

SOME NEW ACRIDIDS FROM SZECHWAN
AND SZECHWAN-TIBETAN BORDER

(ORTHOPTERA: ACRIDIDÆ).

BY

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In this paper, seven acridid species and one allotype which are new to science from south-western China are described. They belong to the collection obtained by Prof. D. C. GRAHAM of the Chengtu University, now kept in the United States National Museum in Washington, D.C. Unfortunately the specimens are poorly preserved and badly decolourized as they were originally pickled and later restored to dry state. In many cases, it is almost impossible to recognize the species with assurance, especially when the latter are represented by only one or two specimens. In this paper, I am describing only those which I am quite sure are new; those of doubtful nature are purposely left out. Dr. UVAROV has kindly checked and compared my identification, read and corrected the draft of this paper on those species that belong to the difficult subfamily *Acridinæ*.

In another paper, I may later give a full report of the GRAHAM collection. In spite of the defects mentioned, the GRAHAM material deserves attention as it gives valuable zoogeographical and altitudinal records of acridids in our South-West, about which we know next to nothing.

I wish to avail myself of this opportunity to express my sincere gratitude to Dr. EDWARD CHAPIN, curator of the division of entomology, and Mr. ASHLEY GURNEY, custodian of Orthoptera and Neuroptera, for their hospitality and their kindness in consigning the specimens to me for study.

To my friend, Mr. JOHN GATES CLARKE of the same museum, and to Dr. J. G. NEEDHAM, my professor at Cornell, I also owe a debt of deep gratitude. I am much indebted to Dr. B. P. UVAROV of the British Museum for his kindness in taking the time and trouble to check part of this paper, for his interest and many courtesies. Finally I want to thank Father O. PIEL, director of Musée Heude, for publishing this paper at this time when war is raging in and around Shanghai.

Chorthippus grahami sp. nov. (Pl. IV, figs. 3-5).

Type: ♂. Szechwan: Nang Yang Ba, West of Chentu Pass, 13,000-14,500 feet, VII, 16, 1923.

Size rather small, form more thick. *Antennæ* rather thick and flattened, longer than head and pronotum together, the longest segments only twice as long as wide. *Dorsum of head* behind fastigium convex. *Fastigium* of vertex triangular, well impressed in front of the eyes, apex acute angularly rounded, marging well formed. *Lateral foveolæ* narrow rectangular, about 3 times as long as broad, well impressed and distinctly margined, close together anteriorly, anterior margin rounded. Face rather strongly receding. *Frontal costa* seen in profile moderately convex above the antennæ, straight below; seen in front view rather broad, punctate, sulcate from between the antennæ downwards, side margins flat or obtuse, subparallel-sided.

Pronotum seen from above with sides full and somewhat dilated. *Disc* with anterior margin slightly convex, posterior margin obtuse angular, *lateral carinæ* concavely inflexed in the prozona, moderately divergent on metazona, *typical sulcus* placed slightly behind the middle. *Lateral lobes* dilated sidewise, as long as high, ventral margin with anterior portion ascending by 45° and posterior portion ascending dorso-posteriorly by 25°.

Elytra abbreviated, not extending to tip of abdomen,

to near the mid-length of the hind femora; mediastinal field reaching to near the apical third, narrowing apically, a short distance proximad of its mid-length with a slight lobe, with a false vein. Scapular area fairly broad, not dilated, cross veins quite regular, not strong, neither parallel. Inter-radial field narrow slightly broadened towards the tip; first and second radial veins straight. Discoidal field parallel-sided, cross veins not parallel. Inter-ulnar area not much narrower than discoidal, narrowing towards the base. Wings abbreviated, considerably shorter than the elytra, reaching to middle of second abdominal segment.

Hind femora extending beyond tip of abdomen.

Supra-anal plate triangular, with a broad median longitudinal groove, surface slightly proximad of mid-length with a transverse ridge on each side, tip acute angular. *Cerci* thick, broad, triangular, reaching to near the tip of supra-anal plate. *Subgenital plate* short, obtuse.

Allotype: ♀. Same locality as type.

