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spicuous dark brown stripes, the median stripe split by a narrow, paler brown vitta; the small pseudosutural foveæ surrounded by a pale brown cloud; scutum pale buffy grey, the lobes conspicuously marked with dark brown; scutellum and postnotum brownish grey, the medio-tergite of the latter narrowly margined posteriorly and laterally with dark brown. Pleura light grey, variegated with dark brown, this especially conspicuous on the sterno-pleura and meron. Halteres elongate, pale brownish yellow, the knobs dark brown, their knobs scarcely if at all paler. Legs with the coxæ pale, sparsely pruinose, more distinct on the fore coxæ; trochanters pale yellowish white; remainder of the legs brownish black throughout, the femoral bases a little paler. Wings with a strong brown suffusion; stigma large, darker brown; conspicuous whitish areas before the stigma, including parts of cells *C*, *Sc*, and *R*; near the fork of *M*, including portions of cells *R* and, especially, the base of 2nd *M*₂; a third conspicuous area occupies the base of cell 2nd *R*₁ beyond the stigma; veins dark brown. Venation: practically as in *D. parvicauda*, Edwards.

Abdominal segments pale greyish plumbeous, banded with dark brown, about the basal and apical third of each segment brown, the middle third or a little more being of the ground-colour; on the subterminal tergites the colour becomes more uniformly dark brown; on the subterminal sternites the apical brown band becomes obsolete. Hypopygium small, dark brown.

Hab. New Zealand (South Island).

Holotype, ♂, Glenorchy, Wakatipu district, altitude 1200 feet, January 4, 1923 (*C. C. Fenwick*).

This very distinct species of *Dolichocheza* is named in honour of the collector, Mr. Cuthbert C. Fenwick.

XXXII.—On new Species of Curculionidæ from India (*Coleoptera*). By GUY A. K. MARSHALL, C.M.G., D.Sc., F.R.S.

[Plate VIII.]

Subfamily ATTELABINÆ.

Attelabus lacertosus, sp. n. (Pl. VIII. fig. 5.)

♂ ♀. Head, rostrum, antennæ, prothorax, sternum, and legs shiny blue-black; elytra and venter testaceous brown to red-brown.

Ann. & Mag. N. Hist. Ser. 9. Vol. xii. 19

Head much longer than broad, as long as the pronotum, with a few fine irregular transverse striolæ in the basal half above, and with irregular and widely scattered punctures; the sides and lower surface more strongly striolate towards the base and coarsely and closely punctate anteriorly; the forehead not separated from the rostrum by a transverse impression, with a very convex smooth median costa and a short deep sulcus on each side of it, the lateral areas being coarsely punctate. *Rostrum* two-thirds the length of the head, parallel-sided in the basal half, strongly dilated in front; the dorsum rather flattened, remotely punctate and with a shallow longitudinal furrow between the antennæ. *Antennæ* with joint 2 of the funicle as long as but narrower than 1, 3 distinctly longer, the remainder gradually diminishing in length, 4 being about as long as 2, and all longer than broad except 7, which is as long as broad; the club with joint 3 as long as the other two together, 1 as long as broad, and 2 transverse. *Prothorax* transverse, widest just in front of the basal constriction, and gradually narrowed thence to the apical constriction, with a very shallow lateral sinuation in the middle; the base bisinuate, with a small emargination in the middle, the apical margin deeply sinuate; the dorsum convex, smooth, and with widely scattered punctures, the curved transverse subapical impression longitudinally striolate, the basal impression shallow, transversely striolate, with a few punctures and with a deep furrow just within the margin. *Scutellum* blue-black, trapezoidal, widest at the base, broadly truncate at the apex, with a few small setigerous punctures along each side and a faint median longitudinal impression. *Elytra* subquadrate, much wider than the prothorax, only a little longer than broad (8:6), not striate (except for a juxta-sutural stria), but with complete regular rows of distinct round punctures; the intervals flat and quite smooth, each with a row of minute remote pale erect setæ, and also a denser row of curved setæ on the epipleuræ. *Legs*: the front coxæ divergent apically; the front femora inflated, much thicker than the others and with an obtuse tooth close to the apex; the tibiæ compressed, with shallow longitudinally confluent punctures and a shallow furrow on each side, the front pair armed internally with a row of long stout teeth, the posterior pairs finely denticulate on the apical half only; the front tarsi with joint 2 flattened and much broader than long. *Sternum*: the metasternum transversely striolate and with sparse curved pale setæ in the middle, and with close shallow punctation and slightly denser recumbent setæ at the sides,

the episternum very closely punctate and fairly densely setose in the posterior half only.

Length 7·8–9 mm., *breadth* 3·6–4·2 mm.

ASSAM: North Manipur (*Doherty*).

Described from eight specimens.

This species belongs to *Jekel's* section *Paramecolabus*, which includes such species as *discolor*, Fhs., *fea*, Fst., *humerosus*, Fst., *obliquus*, Hllr., etc., but its characteristic coloration will distinguish it readily from all the other species of the group except the following.

Attelabus simulatus, sp. n.

♂ ♀. Coloration precisely similar to that of *A. lacertosus*, sp. n., from which this species differs in the following characters:—

Head distinctly tumid at the base; the forehead not costate in the middle and with two comparatively shallow sulci on each side. *Rostrum* less strongly dilated at the apex. *Antennæ* with joint 5 of the funicle as long as broad, 6 and 7 transverse. *Prothorax* more transverse, much more abruptly constricted at the base and apex, the dilatation just in front of the basal constriction being far more prominent; the anterior transverse impression not longitudinally striolate, and the basal one very deep; the disk bearing two large foveæ, and with much finer and more sparse punctures. *Scutellum* without any median impression. *Elytra* only slightly wider than the prothorax, much narrower in relation to the length (8:5); the intervals feebly rugulose. *Legs* rather longer and more slender, especially the front tibiæ of the ♂; the femora with a sharp tooth; the tibiæ finely aciculate, scarcely punctate or sulcate, the teeth on the front pair much smaller and more numerous; joint 2 of the front tarsi about as long as broad. *Sternum* very sparsely setose at the sides of the metasternum.

