

New weevils of the tribe Scleropterini from China and Nepal (Coleoptera: Curculionidae)

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New genera *Proscleropterus* gen. n. (type species *P. davidiani* sp. n. from Sichuan Province, China) and *Alesinus* gen. n. (type species *A. nepalensis* sp. n. from Nepal), a new subgenus *Afrutidosoma* (type species *Rutidosoma alexanderi* sp. n. from Yunnan Province, China), and a new species *Scleropterus antoni* sp. n. from China (Sichuan and Gansu provinces) are described.

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Introduction

Tribe Scleropterini is one of the largest tribes of the subfamily Ceutorhynchinae subendemic or endemic to the Holarctic Realm (Korotyaev, 2008). The majority of the genus group taxa of the Scleropterini are endemic to the Palearctic, mostly to the mountain systems of Europe (*Brachiodontus* Schultze, 1897 and *Scleropteridius* Otto, 1897) and Middle Asia (*Victorinus* Korotyaev, 1999), but some are endemic to lowland areas of East Asia (*Scleropteroides* Colonnelli, 1979 and *Heorutidosoma* Korotyaev & Hong, 2004). Recent investigations of the upland fauna of China and Nepal have discovered a number of new species of Scleropterini, some of them require establishing of new genus group taxa.

Type material of the species described in this paper is deposited in the Zoological Institute of the Russian Academy of Sciences (ZIN) except for holotype of *Alesinus nepalensis* gen. et sp. n. which is deposited in the Canadian Museum of Nature, Ottawa. Bibliographies of the genus and species group taxa mentioned in this paper are not given if they are present in the World catalogue by Colonnelli (2004). Since the publication of the catalogue, only the monotypical genus *Heorutidosoma* has been described (Korotyaev & Hong, 2004) in the Scleropterini.

Genus *Proscleropterus* gen. n.

Type species *Proscleropterus davidiani* sp. n.

Description. Structure of head, prothorax, legs, elytra, and aedeagus similar to that in *Scleropterus* except that frons rather deeply depressed along its entire width, rostrum narrower, not wider than

fore femur, and elytra relatively thin, although armed with strongly developed granules arranged in several large swellings. Rostral channel on meso- and metasternum ill-defined, not closed on metasternum; thoracic sternites lacking keels along very shallow depressions. Metasternum only slightly shorter than middle coxal cavity. Elytra in *Proscleropterus davidiani* fused; wings about 1.7-1.8 times as long as elytra but reduced and non-functional.

Comparison. The new genus is similar and apparently closely related to *Scleropterus* but differs in a set of primitive characters associated with flying abilities: the long metasternum, strongly prominent humeri of the thin elytra, and presence of the well-developed though apparently non-functional hind wings. The structure of the long, narrow, and widely rounded apically aedeagus also differentiates *P. davidiani* from all species of *Scleropterus* possessing much shorter aedeagus pointed apically and exhibiting little variation in the general appearance between the species. The long, slender rostrum which is not wider than the fore femur, and the ill-defined rostral channel on the meso- and metasternum also may be plesiomorphic, and then *Proscleropterus* is the most primitive scleropterine. Yet these two characters may be correlated apomorphies, as the most primitive known scleropterine, *Scleropteroides*, has coarsely sculptured rostrum capable of being placed in the deep rostral channel; long rostra are never accompanied by deeply depressed meso- and metasternum in Ceutorhynchinae. In either case, *Proscleropterus* definitely represents a lineage different from *Scleropterus*. Interesting enough, *P. davidiani* manifests no resemblance or close affinity with *Scleropteroides*, another East

Palearctic monotypic genus of the tribe Scleropterini, and is much more similar to *Scleropterus* in all principal characters.

Species included. The genus is monotypic.

Etymology. The name of the new genus refers to its supposed primitiveness as compared to *Scleropterus*.

***Proscleropterus davidiani* sp. n.**

(Figs 1, 4)

Holotype. ♂, **China, Sichuan**, right bank of Lanhegou River NW of Mt. Ubaoshan, E of Jimi, 3000-3200 m, 28-29 June 2000 (G.E. Davidian).

Paratypes. As above, 8 ♂, 10 ♀; **China, Sichuan**, right bank of Niuzhihe River E of Pusium Village: 2500-2700 m, 17 June 2000 (G.E. Davidian), 6 ♂, 1 ♀; 2200-2800 m, 15-16 June 2000 (G.E. Davidian), 1 ♂, 1 ♀.

