

Five new species of Pterostichinae from Hubei (China) (Coleoptera: Carabidae)

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Abstract

Five new species of Pterostichinae (Coleoptera: Carabidae) from the Chinese province of Hubei are here described. Four of them belong to the genus *Pterostichus* BONELLI, 1810: *P. (Morphohaptoderus) dentellus* sp.n., *P. (M.) shennongjianus* sp.n., *P. (M.) toledanoi* sp.n., *P. (M.) hubeicus* sp.n.; one belongs to the genus *Trigonognatha* MOTSCHULSKY 1857: *T. hubeica* sp.n.

Key words: Carabidae, Pterostichinae, *Pterostichus (Morphohaptoderus)*, *Trigonognatha*, new taxa, Hubei, China.

Introduction

Recent explorations on the mountains of Hubei (China) have allowed the discovery of some new species of Pterostichinae, which belong to *Pterostichus* subgenus *Morphohaptoderus* TSCHITSCHÉRINE, 1898 and *Trigonognatha* MOTSCHULSKY, 1857.

The subgenus *Morphohaptoderus* was described for two species from China and it presently includes 26 species (JEDLIČKA 1932, JEDLIČKA 1938, SCIAKY 1994, SCIAKY 1997, SCIAKY & WRASE 1997). The genus *Trigonognatha* includes 20 species known to date from China and other species from Thailand, Myanmar, Korea, Japan and Taiwan (SCIAKY 1995, SCIAKY & WRASE 1997). The description of five new taxa belonging to these two genera is the purpose of this work.

Material and Methods

This study is based upon specimens of Pterostichinae collected during recent explorations in the mountains of Hubei (China) and in part from Shaanxi and most of the typical material of Chinese *Pterostichus (Morphohaptoderus)* and *Trigonognatha*. The specimens are deposited in the following collections:

CF Coll. S. Facchini, Piacenza, Italy
 CS Coll. R. Sciaky, Milano, Italy
 CSc Coll. M. Schülke, Berlin, Germany
 CSm Coll. A. Smetana, Ottawa, Canada
 CW Coll. D.W. Wrase, Berlin, Germany
 CT Coll. L. Toledano, Verona, Italy
 NMW Naturhistorisches Museum, Wien, Austria

The measurements were made with an ocular micrometer in a stereoscopic binocular microscope at 16X, 32X and 56X. The total length was measured from the apex of the mandibles to the apex of the elytra. Measurements of body parts and abbreviations used for them in the text are:

El	length of elytra from base of scutellum to apex
Ew	maximum width of elytra
Pl	length of pronotum along median line
Pw	maximum width of pronotum

Indices used in this publication are Pw/Pl and El/Ew. The photographs were made by a Canon camera with a Leica MZ 12 stereoscope.

***Pterostichus (Morphohaptoderus) dentellus* sp.n.**

DIAGNOSIS: Similar in external appearance to *P. geberti*, with the pronotum markedly constricted at base, the elytra rounded at lateral margins, and the apex of median lobe of the aedeagus in lateral view markedly hooked (Fig. 5).

TYPE LOCALITY: China, W-Hubei, Shennongjia Forest region, 2000 m.

TYPE MATERIAL: **Holotype** ♂: "China, W-Hubei, Shennongjia Forest reg., 2000 m, 8.6.95" (CF). 7 paratypes ♂ ♀ ♀, the same locality and date as holotype (CF, CS, NMW); 10 ♂ ♂ ♀ ♀ from: China, W Hubei, Daba Shan, pass E Mt. Da Shennongjia, 12 km NW Muyuping, 31°30'N 110°21'E, 1950 m, 16.-22.VII.2001, dry creek valley, mixed forest (CS, CW). 6 ♂ ♂ ♀ ♀ from: China, W-Hubei, Da Shennongjia Mts., 2100-2900 m, 31°5'N, 110°3'E, 12.VI.2002 (CF).

DERIVATIO NOMINIS: This specific epithet derives from the strong tooth at the apex of median lobe of aedeagus.