Length 6–9 mm., *breadth* 2·4–3·6 mm.

SIKKIM: Darjiling.

Described from twenty specimens.

Subfamily OTIORRHYNCHINÆ.

Phytoscapus fractivirgatus, sp. n. (Pl. VIII. fig. 1.)

♂ ♀. Integument red-brown, striped above with dark brown and pale green scaling; the head and rostrum with pinkish-buff scaling having a slight coppery reflexion; the prothorax pale green, with three broad dorsal brown stripes,

the median one being pointed at the the apex, and on the pleuræ a narrower brown stripe running from the base to beyond the middle; the elytra with the whole of interval 1, the basal fifth of interval 3, the whole of interval 5 except the basal fifth, the apex of interval 6, the whole of interval 7, the basal fourth and the apex of intervals 8 and 9, the apex and a small median pitch on interval 10, and the whole of the external margin pale green, the remainder dark brown; the legs pale pinkish buff; and the lower surface pale greenish. Occasionally the green markings on the elytra are more developed, and in one extreme specimen the whole side of the elytra is green beyond stria 4, except the basal half of intervals 6 and 10, also the base of 2, the whole of 3, and the apex of 4.

Head with a deep frontal stria, the forehead flattened, not broader than the space between the dorsal carinæ of the rostrum. *Rostrum* with the narrow dorsal area slightly convex in the basal half and usually having there a faint median carina, the lateral ones being indefinite but becoming distinct on the anterior half, which is shallowly sulcate; the interantennal area deeply bifoveate, and without lateral processes in the ♂; the lateral area with a broad smooth bare costa running from the scrobe straight to the eye and a deep stria above and below it; the lower surface with a stout median tooth. *Antennæ* densely clothed with narrow pale scales, the scape with short recumbent setæ; the funicle with joints 1 and 2 equal, 3-6 slightly diminishing progressively in length and all longer than broad, 7 as long as 4. *Prothorax* broader than long (9:7), moderately rounded at the sides, widest rather behind the middle, and shallowly constricted in front; the basal margin gently bisinuate, the apex truncate dorsally, with the ocular lobes strongly developed and with distinct vibrissæ; the dorsum convex longitudinally, rather coarsely and closely punctate (mostly concealed by the scaling) and with small granules on the interspaces, each bearing a short subrecumbent spatulate seta; the green scales subcircular and much larger than the brown ones. *Scutellum* trapezoidal, broadest behind and sparsely squamose. *Elytra* oblong-ovate, parallel-sided from the shoulders to beyond the middle in the ♂, slightly widened behind the middle in the ♀, jointly sinuate in the middle at the base, the apices separately rounded; the deeply punctate striæ clearly visible through the scaling and scarcely shallower behind, stria 9 bearing a deep fovea on a level with the hind coxa; the intervals slightly convex, with rows of erect flattened pale setæ, each arising from a small

granule; the scale rather convex and closely overlapping. *Legs* with an obtuse angulation on the inner edge of the front tibiæ in both sexes, the apical tibial bristles red-brown, there being a double row on the outer edge of the hind corbels.

Length 6-6.5 mm., *breadth* 2.5-2.9 mm.

ASSAM: Chandkhira, Sylhet (*J. L. Sherwill*, type); Gauhati, iv.-v. 1918 (*T. B. Fletcher*).

Described from ten specimens.

A strikingly coloured species, most nearly allied to *P. alternans*, Fst., which may, however, be at once distinguished by the absence of the fovea in stria 9 and by its broader forehead, which is much wider than the dorsal area of the rostrum.

Phytoscaphus tenuirostris, sp. n.

♂ ♀. Integument testaceous to red-brown, densely clothed above and below with pale greenish scales.

Head densely squamose, with a very fine frontal stria visible through the scaling; a row of three or four suberect spatulate setæ along the inner edge of each eye; the forehead about as broad as an eye. *Rostrum* comparatively slender, as long as the front tibia; the dorsal area flat, as wide as the forehead at the base and gradually narrowing in front, very finely tricarinate, the carinæ almost completely hidden by the scaling, and with curved spatulate raised setæ; the interantennal area flattened, not excavated, and without lateral projections in the ♂; the lateral areas with their usual two striæ shallow and indistinct; the lower surface distinctly curved and without any trace of a median tooth or transverse basal furrow. *Antennæ* slender, the scape clothed with narrow hair-like scales; the funicle with joint 1 as long as 2+3, 2 nearly twice as long as 3, 3-6 subequal and about as long as broad, 7 a little longer; the club as long as the four preceding joints. *Prothorax* as long as broad (♂) or a little broader than long (♀), rounded at the sides, broadest behind the middle, feebly arcuate at the base, truncate dorsally at the apex, the post-ocular lobes but little developed and with short vibrissæ; the dorsum very slightly convex longitudinally and when abraded, with a finely aciculate patch in the middle of the basal half and shiny elsewhere, with remote setigerous punctures throughout and a small lateral fovea on each side behind the middle, all these characters being entirely hidden by the scaling; the setæ rather broad, short, and suberect.

Scutellum small, nearly circular, squamose. *Elytra* oblong-ovate, with the shoulders very prominent and rounded rectangular, almost parallel-sided from there to beyond the middle in the ♂, widened behind the middle in the ♀, jointly rounded at the apex; the striæ closely and distinctly punctate, but the punctures almost entirely concealed by the scaling, stria 9 with a large deep fovea at one-third from the base in the ♀ only, the intervals (when not abraded) almost flat, except interval 1 which is somewhat raised in the posterior half, and each bearing a single row of short curved spatulate setæ; the scales almost circular, dense, and slightly overlapping. *Legs* testaceous, densely squamose; the front tibiæ not bisinuate internally in the ♂.

Length 2.75–3 mm., *breadth* 1.2–1.3 mm.