Not large, but form thick and robust. *Antennæ* distinctly shorter than head and pronotum together, flattened, the segments almost squarish. Head short dorsally, *fastigium* broad, short, not impressed, apex right angular. *Pronotum* with hind portion of ventral margin of lateral lobes very slightly ascending, almost horizontal. *Elytra* reaching to mid-length of hind femora, mediastinal area with a distinct lobe; tip somewhat attenuate. *Hind femora* reaching to tip of abdomen. *Valves of ovipositor* short and stout, without teeth.

General coloration yellowish brown on the sides, buff-brown above. *Antennæ* with apical half dark. Abdomen with a row of lateral black spots. Hind femora with two faint oblique brown stripes on external surface which are fused ventrally with a horizontal stripe, knee-arculus and part of knee-lobe black. Hind tibiæ red.

	♂	♀
Length of pronotum	3.5 — 3.5 mm.	4 — 4.5 mm.
Length of elytra	6.75 — 8.3	7 — 7.2
Length of hind femora	9.0 — 11.0	10 — 11.5
Length of body	15.5 — 15.5	17 — 19

The affinities of this new species are with *Chorthippus jacobsoni* (IKONN.), *Ch. ingenitzkyi* (ZUB.), *Ch. hemipterus* UV., and *Ch. turanicus* TARB.

***Euchorthippus weichowensis* sp. nov.** (Pl. III, figs. 8-10).

Size rather small, organs of flight abbreviated.

Type: ♂. Szechwan: Weichow, 56 miles N. W. Chengtu, 5,000 feet, VIII, 1933.

Fastigium pentagonal, sulcate, slightly shorter than its broadest width, margins distinctly formed, apex acute angular, rounded. Dorsum of head smooth, convex. *Lateral foveolæ* rectangular, $2\frac{1}{2}$ times as long as broad, well impressed with distinct margins. *Eyes* large, oblong, its height a little more than twice the infra-orbital distance, inter-orbital distance above about equal to the width of the lower extremity of the frontal costa. *Face* strongly receding. *Frontal costa* subparallel-sided, sulcate from between the antennæ downwards, rather coarsely punctate. *Lateral facial carinæ* broadly convex. *Antennæ* a little more than $1\frac{1}{2}$ the length of the head and pronotum taken together.

Pronotum with disc more or less flattened, anterior border truncate, posterior border very broadly rounded, the three longitudinal carinæ very distinct, rather thick, the *lateral carinæ* only slightly concavely inflexed on the prozona, *typical sulcus* placed behind the middle. *Lateral lobes* of the pronotum slightly longer than high, more reticulate below the shoulders on metazona, anterior posterior borders oblique.

Elytra reaching to near the tip of the fifth abdominal segment, overlapping each other, its shape and characteristic venation as shown in the figure. *Hind wings* very much reduced, reaching a little beyond the third abdominal segment, less than half the length of the elytra.

Hind femora missing (damaged) in all specimens.

Supra-anal plate triangular, with a broad median longitudinal groove, tip acute-angular, but not pointed. *Cerci* reaching to or to near the tip of the supra-anal plate, finger-like, tapering. *Subgenital* plate conical.

	♂
Length of pronotum	2.5 — 2.9 mm.
Length of elytra	5.6 — 5.8
Length of body	13.9 — 13.5

Besides the type, there are three more males and two female nymphs from the same locality.

In the genus, the new species is allied to *E. madeiræ* UVAROV (Eos: 11: 76-77. 1935), from Grand Corral, Madeira, differing from the latter by its venation and more abbreviated elytra.

✓ ***Oreoptigonotus uvarovi* sp. nov.** (Pl. III, figs. 3-7).

Type: ♂. Szechwan-Tibet Border: Ja Ze Pass. 16-17, 150 feet, VIII, 13, 1930.

Size rather small. Head rather thick and moderately inflated laterally. *Antennæ* slightly longer than head and pronotum taken together, flattened and rather thick, segments at best slightly longer than broad, mostly squarish. *Eyes* of moderate size, short and broad, vertical height a little greater than infra-orbital distance, inter-orbital distance broad, slightly less than horizontal width of eye. *Fastigium* well produced, a little shorter than broad, triangular, hardly sloping, apex acute-angular, rounded, surface shallowly impressed, margins distinct, rather thick.

