rupted longitudinal bands; a dark streak from the nostril to the eye; 8 to 10 vertical reddish-brown streaks along the sides, beginning from in front of the forearm. Young without these vertical streaks.

From *Scincus arenarius* it differs in the shape of the prefrontal, which is six-sided instead of heart-shaped; in having 26 instead of 28 rows of scales round the body; in the postfrontals extending behind to only two thirds, or in some specimens the entire width of the first superciliary; in having two small postnasals instead of one long one; also in the first suborbital postnasal in front of the lower eyelid being as broad at the base as high, and five-sided instead of elongate, and nearly twice its greatest breadth.

These differences are exhibited in all my specimens, thirteen in number.

The following Table will exhibit the differences between this and other species. Of *S. Hemprichii* I have no description.

<table>
<thead>
<tr>
<th></th>
<th>Rostral and prefrontal</th>
<th>Supra-labials</th>
<th>Suborbital labials</th>
<th>Dorsal scales</th>
<th>Scales round body</th>
<th>Superciliary shields</th>
<th>No. of specimens exu</th>
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<tbody>
<tr>
<td><em>S. meccensis</em></td>
<td>In contact</td>
<td>7</td>
<td>5th &amp; 6th</td>
<td>16</td>
<td>?</td>
<td>?</td>
<td>5</td>
</tr>
<tr>
<td><em>S. mitranus</em></td>
<td>do.</td>
<td>8</td>
<td>?</td>
<td>?</td>
<td>?</td>
<td>?</td>
<td>5</td>
</tr>
<tr>
<td><em>S. officinalis</em></td>
<td>do.</td>
<td>8</td>
<td>6th &amp; 7th</td>
<td>18</td>
<td>?</td>
<td>?</td>
<td>6</td>
</tr>
<tr>
<td><em>S. arenarius</em></td>
<td>do.</td>
<td>8</td>
<td>( \frac{1}{2} ) of 5th, 6th, &amp; 7th</td>
<td>20</td>
<td>28</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td><em>S. muscatensis</em></td>
<td>do.</td>
<td>8-9</td>
<td>6th &amp; 7th</td>
<td>18</td>
<td>26</td>
<td>6</td>
<td>13</td>
</tr>
<tr>
<td><em>S. conirostris</em></td>
<td>Not in contact</td>
<td>8</td>
<td>6th &amp; 7th</td>
<td>20</td>
<td>28</td>
<td>6</td>
<td>8</td>
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</tbody>
</table>

**IX. — On the Geodephagous Coleoptera collected by Mr. George Lewis in Ceylon.** By H. W. Bates, F.R.S.

The collection of Coleopterous insects made by Mr. George Lewis during a five months' residence in the island of Ceylon in the cold season of 1881-82, viz. from November 27th to

April 27th, comprised about 1600 species. When duly worked out this will form by far the largest contribution yet recorded to our knowledge of the Ceylonese fauna in this department. The present paper treats of the section Geodephaga. For an account of the localities visited and the habits and relations to their surroundings of the Coleoptera, I must refer the reader to Mr. Lewis’s interesting paper entitled “On a Visit to Ceylon,” in the ‘Transactions of the Entomological Society,’ 1882, p. 475.

With regard to the list of Ceylonese Coleoptera published by Walker in this journal in 1858 and 1859, I have endeavoured, with the aid of Mr. C. O. Waterhouse, to identify the species by inspection of the type specimens in the British Museum. The diagnoses attached to the names are no better than a haphazard collection of words as far as their use is concerned in determining the species, and their reference in so many cases to well-known genera is generally ridiculously wrong and pure guesswork. Under these circumstances I consider Walker’s names as entitled to no more authority than those of a catalogue. When therefore the same species has been since well described under another name I have not replaced it by Walker’s; but in species not so described I have adopted for convenience’ sake, and not on the ground of priority, Walker’s names whenever his brief diagnosis does not flatly contradict the type specimens. Some remarks on species not taken by Mr. Lewis will be found at the end of this paper.

Family Cicindelidae.

*Cicindela lacrymans.*

*Cicindela lacrymans,* Schaum, Journ. Ent. ii. p. 57.

Near Colombo. One example.

*Cicindela catena.*


Colombo, on roads away from the sea.

