NEW LONGICORN BEETLES FROM CHINA, XII (Col.: Ceramb.)1

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The present number of this series² deals with eight new species of Chinese longicorn beetles. Four belong to the subfamily Lepturinae and four to the subfamily Cerambycinae. One genus, Stenopterus, is here newly recorded from China. Keys to the Chinese species of four of the genera are included. All of the material reported upon herein is from the United States National Museum. Five of the species were collected by the Rev. David C. Graham, two by Dr. C. L. Liu of Tsinghua University and one by Dr. Eliot Blackwelder. All come from western or northwestern China. I am indebted to Dr. E. A. Chapin, Dr. R. E. Blackwelder and Mr. W. S. Fisher for facilities and cooperation extended at the National Museum.

Subfamily Lepturinae Tribe Lepturini

1. Leptura alticola Gressitt, new species (Pl. 1, fig. 3)

Female.—Head red, black on vertex, occiput and underside; antennae red on first four segments and bases of following, pitchy black on remainder; prothorax black, red on anterior border below, and at middle, and posterior portion, of sides; scutellum black; elytra red, marked with three incomplete bands: first of two merged spots, inner one larger and oblique, second of two separate spots, inner one larger, third of only a single small spot near suture; ventral surface largely black, extreme bases of abdominal segments reddish; legs red with upper and lower margins and extreme apices of femora black. Head, thorax and abdomen with rather long golden grayish hairs: antennae and legs with largely black hairs.

Head as broad as prothorax just before middle, somewhat abbreviated; genae about one-half as deep as eyes; occiput densely impressed with punctures of various sizes; neck and front more finely punctured; upper portion of frontoclypeus deeply impressed transversely. Antennae two-thirds as long as body; scape slightly longer than third segment; fourth shorter and fifth longer than third; sixth about as long as third; sixth to tenth gradually decreasing in length;

² For part XI, see Lingnan Sci. Jour. 21: 123-134, 1945.

¹ Contribution from the Lingman Natural History Survey and Museum.

eleventh equal to sixth. Prothorax broader than long, constricted near apex; basal angles expanded over humeri; disc fairly even but slightly sloping on each side of middle, deeply emarginate behind center and declivitous on each side near base; sides slightly projecting just before middle and concave before and behind; surfaces coarsely and densely rugose-punctate. Scutellum long, narrowed and rounded-acute apically; concave and punctured. Elytra long, rather feebly narrowed posteriorly, narrowed and obliquely truncate apically; surface minutely punctured, subrugulose basally and each with two feeble sublongitudinal ridges nearer suture than external margin. Ventral surfaces rather closely punctured. Legs moderately long; first hind tarsal segment practically as long as remaining segments combined. Length 20.5 mm.; breadth 5.85.

Holotype, female (No. 58340 U. S. Nat. Mus.), Wahu Pass, China-Tibet border, 14-16,000 ft., Aug. 7, 1930, D. C. Graham.

Differs from L. aurosericans Fairm. in having the elytral ground color red and the elytral bands incomplete and broken into spots.

2. Leptura semilunata Gressitt, new species (Pl. 1, fig. 4)

Head black; mandibles and palpi red or pitchy; antennae red; prothorax black, tinged with red at sides above coxal cavities; scutellum black; elytra brownish red with three yellowish testaceous marks on each as follows: first consisting of an oblique band near base starting opposite middle of base and ending near suture behind scutellum, second a large arc at middle, open externally, nearly touching external margin and suture, and third a narrow incomplete band near suture before apex; ventral surfaces black, last sternite largely reddish; legs red. Head, thorax and abdomen rather heavily clothed with pale grayish golden hairs; elytra largely clothed with dark hairs and antennae and legs with pale hairs.