The rest of vertex behind the fastigium moderately convex; *median carinula* merely indicated by a light line, not raised. *Lateral foveolæ* well impressed, narrow elongate rectangular, about 4 times as long as broad, not contiguous anteriorly, margins well formed. *Face* moderately reclinate, seen in profile convex between the antennæ to where it joins the fastigium. *Frontal costa* broad, slightly and gradually broadening towards the clypeus, rather thickly and finely punctate, very shallowly sulcate from a little above the median ocellus downwards, becoming even shallower towards the clypeus, the rest nonsulcate, flat or convex, lateral margins flat and obtuse. *Median ocellus* small, much reduced. *Lateral facial keels* not well formed, irregular, slightly convexly curved forwards.

Pronotum distinctly tricarinate, the longitudinal carinæ rather thick, traversed only by the typical sulcus; *disc* somewhat tectiform, more so on the metazona than on the prozona, surface not punctate, neither shiny; *lateral keels* well developed, stronger and very slightly concavely inflexed on prozona, weaker and moderately divergent on metazona; hind margin slightly biconvex; *typical sulcus* placed behind the middle. *Lateral lobes* convex subdorsally, forming sloping shoulders to meet the disc.

Mesosternal lobes transverse, broader than long, inner margins divergent, interspace also broadly transverse. *Metasternal lobes* rather close together but separate.

Elytra lateral, oval lobiform, coriaceous, tip symmetrically rounded, reaching a little beyond the first abdominal segment, venation much atrophied. Wings very short, much reduced. Tympanum normal.

Hind femora moderately robust, gradually narrowing apically, dorsal and ventral median keels sharp and carinate; knee-lobes rounded at tip. *Hind tibiæ* with 10 inner and 10 outer spines, outer apical spine absent, the outer tibial claws of equal length, so are the inner ones.

Metanotum and *abdominal terga* dorsally with a well-developed median longitudinal keel.

Supra-anal plate triangular, side margins thickened basally and bearing short transverse ridge, surface with a broad longitudinal groove on basal half, apex an acute angular lobe. *Cerci* thick, tapering, reaching very slightly beyond supra-anal plate. *Subgenital plate* short, conical, apex upturned, not pointed.

Allotype: ♀. Same locality as type.

Size moderate, form rather thick. Head short and thick. *Antennæ* filiform, slightly longer than head and pronotum taken together. *Eyes* rather short and broad, small, not strongly bulging sidewise, about as long as infra-orbital distance, inter-orbital distance about equal to the width of the eye, wider than in the males. *Fastigium* well produced, but shorter than broad, apex acute angular, as in the males, not impressed. *Frontal costa* broad, finely punctate, gradually narrowing towards the dorsal extremity and gradually towards the clypeus, very shallowly and broadly sulcate from a little above the median ocellus downwards, the rest convex, side margins not raised except obtusely so at the shallowly sulcate portion as in the male. *Median ocellus* very much atrophied.

Pronotum, *elytræ* and *wings* and other morphological characters same as in the male.

Supra-anal plate triangular, with sides flexed downwards, medially with a longitudinal groove, apex acute angular. *Podical plate* thick and broad. *Cerci* very short, only half the length of the podical plate, tapering. *Valves of the ovipositor* smooth. *Subgenital plate* longer than broad, hind margin with a median triangular projection.

General coloration of both sexes brownish with distinct post-ocular bands. Each side of abdomen with a broad dark longitudinal band. Hind femora with outer aspect dark, knee-arculus and part of lobes black.

	♀	♂
Length of pronotum	3 — 3 mm.	4 mm.
Length of elytra	3 — 3.4	3.75
Length of hind femora	9 — 9.4	10.75
Length of body	14 — 16	18.02

Besides the type and allotype, I have the following paratypic series. Unfortunately they are rather poorly preserved.

Szechwan-Tibet border: Yu Long Si, 15,600 feet, VIII, 14, 1930. 1 ♂, 1 ♀; Ja Ze Pass, 16-17, 150 feet, VIII, 13, 1930, 1 ♂; Wa-si Geo, 5-6,000 feet, VIII, 18, 1930, 1 ♀, 1 ♂. Tibet: Tatsienlu, 8-9,000 feet, VIII, 16, 1930, 1 ♂.

