New Chinese *Purpuricenus* Dejean, 1821 (Coleoptera, Cerambycidae) close to *P. temminckii* Guérin-Méneville, 1844 group of species

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**Key words:** Cerambycidae, *Purpuricenus*, new species, new subspecies, taxonomy, China, Japan, Korea, Russia.

**Summary:** *Purpuricenus katerinae* sp. n. close to *P. globiger* Fairmaire, 1888 is described from Shanxi. *P. globiger* is recorded from Liaoning province. *P. g. ambrusi*, ssp. n., *P. sideriger richardi* ssp. n. and *P. temminckii oliveri* are described from Gansu. Lectotype of *P. globiger* from near Beijing is designated. The general acceptance of the type locality of *P. temminckii* (Shanghai) was wrong; the species was described from Japan. *P. t. sinensis* A. White, 1853, new rank is accepted as a continental subspecies.

**INTRODUCTION**

Three species – *P. globiger* Fairmaire, 1888, *P. sideriger* Fairmaire, 1888 and *P. temminckii* Guérin-Méneville, 1844 were recently collected in Gansu. All three were not known before from the province (Löbl and Smetana, 2010) and are represented here by local forms. Each is described bellow as a new subspecies.

The dividing of *Purpuricenus* Dejean, 1821 in two subgenera based on the shape of pronotum was not natural (Danilevsky, 2010): *Purpuricenus* Dejean, 1821 = *Sternoplutes* Guérin-Méneville, 1844. The unification was already especially proved long ago by Semenov-Tian-Shansky (1908). The prothoracic shape of *P. temminckii* and *P. globiger* is quite same, though they are placed in different subgenera in the Catalog (Löbl & Smetana, 2010).

Abbreviations of collections:
MD – author’s collection
IZAS – Institute of Zoology, Chinese Academy of Sciences, Beijing
MNHP – Muséum Nationale d’Histoire Naturelle, Paris
RA – collection of Richard Ambrus, Prague
Purpuricenus globiger Fairmaire, 1888
(Figs. 1-12)

Purpuricenus globiger Fairmaire, 1888: 139 - “Pékin, Kiangsi”.

Type locality. Beijing environs - on the base of the present lectotype designation.

Diagnosis. Rather rare species; only a few specimens known. Male antennae usually more than 2 times longer than body; female antennae usually a little shorter than body; pronotum strongly convex in the middle [a character of “subgenus Sternoplistes Guérin-Méneville, 1944” sensu Gressitt (1951) and Löbl & Smetana (2010), though the species was placed in the nominative subgenus in both publications], with 5 convexities indistinct, totally black, largely black or largely red, to totally red, usually red with 5 black spots; elytra red with a large round black spot behind middle; humeral black spots always absent; body length 16.0-24.0mm.

Distribution. The area of the species is very large covering a very big region including 6 provinces; the taxon is known from Liaoning (first record for the province), Hebei, Shanxi, Shaanxi, Jiangxi and Gansu (first record for the province - new subspecies), but records from more provinces are expected.

Purpuricenus globiger globiger Fairmaire, 1888
(Figs. 1-7)


**Type locality.** Beijing environs - on the base of the present lectotype designation.

Only one male-lectotype (present designation, 23mm, figs. 1-2) is available from the type locality - the biggest known male of the species. The original description was most probably based on more specimens as two localities were mentioned, though only one size (20mm) published without sexual information (antennae not described). Antennae in males reaching elytral apex by 7th joint or much longer, in females reaching elytral apex or a little shorter; prothorax moderately transverse, about 1.1 times shorter than basal width in the lectotype and in specimens from Shanxi; pronotum convex, in the lectotype black with a small red “Λ”-shaped spot in the middle and long wide red band laterally connecting anterior and posterior thoracic margins; elytra about 2.3 times longer than wide; pronotum in males from Shanxi can be totally black; or with similar red “Λ”-shaped spot (fig. 4) while lateral red band is reduced to a small red spot at the base of lateral spine; elytra about 2.1 times longer than wide; pronotum in a female (fig. 5) from same locality (Shanxi) is lighter, “Λ”-shaped spot reaching anterior thoracic margin, lateral red band is much wider than in the lectotype; elytra about 2.1 times longer than wide; a population from Shaanxi (fig. 6-7) looks as a transition to a new subspecies, though pronotum is similarly moderately convex (the main character of the nominative subspecies), but prothorax is a little wider, about 1.2 times shorter than basal width; largely red with 5 black spots (in a female from Taibaishan National Park lateral pronotal spots are conjugated); elytra about 2.1 times longer than wide both in male and in female; two females from Liaoning province depicted by Wang (2003) also have red pronotum with 5 black spots, as well as a female (IZAS - according to photo by Mei-Ying Lin – personal message, 2011) from “Eastern Tomb” (English name for Dongling in Zunhua city of Hebei Province, should be located in about 125 km W of Beijing). Another female (IZAS -according to photo by Mei-Ying Lin – personal message, 2011) without label has largely black thorax; the shape of posterior elytral black area is a little variable among all specimens,
from regularly round, to slightly exposed anteriorly or with small anterior notch; body length in males: 16.0-23.0mm, body length in females: 17.3-24.0mm; body width in males: 5.7-7.4mm, in females: 5.3-8.0mm.