Head slightly broader than prothorax at middle, somewhat compressed dorsoventrally; vertex broadly and evenly concave; gena less than one-half as long as eye; surfaces densely and rather finely punctured. Antennae about two-thirds as long as body, fairly slender: scape about as long as third segment; third a little longer than fourth and subequal to fifth; sixth and seventh shorter (8-11 missing). Prothorax a little broader than long, slightly constricted just before apex, very slightly broadened between middle and base and expanded somewhat over humeri; disc fairly even, slightly depressed along median line behind center, somewhat steeply declivitous before basal margin and the central portion emarginate and gradually sloping; surfaces densely punctured, more coarsely so than on head. Scutellum subequilaterally triangular, rounded apically. Elytra moderately narrowed, about twice as long as head and prothorax combined, obliquely truncate apically with the angles very slightly projecting; surfaces finely punctured. Ventral surfaces finely punctured. Legs fairly long; tarsi laterally compresed; first hind tarsal segment about as long as remaining combined. Length 11.5 mm.; breadth 3.8.

Holotype (No. 58341 U. S. Nat. Mus.), SW. of Tatsienlu, 9-13,000 ft. alt., Sikang Prov., W. China, June 28-July 2, 1923, D. C.

Graham.

Differs from L. zonifera (Blanch.) in having the pronotal disc uneven, with the raised area concave on each side and broadly emarginate posteriorly. Also, the pronotum is red in color with the borders and two discal spots of black.

3. Leptura tatsienlua Gressitt, new species (Pl. 1, fig. 5)

Female.—Head red, black on occiput and middle of undersides; antennae red, pitchy black on sixth to ninth segments and apices of third and fourth; ninth pale distally and below, tenth pitchy on middle of outer side; prothorax black, with disc red except for a black spot on each side before middle; scutellum black, pitchy brown posteriorly; elytra yellowish testaceous, each with suture and base narrowly black, posterior one-half of external margin very narrowly black and three bands and apical one-eighth black; first band at end of first quarter, not reaching external margin, but curving forward on humerus to meet basal band; second band at middle, narrowed at suture, third at beginning of last quarter, somewhat arched anteriorly and broadened externally; ventral surfaces black, fourth and fifth and apex of third abdominal segments red; legs red; coxae ochraceous. Head and thorax clothed with fairly long buff hairs, abdomen with sparser

recumbent hairs.

Head slightly broader than prothorax before middle, slightly narrowed anteriorly at genae, finely punctured; frontoclypeus with a transverse groove on upper part, upper portion of groove impunctate; vertex and occiput with a shiny median impressed line. Antennae nearly three-fourths as long as body; first five segments gradually thickened distally, last five subfusiform; scape about as long as third; third longer than fourth and shorter than fifth; sixth about as long as fourth, sixth to tenth gradually decreasing in length; last somewhat flattened at apex. Prothorax broader than long, subtrapeziform, constricted before apex; basal angles extending somewhat over humeri; disc concave on each side just behind middle, declivitous posteriorly, projecting on each side of middle, and concave in middle of declivity, basal margin expanded opposite emargination, forming a flattish ellipse at middle of base; sides slightly projecting just before middle; surface closely rugose-punctate above, less closely so at sides. Scutellum long, narrowed, concave, subacute, punctured. Elytra long, feebly narrowed; apices obliquely emarginate-truncate; surfaces finely punctured. Ventral surfaces finely punctured. First hind tarsal segment nearly as long as remaining segments combined. Length 20.5 mm.; breadth 6.

Holotype, female (No. 58342 U. S. Nat. Mus.), near Tatsienlu, 10-12,000 ft., Sikang Prov., W. China, July 25-30, 1923, D. C.

Graham.

Differs from L. grahamiana Gressitt, in having the prothorax

more evenly narrowed anteriorly, the distal antennal segments subfusiform, the elytral apices less emarginate and more oblique, etc.