This very interesting species is well differentiated from the other species of the same genus, namely, *O. tibetanus* TARBINSKY from Tibet, by the following characteristics: 1. Lateral foveolæ not contiguous anteriorly, 2. lateral carinæ of pronotum less strongly divergent on metazona, 3. hind margin of pronotum not strongly biconvex, 4. tympana well developed. It shows certain affinities also to the genus *Eclipophleps* TARBINSKY.

✓ ***Ptygonotus gurneyi* sp. nov.** (Pl. IV, figs. 1-2).

Type: ♂. Szechwan: Wa Hu Pass, 16,400 feet, VIII, 2-6, 1930.

Size rather small, form medium. Head short. *Antennæ* longer than head and pronotum taken together, flattened, thick, segments squarish. *Eyes* not large, short and broad, anterior border substraight or weakly convex, dorsal, posterior and ventral borders forming one semi-circle, vertical height about equal to the infra-orbital distance, inter-ocular distance wide, about equal to horizontal width of eye. *Dorsum of head* convex behind fastigium, *median carinula* thick, especially distinct on fastigium, gradually fading out posteriorly. Fastigium well produced and triangular, a little shorter than broad, impressed, margins sharply formed,

apex acute-angular, lateral foveolæ absent. *Face* receding, angle between fastigium of vertex with frontal costa of face acute. *Frontal costa* broad towards the clypeus, gradually narrowing towards the upper end, distinctly punctate, sulcate from almost between the antennæ downwards, deepest in the middle, in which the reduced median ocellus is situated, flat above the sulcate area, side margins flat.

Pronotum rather short. *Disc* with anterior margin almost truncate, posterior margin excised in the middle, the keels well developed, the *median carina* stronger, more sharp and elevated than the *lateral carinæ*, the latter slightly and smoothly inflexed in prozona, divergent in metazona. *Typical sulcus* placed behind the middle, the other sulci do not reach the disc. *Prozona* smooth, *metazona* obsoletely rugose; seen in profile, the disc is somewhat tectiform. *Lateral lobes* longer than high, rugose, thickly so on metazona, joining the disc by sharp angle.

Mesosternal lobes transverse, broader than long, inner margins divergent, interspace broadly transverse, as broad as one of the lobes. *Metasternal lobes* separated.

Elytra broad, lobular, lateral, reaching to a little beyond the third abdominal segment, coriaceous and spiny except at the tip which is slightly less coriaceous, anterior margin strongly convex, tip narrow, veins practically obsolete.

Hind femora extending beyond abdomen. *Hind tibiæ* with 10 outer and 11 inner spines, the outer apical spine absent. Inner spurs of equal length.

Pterothorax and *abdomen* dorsally with a distinct longitudinal keel. Tenth abdominal tergite discontinuous in the middle and the dorso-mesal ends here bear a short projection. *Supra-anal plate* broad, sides broadly convex, tip a small triangular lobe, medially with a very shallow

groove. *Cerci* thick and blunt at tip, reaching to tip of supra-anal plate. *Subgenital plate* short, pointing upwards.

Allotype: ♀. Same locality as type,

Size moderate, form rather thick-set. *Antennæ* shorter than head and pronotum taken together, flattened and thick. *Compound eyes* small, relatively smaller than in males, very much shorter than infra-orbital distance, inter-orbital distance greater than the horizontal width of eye, but equal to its height. Dorsum of head convex, median carinula less distinct than in the male. *Fastigium* triangular, broader than long, apex acute angular but rounded, surface not impressed, margins not half as well developed as in the male. *Face* less receding than in the male. *Frontal costa* sulcate from near the antennæ downwards, punctate, broad towards the clypeus, subparallel in the middle section, constricted at where it joins the fastigium, margins flat, median ocellus atrophied but present. *Lateral facial carinæ* weakly developed. *Disc of pronotum* with anterior border straight and truncate; the *lateral carinæ* more strongly divergent on metazona.

Elytra also much reduced in length, reaching to end of second abdominal segment, broad, anterior margin convex, distal margin semi-obliquely truncate with the blunt tip at the upper end.

Supra-anal plate triangular, with a broad median longitudinal groove, tip acute angularly rounded. *Cerci* short, pointed at tip. *Valves of ovipositor* long and slender, serrated with short blunt teeth; ventral valves with a slight basal truncate shoulder. *Subgenital plate* longer than broad, hind margin bearing a slight projection in the middle.