**Distribution.** East and north parts of the species area. The taxon is known from Liaoning (first record for the province), Hebei, Shanxi, Shaanxi and Jiangxi, but records from more provinces are expected.

**Materials.** Lectotype (present designation), male (fig. 1) with 5 labels (fig. 2): (1) Pékin, (2) globiger, Fra / Pekin, (3) Ex Musaeo / ARM. DAVID / 1900, (4) MUSEUM PARIS / 1952 / Coll. R. OBERTHÜR, (5) LECTOTYPE [red] – MNHP; 1 male and 1 female, China, Shanxi, Yongji, 9-18.5.2005, E. Kučera leg. – RA; 1 male, China, Shanxi, Yongji, 9-20.5.2009, E. Kučera leg. – SM; 1 male and 1 female, China, Shaanxi, 15km N Lueyang, 20-28.5.2007, E. Kučera leg. – RA; 1 male and 1 female, China, Shaanxi, Foping county, Longcaoping, alt. 1256 m, 17.8.2007, leg. Yang Yuxia – IZAS; 1 male (pronotum more black, similar to type), Shaanxi, Qinling, Zhouzhi louguantai, alt. 683m, 24.6.2008, leg. Cui Junzhi – IZAS; 1 female, Shaanxi, Taibaishan National Park, 1350m, 10.6.1999, M.Murzin leg. – SM.

**Purpuricenus globiger ambrusi, ssp. n.**

(Figs. 8-12)

**Type locality.** China, Gansu, Longnan [Lungnan] env. [33°48'N, 104°30'E ].

**Diagnosis.** Antennae in males reaching elytral apex by 7th joint or a little longer, in females a little shorter than body; prothorax more transverse, about 1.2 times shorter than basal width in males and in females; pronotum distinctly more convex, largely or totally red; the maximal development of black color on pronotum (figs. 8, 11) is represented by 5 small black spots (3 males, 3 females); 2 males have only 4 very small black spots (postero-central spot is reduced); 1 male and 2 females have only one pair of hardly visible black spots (anterior pair is reduced); pronotum of 1 female is totally red, without black spots (fig. 10); elytra usually a little wider, in males about 2.0-2.1 times longer than wide, in females – 2.0 times longer than wide; the shape of elytral black area is a little variable from regularly round, to slightly elongated or a little narrowed posteriorly or anteriorly, or slightly produced anteriorly; body length in males:
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20.7-21.5mm, body length in females: 19.5-24.0mm; body width in males: 6.7-7.2mm, in females: 6.2-7.5mm.

**Materials.** Holotype, male, China, Gansu, Longnan [Lungnan] env. [33°48'N, 104°30'E ], 1700m, 1-15.06.2009, Wang Xing leg. – MD; 11 paratypes, 4 males and 7 females with same label – MD (1 female), IZAS (1 male and 1 female) and RA.

**Distribution.** China, only one locality is known in South Gansu: Longnan [Lungnan] env. [33°48'N, 104°30'E ], 1700m.

**Etymology.** The new subspecies is dedicated to Richard Ambrus (Prague), who supplied me with the type series for study.

