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TAXONOMY OF THE SUBGENUS *EUTRIACANTHUS* JAKOBSON, OF THE GENUS *PRIOCHIRUS* SHARP, FROM SOUTHERN CHINA, WITH THE DESCRIPTION OF TWO NEW SPECIES FROM GUANGXI AND YUNNAN (COLEOPTERA: STAPHYLINIDAE: OSORIINAE)

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***ABSTRACT.* –** *Priochirus* Sharp, 1887, is a large rove beetle genus well adapted to habitats associated with dead wood. Within this genus, the subgenus *Eutriacanthus* Jakobson, 1908, is a species-rich group containing 42 species. Before our study, only one species, *Priochirus* (*Eutriacanthus*) *tonkinensis* Bernhauer, 1903, was recorded from China. In this paper, we studied the taxonomy of the subgenus *Eutriacanthus* from China and described two new species: *P.* (*E.*) *curticornis*, new species, from Guangxi and *P.* (*E.*) *pulchellus*, new species, from Yunnan. Two other species were recorded from China for the first time: *P.* (*E.*) *bipunctatus* (Fauvel, 1895) from Guangxi, Hainan and Yunnan, and *P.* (*E.*) *unicolor* (Laporte, 1835) from Yunnan. A key to these five Chinese species is provided. Type specimens are deposited in the Institute of Zoology, Chinese Academy of Sciences (IOZ-CAS) and the Zoological Reference Collection of the Raffles Museum of Biodiversity Research, National University of Singapore (ZRC).

***KEYWORDS.* –** Coleoptera, Staphylinidae, *Priochirus*, *Eutriacanthus*, new species, China.

INTRODUCTION

The genus *Priochirus* Sharp, 1887 is a speciose group of the subfamily Osoriinae (Coleoptera: Staphylinidae) with at least 271 species described (Herman, 2001; Wu & Zhou, 2005). These species are well adapted to habitats associated with dead wood and show remarkable specialisation and high diversity in their external morphology.

According to Greenslade (1971), the genus *Priochirus* was divided into 11 subgenera: *Barychirus* Greenslade, 1971; *Cephalomerus* Bernhauer, 1903; *Euleptarthrus* Jakobson, 1908; *Eutriacanthus* Jakobson, 1908; *Exochirus* Greenslade, 1971; *Leiochirus* Greenslade, 1971; *Peucodontus* Bernhauer, 1903; *Plastus* Bernhauer, 1903; *Priochirus* Bernhauer, 1903, sensu stricto; *Stigmatochirus* Bernhauer, 1903; and *Syncampsochirus* Bernhauer, 1903. Among them, the subgenus *Eutriacanthus* can be distinguished from other subgenera by the distinct median tooth on the anterior margin of the frontal impression. This classification is now followed by most taxonomists (Naomi, 1996; Herman, 2001; Smetana, 2004; Wu & Zhou, 2005).

Before our study, the subgenus *Eutriacanthus* included 40 species in the world (Herman, 2001). Most of them were known to be distributed in the tropical forests of Southeast Asia and the islands of the South Pacific. As the northern boundary of the Oriental region, South China is important for this group from the viewpoint of zoogeography. However, as with most other *Priochirus* spp., the taxonomy of this subgenus is poorly studied in China. Only one species, *Priochirus* (*Eutriacanthus*) *tonkinensis* Bernhauer, 1903, was recorded from Taiwan (perhaps also from mainland China, but was not clearly indicated by Cameron, 1949). In this paper, two new species are described from the mainland China: *P.* (*E.*) *curticornis*, new species, from Guangxi and *P.* (*E.*) *pulchellus*, new species, from Yunnan. Two species are recorded from China for the first time: *P.* (*E.*) *bipunctatus* (Fauvel, 1895) from Guangxi, Hainan and Yunnan, *P.* (*E.*) *unicolor* (Laporte, 1835) from Yunnan. Thus, a total of five species of the subgenus *Eutriacanthus* are now known from China.

MATERIALS AND METHODS

All specimens included in this study were originally pinned or glued on hard paper cards. For the following dissections and morphological studies they were macerated in 10% KOH solution, rinsed in water, and then preserved in 75% alcohol. Specimen dissections, examinations and illustrations were made under the stereoscopic microscope (Leica™ MZ APO). The following abbreviations are used in the text: HL, head length (from frontal angle to the posterior margin); PL, pronotum length (along medial line); EL, elytron length (from the humerus to the most distal margin); HW, head width (maximal, excluding eyes); PW, pronotum width (maximal); and EW, elytral width (maximal).

This study is based on the specimens in the collection of IOZ-CAS (Institute of Zoology, the Chinese Academy of Sciences). All the type specimens are deposited in IOZ-CAS and the Zoological Reference Collection of the Raffles Museum of Biodiversity Research, National University of Singapore (ZRC).

TAXONOMY

Priochirus Sharp, 1887

Priochirus Sharp, 1887: 740; Bernhauer, 1903: 116; Bernhauer and Schubert, 1910: 15; Cameron, 1930: 95; Scheerpeltz, 1933: 1001; Greenslade, 1971: 126; Naomi, 1996: 1; Herman, 2001: 1108.

***Type species*. –** *Priochirus haemorrhous* Sharp, 1887, fixed by subsequent designation by Blackwelder, 1952.

Priochirus (*Eutriacanthus*) Jakobson, 1908

Eutriacanthus Jakobson, 1908: 466 (subgenus of *Priochirus*, replacement name for *Triacanthus* Bernhauer, 1903); Greenslade, 1971: 137; Greenslade, 1972: 207; Herman, 2001: 1110; Smetana, 2004: 506.

Type species. – *Leptochirus unicolor* Laporte, 1835, fixed by objective synonymy with *Triacanthus*.

Triacanthus Bernhauer, 1903: 136, 158 (subgenus of *Priochirus*, preoccupied by Oken, 1817; type species: *Leptochirus unicolor* Laporte, 1835, fixed by subsequent designation by R. Lucas, 1920:647); Bernhauer & Schubert, 1910: 15 (subgenus of *Priochirus*); Blackwelder, 1952; 393; Greenslade, 1971: 127 (synonym of *Priochirus* subgenus *Eutriacanthus*); Herman, 2001: 1108.

Triacanthochirus Bernhauer, 1923: 63 (subgenus of *Priochirus*, replacement name of *Triacanthus* Bernhauer, 1903; type species: *Leptochirus unicolor* Laporte, 1835, fixed by objective synonymy with *Triacanthus*); Cameron, 1930: 96; Scheerpeltz, 1933; 1001; Blackwelder, 1952: 393; Greenslade, 1971: 127 (synonym of *Priochirus* subgenus *Eutriacanthus*); Herman, 2001: 1110.

***Diagnosis*. –** This subgenus may be distinguished from other subgenera of *Priochirus* by head with a pair of distinct lateral teeth and a prominent median tooth on anterior margin of frontal impression.