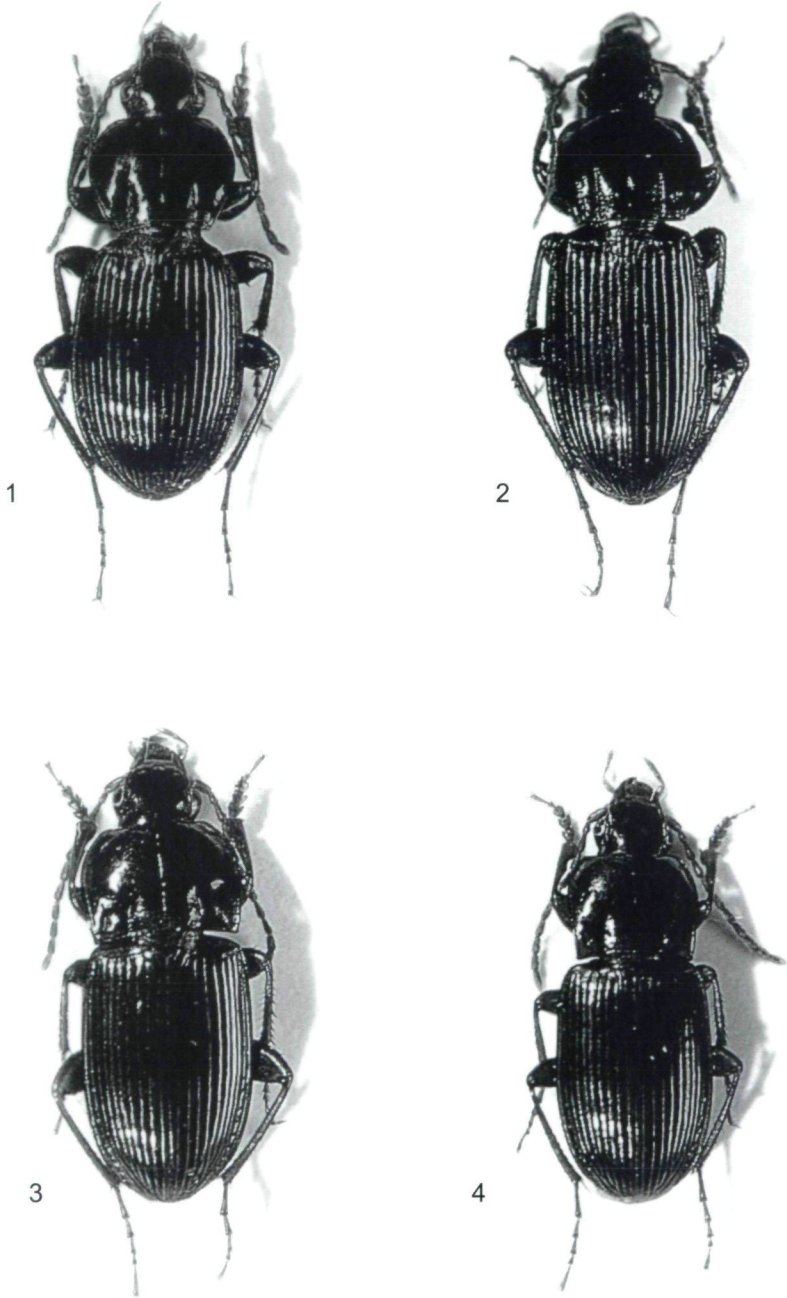
DESCRIPTION: Total length 9.5 – 10.5 mm (9.8 mm in holotype); body rather flat, smooth, micropterous, colour dark brown with light brown tibiae, tarsi, palpi and antennae. Habitus as in Fig. 1. Microsculpture very shallow on head and pronotum, almost absent on elytra.

Head small, smooth, not markedly convex, much narrower than pronotum. Eyes slightly convex, last palpomere narrow. Frontal sulci short, not very deep, linear and slightly diverging posteriorly. Tempora long and oblique, collar constriction hardly distinct dorsally. Antennae pubescent from antennomere 4.

Pronotum wide, (index Pw/Pl= 1.28), markedly constricted towards base, with lateral gutter narrow, not explanate towards base. Sides not sinuate before hind angles, but curved towards base, then abruptly projecting into small acute tooth. Maximum width just before middle, anterior angles slightly projecting forward. Two basal impressions sparsely punctate, external one very short, less than one half of the length of internal one; base almost completely smooth. Anterior seta at anterior third, posterior seta in the basal angle. Median longitudinal impression quite deep, anterior transverse impression not evident, posterior transverse impression shallow. Base bordered only at sides. Prosternum almost completely smooth, mesosternum, metasternum and metepisterna with only a few punctures. Metepisterna very short, as long as wide.

Elytra rounded at sides, oval, slightly convex, with maximum width at the middle (index El/Ew = 1.46). Striae deep but not evidently punctate, intervals slightly convex. Interval 3 with 2 setigerous punctures adjoining stria 2, one almost at middle and one at posterior third. Shoulders rounded but with small tooth, basal margin not forming a distinct angle with lateral margin. Elytra with extremely shallow microsculpture and smooth in both sexes. Scutellar setigerous puncture present at base of scutellar stria and stria 2. Abdomen almost smooth, the last sternite with 1 seta on each side in the male, with two setae on each side in the female.