*Cicindela sumatrensis.*

*Cicindela sumatrensis,* Herbst, Kaf. x. p. 179, t. clxxii. fig. 1.

Colombo, on banks of rivers.


Cicindela viridilabris.


Colombo.

One male example, agreeing with Chaudoir's description, except that the labrum is coppery with greenish reflections rather than "vert métallique," and the head and thorax coppery, subopaque, with green sides, and not "vert bronzé brillant." Chaudoir had only a single female example before him from the "Indes Orientales" in drawing up his description, and it is doubtful if the above-mentioned differences indicate more than individual or local variations.

Cicindela quadrilineata.


Near Colombo. One example.

Cicindela biramosa.


Colombo; common on the sandy beach.

Derocrania nematodes.

*Derocrania nematodes*, Schaum, Journ. Ent. ii. p. 61, t. iv. fig. 1.

Bogawantalawa.

Derocrania concinna.


Kandy.

Distinguished from *D. nematodes* by the elytra being covered to the apex with large separate punctures instead of finely transverse-rugulose. Mr. Lewis's specimen differs from Chaudoir's description in the thorax being dark purplish red instead of black.

Derocrania Nietneri.

*Derocrania Nietneri*, Motschulsky, Et. Ent. 1859, p. 25, 1862, p. 23 (=taevigata, Chaud. 1860, raphidioides, Schaum, 1861).

Balangoda ridge.

Var. Derocrania obscuripes.

Legs darkish testaceous red; apices of the tibiae and tarsi darker piceous.

Bogawantalawa.
In the male the posterior part of the elytra is more gradually and less widely dilated and much less convex above than in the female. It varies, however, a little in both sexes. The sulci of the forehead are in some examples of both forms distinctly traced, in others quite obsolete.

In the var. *obscures*, which Mr. Lewis found confined to one tree and to be slower in its motions than the type form, the legs appear to be a little shorter.

*Collyris Saundersii.*

*Collyris Saundersii*, Chaudoir, Ann. Soc. Ent. Fr. 1864, p. 496?

Colombo.

One example agreeing with the description above cited, except that the coxae are red like the thighs, and not black. In a genus like *Collyris*, where the extent of specific variation is at present ill understood, it would be inexpedient to found a new species on this differential character.

*Collyris* —?

One example with the antennæ deficient, and the species consequently undeterminable.

*Collyris punctatella.*


Balangoda. One example, March 13th.

*Collyris ceylonica.*


Bogawantalawa, April 3rd.

Family *Carabidae*.

Subfamily *Scaritinae*.

*Oxylobus quadricollis.*


Colombo.

*Oxylobus costatus.*

*Oxylobus costatus*, Chaudoir, Monogr. des Scaritides (1880), p. 15.

Colombo.

*Coptolobus omodon.*

*Coptolobus omodon*, Chaudoir, Monogr. des Scaritides (1880), p. 42.

Hadley, Dikoya.
Mr. H. W. Bates on Geodephagous

Coptolobus glabriculus.


Nuwara Eliya and Horton Plains.

Having examined the types of both Walker's species I have found not the slightest difference between them, both specimens being referable to Coptolobus glabriculus, Chaud.

Coptolobus taprobane.

Coptolobus taprobane, Chaudoir, Monogr. des Scaritides (1880), p. 42.
Colombo.

Distichus minor.

Colombo, in marshes.

Scarites indus.

Scarites indus, Olivier, Ent. iii. 36, p. 9, t. i. fig. 2, a, b.
Colombo.

Scarites ceylonicus.

Scarites ceylonicus, Chaudoir, Monogr. des Scaritides (1880), p. 85.
Colombo.

Clivina indica.

Colombo; abundant under dung in the coco-palm groves by the sea.

Clivina Parryi.

Clivina Parryi, Putzeys, Postser. ad Cliv. Monogr. p. 60.
Colombo, in marshes.

Clivina elongatula.

Colombo, in marshes.

Clivina rufipes.

Colombo, in marshes.
Dyschirius ordinatus.


Kandy.

I can discover no difference of specific importance between a Ceylonese example and others taken by Mr. Lewis in Japan described under the above name.

Subfamily Pelechiæ.