o brique, etc.
Key to the Chinese species of Leptura
1. Elytra unicolorous: red, brown or black. 2 Elytra banded or spotted with black and yellowish. 8 Elytra black. 3 Elytra red. 3 Elytra red. 4 3. Pronotum black with a large red spot at each side. thoracica Creutz. Pronotum entirely red or entirely black. aethiops Poda angles as elytra. 5 Body largely black, except for elytra. 5 Body reddish testaceous except for legs; prothorax as broad at basal angles as elytra. 7 Elytra about twice as long as head and prothorax combined, obtuse ectoapically. 8 Elytra about twice as long as head and prothorax combined, broadly toothed ectoapically. 8 Elytra about three times as long as head and prothorax combined, broadly toothed ectoapically. 8 Elytra brown with gray pubescence. 8 Elytra red-brown with black pubescence. 8 Elytra red-brown with gray pubescence. 8 Elytra brown with gray pubescence. 8 Elytra brown with gray pubescence. 8 Elytra entirely black. 9 Femora red at least on basal halves, or posterior femora distinctly simuate. 12 Pale bands of elytra rather broad, at least as wide as black bands; elytral apices obliquely emarginate-truncate. 10 Pale markings of elytra rather arrow, first two bands oblique and incomplete, third broadened at suture; elytra transversely truncate apically. 4 Liytral black bands sometimes narrow or broken: pronotum distinctly concave medially; prothorax with many long, fine hairs grahamiana Gress. 11 Prothorax with many long fine hairs; elytral apices transversely emarginate. 12 Prothorax with many long fine hairs; elytral apices transversely emarginate. 13 Elytra ethick bands and yellow bands. 13 Pronotal disc evenly convex except for a feeble median depression and a slight posterior declivity with an emargination at center; scutellum equilaterally triangular; elytra each with an externally open are on central portion. 8 Entra or the first part of the protein and equilaterally triangular; elytra each with an externally open are on central portion. 8 Entra or the first part of the protein and externally open are on central portion. 8 Entr
equilaterally triangular; elytra each with an externally open arc on central portionsemilunata Gress. Pronotal disc irregular, strongly emarginate posteriorly, slightly concave on each side; scutellum narrow; elytra with two incomplete suboblique
14. Pronotal disc rather evenly convex; pronotum generally black

16. Pronotum entirely black......17 Pronotum largely reddish on disc; black bands of elytra becoming reddish near external margins; humeri and apices reddish.....auratopilosa Matsush, 17. First postbasal band of elytra produced forward on middle of disc nearly to base; body rather narrow.....arcuata Panzer First postbasal band of elytra not produced forward on disc, gradually broadened from suture to humerus; body broad....aurosericans Fairm. Posterior tibiae distinctly sinuate; legs rather stout; femora largely dark; elytral black bands broader than pale bands, widened towards external margin.....zonifera (Blanch.) 19. Elytral pale bands narrow and incomplete; thoracic hairs pale grayish; elytral apices obliquely truncate; femora black apically..... Elytral pale bands broad; thoracic hairs golden; elytral apices obliquely emarginate; femora entirely reddish.....horishana Matsush.

Tribe Necydalini

4. Necydalis marginipennis Gressitt, new species

Large, extremely narrow. Body black, abdomen and appendages largely ochraceous: head black with labium, maxillae, labrum and anterior portion of clypeus ochraceous, clothed with erect tawny hairs, particularly on frons; antennae ochraceous, somewhat more reddish brown on basal segments, with hairs extremely short beyond fourth segment; prothorax black, with long golden pubescence at sides and relatively sparse long erect tawny hairs on disc; scutellum pitchy black; elytra reddish ochraceous, broadly margined externally (behind humeri) and apically and narrowly along suture with pitchy black, clothed with sparse erect pale hairs and some golden pubescence on sutural portions; hind wing paler amber hyaline, with veins reddish brown; hind thorax black with long golden pubescence on lower sides; abdomen reddish ochraceous, subglabrous, with lateral borders of sternites blackish and apical borders of segments pitchy; legs ochraceous, fore and middle tarsi partly reddish brown.

Head about as broad as prothorax, with a deep median groove; frontoclypeus sparsely punctured in central portion, impunctate on raised triangular posterior portion; frons and occiput densely and variously punctured. Antennae fully one-half as long as body; segments subcylindrical, fourth one-half as long as fifth. Prothorax distinctly longer than broad, deeply constricted anteriorly and posteriorly; disc swollen, but shallowly concave medially, irregularly punctured; sides bluntly tuberculate. Scutellum concave, finely punctured, narrowed and slightly longer than broad. Elytra each less than twice as long as broad, slightly narrowed and broadly rounded apically, somewhat coarsely and densely punctured, swollen on apical seventh. Hind thorax densely rugose-punctate. Abdomen smooth and shiny,

laterally compressed in type. Legs long and slender; hind femora enlarged and laterally compressed in apical third; hind tibiae slightly sinuate. Length 31 mm.; breadth 3.85.