Key to species of subgenus *Eutriacanthus* from South China

1. Head: median tooth shorter than lateral tooth 2
– Head: median tooth longer than lateral tooth 3

2. Sides of pronotum convergent anteriorly; mentum with two distinct transverse ridges ..... *P.* (*E.*) *curtcornis*, new species
– Sides of pronotum parallel; mentum with one transverse ridge ..... *P.* (*E.*) *unicolor* (Laporte)

3. Lateral line vanishing before reaching protruding part of posterior margin of pronotum; 8th abdominal segment red ... . *P.* (*E.*) *pulchellus*, new species
– Lateral line complete, reaching posterior margin of pronotum; 8th abdominal segment black 4

4. Pronotum and elytra red; body size larger (13–15 mm) .... *P.* (*E.*) *bipunctatus* (Fauvel)
– Pronotum and elytra black; body size smaller (9–11 mm) .... *P.* (*E.*) *tonkinensis* Bernhauer

Priochirus (*Eutriacanthus*) *curticornis*, new species

(Figs. 1, 2)

Material examined. – Holotype: male, China, Guangxi, Langping, 1400 m, 1 Jun.2002, Guofang Jiang coll. (IOZ-CAS). Paratype: 1 female, same data as holotype (IOZ-CAS).

Description. – Body moderately depressed. Antennae brown; head, pronotum and elytra black; legs black, tarsi red-brown; abdomen black, 8th segment slightly dark red.

Head transverse (Fig. 1), almost parallel-sided, frontal angle weakly convex behind lateral teeth; frontal impression about 2.5 times as wide as median length, posterior margin slightly rounded; median tooth bluntly projecting, slightly shorter than two lateral teeth, base distinctly convex and weakly contracted behind anterior margin; lateral teeth pointed and divergent anteriorly, lateral face with 5 or 6 setae turning upward, medial face with row of setae extending onto anterior margin; median sulcus deep, scarcely connected with frontal impression, gradually broadened backwards, posterior end almost as wide as middle width of median longitudinal sulcus on pronotum; vertex smooth, with some scattered punctures and setae along lateral and postero-lateral margin; posterior margin near posterior end of sulcus, with distinct fovea bearing 3 or 4 setae; clypeus short and declivous anteriorly, its anterior margin almost truncate. Eyes glabrous and distinctly convex, longitudinal diameter at most as long as 1/2 length of head.

Mandible moderately protruding, anterior half strongly bent, with row of setae along lateral margin, dorsal tooth short and blunt, apically curved inwards, medial face of first ventral tooth distinctly convex. Mentum trapeziform and setose, anterior margin truncate, median tooth pointed and broadened at base, lateral margin convex, with two distinct transverse ridges, anterior ridge moderately convex laterally and moderately depressed in middle, posterior ridge less convex, gradually indistinct mediad (Fig. 2).

Antennae almost reaching shoulder of elytra posteriorly; 1st segment baculiform, emarginate at apex; 2nd segment smallest and slightly transverse; 3rd segment elongate and narrowed at base, about 2.5 times as long as 2nd; 4th segment longer than wide; 5th and 6th segments slightly quadrate; 7–10th segments transverse; 11th segment slightly elongate, apically rounded, about 1.8 times as long as 10th.

Pronotum wider than long, anterior margin weakly bisinuate, sides distinctly convergent anteriorly, posterior margin slightly protruding backwards in middle; surface smooth with fine coriaceous sculptures; median longitudinal sulcus deep, widest in middle, not reaching both anterior and posterior margins; disc on each side of sulcus with indistinct puncture; marginal area with some scattered, coarse setiferous punctures, especially dense at posterior angle; lateral line continuing along posterior margin and reaching basal line. Mesoscutellum heart-shaped, smooth and shiny.

Protibiae lateral with 13–16 denticles, which gradually become shorter basally, dorsal side with indistinct spine close behind apical spur, slightly shorter and thicker than other erect dorsal setae. Middle and hind tibiae densely setose.

Elytra slightly longer than wide, humeri rounded, sides slightly convex along posterior 1/3, combined posterior margins shallowly emarginate; surface glabrous with dense micropunctuations; base and sides with dense setae of various length.

Abdomen cylindrical, broadened posteriorly and widest at 7th segment; all segments, except 8th, narrowed at base; surface with moderately dense, mostly long and erect setae, which are relatively denser at lateral sides; punctures small, especially denser in basal half of tergites, with longitudinal glabrous region in the middle.

Measurements. **–** Body length: 12.0–13.0 mm. HL: 0.78 mm; HW: 1.69 mm; PL: 1.95 mm; PW: 2.65 mm; EL: 2.47 mm; EW: 2.34 mm (n = 2).

Etymology. **–** The species name is derived from the combination of the Latin words "*curtus*" (meaning "short") and "*cornis*" (meaning "corn-like") to indicate the short median tooth on the anterior margin of frontal impression, characteristic to this species.

Remarks. **–** This new species is similar to *P.* (*E.*) *unicolor*, but may be distinguished from the latter by the smaller body size and anteriorly convergent sides of pronotum.

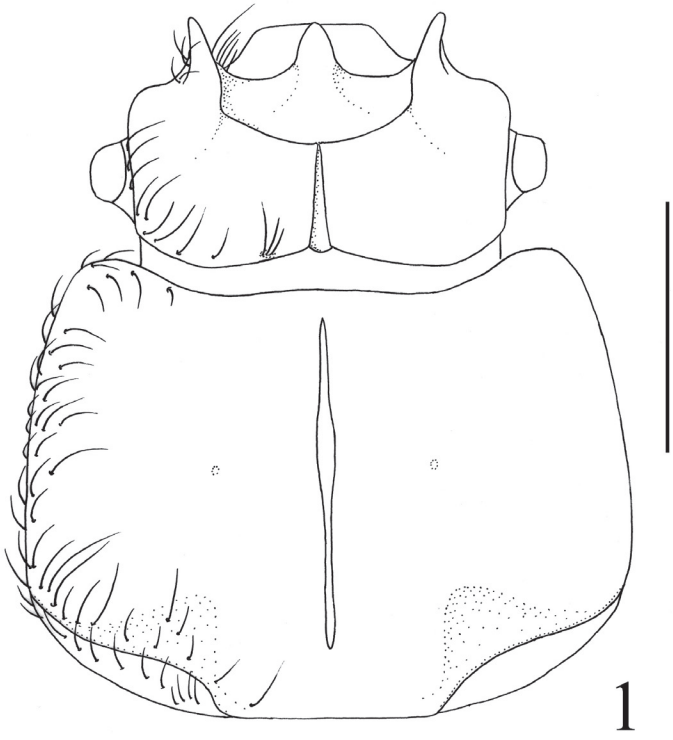
Distribution. **–** China (Guangxi).