_Dipsocerus ovicollis._


Anderson’s Estate, Dikoya. One example, Jan. 10th.

Differs from _D. marginicollis_, Schaum, the only other described Asiatic species, by its larger size and the long, narrow, ovate form of its thorax. In the latter feature it differs also from the African species. The thorax attains its greatest width immediately behind its anterior angles, which are depressed and applied closely to the sides of the neck; it continues thence of nearly the same width to beyond the middle, whence it narrows very gradually to the base; the sides are very distinctly margined, the sharp marginal groove having a setiferous puncture at about its middle, and the posterior declivity of the convex and impunctate surface is nearly vertical. The elytra are also much narrower than in the other known species; the first five striae from the suture are deeply impressed, the first and second uniting near the base and thence continuing to the basal margin, which the third also reaches, whilst the fourth and fifth terminate before the base, the fifth joining the sixth behind and terminating at about the middle of the elytron. None of the striae except the marginal one quite reaches the apex.

Subfamily Panagæinæ.

_Epicosmus Castelnau_.


Colombo.
Subfamily Chlæniinae.

Chlænius circumdatus.


Kandy and Colombo.

Chlænius rugulosus.


Kandy and Peradeniya.

This species was unknown to Chaudoir. All Mr. Lewis's examples answer well to Nietner's description of the peculiar sculpture of the head and thorax; but the term lunule which he applies to the apical spot of the elytra is misleading; the spot is a broad dilatation of the yellow border and resembles much that of _C. sulcatulus_.

Chlænius frater.

_Chlænius frater_, Chaudoir, Monogr. des Chléniens (1876), p. 261.

Kandy.

According to Chaudoir's description the thorax of his _C. frater_ is of the same form as _C. vestitus_, but then he goes on to mention an important difference in the hind angles. This leaves the identification of the Ceylonese species with _C. frater_ in some doubt, for though the form of the hind angles agrees with the description of _C. frater_, the outline of the thorax is certainly different, being less cordate or more narrowed in front towards the anterior angles. The punctuation is much sparser and coarser than in the thorax of _C. vestitus_. _C. frater_ is from the Malabar coast.

Chlænius velociipes.

_Chlænius velociipes_, Chaudoir, Monogr. des Chléniens, p. 266.

Dikoya.

Agrees with Chaudoir's description founded on specimens from Siam and Dacca (not Deccan, as erroneously stated), and also with an example with which I have compared it from the Nilghiris.

Chlænius cinctus.


Colombo.
Chlœnius leucops.

*Chlœnius leucops*, Wiedemann, Zool. Mag. 2, i. p. 52; Chaudoir, Monogr. p. 71.

Colombo, in garden, April 14th.

Chlœnius melanopterus.

*Chlœnius melanopterus*, Chaudoir, Monogr. des Chlœniens (1876), p. 226?

Peradeniya, in river bed.

The determination of this species is not quite satisfactory. It agrees with Chaudoir's description as far as the description is intelligible, which it is only in part, the author comparing his species simply with another new one existing only in his own collection. His specimens came from Siam; the Ceylonese species is probably therefore distinct, but in what points it is impossible to indicate.

_Hololeius nitidulus._


Kandy, in sandy river beds.

Subfamily _Oodes._

*Oodes vilis*.


Colombo.

Subfamily _Anisodactylinae._

*Anisodactylus dispellens._


Kandy.

Compared with the type specimen in the British Museum. The species agrees with European and North-American *Anisodactylus* in all essential characters, but differs much from them in facies, owing to the rounded hind angles of the thorax and the large prominent eyes and much narrower neck. In these respects it also differs from *Selenophorus orientalis*, Dej., which is also an *Anisodactylus*, or belongs to a closely allied genus, differing in the setose upper surface of the tarsi and the narrower dilated joints of the middle tarsi in the male. *Anisodactylus dispellens* is a widely distributed insect in tropical Asia, being found in Siam and at Hong Kong and Fu-chau in China.
Subfamily Harpalinae.

Platymetopus senilis.


Colombo.

Platymetopus colombensis.


Colombo, in marshes.