Holotype, male (?) (No. 58343 U. S. Nat. Mus.), South of Suifu, Szechuan Prov., W. China, Aug. 1929, D. C. Graham, collector.

Differs from N. sericella Ganglb. in being longer, and more slender, with the abdomen and appendages ochraceous, the elytra black laterally and the pronotum less pubescent and concave instead of carinate medially.

Key to the Chinese species of Necydalis

- - Pronotal disc densely pubescent, narrowly carinate medially; elytra densely pubescent, indistinctly punctured; head distinctly broader than prothorax; antennae dark basally; length 23 mm.; W. China.....

Tribe Cerambycini

5. Trachylophus rugicollis Gressitt, new species (Pl. 1, fig. 2)

Male.—Large, dorso-ventrally compressed, subparallel-sided. Derm pitchy red-brown to black, largely clothed with thin silky dull golden-buff pubescence which is very thin on elytra and rather dense on ventral surfaces of body: Head pitchy black, reddish on genae, concavities, and underside of neck, irregularly clothed with pubescence; antennae dark reddish brown, moderately pubescent with apex of each segment partly glabrous; prothorax pitchy brown, fairly well clothed with pubescence; scutellum dark brown, pubescent; elytra pitchy to black, sparsely pubescent; ventral surfaces largely reddish, with dense, less recumbent pubescence; legs reddish, slightly less densely pubescent than ventral surfaces.

Head with occiput deeply grooved behind inter-ocular area, slightly depressed beside inner hind corners of eyes, and vertex narrowly grooved between antennal supports which project angularly backward and somewhat outward. From with a triangular area surrounded by grooves, which are deepest at sides; genae emarginate near anterior corners of eyes and angulate anteriorly beneath. Antennae nearly one-half again as long as body; scape stout; segments with the following order of decreasing lengths: 11, 3, 5, 6, 7, 8, 9, 1,

10, 4, 2; none of segments armed or strongly flattened. Prothorax broader than long, obtusely swollen at middle of each side, with a lesser rounded swelling on each side between middle and apex; disc transversely wrinkled, with a rounded area centered slightly behind middle, surrounded by grooves and crossed by two irregular transverse grooves, a pair of longitudinal ridges anterior to post-central area. Scutellum rounded-triangular. Elytra two and one-third times as long as broad, smooth, minutely punctured, subrounded apically with sutural angles slightly toothed. Length 32.5 mm.; breadth 8.5.

Holotype, male (No. 58347 U. S. Nat. Mus.), Mt. Omei: Shin-kai-si, alt. 4400 ft. Szechuan Prov., W. China, August 1922, D. C. Graham collector; allotopotype, female, Mt. Omei, 1922; paratopotype, male (Lingnan Nat. Hist. Mus.), same data as allotopotype; paratype (U.S.N.M.), Beh-luh-din, 30 miles N. of Chengtu, alt. 6000 ft., July

1933. All taken by D. C. Graham.

Allotopotype.—Length 30.5 mm.; breadth 8. Paratypes.—Length 30-31 mm.; breadth 7.6-8.4. The allotopotype and paratypes have the elytra more brownish than the type and there is some variation in the vermiculation of the pronotum. The paratopotype has the raised post-central area more elongate-oval than round, and has the transverse grooves crossing it less distinct. The allotopotype and the paratype from Beh-luh-din have this central area less defined than do the holotype and paratopotype.

Differs from T. sinensis Gahan in having the antennal segments unspined, the elytra more rounded than truncate apically, and the pronotum less uneven, with fewer and weaker nodes, a flattened central area instead of strongly longitudinal ridges, and the elytral

pubescence less close and less regular.