I am unable to say definitely what the *general coloration* of this species is as it is faded out. Some markings are still brilliantly conspicuous, others are faded. The post-ocular mark is distinct. The elytra is conspicuously colored, the dorsal area yellowish, the rest brilliantly black

containing a conspicuous longitudinal stripe of jade white. Sides of abdomen with interrupted black markings on each segment.

	♂	♀
Length of pronotum	2.5 — 2.75 mm.	3.5 — 4 mm.
Length of elytra	3.5 — 3.5	3 — 4.25
Length of hind femora	8 — 8.5	9.25 — 11.0
Length of body	11 — 13.0	21.4 — 22.5

I have examined the following paratypic series from Tibet:

Ngan Yan Ba (West of Chentu Pass near Tatsienlu), 13-14,500 feet, VII, 16, 1923, 4 ♀♀. Tatsienlu, VIII, 16, 1930, 1 ♀. Ja Ze Pass, 16-17,150 feet, VIII, 13, 1930, 3 ♀♀. U Long Kong, near Tatsienlu, 10-15,000 feet, VI, 20-24, 1923, 3 ♀♀. Wa Si Geo, 5-6,000 feet, VIII, 18, 1930, 5 ♀♀. Wa Hu Pass, 16,400 feet, VIII, 2-6, 1930, 42 ♀♀, 14 ♂♂. Yu Long Si, 15,600 feet VIII, 14, 1930, 2 ♀♀. Zya Hu Pass, 14-17,000 feet, VII, 25-27, 1930, 1 ♀.

This new species is well differentiated from all previously known species. From *P. semenovi* TARBINSKY, the type of the genus, it is distinguished by the following characters: 1. The side margins of the fastigium very distinct in the male, the same are evidently weakly developed as shown by Tarbinsky's drawing, 2. the anterior margin of the pronotum truncate, not obtusely projecting and the hind margin not so strongly biconvex as in *P. semenovi*, 3. lateral keels less angulately inflexed in the males and subobsolescent in metazona, 4. elytra broad, not narrowly lanceolate as in *semenovi*. Undoubtedly the present species is more closely related to *P. tarbinskyi* Uv., also described from Szechwan, based on a single male from Sunpanting. From the latter species, it can be differentiated by the following characteristics: 1. frontal costa distinctly sulcate, that of *P. tarbinskyi* non-sulcate, 2. male subgenital plate short, but said to be elongate in *P. tarbinskyi*.

The coloration of elytra of this new species is very distinctive. The dorsal area is yellowish, the rest deep and shiny black, containing a conspicuous longitudinal stripe of yellow; these markings are not present in *P. tarbinskyi*.

Comparing the new species with the other 2 known species for me, Dr. UVAROV states that *P. gurneyi* is characteristically marked by its very acute fastigium of vertex which forms in profile an acute angle with the frontal ridge and by the practically obsolete venation of its elytra. These may be considered as generic characters, but until we know more about the group, I hesitate to give it generic assignment.

***Conophymacris szechwanensis* sp. nov.** (Pl. IV, fig. 6).

Form rather stoutly built.

Type: ♂. Szechwan: Mount Omei, 11,000 feet, VIII, 10, 1934.

Head short. *Fastigium* of vertex declivent, punctate, feebly impressed, side margins between the eyes parallel and comparatively well marked, in front of eyes they are subobliterate, obtuse, poorly defined and rather coarsely punctate, base with a transverse impressed line. *Median carinula* just barely traceable. *Face* moderately reclinate; *frontal costa* distinctly sulcate, coarsely punctate subparallel-sided, slightly narrower at where it joins the vertex and slightly broader at the clypeus, side borders obtuse somewhat less distinct as they reach towards the fronto-clypeal suture. *Lateral* and *genal areas* and *gena* of face and the postclypeus also rugose-punctate. *Eyes* of moderate size, infra-orbital distance about two-thirds of vertical height of eye, inter-orbital distance about twice the width of the frontal costa between the antennæ. *Antennæ* longer than head and pronotum taken together, filiform, the middle segments long, about $3\frac{1}{2}$ to 4 times as long as broad.