Legs long and slender, meso- and metatibiae straight, tarsi narrow, tarsomeres dorsally smooth, mesotarsomeres 1-3 and metatarsomeres 1-3 furrowed at sides, metatarsomere 1 as long as 2 and 3 together, onychium with few thin setae underneath. Protarsomeres 1-3 of male markedly dilated.



Figs. 1 – 4: Habitus of holotype of: 1) *Pterostichus (Morphohaptoderus) dentellus* sp.n. (9.8 mm); 2) *P. (M.) shennongjianus* sp.n. (10 mm); 3) *P. (M.) toledanoi* sp.n. (7.7 mm); 4) *P. (M.) hubeicus* sp.n. (6.8 mm).

Median lobe of aedeagus with apical portion much longer than basal one; ostium very large and partially reaching the ventral side; apex in lateral view markedly hooked (Fig. 5), in dorsal view bent towards the right (Fig. 6). Right paramere short and stout (Fig. 7).

AFFINITIES: This species is peculiar within the subgenus *Morphohaptoderus* in the pronotal and elytral shape, which show a certain resemblance to that of the species of the subgenus *Circinatus* SCIAKY, 1996. The only species of *Morphohaptoderus* sharing this pronotal shape are *P. geberti* SCIAKY & WRASE, 1997 and *P. parvicollis* SCIAKY & WRASE, 1997 but the apex of the median lobe of the aedeagus of *P. geberti* (*P. parvicollis* is known only upon a single female specimen) is markedly different, being without apical hooks. The median lobe of the aedeagus of *P. dentellus* is quite similar to that of *P. (Morphohaptoderus) dundai* SCIAKY, 1994 from Shaanxi.

DISTRIBUTION: Known only from W-Hubei, China.

Pterostichus (Morphohaptoderus) shennongjianus sp.n.

DIAGNOSIS: Related to *P. lingshanus*, 9.5 – 10.1 mm long, elongate and slender, with pronotum markedly constricted at base, elytra narrow and parallel-sided, microsculpture of elytra almost absent in males and markedly incised in females, and apex of median lobe of aedeagus in lateral view markedly hooked (Fig. 8).

TYPE LOCALITY: China, W-Hubei, Shennongjia Forest reg., 2000 m.

TYPE MATERIAL: **Holotype** ♂: "China, W-Hubei, Shennongjia Forest reg., 2000 m, 8.6.95 "(CF). Paratypes: 2 ♂ ♀, China, W-Hubei, Da Shennongjia mts., 2800-3000 m, 31.5°N, 110.3°E, 15.6.2000 (CW); 161 ♂♂ ♀♀ from: China, W Hubei, Daba Shan, pass E Mt. Da Shennongjia, 12 km NW Muyuping, 31°30'N 110°21'E, 1950 m, 16.-22.VII.2001, dry creek valley, mixed forest (CS, CSc, CSm, CW); 1 ♂ from: China, W Hubei, Daba Shan, 12 km N Muyuping, 31°32'N 110°26'E, 2380 m, 17.VII.2001, (CSm); 6 ♂♂ ♀♀ from: China, S Shaanxi, Daba Shan, pass 22 km NW Zhenping, N slope, 2850 m, 32°01'N 109°21'E, 13-14.VII.2001, near mountain top, *Abies*, bushes-sifted (CW, CSm); 51 ♂♂ ♀♀: China, W Hubei, Daba Shan, mountain range NE Muyuping, pass 12 km N Muyuping, N slope, 31°32'N 110°26'E, 2380 m, 17.-21.VII.2001, young deciduous forest, pitfall traps (vinegar) (CW); 5 ♂ ♀♀ from: China, border Shaanxi-Sichuan, Daba Shan, pass 20 km SSE Zhenping, 1700-1800 m, 31°44'N 109°35'E, 9.-12.VII.2001, small creek valley, young dry mixed forest, leaf litter, moss-sifted (CSm, CW).

DERIVATIO NOMINIS: This specific epithet derives from the name of the village of Shennongjia, where these specimens were collected.

DESCRIPTION: Total length 9.5 – 10.1 mm (10 mm in holotype); body rather flat, smooth, micropterous, colour dark brown with light brown tibiae, tarsi, palpi and antennae. Habitus as in Fig. 2. Microsculpture very shallow on head and pronotum, almost absent (male) or very strong (female) on elytra.

