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XLI.—*Revision of the S. African Species of Dinometopus, Troglops, Chalicorus, Colotes, Helcogaster, and the allied Genera, with an Account of their accessory ♂-characters [Coleoptera].* By G. C. CHAMPION, F.Z.S.

[Plates IV.-VI.]

THIS paper is in continuation of the one on *Ebæus*, Er., published in the last volume of the 'Annals.' It gives an account of the remaining genera of Malachiinæ represented in S. Africa. The Dasytinæ (including various insects described as Malachiids) have been dealt with in a separate article, which will be issued later. The material examined is from the same sources. The ♂-characters of *Dinometopus*, *Troglops*, etc., are homologous with those found in *Hedybius* and its allies; but in *Sphinginopalpus*, *Colotes*, etc., the development is transferred to the maxillary palpi. Dr. Marshall's collection is very rich in these insects, mostly collected by himself, and Dr. Péringuey has forwarded various interesting forms. With one exception, a *Troglops* from Nyasaland, all the species studied are from Rhodesia, Natal, or S. Africa. The E. African forms named by Pic in 1919 (*Mélanges exot.-entom.* xxxi. pp. 4-9) are therefore not likely to be synonymous with any of those here enumerated.

DINOMETOPUS.

Dinometopus, Gorham, Ann. & Mag. Nat. Hist. (7) v. p. 76 (1900).

This genus includes a few S. African "*Troglops*" with simple 5-jointed anterior tarsi in ♂. The type, ♂, is *D. natalensis*, Gorh. (= *Hedybius cavifrons*, Boh., and *Challicorus ferox*, Ab.). The apterous ♀ ♀ resemble those of the Palearctic genus *Charopus*, and two of them have, in consequence, been described under different generic names. The ♂ ♂ of *D. albonotatus*, Pic, are dimorphic, and the ♀ ♀ here referred to *D. cavifrons* have immaculate elytra.

♂ ♂.

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| 1 | (6). Elytral markings extending along whole or part of outer margin. | |
| 2 | (3). Elytra with the marginal streak complete; epistoma with a sulcate triangular plate behind the epistoma, the cephalic cavity bimaculate in front | Species 1. |
| 3 | (2). Elytra with the marginal streak incomplete. | |
| 4 | (5). Epistoma flat, with a transverse plate behind, the cephalic cavity not divided | Species 2. |
| 5 | (4). Epistoma excavate, without plate behind, the cephalic cavity transversely sulcate | Species 3. |
| 6 | (1). Elytral markings wanting along the outer margins. | |
| 7 | (10). Elytra narrowly bifasciate, the submedian fascia interrupted at suture, the other apical. | |
| 8 | (9). Epistoma flattened | Species 4. |
| 9 | (8). Epistoma excavate | Species 5. |
| 10 | (7). Elytra with three transversely-placed spots—one common (sutural), the others lateral; cephalic cavity foveate and tuberculate | Species 6. |

1. *Dinometopus cavifrons*. (Pl. IV. fig. 1, head, ♂.)

♂. *Hedybius cavifrons*, Boh. Ins. Caffraria, i. 2, p. 468 (1851)¹.

♂. *Dinometopus natalensis*, Gorh. Ann. & Mag. Nat. Hist. (7) v. p. 76 (Jan. 1900)².

♂. *Challicorus ferox*, Ab. Rev. d'Ent. xix. pp. 163, 169 (Sept. 1900)³.

♀. *Charopus brachypterus*, Boh. loc. cit. p. 472⁴.

♀. *Anexodes albicauda*, Ab. loc. cit. pp. 163, 164⁵.

♂. Black or brassy black, the basal joints of the antennæ in great part (except 1 above), the head (except two spots in the frontal cavity and the extreme base), and the elytra with a transverse median patch on the outer part of the disc and the apex narrowly, these markings connected by a narrow marginal stripe (which extends forwards around the humeri), flavous or testaceous; antennæ long, filiform; head with a subtriangular, deeply sulcate, deflexed lamella extending backward from the epistoma over the anterior portion

of the frontal cavity, the cavity itself broad, deep, bimaculate in front, bisinuate behind, the margins dentate before the eyes; elytra parallel; wings fully developed.

♀. Head and elytra black or brassy black, the latter with at most the extreme apical margin testaceous; elytra more or less abbreviated, leaving 3 or 4 abdominal segments exposed, much widened or inflated posteriorly; wings wanting; the vestiture of the upper surface a little longer.

Length $2\frac{3}{4}$ – $3\frac{1}{2}$ mm. (♂ ♀.)

Hab. S. AFRICA: Limpopo¹; Estcourt² and Frere, Natal⁴; Hamman's Kraal, near Pretoria⁵; Vryburg, Bechuanaland³; Salisbury, S. Rhodesia (*Dr. Marshall*); Bothaville, Orange Free State (*Dr. Brauns*).

Males and females have been taken at Estcourt, Frere, and Salisbury, and there can be little doubt that they belong to one and the same species, the almost entirely black elytra of the ♀ notwithstanding. I have seen the types of *D. natalensis*, *C. ferox*, and *A. albicauda*, the two first-mentioned agreeing perfectly with the descriptions of *H. cavifrons*, Boh., ♂. The insect named by Pic *C. ferox*, var. *testaceifrons*, is specifically distinct. The basally constricted prothorax and the filiform antennæ separate *D. cavifrons* from the first section of *Hedybius*.

2. *Dinometopus feroculus*, sp. n. (Pl. IV. fig. 2, head, ♂.)

♂. Very like the same sex of *D. cavifrons*, Boh., and *D. testaceifrons*, Pic:—Narrower and less shining, the puncturing excessively fine and close; black, the antennæ with the basal four or five joints, the head (except at the base), and the anterior and intermediate tibiæ, testaceous; the elytra each with a rather large rounded patch on the outer part of the disc before the middle, extending narrowly forwards along the external margin to the base, and an apical patch, flavous; head with a broad, deep, simple, inter-ocular excavation, the epistoma flattened and with a transverse lamella in the centre behind it projecting over the anterior portion of the cavity.

♀. Smaller and less convex than *D. testaceifrons*, ♀ (= *croceomaculatus*, Pic); the basal joints of the antennæ darker (1 black above); the head black; the yellow markings on the elytra smaller, the apical patch sometimes wanting, the elytra themselves a little more shining than in ♂.

Length $2\frac{1}{5}$ – $2\frac{4}{5}$ mm. (♂ ♀.)

Hab. S. AFRICA, Salisbury, S. Rhodesia [♂ ♀], Frere, Natal [♀] (*Dr. Marshall*).

Four ♂♂, 5 ♀♀, all but one from Salisbury. The apterous ♀♀ differ from those referred by me to *D. cavifrons*, Boh., in their smaller size, the maculate elytra, and the testaceous anterior and intermediate tibiae.

3. *Dinometopus testaceifrons*. (Pl. IV. fig. 3, head, ♂.)

♂. *Chalicornis ferox*, Ab., ab. *testaceifrons*, Pic, L'Echange, xix. p. 152 (1903)¹.

♀. *Anexodes croceomaculatus*, Pic, loc. cit. p. 164².

♂. Smoother and more shining than *D. cavifrons*, Boh. (= *natalensis*, Gorh., and *ferox*, Ab.), the elytra more sparsely punctured and with the flavous markings larger, the transverse median patch on the outer part of the disc not connected laterally with the apical spot, extending forwards along the outer margin to the base; the basal joint of the antennae wholly testaceous; the head flavo-testaceous, except at the extreme base, the frontal cavity large and deep, divided across the middle by a transverse sulcus and limited on each side behind by an oblique tumid ridge, the two ridges not meeting on the median line, the backwardly projecting subtriangular lamella wanting in front; the tibiae partly testaceous.

♀. Larger and more convex, the head black, the elytra much widened behind, oval, leaving three abdominal segments exposed, each elytron with two flavous spots—one on the disc below the base, large, the other smaller, apical.

Length $2\frac{1}{2}$ – $3\frac{1}{4}$ mm. (♂ ♀.)

Hab. S. AFRICA, Dunbrody^{1 2} (*Mus. Brit.*; *Mus. Cape Town*), Algoa Bay [♀], Sunday River [♂] (*Dr. Brauns*).

Two ♂♂ and two ♀♀ seen, including a pair from the type-locality. Specimens of it were found with *Termes unidentatus*, Wasm., by Father O'Neil.

4. *Dinometopus albonotatus*. (Pl. IV. fig. 4, head, ♂.)

Dinometopus albonotatus, Pic, L'Echange, xxii. p. 2 (♂) (1906)¹.

♂. Elongate, very narrow, moderately shining, very finely pubescent; black, the elytra and abdomen with long, erect, intermixed black setae, the antennal joints 1–4 beneath or in part, the head (except the foveae in the frontal cavity and the base), and the anterior tarsi in part, testaceous or flavo-testaceous, the elytra with a transverse ante-median fascia (not reaching the suture) and the apical margin whitish or flavous; the upper surface extremely finely punctured. Head large, much broader than the prothorax, flattened in

front, with a deep, foveate, transverse, trapezoidal, inter-ocular excavation, in the centre of which anteriorly is an erect trifid prominence; antennæ very long, filiform. Prothorax elongate, constricted and much narrowed behind, convex anteriorly, depressed towards the base, the base itself raised. Elytra narrow, a little longer than the head and prothorax, depressed below the base. Legs long and slender. Wings present.

♀. Head much smaller, black, slightly depressed in the middle; eyes smaller; elytra about as long as the head and prothorax, not longer than the exposed portion of the abdomen, much widened posteriorly; wings wanting.

♂. Form brachypt. Elytra short, as in ♀, but much less dilated; wings wanting.

Length $2\frac{1}{10}$ – $3\frac{1}{10}$ mm. (♂ ♀.)

Hab. S. AFRICA, Camps Bay, Ceres (R. E. Turner: ♀), Table Mt. (W. Bevins, K. H. Barnard), Rhodesia (K. H. Barnard), Stellenbosch and Koeberg (Mus. Cape Town: ♂ ♀), Port Elizabeth¹.

Twelve examples seen, one of the ♀ ♀ having the elytra almost immaculate. The brachypterous forms, ♂ ♀, superficially resemble the European *Atelestus brevipennis*, Cast. (= *hemipterus*, Er.).

5. *Dinometopus peringueyi*, sp. n. (Pl. IV. fig. 5, head, ♂.)

♂. Extremely like *D. albonotatus*, Pic, differing as follows: Head with the deep inter-ocular excavation less extended laterally, the foveæ within it larger and immaculate, one of them extending forward to near the anterior margin of the epistoma (the latter broadly flattened in *D. albonotatus*), the trifid prominence wanting, the vertex with a short median carina; prothorax smoother and more shining, more strongly constricted behind, the short basal portion parallel-sided, the base itself bituberculate; elytra with a transverse flavous patch at the sides before the middle, the apex immaculate.

Length $2\frac{1}{2}$ mm.

Hab. S. AFRICA, Rondebosch (Mus. Cape Town).

One ♂, communicated by Dr. Péringuey.

6. *Dinometopus diversifrons*. (Pl. IV. fig. 6, head, ♂.)

Dinometopus (?) *diversifrons*, Pic, L'Echange, xix. p. 178 (♂) (1903)¹.

♂. Elongate, very narrow, shining, almost glabrous; black, the antennal joints 1–4 and the head (the numerous

foveæ in the frontal cavity and a space behind the eyes excepted) testaceous, the elytra with three transversely placed white spots below the base—one small, common, on the suture, the two others larger, triangular, external; the surface sparsely, obsoletely punctulate. Head with a multi-foveate triangular excavation behind the smooth, sub-triangular, concave anterior portion, the depressed interocular space with a small prominence in the middle posteriorly; antennæ long, slender, filiform. Prothorax elongate, narrow, strongly constricted and transversely excavate below the base. Elytra long, widened posteriorly, deeply excavate below the base. Legs very slender.

Length $2\frac{1}{5}$ mm.

Hab. S. AFRICA, Dunbrody¹ (O'Neil).

There is a ♂ of this species in Dr. Marshall's collection. The elytra are marked as in the insect named by Abeille de Perrin *Chalicorus triguttatus*.

TROGLOPS.

Troglops, Erichson, Entomographien, p. 125 (1840).

Trauglops (emend.), Abeille de Perrin, Ann. Soc. Ent. Fr. 1890, pp. 205, 225.

Calotrauglops, Abeille de Perrin, *loc. cit.* pp. 205, 220.

Calotroglops (emend.), Abeille de Perrin, *op. cit.* 1891, pp. 406, 409.

The collections before me contain eight S. or E. African forms agreeing very nearly with Erichson's definition of *Troglops*; some of them belong to *Calotroglops*, Ab., which was based upon four species with maculate elytra, and the elytra themselves incompletely covering the abdomen in the ♀, characters of no importance. The insects here noticed have, in the ♂ sex, the anterior tarsi 4-jointed (joint 1 being greatly elongated and dentate at the tip in *T. donckieri*, Pic); the antennæ filiform or tapering, joints 1 and 2 or 1-4 thickened in certain species, and 3 much longer than 2, and sometimes compressed; the head large, with deep frontal cavity; the prothorax more or less elongate, constricted towards the base; and the elytra simple. The ♀♀ of four of the S. African species have been obtained, three being apterous (two dimorphic) and one fully winged. The eyes in ♂ are less prominent than in *Chalicorus*. Two E. African *Troglops* have been named by Pic. The Abyssinian *T. megacephalus*, Roth (1851), of which there is a male in the British Museum, is synonymous with *Hedybius formosus*, Reiche (1849); *T. luteus*, Roth = *H. lividus*, Gorh. (1883); and *T. signatus*, Roth, is almost certainly a variety of *H. limbatipennis*, Pic (1914).

♂ ♂.

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| 1 | (8). Elytra maculate or fasciate laterally; head flavous or testaceous, except at base. | |
| 2 | (3). Anterior tarsal joint 1 very elongate, dentate at tip, 2 and 3 short; cephalic cavity very broad; prothorax angulate at sides in front; body shining. | Species 1. |
| 3 | (2). Anterior tarsal joint 1 simple, longer than 2. | |
| 4 | (5). Prothorax dentate at sides; cephalic cavity broad; body shining: species small | Species 2. |
| 5 | (4). Prothorax angulate or not at sides; cephalic cavity extending backwards in the middle behind; body opaque: species larger, more elongate. | |
| 6 | (7). Cephalic cavity with a transverse, central, erect lamella; prothorax angulate laterally | Species 3. |
| 7 | (6). Cephalic cavity with a tuberculiform prominence behind the epistoma; prothorax not angulate laterally | Species 4. |
| 8 | (1). Elytra immaculate; body subopaque. | |
| 9 | (10). Head black, epistoma tricornute, frontal cavity broad; antennal joints 1 and 2 widened, the others filiform | Species 5. |
| 10 | (9). Head rufescent, testaceous, or flavous, except at base. | |
| 11 | (14). Antennæ filiform; elytra not metallic. | |
| 12 | (13). Antennal joints 1-4 widened; cephalic cavity triangular | Species 6. |
| 13 | (12). Antennal joint 1 only widened; cephalic cavity transverse | Species 7. |
| 14 | (11). Antennæ tapering outwards, joints 4-7 widened; cephalic cavity broad; prothorax rufous, trapezoidal; elytra metallic | Species 8. |

1. *Troglops donckieri*. (Pl. IV. fig. 7, head, ♂.)