Pronotum long, reticulo-punctate, *disc* with anterior

border straight, truncate, posterior border broadly and obtusely convex, median carina well raised, metazona broader than prozona; *lateral carinae* strong and well-formed, gradually diverging from the anterior border towards the posterior border. Lateral lobes perpendicular to disc, longer than high, the anterior and posterior borders divergently oblique, the posterior more so than the anterior; anterior portion of the ventral border ascending by 45° , posterior portion of same slightly ascending postero-dorsally, postero-ventral angle obtuse.

Prosternal spine conical, thick and short, tip obtuse. *Metasternal lobes* wider than long, inner margins somewhat divergent posteriorly, posterior margin oblique, interspace transverse. *Mesosternal lobes* separated by a transverse interspace.

Elytra abbreviated, lateral, oval, reaching slightly beyond the first abdominal segment, tip rounded parabolic. *Wings* rudimentary, very narrow reaching only slightly over the metanotum.

All femora rather incrassate. *Hind femora* extending slightly beyond abdomen. All longitudinal keels smooth, knee-lobes rounded. *Hind tibia* with 11 inner and 13 outer spines (including the outer apical one).

Abdomen carinate dorsally. *Supra-anal* plate broad, side margins broadly convex, apex a short triangular, round-tipped, process; surface with a raised median longitudinal area bearing the groove. *Cerci* long, bowed inwards and upwards, base broad, shape as illustrated in figure. Subgenital plate short, conical.

Allotype: ♀. Same locality as type.

Supra-anal plate triangular, tip right-angular rounded, basally with median longitudinal groove and distinct transverse raised suture slightly before the mid-length. *Cerci* triangular in shape, tapering to a rounded tip, slightly

bowed upwards. *Valves of ovipositor* long, upper valves with blunt short serration, lower valves with a basal shoulder, smooth. Posterior margin of subgenital plate medially slightly concave, bearing the median egg-guide, at the sides deeply incised, forming two short triangular lobes.

	♂	♀
Length of body	27 mm.	40 mm.
Length of pronotum	7	8
Length of elytra	5.25	7
Length of hind femora	15.75	17

General coloration brown. Post-ocular bands distinct, continued on the pronotum below the lateral carinae. Lateral lobes of pronotum with an oblique black mark on each side. Mesepimera and metapleura black except the oblique metepisternal ridge which is yellowish. Elytra black except the dorsal anal area, which is light brown. Posterior aspects of fore and middle legs black. Hind femora brown, with two black cross bands, the proximal one confluent with the basal longitudinal black stripe on the externo-medial area; inner lower area red. Hind tibia red, spines black-tipped.

Besides the types, I have records of the following paratypes, all from Szechwan:

Mt. Omei, 11,000 ft, VIII, 10, 1934, 3 ♀♀, 1 ♂♂; Shin Kai Si, Mt. Omei, 4,400 ft., VIII, 6, 1929. 11 ♀♀, 11 ♂♂; VIII, 7-9, 1929, 6,000 ft. 1 ♀, 1 ♂.

Near Mupin, VI, 1929, 1 ♀.

Yachow, VII, 1929, 1 ♂.

Si Gi Pin, VIII, 10, 1934, 1 ♀, 2 ♂♂.

This species is well differentiated from *C. chinensis* WILLEMSE by the following characters: 1. larger size. 2. The middle segments of antennæ being about 3-4 times as long as broad. In *C. chinensis* WILL. they are relatively shorter,

about twice as long as broad. 3. Frontal costa distinctly sulcate, that of *C. chinensis* is only slightly impressed. 4. The color of the hind femora is well differentiated, with two black cross-bands, which are absent in *C. chinensis*. 5. The difference of the male cerci is distinct in the two species as shown in figures given.

Tonkinacris sinensis sp. nov. (Pl. III, figs. 1-2).

Type: ♂. Szechwan: Shin Kai Si, Mt. Omei, 2-4,000 feet, VIII, 30, 1923.