Head small, smooth, not very convex, much narrower than pronotum. Eyes slightly convex, last palpomere narrow. Frontal sulci short, superficial and slightly diverging behind. Tempora long and oblique, collar constriction hardly distinct dorsally. Antennae pubescent from antennomere 4.

Pronotum wide, (index $Pw/Pl = 1.28$), markedly constricted towards base, with lateral gutter widely explanate towards base. Sides not sinuate before hind angles, but curved towards base, then abruptly projecting into small acute tooth. Maximum width near middle, anterior angles slightly projecting forward. Two basal impressions sparsely punctate, external one short, about one half of the length of internal one, base sparsely punctate. Anterior seta at anterior third, posterior seta in the basal angle. Median longitudinal impression quite deep, anterior transverse impression not evident, posterior transverse impression shallow. Base bordered only at sides.

Pro-, meso- and metasternum almost completely smooth, proepisterna with only a few punctures, meso- and metepisterna sparsely punctate. Metepisterna very short, as long as wide.

Elytra narrow and almost parallel-sided (index $El/Ew = 1.58$), rather flat. Striae deep, finely, often indistinctly, punctate, intervals only slightly convex. Interval 3 with 2-4 setigerous punctures adjoining stria 2. Shoulders distinct, with small tooth, basal margin forming a distinct angle with lateral one. Elytra without microsculpture and smooth (male) or with markedly impressed microsculpture and therefore mat (female). Scutellar setigerous puncture present at the base of scutellar stria and stria 2. Abdomen almost smooth, the last sternite with 1 seta on each side in the male, with 2 setae on each side in the female.

Legs long and slender, meso- and metatibiae straight, tarsi narrow, tarsomeres dorsally smooth, mesotarsomeres 1-3 and metatarsomeres 1-3 furrowed at sides, onychium with few thin setae underneath. Protarsomeres 1-3 of male markedly dilated, mesotarsomeres not dilated.

Median lobe of aedeagus with apical portion much longer than basal one, ostium very large and partially reaching the ventral side; apex in lateral view markedly hooked (Fig. 8). Dorsal view as in Fig. 9, right paramere short and stout (Fig. 10).

AFFINITIES: Similar in external appearance and aedeagal shape to *P. (Morphohaptoderus) lingshanus* SCIACY & WRASE, 1997 and to *P. dundai* SCIACY, 1994, both from Shaanxi. These three species share some features, like the general structure of the body, the shape of the aedeagus and the strong microsculpture covering the elytra of the females, and giving them a distinctly mat appearance. *P. dundai* can be distinguished from *P. lingshanus* and *P. shennongjianus* by the elongate shape of the right paramere. *P. shennongjianus* is the largest of the three (9.5 – 10.1 mm instead of 8.1 – 9.3 mm in the two related species) and shows a pronotal shape that is much more markedly rounded at the sides than in the two other species.

We would like to point out that, basing upon our careful observation of the typical series and of further material collected after the description of the species, the two populations of *P. lingshanus* known to date are not completely identical: the one collected near the village of Houzhenzi is of larger body size and shows a pronotal shape that is more evidently rounded at sides, while the one collected 47 km to the south of the town of Xian has a smaller body size and shows a pronotum almost parallel-sided. The median lobe of the aedeagus, however, is almost identical in both populations.

DISTRIBUTION: Known only from W-Hubei and S-Shaanxi, China.