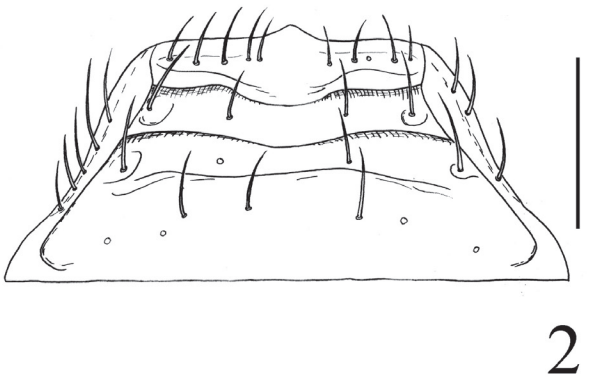
Priochirus (*Eutriacanthus*) *pulchellus*, new species

(Figs. 3–7)

Material examined. **–** Holotype: male, China, Xishuangbanna, Damenglong, 650 m, 18 Apr.1958, Leyi Deng coll. (IOZ-CAS).

Paratypes: 2 females, same data as holotype (IOZ-CAS); 1 male, 2 females, China, Xishuangbanna, Damenglong, 650 m, 16 Apr.1958, Shuyong Wang coll. (IOZ-CAS); 1 male, China, Xishuangbanna, Damenglong, 650 m, 16 Apr.1958, Xuwu Meng coll. (ZRC); 1 female, China, Xishuangbanna, Damenglong, 650 m, 16 Apr.1958, Yiran Zhang coll. (ZRC).

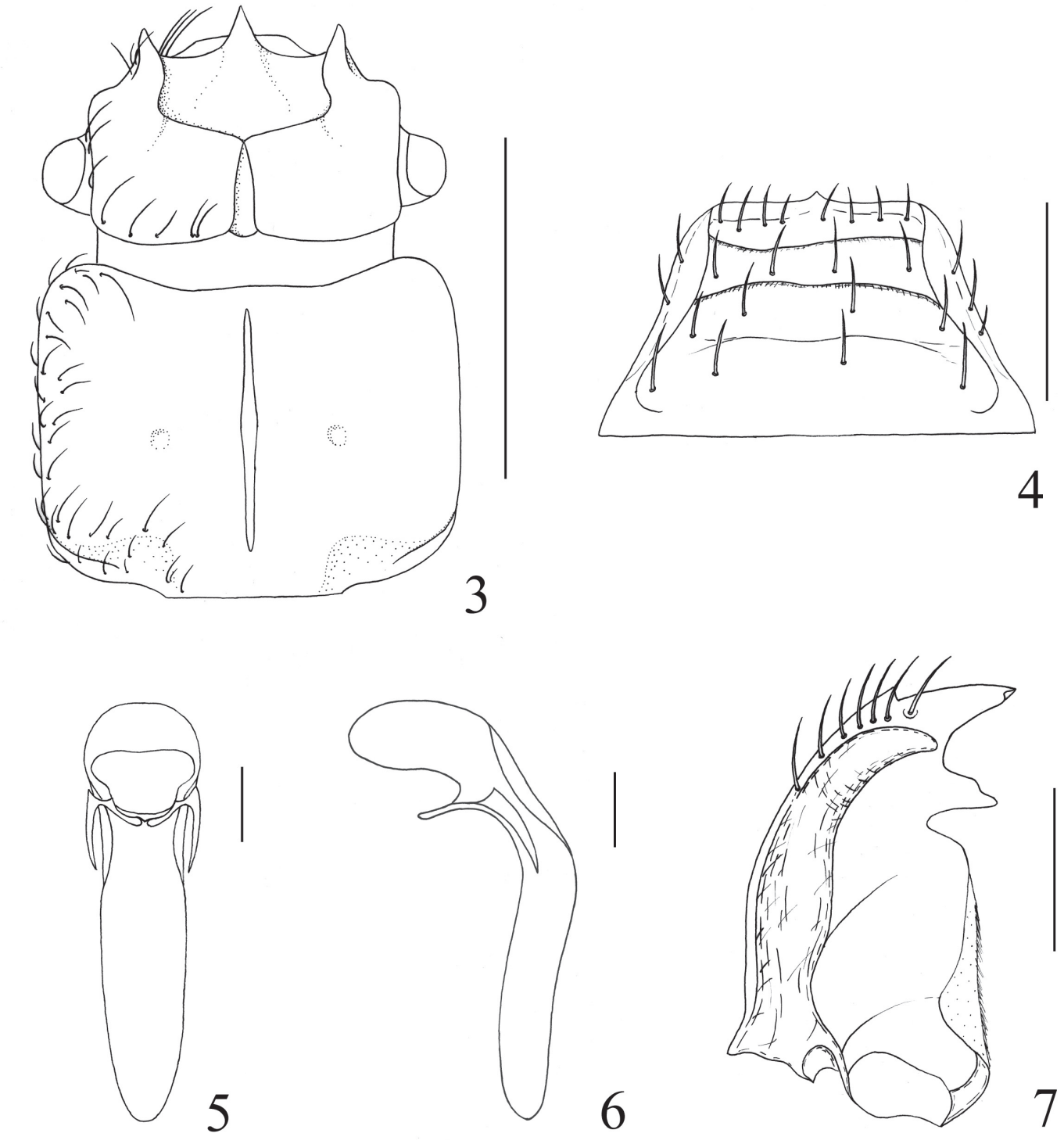




Figs. 1 and 2. *Priochirus* (*Eutriacanthus*) *curticornis*, new species: 1, head and pronotum, dorsal view; 2, mentum. Scale bars: (Fig. 1) = 1.00 mm; (Fig. 2) = 0.25 mm.

Description. **–** Body moderately depressed. Antennae reddish-brown; head dark red and shiny with anterior margin reddish; pronotum and elytra dark red; femorae and tibiae reddish, tarsi slightly yellowish; abdomen dark red with 8th segment red.

Head transverse (Fig. 3), parallel-sided, frontal angle weakly convex behind lateral teeth; frontal impression about twice as wide as median length, posterior margin medially protruding backwards; median tooth triangularly projecting and sharply pointed, distinctly longer than two lateral teeth, base slightly convex along central disc of frontal impression; lateral teeth short and pointed, weakly divergent anteriorly, but with their apex slightly curved inwards, lateral face with 4 or 5 setae turning upward, medial face with row of long setae extending onto anterior margin; median sulcus deep, scarcely connected with frontal impression, gradually broadened backwards, posterior end distinctly wider than middle width of median



Figs. 3–7. *Priochirus* (*Eutriacanthus*) *pulchellus*, new species: 3, head and pronotum, dorsal view; 4, mentum; 5, aedeagus, dorsal view; 6, aedeagus, lateral view; **7**, left mandible. Scale bars: (Fig. 3) = 1.00 mm; (Figs. 4–7) = 0.25 mm.

longitudinal sulcus on pronotum; vertex smooth, along lateral and postero-lateral margin with some scattered punctures and setae, posterior margin near to posterior end of sulcus with indistinct fovea bearing 2 or 3 setae; clypeus short and declivous anteriorly, anterior margin almost truncate. Eyes glabrous and distinctly convex, longitudinal diameter distinctly longer than 1/2 length of head.