This species would be almost equally well placed in the American genus Selenophorus, to which Nietner referred it, as in Platymetopus, but the short and obtuse front part of the head and flatter though not perhaps broader forehead show that it belongs to an aberrant group of Platymetopus, in which the head is smaller than in the typical section, and not to Selenophorus. The species very much resembles such species as Selenophorus discopunctatus; in its finely punctured elytral interstices it has less of the character of Selenophorus than the smooth P. amoenus. Cardiaderus setus, Walker, Ann. & Mag. Nat. Hist. ser. 3, ii. 1858, p. 203, according to the type in the British Museum, belongs to this species.

Amblystomus (Megaristerus) indicus.


Kitugalle.

Siopelus ferreus.

Elongato-oblongus, chalybeo-niger, subnitus; palpis, antennis peditibusque rufo-testaceis; elytris brevissime pubescentibus, subcrebre punctulatis, striatis, interstitiis tertio, quinto et septimo punctis nonnullis majoribus; capite medio levii, lateribus grosse disperse punctato; thorace breviter cordato-quadrate, angulis posticis fere rectis, disco levii, limbo sparsim, basi utrinque crebrius, punctulato. Long. 8 millim. ♂ ♀.

Nuwara Eliya.

Like an Ophonus in form and punctuation, but more nearly allied to Platymetopus, from which the shape of the emargination of the mentum—not semiovate, but with oblique sides forming a distinct angle with the straight bottom, which is destitute of tooth—readily distinguishes it. The frontal foveae are a little prolonged on their outer side, but do not form a stria extending to the eye. The genus is hitherto known only from tropical Africa east and west.
Barysomus Gyllenhali.  

Barysomus Gyllenhali, Dej. Sp. Gen. iv. p. 59, = Oosoma arenaria, 

Colombo. 

Bradybœnis festivus. 

Bradybœnis festivus, Dej. Sp. Gen. iv. p. 163, = Calodromus exornatus, 
Bradybœnis ornatus, Redtenb. Reise Novara, Ins. ii. p. 14, t. i. fig. 8. 

Kandy. 

Dejean did not know the locality of his specimen, but 
supposed it was from Senegal. 

Calathomimus, nov. gen. 

Gen. Harpalo affinis, sed corpore gracili gen. Calatho similis, thorace 
ovo plicaque elytrorum basali valde curvata etc. Caput post 
oculos gradatim angustatum; ante oculos quam in Harpalo lon- 
gius, mandibule longiores et rectiores; foveae frontales rotundatae, 
profundae. Palpi articulis apicalibus setosis, versus apicem angus-
tatis, Mentum acute dentatum. Paraglossae ligula latiores et 
longiores. Thorax quadrato-ovatus. Elytra oblongo-ovata, plica 
basali valde curvata, cum margine basali apud humeros angulum 
acutum efficiente; profunde striata, interstitiis tertio, quintio et 
septimo seriatim punctatis, punctis plerumque in striarum margi-
nibus sitis et inconspicuis. Pedes graciles parce setosi. 

One of the two species for which this new genus is proposed 
has the form of a Calathus or Pristodactyla; the pubescent 
third antennal joint, the simple tarsal claws, and the broad 
adherent paraglossa show, however, even in the female, that 
it belongs to the Harpalus group; the plurisetose penultimate 
joint of labial palpi and rounded frontal foveæ indicating its 
place among the Harpalinae proper rather than the Stenolo-
phine. 

Calathomimus maculatus. 

Elongatus parallelogrammicus, niger politus; antennis, partibus oris, 
pedibus abdominique apice fulvo-testaceis, elytris macula humerali 
striga subapicali (apud interstitia 6–8) margineque laterali rufes-
centibus; thorace elongato postice paullo magis quam antice 
angustato, lateribus arcuatis angulis posticis omnino rotundatis, 
margine reflexo fulvo, basi absque foveis distinctis, tota superficie 
sparsissime setifero-punctata, margine laterali punctis setiferis 
circiter 10 in serie regulari dispositis; elytris profunde lævi-
striatis vel sulcatis striolaque scutellari. 

Long. 11 millim. ♂. 

Bogawantalawa, April 1st.
Of rather narrow oblong form, the elongate thorax as wide in front as the elytra, its hind angles rounded off, and its base fitting into the deeply sinuated base of the elytra. The elytra have a strong satiny gloss and the striae are deeply and broadly incised, the rows of setiferous punctures crenulating the edges of the second, fourth, and sixth striae, and the ninth interstices being rather closely punctured throughout. The humeral angles are very acute and prominent, but form no dentiform projection. The slender tarsi are not grooved on the sides.