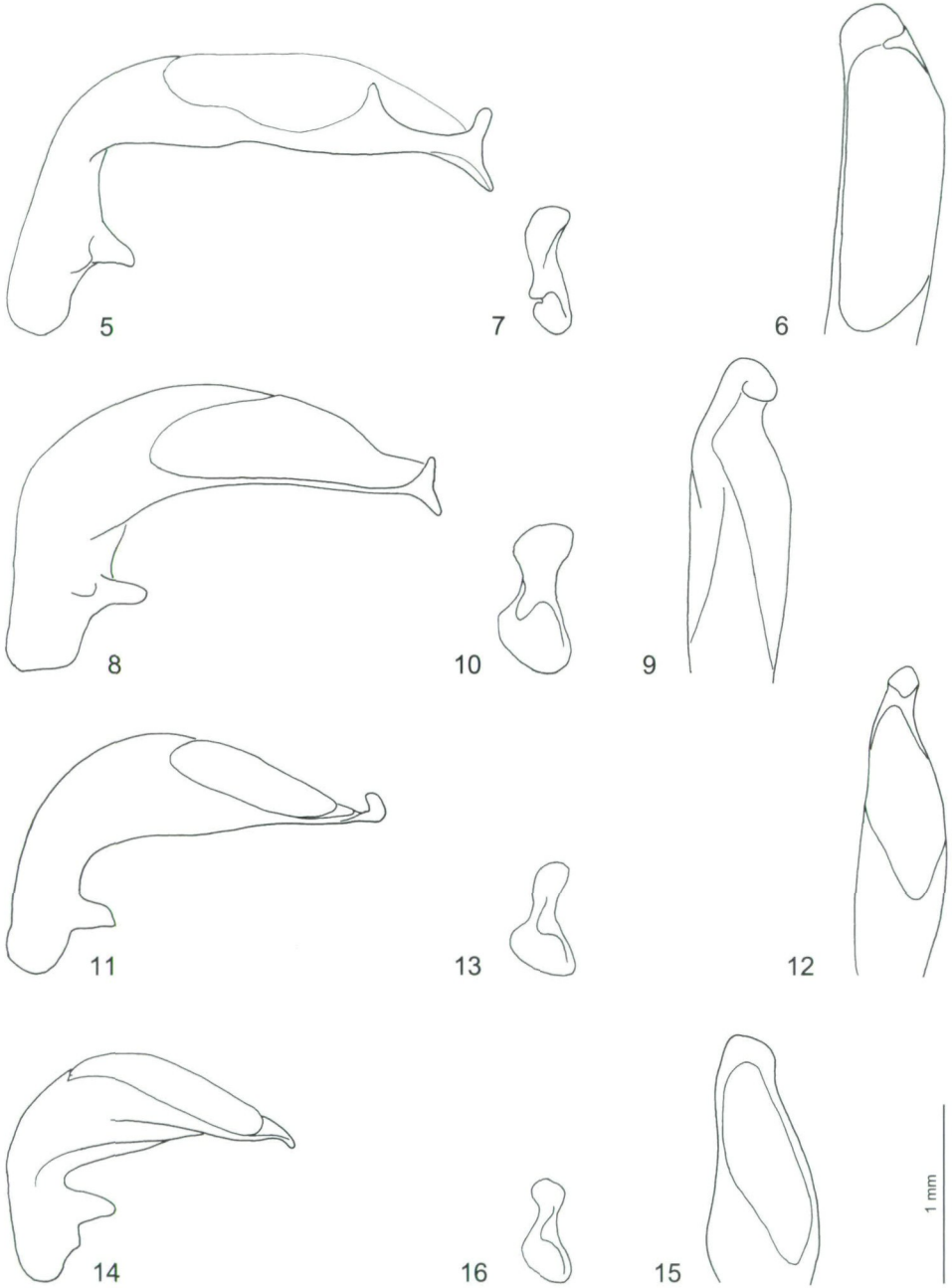
Pterostichus (Morphohaptoderus) toledanoi sp.n.

DIAGNOSIS: Externally similar to *P. huashanus*, with pronotum slightly constricted at base, elytra almost parallel-sided and apex of median lobe of aedeagus in lateral view markedly hooked (Fig. 11).

TYPE LOCALITY: China, W-Hubei, Da Shennongjia Mts., 2500 – 2900 m, 31°24'-27'N, 110°17'-20'E.

TYPE MATERIAL. **Holotype** ♂: "China, W-Hubei, 2500-2900 m, Dashennongjia massif, 31°24'-27'N, 110°17'-20'E, 28.6-3.7.95" (CF). 19 paratypes ♂♂ ♀♀, the same locality and date as holotype (CF, CS, CT, NMW); 2 ♂♀, China, W-Hubei, Da Shennongjia Mts., 2800-3000 m, 31.5°N, 110.3°E, 15.VI.2000 (CW).

DERIVATIO NOMINIS: This species is dedicated to our dear friend Luca Toledano from Verona, excellent specialist of Bembidiini.



Figs. 5 – 16: Aedeagus of holotype of: 5-7) *Pterostichus (Morphohaptoderus) dentellus* sp.n.; 8-10) *P. (M.) shennongjianus* sp.n.; 11-13) *P. (M.) toledanoi* sp.n.; 14-16) *P. (M.) hubeicus* sp.n.; 5, 8, 11, 14) median lobe of aedeagus in lateral view; 6, 9, 12, 15) apical half of same, in dorsal view; 7, 10, 13, 16) right paramere.