N.W. FRONTIER PROVINCE: Taru, Peshawar District, on sugar-cane, x. 1914 (*T. B. Fletcher*, type). BIHAR: Pusa, viii. 1920 (*Hag*). BOMBAY: Dohad, on maize, viii. 1917 (*T. B. Fletcher*).

Described from twenty-four specimens.

The only other described species of *Phytoscapus* that exhibits the following combined characters—rostrum without a median tooth or transverse basal furrow beneath, hind tibiæ with only a single row of setæ on the outer margin of corbel, and the front tibiæ not bisinuate internally—is *P. parilis*, Fst., which differs from the present species, *inter alia*, in having a comparatively short and broad rostrum and the two basal joints of the funicle equal.

Subfamily CLEONINÆ.

Genus LIXOCLEONUS, nov.

Head with the eyes broadly ovate, oblique. *Rostrum* almost cylindrical, not angulate laterally and not broader at the base than the forehead, the apical margin somewhat produced and sinuate in the middle; the scrobe with its upper edge distinctly angulate close to the base. *Antennæ* with joint 1 of the funicle much longer than 2, and joint 7 annexed to the club. *Prothorax* gently rounded at the base, without postocular lobes, but with well-developed vibrissæ. *Scutellum* invisible. *Elytra* narrowly cylindrical, only slightly broader than the prothorax, the clothing consisting of hairs only. *Legs* with the femora unarmed; the lower surface of the tarsi with only a very narrow line of spongy setæ at the side of each joint, joint 2 of the hind pair as long as 3; the claws connate at the base and each

with a minute basal lateral seta. *Sternum*: the metasternum much longer than the median coxæ. *Venter* closely and minutely punctate, with scattered larger punctures, which show through the clothing as irregular black spots; the first ventral suture sinuate in the middle.

Genotype, *Lixocleonus incanus*, sp. n.

The species for which this genus is proposed runs down to the American genus *Cleonidius*, Casey, in Faust's key to the subfamily (Deut. ent. Zeitschr. 1904, p. 190), but the latter differs in having the head separated from the rostrum by a transverse impression, the upper edge of the scrobe is not angulate near the base, joint 7 of the funicle is not annexed to the club, and the prothorax has well-developed postocular lobes and its base deeply bisinuate.

The general facies of *Lixocleonus* is very similar to that of the narrowly cylindrical species of *Lixus*, but these may be distinguished by the fact that the forehead is narrower than the base of the rostrum, and that the lower surface of the tarsi is densely clothed throughout with spongy pubescence.

Hitherto no satisfactory character has been given for distinguishing the Lixini from the Cleonini, but the width of the forehead appears to afford quite a reliable distinction, this being as broad as or broader than the base of the rostrum in the Cleonini and narrower in the Lixini. It would, however, then be necessary to remove a few Palæarctic species from the genus *Lixus*, such as *L. vibex*, Pall. (subg. *Lixestus*, Reitt.), subgenus *Philliaus*, Petri, and *L. anguinus*, L., which would appear to be more naturally placed in *Cleonidius*.

Lixocleonus incanus, sp. n. (Pl. VIII. fig. 2.)

♂ ♀. Integument black, rather thinly and evenly clothed above with short recumbent grey setæ; the prothorax with a paler lateral stripe on each side formed of rather denser setæ, with a very indefinite darker stripe on each side of it; the elytra with a small whitish spot at the bases of interval 2, stria 3, and the shoulder, and some very indefinite whitish dots along the outer striæ formed of a few setæ that are whiter than the others; the lower surface with much longer and denser grey setæ, irrorated with darker spots due to the smooth black rings round the larger punctures.

Head very closely punctate; the rostral carina encroaching somewhat on the forehead. *Rostrum* about three-fourths

the length of the pronotum, closely and confluent punctate throughout, with a strong median carina extending from the base to slightly beyond the antennæ and a shallow furrow on each side of it. *Antennæ* piceous, with the scape red-brown at the base and along its posterior half, fairly densely clothed with grey setæ; the funicle with joint 2 a little longer than 3, 3-6 short and strongly transverse. *Prothorax* broader than long (22 : 17), almost parallel-sided from the base to far beyond the middle, then rather abruptly narrowed to the apex; the dorsum very closely and finely punctate and with numerous separated large punctures, a very feeble median carina on the anterior half and a small shallow impression in the middle of the base. *Elytra* narrowly elongate, parallel-sided from the shoulders to far beyond the middle, shallowly sinuate jointly at the base and separately rounded at the apex, with very feeble impressions behind the scutellum (sometimes obsolete) and just within the shoulders; the striæ very shallow, with rather elongate separated punctures, the intervals flat and finely rugulose, without any posterior callus. *Legs* black, with the tarsi piceous, fairly densely clothed with long recumbent grey setæ; the fringe of spines at the apex of the tibiæ testaceous.

Length 7.25-9 mm., *breadth* 2.3-2.9 mm.

BIHAR: Pusa.

Described from forty-four specimens.

The larvæ have been found feeding on the roots of *Lannea asplenifolia*, on which they form elongate earthy cocoons. The adults have been observed on grasses, sugar, maize, and cotton, but there is no indication that they do any damage.

Subfamily ERIRRHININÆ.

Smicronyx cuscute, sp. n.

♂ ♀. Integument black, clothed above with cinnamon-brown scales variegated with whitish ones; the lower surface with uniform greyish-brown scaling.