Description. Male (holotype). Rostrum 1.39 times as long as pronotum, 5.06 times as long as wide at apex, 0.94 times as wide as fore femur, weakly and almost evenly curved, almost parallel-sided in basal half, moderately widening around antennal insertion, and weakly widening toward apex where it is 1.2 times as wide as near base. Dorsal surface of rostrum weakly and almost evenly convex in cross-section, occasionally weakly roof-shaped raised along midline in apical or basal part, but never carinate. Punctuation moderately dense and partly rugose, formed of medium-sized, slightly elongate, rather shallow punctures. Intervals between punctures matte, with dense microsculpture, in apical part of rostrum subequal to width of more strongly elongate and acuminate punctures. Antennae inserted at 0.42 length of rostrum from apex. Scape weakly thickening in apical third, with 1 short apical seta. First segment of funicle about twice as long as wide, 2nd 0.9 times as long and half as wide as 1st, about 3 times as long as wide; 3rd slightly shorter than 2nd, 4th and 5th 2/3 as long as 3rd, slightly longer than wide, 6th segment as long as wide. Pubescence on funicle fine, rather long (hairs on apical segments as long as latter), semi-erect. Club ovate, conically narrowing toward base, broadly conical in apical part. Basal segment of club distinctly separated from rest of club and bearing rosette of setae as long as those on apical funicular segments. Eyes medium-sized, moderately convex, rounded-triangular with more strongly curved dorsal margin and orbits in dorsal half somewhat projecting from head capsule. Frons and anterior part of vertex moderately deeply depressed across their entire widths, with dense, medium-sized, shallow, polygonal punctures separated by narrow intervals producing alveolate sculpture. All of head capsule matte, posterior part of vertex with short median carina.

Pronotum 1.1 times as wide as long, widest in, or anterior to middle, with base shallowly to

rather deeply bisinuate and somewhat produced posteriorly in middle, sides moderately rounded in middle part, less strongly converging and slightly emarginate in basal half, more narrowly rounded in anterior part, and deeply constricted near apex. Apical constriction on disc very deep and rather sharp, separating almost half of pronotum; anterior margin slightly raised, moderately produced over head, very shallowly sinuate in middle, with sparsely and finely serrate lateral sections. Basal part of disc rather strongly convex in cross-section and longitudinally, steeply sloping toward apical constriction and gently sloping toward narrow depression along base, with deep, dense and large round punctures separated by sharp intervals producing alveolate sculpture. Punctuation on apical part of pronotum sparser, with flat, matte intervals between round punctures. Median sulcus separating two weak obtuse prominences immediately behind apical constriction, covered with deeper punctures with sharply ridged intervals. Base not margined, punctuation reaching basal edge and leaving no smooth line at base. Mesepimera clearly visible dorsally but weakly prominent. Scutellum very narrow, wedge-shaped, sloping anteriorly.

Elytra 1.13 times as long as wide, with strongly prominent humeri and large, sharply granulate bulge on base of 8th interval, strongly convex dorsally except flattened basal quarter, subparallel-sided in basal half and rounded in apical half, deeply angularly emarginate at base. Striae relatively narrow and shallow but often curved around numerous large swellings on intervals; punctures somewhat angular, separated by own diameter or less, spaces between punctures almost levelling with intervals; margins of striae well-defined. Intervals weakly shining, somewhat coriaceous, flat between swellings. 2nd interval with weak smooth elongate swellings composed of 2 or 3 merged tubercles designated by reclinate setae before and after midlength on one elytron and at midlength on the other. 3rd interval with short tubercle near base and two very large round or oblong tubercles before and after midlength, additional small tubercle may be present in apical part of interval on one or both elytra. 4th interval narrow, with a few sharp granules scattered along its entire length. 5th interval with rather large short 3-capitate swelling near base, shorter and larger round swelling in middle with 2 or 3 minute granules at top, and another swelling of similar size and shape but bearing 5-7 sharp setiferous granules, at apex of interval. 6th interval with sculpture similar to that on 4th interval. 7th interval with large rounded swelling slightly before middle at level of anterior half of large swelling on 5th interval, with smaller simple or 2-capitate swelling anterior to largest swelling at apex of 5th interval, and simple large granule

in between. 8th interval with large swelling at base, rest of 8th interval and lateral intervals with simple, irregularly spaced large granules.