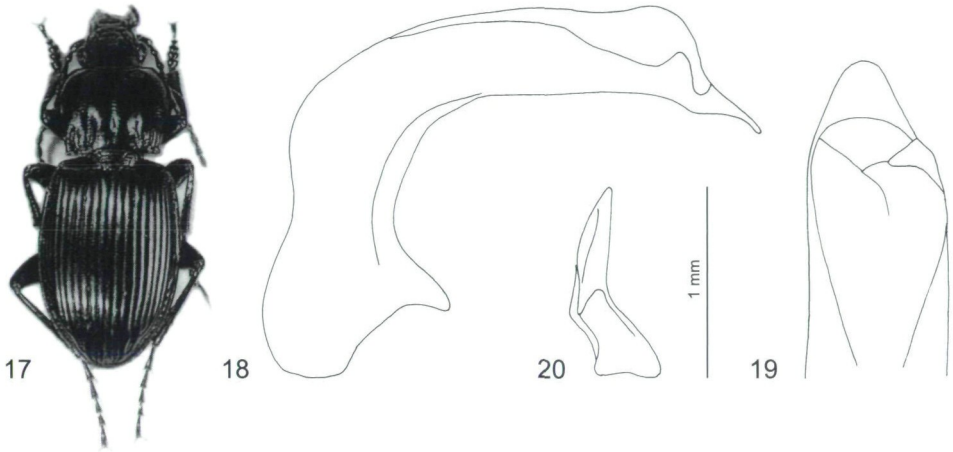


Fig. 17: Habitus of holotype of *Trigonognatha hubeica* sp.n. (11 mm).

Figs. 18 – 20: Aedeagus of holotype of *Trigonognatha hubeica* sp.n.: 18) median lobe of aedeagus in lateral view; 19) apical half of same, in dorsal view; 20) right paramere.

DESCRIPTION: Total length 7.2 – 8.1 mm (7.7 mm in holotype); body rather flat, smooth, micropterous, colour dark brown, appendages dark reddish-brown. Habitus as in Fig. 3. Microsculpture very shallow on head and pronotum, almost absent on elytra in both sexes.

Head small, smooth, not very convex, much narrower than pronotum. Eyes slightly convex, last palpomere narrow. Frontal sulci short, not very deep, linear and slightly diverging behind. Tempora long and oblique, collar constriction hardly distinct dorsally. Antennae pubescent from antennomere 4.

Pronotum wide, markedly transverse (index $Pw/Pl = 1.44$), slightly constricted towards base, with lateral gutter narrow, not explanate towards base. Sides not sinuate before hind angles, but slightly curved towards base, then abruptly projecting into a small acute tooth. Maximum width near middle, anterior angles projecting forward. Two basal impressions with only very few punctures, external one shorter than internal one, base with longitudinal lines. Anterior seta at anterior third, posterior seta in the basal angle. Median longitudinal impression quite deep, anterior transverse impression not evident, posterior transverse impression shallow. Base bordered only at sides. Pro-, meso and metasternum almost completely smooth, metepisterna with only few points. Metepisterna very short, as long as wide.

Elytra almost parallel-sided (index $Ei/Ew = 1.51$), quite flat, maximum width near the middle. Striae deep but not punctate, intervals slightly convex. Interval 3 with 3-4 setigerous punctures, one at the anterior third adjoining stria 3, one almost at the middle adjoining stria 2, and one or two at the posterior third adjoining stria 2. Shoulders well-marked and with small tooth, basal margin forming a distinct angle with lateral one. Elytra without evident microsculpture in both sexes. Scutellar setigerous puncture present at the base of scutellar stria and stria 2. Abdomen nearly smooth, the last sternite with 1 seta on each side in the male, with 2 setae on each side in the female.

Legs quite long and slender, meso- and metatibiae straight, tarsi narrow, tarsomeres smooth dorsally, mesotarsomeres 1-3 and metatarsomeres 1-3 furrowed at sides, onychium with few thin setae underneath. Protarsomeres 1-3 of male markedly dilated, mesotarsomeres not dilated.

Median lobe of aedeagus with apical portion longer than basal one, with ostium very large; apex in lateral view markedly hooked (Fig. 11), in dorsal view straight (Fig. 12). Right paramere short (Fig. 13).

AFFINITIES: The body shape is similar to that of many other species of the subgenus, like *P. huashanus* SCIAKY, 1994 and *P. confucius* SCIAKY & WRASE, 1997, but the structure of the aedeagus, with a large tooth on the upper side (in lateral view), is very characteristic and different from all the other species known.

DISTRIBUTION: Known only from W-Hubei, China.