Head with the vertex finely shagreened and bare, the forehead squamose. *Rostrum* slightly longer than the head and pronotum, distinctly curved, very finely shagreened and with five fine indistinct carinæ, which extend to the antennæ (♀) or nearly to the apex (♂), the median one being flattened and broadened between the antennæ; the basal half squamose, the scales forming a small tuft on each at the base. *Antennæ* black; the funicle with joint 1 as

long as 2-4 together, 2-7 transverse, 2 not longer than 3. *Prothorax* broader than long (6:5), moderately rounded at the sides, widest at the middle, and constricted near the apex; the basal margin shallowly bisinuate, much broader than the apex, which is truncate dorsally, the postocular lobes being small; the dorsum with very shallow, more or less confluent punctures throughout, which are almost completely hidden by the relatively large scales. *Scutellum* punctiform. *Elytra* oblong-ovate, with prominent and roundly rectangular shoulders, almost parallel-sided from the shoulders to beyond the middle; the fine, indistinctly punctate striæ narrowly visible through the scaling; the intervals flat and smooth, each with two irregular rows of large, partly overlapping scales and a single row of recumbent scale-like setæ. *Legs* black, densely squamose; the femora with a minute tooth.

Length 2.4 mm., *breadth* 1.2 mm.

BIHAR: Pusa, iii. 1921 (*Rangi*).

Described from sixteen specimens, all bred from larvæ living in galls on the stems of *Cuscuta reflexa*.

Of the previously described Indian species the most similar is *S. albovariegatus*, Fst. (1891), which differs in having the prothorax strongly punctate and with white scaling at the sides and along the median line; the legs and antennæ are red-brown; and the scales on the elytra are elongate and narrowed at both ends.

A much closer ally is *S. tataricus*, Fst. (1886), from Russian Turkestan, which has the elytra distinctly narrower in proportion to their length and bearing many more white scales, these being almost as numerous as the brown, and the median carina on the rostrum is not flattened and dilated between the antennæ.

Genus HEDYCHROUS, nov.

Head separated from the rostrum above by a shallow transverse impression; the eyes entirely contiguous beneath. *Rostrum* long and slender, flattened dorso-ventrally towards the apex, the lower surface somewhat flattened and deeply notched at the base (as seen from the side); the scrobes confluent beneath the rostrum; the peduncle of the submentum large and subtriangular, the mentum minute and strongly transverse. *Antennæ* inserted at (♀) or beyond (♂) the middle of the rostrum; the scape strongly clavate, not reaching the eye; the funicle with joint 1 longer than 2, and 7 not annexed to the club, which is elliptical and

3-jointed. *Prothorax* with well-developed postocular lobes. *Scutellum* minute. *Elytra* with prominent shoulders; stria 10 abbreviated. *Legs* without a trochanteral seta; the femora strongly clavate and with a large sharp tooth; the tibiæ not dilated at the apex, the inner margin distinctly bisinuate and with a sharp angle at one-third from the base, the external apical angle rounded off, and just within the apical fringe of setæ on the hind pair a narrow carina, of which the long sharp uncus is a continuation, the latter partly concealed by a dense tuft of setæ arising from near the apex of the inner edge; the tarsi densely spongy beneath, with the third joint broadly lobate, the claws rather short, stout, connate at the base, and without a basal seta. *Sternum*: the prosternum with a broad shallow impression in front of the coxæ, somewhat tumid behind the coxæ and with a distinct median furrow; the metasternum with a deep fold in front of each hind coxa. *Venter* with the intercoxal process broadly rounded and rather narrower than a coxa; ventrite 2 (4) a little longer than the next two together and fused with 1 (3) in the middle.

Genotype, *Hedychrous rufofasciatus*, sp. n.

Closely allied to *Smicronyx*, Schh., but in that genus the eyes are not contiguous, and the tibiæ are produced externally at the apex and are not angulate on the internal edge.

Hedychrous rufofasciatus, sp. n. (Pl. VIII. fig. 6.)

♂ ♀. Integument black, with a well-marked pattern composed of black scales (often with a peacock-blue reflection) and orange-red scales (occasionally varying to orange-yellow or deep red); the head and rostrum bare; the prothorax orange-red, with the basal margin whitish, a large oval black patch in the middle of the disk that nearly reaches both base and apex, and a smaller, nearly circular, black patch on each side, the black markings often surrounded by a narrow whitish ring; the elytra with black scaling, the margins and two broad transverse bands orange-red; the anterior band situated in front of the middle, its posterior margin sinuate on the disk, its front margin triangularly produced to the base along the suture, the apex of the triangle being on the scutellum, and a red stripe running along interval 7 from the band to the base; the posterior band a little behind the middle and narrowly connected along the suture with the other band, its front margin quite

straight, and a red stripe on interval 1 connecting it posteriorly with the apex; the red marginal stripe extending inwards only to stria 9 in front of the posterior band but reaching stria 7 behind it; the lower surface with whitish or grey scaling, except the last three ventrites, which are entirely black, and a large black lateral patch on the metasternum and on each of the two basal ventrites.

Head finely aciculate and with scattered shallow punctures. *Rostrum* longer than the head and pronotum (19 : 13) and of about the same length in the two sexes; in the ♂, parallel-sided, strongly and closely punctate throughout, and with a faint median carina in the basal two-thirds; in the ♀, the apical half shiny and with sparse minute punctures, and the median carina evanescent. *Antennæ* with joint 1 of the funicle equal to 2 + 3, 3 and 4 subequal and about as long as broad, 5 and 6 slightly transverse and equal, 7 similar but a little larger. *Prothorax* transverse (4 : 3), strongly rounded at the sides, broadest slightly behind the middle, much narrowed in front; the apical margin subtruncate dorsally, the base slightly rounded or feebly bisinuate; the dorsum very closely and evenly punctate (the punctures concealed by the scaling), and without any median furrow or carina. *Elytra* ovate, jointly and shallowly sinuate at the base, and jointly rounded at the apex; the rows of fine elongate punctures feebly striate, but the striæ deceptively emphasised by the arrangement of the black scales; the scales oblong, densely overlapping, there being six or seven across an interval in the middle of the disk; no trace of any setæ. *Legs* black, not very densely clothed with grey scales; the apical fringe of setæ on the tibiæ black, the internal apical tuft reddish; the punctures coarse, shallow, and subconfluent, except on the clavate portion of the femora, where they are much smaller and separated.

Length 4.2-6 mm., breadth 2-2.7 mm.