Size moderate. *Antennæ* longer than head and pronotum together, middle segments about 4 times as long as wide. *Compound eyes*, large, strongly bulging side-wise, subroundish, its vertical height not much less than twice the infra-orbital distance, inter-orbital space above narrow, about the width of the frontal costa between the antennæ. *Dorsum* of head short, roundly convex behind. *Fastigium* steeply sloping forwards, longer than broad, base between the eyes very narrow, furrowed; apex broad and rhomboidal in front of the eyes, sulcate, side margins raised but broad and obtuse. *Face* moderately slanting. *Frontal costa* rather straight seen in profile, subparallel-sided, somewhat parallelly broader above the median ocellus, slightly constricted below the median ocellus, grooved from above the antennæ downwards, punctate, side margins obtuse. Lateral facial keel rather prominent, very slightly convex forwards. Genæ with a diagonal sulcus.

Pronotum long, cylindrical, with fine silky hair, thickly punctate-reticulate; *disc* with anterior margin subtruncate, and posterior margin produced, obtuse-angulate; *median carina* low, more distinct on the metazona than on prozona; *typical sulcus* placed a little behind the middle, the other sulci also well impressed; shoulders broadly rounded merging the disc with the lateral lobes. *Lateral lobes* distinctly longer than high, both anterior and posterior margins

oblique, the latter more strongly so. *Prosternal tubercle* conical, pointing somewhat backwards, tip subacuminate.

Elytra abbreviated, hardly reaching to the mid-length of the hind femora, broader basally, attenuating to a rounded parabolic tip, anterior margin convex. *Wings* as long as elytra.

Fore and middle femora stout. *Hind femora* extending to a little beyond tip of abdomen, normal in shape; knee-lobes subroundly truncate apically. *Hind tibia* with 10-12 inner and 9-10 outer spines with fine light hair.

Supra-anal plate triangular, longer than broad, with a distinct median groove, which is as a whole, somewhat elongate triangular in shape, side margins with an oblique dash-like tubercle near the base, apex obtuse and with horizontal ridge on each side. *Cerci* broad at base, the narrower finger-like apical portion bent upwards and innerwards as shown. *Subgenital plate* short, tip tuberculate pointing upwards.

Allotype: ♀. Locality same as type.

Size larger than the male. Most characters agreeing with the male.

Supra-anal plate triangular, the sides flexed downwards, tip blunt, proximal third with a broad short longitudinal median groove, and a transverse ridge. *Cerci* triangular, tapering to a subacuminate tip, not extending beyond podical plate. *Valves of ovipositor* long; dorsal valves with broad short and blunt serration; ventral valves with much finer serration or smooth, with a basal ventral shelf. *Subgenital plate* with a short, triangular projection on the sides of the ventral border, at the middle with a more prominent triangular projection.

General coloration yellowish tinged with green or brown, with a pattern of alternating black longitudinal stripes. On the vertex of the head between the compound

eyes, there is a black spot, behind this but not continuous with the spot just described is a longitudinal median stripe which is continued through the disc of the pronotum on to and through the anal border of the elytra. On each side is the broader post-ocular stripe which extends directly from behind the compound eyes through the pronotum. Antennæ tipped in black. The elytra is yellow, costal and anal borders black and with a median longitudinal stripe of black. The vertical and transverse sutures of the meso- and meta-thorax marked in black. Hind femora yellowish or greenish, dorsally with two black cross bands, which are not continued either on the external or the internal aspects of the femora, knee and knee-lobes black. Hind tibia greenish or bluish (?) with black base, and lower aspect black, spines claws black. Tarsal claws and pulvilli edged with black.

	♂	♀
Length of body	25 — 26 mm.	30 — 32 mm.
Length of pronotum	6.3 — 7	8 — 8.5
Length of prozona	3.4 — 3.5	4.25 — 4.5
Length of metazona	2.8 — 3.6	3.7 — 4.0
Length of elytra	9.6 — 9.4	10.0 — 12.5
Length of hind femora	14.0 — 14.5	16 — 17
Length of antennæ	13.5	15

This species is well differentiated from *T. decoratus* CARL (1916), the only known species of the genus described by CARL from Tonkin, by its much smaller size, by the characters of its male cerci, and its male supra-anal plate.

***Eupreocnemis yunkweiensis* sp. nov.** (Pl. IV, fig. 9).

Very close to *E. shirakii* BOLIVAR, agreeing with it in practically all external morphological features and coloration, but well differentiated from it by two outstanding characteristics, namely, 1. its distinctly smaller size, and 2. by the shape of the lobes that flank its penis as shown in the drawing.