Mandible moderately protruding, anterior half moderately bent, with row of setae along lateral margin, dorsal tooth long and pointed, gradually curved inwards, medial side of first ventral tooth slightly convex at apex (Fig. 7). Mentum trapeziform and setose, anterior margin truncate with pointed tooth in middle, lateral margin convex, with two distinct transverse, evenly convex ridges (Fig. 4).

Antennae short, posteriorly reaching base of pronotum; 1st segment baculiform, emarginate at apex; 2nd segment smallest and quadrate; 3rd segment elongate and narrowed at base, about 1.5 times as long as 2nd; 4–10th transverse; 11th slightly elongate, apically rounded, about twice as long as 10th.

Pronotum wider than long, anterior margin weakly bisinuate, sides parallel, posterior margin slightly protruding backwards in middle; surface smooth with sparse micropunctures; median longitudinal sulcus deep, widest in middle, not reaching both anterior and posterior margins; disc on each side of sulcus with distinct puncture; along marginal area with some scattered, coarse, setiferous punctures, especially denser at posterior angle; lateral line complete, but vanishing before reaching protruding part of posterior margin. Mesoscutellum not very elongate, slightly heart-shaped, smooth and shiny.

Protibiae laterally with 9–11 denticles, which become gradually shorter basally, dorsal side with indistinct spine close behind apical spur, which is moderately thicker than other erect dorsal setae. Middle and hind tibiae densely setose.

Elytra slightly longer than wide, humeri rounded, almost parallel-sided, combined posterior margins shallowly emarginate; surface glabrous with dense micropunctuations; moderately dense setae of various lengths along base and laterally.

Abdomen cylindrical, broadened posteriorly and widest at 7th segment; all segments, except 8th, narrowed at base; surface with moderately dense setae, mostly long and erect, relatively denser laterally; punctures small, denser in basal half of tergites, gradually becoming sparser posteriorly.

Male: Aedeagus almost membraneous with basal orifice rounded and slightly convex lateral outline; median lobe slightly bulbous at base, strongly curved behind basal orifice, posterior part stick-shaped, weakly sclerotized dorsally, slightly contracted apically; parameres thin and short, apically pointed, dorsally protruding, but not connected with each other (Figs. 5, 6).

Measurements. **–** Body length: 6.5–7.0 mm. HL: 0.42 mm; HW: 0.92 mm; PL: 0.93 mm; PW: 1.32mm; EL: 1.35 mm; EW: 1.28 mm (n = 3).

Etymology. **–** The species name is derived from the Latin word "*pulcher*" (meaning "beautiful") to indicate its beautiful body coloration.

Remarks. **–** This new species is similar to *P.* (*E.*) *tridens* (Motschulsky, 1857), but may be distinguished from the latter by red body coloration and two distinct punctures on each side of the sulcus on pronotum. This new species is also similar to *P.* (*E.*) *bipunctatus* (Fauvel, 1895), but differs in distinctly smaller body size, incomplete lateral line on posterior margin of pronotum and the sharper median tooth on anterior margin of frontal impression.

Distribution. **–** China (Yunnan).

Priochirus (*Eutriacanthus*) *bipunctatus*, Fauvel, 1895
(Figs. 8–11)

Leptochirus bipunctatus Fauvel, 1895: 180 (type locality: Bírmanie, Carin Cheba, 900–1,100 m; Carin Ghécu, 1,300–1,400 m; Tenasserim, mont Mooleyit, 1,800–1,900 m; Plapoo; Siam, monts de La Khone).

Priochirus bipunctatus Heller, 1898: 7; Bernhauer & Schubert, 1910: 15 (subgenus *Triacanthus*); Cameron, 1930: 97 (subgenus *Triacantochirus*); Scheerpeltz, 1933: 1002; Greenslade, 1971: 138 (subgenus *Eutriacanthus*); Herman, 2001: 1115.

Leptochirus nigrita Fauvel, 1902: 13 (variety of *bipunctatus*; type locality: Malacca; Sumatra); Bernhauer & Schubert, 1910: 15; Herman, 2001: 1115 (synonym of *bipunctatus*).

Material examined. **–** 2 males, 3 females, China, Guangxi, Napo, 960–1,005 m, 12 Apr.1998, Haisheng Zhou coll. (IOZ-CAS); 1 male, 4 females, China, Yunnan, Xishuangbanna, Mengla, 730 m, 13 Feb.2004, Jie Wu coll. (IOZ-CAS); 5 males, 7 females, China, Hainan, Wuzhi mountain, 820 m, 7 Jul.2004, Jie Wu and Yongjie Chen coll. (IOZ-CAS).

Redescription. **–** Body moderately depressed. Antennae reddish-brown; head dark red and shiny; pronotum and elytra red; femorae and tibiae dark red, tarsi slightly red-brown; abdomen black with posterior margin of each segment slightly red-brown.

Head transverse (Fig. 8), parallel-sided, frontal angle weakly convex behind lateral teeth; frontal impression about twice as wide as median length, posterior margin obliquely convergent backwards forming a sharp angle; median tooth distinctly projecting and pointed, slightly longer than 2 lateral teeth, distinctly contracted behind apex, base strongly convex along central disc of frontal impression; lateral teeth pointed, apex slightly curved inwards, lateral face with 5 or 6 setae turning upward, medially with row of long setae extending onto anterior margin; median sulcus deep, not anteriorly connected with frontal impression, gradually broadened backwards, posterior end about twice as wide as middle width of median longitudinal sulcus on pronotum; vertex smooth and shiny, some scattered punctures and setae along

lateral and postero-lateral margins, posterior margin near to posterior end of sulcus with indistinct fovea bearing 3 or 4 setae; clypeus short and declivous anteriorly, slightly convex in middle, anterior margin almost truncate. Eyes glabrous and distinctly convex, longitudinal diameter about 1/2 length of head.

Mandible similar to that of *P.* (*E.*) *pulchellus*, but with relatively denser setae occurring along lateral margin. Mentum trapeziform and setose, anterior margin truncate, median tooth small and pointed, lateral margin moderately convex, with two waved and rugose transverse ridges (Fig. 11).