BIHAR: Pusa, vii. 1916 (*T. B. Fletcher*, type), xi. 1919 (*Haq.*). BENGAL: Calcutta (*N. Ammandale*).

Described from twenty specimens.

This very striking species is recorded as having been found on various plants, such as jute, ginger, rice, and sweet potato, but there is no information as to its doing any damage.

Subfamily *BALANININÆ*.

Balaninus nigricollis, sp. n. (Pl. VIII. fig. 4.)

♂. Integument dull black, densely clothed with fulvous scaling above and below, except the following parts which

are bare and black : the head, rostrum, the entire pronotum (the upper edge of the inferior squamose area quite sharply defined), an ovate humeral patch on the elytra reaching the lateral margin broadly, extending backwards for 1.2-1.5 mm. on intervals 7 and 8 and narrowly along the base to stria 4, and a median wedge-shaped area on the last visible ventrite (♂); the outer part of the black humeral patch with a few whitish scales; the legs thinly clothed with grey setiform scales.

Head closely and strongly punctate, with a minute frontal fovea and a median frontal carina continuous with that on the rostrum, the latter arising (in lateral view) from the middle of the eye. *Rostrum* nearly twice as long as the head and prothorax, moderately curved, strongly punctate in rows at the base, with a smooth median line and a punctate furrow just above the scrobe, the latter passing beneath the rostrum at the base. *Antennae* inserted a little behind the middle of the rostrum, with the scape not quite reaching the eye; the funicle with joint 1 as long as 2-4 together, 2-6 progressively diminishing in length, 7 as long as 4 but broader; the club rather longer than the five preceding joints together, its first joint equal to the second. *Prothorax* about as long as its basal width, broadest at the base, very slightly rounded at the sides, and scarcely constricted at the apex; the apical margin truncate dorsally and sloping obliquely forward at the sides; the median basal process sinuate; the dorsum with close shallow reticulate punctures, tending to coalesce into oblique curved striae, and with a very variable abbreviated narrow smooth median line. *Scutellum* small, oval, longer than broad, with dense pale scaling. *Elytra* cordiform, with the apices jointly rounded and the lateral margins not sinuate; the striae broad and deep at the base, but rapidly becoming narrower and shallower behind; the sutural impression asymmetrical, very deep at the base and becoming shallower posteriorly towards the apex, starting on interval 1 of the left elytron but soon passing over to interval 1 of the right elytron, which is distinctly broader than the other interval 1 in the apical half; the intervals otherwise flat and transversely rugulose, the narrowly triangular scales not entirely concealing the integument, there being four (sometimes five) across each interval on the disk; the suture with a fringe of obliquely raised interlocking setae at the apex. *Legs* elongate, slender, with longitudinally confluent punctures; the femora with a large sharp tooth, compressed at its base, the hind pair exceeding the apex of the elytra. *Venter*: the anal ventrite

(♂) with a broad bare depression down the middle bearing a fringe of long pale setæ at the apex : the pygidium with a deep transverse impression.

Length 5.25-5.7 mm., *breadth* 2.5-2.8 mm.

BURMA: Lashio, iv. 1918, on *Ficus* (Y. Ramachandra Rao).

Described from eight specimens.

Its characteristic colouring distinguishes this species from any other Oriental *Balaninus* known to me.

Subfamily CRYPTORRHYNCHINÆ.

Cyphomydica quadrifloccosa, sp. n. (Pl. VIII. fig. 3.)

♂. Integument shiny black, densely clothed with earth-brown scaling and with a short stripe of dark brown scales at the base of the suture.

Head entirely concealed from above, closely and strongly punctate throughout, with a very shallow median impression on the vertex, but the sculpturing entirely hidden by the squamose indumentum, and set with scattered short erect inflated scales. *Rostrum* about as long as the pronotum, gently curved, parallel-sided from the base to near the apex and there slightly dilated, reticulately punctate throughout, but the punctures entirely hidden by the indumentum, and set with numerous erect inflated scales. *Antennæ* testaceous brown to piceous; the funicle with joint 1 about as long as but thicker than 2, 3-5 equal and slightly longer than broad, 6 a little longer, 7 a little longer and broader than 6. *Prothorax* transverse (15:11), parallel-sided from the base nearly to the middle, then rapidly narrowed to near the apex, the sides being straight; the base shallowly bisinuate, the apex arcuately produced dorsally, the postocular lobes small but distinct; the dorsum elevated in the middle and with a broad deep smooth median furrow which reaches from the base almost to the apex, the ridges on each side of it bearing at the middle a small clump of erect striolate club-shaped scales set in a hollow and a much larger clump on each side at the apex; the lateral areas depressed and rather uneven, the extreme lateral margin with a fovea at the angulation containing several erect club-shaped scales, and a similar fovea just behind it; the general surface for the most part smooth owing to the dense indumentum, which when clean seems to have a somewhat fibrous texture, and when it is removed the surface is shiny and closely and deeply punctate. *Scutellum* small, punctiform, not elevated. *Elytra* jointly trisinate at the base, broadest behind the middle, then very abruptly narrowed, the apex being broadly rounded; the

dorsal outline rising steeply from the base, then almost flat to a little beyond the middle, and the posterior part forming a straight slope to the apex of about 60° , the declivity being flattened dorsally; the rows of large deep punctures almost entirely hidden by the indumentum; interval 3 with a large group of long broad erect scales not far from the base, another much smaller group at about the middle, and two very small tufts of short scales on the declivity; interval 5 with five tufts of scales, which diminish behind; interval 7, which forms the dorso-lateral margin, with two slight angulations before the middle, each bearing a small tuft of short setæ and one longer one, and behind the middle an elongate and more prominent tuft; the apical margin with a fringe of broad erect scales. *Legs* with dense honeycomb scaling and numerous short erect scales; the femora with two indefinite, dark brown patches and a small sharp tooth; the tibiæ strongly bent near the base, and there rather widened dorsally and with a dark brown patch.

Length 3.45 mm., *breadth* 1.8–2.4 mm.