*Calathomimus consors.*

Minor elytrisque oblongo-ovatis, niger nitidus; antennis, palpis, pedibus apiceque ventris fulvo-testaceis; thorace oblongo-ovato lateribus minus arcuatis, postice minus angustato, sparsim grosse punctato et versus angulos posticos minute punctulato, margine laterali testaceo; elytris acute striatis, humeris minus productis sed acutis, intersticio 3–5 et 7 praecipue medio punctatis.

Long. 8½ millim. ♀.

Bogawantalawa, April 1st.

Undoubtedly congeneric with *C. maculatus*, but less elongate, and the elytra less arcuated at the base and immaculate, black, with a strong satiny gloss. The species in facies is less like a *Calathus*, and resembles more the slenderer forms of Harpalinae.

Subfamily *Stenolophinae*.

*A. circumcincto* brevior, niger nitidus, subitus sordide rufo-testaceus; elytris viridescentibus laete sericeo-micantibus, margine inflexo testaceo; palpis pedibusque flavo-testaceis; antennis piceis basi pallidioribus; thorace breviter cordato-quadrato, angulis posticis minutis, exstantibus, margine laterali testaceo, fovea utrinque lata et vage punctulata.

Long. 7 millim.

Colombo. Also in Siam, of larger size—9 millim.

The absence of the scutellar striole brings this species within the definition of the genus *Anoplogenius*, but the fourth joint of the four anterior tarsi in the male is not bilobed, as in that genus, the lobes of the anterior tarsi being short and broad, and in the intermediate the joint is rather cordate than bilobed. The palpi have their terminal joints subcylindrical and truncated, and the frontal linear foveae are sunk in large depressions, as in *Anoplogenius circumcinctus*. The elytral striae are impunctate and sharply incised, the interstices flat and more convex at the apex, near which the elytral margin is moderately sinuated.
Anoplogenius renitens.

A. microgono proxime affinis, angustior et differt thorace angulis posticis rotundatis palpisque apice obtusis nec truncatis. Supra totus sericeo-micans, thorace et elytris coloribus aureo- et viridirelucentibus, limbo laterali vage fusco-testaceo; thorace relative angustiori quadrato, postice angustato, angulis posticis valde obtusis, rotundatis; pedibus flavo-testaceis, tibiis paulo obscunioribus; caeteris sicut in A. microgono.

Long. 6½–7 millim.

Colombo.

Lepithrix foliolosus, Nietner, which belongs also to the genus Anoplogenius, has rounded hind angles to the thorax, but it is a larger insect, dark brown, with the margins of the thorax and elytra testaceous.

Stenolophus polygenus.

Anguste oblongus, nitidus subcyaneo-relucens; palpis, antennis basi (reliquis fuscis) pedibusque flavo-testaceis; foveis frontalibus late impressis lineaque curvata usque ad oculum; thorace relative parvo postice angustato angulis posticis obtusis, foveis latis basalibus levibus; elytris parallelis, profunde striatis apice obtusis parum sinuatis.

Long. 7 millim.

Nuwara Eliya.

A narrow species unlike any other Stenolophus known to me; but it agrees with this genus better than with any of its allies, the fourth joint of the two anterior tarsi of the males being narrowly bilobed and the mentum without tooth. The male tarsi are, however, only very narrowly dilated, the intermediate pair scarce perceptibly so, though having the usual hair-scales on the sides of the second to fourth joints, the fourth triangular and scarcely lobed. The head is of the same form as in Anoplogenius circumcinctus, the eyes being prominent and the frontal foveae very broadly impressed, the terminal joints of the palpi taper to the apex, which is briefly truncated. The elytra have a well-developed scutellar striae and the prosternum has three bristles at its apex.

Stenolophus 5-pustulatus.

Badieter 5-pustulatus, Wiedemann, Zool. Mag. ii. i. p. 53.

Colombo.