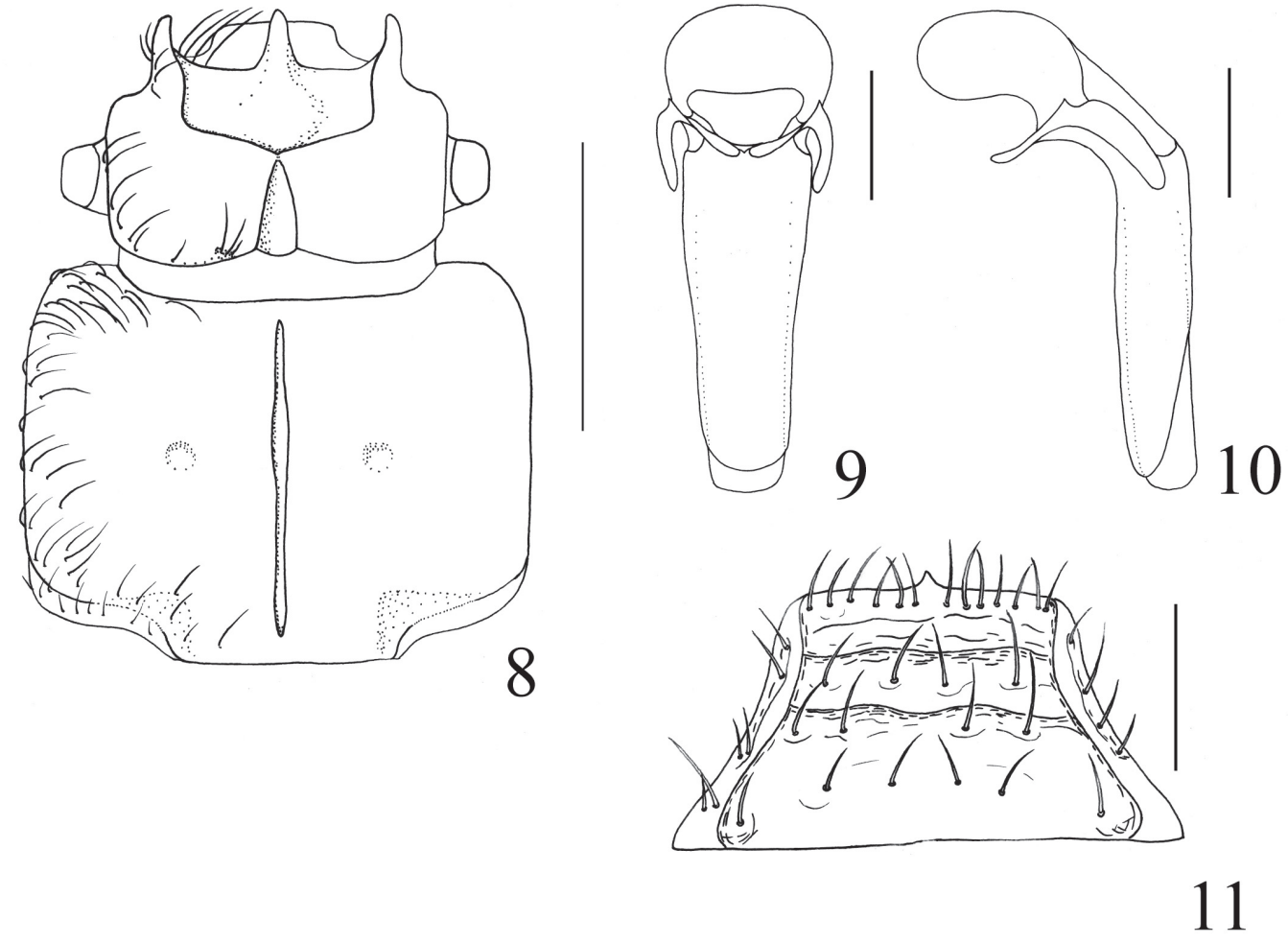
Antennae almost reaching shoulder of elytra posteriorly; 1st segment baculiform, emarginate at apex; 2nd segment smallest and transverse; 3rd segment elongate and narrowed at base, about 1.5 times as long as 2nd; 4–6th segments longer than wide; 7–10th segments gradually transverse; 11th segment slightly elongate, apically rounded, about 1.8 times as long as 10th.

Pronotum wider than long, anterior margin weakly bisinuate, sides parallel, posterior margin slightly protruding backwards in middle; surface smooth with sparse micropunctures, near to lateral region with fine vermiform sculptures; median longitudinal sulcus deep, widest in middle, not reaching both anterior and posterior margins; disc on each side of sulcus with big puncture; along marginal area with some scattered, coarse, setiferous punctures, especially denser at anterior and posterior angle; lateral line complete on posterior margin of pronotum and reaching basal line. Mesoscutellum tongue-shaped, smooth and shiny.

Protibiae laterally with 13–16 denticles, which gradually becoming shorter basally, on dorsal side with distinct spine closely behind apical spur. Middle and hind tibiae densely setose.

Elytra slightly wider than long, humeri rounded, almost parallel-sided, weakly convex in posterior 1/4, combined posterior margins distinctly emarginate; surface with sparse micropunctuations; along base and sides with moderately dense setae of various length.

Abdomen cylindrical, broadened posteriorly and widest at 7th segment; all segments, except 8th, narrowed at base; surface with sparse setae, mostly long and erect, relatively denser at



Figs. 8–11. *Priochirus* (*Eutriacanthus*) *bipunctatus* (Fauvel, 1895): 8, head and pronotum, dorsal view; 9, aedeagus, dorsal view; 10, aedeagus, lateral view; 11, mentum. Scale bars: (Fig. 8) = 1.00 mm; (Figs. 9–11) = 0.25 mm.

lateral sides; punctures small, especially denser in basal half of tergites, gradually becoming sparser posteriorly.

Male: Aedeagus similar to that of *P*. (*E*.) *pulchellus*, but parameres rounded at apex, not pointed (Figs. 9, 10).

Measurements. **–** Body length: 13.0–15.0 mm. HL: 0.62 mm; HW: 3.47 mm; PL: 1.56 mm; PW: 2.13 mm; EL: 2.08 mm; EW: 2.16 mm (n = 3).

Remarks. **–** In coloration, this species is similar to *P*. (*E*.) *apicalis* Eppelsheim, 1895, but with a black abdomen, not reddish as in the latter. Furthermore, the median tooth in this species is distinctly contracted behind the apex, not stout as in *P*. (*E*.) *apicalis*. This species is widely distributed in Southeast Asia and is recorded from southern China for the first time.

Distribution. **–** China (Guangxi, Hainan, Yunnan); India, Myanmar, Thailand and Indonesia.