MADRAS: Nilgiri Hills (*A. K. Weld Downing*).

Described from six specimens.

The only other species of the genus that has been described, *C. megacalles*, Heller (*Stett. ent. Zeitschr.* 1908, p. 175), is a much larger insect (7 mm. long); the median discal area is not elevated on the posterior half of the pronotum and there is no median furrow; the scutellum is markedly elevated; on the elytra there is no dark stripe at the base of interval 1, but only a rounded spot near the base of interval 2; the two tufts on interval 3 unite to form a continuous compressed ridge of upright scales, the scales themselves being much broader; and the legs have no dark brown patches.

Genus PLOCOCERUS, nov.

Head with the forehead as broad as the base of the rostrum and forming a continuous curve with it; the eyes very nearly as widely separated beneath as above. *Rostrum* gently curved, with the scrobes lateral, the antennæ inserted at the middle (♀) or at one-third from the apex (♂); the mentum punctiform, the submentum elongate, narrow, and parallel-sided; the mandibles tridentate. *Antennæ* elongate; the scape very slender, abruptly clavate and not quite reaching the eye; the funicle 7-jointed, with a fringe of very long hairs on the inner side in the ♂ only; the club narrowly elliptical, somewhat compressed, the basal half of the inner side set with long hairs in the ♂. *Prothorax* strongly

transverse, the base with a median angle and subtruncate on each side of it, much narrowed in front, with well-developed rectangular postocular lobes. *Scutellum* distinct, transverse. *Elytra* with the shoulders only moderately prominent and obliquely rounded, deeply punctato-striate, the apices jointly rounded, the interlocking sutural flanges continued right to the apex. *Legs* approximately equal in length; the femora not very narrow at the base, moderately clavate, each with a short stout tooth, and not sulcate beneath; the tibiæ compressed, curved at the base, narrowly carinate on the upper and lower edges, with a bifid tuft at the inner apical angle, two oblique rows of bristles towards the apex of the two posterior pairs, and a longitudinal patch of bristles on the posterior face of all the tibiæ just below the tarsi; the tarsal claws comparatively small and slender, simple, and without any basal lateral seta. *Sternum*: the pectoral canal forming a deep narrow gutter, bounded behind by the mesosternum, forms the whole of the furrow behind the front coxæ and is continued for some distance behind the median coxæ, the apical portion of the furrow not overhung but sloping; the mesepisterna much smaller than the mesepimera, very narrow, and lying almost transversely; the metasternum as long as the median coxæ, the metepimera concealed. *Venter* with the intercoxal process broadly rounded, narrower than the coxæ; the first ventral suture deep and straight; the three intermediate ventrites equal in length. *Stridulatory apparatus* as in *Cryptorrhynchus lapathi*, L.; in the ♂ the files are on the lower surface of the elytra at the apex of the sutural margin, the scrapers being two minute short transverse ridges at the apex of the 7th tergite; whereas in the ♀ the files consist of a large striolate patch on each side of the 7th tergite.

Genotype, *Plococerus denticollis*, sp. n.

A distinctive genus, which is perhaps most nearly allied to *Cyamobolus*, Schh.; but in the latter the mesosternal portion of the pectoral canal is much shorter and scarcely reaches the middle of the median coxæ; the mesepisterna are broad and strongly oblique; the first ventral suture is deep at the sides and almost fused in the middle; ventrite 2 (4) is about as long as the next two together, etc.

Plococerus denticollis, sp. n. (Pl. VIII. fig. 8.)

♂ ♀. Integument black, with somewhat variegated greyi-brown scaling above and below, the scales not entirely concealing the tegument.

Head reticulately punctate, without any frontal fovea, but with a shallow furrow along the hind margin of the eye that is partly concealed by scaling. *Rostrum* of about the same length in the two sexes, subcylindrical, but wider at the base; in the ♂, rather strongly and closely punctate throughout and with a low narrow median carina; the ♀ with the apical half finely and sparsely punctate. *Antennæ* devoid of scaling; the funicle with joint 2 half as long again as 1, 3 almost or quite as long as 1, the remainder becoming progressively shorter, 4 and 5 longer than broad, 6 and 7 bead-like and transverse; the club with the articulations mainly obsolete; in the ♂ the setæ on joints 2-7 of the funicle and on the base of the club are prolonged into a long fringe on the inner face only, those of the ♀ being quite normal. *Prothorax* almost parallel-sided from the base to about the middle and there abruptly narrowed, thus forming a distinct angle in the ♀, which in the ♂ is produced into a sharp forwardly-projecting tooth; the dorsum deeply and reticulately punctate throughout, with a low narrow median carina, which is continued on to the median basal angle; the scales narrow and elongate, there being one to each puncture, and those on the disk all lying transversely. *Scutellum* rhomboidal, shallowly punctate, and sparsely squamose. *Elytra* oblong-ovate, very gently rounded at the sides and constricted close to the apex; the basal margin jointly trisinate, with the external angles projecting slightly forward, the apices not quite symmetrical owing to the suture there curving to the right: the striæ deep and coarsely punctate, the intervals costate and closely punctate, the alternate ones slightly higher, especially behind, but interval 1 markedly flattened in the basal half; the striæ and intervals clothed with short oblong scales (much smaller than those on the thorax), but without setæ, each puncture containing a single recumbent scale. *Legs* rather thinly squamose and with longitudinally confluent punctures, thus appearing striate in parts; the femoral tooth rather obtuse; the uncus of the tibiæ almost longitudinal in direction and forming a low curve with the dorsal edge, the inner apical angle acute. *Sternum* and *venter* with coarse reticulate punctures, each containing a large scale; the venter scarcely differing in the two sexes.

Length 9-10.5 mm., *breadth* 4.5-5.25 mm.

BIHAR: Pusa, v. 1907.

Described from eighteen specimens, all of which were found boring in the stems of a species of *Euphorbia*. The male of this species should be very easily recognisable on account of its plumose antennæ and dentate prothorax.