A variable species with regard to the number of red spots on the elytra. None of the Ceylonese examples have five well-defined spots; in some the posterior discoidal spot is wanting, but this variety occurs with the typical form also in
China and Japan. One of the varieties (S. transmutans) is peculiar in wanting the subhumeral and sutural spots and in the posterior discoidal spot being limited to two small separate spots, one on the fifth and one on the seventh interstice. I have seen this variety elsewhere only from Tranquebar. This comes very close to S. smaragdulus, Fab., which differs only in its bluer colour and somewhat more robust form. 

*Obs.* The nearly-allied S. smaragdulus (Fab., Dej.) is also found in Ceylon. Harpalus stolidus, Walker (Ann. & Mag. Nat. Hist. ser. 3, ii. p. 204), according to the type specimen, belongs to this species.

*Stenolophus opaculus.*

S. smaragdulo affinis; sed valde differt elytris minute punctulatis, subopacis. Sut breviter oblongus; palpis, antennis pedibusque flavo-testaceis; thorace lateribus arcuatis angulis postiee omni rotondatis, margine flavo-testaceo, foveis basalis punctatis; elytris (♀) apice late et obtuse rotondatis vix simiatis, valde striatis, interstiiis subconvexis minutissime punctulatis, subopacis; margine, sutura postiee maculaque parva subbasali apud interstitium sextum, fulvis.

Long. 6½ lin. ♀.

Nuwara Eliya.

The terminal joints of the palpi taper to a point; the frontal foveae are only moderately depressed; the prosternum has three bristles at its apex.

*Aculalus* derogatus.


One example, which I refer to this species on an examination of the type, the condition of which makes it difficult to examine. It is evidently, however, an *Acupalpus*; oblong, narrow, shining black, the elytra with a slight bluish tinge; antennae, palpi, and legs pale testaceous; tip and margins of the elytra slightly rufous.

*Tachycellus lamprus.*

Harpalis metallicis haud dissimilis. Supra aeneo-niger, elytris cuprascentibus, politis; palpis, antennis pedibusque rufis; capite robusto sutura inter frontem et epistoma, lineae curvatae frontali, profunde insculptis; thorace transverso-quadrato antice rotondato-dilatato, angulis posticis rectis; elytris profunde lacinio-striatis, interstiiis convexis, tertio post medium impunctato.

Long. 8 millim. ♂ ♀.

Colombo.

A large submetallic species resembling somewhat in form...
the male of *Harpalus rubripes*, but distinguishable at once from all members of the true Harpalinae group by the bisetose penultimate joint of the labial palpi and the tapering and pointed apices of the terminal joints of both labial and maxillary palpi. The upper surface is glossy and relucent, and impunctate, except the base of the thorax, which is covered with minute separate punctures. The frontal foveae (linear and reaching the eye, as in the rest of the genus) are very deep, as is also the transverse suture separating the forehead from the epistome. The elytra are convex, moderate, sinuate near the tip, and furnished with a scutellar stirole. The male has a punctured fovea in the middle (towards the base) of the first ventral segment, as in most other species of the genus.

[To be continued.]

**BIBLIOGRAPHICAL NOTICE.**


The publication of this work forms an era in the bibliography of terrestrial Isopod Crustacea. Specialists acquainted with the author’s writings and style of description have for six years been looking forward to its appearance; and it is not likely to disappoint their expectations. Mr. Budde-Lund’s identifications of species described by other naturalists are occasionally open to revision. In most instances this is due to their descriptions being insufficiently detailed and his failure to obtain access to the typical specimens; but in one case, perhaps in more than one, he has gone astray through quoting a citation at second hand, instead of looking up the reference. The notes published in the ‘Annals’ for November and December 1882 were apparently not seen by him until his Additamenta were in hand, and consequently the misnomers exposed in those numbers still obtain currency; but as he holds English authors on this order in very slight esteem, he may have deemed the corrections untrustworthy. His list of works cited is tolerably complete, the omissions being mostly unimportant.

Mr. Budde-Lund recognizes four families of woodlice:—Onisci, Ligiae, Tylides, and Syspastide.

The Onisci comprise fourteen well-established genera arranged in two sections—the Armadilloidea with eight genera, and the Oniscoidea with six—besides two or three genera referred to as unknown to the author. Of the fourteen genera specified three are gen. nov.,


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