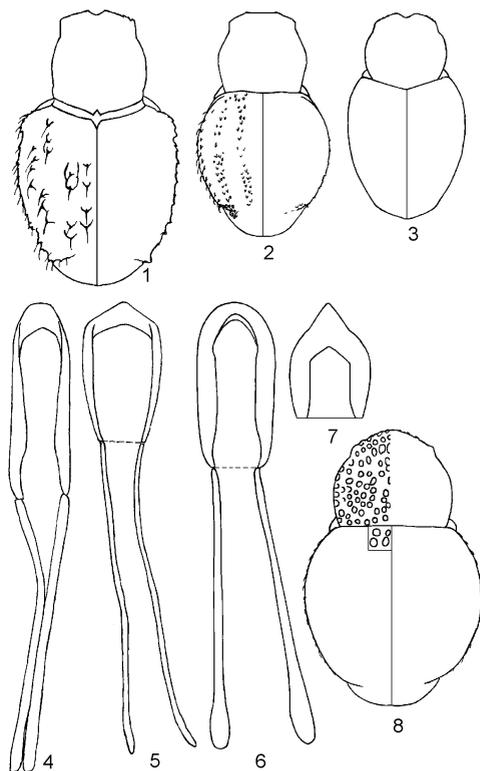
Legs long and slender; femora weakly clavate, not strongly differing between pairs, all finely dentate. Fore tibia weakly S-curved, noticeably outcurved apically, narrow in basal third, wider and slightly widening toward apex in apical two-thirds, non-mucronate. Spines of apical comb extending on outer margin for apical width of tibia, moderately long, dense and fine. Middle and hind tibiae with rather wide mucrones pointed medio-posteriorly and somewhat shorter than tarsal claw. Apical combs on middle and hind tibiae short, rounded. Tarsi long and narrow; 1st segment of fore tarsus twice as long as wide, 2nd as long as wide, 3rd 1.7 times as wide as 2nd, moderately rounded at sides. Claw-segment by 2/3 of own length extending from lobes of 3rd segment, moderately widening apically. Claws with appendages fused in entire unit between them 2/3 as long as a claw.

Exposed part of pygidium strongly transverse, almost threefold as wide as long, weakly convex longitudinally and rather strongly roof-shaped raised along midline, with fine median carina, matte, densely punctate. Anal ventrite with moderately deep rounded depression along entire length in medial quarter, bottom of depression sparsely pubescent. Aedeagus (Fig. 4) elongate, with rather narrow sclerotized lateral areas, widely rounded at apex.

Female. Rostrum 1.66 times as long as pronotum, very weakly and regularly curved, parallel-sided in basal half, moderately widening at very short distance around antennal insertion, and moderately widening toward apex where it is 1.3 times as wide as near base. Dorsal surface of rostrum weakly and almost evenly convex in cross-section, occasionally weakly roof-shaped raised along midline in basal part leaving median line impunctate. Punctuation in basal part moderately dense, formed of medium-sized, slightly elongate, rather shallow punctures, partly arranged in rows; intervals between punctures more or less glossy. Apical part matte, with dense microsculpture and sparser, more elongate punctures separated mostly by more than own widths. Antennae inserted at 0.44 length of rostrum from apex. Pronotum 1.06 times as wide as long. Elytra 1.12 times as long as wide. Middle and hind tibiae with fine, sharp mucrones pointed almost medially and not projecting from beyond pubescence of tibial apices. Exposed part of pygidium as in male.

Body length 2.30-2.65 mm.

Body black; scape and varying long basal part of antennal funicle, apical part of prothorax, apices of elytra behind apical prominences, coxae, apices of femora, tibiae, and tarsi usually



Figs 1-8. Body outline: 1, *Proscleropterus davidiani* gen. et sp. n., female; 2, *Scleropterus antoni* sp. n., female; 3, *Alesinus nepalensis* gen. et sp. n., male, holotype; 8, *Rutidosoma (Afrutidosoma) alexanderi* sp. n., female. Aedeagus dorsally: 4, *Proscleropterus davidiani* gen. et sp. n.; 5, *Scleropterus antoni* sp. n.; 6, *Alesinus nepalensis* gen. et sp. n., holotype. Apex of aedeagus dorsally: 7, *Alesinus nepalensis* gen. et sp. n., holotype.

rather bright reddish brown; occasionally most of femora of same colour as tibiae. Rostrum with inconspicuous sparse, short, subrecumbent hairs. Frons with semi-erect narrow reclinate brown and yellowish scales, inner eye orbits with erect yellowish scales. Pronotum with three well-defined narrow longitudinal stripes of white or yellowish lanceolate scales and with row of anteriorly-pointed scales along base. Lateral bands curved medially in apical constriction of pronotum. Vestiture of elytra sparse and inconspicuous; granules and swellings bearing rather long, narrow, dark semi-erect scales, with light yellowish narrow scales present only in sutural corners. Apical half of mesepimera with dense elongate scales, ventral half of mesepimera bare. Sides of meso- and metasternum and ventrites of abdomen rather sparsely and uniformly covered with white lanceolate scales condensed in posterior part of metasternum. Legs uniformly and moderately densely dressed with subrecumbent very narrow,

parallel-sided yellowish scales. Pygidium with sparse short, dark, subrecumbent hairs.

Etymology. The species is named for G.E. Davidian (St. Petersburg), who collected very interesting material in mountainous regions of China.

Genus *Scleropterus* Schönherr, 1825

Scleropterus antoni sp. n.
(Figs 2, 5)

Holotype. ♂, **China**, NW *Sichuan*, road from Langmusi to Zoige, km 8, 3300 m, 14 July 1994 (K.W. Anton) (ZIN).