Dinometopus donckieri, Pic, L'Echange, xxii. p. 2 (♂) (1906)¹.

♂. Elongate, very narrow, shining, sparsely pubescent, with a few long erect hairs intermixed; nigro-piceous or black, the antennæ, the palpi in part, the head (except on each side at the base), the anterior and basal margins of the prothorax, and the anterior and intermediate legs (the femora wholly or in part excepted) testaceous; the elytra with the humeri in front and a transverse fascia on the outer part of the disc below the base whitish or flavous; the surface-puncturing sparse and extremely fine. Head triangular, very large, wider than the prothorax, the frontal excavation deep, broad, with a slender erect horn in the centre anteriorly, the posterior wall of the cavity quadridentate, the epistoma narrow, triangular, convex along the middle, notched in front; eyes prominent, large, convex; antennæ filiform, very long, comparatively stout, joint 3 as long as 4. Prothorax elongate, very convex on the disc, angularly dilated

and obliquely excavate at the sides anteriorly, and rapidly narrowed thence to the base. Elytra subparallel, rather long, transversely depressed below the base, the humeri tumid. Legs very long and slender; anterior tarsi 4-jointed, joint 1 as long as 2-4 united, produced into a long oblique tooth at the apex within, 2 and 3 short.

♀. Head and prothorax (the basal margin of the latter excepted) black or obscurely rufescent, the antennæ infusate towards the apex, shorter and more slender than in ♂; head and eyes smaller; prothorax rounded at the sides anteriorly; elytra more or less inflated posteriorly, as long as in ♂, not quite covering the abdomen; wings wanting.

Length $2\frac{1}{10}$ – $2\frac{1}{2}$ mm. (♂ ♀.)

Hab. S. AFRICA, Stellenbosch, Constantia, Strand, Tulbagh, Cape Colony (*Mus. Cape Town*: ♂ ♀), Table Mt. (*R. E. Turner*: ♀), Port Elizabeth¹.

Numerous ♂ ♂ and ♀ ♀ seen, including a pair found *in copula* by Dr. Purcell. The tarsal structure was not mentioned by Pic. The ♀ ♀ are dimorphic as in those of *T. cicindeloides*, some of them having the elytra strongly inflated towards the apex; they are very like the same sex of *Sphinginopalpus*, differing in the shorter head and the less elongate first antennal joint.

2. *Troglops biguttatus*. (Pl. IV. fig. 8, head, ♂.)

♀. *Charopus biguttatus*, Redt. Reise Novara, ii. p. 106 (1867)?

♂. Elongate, narrow, shining, sparsely pubescent; black, the antennæ at the base or almost wholly, the head (except at the base), the basal margin at the prothorax, and the anterior and intermediate legs in part, testaceous, the elytra with a suturally-interrupted, outwardly-widened, whitish or flavescent fascia before the middle; the prothorax and elytra very finely, closely punctate. Head subtriangular, broader than the prothorax, the frontal excavation transverse, deep, and with a short, horn-like prominence in the centre anteriorly and an oblique one on each side of it in front, the epistoma also deeply excavate down the middle, the lateral portions thus appearing tumid; antenna long, filiform, joint 3 as long as 4, compressed, slightly widened. Prothorax elongate, feebly dentate laterally at about the middle and constricted and rapidly narrowed thence to the base, the disc flattened posteriorly. Elytra moderately elongate, slightly widened towards the apex, depressed below the base. Anterior tarsi 4-jointed, 1 simple, as long as 2 and 3 united.

♀. Head and antennæ (joints 1-4 excepted) black; prothorax not angulate laterally; elytra much widened posteriorly, incompletely covering the abdomen; wings wanting.

Length $1\frac{1}{2}$ -2 mm. (♂ ♀.)

Hab. S. AFRICA, Cape of Good Hope (*type*), Table Mt. (*W. Bevins*), Camps Bay (*R. E. Turner* : 9. x. 1920 : ♂ ♀); Cape Town (*L. Péringuey* : 1897 : ♂).

Four ♂♂, two ♀♀ seen. Smaller than *Dinometopus albonotatus*, Pic, the elytra with a similar whitish ante-median fascia, the apical margin black; the ♂ with 4-jointed anterior tarsi, the anterior portion of the head differently shaped, the prothorax (as in certain European *Troglops*) angulate laterally. The fourth joint of the maxillary palpi is rather slender, obliquely truncated at the tip. *Charopus biguttatus*, Redt., from S. Africa, a name omitted from the 'Munich Catalogue,' seems to have been based upon a ♀ of this species; the type, Dr. Holdhaus informs me, cannot be found in the Vienna Museum.

3. *Troglops cicindeloides*, sp. n. (Pl. IV. fig. 9, head, ♂.)

♂. Very elongate, narrow, rather convex, opaque, finely cinereo-pubescent; black, the basal half of the antennæ, the front of the head (two small spots on the frontal plate excepted, the black basal portion bilobed anteriorly), the anterior and intermediate tibiae, and the tarsi in great part or entirely, testaceous; the prothorax with a short triangular or transverse space at the base, and the elytra with an externally-widened, ante-median fascia on the outer part of the disc, whitish or flavescent; the upper surface densely, very finely, rugulosely punctured. Head broader than the prothorax, the frontal excavation deep, transverse, extending backwards triangularly in the middle behind, and with a transverse, erect, bimaculate lamella in the centre, the epistoma triangular, sulcate down the middle, and angulate and ciliate posteriorly; eyes large; antennæ long, filiform, joint 3 compressed, hollowed on its inner aspect, as long as 4. Prothorax very elongate, narrowed and constricted towards the base, the sides subangulate at a little before the middle, the disc flattened posteriorly. Elytra elongate, parallel. Anterior tarsi 4-jointed, joints 1 and 2 elongate, 1 longer than 2.

♀. Head black, flattened; antennæ shorter; prothorax piriform; elytra widened posteriorly; wings wanting.

Var. ♀. Less elongate, the prothorax immaculate, the basal joint of the antennæ sometimes infusate above, the elytra shorter and more dilated posteriorly.

Length $2\frac{1}{2}$ – $3\frac{1}{4}$ mm. (σ φ .)

Hab. S. AFRICA, Salisbury, S. Rhodesia (Dr. G. A. K. Marshall: xii. 1893, xii. 1894, l. i. 1895, l. xii. 1898).

Four σ σ , twelve φ φ seen, three of the latter belonging to the variety. A very elongate, narrow, opaque, albi-maculate insect, with peculiarly formed head and antennæ in σ , the φ φ apterous and dimorphic.

4. *Troglops neavei*, sp. n. (Pl. IV. fig. 10, head, σ .)

σ . Very like *T. cicindeloides*, σ , and differing as follows:—Antennal joints 1–4 only testaceous, the head with two transverse black marks immediately behind the epistoma, the prothorax and legs (the apices of the anterior femora and tibiæ excepted) black, the whitish elytral fascia scarcely widened outwards; head with the anterior portion narrower, the very deep, transverse, backwardly-produced frontal excavation interrupted in the middle immediately behind the sulcate epistoma by a tuberculiform prominence (this being represented in *T. cicindeloides* by a transverse lamella placed at some distance behind the epistoma); antennal joint 3 compressed, curved, as long as 4; prothorax very elongate, without lateral angulation; anterior tarsi as in *T. cicindeloides*.

Length 3 mm.

Hab. E. AFRICA, Mlanji Boma, Nyasaland, alt. 2400 ft. (*S. A. Neave*: iv. 1910).

One male, the species representing *T. cicindeloides* in Nyasaland.

5. *Troglops tricornutus*, sp. n.
(Pl. IV. fig. 11, head in profile, σ .)

σ . Elongate, very narrow, subopaque, finely cinereo-pubescent; black, joints 1–5 of the antennæ (the inner half of 1 excepted) testaceous; the puncturing of the upper surface very fine and close. Head wider than the prothorax, the inter-ocular cavity deep, arcuate, the epistoma triangular, raised on each side into a stout, obtuse, horn-like prominence, each of which is foveate above, the space between the elevations appearing sulcate and limited behind by a prominent tubercle; antennæ long, joint 1 dilated, concave in its outer half above, angulate externally, 2 also widened, as long as 3, 3–5 increasing in length, 5–11 filiform, elongate. Prothorax elongate, constricted and narrowed posteriorly, feebly, transversely depressed before the base. Elytra

elongate, a little widened towards the apex. Anterior tarsi 4-jointed, 1 and 2 elongate, 1 longer than 2, 3 short.

Length $2\frac{1}{4}$ mm.

Hab. S. AFRICA, Salisbury, S. Rhodesia (*Dr. Marshall* ; iii. 1900).

One male. Separable from the same sex of its allies by the wholly black head, with rather long, bi-cornute epistoma, and the dilated first and second joints of the antennæ.

6. *Troglops nodosicornis*, sp. n.

(Pl. IV. figs. 12, head, 12 a, antenna, ♂.)

♂. Elongate, narrow, subopaque, finely cinereo-pubescent; leaden-black, the head (an anteriorly angulate space at the base excepted), the antennal joints 1-5, the anterior and intermediate legs (the femora excepted), and the bases of the posterior tibiæ, flavous or testaceous; the puncturing of the upper surface very fine and close. Head large, much broader than the prothorax, transverse, the frontal excavation triangular, deep, impinged upon anteriorly by the raised, Y-shaped, backward extension of the epistoma, the latter trifoveate, the central fovea rounded, deep, the others transverse; antennæ long, joints 1-4 thickened, 2 short, 3 concave and as long as 4, 4 nodose, hollowed at the base, 5-11 filiform. Prothorax longer than broad, somewhat oval, narrowed posteriorly, almost unimpressed on the disc. Elytra moderately long, a little widened towards the apex. Anterior tarsi 4-jointed, 1 and 2 elongate, 1 longer than 2, 3 short.

Length $2\frac{1}{5}$ mm.

Hab. S. AFRICA, Salisbury, S. Rhodesia (*Dr. Marshall* ; ii. 1898).

One male. Broader and a little less elongate than *T. plumbeus*, ♂; the antennal joints 1-4 thickened, 3 concave and 4 nodose; the head very differently shaped; the prothorax almost unimpressed.

7. *Troglops plumbeus*, sp. n. (Pl. IV. fig. 13, head, ♂.)

♂. Elongate, very narrow, subopaque, very finely cinereo-pubescent; leaden-black, the head (except at the base), the antennal joints 1-4 (a black streak on the outer edge of 1 excepted), and anterior tibiæ, flavous or testaceous; the puncturing of the upper surface extremely fine and close. Head large, broader than the prothorax, angulate at the sides anteriorly, the frontal cavity deep, subquadrate, and with a compressed, horn-like prominence behind the epistoma, the latter sulcate down the middle and bidentate in front;

antennæ long, joint 1 stout, 2-11 slender, filiform, 3 curved, as long as 4. Prothorax elongate, constricted and much narrowed posteriorly, transversely depressed before the base. Elytra elongate, slightly widened towards the apex, not quite covering the abdomen, feebly transversely depressed below the base. Legs very slender, long; anterior tarsi 4-jointed, 1 and 2 elongate, 1 longer than 2, 3 short.

Length 2-2½ mm.

Hab. S. AFRICA, Salisbury, S. Rhodesia (*Dr. G. A. K. Marshall*: xii. 1898, iii. 1902).

Three males, one imperfect. This insect is one of three small, subopaque, closely allied, plumbeous forms with immaculate elytra captured by Dr. Marshall at Salisbury, the males differing greatly *inter se* in the structure of the head and antennæ, the flavous portion of the head being subquadrate in the present species. The general shape is that of a *Cicindela*.

8. *Troglops semicæruleus*, sp. n.

(Pl. IV. fig. 14, head, ♂.)

♂. Elongate, opaque, finely cinereo-pubescent; head (except the eyes and at the base, and within the two curved sulci behind the epistoma in one specimen), antennæ (except joints 4-9 or 5-9, which are black), prothorax, tarsi, and the anterior and intermediate femora in part, testaceous or rufo-testaceous, the rest of the legs black, the scutellum, elytra, metasternum, and abdomen nigro-cæruleous; head and prothorax finely rugulose, the elytra closely punctulate. Head large, subtriangular, wider than the prothorax, the interocular cavity broad, deep, arcuate, limited in front by the comparatively large, flattened, trapezoidal epistoma, which is notched in the middle behind and foveate on either side of this, the large cavity bordered anteriorly by two curved sulci which are separated in the middle by a small prominence; antennæ long, the blackened joints 4-7 more or less dilated, wider than those following, 3 as long as 4. Prothorax barely as long as broad, trapezoidal, angulate in front and also at and behind the anterior angles, narrowed and constricted posteriorly, the sides subparallel anteriorly, the disc convex and almost unimpressed. Elytra long, about as wide as the head, subparallel, obliquely depressed on the disc below the base. Anterior tarsi 4-jointed, 1 simple, nearly as long as 2 and 3 united, 3 shorter than 2.

♀. Head black, flattened; antennæ shorter and more slender, subfiliform, joint 1 nigro-maculate above; prothorax narrower, as long as broad, less dilated in front, the

anterior margin rounded and the angles obtuse, the lateral margins without angular dilatation; elytra and wings as in ♂.

Length $2\frac{1}{2}$ – $2\frac{2}{3}$ mm. (♂ ♀.)

Hab. S. AFRICA, Bulawayo [xii. 1903: ♂ ♀], Salisbury [ii. 1906: ♂] (*Dr. G. A. K. Marshall*).

Two ♂♂, one ♀. A very different insect from any S. African species known to me, the general facies being that of a large *Xylophilus*. Both sexes are fully winged and have similarly shaped elytra. The cephalic cavity is finely pubescent within.

CHALICORUS.

Chalicorus, Erichson, Entomographien, p. 124 (1840) [type *C. vinula*, Er.].

Antennæ 11-jointed, long, filiform, joints 2 and 3 short, subequal; head in ♂ short, broad, triangular, excavate anteriorly and with a horn-like prominence or lamella behind the epistoma, the eyes very prominent in the same sex; terminal joint of maxillary palpi oblong, stout, obliquely truncate at tip; prothorax elongate, constricted posteriorly, the anterior portion very convex; elytra simple, incompletely covering the abdomen in both sexes in *C. vinula*; anterior tarsi simple, 5-jointed in both sexes, 1–4 gradually decreasing in length; wings in ♀ wanting (*C. vinula*) or fully developed.

This genus is here restricted to *C. vinula* and two allied S. African forms with a gibbous prothorax. The species referred to it by Boheman, Abeille de Perrin, and Gorham belong elsewhere.

1. *Chalicorus vinula*. (Pl. IV. figs. 15, 15 a, head and prothorax, 15 b, antenna, ♂.)

♂. *Chalicorus vinula*, Er. Entomographien, p. 125 (1840)¹.

“Niger, thorace rufo, elytris albo-bifasciatis” (*Erichson*).