***Pterostichus (Morphohaptoderus) hubeicus* sp.n.**

DIAGNOSIS: Similar to *P. pseudoplatyderus* SCIAKY, 1994, 6.8 – 7.5 mm long, with the pronotum slightly constricted at base, the elytra almost parallel-sided and the median lobe of aedeagus inferiorly crenate and in lateral view with simple apex. (Fig. 14).

TYPE LOCALITY: China, W-Hubei, Da Shennongjia Mts., 2500 – 2900 m, 31°24'-27'N, 110°17'-20'E.

TYPE MATERIAL: **Holotype** ♂: "China, W-Hubei, 2500-2900 m, Dashennongjia massif, 31°24'-27'N, 110°17'-20'E, 28.6-3.7.95" (CF). Paratypes: 1 ♀ with same data as holotype (CF); 5 ♂♂ ♀♀ from: China, W Hubei, Daba Shan, pass E Mt. Da Shennongjia, 12 km NW Muyuping, 31°30'N 110°21'E, 2000 m, 16.-22.VII.2001, dry creek valley, mixed forest (CS, CW).

DERIVATIO NOMINIS: This specific epithet derives from the name of the region where these specimens were collected.

DESCRIPTION: Total length 6.8 – 7.5 mm (6.8 in holotype); body rather flat, smooth, micropterous, color brown with reddish-brown appendages. Habitus as in Fig. 4. Microsculpture shallow on head and pronotum, almost absent on elytra in both sexes.

Head small, smooth, not very convex, much narrower than pronotum. Eyes slightly convex; last palpomere narrow. Frontal sulci short, linear and slightly diverging behind. Tempora long and oblique, collar constriction hardly distinct dorsally. Antennae pubescent from antennomere 4.

Pronotum wide, (index $Pw/Pl = 1.31$), transverse, slightly constricted towards base, with lateral gutter narrow, not explanate towards base. Sides curved in anterior half, straight in posterior half, then projecting into a small tooth. Maximum width almost at middle, anterior angles projecting forward. Two basal impressions, smooth, external one very short and almost obsolete, less than one half length of internal one, base completely smooth. Anterior seta at anterior one-third, posterior seta in the basal angle. Median longitudinal impression quite deep, anterior transverse impression not evident, posterior transverse impression shallow. Base bordered only at sides. Pro-, meso- and metasternum almost completely smooth; pro-, meso- and metepisterna with only a few punctures. Metepisterna very short, as long as wide.

Elytra almost parallel-sided (index $El/Ew = 1.51$), maximum width at the middle. Striae quite deep, not punctate, intervals slightly convex. Interval 3 with 2 setigerous punctures adjoining stria 2, one around middle and one at the posterior third. Basal margin forming a distinct angle with lateral one. Elytra without microsculpture, smooth. Scutellar setigerous puncture present at the base of scutellar stria and stria 2. Abdomen nearly smooth, the last sternite with 1 seta on each side in the male, with two setae on each side in the female.

Legs long and slender, meso- and metatibiae straight, tarsi narrow, tarsomeres smooth dorsally, mesotarsomeres 1-3 and metatarsomeres 1-3 furrowed at sides, onychia with a few thin setae underneath. Protarsomeres 1-3 of male markedly dilated, mesotarsomeres not dilated.

Median lobe of aedeagus rather short, with a small carina near base; ostium very large; apex in lateral view simple, only bent downwards, (Fig. 14), in dorsal view straight (Fig. 15). Right paramere short (Fig. 16).

AFFINITIES: The body shape is similar to that of several species of the subgenus, although this one is probably related to *P. pseudoplatyderus*, with which it shares both the body shape and the structure of the median lobe of aedeagus. It can be diagnosed by the occurrence of a small carina in the inferior side and the apex without a tooth. This character is observed also in *P. (Morphohaptoderus) janatai* SCIACY & WRASE, 1997 and *P. (Morphohaptoderus) geberti* SCIACY & WRASE, 1997, both from Shaanxi, but these species have a much larger body size and are markedly different in many internal and external characters.

DISTRIBUTION: Known only from W-Hubei, China.

Trigonognatha hubeica sp.n.

DIAGNOSIS: Related to *T. cordicollis* SCIACY & WRASE, 1997 and *T. vignai* CASALE & SCIACY, 1994, of relatively small size (10.8 – 12.0 mm), coppery with green reflections, with one anterior seta on each side of the pronotum and normally 2 setigerous punctures on interval 3 of elytra.

TYPE LOCALITY: China, W-Hubei, Da Shennongjia Mts., 2500 – 2900 m, 31°24'-27'N, 110°17'-20'E.