Paratypes. 2 ♀, **China**, SW *Gansu*, road from Hezuo(zhen) to Amqoh, pass, 3200 m, 12 July 1994 (K.W. Anton) (ZIN).

Description. Male. Rostrum 1.04 times as long as pronotum, 3.2 times as long as wide at apex, 1.25 times as wide as fore femur, moderately strongly and almost evenly curved, weakly narrowing from base to beginning of middle third, then moderately widening toward antennal insertion, and weakly widening toward apex thereafter. Dorsal surface of rostrum weakly obtusely raised roof-shaped along midline, with wide glabrous median carina in apical half disappearing near apex. Punctuation of rostrum coarse and dense up to apex, with narrow rugose intervals between elongate punctures merging in carinae at sides in basal half (distinct only on right side in holotype). Antennae inserted at 0.42 length of rostrum from apex. Scape weakly thickening in apical third, with 1 short apical seta. First segment of funicle about 2.5 times as long as wide, 2nd 0.6 times as long as 1st, 2.5 times as long as wide; 3rd slightly shorter than 2nd, 4th and 5th 2/3 as long as 3rd, slightly longer than wide, 6th segment slightly transverse. Pubescence on funicle fine, moderately long, semi-erect. Club ovate, conically narrowing toward rounded base, broadly conical in apical part. Eyes small, rounded-triangular, flat. Frons flat, with moderately dense, rather coarse round and weakly oblong punctures separated by flat shining intervals. Vertex matte, with denser round punctures.

Pronotum 1.30 times as wide as long, widest somewhat before middle, with base shallowly bisinuate, sides moderately rounded in middle part, less strongly converging and almost straight in basal half, more narrowly rounded in anterior part, and moderately deeply constricted near apex. Apical constriction on disc deep but not very sharp, separating apical 0.3 of pronotum; anterior margin not raised, moderately produced anteriorly over head, very shallowly sinuate in middle, with sparsely and finely serrate lateral sections. Disc moderately and almost evenly convex, more steeply sloping to apical constriction than to base, shining, with moderately dense, large and deep round punctures separated by smooth intervals

without microsculpture. Two shallow transverse depressions present at base. Lateral tubercles and median sulcus wanting. Base not margined, punctuation reaching basal edge and leaving no smooth line at base. Anterior margin of prosternum deeply and almost rectangularly emarginate in middle; rostral channel deep, limited by low obtuse keels before fore coxae; precoxal zone shorter than constricted apical part. Mesepimera clearly visible dorsally but weakly prominent. Scutellum small but well-visible, triangular, shining, almost leveling with elytral surface.

Elytra ovate, 1.15 times as long as wide, strongly and evenly convex dorsally and rounded at sides, with completely rounded humeri and apical prominences, widest slightly before middle, shallowly emarginate at base. Striae wide and deep, entire, with round punctures separated by own diameter; spaces between punctures almost leveling with intervals; margins of striae smoothed. Intervals shining; sutural interval reduced to linear area between 1st stria and suture, 2nd, 4th, 6th, and 8th intervals not wider than striae, moderately convex along their entire lengths, each with single row of large granules bearing reclinate parallel-sided scales. 3rd and 5th intervals wider than neighbouring ones; 3rd interval weakly swollen at base, dilated both in- and outward and bearing 3 or 4 shining granules; rest of interval moderately convex, with short elongate, glabrous prominence immediately behind middle. 5th intervals not more strongly convex at base than 4th or 6th interval but moderately swollen behind 2nd puncture in neighbouring striae and with callosity like that on 3rd interval somewhat proximal to it. 5th interval bearing short and weak rounded prominence at apex separated from stronger prominence near middle by not-raised piece of the interval. Middle third of 7th interval weakly and regularly swollen, 8th and 9th intervals less strongly convex along their entire lengths.

Legs slender; femora weakly clavate, mutic. Fore tibia straight, parallel-sided, non-mucronate, with narrowly rounded outer apical angle; length of apical comb slightly less than apical width of tibia. Spines of apical comb short and fine; those on apical margin of tibia separated by slightly less than own length. Middle and hind tibiae with rather wide mucrones pointed medio-posteriorly and about as long as tarsal claw. Apical combs on middle and hind tibiae short, rounded. Tarsi long and narrow; 1st segment of fore tarsus twice as long as wide, 2nd as long as wide, 3rd 1.6 times as wide as 2nd, very weakly rounded at sides. Claw-segment by 2/3 of own length extending from lobes of 3rd segment, weakly widening apically. Claws dentate in basal half.

Pygidium strongly transverse, with small glabrous, weakly convex granule (not visible dorsally)

between sutural angles of elytra. Anal ventrite with shallow transverse depression along its entire length. Aedeagus (Fig. 5) with rather narrow sclerotized lateral areas, short, conically narrowing toward pointed apex.