♂. Head broad, transversely triangular, with a deep arcuate frontal excavation, in the centre of which is a stout, erect, truncate horn, the posterior border of the cavity subdentate on each side as seen from above, the eyes small, prominent; antennæ very elongate, filiform, joints 2 and 3 short, equal in length; joint 4 of maxillary rather stout, obliquely truncate at tip; prothorax oblongo-cordate, narrow, flattened, and parallel-sided at the base; elytra long, parallel, not wider than the head; anterior tarsi 5-jointed, simple, joint 1 about as long as 2 and 3 united.

♀. Head less transverse, flattened, the eyes not prominent;

elytra long, much widened and inflated posteriorly, incompletely covering the abdomen; wings wanting.

Var. *nigricollis*, nov.—Prothorax black, the elytral fasciæ narrower, the apical fascia wanting in one specimen, the legs darker; antennal joint 3 (fig. 15*b*) more or less curved. (♂.)

Hab. S. AFRICA, Simonstown, Cape Colony (*K. H. Barnard*, in *Mus. Brit.*: 24. ix. 1911: ♂ ♀), Cape Town¹ (*Mus. Cape Town*: ♀), Mossel Bay (*R. E. Turner*: vii. 1921; ♂, var.).

There are numerous ♀ ♀ of this insect in the Cape Town Museum, and a pair of the type-form, and three ♂ ♂ of the dark variety, in the British Museum. These latter agree perfectly in the structure of the head with a typical ♂, and they are therefore referred to the same species. Erichson's description was based upon a specimen of that sex. The type has two rather broad white fasciæ on the elytra—one median, not reaching the suture, the other extending along the apical margin,—which are much narrower, and the apical one sometimes wanting, in the var. *nigricollis*.

2. *Chalichorus flavofasciatus*, sp. n. (Pl. IV. fig. 16, head and prothorax in profile, ♂.)

♂. Elongate, rather narrow, shining, finely, very sparsely pubescent; brilliant cyaneous, the antennæ (the testaceous joints 2–4 excepted) and legs black, the elytra with a complete, outwardly widened, testaceous submedian fascia; the surface-puncturing sparse and very fine. Head broad, transversely triangular, sulcate around the very prominent eyes in front, and with a deep, arcuate, frontal excavation, in the centre of which is a rounded, transverse, horn-like prominence projecting backward from the epistoma; antennæ long, filiform, rather stout, joints 2 and 3 short, broad, transversely subquadrate, subequal in length. Prothorax elongate, abruptly constricted and narrowed posteriorly, the anterior portion strongly, longitudinally gibbous on the disc and deeply sulcate laterally, the transverse basal groove also deep, the base itself raised and obsoletely bituberculate. Elytra widened posteriorly, at the base as broad as the head, deeply, transversely depressed before the middle, and also hollowed along the suture anteriorly, the apices conjointly rounded. Anterior tarsi 5-jointed, joint 4 small.

Length $2\frac{1}{2}$ mm.

Hab. S. AFRICA, Saldanha Bay, Cape Colony (*Mus. Cape Town*).

One male, readily known by its brilliant blue, shining surface, the testaceo-unifasciate elytra, and the gibbous disc

of the prothorax, the head formed very much as in the same sex of *C. vinula*, Er. The elytra are more depressed below the base than in that species and the legs are not so slender.

3. *Chalicorus bisellatus*, sp. n.

♀. Elongate, narrow, shining, sparsely, finely pubescent; nigro-cyaneous, the antennæ with joints 1-5 in great part (except 1 above), and the elytra with two fasciæ—one ante-median, widened outwards, the other apical, extending for some distance forward along the suture—testaceous, the prothorax rufous, with two small, oblong, bluish spots on the dorsal hump, the rest of the antennæ and the legs piceous or black; closely, finely, the elytra more strongly, punctate. Head triangular, flattened; antennæ long, filiform, joints 2 and 3 short, subequal in length. Prothorax elongate, constricted and much narrowed posteriorly, the anterior portion gibbous on the disc, the transverse basal depression deep, the base itself appearing raised. Elytra elongate, deeply transversely depressed below the base, the apical portion convex. Wings fully developed.

Length $2\frac{4}{5}$ mm.

Hab. S. AFRICA, Willowmore, Cape Colony (*Dr. Brauns, Mus. Cape Town*).

One specimen, forwarded by Dr. Péringuey for determination. Separable from *C. flavofasciatus* by its bimaculate red prothorax and the bifasciate elytra. The wings are ample in this insect and wanting in the same sex of the type of the genus, *C. vinula*.

CHALICOROIDES, gen. nov.

Antennæ filiform, 11-jointed, 3 and 4 subequal in length, 3 longer than 2; terminal joint of maxillary palpi in both sexes oblong-ovate, obliquely truncate at tip; head in ♂ short, triangular, tuberculate and excavate anteriorly, the eyes prominent; prothorax cordate; elytra simple; anterior tarsi simple, 5-jointed, 1-4 gradually decreasing in length; wings present in both sexes.

Type, *Chalicorus triguttatus*, Ab.

The small S. African insects referred to this genus are so different from the type of *Chalicorus*, *C. vinula*, Er., that they are best separated from it. The ♂, it is true, has the head and anterior tarsi very similarly formed; but the cordate or transversely cordate, less constricted prothorax gives them the general facies of an *Attalus* or *Colotes*, the third antennal

joint, too, is relatively longer than in *Chalichorus*. The 5-jointed anterior tarsi of the ♂, and the simple palpi in the two sexes, distinguish *Chalichoroides* from *Colotes*, the type of which is *C. trinotatus*, Er. *Psiloderes*, Peyr., has a similarly shaped head in ♂, but differs in other respects from the present genus*.

1. *Chalichoroides triguttatus*. (Pl. V. fig. 17, head, ♂.)

Chalichorus triguttatus, Ab. Rev. d'Ent. xix. pp. 163, 169 (♂ ♀) (1900)¹.

♂. Moderately elongate, shining, finely pubescent; black, the anterior half of the head, the antennal joints 1-4, the anterior and intermediate legs (the femora in part excepted), and the posterior tarsi in great part or wholly, testaceous; the elytra with three transversely placed whitish or flavescent spots just before the middle—one common, rhomboidal, the others lateral, triangular; the surface extremely finely, closely punctate. Head short, triangular, about as broad as the prothorax, the frontal cavity deep, transverse, trituberculate behind, the epistoma flattened, and with a small truncated projection in the centre posteriorly, the eyes very prominent; antennæ moderately long, filiform, joint 1 stout, 3 considerably longer than 2. Prothorax transversely cordate, depressed at the base, the lateral margins explanate. Elytra slightly widened posteriorly. Legs very slender; anterior tarsi simple, 5-jointed.

♀. Head black, flattened, the eyes not prominent; antennæ shorter and more slender; elytra much widened posteriorly.

Var. Elytra black. (♀.)

Length 2-2½ mm. (♂ ♀.)

Hab. S. AFRICA, Cape Town, Stellenbosch (*Mus. Cape Town*: ♂ ♀), Table Mountain (*W. Bevins*), Umvoti, Natal (*H. Fry, in Mus. Cape Town*: ♀).

Redescribed from three ♂♂ and three ♀♀, including the type communicated by Dr. Péringuey.

2. *Chalichoroides peninsularis*, sp. n.

(Pl. V. fig. 18, head, ♂.)

♂. Moderately elongate, rather broad, shining, closely pubescent, testaceous or rufo-testaceous, the head with the base, eyes, and frontal tubercle, the outer half or more of the antennæ, the palpi, abdomen, and under surface, the elytra

* There are three ♂♂ and one ♀ of *P. pluriarmatus*, Belon, from Kurdistan, in the British Museum: the ♂ has 4-jointed anterior tarsi, 1 and 2 being elongate and 3 short.

with the base narrowly and an oblique subapical fascia on the disc of each of them, the anterior and intermediate femora and tarsi in part, and the posterior legs almost entirely, black or piceous; the surface closely, very finely punctate. Head short, triangular, about as wide as the prothorax, the frontal cavity rather small, limited on each side by a subconical prominence, the epistoma with a small black tubercle in the middle behind, the eyes prominent. Antennæ long, filiform, joint 3 much longer than 2, 3 and 4 subequal, 5-11 elongate. Prothorax small, short, transversely cordate, narrowly margined. Elytra much broader than the prothorax, widened posteriorly, incompletely covering the abdomen, somewhat depressed. Anterior tarsi simple, 5-jointed.

♀. Head flattened, black, the eyes not prominent, the antennæ shorter, the subapical elytral fascia curved, extending outwards to the lateral margin.

Length 2-3 mm. (♂ ♀.)

Hab. S. AFRICA, Celes, Cape Province, alt. 1500 feet (*R. E. Turner*: x., xi. 1920).

Four ♂♂ and ten ♀♀ recently sent by Mr. Turner to the British Museum. Its nearest ally seems to be *C. (Chalicorus) triguttatus*, Ab., from the same region. The excavate, trituberculate head and the simply 5-jointed anterior tarsi of the ♂ separate *C. peninsularis* from *Attalus*.

3. *Chalicoroides* (?) *semicinctus*, sp. n.

♀. Elongate, narrow, shining, finely pubescent; black, the prothorax with the basal margin, and the lateral margins thence to about the middle, narrowly edged with testaceous, the elytra each with a whitish or flavous transverse fascia on the outer part of the disc before the middle, the antennæ (a dark streak on joint 1 and the infusate terminal joints excepted) and legs (the infusate femora and posterior tibiae excepted) testaceous; the entire upper surface sparsely punctulate. Head about as wide as the prothorax, longitudinally bi-impressed anteriorly; antennæ long, filiform, joint 3 longer than 2. Prothorax convex, subcordate, about as long as broad, gradually narrowed posteriorly, feebly margined at the sides. Elytra long, gradually widened towards the apex, the apices separately rounded. Legs long and slender.

Length 2-2½ mm.

Hab. S. AFRICA, Salisbury, S. Rhodesia [type] (*Dr. Marshall*: ix. 1898, viii. 1900), Prieska (*Mus. Cape Town*: x. 1887).

Three ♀ ♀, precisely similar, provisionally referred to *Chalicoroides* in the absence of the ♂. More elongate than *C. triguttatus*, Ab.; the prothorax longer, more gradually narrowed behind, and with the margins less extended; the elytra longer and wanting the common whitish sutural spot.

MATOPUS, gen. nov.

Antennæ inserted beneath the outer angles of the epistoma at some distance before the eyes, 11-jointed, joints 1, 3, 4, 5 thickened in ♂; head transverse, subtriangular, excavate in ♂, the epistoma truncate anteriorly and without suture behind; terminal joint of maxillary palpi oblongo-conic, truncate at tip; prothorax long, constricted posteriorly, unidentate laterally; elytra oblong-oval; anterior tarsi 5-jointed in both sexes, joint 2 extending over the base of 3 in ♂; tarsal claws small, lobed at the base; body elongate, narrow, winged in ♂, apterous in ♀, integument coriaceous.

Type, *M. petrensis*, sp. n.

This genus has the anterior tarsal structure of the "Attalaires" of Abeille, and the ♂ cephalic excavation of a *Troglops*. The 11-jointed antennæ, with simply dilated basal joints 3-5 in ♂, separate *Matopus* from *Laius*, some of the Malayan members of which have the sides of the prothorax similarly dentate. *Colpometopus*, Ab., which has 4-jointed anterior tarsi in ♂ and an apterous ♀, is related to the present genus.

1. *Matopus petrensis*, sp. n. (Pl. V. figs. 19, head and prothorax, 19 a, antenna, ♂.)

♂. Somewhat convex, opaque, finely pubescent; black or bluish-black, the basal joints of the antennæ testaceous beneath, the elytra each with a very large orange-red or orange patch on the outer part of the disc below the base extending inward to near the suture; the head and prothorax densely, finely, rugulose, the elytra coarsely, closely punctate. Head bifoveate and deeply excavate in the middle between the eyes, the anterior margin of the cavity produced backward in the centre into a short dentiform projection; eyes prominent; antennæ comparatively stout, long, subserrate, tapering from joint 6 onward, 1 moderately elongate, curved, much thickened, 2 small, 3-5 dilated within, 3 triangular, 4 transverse. Prothorax narrower than the head, long, narrowed and constricted behind the median tooth, transversely depressed on each side anteriorly and on the disc before the base. Scutellum transverse. Elytra oblong

slightly rounded at the sides. Anterior tarsal joints 1 and 2 somewhat thickened, 2 with a claw-like extension at tip.

♀. Antennæ gradually tapering from joint 4, 1 shorter and less thickened than in ♂; eyes smaller; elytra more rounded at the sides, not quite covering the abdomen.

Length $2\frac{4}{5}$ –3 mm. (♂ ♀.)

Hab. S. RHODESIA, Matopo Hills (26. xii. 1916: *ex Rhodesian Museum*).

Numerous examples, found running on bare granite slopes.

SPHINGINOPALPUS.

Sphinginopalpus, Pic, L'Echange, xix. p. 164 (1903) [type *S. oneili*, Pic].

The ant-like beetles forming this genus have 11-jointed antennæ, a simple head, a narrow, elongate, posteriorly constricted prothorax, more or less swollen elytra, and simple 5-jointed anterior tarsi in the two sexes; the ♂♂ with enormously developed third and fourth joints to the maxillary palpi (as in *Colotes*), and the basal joint of the antennæ often toothed near the base; the ♀♀ (and in one species the ♂ also) wingless, and usually with the elytra more inflated than in ♂. The S. African species named by Pic appear to be represented in the collections before me, except *S. apicalis* (1914) from Rhodesia. He has also diagnosed in Oct. 1919, "pour prendre date," many others from E. Africa, found by MM. Jeannel and Alluaud. There is, at present, only one representative from this region (from Rogoro, in the Kikuyu Forest, and Kabete, Kenya Colony) in the British Museum collection.

These insects, Dr. Péringuey informs me, are to be obtained by sifting dead leaves and mould. Mr. R. E. Turner has found specimens on flowers.

♂♂.

- | | |
|--|-----------------|
| 1 (6). Wings present (wanting in ♀♀). [SPHINGINOPALPUS, Pic, s. str.] | |
| 2 (3). Antennal joint 1 bi- or unidentate near base. . . . | Species 1–9*. |
| 3 (2). Antennal joint 1 simple. | |
| 4 (5). Antennal joint 4 not dilated; elytral margins prominent | Species 10, 11. |
| 5 (4). Antennal joint 4 dilated; elytral margins not prominent | Species 12. |
| 6 (1). Wings wanting (as in ♀) [Subgen. CHALICOROPHYSIS, Péring., in litt.]; antennal joint 1 simple | Species 13. |

* ♀ only of No. 7 known to me.

1. *Sphinginopalpus bidens*, sp. n.

(Pl. V. figs. 20, antenna, 20 a, maxillary palpus, ♂.)

♂. Very like *S. oneili*, Pic; the front of the head, the labrum, the antennal joints 1-6, the base of the prothorax, and the anterior and intermediate legs (the femora in part excepted), testaceous; the elytra with a faint triangular patch at the sides below the base and the expanded lateral margins whitish. Antennal joint 1 moderately long, sharply triangularly dilated at about the middle within, and with a shorter acute tooth near the base. Palpi as in *S. oneili*. Elytra rather elongate, parallel at the base, and with the margins explanate thence to near the apex.