	♂	♀
Length of body	18.3 mm.	23 — 24 mm.
Length of pronotum	3.8 — 4	4.7 — 5
Length of elytra	15.5 — 17	19.1 — 20
Length of hind femora	13.5	16 — 16.6

Type, male, allotype, female, and 2 male paratypes and one female paratype have been obtained from Kweichow; Shih Men Kan, VII, 19, 1934. Besides the Kweichow material, Dr. S. H. CHEN of Academia Sinica has sent me a male from Yunnan: Da Li, bearing the date, VIII, 27, 1933.

Habrocnemis sinensis UVAROV.

This species, the genotype of *Habrocnemis*, was described by UVAROV (Ann. & Mag. Nat. Hist., Ser. 10, 5: 254) in 1930, based on a single male specimen from Tatsienlu in Szechuan. The Graham material contains two female specimens from the same locality, and here is this sex described for the first time.

Allotype: ♀. China-Tibet Border: Tatsienlu, 8-9,000 ft.

Size rather large, form robust. *Antennæ* rather thick, slightly flattened. *Fastigium* elongate, almost twice as long as broad, sulcate, apex acute-angular, side margins distinct. Bordering the fastigium anteriorly on each side are the two shallowly impressed, triangular temporal areas. Dorsum of head behind the fastigium convex, bearing a short *median carinula* right behind the latter. Face not strongly receding. *Frontal costa* rather narrow, subparallel, gradually and feebly widened towards clypeus, sulcate, coarse-shallowly punctate, margins broadly obtuse. *Lateral facial keels* straight, well-marked, extending from fronto-clypeal suture to the lateral ocelli above. Eyes elyptical, rather large, about two-thirds as broad as high, its height about equal to $1\frac{1}{2}$ times the infra-orbital distance.

Pronotum gibbose, coarsely punctured and rugulose. *Disc* with anterior border straight, posterior margin broadly obtusely rounded, transverse sulci deep, cutting all of the

longitudinal keels, the hind sulcus placed behind the middle; *median keel* well developed; *lateral keel* thick, nearly obsolete, straight, weakly divergent from front border to the posterior margin, as a consequence of which, the metazona is slightly broader than prozona. *Lateral lobes* with anterior border slightly convex, posterior border strongly oblique, coarsely rugose.

Prosternal tubercle thick, transverse-cylindrical, tip rounded obtuse. *Mesosternal lobes* transverse, inter-space narrower than one of the lobes. *Metasternal lobes* separated by a squarish interspace.

Elytra lateral not touching above, extending a little beyond the first abdominal tergite, oval, broad, veins well raised, tip broadly rounded.

Hind femora short and thick, median dorsal keel serrated; knee-lobes broadly rounded at tip. *Hind tibia* with 7 outer spines, the external apical spine absent, and 9 inner spines.

Supra-anal plate triangular, with sides flexed, surface with a broad median groove on basal portion and a transverse ridge behind the middle. *Cerci* short, triangular, tip subacuminate. *Valves of ovipositor* smooth, the ventral pair with a basal shelf on ventral margins.

Coloration same as the male.

	♀
Length of body	31.5 mm.
Length of pronotum	7.5 — 8
Length of elytra	6.25 — 6.5
Length of hind femora	16 — 16.25

Besides the allotype, there is one female paratype from the same locality.

PLATE III.

- Fig. 1. *Tonkinacris sinensis* sp. nov. (♂).
2. Cerci of *T. sinensis* sp. nov. (♂).
3. Dorsal view of head and pronotum of *Oreoptigonotus uvarovi* sp. nov. (♂).
4. Side view of head and pronotum of *O. uvarovi* sp. nov. (♂).
5. Dorsal view of tip of abdomen of *O. uvarovi* sp. nov. (♂).
6. Side view of same (♂).
7. Elytra of *O. uvarovi* sp. nov. (♂).
8. Dorsal view of head and pronotum of *Euchorthippus weichowensis* sp. nov. (♂).
9. Side view of same (♂).
10. Elytra of *E. weichowensis* sp. nov. (♂).