Body length 1.9 mm.

Female. Rostrum 1.09-1.16 times as long as pronotum, 4.3 times as long as wide at apex, 1.08 times as wide as fore femur, very weakly curved, weakly narrowing from base to beginning of middle third, then moderately widening toward antennal insertion, and weakly widening toward apex. Dorsal surface of rostrum roof-shaped raised along midline, in basal part with 3 undulate carinae formed by merged intervals between coarse elongate punctures. Apical part of rostrum rather glossy, with moderately dense elongate punctures. Antennae inserted at 0.43 length of rostrum from apex. Pronotum 1.13-1.18 times as wide as long, with sides moderately to rather strongly rounded in middle part, moderately converging and straight in basal half, and moderately deeply constricted near apex. Elytra (Fig. 2) wide-ovate, 1.09-1.11 times as long as wide. Pygidium strongly transverse, with small apical denticle between sutural angles of elytra visible dorsally.

Body length 2.05 mm.

Body reddish brown; rostrum, head capsule, meso- and metasternum, abdominal ventrites, and pygidium black, antennae dark brown, legs and apical part of pronotum paler, swollen areas of intervals and sides of elytra more or less clearly darkened. Apical half of rostrum sparsely set with semi-erect hairs, basal half with white linear scales along sides. Medial part of frons and vertex dark, sparsely clothed with narrow recumbent scales, sides of head capsule with denser longer and wider white scales widening apically. Prothorax with three narrow stripes of white narrow-lanceolate scales. Vestiture of elytra sparse; scales on intervals mostly brown with admixture of white ones; prominences on odd-numbered intervals with brown scales, humeri and small subapical tubercles at apices of 5th intervals with spots of recumbent scales widening toward truncate apices. Sides of meso- and metasternum and ventrites of abdomen rather sparsely covered with white lanceolate scales condensed on apical third of mesepimera and on metepisternal suture. Legs uniformly dressed with very narrow parallel-sided white scales. Pygidium with sparse long, yellow subrecumbent hairs.

Comparison. *Scleropterus antoni* sp. n. differs from other species of *Scleropterus* from China, *S. sinensis* Korotyaev, 1992 and *S. berezovskii* Korotyaev, 1992, in the completely rounded humeri of the elytra and lack of large prominences or tubercles on the elytra, absence of discal tubercles on the pronotum, and more elongate body. In the

less developed sculpture of both the pronotum and elytra, completely rounded humeri, and shape of the aedeagus *S. antoni* sp. n. is more similar to *S. verecundus* Faust, 1890 from central Siberia and *S. rubi* Korotyaev, 1980 from the Far East, but can be easily distinguished by the smaller, narrower body with shining integument, especially that of the elytra, light coloration, and the presence of the well-developed though fine mucrones on the middle and hind tibiae of female.

Etymology. The species is named for K.-W Anton (Emmendingen, Germany), who collected and kindly presented the material.

Genus *Alesinus* gen. n.

Type species *Alesinus nepalensis* sp. n.

Description. Rostrum of male slightly longer than pronotum and wider than fore femur, moderately and regularly curved, subcylindrical, parallel-sided, not carinate, with moderately coarse sculpture. Antennae of male inserted slightly before middle of rostrum, funicle 6-segmented. Frons as wide as base of rostrum, flat or slightly depressed. Pronotum weakly transverse, with anterior margin not raised, base strongly angularly produced posteriorly. Disc evenly convex, without discal and lateral tubercles, sulcate medially. Scutellum not visible. Rostral channel vestigial, limited to prosternum. Meso- and metasternum very short. Femora mutic. All tibiae of male mucronate. Claws large, appendiculate. Elytra with completely rounded humeri, fused along suture, with moderately convex disc, deeply and widely striate, intervals lacking coarse granules, denticles, or swellings. Coloration of body pale, underside partly darkened. Vestiture sparse and inconspicuous, only pronotum with 3 narrow longitudinal stripes. Aedeagus short, with long apophyses. Size small, less than 2 mm.

Comparison. The new genus shares many characters with *Scleropterus* but sharply differs in the lack of the rostral channel on the meso- and metasternum, weakly and evenly convex pronotum lacking discal and lateral prominences, and smooth elytral intervals lacking large granules and swellings. In the structure of the meso- and metasternum with a vestigial rostral channel *Alesinus* is similar to the genus *Rutidosoma* but the absence of the setae on the apex of the aedeagus, the entire appendage of the tarsal claws, and elongate body relate it more closely to *Scleropterus*. The pale coloration and somewhat flattened body produce an unusual appearance of *Alesinus nepalensis* sp. n. so that it is not immediately recognizable as a scleropterine and even a ceutorhynchine among an unsorted material.

Species included. The genus is monotypic.