Tribe Obriini

6. Stenhomalus complicatus Gressitt, new species (Pl. 1, fig. 1)

Male.—Body reddish brown to pale testaceous or pitchy, largely clothed with pale pubescence and long suberect golden hairs; head reddish brown, borders of mandibles pitchy, occiput with silver pubescence; antennae pale testaceous with outer portions of scape and distal two-thirds of fifth segment pitchy and apices of other segments slightly brownish, first six segments with long flying hairs internally, those at apices of third and fourth segments fully as long as the repective segments; prothorax reddish brown, entirely clothed with silvery pubescence lying in different directions; scutellum reddish with dense silvery pubescence; elytra pale testaceous to almost transparent, with a common triangle of pitchy just behind scutellum, a thin pitchy thread extending basad from both lateral angles of triangle, a large oblique pitchy band extending from humerus to suture on each, broadening and becoming paler towards suture, followed by a narrow oblique whitish band, an incomplete narrow oblique pitchy band and then a pale area with a small pitchy spot near center and a depressed ochraceous area near suture, which is partly pitchy and partly whitish, apical tenth subtransparent but preceded by a narrow transverse pitchy band bordered with whitish, extreme apical margin slightly brownish; ventral surfaces reddish brown with pale pubescence; legs with tibiae and swollen portions of femora partly pitchy, and tarsi and remainders of femora pale testaceous.

Head barely broader than prothorax, distinctly narrower than elytra, minutely punctate; eyes large, coarsely facetted, nearly twice as widely separated below as above. Antennae fully one-half again as long as body; third segment shorter than scape and equal to fourth; fifth nearly as long as fourth and fifth combined; sixth slightly longer than fifth; following decreasing in length. Prothorax longer than broad, wider at apex than base, strongly tuberculate at middle of each side; disc swollen at each side of, and behind, middle. Scutellum rounded. Elytra slightly narrowed posteriorly, separately rounded-obtuse apically, moderately punctured to apical quarter. Femora gradually but distinctly clavate. Length 7.75 mm.; breadth 2.25.

Holotype, male (No. 58344 U. S. Nat. Mus.), Yunnan (probably at or near Kunming), SW. China, Aug. 1, 1944, Dr. C. L. Liu (Liu

Chung-lo), exper. no. 2833.

Differs from the male of S. cleroides Bates in having the antennae with many more, and larger, bristles, and the sixth segment as long as third and fourth combined, the prothorax more densely pubescent, the scutellum twice as broad, the elytra more contrastingly marked and differently patterned and the femora less swollen.

Key to the Chinese species of Stenhomalus

1. Elytra not distinctly marked with hyaline spots or oblique pale and dark bands 2 Elytra distinctly marked with hyaline spots or oblique pale and dark bands 4 Eyes not closely approximated below, subfinely facetted; prothorax and head red; elytra ochraceous diffusing to pitchy black: Formosa....ruficollis Gressitt 3. Body dark chestnut brown; prothorax and legs pale ochraceous; head reddish brown above; antennae brown with bases of segments paler; head broader than elytra; Kiangsu.....incongruus Gressitt Body testaceous; head and prothorax reddish; scape pitchy; head not broader than elytra; Formosa......pallidus Gressitt 4. Elytra marked with oblique dark and pale bands...... 5 Elytra with two oval hyaline spots on each; hairs at apices of third and fourth segments nearly as long as respective segments; Formosa to India (generotype).................fenestratus White 6. Posterior half of each elytron largely dark; sides of prothorax not angulate near apex; Formosa.....baibarensis Matsushita Posterior half of each elytron largely testaceous; sides of prothorax angulate near apex; S. Formosa.....koshunensis Seki Prothorax not broader at apex than at base; Formosa..taiwanus Matsushita

Tribe Molorchini

7. Molorchus liui Gressitt, new species (Pl. 1, fig. 6)

Female.—Slender, dorsoventrally compressed. Chestnut brown, paler on coxae and base of first abdominal sternite. Body and legs largely clothed with long erect hairs, reddish above and whitish beneath, shorter on posterior two-thirds of elytra; antennae with a few long hairs on scape and on inner sides, or apices, of following segments; adpressed silvery pubescence on base of prothorax, scutel-

lum and sides of hind thorax and abdomen.