Subfamily *ISORRHYNCHINÆ*.*Lobotrachelus urenæ*, sp. n.

♂ ♀. The upper surface of the head and prothorax and the elytra black, with black setæ or scales, except for a diamond-shaped patch of densely overlapping, ribbon-like, white scales in the middle of the base of the pronotum, and a faint common arcuate band on the elytra a little behind the scutellum formed of rather sparse recumbent whitish setæ and extending only to interval 3, there being also a few whitish setæ on the basal half of the lateral margin, and sometimes too at the base of intervals 3 and 5; the whole of the lower surface, the forehead, and (in the ♂ only) the upper surface of the rostrum clothed with dense silvery-white scales, occasionally with a tinge of pale yellow on the sides of the sternum; the extreme apical margin of the elytra red-brown.

Head shining and very shallowly punctate on the vertex, more coarsely so at the sides. *Rostrum* straight; in the ♂, as long as the front femur and with a sharp median carina, the sculpture hidden by the scaling; in the ♀, a little longer and more slender, and forming a less wide angle with the forehead than in the ♂, bare, finely punctate, and not carinate. *Antennæ* testaceous; joint 1 of the funicle as long as the next two together, joints 3-6 a little longer than broad, 7 as long as broad. *Prothorax* (including the median basal lobe) a little shorter than its basal width (9 : 10), subconical, with the sides almost straight; the dorsum closely set with shallow umbilicate punctures, each containing a recumbent black seta, leaving a narrow smooth median line, the punctures becoming closer and deeper towards the middle of the base; the median basal lobe carinate, the carina being concealed but making the patch of white scales appear tectiform; the dorsal edge of the lateral white scaling straight and about on a level with stria 7 of the elytra. *Elytra* of the normal shape, with deep, indistinctly punctate striæ, which became shallower behind; the intervals finely rugulose (except the small shiny patch on the shoulder) and set with broad curved black setæ, the odd intervals bearing three rows of setæ in the middle of the disk, the even intervals two. *Legs* black, the tarsi piceous; the femora subsulcate, and rather thinly clothed with narrow oblong setæ running almost in lines. *Sternum* and *venter* with the scales ribbon-like.

Length 2-2.4 mm., *breadth* 1.2-1.5 mm.

BIHAR: Pusa, vii. 1922 (*Haq.*).

Described from twenty-two specimens which were bred from larvæ boring in stems of *Urena lobata*.

Very closely allied to *L. subfasciatus*, Mot. (sec. Faust), which is a rather larger insect (3×1.75 mm.), with the sides of the prothorax gently rounded and all the dark setæ on the pronotum and elytra brown instead of black; the median basal lobe of the pronotum is not carinate, so that the scales on it lie quite flat; the vertex of the head opaque and not shiny; and the scales on the rostrum of the ♂ are much narrower than those on the prosternum, so that the integument is mostly visible, whereas in the new species the scales are quite as broad as those on the prosternum and the median carina is higher.

The description of *L. argenteus*, Mot., would apply to both these species, except that the antennæ are stated to be black.

Lobotrachelus postoculatus, sp. n. (Pl. VIII. fig. 7.)

♂ ♀. Integument shiny black, with markings formed of ivory-white or yellowish-white scales; the prothorax with a transverse pale band at the apex and at the base; the elytra with a broad basal band formed of short stripes of pale setiform scales on the intervals, which diminish rapidly in length from the suture to the shoulder, and the apical half covered with similar scales, except for a large ovate black patch on the posterior declivity of each elytron lying between striae 1 and 6; the pale scales on interval 10 do not extend so far back as on the others and are often confined to the apical fourth, whereas those on interval 9 extend to within a fourth of the base; the front of the prosternum and the side-pieces of the meso- and metasternum clothed with long narrow simple scales, but the rest of the meso- and metasternum and the whole of the venter with highly plumose pale scales, those in the middle of the sternum bearing much longer fringes in the ♂ than in the ♀.

Head shiny, with shallow confluent punctures, which are more sparse in the middle of the vertex; the forehead with a bare smooth median stripe and a row of pale setæ on each side. *Rostrum* with sparse pale setæ throughout in ♂, these being confined to the base and sides in ♀; the dorsum tectiform in ♂ with coarse confluent punctures and a sharp median carina, the punctures finer in ♀ and the apical part rather flatter. *Antennæ* testaceous; the funicle with joint 1 as long as 2+3, 4 as long as 3 and longer than broad, 5-7

bead-like, transverse, and progressively widening. *Prothorax* a little shorter than its basal width, subconical, with the sides quite straight; the dorsum with the bare part very shiny, rather closely set with small separated transverse punctures and with a very indefinite median impunctate line; the long narrow scales of the anterior fascia all transverse, also the more median ones of the basal fascia, the lateral one lying longitudinally, very dense and slightly overlapping the base of the elytra; the median basal lobe not carinate. *Elytra* with deep, feebly punctate striæ which become somewhat shallower behind; the intervals on the dark areas with very shallow punctures bearing fine, closely appressed, brownish-black setæ, there being four or five across each interval in the middle of the disk. *Legs* black, with the tarsi red-brown; the femora subsulcate on the external face, fairly densely covered with fine recumbent white setæ, turning to blackish near the apex.

Length 3.6-4.2 mm., *breadth* 1.9-2.25 mm.

Sikkim: Lebong, 5000 feet, ix. 1908 (*H. M. Lefroy*, type); Gangtok, 6150 feet, ix. 1909; Kurseong, 4700-5000 feet, vi. 1910 (*N. Annandale*).

Described from fourteen specimens.

Subfamily *BARIDINÆ*.

Baris cordiæ, sp. n. (Pl. VIII. fig. 9.)

♂ ♀. Integument black, rather thinly clothed above and below with elongate sandy-grey scales, more or less intermingled above with brownish scales, which sometimes form an indefinite narrow median stripe on the pronotum.