Etymology. The new genus is named for Ales Smetana, Canadian National Collection of Insects and Mites, Ottawa, in appreciation of his contribution to the knowledge of the alpine fauna of East and South Asia.

Alesinus nepalensis sp. n.

(Figs 3, 6, 7)

Holotype ♂, Nepal, Bagmati Prov., Yangri Ridge, 4700-4800 m, 22 April 1981 (A. Smetana) (CMN).

Paratype ♂, as above (ZIN).

Description. Male. Rostrum 1.16 times as long as pronotum, 3.06 times as long as wide at apex, 1.14 times as wide as fore femur, moderately and rather evenly curved or slightly bent at antennal insertion, parallel-sided, not widening at antennal insertion but slightly wider in apical part than in basal one. Width of rostrum slightly exceeding its depth. Dorsal surface of rostrum weakly and almost evenly convex in cross-section, slightly flattened medially in apical part, without any trace of median carina. Punctuation dense, formed of rather fine, elongate to varying degree, rather shallow punctures, coarser and partly rugose on sides and somewhat striate medially. Intervals between punctures narrow, shiny or with fine and sparse microsculpture; short apical part of rostrum shiny medially. Antennae inserted at 0.40 length of rostrum from apex. Scape weakly thickening in apical third, with 1 short apical seta. Funicle rather thick and short; 1st segment about 2.5 times as long as wide, 2nd 0.55 times as long and 2/3 as wide as 1st, about twice as long as wide; 3rd 3/4 as long as 2nd, 4th shorter than 3rd and slightly longer than wide, 5th slightly, 6th more noticeably transverse. Pubescence on funicle fine, moderately long (hairs on apical segments not longer than latter), semi-erect. Club short, ovate, compact, with basal segment not distinctly separated from rest of club and bearing rosette of setae as long as, but less strongly raised than those on apical segments of funicle. Eyes small (largest diameter less than width of rostrum), moderately convex, rounded-triangular; in lateral view, their dorsal margins situated below frons contour. Frons as wide as base of rostrum, flat, with dense, moderately deep and large rounded or weakly elongate punctures partly merging in medial part. Intervals between punctures irregular, narrow, convex but not ridged, shiny or microreticulate. Frons in holotype separated from vertex by shallow and wide depression deepened medially, in paratype faintly longitudinally depressed across its entire width.

Pronotum 1.08-1.14 times as wide as long, widest near middle, with sides rather strongly and evenly rounded, shallowly constricted rather close to apex. Base deeply angularly produced posteriorly in middle. Apical constriction on disc well-defined, separating about one-third of

pronotum; anterior margin not raised, moderately produced over head, rather deeply sinuate in middle, sparsely and finely serrate laterally. Disc moderately and evenly convex in cross-section and rather weakly and evenly convex longitudinally, with rather deep narrow depression along base interrupted by not-depressed areas limiting median sulcus. Punctuation rather sparse and coarse, large round punctures with flattened bottoms separated by varying wide shiny, slightly convex intervals; surface somewhat uneven because of coarse and irregular punctuation, but no trace of discal or lateral tubercles present. Median sulcus entire, somewhat widened and, in holotype, foveiform deepened in apical constriction. Base not margined, punctuation reaching basal edge and leaving no smooth line at base. Postocular lobes not developed, anterior margin of prothorax in ventral half rectilinearly running toward edges of anterior emargination of prosternum. Setae in postocular lobes area short, fine, and sparse. Anterior emargination of prosternum arquate, moderately deep. Weakly depressed precoxal area less than half as long as fore coxal cavity, gently rising to anterior margin, with shallow apical constriction situated at about half-way to anterior margin. Keels before coxae obsolete, arquately concave in lateral view. Fore coxae separated by slightly less than apical width of antennal scape.

Mesepimera clearly visible dorsally. Meso- and metasternum very short, without depression for reception of rostrum. Middle coxae separated by about one-third width of coxa. Metasternal process slightly depressed, distance between middle and hind coxae slightly greater than half distance between middle coxae. Sides of metasternum transversely depressed. Scutellum invisible.

Elytra 1.20-1.23 times as long as wide, with completely rounded humeri (vestigial angulation may be remaining on one elytron) and deep angular emargination at base, widest slightly before middle, moderately rounded at sides in basal half and strongly narrowing in apical half. Disc moderately and evenly convex; in lateral view, separated from pronotum by depression and not forming common curve with pronotum in outline. Base between suture and humeri slightly raised against basal margin of pronotum, first smoothly, then abruptly sloping. Striae very wide and deep, with round punctures separated by own diameter excising strongly convex intervals. First to sixth striae straight at base and reaching base of elytra, 7th and 8th striae reaching posterior part of humeral tubercle. First stria shortened apically and sutural corners of elytra with widened smooth area. Intervals weakly shining, evenly arcuately convex in cross-section along entire lengths; 3rd, 5th and 7th intervals wider than neighbouring ones and each with single, in places irregular, row of

minute setiferous granules. Third interval weakly widened and swollen at base.