♀. Head infusate; antennal joint 1 infusate at base; joint 4 of maxillary palpi broad, triangular; elytra elongate-oval, convex, flavo-marginate laterally; wings wanting.

Length 2-2½ mm. (♂ ♀.)

Hab. S. AFRICA, Frere, Natal (*Dr. Marshall*).

Described from a pair captured in Dec. 1896, and a ♀ taken in Feb. 1893. This is a form of *S. oneili*, Pic, with the basal joint of the antennæ sharply bidentate in ♂ and the fourth joint of the maxillary palpi triangular in ♀—this being stouter and securiform in the same sex of *S. oneili* and *S. myrmecodes*, and broader than in *S. albilabris* and *S. flavomarginatus*.

2. *Sphinginopalpus oneili*. (Pl. V. fig. 21, antenna, ♂.)

Sphinginopalpus oneili, Pic, L'Echange, xix. p. 164 (♂ ♀) (1903)¹; Bull. Soc. Ent. Fr. 1904, p. 13 (♂ ♀)².

♂. Narrow, very shining, black, with a faint metallic lustre, the head usually more or less whitish in front, the basal 4-6 joints of the antennæ wholly (except 1 at the base) or in part, the base of the prothorax, and the anterior and intermediate legs (the tibiæ in part and the femora excepted), testaceous; the elytra with a complete or interrupted, externally-dilated, ante-median fascia (sometimes reduced to a small transverse mark on the suture or wholly wanting), and the outer margins to a greater or less extent, whitish or testaceous; the surface-sculpture as in *S. myrmecodes*, Boh. Antennal joint 1 with a prominent curved tooth near the base; palpi as in *S. myrmecodes*.

♀. Head infusate; joint 4 of maxillary palpi stout, securiform; elytra rather elongate, narrow at the base, inflated posteriorly, more broadly margined; wings wanting.

Length 2-2½ mm. (♂ ♀.)

Hab. S. AFRICA, Dunbrody¹, Stellenbosch, Cape Town (*Mus. Cape Town*: ♂ ♀), Camps Bay, Rapenburg (*R. E. Turner*: ♂), Salisbury (*Dr. Marshall*: ♂ ♀).

A variable insect, of which there is a long series in the Cape Town Museum. It is one of several imperfectly segregated, extremely closely related South African forms, and mainly distinguishable amongst them by its narrow shape and the strongly toothed basal joint of the antennæ in the ♂, this tooth being very small in *S. myrmecodes*. The head is in one example wholly infusate as in ♀; and the elytral markings may be reduced to a marginal stripe. The palpi are testaceous in the single ♂ captured at Camps Bay.

3. *Sphinginopalpus longidens*, sp. n.

♂. Elongate, narrow, very shining, clothed with scattered, long, whitish, erect hairs; black, the antennal joints 1-5 or 1-6 (except 3 and the basal half of 1), base of prothorax, outer halves of anterior and intermediate tibiæ, and bases of the tarsi, testaceous, the elytra with an elongate whitish or flavous patch at the sides below the base; head and prothorax very sparsely punctulate, the elytra coarsely seriatopunctate to near the tip. Head a little wider than the prothorax; antennæ moderately long, subfiliform, joint 1 slender at the base and then abruptly thickened to the apex, the narrow basal portion slightly angulate and the thickened outer portion armed with a long, straight tooth at the proximal end within, 3 longer than 2 or 4; joints 3 and 4 of maxillary palpi extremely large, transverse, 4 scaphiform, concave. Prothorax long, convex, constricted and much narrowed at the base, the transverse basal groove deep. Elytra oval, narrow at the base, the margins arcuately widened, the humeri tumid. Posterior tibiæ curved.

♀. Elytra broader, more rounded at the sides, inflated posteriorly, the humeri dentiform; fourth joint of maxillary palpi triangular, not very large; wings wanting.

Length 2 mm.

Hab. S. AFRICA, Mossel Bay (*R. E. Turner*: ii. 1922).

Ten examples, four of which are males. Smaller and less elongate than *S. oneili*, Pic; the antennæ shorter, joints 1 and 3 partly or wholly black, the long narrow tooth on joint 1 straighter and the joint itself abruptly widened in its outer half in ♂; the elytra more rounded at the sides in both sexes, the whitish markings reduced to an elongate lateral patch; the head black or piceous in ♂ and ♀.

4. *Sphinginopalpus formicarius*. (Pl. V. fig. 22, antenna, ♂.)

♀. *Chalichorus* (?) *formicarius*, Gorh. Ann. & Mag. Nat. Hist. (7) vii. p. 358 (1901)¹.

? *Sphinginopalpus barkeri*, Pic, L'Echange, xx. p. 66 (♂ ♀) (1904)².

♂. Extremely like *S. (Chalichorus) collaris*, Boh.; smaller, the antennæ less elongate, joints 1–5 (1 with a streak at the apex only) nigro-maculate above, testaceous beneath, the others black, 1 slightly curved, notched near the base within, and armed with a curved, ciliate tooth in front of this; joints 3 and 4 of maxillary palpi smaller, less dilated laterally, 4 strongly curved (appearing bifurcate in certain aspects); head and prothorax opaque or subopaque; elytra shining, brassy-black, the expanded margins rufescent, the coarse puncturing extending to the apex, subseriate on basal half; anterior and intermediate tibiæ (except at their bases) and tarsi testaceous.

♀. Head piceous; joint 4 of maxillary palpi small, narrow; elytra subglobose, narrow at the base, the humeral callus small; wings wanting.

Length 2–2½ mm. (♂ ♀.)

Hab. S. AFRICA, Malvern, Natal^{1 2} (*Mus. Cape Town*, *Mus. Brit.*, *Mus. Durban*: ♂ ♀), Port Natal, Durban (*Mus. Brit.*: ♂ ♀).

Fourteen specimens seen, including three males in the British Museum. This species seems to be the imperfectly-described *S. barkeri*, Pic; but his definition of the palpi, "moyens," is unintelligible, and the structure of the antennæ of the ♂ is not noticed. The ♀ from Port Natal was received by the British Museum in 1855.

5. *Sphinginopalpus myrmecodes*.

♀. *Chalichorus myrmecodes*, Boh. Ins. Caffraria, i. 2, p. 475 (1851)¹.

♂. *Chalichorus albifrons*, Boh. loc. cit. p. 476².

♂. Narrow, shining, black, with a violaceous or bluish lustre in certain lights, the head whitish in front, the basal five joints of the antennæ (a streak on 1 excepted), the base of the prothorax, a transverse, externally-dilated fascia on each elytron below the base (not extending to the suture), and the anterior and intermediate tarsi, testaceous or flavous; the head and prothorax very finely, sparsely, and the elytra to beyond the middle coarsely, subseriately, punctured, the apical portion of the last-named with fine scattered punctures. Antennal joint 1 moderately long, armed with a small tooth near the base within; maxillary palpi with joints 3 and 4 enormously large, transverse, 3 pyriform,

4 curved, scaphiform; elytra rather narrow, oblong, subparallel at the base, the humeri somewhat tumid.

♀. Head wholly infusate; joint 4 of maxillary palpi stout, securiform; elytra broader, oval, convex; wings wanting.

Length $2\frac{1}{4}$ – $2\frac{1}{2}$ mm. (♂ ♀.)

Hab. S. AFRICA, mouth of Umkomaas River (*Dr. Marshall*: ♂), Malvern, Natal (*Mus. Brit.*, *Mus. Durban*: ♀), Isipingo beach (*Mus. Durban*: ♀), Seymour (*Mus. Cape Town*: ♂ ♀), River Gariep^{1 2}.

Five ♀ ♀ and two ♂ ♂ are referred to this species, which is extremely like some of the varieties of *S. oneili*, Pic. The ♀ ♀ of the two forms have an equally large securiform apical joint to the maxillary palpi; the ♂, however, has the tooth on the basal joint of the antennæ very small in the Seymour specimen, which was sent mounted with two ♀ ♀ on the same piece of card. There can be little doubt that Boheman's names refer to one species only, the differential characters mentioned by him being purely sexual: *S. oneili* may be a form of *S. myrmecodes*?

6. *Sphinginopalpus collaris*.

♀. *Chalichorus collaris*, Boh. Ins. Caffraria, i. 2, p. 478 (1851)¹.

♀. *Sphinginopalpus martini*, Pic, Bull. Soc. Ent. Fr. 1904, p. 12².

♂. Opaque, piceous, the elytra moderately shining and with a bluish lustre in certain lights, the front of the head whitish, the antennal joints 1–3 (the others at most very slightly darker), the base of the prothorax, the trochanters, and the anterior and intermediate tarsi, testaceous or flavous; the head and prothorax shagreened and very finely punctured, the elytra rather coarsely subseriato-punctate to beyond the middle, the apical portion smoother. Antennæ long, slender, joint 1 elongate, subcylindrical, and armed with a small tooth near the base within; maxillary palpi with joints 3 and 4 enormously developed, transverse, 4 scaphiform, arcuate (concave seen from above). Elytra rather broad, oval, subparallel and depressed at the base, broadly margined, the posterior portion convex, the humeri subcarinate. Posterior tibiæ feebly curved, flattened, rather broad.

Length $2\frac{2}{5}$ mm. (♂.)

Hab. S. AFRICA, Malvern, Natal² (*Dr. Marshall*: ♂ ♀), River Limpopo¹.

The above description of the ♂ is taken from two precisely similar examples from Malvern: one of these agrees with the type of Boheman communicated by Dr. Sjöstedt; the

other has been sent me from the Durban Museum as *S. barkeri*, Pic, a name here sunk as a synonym of *S. formicarius*, Gorh., an insect also occurring at Malvern and elsewhere in Natal. The colour given by Boheman for *S. collaris* and the allied forms, "nigro-cæruleus" or "cæruleus," is misleading, though a metallic sheen is usually visible, at least on the head or elytra.

7. *Sphinginopalpus formicoides*.

? *Sphinginopalpus formicoides*, Pic, L'Echange, xx. p. 66 (♀) (1904) ¹.

♀. Shining, nigro-piceous, the elytra with a brassy lustre, the antennæ (the slightly infusate terminal joints excepted), base of prothorax, tarsi, intermediate tibiæ, and the anterior tibiæ at the apex, testaceous; antennæ long; joint 4 of maxillary palpi narrow, small, obliquely truncate at tip; elytra globose, attenuate anteriorly, somewhat confusedly punctate, the punctures subseriately arranged on the basal half, the margins narrow, the humeri subangular; posterior tibiæ curved, flattened, rather stout; wings wanting.

Hab. S. AFRICA, Grahamstown, Cape Colony ¹.

A ♀ from S. Africa sent me by Dr. Péringuey as *S. (Chalicorus) collaris*, Boh., may be referable to *S. formicoides*, Pic, which should have a duller head and prothorax, and rufescent elytral margins. This specimen has the antennæ long and testaceous to near the tip, and the head and prothorax more shining than in *S. collaris* and *S. formicarius*, thus approaching *S. atripennis*.

8. *Sphinginopalpus albilabris*.

♂. *Chalicorus albilabris*, Boh. Ins. Caffraria, i. 2, p. 477 (1851) ¹.

♂. Narrow, very shining, black with a violaceous lustre in certain lights, the head with a sharply-defined white Λ -shaped space in front, the basal six joints of the antennæ, the palpi, base of the prothorax, anterior and intermediate legs (the bases of the femora and the tips of the tarsi excepted), and the posterior tarsi in great part, testaceous, the elytra with an elongate-triangular whitish patch at the sides below the base; the head and prothorax very sparsely, minutely, the elytra to beyond the middle rather coarsely, subseriately, punctured. Head rather broad; antennæ long, slender, filiform, joint 1 moderately elongate, obsoletely dentate near the base; joints 3 and 4 of maxillary palpi very large, transverse, 4 scaphiform, concave. Elytra oblong, slightly rounded at the sides, parallel at the extreme base, the humeri tumid. Posterior tibiæ feebly curved.

♀. Head infusate, smaller; antennæ much shorter; joint 4 of maxillary palpi small, subtriangular; elytra broader, oval; wings wanting.

Length $2-2\frac{1}{5}$ mm. (♂ ♀.)

Hab. S. AFRICA, Salisbury [♂], Frere, Natal¹ [♀] (*Mus. Cape Town, Dr. Marshall*).

One ♂ and five ♀ ♀ are referred to *S. albilabris*, which is distinguished by Boheman from his *S. albifrons*, ♂, by its smaller size, the flavous palpi, and the exactly triangular whitish lateral patch of the elytra. The specimens before me are extremely like one of the forms of *S. oneili*; the ♂ has the tooth on the first joint of the antennæ almost obsolete and the palpi entirely testaceous; the ♀ ♀ have shorter antennæ, a smaller head, and the fourth joint of the palpi greatly reduced in size.

9. *Sphinginopalpus tetrastigma*, sp. n.

♂. Elongate, narrow, rather convex, shining, clothed with long, scattered, fine, erect hairs; testaceous, the head above, two spots on each elytron (one near the base, the other beyond the middle), and the metasternum, infusate or piceous, the eyes black. Head large, wider than the prothorax, minutely punctured; antennæ moderately long, slender, joint 1 elongate, somewhat thickened, and armed with a fine sharp tooth at the base within; joints 3 and 4 of maxillary palpi enormously large, angular; prothorax convex, almost smooth, a little longer than broad, strongly constricted posteriorly, the transverse basal groove deep. Elytra oblong, coarsely, closely, irregularly seriato-punctate.

Length 2 mm.

Hab. S. AFRICA, Frere, Natal (*Dr. Marshall*).

One male. The testaceous coloration and the four-spotted elytra readily distinguish this minute form from its S. African allies.

10. *Sphinginopalpus atripennis*, sp. n.

♂. Elongate, narrow, very shining black, the antennal joints 1-5, the palpi (except at the tip), a spot on the front of the head, the base of the prothorax, the tarsi, apices of the anterior tibiæ, and the intermediate tibiæ entirely, testaceous; sparsely pubescent, the elytra with intermixed long, erect hairs; the head and prothorax very sparsely, finely punctate, the elytra seriato-punctate to near the tip, the apical portion much smoother. Head a little wider than the prothorax, foveate between the eyes; antennæ moderately

long, filiform, joint 1 elongate, slender, simple; maxillary palpi with joints 3 and 4 stout, 3 pyriform, 4 strongly transverse, subscaphiform. Prothorax elongate, very convex, abruptly constricted and narrowed posteriorly, the base strongly depressed. Elytra oval, gibbous, attenuate at the base, narrowly margined, the humeri angular. Posterior tibiæ curved, flattened.

Length 2 mm.

Hab. S. AFRICA, Malvern, Natal (*Dr. Marshall*: viii. 1897).

One specimen. A small, shining black form allied to *S. (Chalicorus) collaris*, Boh., differing from the latter in its much smaller size, partly infusate antennæ, with unarmed basal joint, less developed palpi, and the narrowly margined elytra. The polished head and prothorax, etc., also separate *S. atripennis* from *S. formicarius*, Gorh. The shorter antennæ and black elytra distinguish it from *S. formicoides*, Pic.