Head slightly narrower than prothorax, sparsely punctured in front; vertex shallowly concave. Antennae slightly shorter than body; third and fourth segments subequal; fifth to seventh longer, subequal; eighth to eleventh shorter, subequal. Prothorax distinctly longer than broad, subacutely tuberculate at middle of each side; disc somewhat flat, with five smooth areas forming a "W" and the intervening spaces coarsely and closely punctured, in part reticulate. Scutellum concave, rounded posteriorly. Elytra extending beyond apex of metathorax, each rounded apically and sparsely punctured. Legs slender; femora suddenly and strongly swollen distally, hind pair swollen in apical two-fifths. Length 6.5 mm.; breadth 1.

Paratypes.—Length 5.2-7.2 mm.; breadth 0.7-1.3.

Holotype, female (No. 58345 U. S. Nat. Mus.), Yunnan (probably at or near Kunming), SW. China, Aug. 1, 1944, Dr. C. L. Liu (Liu Chung-lo), experiment no. 86-2861; allotopotype (USNM) and

paratopotype, (Lingnan Nat. Hist. Mus.), same data.

Differs from M, umbellatarum Schreber in being more uniformly dark reddish brown and in having the pronotal disc with more conspicuous impunctate areas, the scape more swollen and the posterior femora more suddenly swollen. Differs from M, insularis (White) in having the prothorax strongly tuberculate and distinctly widened at middle of sides, and with impunctate areas on the disc.

Key to the Chinese species of Molorchus

8. Stenopterus truncatipennis Gressitt, new species

Testaceous brown to dull reddish brown or pale testaceous: head reddish brown, darker on front, genae and margins of mandibles; antennae dark reddish brown, dull on third and following segments, which have extremely short hairs; prothorax pale chestnut brown, shiny, testaceous on sternum; scutellum reddish brown, bordered with pitchy; elytra ochraceous, paler just before apices, pitchy on borders and punctures; ventral surfaces of body ochraceous with pitchy shades, testaceous on apical quarter of abdomen; legs with femora shiny pale testaceous, and tibiae and tarsi pitchy brown. Body largely clothed with erect auburn hairs, particularly on prothorax and tibiae.

Head as broad as prothorax, rather closely and somewhat finely punctured; occiput strongly convex and subasperate at sides; vertex medially grooved. Antennae slightly longer than body, relatively slender, with the segments nearly cylindrical beyond third; scape and pedicel sparsely punctured, swollen apically; third segment slightly thickened distally, barely as long as scape, two-thirds as long as fourth segment; fifth slightly longer than fourth, subequal to each of follow-Prothorax distinctly broader than long, strongly convex at sides. constricted near base and apex; disc with a large convex impunctate area on each side and a smaller median one behind center, intervening areas distinctly and not very closely punctured; sides with several partly coalescing smooth convexities. Scutellum small, subrectangular, emarginate posteriorly. Elytra each about three-fourths as long as abdomen, gradually narrowed to end of second third, then parallelsided a short distance and slightly narrowed before apex which is transversely subsinuate-truncate with the sutural and external angles slightly projecting; surface subregularly punctured. Abdomen with first segment as long as following three united, with a small, pilose concavity before posterior margin of first sternite. Legs with hind femora gradually swollen in distal half and hind tibiae somewhat arched. Length 5.5 mm.; breadth 0.85.

Holotype (No. 58346 U. S. Nat. Mus.) South Shensi, N. China.

May 1904, Dr. Eliot Blackwelder (6368).

Differs from S. flavicornis Küster in having the body almost entirely pale, the antennal segments more cylindrical, the prothoracic swellings larger and nearly confluent, the elytra much shorter and truncate, and the first abdominal segment much different. From the standpoint of the antennae and first abdominal segment this species may justify generic or subgeneric separation.

Explanation of Plate

- Fig. 1. Stenhomalus complicatus Gressitt, n. sp., holotype, ×10.5
- Fig. 2. Trachylophus rugicollis Gressitt, n. sp., paratopotype, $\times 3$. Fig. 3. Leptura alticola Gressitt, n. sp., holotype, left elytron, $\times 5$.
- Fig. 4. Leptura semilunata Gressitt, n. sp., holotype, left elytron, ×8.5
- Fig. 5. Leptura tatsienlua Gressitt, n.sp., holotype, left elytron, ×5.
- Fig. 6. Molorchus liui Gressitt, n. sp., paratopotype, head and prothorax, ×23.

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