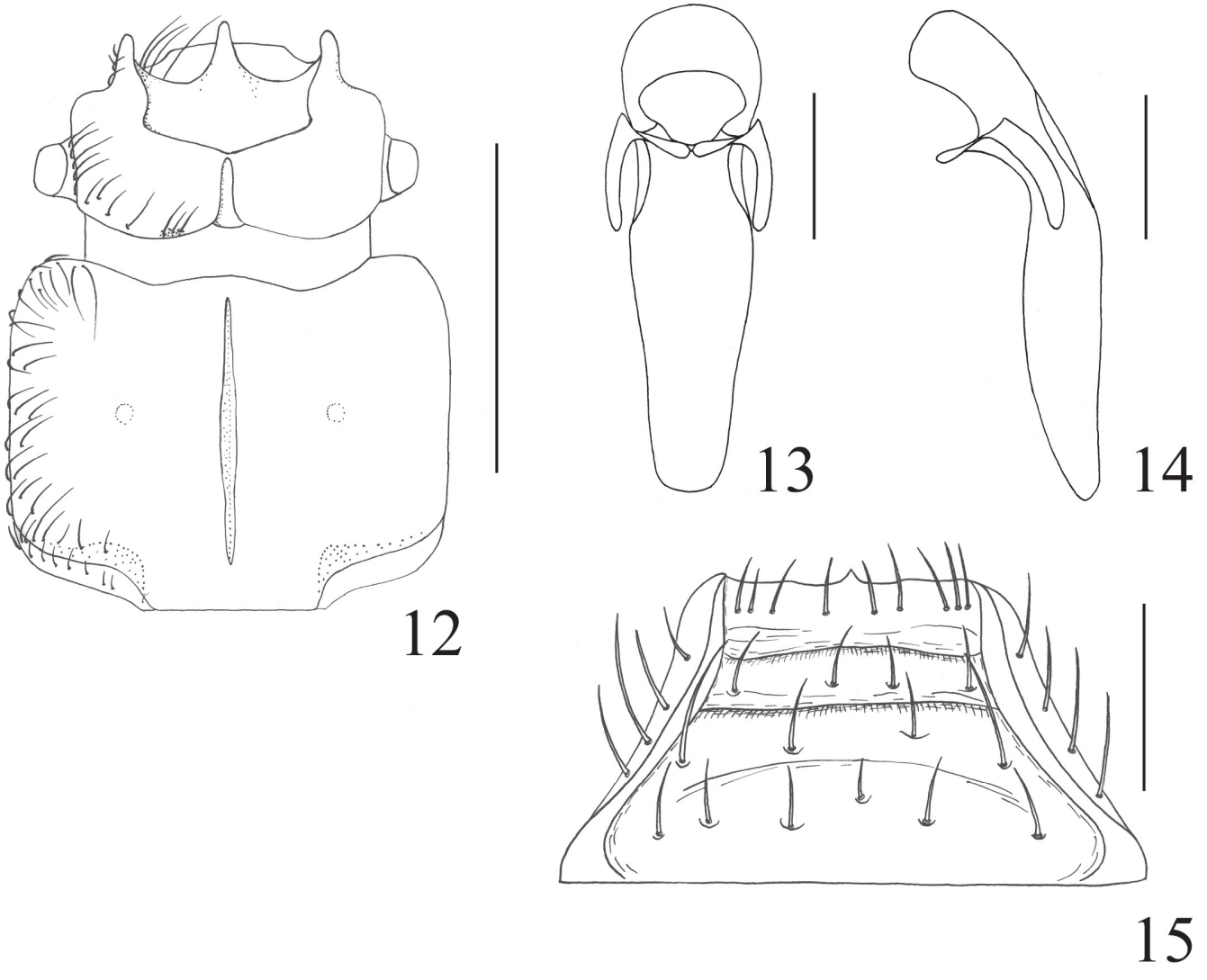
***Priochirus* (*Eutriacanthus*) *tonkinensis* Bernhauer, 1903**
(Figs. 12–15)

Priochirus tonkiensis Bernhauer, 1903: 137, 148 (type locality: Tonkin); Bernhauer and Schubert, 1910: 16 (subgenus of *Triacanthus*; Scheerpeltz, 1933: 1003 (subgenus of *Triacanthochirus*); Greenslade, 1971: 138 (subgenus of *Eutriacanthus*); Herman, 2001: 1140.

Material examined. **–** 5 males, 8 females, China, Guangxi, Napo, Nonghua, 960 m, 14 Apr.1998, Haisheng Zhou coll. (IOZ-CAS); 10 males, 9 females, China, Yunnan, Xishuangbanna, Menglun, 560 m, 9 Feb.2004, Jie Wu coll. (IOZ-CAS); 3 males, 4 females, Tonkin, Hao-Binh, A. de Cooman coll. (IOZ-CAS).

Redescription. **–** Body moderately depressed. Antennae black-brown; femorae and tibiae slightly red-black, tarsi red-brown; other body parts black.

Head transverse (Fig. 12), parallel-sided, frontal angle weakly convex behind lateral teeth; frontal impression about twice as



Figs. 12-15. *Priochirus* (*Eutriacanthus*) *tonkinensis* Bernhauer, 1903: 12, head and pronotum, dorsal view; 13, aedeagus, dorsal view; 14, aedeagus, lateral view; 15, mentum. Scale bars: (Fig. 12) = 1.00 mm; (Figs. 13–15) = 0.25 mm.

wide as median length, posterior margin obliquely convergent backwards forming a sharp angle; median tooth distinctly projecting and pointed, distinctly longer than 2 lateral teeth, base weakly convex along central disc of frontal impression; lateral teeth bluntly projecting, apex slightly curved inwards, lateral face with 5 or 7 setae turning upward, medial face with row of long setae extending onto anterior margin; median sulcus deep, not anteriorly connected with frontal impression, gradually broadened backwards, posterior end almost as wide as middle width of median longitudinal sulcus on pronotum; vertex smooth, sometimes with one or two distinct punctures, along lateral and postero-lateral margin with some scattered punctures and setae, posterior margin near to posterior end of sulcus with distinct fovea bearing 3 or 4 setae; clypeus short and steep, anterior margin truncate. Eyes glabrous and distinctly convex, longitudinal diameter about 1/2 length of head.

Mandible similar to that of *P.* (*E.*) *pulchellus*, but medial face of first ventral tooth more convex. Mentum trapeziform and setose, median tooth on anterior margin small and pointed, lateral margin convex, ventral surface with 2 distinct transverse ridges (Fig. 15).

Antennae short, almost reaching base of pronotum posteriorly; 1st segment baculiform, emarginate at apical margin; 2nd segment smallest and transverse; 3rd segment elongate and narrowed at base, about 1.5 times as long as 2nd; 4th segment quadrate; 5–10th segments gradually transverse; 11th segment slightly elongate, apically rounded, about 1.5 times as long as 10th.

Pronotum distinctly wider than long, anterior margin distinctly bisinuate, sides parallel, posterior margin slightly protruding backwards in middle; surface smooth with sparse micropunctures; median longitudinal sulcus deep, widest in middle, not reaching both anterior and posterior margins; disc on each side of sulcus with big puncture; along marginal area with some scattered, coarse, setiferous punctures, especially denser at anterior and posterior angles; lateral line complete on posterior margin of pronotum and reaching basal line. Mesoscutellum tongue-shaped and shiny, surface sometimes with a few punctures.

Protibiae laterally with 12–15 denticles, which becoming gradually shorter basally, on dorsal side with distinct spine closely behind apical spur. Middle and hind tibiae densely setose.

Elytra almost quadrate, humeri rounded, almost parallel-sided, combined posterior margins shallowly emarginate; surface shiny with sparse micropunctions; moderately dense setiferous punctures along base and sides.

Abdomen cylindrical, broadened posteriorly and widest at 7th segment; all segments, except 8th, narrowed at base; surface with moderately dense setae, mostly long and erect, denser laterally than in middle; punctures small, especially denser in basal half of tergites and gradually becoming sparser posteriorly.

