anch. subovatus, niger, opacus; rostro basi constricto, rugoso-punctato; thorace fere cylindrico sed intra apicem distincte constricto, antice truncato, postice sub-bisinuato, rugoso-punctato, setis fuscis adperso; elytris seriatim punctatis interstitiis tuberculis magnis, oblongis, dense fusco-setosis, obsitis; corpore subtus punctis magnis adpersis; antennis tarsisque piccis.—Long. corp. præter rostrum $2\frac{1}{2}$ — $2\frac{1}{2}$ lin.; lat. 1 lin.

From James' Island.

The thorax is narrower than usual in this species, being less dilated in the middle; its sides are nearly parallel, but in front it is rather suddenly constricted, and immediately behind the constricted portion the thorax is sometimes a trifle broader than elsewhere: the punctures in the thorax are very large and coarse, and close together, the interspaces being mere ridges. The elytra are nearly ovate, but the sides in the middle evince an approach to parallelism; they are strongly punctured, and the punctures are arranged in rows, and for the most part distinctly separated from each other; the interspaces between the rows of punctures are impunctate, but present very narrow tubercles, and these are rather widely separated on the fore-part of each elytron, but on the apical portion they are longer and nearer together, and here the interstices are somewhat convex; on the third, fifth and seventh interspace the tubercles are rather more developed than on the intermediate interspaces; these tubercles are provided with largeish semi-erect setiform scales, and these are of a brownish yellow colour; similar scales are scattered in other parts, and sometimes the whole surface of the thorax and elytra is covered with a brownish substance, of the nature of which I cannot satisfy myself.

Section CYCLICA.

Family HALTICIDÆ.

Haltica galapagoensis. Hal. ænea, antennis pedibusque testaceis; corpore oblongo-ovato, valde convexo; thorace postice transversim

impresso; elytris punctatis, punctis subseriatim depositis.—Long. corp. $\frac{3}{4}$ lin.

From Charles' Island. Procured by sweeping the herbage on the high central parts of the island in the month of October.

This little insect somewhat resembles the *Haltica* (*Podagrica*) *arata*, but has the body rather more convex in the transverse direction, the thorax broader, and the antennæ shorter and stouter; when extended backwards they scarcely reach the middle of the elytra. The thorax is transversely grooved behind, as in the genera *Graptodera*, *Crepidodera*, &c.; but it has not the small posterior longitudinal indentations which we observe at the extremities of the transverse groove in the latter genus, and in the structure of the antennæ and tarsi it differs from both. The tarsi are formed as in *Haltica rustica*, auct. (*Mantura* of Stephens), but the joints of the antennæ are shorter; the basal joint is long and stout; the second and eight following joints scarcely differ in length, but they very indistinctly increase in width towards the apex of the antennæ; the second joint is nearly ovate; the third, fourth, fifth and sixth are of a very short obconic form, and the rest nearly globose, with the exception of the last, which is longer than the preceding, and acuminate at the apex: the tarsi are short; the first joint very large and broad; the second rather less than the third, and nearly triangular; the third cordiform, and the fourth scarcely equal in length to the preceding two joints taken together. The eyes are lateral, moderately prominent. The thorax is narrower than the elytra, broader than long, and very convex in the transverse direction; it is truncated behind, and slightly rounded and produced over the head in front: the posterior angles are very obtuse; the surface impunctate: on the hinder part is a very distinct transverse impression which does not extend quite to the sides. The elytra are of an oblong-ovate form, and distinctly punctured above; the punctures show a tendency to arrange themselves in lines: each elytron is obtusely rounded at the apex. The upper surface of the insect is glossy and of a greenish brass colour: the legs and antennæ are testaceous, but the three or four terminal joints of the latter are somewhat dusky.

Of the various genera and subgenera of *Halticidæ* which have been characterized, I know none in which it can be placed; its nearest affinities appear to me to be with *Mantura*; but the antennæ are less incrassated at the apex, and on the other hand, as I have before stated, the basal joints are shorter and stouter: it moreover has a transverse groove to the thorax not found in that genus, and wants the longitudinal impressions on the hinder part, which all the species of *Mantura* which have come under my notice present.

Section TRIMERA.

Family COCCINELLIDÆ.

7) *Scymnus Galapagoensis*. Scym. ater, pubescens; capite piceo; thorace utrinque flavo; elytris pallide testaceis, indistinctissime punctulatis; sutura, margine anteriore, fascia valde flexuosa, maculisque duabus subapicalibus, nigris; antennis pedibusque flavis.—Long. corp. $\frac{3}{4}$ lin.

From James' Island.

This species is about equal in size to the *Sc. minimus*; its form is rather more elongated and less convex than in that insect. The suture of the elytra is black; the black forms a broad mark at the base, but becomes very narrow towards the tip of the elytra; the outer margin of each elytron is narrowly edged with black, but on the anterior third the dark colour is suddenly expanded, and forms a broadish mark which extends to the humeral angle, and there meets a broad transverse black mark which crosses the base of the elytra: about the middle of the elytron is a narrow black fascia, which as it parts from the suture descends, about the middle is suddenly bent upwards so as to become longitudinal, and then again descends obliquely outwards and nearly reaches the outer margin: behind this central band is an oblique black spot.

VI.—On the Organization of the Lucinæ and of Corbis.

By M. A. VALENCIENNES*.

THOSE anatomists who have been engaged in the study of the Acephalous Mollusca, that numerous class of animals related to the oysters, mussels, &c., regard as one of the constant characters of these creatures, that the respiratory organ fixed on each side of the body under the folds of the mantle is composed of two pairs of branchial leaflets, *i. e.* that under the common covering of the body there are four branchiæ arranged symmetrically on each side of the visceral mass.

These branchiæ are in some pectinated, or composed of small, straight and triangular laminae arranged close together; the oysters, scallops, and the *Spondyli* present examples of this general structure, which calls to mind that of the branchiæ of almost all the osseous fish. In other Acephalous Mollusca the pectinated lamellæ are connected by numerous transversal ridges which impart more consistence to the branchial leaflet and render it more dense; the *Anodonta*, so common in all our fresh waters, offer, with a large number of other Acephala, examples of this structure; a confirmation which is seldom met with in fish, for *Niphiæ* is the only one in which I have observed this arrangement.

* From the Comptes Rendus, June 9th, 1845.