11. *Sphinginopalpus flavomarginatus*, sp. n.

♂. Elongate, narrow, shining, the elytra oval and convex from a little below the base, very sparsely pubescent and with long, erect hairs intermixed on the elytra; piceous or nigro-piceous, the head whitish in front, the antennæ (the slightly infusate terminal joints excepted), the palpi in great part, the narrow basal portion of the prothorax, the margins of the elytra, the anterior and intermediate legs (the femora in part excepted), the bases of the posterior femora, and the posterior tarsi, testaceous; the head and prothorax sparsely, minutely, and the elytra to beyond the middle rather coarsely, seriatly, punctate. Head a little wider than the prothorax; antennæ filiform, joint 1 long, slender, unarmed; maxillary palpi with joints 3 and 4 very large, 3 pyriform, 4 subsecuriform. Prothorax elongate, the anterior portion very convex, the basal portion narrow, abruptly flattened. Elytra moderately long, abruptly, arcuately widened from near the base, the margins rather broad, the humeri angular. Posterior tibiæ flattened, arcuate, somewhat dilated.

♀. Head infusate; joint 4 of maxillary palpi small, arrow, obliquely truncate at tip; elytra more inflated, and more rounded at the sides; wings wanting.

Length 2 mm. (♂ ♀.)

Hab. S. AFRICA, Frere and Estcourt, Natal (*Dr. Marshall*).

Five ♂♂, four ♀♀. Separable from *S. atripennis*, which also has a slender unarmed basal joint to the antennæ in ♂,

by the expanded flavescent lateral margins of the elytra, the testaceous antennæ, the less developed apical joint of the maxillary palpi in ♂, and the paler legs. The general shape is very similar in the two sexes, as in *S. formicarius* and *S. collaris*, which are larger insects. The resemblance to a Scydmaenid, as well as to an ant, is rather striking in the present species.

12. *Sphinginopalpus limbatus*. (Pl. V. fig. 23, antenna, ♂.)

♀. *Sphinginopalpus limbatus*, Pic, L'Echange, xx. p. 65 (1904) ?

♂. Elongate, narrow, subopaque, the elytra rather broad, widened posteriorly, and a little more shining; nigro- or æneo-piceous, the anterior portion of the head, the antennæ (the black fourth joint, and the more or less infusate five or six outer ones excepted), joint 3 of the maxillary palpi, the tarsi in part, and the elytra with a narrow transverse fascia below the base, and the sutural margin very narrowly, testaceous or flavescent; sparsely pubescent, the elytra with a few long erect hairs intermixed; the head and prothorax extremely finely, the elytra conspicuously, confusedly punctate. Head about as wide as the prothorax; antennæ long, filiform, joint 1 elongate, simple, 4 dilated, subtriangular; maxillary palpi with joints 3 and 4 extremely large, 3 pyriform, 4 securiform. Prothorax oblong-oval, convex, narrowed and constricted posteriorly, depressed at the base. Elytra rather elongate, depressed at the base, the posterior portion moderately convex, the margins not dilated. Posterior tibiæ sinuato-arcuate, flattened.

♀. Head wholly infusate; prothorax sometimes with the base testaceous or reddish, elytra with the sutural and outer margins flavous and the transverse fascia interrupted on the disc, or with the markings reduced to a streak on the suture below the base and a triangular spot at the sides; antennæ shorter, the black fourth joint undilated; joint 4 of maxillary palpi narrow, subfusiform; elytra globose from a little below the base; wings wanting.

Var. ♂. Elytra nigro-piceous, except along the outer limb, the basal depression deeper; antennæ more elongate, joint 4 similarly dilated.

Length 2-2½ mm.

Hab. S. AFRICA, Grahamstown (*type of Pic*), Mossel Bay, Cape Province (*R. E. Turner*: iv. 1921, ♀), Transvaal (*Mus. Brit.*: ♂ ♀), Malvern, Natal (*Dr. Marshall*: ♂, var.).

A variable insect, the ♀ ♀ from the Transvaal agreeing with Pic's description, except that they have the fourth

antennal joint (instead of the fifth) black. The two ♂♂ from the Transvaal (sent with the ♀♀) want the pale margins to the elytra, and in the three ♀♀ captured by Mr. Turner the fascia is reduced to three spots and the margins are piceous, like the rest of the surface.

13. *Sphinginopalpus raffrayi*, sp. n.

Chalicorophasis raffrayi, Péring. in litt.

♂. Elongate, narrow, the elytra pyriform, gibbous, attenuate and depressed anteriorly; shining, the head and prothorax duller, sparsely pubescent, the elytra with a few intermixed long, erect, whitish hairs; black, the anterior portion of the head indeterminately, the oral organs, palpi, joints 1-3 of the antennæ, trochanters, and anterior and intermediate tarsi, more or less testaceous, the elytra with an elongate whitish patch or streak at the sides below the base; the head and prothorax closely, finely, subrugulose, the narrow basal portion of the elytra coarsely, rugosely, punctate, the gibbous portion of the last-named with a few fine scattered punctures. Head a little wider than the prothorax; antennæ long, filiform, joint 1 elongate, thickened, simple; maxillary palpi with joints 3 and 4 enormously large, transverse, 3 somewhat pyriform, convex beneath, excavate above, 4 widened basally, subscaphiform, concave above. Prothorax elongate, convex, constricted and much narrowed posteriorly, transversely depressed before the base. Elytra rapidly, obliquely widening from the short, narrow, depressed basal portion, the apical portion globose or oval. Posterior tibiæ slightly curved, slender. Wings wanting.

♀. Head, palpi, and trochanters infusate; antennal joint 1 more slender; joint 4 of maxillary palpi small, elongate-triangular.

Length 2-2½ mm. (♂ ♀.)

Hab. S. AFRICA, Cape Town (*Raffray and Péringuey*, in *Mus. Cape Town*: ♂ ♀), Table Mt. (*K. H. Barnard*, in *Mus. Brit.*: 8. x. 1911: ♀).

Twelve examples seen, including five males. Differs from its allies in wanting the wings in the two sexes; the elytra with the short, narrow, depressed basal portion rugosely punctured, the whitish lateral streak very sharply defined.

OLISTHERARTHUS, gen. nov.

Head subtriangular, simple; joints 3 and 4 of ♂ maxillary palpi enormous; antennæ 11-jointed, filiform, 1 elongate,

dentate in ♂ ; prothorax convex, cordate ; elytra inflated, very convex, oval, sharply margined, the humeri obliterated ; anterior tarsi 4-jointed in ♂ ; tarsal claws small, lobed at the base beneath ; wings wanting.

Type, *O. abeillei*.

The metallic, convex, apterous S. African insect taken as the type of this genus is related to *Colotes* and *Sphingopalpus*, differing from the last-named in the 4-jointed anterior tarsi of the ♂, etc., and from *Colotes* in the very convex, cordate prothorax, and the inflated, oval elytra, which are without trace of humeral callus.

1. *Olistherarthrus abeillei*, sp. n. (Pl. V. fig. 24, ♂.)

Olistherarthrus (sic) *abeillei*, Péring. in litt.

♂. Elongate, very convex, clothed with long, erect, soft, pallid hairs ; nigro-cæruleous or nigro-violaceous, the anterior half of the head (two dentiform projections of the dark basal portion excepted), labrum, antennal joints 1 and 2, maxillary palpi, and tibiæ, tarsi, and abdomen in part, testaceous, the rest of the legs and antennæ infusate. Head small, much narrower than the prothorax, slightly depressed in the middle between the eyes, dull, very finely punctured ; antennæ long, joint 1 elongate, thickened, slender at the apex, and armed with a large triangular tooth at the middle beneath, 2 as long as 3, dentate at the tip within ; joint 3 of maxillary palpi subcupuliform, 4 concave, securiform, bifurcate at tip when viewed in profile. Prothorax about as long as broad, rounded at the sides, much narrowed behind, scabroso-punctulate, shining and a little smoother along the middle, the lateral portions opaque. Scutellum transverse. Elytra rather long, much wider than the prothorax, transversely depressed behind the scutellum ; coarsely, closely punctate. Legs long, slender.

♀. Head violaceous, opaque ; antennal joints 1 and 2 simple, narrow ; joint 4 of maxillary palpi narrow, oblong-ovate, truncate at tip ; elytra broad, more rounded at the sides.

Length $2\frac{3}{4}$ –3 mm. (♂ ♀.)

Hab. S. AFRICA, Cape Town (*Mus. Cape Town*).

One ♂, two ♀ ♀, the ♂ bearing the MSS. name here used, and all of them labelled "10. 86." The ♂ is assumed to be apterous like the ♀ ♀ ; one of the latter has been placed in the British Museum.

COLOTES.

Colotes, Erichson, Entomographien, p. 129 (1840); Abeille de Perrin, Ann. Soc. Ent. Fr. 1890, p. 255 (part.) [type, *C. maculatus*, Cast. (= *trinotatus*, Er.)]; Champion, Ent. Monthly Mag 1921, p. 70.
Antidipnis, Wollaston, Ann. & Mag. Nat. Hist. (3) ii. p. 337 (1858) [type, *Charopus punctatus*, Er.].
Pseudocolotes, Ab. de Perrin, Rev. d'Ent. xix. p. 166 (1900) [type, *P. cribripennis*, Ab.].

Erichson included three species under *Colotes*, the type of which is a common Mediterranean insect. His third species, *C. albilateris*, is one of many very closely allied S. African forms, which were said by Abeille de Perrin to have 5-jointed anterior tarsi in the males; but this definition proves to be inaccurate, as I have satisfied myself by an examination of the types kindly lent by Dr. Péringuey. *Antidipnis* was based upon a small, convex, Halticiform insect, which occurs plentifully at the roots of plants on the sandy sea-coasts of S. Europe; its ♀ is usually apterous. *Colotes*, as here understood, includes numerous small forms, with very large or enormously developed fourth or third and fourth joints to the maxillary palpi, and 4-jointed anterior tarsi, in the ♂; the elytra simple, and the prothorax transverse, with the sides rounded, in both sexes; the head of the ♂ simple, or hollowed, laterally sulcate, or transversely grooved anteriorly, but never tuberculate or horned as in *Hedybius*; the wings sometimes wanting in the subgenus *Antidipnis*. It is almost impossible to describe the maxillary palpi of some of the species without dissection, the third and fourth joints being more or less interlocked and difficult to separate without injury: the third is usually somewhat cup-shaped, the fourth crescentiform, subsecuriform, scaphiform, or malleiform. The S. African species here enumerated* may be tabulated thus: ♀ ♀ only known of Nos. 2, 14, 17, 19, 20; 14 omitted from table:—

♂ ♂.

Sect. I. Joints 3 or 4 of maxillary palpi very large, more or less interlocked or very closely articulate, 4 crescentiform, malleiform, or scaphiform; elytra subparallel or gradually widened posteriorly; wings present (as in ♀). [COLOTES, Er., s. str.]

- 1 (20). Elytra wholly or in part metallic, not fasciate.
- 2 (3). Elytra without pale lateral streak; face white,
 flattened Species 1 [2].

* Several others, uniques, in the Cape Town Museum, are left unnamed for want of sufficient material. Numerous E. African *Pseudocolotes* have been named by Pic.

- 3 (2). Elytra with whitish or flavous lateral streak.
- 4 (7). Prothorax black, with the base narrowly testaceous.
- 5 (6). Antennal joints 1-3 in great part testaceous, 4 dilated; face whitish, arcuately swollen across the middle Species 3.
- 6 (5). Antennal joints 1 and 2 (except 1 above) testaceous, 4 simple; face (a whitish oblong spot excepted) black, excavate laterally Species 4.
- 7 (4). Prothorax testaceous, with black discal patch.
- 8 (11). Face with a flattened or raised, triangular or oblong, space extending down the middle, sulcate laterally.
- 9 (10). Face testaceous or whitish..... Species 5, 6.
- 10 (9). Face black, the triangular space only whitish.. Species 7.
- 11 (8). Face without triangular raised space.
- 12 (15). Face broadly hollowed or transversely sulcate.
- 13 (14). Antennal joints 1-4 testaceous, 3 usually widened and black above; face broadly hollowed, testaceous Species 8.
- 14 (13). Antennal joints 1-3 testaceous, 1 black at the tip above, 3 not wider than 4; face transversely sulcate, testaceous..... Species 9.
- 15 (12). Face excavate laterally, hollowed in the middle anteriorly, or feebly bi-impressed.
- 16 (17). Antennæ with joints 1-4 testaceous; face excavate laterally Species 10.
- 17 (16). Antennæ with two or more of the basal joints nigro-maculate.
- 18 (19). Antennal joints 2 and 3 small, testaceous, 1 and 4 maculate Species 11.
- 19 (18). Antennal joint 3 much larger than 2, 1, 3, and 4 maculate Species 12, 13.
- 20 (1). Elytra and prothorax black or blue-black, elytra flavo-fasciate; antennal joint 1 stout, testaceous..... Species 15.

Sect. II. Joints 3 and 4 of maxillary palpi large, more freely articulate, 4 oblong or subquadrate, truncate at tip, 3 sometimes transverse and much smaller than 4; elytra rounded at the sides; wings present (sometimes wanting in ♀): species small, Halticiform. [Subgen. *ANTIDIPNIS*, Woll.]

- 21 (22). Elytra interruptedly unifasciate Species 16, 17.
- 22 (21). Elytra not fasciate.
- 23 (24). Elytra maculate at tip Species 18, 19.
- 24 (23). Elytra (and head and prothorax also) black .. Species 20.

1. *Colotes cyanopterus*. (Pl. V. figs. 25, head from in front, 25 a, antenna, 25 b, maxillary palpus, ♂.)

♀. *Charopus cyanopterus*, Gorh. Ann. & Mag. Nat. Hist. (7) v. p. 75 (1900)¹.

♂. Head broad, foveate in the middle between the eyes, the face wholly whitish, transversely bifoveate anteriorly; antennæ slender, longer than in ♀, black, joints 1-3 (a long

streak on 1 within and a spot on 3 above excepted) testaceous, 1 elongate, conical, concave and shining within, angulate at the apex; maxillary palpi testaceous, black at the tip, joints 3 and 4 enormously dilated, 3 arcuate, convex, concave at the apex, 4 curved and concave at the base within, and with the apical portion securiform; anterior tarsi simple, 4-jointed.

♀. Head smaller, obscurely metallic; antennæ shorter, black, joints 1-3 (a narrow streak on 1 excepted) testaceous; maxillary palpi short, slender, joint 3 very short, 4 rather long, subfusiform.

Hab. NATAL, Frere¹ and Estcourt (*Mus. Cape Town, Dr. Marshall*).

There are a pair of this species in the Cape Town Museum and seven ♀ ♀ in the British Museum. The ♂ was unknown to Gorham. A small, nigro-subæneous, sericeo-pubescent insect, with uniformly cyaneous or greenish elytra, and the legs in part testaceous.

2. *Colotes chloropterus*, sp. n.