Legs moderately long and slender. Femora moderately swollen in apical part, not strongly differing between pairs, all unarmed and lacking any trace of femoral tooth, even scales at its place. Fore tibia noticeably outcurved apically, slightly widening toward, and slightly roundly widened outward at apex, finely mucronate. Spines of apical comb not extending on outer margin of tibia, short and dense, very fine. Middle and hind tibiae straight, with large mucrones (that on middle tibia longest) pointed medio-posteriorly and about as long as tarsal claw. Apical combs on middle and hind tibiae short, rounded. Tarsi rather short and narrow; 1st segment of fore tarsus about 1.3 times as long as wide, 2nd 1.25 times as wide as long, 3rd 1.6 times as wide and long as 2nd, moderately rounded at sides. Claw-segment by 2/3 of own length extending from lobes of 3rd segment, moderately widening apically. Claws with appendages fused in entire triangular piece between them much wider than, and 2/3 as long as claw. Sole surfaces densely covered with fine, rather long waved hairs.

Ventral surface concave. Suture between 1st and 2nd ventrites deep, 2nd ventrite only slightly longer than 1st. Anal ventrite with shallow transverse depression along its entire length in medial half of width. Exposed part of pygidium not visible in dorsal view, strongly transverse, almost threefold as wide as long, weakly convex longitudinally and rather strongly convex in cross-section, weakly shiny, densely covered with shallow round punctures. Aedeagus (Figs 6, 7) short, with rather wide sclerotized lateral areas, strongly bent dorso-ventrally in apical part, with slightly separated conical apex.

Body length 1.85-1.90 mm.

Body reddish brown, rather light; elytral suture, meso- and metathorax and 1st-4th abdominal ventrites very dark brown. Vestiture sparse and inconspicuous except 3 narrow white longitudinal stripes on pronotum. Head, pronotum and elytra with sparse short, subrecumbent pale hairs, granules on elytral intervals bearing longer semi-erect, narrow, parallel-sided scales. Legs with sparse short, semi-erect light setae separated by own lengths. Thorax ventrally and base of 1st abdominal ventrite with moderately dense white scales, apical half of mesepimera bare, shiny. Rest of abdomen with sparse recumbent hairs.

Etymology. The name of the new species refers to its distribution area.

Genus *Rutidosoma* Stephens, 1831

Genus *Rutidosoma* is treated here in a broad sense including all allied genus group taxa pro-

moted to genera by Colonnelli (2004). Although clearly separated from each other and some of them, e.g. *Prorutidosoma* Korotyaev, 1999, *Victorinus* Korotyaev, 1999 and *Heorutidosoma* s. str. and *Scleropteridius*, all the five taxa share characteristic structure of the rostral channel, including the well-developed, somewhat arcuately diverging keels behind fore coxae; presence of the setae on the penis apex, and the not fused appendages of the tarsal claws. The new species discovered in Yunnan represents another well-separated lineage of *Rutidosoma* and cannot be attributed to any of the known subgenera. A new subgenus is erected for it in this paper.

Subgenus *Afrutidosoma* subgen. n.

Type species *Rutidosoma alexanderi* sp. n.

Description. Most characters as in *Heorutidosoma* but body unicoloured black, matte; rostrum more strongly flattened and widening apically; pronotum lacking lateral tubercles; elytra with completely rounded humeri, no trace of humeral tubercles present; anal ventrite of female depressed medially at apex and lacking glabrous prominence. Size large, body length 2.6 mm.

Comparison. The new subgenus differs from the Eastern Palaearctic *Heorutidosoma* in the larger size, uniformly black matte body, absence of white scales on dorsal surface, more strongly flattened and widening apically rostrum, smoothed sculpture of the pronotum, completely rounded elytral humeri, and shorter metasternum.

Species included. The subgenus is monotypic.

Etymology. The name is a combination of the first two letters of "afer" referring to the unicoloured black body of the type species and the genus name *Rutidosoma*.

Rutidosoma alexanderi sp. n.
(Fig. 8)

Holotype. ♀, China, Yunnan Prov., env. of Lijiang, 27°10' N 100°14' E, 3000-3600 m, moss sifting, 28 May - 2 June 2002 (A.S. Konstantinov & M.G. Volkovitch) (ZIN).