Male: Aedeagus with median lobe bulbous at base, weakly curved behind basal orifice, posterior part weakly sclerotized dorsally, broadened in middle and gradually contracted apically; parameres apically rounded, dorsally protruding, but not connected with each other (Figs. 13, 14).

Measurements. **–** Body length: 9.0–11.0 mm. HL: 0.59 mm; HW: 1.18 mm; PL: 1.05 mm; PW: 1.41 mm; EL: 1.43 mm; EW: 1.45 mm (n = 3).

Remarks. **–** In body size and shape of the teeth of head, this species is similar to *P.* (*E.*) *tridens* Motschulsky, 1857. But it may be distinguished from the latter by the black abdominal apex, more transverse frontal impression and pronotum disc, which has a big puncture on each side of sulcus.

Distribution. **–** China (Guangxi, Yunnan, Taiwan) and Vietnam.

Priochirus (*Eutriacanthus*) *unicolor* Laporte, 1835
(Figs. 16–20)

Leptochirus unicolor Laporte, 1835: 125 (type locality: Java); Erichson, 1840: 826.
Priochirus unicolor Heller, 1898: 8; Bernhauer, 1903: 136; Bernhauer and Schubert, 1910: 16 (subgenus *Triacanthochirus*); Scheerpeltz, 1933: 1003; Greenslade, 1971: 138 (subgenus *Eutriacanthus*); Herman, 2001: 1141.
Leptochirus coronatus Sachse, 1852: 146 (type locality: Java); Heller, 1898: 8 (synonym of *unicolor*); Bernhauer & Schubert, 1910: 16; Herman, 2001: 1141.

Material examined. **–** 10 males, 13 females, Yunnan, Xishuangbanna, Menglun, 620 m, 12 Feb.2004, Jie Wu & Jiaolin Zhang coll. (IOZ-CAS); 3 males, 4 females, Yunnan, Xishuangbanna, Mengzhe, 11 Jul.1958, Shuyong Wang coll. (IOZ-CAS); 1 male, Sumatra, 1906 (collector unknown) (IOZ-CAS).

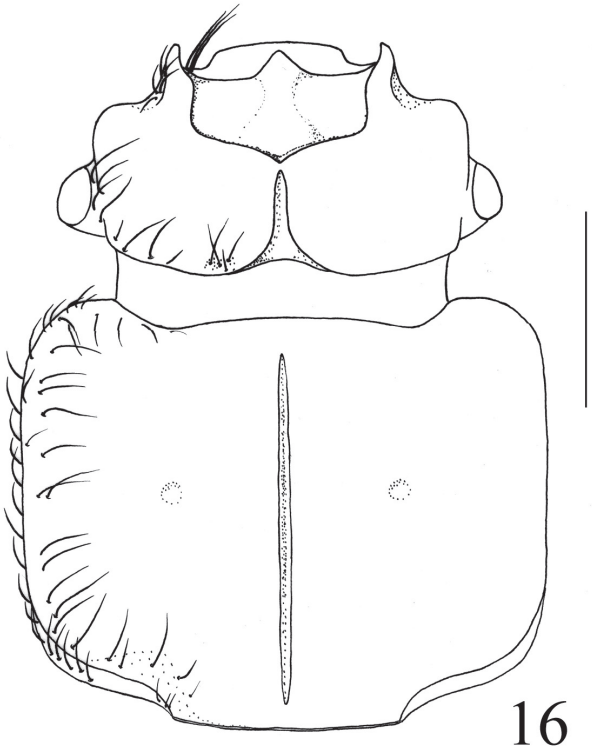
Redescription. **–** Body moderately depressed and shiny. Antennae slightly brown; femorae and tibiae slightly red-black, tarsi red-brown; other body parts black.

Head transverse (Fig. 16), parallel-sided, frontal angle weakly convex behind lateral teeth; frontal impression about twice as wide as median length, posterior margin obliquely convergent backwards forming a sharp angle; median tooth triangular and pointed, distinctly shorter than 2 lateral teeth, base convex along central disc of frontal impression and contracted behind anterior margin; lateral teeth apically pointed and curved inwards, lateral face with 6 or 7 setae turning upward, medial face with a bunch of setae just behind anterior margin; median sulcus deep, not anteriorly connected with frontal impression, gradually broadened backwards, posterior end about three times as wide as middle width of median longitudinal sulcus on pronotum; vertex smooth, along lateral and postero-lateral margin with some scattered punctures and setae, posterior margin near to posterior end of sulcus with distinct fovea bearing 3 or 4 setae; clypeus short and declivous anteriorly, anterior margin almost truncate. Eyes glabrous and distinctly convex, longitudinal diameter about 1/2 length of head.

Mandible moderately protruding, anterior half strongly bent, with row of setae along lateral margin, dorsal tooth short and pointed, apically curved inwards; first ventral tooth pointed, strongly convex, medially forming a ridge; second ventral teeth strongly protruding and distinctly concave at apex; behind second ventral teeth, inner margin with small pointed tooth (Fig. 20). Mentum trapeziform and setose, anterior margin laterally convex, median tooth small and pointed; lateral margin convex; surface with distinct transverse ridge, which is strongly convex laterally almost forming 2 denticles (Fig. 17).

Antennae almost reaching base of pronotum posteriorly; 1st segment baculiform, emarginate at apex; 2nd segment transverse; 3rd segment elongate and narrowed at base, about twice as long as 2nd; 4th segment quadrate; 5–10th segments gradually transverse; 11th segment apically rounded, about twice as long as 10th.

Pronotum distinctly wider than long, anterior margin distinctly bisinuate, sides parallel, posterior margin slightly protruding backwards in middle; surface smooth and shiny with sparse micropunctures; median longitudinal sulcus



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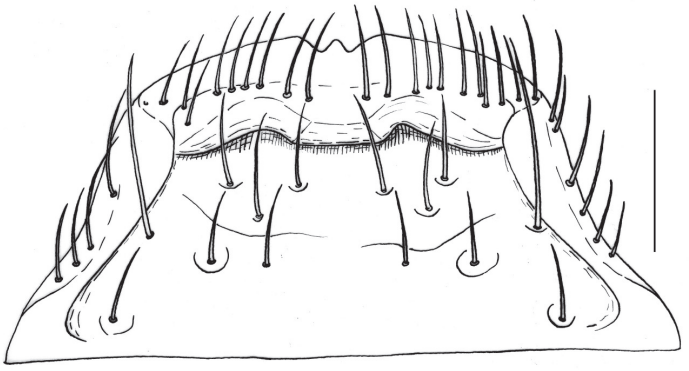

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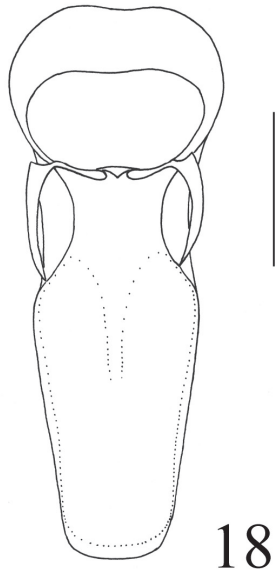