♀. Moderately elongate, rather broad, widened posteriorly, the head and prothorax opaque, the elytra shining, finely cinereo-pubescent; black, the antennal joints 1-4, the sides of the prothorax broadly, and the anterior and intermediate legs (the tarsi in part and the bases of the femora excepted) testaceous, the elytra blue or bluish-green. Head much narrower than the prothorax, obsoletely punctulate, bi-impressed in front; antennæ moderately long, joint 1 elongate and slightly thickened. Prothorax strongly transverse, convex, rounded at the sides, obsoletely punctulate. Elytra rather long, at the base scarcely wider than the prothorax; closely, strongly punctured. Legs not very slender.

Length $2\frac{3}{4}$ mm.

Hab. S. AFRICA, Howick, Natal (*J. P. Cregoe, in Mus. Brit.*).

Two females, received by the Museum in 1903. Larger and broader than *Colpometopus leucostomus*, ♀ (*infra*), the antennæ more slender, and with joints 1-4 testaceous and 5-11 black, the head and prothorax without metallic lustre, the prothorax less narrowed behind, the elytra more strongly punctured. The testaceous sides of the prothorax and the stronger punctuation of the elytra separate *C. chloropterus* from *C. cyanopterus*, Gorh. Two allied unnamed forms from Algoa Bay, represented by ♀ ♀ only, are contained in the Cape Town Museum.

3. *Colotes cribripennis*. (Pl. V. figs. 26, head from in front, 26 a, antenna, 26 b, maxillary palpus, ♂.)

Pseudocolotes cribripennis, Ab. Rev. d'Ent. xix. pp. 163, 167 (♂ ♀) (1900)¹.

♂. Head (with the eyes) about as wide as the prothorax, flavous in front, black at the base, sulcate above and on each side within the eyes, the black basal portion limited anteriorly by an arcuate, tumid, shining space; antennæ long, black, joints 1-3 (a conspicuous spot at the apex of 1 excepted in some specimens) testaceous, 1 elongate, compressed, 4 arcuately dilated within; maxillary palpi testaceous, black at the tip, joint 4 enormously thickened, crescentiform, 3 transverse, subtriangular, much wider than 2. Prothorax black, dull, testaceous at the base. Elytra blue, with an elongate, narrow, whitish patch at the sides below the base, the punctuation close and strong. Legs in part testaceous; anterior tarsi 4-jointed.

♀. Head black, except along the anterior margin, rather convex; antennæ with joints 1-3 testaceous (1 sometimes nigro-lineate above), 1 more slender, 4 simple; joint 4 of maxillary palpi infusate or testaceous, subtriangular.

Length 2 mm.

Hab. S. AFRICA, Cape Town¹, Stellenbosch (*Mus. Cape Town*), Table Mountain (*W. Bevins*), Mossel Bay, Ceres, Witzenberg Valley (*R. E. Turner*: xii. 1920, i., iv. 1921).

Dr. Péringuey has lent me two ♂ ♂ and three ♀ ♀ of this species, including the types, and Mr. Turner has recently sent numerous others to the British Museum. The very large crescentiform fourth joint of the ♂ maxillary palpi cannot be properly seen till the palpus is detached.

4. *Colotes pictifrons*, sp. n.

(Pl. V. fig. 27, head from in front, ♂.)

♂. Moderately elongate, finely cinereo-pubescent, shining; bluish-black, the palpi (except at the tip), the antennal joints 1 and 2 (a long streak on 1 and a spot on 2 excepted), labrum, an elongate-triangular streak on the anterior portion of the head, the basal and outer margins of the prothorax (the pale marginal portion angularly extended inward near the hind angles), and the anterior and intermediate legs in part, testaceous; the elytra cæruleo-violaceous, with a rather broad, oblong, whitish patch at the sides below the base. Head broad, obliquely, deeply excavate on each side near the eyes anteriorly, the vertex depressed in the middle and

angularly raised on each side ; antennæ long, slender, joint 1 elongate, but little widened ; joints 3 and 4 of maxillary palpi enormously developed, 3 somewhat cup-shaped, 4 sub-scapiform, concave at the tip. Prothorax transverse, much narrowed behind, obsoletely punctulate. Elytra finely punctured. Legs very long, slender ; anterior tarsi 4-jointed.

♀. Head smaller, immaculate ; palpi infusate ; antennal joints 1 and 2 testaceous, 1 with a black streak above, 2 immaculate.

Length $2\frac{1}{2}$ mm.

Hab. S. AFRICA, Ulundi, Drakensburg (Dr. G. A. K. Marshall : i. 1893 : ♂, type), Frere (*Mus. Cape Town* : ♀).

One pair. Separable from *C. cribripennis*, Ab., by the much finer puncturing of the elytra and the slender antennæ, the ♂ with the head and antennæ different in colour and structure. *C. pictifrons* seems to approach *C. buccator*, Ab. A ♂ of an allied unnamed form from Algoa Bay (*Brauns*) has been sent me for examination by Dr. Péringuey.

5. *Colotes frontalis*, sp. n. (Pl. V. fig. 28, head, ♂.)

♂. Moderately elongate, finely cinereo-pubescent, opaque ; the elytra somewhat shining ; head testaceous, black at the base ; antennæ testaceous, joint 1 with a streak above and 4-7 in part black ; palpi, prothorax (a triangular black patch on the disc in front excepted), and legs (the black posterior femora and tibiæ excepted) testaceous ; scutellum black ; elytra cyaneous or bluish-green, the margins with a broad, inwardly-rounded, whitish stripe extending from the base to beyond the middle ; the under surface black ; elytra closely, rather strongly punctured. Head broad, the face with a triangular, slightly raised, flattened space extending down the middle, bordered by a cavity on each side, the eyes large ; antennæ moderately long, slender, filiform, joint 1 elongate, compressed, 3-6 subequal in length ; joint 4 of maxillary palpi extremely large, transverse, somewhat ear-shaped, pointed at the tip, 3 stout, convex, closely applied to 4 ; prothorax transverse, narrowed posteriorly ; elytra moderately long ; anterior tarsi 4-jointed.

♀. Head black, closely punctulate ; antennæ testaceous, joint 1 sometimes infusate or nigro-lineate at the base ; the whitish lateral patch on the elytra not reaching the base.

Length $2\frac{1}{4}$ - $2\frac{1}{2}$ mm.

Hab. S. AFRICA, Bulawayo [type] (Dr. Marshall : xii. 1903 : ♂ ♀), Umtali, S. Rhodesia (*Mus. Cape Town* : ♀).

Eleven examples, one only of which is ♂. The ♀ has testaceous antennæ, as in the type (♀) of *C. albilateris*, Er., from the Cape; but the latter is described as having testaceous legs and the disc of the prothorax black, and the present insect cannot be identified with it. The structure of the head in ♂ is peculiar, approaching that of *C. buccator*, as described by Abeille de Perrin.

6. *Colotes nasutus*, sp. n. (Pl. V. fig. 29, head, ♂.)

♂. Extremely like *C. frontalis* and very similarly coloured, but differing as follows:—Antennæ a little stouter, black, except the two apical joints and the basal one beneath, the latter more curved; joint 4 of maxillary palpi extremely large, broad, convex, scaphiform, almost smooth, 3 strongly transverse and closely applied to 4; head with the triangular frontal plate much more prominent, longer, narrower behind, and forming a blunt horn anteriorly, the black basal space angulate in the middle; prothorax a little more transverse, the black patch on the anterior portion of the disc transverse, the base whitish.

Length $2\frac{1}{2}$ mm.

Hab. S. AFRICA, Bulawayo (*Dr. Marshall*: xii. 1903).

One male, found with the preceding, of which it was at first supposed to be a varietal form.

7. *Colotes trigonus*, sp. n. (Pl. VI. fig. 30, head, ♂.)

♂. Moderately elongate, finely cinereo-pubescent, shining; bluish-black, the head with a sharply-defined, triangular, whitish patch in front extending upwards to near the vertex, the labrum and palpi, the antennal joints 1–4 (the inner surface of 1 and a small spot on 4 excepted), the prothorax (a broad patch down the middle, extending to near the base, excepted), anterior and intermediate legs, and posterior tarsi, testaceous or rufo-testaceous; the elytra bluish-green, with a rather broad, elongate, whitish patch at the sides below the base. Head rather broad, with a deep, shining, oblique sulcus on each side near the eyes, the vertex depressed in the middle, the triangular whitish space in front of it flattened and slightly raised; antennæ somewhat thickened, joint 1 elongate, compressed, subconical; joints 3 and 4 of maxillary palpi enormously developed, 4 scaphiform. Prothorax transverse, convex. Elytra rather strongly, closely punctured. Anterior tarsi 4-jointed.

♀. Head bluish-black, immaculate; antennæ a little

shorter and more slender, joint 1 narrower, coloured as in ♂; palpi black; prothorax with the dark median patch slightly less extended.

Length $2\frac{1}{2}$ mm.

Hab. S. AFRICA, Estcourt [♂, type] and Ennersdale [♀], Natal (*Dr. Marshall*: xi. 1892, x. 1896).

One pair. The ♂ of this species may be recognized by the laterally-sulcate black head, which has a rather broad, large, sharply-defined, triangular, whitish patch in front. It is allied to *C. pictifrons*, an insect with slender antennæ, the prothorax in great part black, and the whitish patch on the head narrow and less extended upwards. The elytral puncturing is nearly as coarse as in *C. cribripennis*, Ab.

8. *Colotes oneili*. (Pl. VI. figs. 31, head, 31*a*, antenna, 31*b*, maxillary palpus, ♂.)

Pseudocolotes o'neili, Pic, L'Echange, xix. p. 152 (1903) ¹.

♂. Head large, triangular, opaque, testaceous, nigro-fasciate or black at the base, densely punctulate, the anterior portion broadly hollowed; antennæ long, testaceous, joints 5-11 and a spot on 3 above black, 1 elongate, compressed, 3 slightly widened, triangular; maxillary palpi testaceous, joints 3 and 4 extremely large, 3 convex, cup-shaped, 4 elongate, somewhat curved, truncate at tip; prothorax dull, short, obliquely narrowed posteriorly, testaceous, with a broad black median vitta; elytra subparallel, finely punctured, bluish-green, with a rather broad whitish marginal stripe extending to near the apex; legs in great part testaceous, the posterior pair usually dark; anterior tarsi 4-jointed.

♀. Head smaller, somewhat flattened, shining, black at the base; antennæ shorter, joint 3 with a smaller black spot.

Var. ♂. Antennal joint 3 narrower, immaculate above.

Length $2-2\frac{1}{2}$ mm. (♂ ♀.)

Hab. S. AFRICA, Dunbrody ¹ (*type of Pic*), Uitenhage (*Mus. Cape Town*), Bulawayo (*Dr. Marshall*), Mwenga, N.W. Rhodesia (*H. C. Dollman*).

Numerous examples seen, including five ♂♂, two of which belong to the varietal form. The sexual characters were not mentioned by Pic and his type was presumably ♀.

The figure of the palpus is taken from a Rhodesian male.

9. *Colotes agnatus*.

(Pl. VI. figs. 32, head, 32a, maxillary palpus, ♂.)

Pseudocolotes agnatus, Ab. Rev. d'Ent. xix. pp. 163, 168 (♀) (1900).

♂. Head subtriangular, broad, testaceous, black at the base (the black portion truncate in front), the vertex depressed in the centre and somewhat tumid on each side near the eyes, the face with a deep transverse depression extending to the outer margins; antennæ long, black, joints 1 and 2 (a spot at the apex of 1 excepted) testaceous, 4-6 a little wider than those following; maxillary palpi testaceous, joints 3 and 4 enormously developed, 4 hammer-shaped and armed with a long tooth within, 3 convex, subtriangular, and bearing a long compressed appendage; prothorax testaceous, with a broad, posteriorly-narrowed, black median vitta nearly reaching the base; elytra bluish-green or green, with a rather broad whitish lateral stripe extending from the base to near the apex, finely punctured; legs in part testaceous; anterior tarsi 4-jointed.

♀. Head in front and antennal joints 1 and 2 testaceous, the palpi infusate; antennæ shorter.

Length about 2 mm.

Hab. S. AFRICA, Hebron, Vaal River, near Kimberley [♀ type and ♂], Estcourt and Frere, Natal (*Dr. Marshall*: ♂ ♀).

Redescribed from 2 ♂ ♂ and 3 ♀ ♀, including the type. The ♂ ♂ were sent me by Dr. Péringuey as *C. buccator*, Ab.; but they do not agree with the description of that species, the type of which was captured at Vryburg. The Natal females agree exactly with *C. agnatus*, and the male from the same locality certainly belongs to the same species. The terminal joint of the ♂ maxillary palpi is armed with a long hook-like tooth, as in *C. buccator*.

10. *Colotes buccator*.

Pseudocolotes buccator, Ab. Rev. d'Ent. xix. pp. 163, 168 (♂ ♀) (1900) ¹.

“Niger, elytris viridi-cæruleis, thorace (macula longitudinali media apicem, haud basim attingente, nigra, excepta) in mare capite antice, palpis, antennarum basi, tibiis et tarsis maculaque laterali in singuli elytri margine albo-flavis. Long. 2 mm.”

Hab. S. AFRICA, Vryburg, Bechuanaland ¹.

The ♂ of this species is said to have the head convex, reddish in its anterior half (the black basal portion advancing

in a point in the middle in front), and with a deep triangular cavity on each side at the interior border of the eyes; the terminal joint of the maxillary palpi yellow and enormously large, hammer-shaped, one of its branches emitting a long hook-like process. A ♂, labelled type, from Hebron, sent me by Dr. Péringuey, does not accord with the description of the head, and it is here referred to *C. agnatus*, Ab.; the palpi, however, seem to be very similarly formed in the two insects.

11. *Colotes notaticornis*, sp. n.

♂. Moderately elongate, cinereo-pubescent, shining; black, the anterior portion of the head (the black basal portion extending triangularly forward in the middle) and an elongate streak at the sides of the elytra whitish, the rest of the elytra metallic green, the mouth-parts, palpi, antennæ (a streak on joint 1 and a rounded spot on joint 4 excepted), prothorax (a broad median vitta extending from the apex to near the base excepted), anterior and intermediate legs (the bases of the femora excepted), and the posterior tibiæ in part, testaceous; the head and prothorax closely, minutely, the elytra finely, rugulosely, punctate. Head as wide as the prothorax, slightly depressed in the middle between the eyes; antennæ rather long, slender, joints 2 and 3 very short, 2 small, 3 triangular, wider than 2, 4 short, arcuately dilated within, 5 elongate, 6 and 7 shorter [9-11 wanting]; maxillary palpi with joints 3 and 4 enormously developed, 3 convex externally, cupuliform, 5 hammer-shaped. Prothorax transverse, broad, rounded at the sides, narrowed behind. Elytra subparallel, rounded at the tip. Anterior tarsi 4-jointed.

♀. Head with the anterior portion, and the antennæ, testaceous, the latter infusate towards the tip, the latter shorter and with joints 2-5 normally formed; the anterior and intermediate femora wholly or in part testaceous; the elytra bluish-green.

Length 2-2½ mm.