Description. Female. Rostrum 1.21 times as long as pronotum, 4 times as long as wide at apex, 1.1 times as wide as fore femur, in basal part moderately curved and slightly compressed, in apical part weakly curved and slightly flattened, tapering apically. Dorsal side of rostrum weakly narrowing from beginning of second quarter toward middle exposing ventral margin of antennal scrobe; distal to antennal insertion rostrum feebly widening apically. Punctuation of dorsal surface dense, rather coarse, thinning in apical part; elongate punctures arranged in rows along ill-defined lateral wrinkles. Base of rostrum with weak median carina. Antennae inserted at

0.45 length of rostrum from apex. Scape weakly thickening in apical 0.40, with transparent lamella and 2 short setae at apex. Funicle 6-segmented, moderately thick, rather long; 1st segment about 2.5 times as long as wide, 2nd almost as long and 2/3 as wide as 1st, slightly longer than 3rd; 4th and 5th about 2/3 as long as 3rd, slightly longer than wide, 6th slightly shorter than 5th, about as long as wide, more noticeably transverse. Pubescence of funicle moderately long, fine, semi-erect. Club short spindle-shaped. Eyes small, rounded-triangular, weakly and evenly convex; in lateral view, their dorsal margins situated below frons contour. Frons weakly convex, as wide as base of rostrum, with slightly depressed central area. In lateral view, head contour straightened between base of rostrum and vertex. Punctuation of dorsal surface of head dense and coarse, posterior part of vertex with vestigial median carina.

Pronotum 1.26 times as wide as long, with base nearly straight, sides moderately rounded, apical constriction moderately deep; anterior margin not raised, arcuately produced over head, with wide, very shallow median emargination, finely serrate. Postocular lobes well-developed, rounded. Disc strongly and almost evenly convex, with obsolete median sulcus slightly widened and deepened at base. Sides with obsolete lateral tubercles. Punctuation deep and irregular, medium-sized punctures separated by varying wide, flat, microreticulate interspaces producing no asperity. Fore coxae separated by slightly less than width of antennal club, about one-third width of fore coxa. Prosternum behind coxae rather deeply depressed, depression limited by well-developed fine, low carinae.

Mesepimera clearly visible dorsally, with straight outline. Mesosternum very short. Middle coxae separated by about half width of coxa. Meso- and metasternal processes slightly jointly depressed, metasternal process slightly narrowly depressed along midline. Distance between middle and hind coxae about half distance between middle coxae. Sides of metasternum transversely depressed. Scutellum invisible but bases of elytra rounded in its area.

Elytra 1.01 times as long as wide, almost spherical, with completely rounded humeri and feeble preapical prominences. Disc strongly and evenly convex; in lateral view, separated from pronotum by deep depression. Striae very wide and deep, with round punctures separated by own diameter excising strongly convex intervals. First and 2nd striae moderately incurved but not widened toward base, rest striae straight. Intervals uniform, almost costiform convex, matte, each with dense and somewhat irregular row of conical, posteriorly-pointed tubercles and with smaller granules along sides.

Legs rather long and slender, matte, densely and rather finely punctate. Femora moderately swollen in apical part, not conspicuously differing between pairs, all finely dentate. Tibiae straight, slightly widening apically, non-mucronate. Fore tibia slightly roundly beveled outward at apex. Spines of apical comb not extending on outer margin of tibia, short and dense, very fine. Tarsi rather short and wide; 1st segment of fore tarsus about 1.3 times as long as wide, 2nd about as wide as long, almost parallel-sided; 3rd 1.6 times as wide and about as long as 2nd, rather strongly rounded at sides. Claw-segment by 2/3 of own length extending from lobes of 3rd segment, moderately widening apically. Claws with appendages almost 3/4 as long as a claw. Sole surfaces densely covered with fine, rather long setae.

Ventral surface convex, matte, densely and moderately coarsely punctate. Suture between 1st and 2nd ventrites entire, in lateral third deep; 2nd ventrite along midline about half as long as 1st, very steeply sloping to 3rd ventrite. Anal ventrite with apical half rather steeply rising toward apical margin, with small transverse median depression at apex. Exposed part of pygidium not visible in dorsal view, moderately transverse, about twice as wide as long, concave longitudinally, matte, densely covered with shallow round punctures.

Body length 2.6 mm.

Body black, funicle of antennae and tarsi very dark brown. Vestiture sparse and inconspicuous. Rostrum, head capsule, and pronotum with sparse inconspicuous dark, subrecumbent setae slightly projecting from punctures. Each interval of elytra with dark short, reclinate semi-erect setae sitting on granules. Pro- and mesosternum with moderately dense long, lanceolate subrecumbent greyish scales; metasternal process, coxae and trochanters with narrower scales, mesepisterna with with row of short-lanceolate greyish scales along elytral margin. Femora and tibiae with sparse narrow white and dark brown recumbent and subrecumbent (on ventral surface) scales. Abdominal ventrites with a few recumbent brown and white short scales, apical margin of last visible ventrite with dense greyish subrecumbent scales widening apically. Pygidium with moderately dense and long subrecumbent brown hairs.

Etymology. The new species is named for Alexander S. Konstantinov, Systematic Entomology Laboratory, USDA, Washington D. C., U.S.A.

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