Head with close reticulate punctures throughout. *Rostrum* not bent at the base but regularly curved, almost parallel-sided, but very slightly widened at the insertion of the antennæ, gradually diminishing in depth from the middle to the apex, with shallow reticulate punctation throughout, except on a shining narrow transverse band at the extreme base, and without any carinæ, the basal half clothed with transverse scales. *Antennæ* piceous, unusually short, the scape reaching little more than halfway to the eye; the funicle distinctly widening outwardly, joint 1 short, but longer than 2, 3-7 transverse, 2 only slightly longer than 3, and 7 more than twice as broad as long. *Prothorax* about as long as broad, widest at the base, very gradually narrowing to beyond the middle, then more rapidly so, and shallowly constricted at the apex; the dorsum closely and reticulately punctate throughout, with a very faintly indicated

median ridge. *Scutellum* strongly transverse, punctate, and squamose. *Elytra* oblong-ovate, distinctly broader at the shoulders than at the prothorax, almost parallel-sided from the shoulders to beyond the middle, with deep striæ containing shallow separated punctures, the intervals flat and each with two very irregular rows of small shallow punctures (hidden by scaling), without any posterior callus; the scales elongate, spatulate, and not entirely concealing the integument. *Legs* black, confluent punctate; the femora rather densely squamose and quite linear; the front tibia sinuate dorsally; the tarsi with joint 2 not wider than 1.

Length 4.25–4.5 mm., *breadth* 1.8 mm.

BIHAR: Pusa, larvæ boring in fruits of *Cordia myxa*, vi. 1920 (*Rangi*).

Described from fifteen specimens.

This insect may be distinguished from any of the species of the genus previously described from India by the abnormally short scape of the antennæ and by its uniform dingy scaling.

EXPLANATION OF PLATE VIII.

- Fig. 1. Phytoscapus fractivirgatus*, sp. n., ♀.
Fig. 2. Lixocleonus incanus, sp. n., ♀.
Fig. 3. Cyphomydica quadristoccosa, sp. n., ♂.
Fig. 4. Balaninus nigricollis, sp. n., ♂.
Fig. 5. Attelabus lacertosus, sp. n., ♂.
Fig. 6. Hedychrous rufofasciatus, sp. n., ♀.
Fig. 7. Lobotrachelus postoculatus, sp. n., ♂.
Fig. 8. Plococerus denticollis, sp. n., ♂.
Fig. 9. Baris cordie, sp. n., ♀.

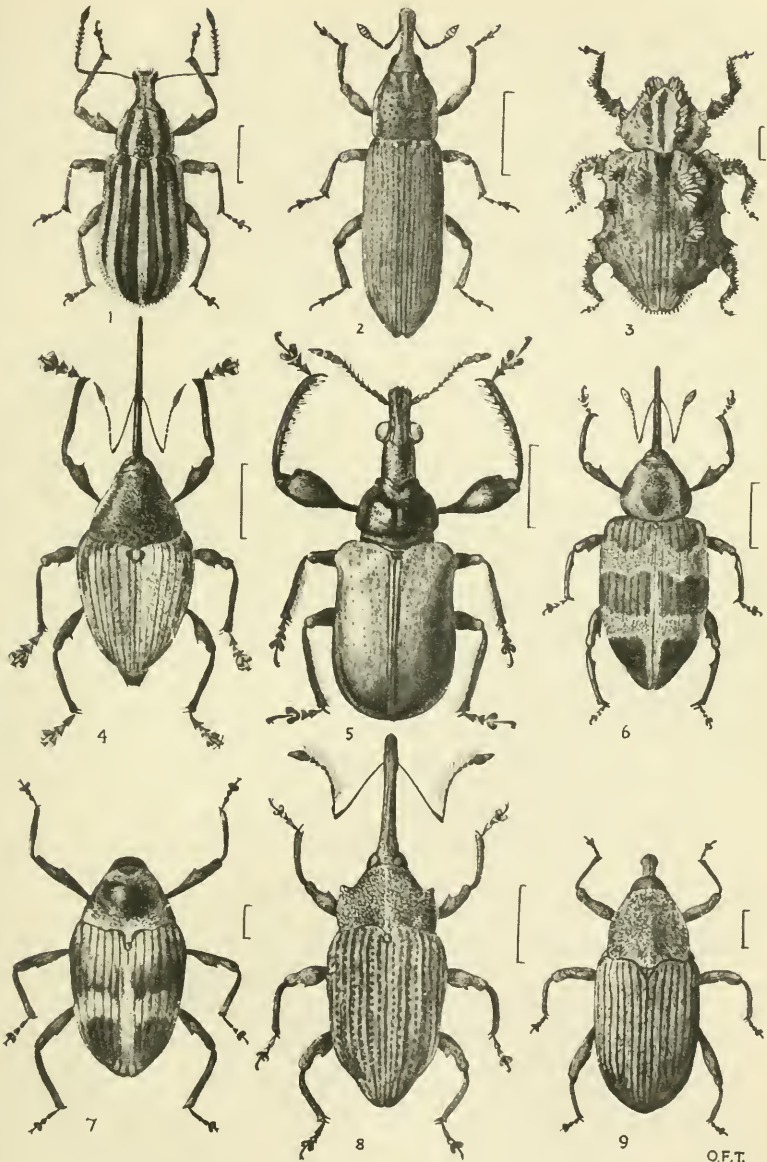
XXXIII.—*On Marine Triassic Shells from Singapore.* By R. BULLEN NEWTON, I.S.O., F.G.S., Geological Department, British Museum (retired).

[Plate IX.]

INTRODUCTION.

As a further contribution to the geology of the Federated Malay States, we are again indebted to Mr. John B. Scrivenor, M.A., F.G.S., the Government Geologist of that region, for some new fossiliferous material obtained from the island of Singapore. The specimens in question, which are entirely of marine origin, were found in a soft, pinkish, fine-grained, argillaceous sandstone, forming a cutting on Morse Road, Mount Faber, at about 100 yards from the highest point of

535



O.F.T.