TYPE MATERIAL. **Holotype** ♂: "China, W-Hubei, 2500-2900 m, Dashennongjia massif, 31°24'-27'N 110°17'-20'E, 28.6-3.7.95" (CF). Paratypes 9 ♂♂ ♀♀, the same locality and date as holotype (CF, CS, NMW); 64 ♂♂ ♀♀: China, W-Hubei, Da Shennongjia Mts., 2100-2900 m, 31°5'N, 110°3'E, 12.VI.2002 (CF).

DERIVATIO NOMINIS: This name derives from the region where these specimens were collected.

DESCRIPTION. Total length 10.8 – 12.0 mm (11 mm in holotype); micropterous, colour coppery with greenish reflections on head, pronotum and elytra; palpi, legs and antennae dark-brown, palpi light-brown at apex. Habitus as in Fig. 17. Microsculpture very shallow on head and pronotum, shallow but distinct on elytra.

Head small, almost smooth, much narrower than pronotum. Eyes convex, frontal sulci deep and diverging posteriorly, reaching almost the middle of the eyes. Collar constriction hardly distinct dorsally. Antennae pubescent from antennomere 4.

Pronotum (index Pw/Pl = 1.26) markedly constricted towards the base, with lateral gutter narrow, not explanate towards base. Sides sinuate before hind angles, notched near base. Maximum width almost at middle, fore angles slightly projecting forward, hind angles almost right (slightly acute in some paratypes). Two basal impressions very deep, with very few punctures, external one shorter than internal one, base almost completely smooth, only with few longitudinal lines. Anterior seta almost at middle, posterior seta in the basal angle. Median longitudinal impression deep, anterior transverse impression evident, posterior transverse impression deep. Base unbordered. Pro-, meso- and metasternum almost completely smooth; pro-, meso- and metepisterna with scattered punctures. Metepisterna very short, as long as wide.

Elytra short and wide, rounded at sides (index El/Ew = 1.43), oval, convex, maximum width almost at middle. Striae deep, indistinctly punctate, intervals convex, the intervals all of the same width. Interval 3 with two (rarely one or three, in only one elytron) setigerous punctures (two in holotype), the anterior one in the anterior third adjoining stria 3, the posterior one in the posterior third adjoining stria 2. Shoulders with small tooth, basal margin forming a distinct angle with

lateral one. Scutellar setigerous puncture absent. Abdomen nearly smooth, the last sternite of male with one seta on each side, female with two setae on each side.

Legs rather short and stout, meso- and metatibiae straight, tarsi narrow, tarsomeres smooth dorsally, not furrowed, onychia with some setae underneath. Protarsomeres 1-3 of male markedly dilated, mesotarsomeres not dilated.

Median lobe of aedeagus without distinct characteristics, quite normal for the genus; in lateral view as in Fig. 18, in dorsal view as in Fig. 19. Right paramere as in Fig. 20.

AFFINITIES: This species seems to be related to *T. cordicollis* SCIAKY & WRASE, 1997 from Shaanxi (China) in the occurrence of one anterior seta on each side of the pronotum, the coppery color with green reflections and the pronotum distinctly constricted towards the base and sinuate before the hind angles. Also, *T. vignai* CASALE & SCIAKY, 1994 from N Sichuan and Gansu (China) and *T. latibasis* SCIAKY & WRASE, 1997 from Shaanxi (China) have only one anterior seta on each side of the pronotum and a similar color, but in these two species the pronotum is much more evidently transverse and very slightly constricted towards base. Although the habitus of *T. hubeica* sp.n. is similar to that of *T. cordicollis*, the former has the pronotum less constricted towards the base, with hind angles less acute, elytra with visible microsculpture, less shiny, striae with indistinct punctation (striae evidently punctate in *T. cordicollis*), striae deeper with more convex intervals, elytra less convex and interval 3 with 2 setigerous punctures (rarely 1 or 3, in only one elytron) instead of one (we have seen only one specimen of *T. cordicollis* with 2 setigerous punctures in only one elytron and one specimen without discal pores).

DISTRIBUTION: Known only from W-Hubei, China.

General remarks

These are the first Pterostichinae reported from Hubei and they seem to prove that the fauna of this region would deserve more attention and more research. The first considerations that can be done upon these preliminary, and necessarily very incomplete, data are that the fauna of this region seems to show evident similarities with that of the neighboring region of Shaanxi. It remains to be seen whether future research will also show the existence of endemic groups (species or genera), as those that have been discovered in several other areas of China.

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