Hab. S. AFRICA, Howick, Natal (*J. P. Cregoe*: ♂, type). Frere (*Dr. Marshall*: ♀), Irene (*Mus. Brit.*: ♂).

The structure and colouring of the antennæ in the ♂ of this insect are suggestive of that of various species of *Hedybius*. The very small, short, testaceous second and third antennal joints separate it at once from *C. plagiatus*, ♂, which also has a less elongate lateral patch to the elytra; the partly testaceous head in ♀ removes it from *C. albilateris*.

12. *Colotes albilateris*. (Pl. VI. fig. 33, antenna, ♂.)♀. *Colotes albilateris*, Er. Entomographien, p. 131 (1840)¹?♀. *Coletes nobilis*, Boh. Ins. Caffr. i. 2, p. 473 (1851)²?

♂. Moderately elongate, finely cinereo-pubescent, shining; head black, submetallic, a streak or spot on each side near the eyes and the depressed space in front flavous (the black portion extending forwards on each side between the eyes, appearing Π -shaped as seen from the anterior aspect, the lower surface and palpi testaceous; antennæ black, joints 1-5 (a streak on 1 above, and 3 and 4 in great part, excepted) testaceous; prothorax (a large black patch on the disc excepted) and legs (the infusate posterior femora and tibiæ excepted) testaceous; elytra cyaneous or green, with a rather broad elongate whitish patch at the sides below the base; metasternum and abdomen black. Head broad, minutely punctate, hollowed and smoother in the centre anteriorly; antennæ long, joint 1 elongate, subconical, compressed, 3 and 4 widened and compressed, 4 much longer than 3 and slightly produced at the outer apical angle, 5-10 short; joints 3 and 4 of maxillary palpi enormously developed, 4 securiform. Prothorax transverse. Elytra moderately elongate, closely, very finely punctate. Anterior tarsi 4-jointed.

♀. Head bluish-black, unimpressed in the middle in front; antennæ shorter and more slender, joints 1-5 or 6 (a faint streak on 1 excepted) testaceous; palpi black; anterior and intermediate femora infusate at the base.

Length 2-2½ mm.

Hab. S. AFRICA, Cape of Good Hope¹ (*type of Erichson*), Malvern, Estcourt, and Frere, Natal (*Dr. Marshall, Mus. Cape Town, Mus. Durban*), River Limpopo².

C. albilateris and *C. nobilis* seem to have been each based upon a single female example, the former having the legs and antennæ testaceous, and both having the head black, a character distinguishing them from the same sex of nearly all the allied forms. In the absence of the ♂ of *C. albilateris*, it cannot be certainly identified; but the name can quite well be used for the species with a black-headed ♀. Three ♂♂ and five ♀♀, one of the latter labelled as having been compared with the type of *C. nobilis* (which is said to have the antennal joints 5-7 slightly infusate externally), are referred to the present species. The ♂ differs from that of *C. plagiatus*, Ab., in having the head hollowed and smoother in the middle in front and the black basal portion extending

forward on each side within the juxta-ocular flavous spot or streak; and the fourth antennal joint curved, compressed, and longer than the third.

13. *Colotes plagiatas*. (Pl. VI. fig. 34, antenna, ♂.)

Pseudocolotes plagiatas, Ab. Rev. d'Ent. xix. pp. 163, 167 (♂) (1900)¹.

♂. Head subtriangular, testaceous, black at the base, feebly bi-impressed anteriorly and also impressed in the middle between the eyes, closely punctulate; antennæ long, joints 1-6 testaceous, 1 with a long streak, and 3 and 4 with a rounded spot above, black, 7-11 more or less infusate, 1 elongate, conical, 3 and 4 widened, subequal; [maxillary palpi now wanting in type, but described as "red, with joints 3 and 4 short, cupuliform, and subcylindric but difficult to see"]; prothorax testaceous, with a large tricuspid black patch on the anterior part of the disc; elytra blue, with a moderately long whitish patch at the sides below the base, finely punctured; legs testaceous, the posterior tibiæ and femora infusate; anterior tarsi 4-jointed.

Length 2 mm.

Hab. S. AFRICA, Hebron, Vaal River, near Kimberley¹.

Redescribed from the unique ♂ type. The insect here referred to *C. albilateris*, Er., has a black head in the ♀.

14. *Colotes rotundicollis*, sp. n.

♀. Elongate, widened posteriorly, finely pubescent, moderately shining; head (a transverse black space extending across the vertex excepted) and prothorax (an elongate-triangular black patch extending down the anterior part of the disc excepted) rufo-testaceous; antennal joints 1-4 (a dark streak on 1 above excepted) testaceous, joints 5-11, the palpi, metasternum, abdomen, and legs in great part, black; elytra metallic green, each with a narrow oblong whitish patch at the sides below the base; the head and prothorax obsoletely punctulate, the elytra densely, very finely punctate. Head narrower than the prothorax, triangular, obliquely narrowed behind the eyes; antennæ long, filiform, joint 1 elongate, moderately thickened. Prothorax a little broader than long, convex, rounded at the sides. Elytra long, incompletely covering the abdomen.

Length 3 mm.

Hab. N.W. RHODESIA, R. Kafue, Mwengwa (*H. C. Dollman*: 20. vii. 1913).

One specimen. Near *C. albilateris*, Er., the antennæ

longer, the head obliquely narrowed at the base, testaceous in its anterior half and also behind the eyes; the prothorax less transverse and more rounded at the sides; the whitish lateral patch on the elytra less extended forwards; the legs black, the extreme bases of the tibiæ excepted.

15. *Colotes unifasciatus*. (Pl. VI. fig. 35, antenna, ♂.)

♀. *Coletes unifasciatus*, Boh. Ins. Caffr. i. 2, p. 474 (1851).

♂. Shining, the head and prothorax almost smooth, the elytra rather coarsely punctured; nigro-cæruleous or black, the front of the head, labrum, palpi, joint 1 of antennæ, and anterior tibiæ testaceous, the elytra with a transverse flavous fascia before the middle, the rest of the antennæ and legs infusate or black. Head subtriangular, rather small, foveate in the middle between the eyes; antennæ long, joint 1 elongate, curved, greatly thickened, slender at the base, convex externally; joints 3 and 4 of maxillary palpi enormously thickened, imbricate, 4 securiform. Prothorax transverse, very convex. Elytra depressed below the base, slightly widened posteriorly. Anterior tarsi 4-jointed.

♀. Head nigro-cæruleous; antennæ shorter and more slender, joint 1 smaller, pyriform; palpi infusate; elytra much widened posteriorly.

Length about 2 mm.

Hab. S. AFRICA, River Limpopo (*type of Boheman*), Isipingo beach N. (*Mus. Durban*).

Redescribed from two ♂ ♂ and one ♀.

16. *Colotes subfasciatus*, sp. n.
(Pl. VI. fig. 36, maxillary palpus, ♂.)

♂. Oblong-oval, convex, shining, finely pubescent; black, the antennal joints 1-4, a moderately broad transverse patch or fascia below the base of each elytron (widened outwards and not reaching the suture), and the legs (the femora in part excepted) testaceous; head and prothorax almost smooth, the elytra closely, coarsely punctate. Head subtriangular, unimpressed, scarcely as wide as the prothorax; antennæ moderately long, rather slender, joint elongate, compressed, stout; joints 3 and 4 of maxillary large, free, subquadrate, 3 sharply angulate at the apex above. Prothorax transverse, convex. Elytra rounded at the sides posteriorly. Anterior tarsi simple, 4-jointed.

♀. Head as in ♂; antennæ shorter, joint 1 shorter and less thickened; wings present or wanting.

Length $1\frac{1}{2}$ –2 mm.

Hab. S. AFRICA, Salisbury, S. Rhodesia (*Dr. Marshall*).

Two ♂♂ and two ♀♀, found on various dates between April 1894 and June 1899. Smaller than *C. sellatus*, Ab. (♀ only known); the elytra with a narrower, incomplete, testaceous fascia, which does not extend to so near the suture, and the puncturing coarser. *C. subfasciatus* is nearly related to *C. (Antidipnis) punctatus*, Er., with which the Indian *C. gorhami*, Champ. (= *punctatus*, Gorh.), is congeneric.

17. *Colotes sellatus*.

Colotes sellatus, Ab. Rev. d'Ent. xix. pp. 163, 165 (♀) (1900).

Hab. S. AFRICA, Vryburg, Bechuanaland.

A small, convex, shining black insect; the elytra with a very broad, transverse, testaceous fascia (widened outwards and extending to near the shoulder, and almost reaching the suture) below the base, and the surface densely, rather coarsely punctate; the base of the antennæ, and the legs in great part, testaceous. The ♀ type has been lent me by Dr. Péringuey.

18. *Colotes capensis*.

(Pl. VI. fig. 37, maxillary palpus, ♂.)

? *Pseudocolotes capensis*, Pic, L'Echange, xx. p. 11 (♀) (1904).

? *Pseudocolotes notatithorax*, var. *flavonotatus*, Pic, l. c. (♂♀).

Var. Black or bluish-black, the prothorax, and sometimes the head also in ♂, the basal half or more of the antennæ, a transverse or common triangular apical patch extending forward along the elytral suture, and the legs wholly or in part, testaceous.

♂. Head rather small, unimpressed; antennæ moderately long, joint 1 narrow, simple; joints 3 and 4 of maxillary palpi black or testaceous, 4 very large, oblong, obliquely truncate at tip, 3 moderately stout, transverse; anterior tarsi 4-jointed.

Hab. S. AFRICA, Dunbrody (*types of Pic*), Malvern and Estcourt, Natal, and Salisbury, S. Rhodesia (*Dr. Marshall*).

A ♀ from Malvern, bluish-black in colour, with a common, triangular, testaceous apical patch, agrees with the description of *C. capensis*; six others, 3 ♂♂ and 3 ♀♀, including another ♂ from Malvern, seem to correspond with his *flavonotatus*. These specimens are allied to *C. (Antidipnis)*

punctatus, Er., which also has a variety with a reddish prothorax (*colon*, Ab.); they have, however, a much smaller third joint to the maxillary palpi in the ♂*. The four small Halticiform *Colotes* from S. Africa named by Pic may prove to be forms of one variable species when a longer series of them is obtained.

19. *Colotes notatithorax*.

Pseudocolotes notatithorax, Pic, L'Echange, xx. p. 11 (♀) (1904)
[? excl. var. *flavonotatus*, Pic, l.c. (♂ ♀)].

Hab. S. AFRICA, Dunbrody.

Two females of *C. notatithorax*, Pic, are before me. They are broader and more convex than his *C. innotatus*, and have the head wholly or in part black, the prothorax testaceous, with a transverse black patch on the anterior part of the disc, the elytra uniformly bluish-black, the antennæ testaceous in their basal half and black thence to the tip, and the legs (the posterior femora and tibiæ excepted) testaceous. *C. notatithorax* is compared with *Colotes buccator*, Ab., but it cannot bear any resemblance to that species.

20. *Colotes innotatus*.

Pseudocolotes (?) *innotatus*, Pic, L'Echange, xix. p. 164 (♀) (1903).

Hab. S. AFRICA, Dunbrody.

A ♀ from Manini River, Portuguese E. Africa (*Dr. Marshall*), may belong to this species? It differs from an immature *C. innotatus* lent me by Dr. Péringuey in having the elytra more coarsely punctured. A very small, convex, oval, shining black insect, superficially resembling a species of *Longitarsus* or *Aphthona*, with very slender testaceous antennæ and legs, and inflated elytra.

COLPOMETOPUS.

Colpometopus, Abeille de Perrin, Rev. d'Ent. xix. p. 170 (1900).

This genus is based upon a S. African insect with the palpi very similarly shaped in the two sexes, joint 4 fusiform; the antennæ 11-jointed. The ♂ with a stout, elongate, excavate basal joint to the antennæ, the head broad, triangular, and deeply transversely sulcate anteriorly, and the anterior tarsi 4-jointed. A smaller, similarly-coloured

* See Duval's figure of the palpi of *Antidipnis punctatus*, Er. (= *rubripes*, Duv.), Gen. Coleopt. Europ. iii. pl. 44, fig. 317.

form, with the face whitish in the ♂, is referred to *Colpommetopus*, both species having metallic elytra and the sides of the prothorax usually rufo-testaceous. *Homœodipnis*, Duv., to which a S. African representative is here added, also has 4-jointed anterior tarsi in ♂, and simple palpi, but differs in the form of the basal joint of the antennæ in that sex. The ♀ of *C. basicornis* is apterous.

1. *Colpommetopus basicornis*.

(Pl. VI. fig. 38, head, ♂.)

Troglops basicornis, Fairm. Ann. Soc. Ent. Belg. xxxviii. p. 655 (♂ ♀) (1894)¹.

Colpommetopus pithecius, Ab. Rev.d'Ent. xix. pp. 164, 170 (♂ ♀) (1900)².

♂. Antennæ with joint 1 very stout, elongate, compressed, concave on its inner aspect, 4 longer than 3, 4-10 subequal in length; head black, triangular, with a deep transverse sulcus extending completely across the upper surface behind the points of insertion of the antennæ, and also transversely hollowed in the middle behind this, the cavity limited on each side anteriorly by a small oblique tuberculiform plica; elytra subparallel.

♀. Antennæ with joint 1 smaller and less elongate; head simply transversely depressed on each side before the eyes; elytra much widened posteriorly, not nearly covering the abdomen; wings wanting.

Var. The prothorax narrowly testaceous at the sides or wholly metallic. (♀.)

Hab. S. AFRICA, Cape Town^{1 2} (*Simon, Péringuey*), Stellenbosch (*Péringuey*), Table Mountain (*W. Bevins*), Caledon District (*Lightfoot*), Port Nolloth, Namaqualand (*Mus. Durban*: var., ♀).

There is a long series of this species in the Cape Town Museum. The three ♀ ♀ sent me from the Durban Museum have the prothorax cyaneous. Found at Cape Town under large decaying sea-bamboo plants (*Ecklonia*) which are thrown on the beach and left there to rot, the insect preying on the fly-maggots living in the partly decomposed mass (*L. P.*).

2. *Colpommetopus leucostomus*, sp. n.

(Pl. VI. fig. 39, head, ♂.)

♂. Moderately elongate, finely cinereo-pubescent, shining; head whitish, black at the base; antennæ and palpi testaceous, the outer five or six joints of the former more or

less infusate and the tips of the latter black; prothorax, scutellum, metasternum, and abdomen bluish-black, the sides of the prothorax broadly testaceous (the broad median vitta with an oblique ramus on each side in one example); elytra cyaneous; legs testaceous, the femora and the posterior tibiæ wholly or in part bluish-black. Head broad, subtriangular, flattened in front, the intraocular space narrowly sulcate down the middle, the epistoma limited behind by a deep transverse sulcus, which is sometimes interrupted in the centre (fig. 39); antennæ long, rather stout, joint 1 elongate, much thickened, hollowed within, and angulate at the inner apical angle; joint 4 of maxillary palpi narrow, subfusiform. Prothorax strongly transverse, rounded at the sides, narrowed posteriorly. Elytra moderately long, closely, finely punctate. Anterior tarsi 4-jointed.