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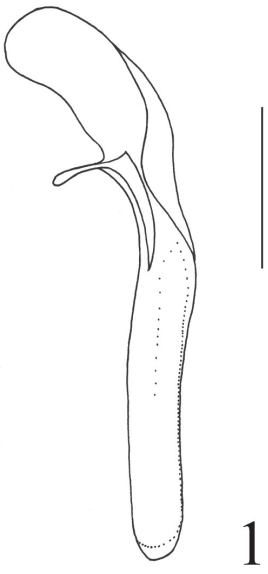

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Figs. 16–20. *Priochirus* (*Eutriacanthus*) *unicolor* (Laporte, 1835): 16, head and pronotum, dorsal view; 17, mentum; 18, aedeagus, dorsal view; 19, aedeagus, lateral view; 20, left mandible. Scale bars: (Fig. 16) = 1.00 mm; (Figs. 17–20) = 0.25 mm.

almost evenly narrowed, not reaching both anterior and posterior margins; disc on each side of sulcus with big puncture; along marginal area with some scattered setiferous punctures, relatively sparser than in other species; lateral line complete on posterior margin of pronotum and reaching basal line. Mesoscutellum tongue-shaped, smooth and shiny.

Protibiae laterally with 15–17 denticles, which gradually becoming shorter basally, on dorsal side with short spine closely behind apical spur. Middle and hind tibiae densely setose.

Elytra slightly wider than long, humeri rounded, almost parallel-sided, combined posterior margins shallowly emarginate; surface shiny with sparse micropunctions; along base and sides with moderately dense setiferous punctures.

Abdomen cylindrical, broadened posteriorly and widest at 7th segment; all segments, except 8th, narrowed at base; surface with sparse setae, relatively dense laterally; punctures big and sparse, denser in basal half of tergites and vanishing in posterior half.

Male: Aedeagus similar to that of *P.* (*E.*) *tonkinensis*, but basal orifice more expanded and rounded; median lobe more bulbous at base, posterior part more broadened in middle, slightly depressed in lateral view; parameres apically pointed, not rounded (Figs. 18, 19).

Measurements. **–** Body length: 15.0–17.0 mm. HL: 0.93 mm; HW: 15 mm; PL: 2.31 mm; PW: 3.04 mm; EL: 2.81 mm; EW: 2.97 mm (n= 3).

Remarks. **–** This species is similar to *P. pentagonalis* Bernhauer, 1914 in shape of median tooth on head, but may be distinguished from the latter by bigger body size and more transverse elytra (not much longer than wide). Before this study, this species has been known only from Indonesia (Java and Sumatra). This is the first time that this species is recorded from southern China and it is possible that this species is more widely distributed in Southeast Asia.

Distribution. **–** China (Yunnan) and Indonesia.

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LITERATURE CITED

Bernhauer, M., 1903. Die Staphyliniden-Tribus Leptochirina nebst analytischen Bestimmungstabellen der Gattungen. *Deutsche Entomologische Zeitschrift*, **1903:** 113–160.

Bernhauer, M., 1923. Synonymische Bemerkungen bezüglich mehrfach beschriebener Staphylinidengattungen und Arten. *Wiener Entomologische Zeitung*, **40:** 63.

Bernhauer, M. and Schubert, K., 1910. Family Staphylinidae I. *In*: Schenkling, S. (ed.). *Coleopterorum Catalogus*. 5(19). Berlin, Junk. Pp. 1–86.

Blackwelder, R.E., 1952. The generic names of the beetle family Staphylinidae, with an essay on genotypy. *United States National Museum Bulletin*, **200:** i-iv, 1–438.

Cameron, M., 1930. *The Fauna of British India including Ceylon and Burma. Coleoptera. Staphylinidae. Vol.1.* London, Taylor and Francis. Pp. 89–120.

Erichson, W.F., 1840. *Genera et species Staphylinorum insectorum coleopterorum familiae*, (1). Berlin: F.H. Morin. Pp. 401–954.

Fauvel, A., 1895. Staphylinides nouveaux de l'Inde et de la Malaisie. *Revue d'Entomologie*, **14:** 180–286.

Fauvel, A., 1902. Staphylinides exotiques nouveaux. *Reuve d'Entomologie,* **21:** 8–37.

Greenslade, P.J.M., 1971. The genus *Priochirus* Sharp 1887 (Coleoptera: Staphylinidae) revision of subgeneric classification and descriptions of new species. *Transactions of the Royal Entomological Society of London*, **123**(2): 125–187.

Greenslade, P.J.M., 1972. Evolution in the staphylinid genus *Priochirus* (Coleoptera). *Evolution*, **26:** 203–220.

Heller, K.M., 1898. Nr. 3. Neue Käfer von Celebes III. *Abhandlungen und Berichte des Königlichen Zoologischen und Anthropologisch-Ethnographischen Museums zu Dresden*, **7**(3): 1–20.

Herman, L.H., 2001. Catalog of the Staphylinidae (Insecta: Coleoptera). 1758 to the end of the second millennium. III. Oxyteline group. *Bulletin of the American Museum of Natural History*, **265:** 1108–1142.

Jakobson, G., 1908. Zhuki Rossii i Zapadnoi Evropy. Rukovodstvo k opredieleniiu Zhukov. Fasc. 6. S. Peterburg, A. F. Devrien. Pp. 401–480.

Laporte, F.L., 1835. Études entomologiques, ou description d'insectes nouveaux, et observations sur leur synonymie. Paris: Méquignon-Marvis, 159 pp.

Naomi, S.-I., 1996. Revision of the Tribe Leptochirini Sharp (Coleoptera, Staphylinidae) from Japan. *Japanese Journal of Systematic Entomology*, **2**(1): 1–17.

Sachse, C.T., 1852. Neue Käfer. *Entomologische Zeitung. Stettin*., **13:** 142–149.

Scheerpeltz, O., 1933. Staphylinidae VII. *In*: Schenkling, S. (ed.), *Coleopterorum Catalogus*. 6 (129). Berlin, Junk. Pp. 989–1500.

Sharp, D.S., 1887. Staphylinidae. *In: Biologia Centrali-Americana. Insecta. Coleoptera*. 1(2). London, Taylor and Francis. Pp. 673–824.

Smetana, A., 2004. Staphylinidae. In: Löbl, I. and Smetana, A. (eds). *Catalogus of Palaearctic Coleoptera Volume 2. Hydrophiloidea-Histeroidea-Staphylinoidea*. Stenstrup, Apollo Books. Pp. 237–698.

Wu, J. and Zhou, H.-Zh., 2005. Taxonomy of the subgenus *Stigmatochirus* of *Priochirus* (Coleoptera, Staphylinidae, Osoriinae) from China. *Acta Zootaxonomica Sinica*, **30**(4): 804–808.