♀. Head bluish-black, the epistoma and labrum only testaceous; antennæ slightly infusate (joint 2 excepted), shorter and more slender, joint 1 moderately elongate, simple, with a dark streak above; palpi as in ♂, slightly infusate; wings present.

Length $2\frac{1}{4}$ –3 mm.

Hab. S. AFRICA, Cape Town (*A. Raffray and L. Péringuey: Mus. Cape Town*).

Ten examples, including five males. Smaller than *C. basicornis*, Fairm. (= *pithecus*, Ab.), the legs partly testaceous, the prothorax more transverse; the ♂ with the inter-ocular portion of the head flattened (not excavate), the face whitish and deeply transversely sulcate, and the basal joint of the antennæ hollowed within and angulate at the tip. An apterous ♀ from the same locality may belong here?

HOMÆODIPNIS.

Homæodipnis, Duval, Glanures Ent. i. p. 47 (1859–1860); Gen. Col. Europ. iii. p. 178 (1859–1863).

Colotes, Er., subgen. *Homæodipnis*, Duv., Abeille de Perrin, Ann. Soc. Ent. Fr. 1890, pp. 257, 258.

The type of this genus or subgenus, *H. javeti*, Duv., of the Mediterranean Region, is a small insect nearly related to *Colotes*, Er., type *C. maculatus*, Cast. (*trinotatus*, Er.), with simple maxillary palpi in the two sexes. A S. African insect, with the head excavate in front in the ♂ and the fourth joint of the palpi slender in the two sexes is referred to it, this species having the third antennal joint very peculiarly shaped in the male. The ♀ is inseparable from *Colotes*.

1. *Homœodipnis luniger*, sp. n.

(Pl. VI. figs. 40, head, 40a, antenna, ♂.)

♂. Moderately elongate, finely cinereo-pubescent, the head and prothorax subopaque, the elytra shining; head testaceous, the vertex black; antennæ black, joints 1-4 and the palpi (except at the tip) testaceous; prothorax testaceous, with a large anteriorly-emarginate black patch on the disc; elytra fusco-cæruleous or greenish, with a narrow whitish stripe at the sides extending to beyond the middle; anterior and intermediate legs (the bases of the femora excepted) testaceous, the posterior pair, metasternum, and abdomen black; elytra finely, closely punctate. Head broad, subtriangular, very deeply, transversely excavate and trifoveate anteriorly, and with an oblique groove on each side near the eyes, the epistoma tumid, shining, angulate in the middle behind; antennæ long, joint 1 elongate, stout, compressed, and slightly curved, 2 short, 3 U-shaped, 4-10 subequal, longer than broad; maxillary palpi simple, similar to those of ♀, joint 4 narrow, subfusiform. Prothorax transverse. Elytra moderately long. Anterior tarsi 4-jointed.

♀. Head smaller, unimpressed, testaceous in front; antennæ slender, much shorter; prothorax with the discoidal patch sometimes divided down the middle.

Length 2 mm.

Hab. S. AFRICA, Salisbury, S. Rhodesia (*Dr. Marshall*).

Ten specimens, including seven males.

ANEXODES.

Anexodes, Abeille de Perrin, Rev. d'Ent. xix. p. 163 (Sept. 1900).

Anexodes was based upon ♀ ♀ of two small S. African forms, a specimen of each of which has been lent me by Dr. Péringuey for examination. The first of these, *A. albicauda*, is here treated as the sexual complement of *Dinometopus* (*Hedybius*) *cavifrons*, Boh., type ♂. The second, *A. longiventris*, belongs to a genus resembling *Helcogaster*, Boh., and *Carphurus*, Er., both numerous in species in the Malayan Region and Australia, genera characterised by their greatly elongated abdomen and short elytra in the two sexes. A species allied to *Anexodes longiventris* has been captured by Dr. Brauns, and the ♂-characters are given below under the description of that insect; *A. longiventris* can be taken as the type of the genus. The projecting

vesicles are visible at the front angles of the prothorax in *A. perrini*. The ♂ of the latter has the anterior tarsi formed as in *Attalus*, the head and elytra simple, and the antennal joints 5-11 strongly flabellate.

1. *Anexodes longiventris*.

Anexodes longiventris, Ab. loc. cit. pp. 163, 165 (♀).

Hab. S. AFRICA, Hamman's Kraal, near Pretoria (*E. Simon*: 1893).

Numerous examples are stated to have been captured, apparently all ♀ ♀. A shining black form, with an oblong white patch on the outer part of each elytron below the base, and a smaller common triangular white patch at the sutural angles.

2. *Anexodes perrini*, sp. n. (Pl. VI. fig. 41, antenna, ♂.)

♂. Elongate, depressed, shining, finely pubescent; æneous or nigro-æneous, the elytra sometimes greenish, the tibiæ and tarsi in part, and the abdominal sutures, testaceous. Head narrower than the prothorax, closely, rather strongly punctate, longitudinally bi-impressed anteriorly; antennæ moderately long, joint 1 stout, 2 very short, 3 and 4 long, widened, 3 angularly dilated towards the apex and 4 arcuately produced at the base within, 5-11 each furnished with a very long, slender, pilose ramus. Prothorax transverse, rounded at the sides, narrowed behind; closely, finely punctate, almost smooth on the disc, which is interruptedly canaliculate down the middle and distinctly foveate at the base. Elytra wider than the prothorax, subparallel, short, covering about half the abdomen shagreened and rugulosely punctate. Anterior tarsal joints 1 and 2 slightly thickened, 2 nigro-pectinate along the oblique outer edge.

♀. Antennæ short, feebly serrate, the basal joints testaceous; head narrower; terminal four abdominal segments exposed; tibiæ wholly or in part testaceous.

Var. Prothorax with the base or hind angles reddish.

Length $2\frac{1}{2}$ - $3\frac{1}{2}$ mm.

Hab. S. AFRICA, Willowmore [type] (*Dr. Brauns*: 30. xi. 1903: ♂ ♀), Kimberley (*Mus. Cape Town*: ♀, var.: 1912).

Described from two pairs from Willowmore and two ♀ ♀ of the variety taken at Kimberley. Separable from *A. longi-*

ventris, Ab., by the roughly sculptured, immaculate elytra, the closely punctured head, etc. The ♂ tarsal structure removes *A. perrini* from *Carphurus* and its allies.

HELCOGASTER.

Helcogaster, Boheman, Res. Eugen. p. 81 (1858).

The Rhodesian insect referred to this genus is allied to the Hawaiian *H. pectinatus*, Sharp; but it differs from *Helcogaster*, as adopted by Lea in 1909 and 1921*, in having the head simple in the two sexes, the antennæ strongly pectinate in ♂, and the basal joint of the anterior tarsi in this sex simply thickened and without comb. Boheman's types were from Australia and their sex not stated. His genus is doubtfully distinct from *Carphurus*, Er. Both are abundantly represented in Australia, the Malayan Region, South India, etc.

1. *Helcogaster vitreatus*, sp. n.
(Pl. VI. fig. 42, antenna, ♂.)

♂. Moderately elongate, shining, clothed with scattered, erect, bristly hairs; black, the two basal joints of the antennæ testaceous beneath, the elytra each with an elongate, broad, oblique, translucent, flavescent patch extending downward from the shoulder to near the apex; the head and prothorax very sparsely, minutely, the elytra strongly, diffusely punctured. Head short, narrower than the prothorax, simply bi-impressed in front, as in ♀; antennæ rather short, stout, strongly pectinate from joint 4 onward. Prothorax broader than long, rounded at the sides. Elytra wider than, and about twice the length of, the prothorax, leaving five abdominal segments exposed. Legs rather stout; tarsi comparatively short, joint 1 of anterior pair much stouter than 2-4, without comb; posterior tibiæ curved.

♀. Antennæ shorter, sharply serrate; anterior tarsal joints 1-4 short, subequal; posterior tibiæ straight.

Length $4\frac{1}{2}$ mm.

Hab. N.W. RHODESIA, Nama-ula (*H. C. Dollman*: ix. 1914). One pair.

* Trans. Ent. Soc. Lond. 1909, p. 213; Trans. R. Soc. S. Australia, xlv. p. 107 (1921).

Alphabetical numbered list of species enumerated in the present paper; the generic names in brackets abbreviated thus:
A. = *Anexodes*, *Ch.* = *Chalicoroides*, *C.* = *Chalicorus*,
Col. = *Colotes*, *Colp.* = *Colpometopus*, *D.* = *Dinometopus*,
H. = *Helcogaster*, *Ho.* = *Homœodipnis*, *M.* = *Matopius*,
O. = *Olistherarthrus*, *S.* = *Sphinginopalpus*, *T.* = *Troglops*;
those marked with an asterisk are described as new.

**abeillei* (O.), 1.
agnatus (Col.), 9.
albilabris (S.), 8.
albilateris (C.), 12.
albonotatus (D.), 4.
**atripennis* (S.), 10.
basicornis (Colp.), 1.
**bidens* (S.), 1.
biguttatus (T.), 2.
**bisellatus* (C.), 3.
buccator (Col.), 10.
capensis (Col.), 18.
cavifrons (D.), 1.
**chloropterus* (Col.), 2.
**cicindeloides* (T.), 3.
collaris (S.), 6.
cribripennis (Col.), 3.
cyanopterus (Col.), 1.
diversifrons (D.), 6.
donckieri (T.), 1.
**feroculus* (D.), 2.
**flavofasciatus* (C.), 2.
**flavomarginatus* (S.), 11.
formicarius (S.), 4.
formicoides (S.), 7.
**frontalis* (Col.), 5.
innotatus (Col.), 20.
**leucostomus* (Colp.), 2.
limbatus (S.), 12.
**longidens* (S.), 3.
longiventris (A.), 1.
**luniger* (Ho.), 1.
myrmecodes (S.), 5.
**nasutus* (Col.), 6.
**neavei* (T.), 4.
**nodosicornis* (T.), 6.
**notaticornis* (C.), 11.
notatithorax (Col.), 19.
oneili (Col.), 8.

oneili (S.), 2.
**peninsularis* (Ch.), 2.
**peringueyi* (D.), 5.
**perrini* (A.), 2.
**petrensis* (M.), 1.
**pictifrons* (Col.), 4.
plagiatus (Col.), 13.
**plumbeus* (T.), 7.
**raffrayi* (S.), 13.
**rotundicollis* (Col.), 14.
sellatus (Col.), 17.
**semicæruleus* (T.), 8.
**semicinctus* (Ch.), 3.
**subfasciatus* (Col.), 16.
testaceifrons (D.), 3.
**tetrastigma* (S.), 9.
**tricornutus* (T.), 5.
triguttatus (Ch.), 1.
**trigonus* (Col.), 7.
unifasciatus (Col.), 15.
vinula (C.), 1.
**vitreatus* (H.), 1.

SYNONYMS, VARIETIES, ETC.

albicauda (D.), 1.
albifrons (S.), 5.
barkeri (S.), 4.
brachypterus (D.), 1.
croceomaculatus (D.), 3.
ferox (D.), 1.
flavonotatus (Col.), 18.
martini (S.), 6.
natalensis (D.), 1.
nobilis (C.), 12.
pithecus (Colp.), 1.

SPECIES NOT IDENTIFIED.

apicalis, Pic (S.), see p. 331.

EXPLANATION OF THE PLATES.

♂♂ only figured.

PLATE IV.

Fig. 1. *Dinometopus cavifrons*, Boh., head.
Fig. 2. „ *feroculus*, sp. n., head.
Fig. 3. „ *testaceifrons*, Pic, head.

- Fig. 4. *Dinometopus albonotatus*, Pic, head.
 Fig. 5. " *peringueyi*, sp. n., head.
 Fig. 6. " *diversifrons*, Pic, head.
 Fig. 7. *Troglops donckieri*, Pic, head.
 Fig. 8. " *biguttatus*, Redt., head.
 Fig. 9. " *cicindeloides*, sp. n., head.
 Fig. 10. " *neavei*, sp. n., head.
 Fig. 11. " *tricornutus*, sp. n., head, in profile.
 Fig. 12. " *nodosicornis*, sp. n., head.
 Fig. 12a. " " " antenna.
 Fig. 13. " *plumbeus*, sp. n., head.
 Fig. 14. " *semicæruleus*, sp. n., head.
 Figs. 15, 15a. *Chalicorus vinula*, Er., head and prothorax.
 Fig. 15b. " " " antenna.
 Fig. 16. " *flavofasciatus*, sp. n., head and prothorax, in profile.

PLATE V.

- Fig. 17. *Chahcoroides* (gen. nov.) *triguttatus*, Ab., head.
 Fig. 18. " *peninsularis*, sp. n., head.
 Fig. 19. *Matopius* (gen. nov.) *petrensis*, sp. n., head and prothorax.
 Fig. 19a. " " " antenna.
 Fig. 20. *Sphinginopalpus bidens*, sp. n., antenna.
 Fig. 20a. " " " maxillary palpus.
 Fig. 21. " *oneili*, Pic, antenna.
 Fig. 22. " *formicarius*, Gørh., antenna.
 Fig. 23. " *limbatus*, Pic, antenna.
 Fig. 24. *Olistherarthrus* (gen. nov.) *abeillei*, sp. n.
 Fig. 25. *Colotes cyanopterus*, Gørh., head, from in front.
 Fig. 25a. " " " antenna.
 Fig. 25b. " " " maxillary palpus.
 Fig. 26. " *cribripennis*, Ab., head, from in front.
 Fig. 26a. " " " antenna.
 Fig. 26b. " " " maxillary palpus.
 Fig. 27. " *pictifrons*, sp. n., head, from in front.
 Fig. 28. " *frontalis*, sp. n., head.
 Fig. 29. " *nasutus*, sp. n., head.

PLATE VI.

- Fig. 30. *Colotes trigonus*, sp. n., head.
 Fig. 31. " *oneili*, Pic, head.
 Fig. 31a. " " " antenna.
 Fig. 31b. " " " maxillary palpus.
 Fig. 32. " *agnatus*, Ab., head.
 Fig. 32a. " " " maxillary palpus.
 Fig. 33. " *albilateris*, Er. (*nobilis*, Boh.), antenna.
 Fig. 34. " *plagiatus*, Ab., antenna.
 Fig. 35. " *unifasciatus*, Boh., antenna.
 Fig. 36. " *subfasciatus*, sp. n., maxillary palpus.
 Fig. 37. " *capensis*, Pic, maxillary palpus.
 Fig. 38. *Colpometopus basicornis*, Fairm., head.
 Fig. 39. " *leucostomus*, sp. n., head.
 Fig. 40. *Homæodipnis luniger*, sp. n., head.
 Fig. 40a. " " " antenna.
 Fig. 41. *Aneæodes perrini*, sp. n., antenna.
 Fig. 42. *Helcogaster vitreatus*, sp. n., antenna.



Champion, G. C. 1922. "XLI.—Revision of the S. African Species of Dinometopus, Troglops, Chalicorus, Colotes, Helcogaster, and the allied genera with an account of their accessory ♂-characters [Coleoptera]." *The Annals and magazine of natural history; zoology, botany, and geology* 10, 309–358. <https://doi.org/10.1080/00222932208632786>.

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