*Purpuricenus katerinae* sp. n.  
(Figs. 13-16)

**Type locality.** China, Shanxi, Yongji environs – according to the label of the holotype.

**Description.** Close to *P. globiger* with similarly convex pronotum (fig. 16) and similar prothorax shape; five pronotal convexities typical for certain *Purpuricenus* hardly pronounced; antennae shorter, in males less than two times longer than body, reaching elytral apex by 8th joint, in female (fig. 15) a little shorter than body; elytra strongly elongated, in males 2.3-2.4 times longer than wide, in female about 2.2 times longer than wide; prothorax totally black, in males with very small red spots near lateral spines; elytral base with narrow (males) or wide (female) black transverse band; hind margin of transverse band can be contrast (holotype and female, figs. 13, 15) or diffused (paratype male, fig. 14); elytra with long and wide posterior black area from before middle to apex; black area in males can be wider or narrower, with widely rounded anterior margin, with sides converging posteriorly; black area in female very wide, covering about whole posterior elytral half, with anterior margin extended along suture; body length in males: 16.9mm (holotype)-18.7mm, in female: 20.0mm; body width in males: 5.0mm (holotype) - 5.6mm, in female: 6.6mm.

**Materials.** Holotype, male, China, Shanxi, 35km E Yongji, 6-18.5.2007, E. Kučera leg. – MD; 2 paratypes: 1 male, China, Shanxi, Yongji, 9-20.5.2009, E. Kučera leg. – RA; 1 female, China, Shanxi, Yongji env., Shuiyukou, ca 900m, 1-6.6.2011 – TT.

Etymology. The new species is dedicated to Kateřina Ambrusová – wife of Richard Ambrus (Prague), who supplied me with the type series for study.

Remark. The general color design of *P. katerinae* sp. n. is similar to *P. foraminifer* Pesarini & Sabbadini, 1997 described from Sichuan with similar largely black pronotum, humeral black area and postmedian black spot. A male (15mm) of *P. foraminifer* was collected by S.Murzin and I. Shokhin near Nanping (type locality), 14-19.6.2002 – SM. Pronotum in *P. foraminifer* is less convex, with better developed 5 small convexities and longer lateral spines; antennae much longer, reaching elytral apex in males by 7th joint; elytral punctation much rougher anteriorly, black elytral spot is round with small anterior emarginations.

**Purpuricenus sideriger** Fairmaire, 1888
(Figs. 17-21)


Type locality. China, Jiangxi prov. – according to the original description.

Diagnosis. Male antennae usually more than 2 times longer than body; female antennae a little longer than body; pronotum poorly convex, but with a distinct high sharp tubercle in the middle (**fig. 21**), with 4 lateral pronotal convexities hardly visible, red with 5 black spots; elytra red with a large round black spot behind middle, which is a little elongated, and with (**figs. 17-18**) or without (in new subspecies, **figs. 19-20**) a pair of humeral black spots; body length in males: 16.0-20.0mm; in females: 13.0-22.0mm.

Distribution. The area of the species is very large covering a very big region from Far East Russia and Korea to South China; it was recorded for 10 China provinces: Heilongjiang, Hebei, Shaanxi, Sichuan, Henan, Jiangxi, Hubei, Hunan, Jiangxi, Fujian; recently it was discovered in Gansu (new subspecies described bellow).
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*Purpuricenus sideriger sideriger* Fairmaire, 1888
(Figs. 17-18)


*Purpuricenus* (s. str.) *sideriger*, Gressitt, 1951: 319 – “China: Kiangsi; Kiangsu (Kuyung, Siashu, Chemo); Fukien (Shaowu)”, “Korea”; Lee, 1982: 46 - South Korea.

*Purpuricenus* (Sternoplistes) *sideriger*, Löbl & Smetana, 2010: 199 – Far East Russia; China: Fujian (Fukien), Hebei (Hopei), Henan (Honan), Hubei (Hupeh), Hunan, Jiangxi (Kiangsi), Sichuan (Szechwan), Shaanxi (Shensi); South Korea.

**Type locality.** China, Jiangxi prov. – according to the original description.

**Diagnosis.** Lateral thoracic tubercles usually smaller (at least in northern populations), elytra with rough punctuation anteriorly (at least in northern populations), a pair of humeral black spots present, but sometimes very small nearly disappearing; a large round black spot behind middle can be rather elongated with distinct lateral emarginations anteriorly; body length in males: 16.0-20.0mm; in females: 13.0-22.0mm.

**Distribution.** The area of the species is very large covering a big region from Far East Russia and Korea to South China. Only three specimens were collected in Russia in the south of Primorsky Region: one near Arseniev and two near Lazo. In Korea it is known only from the south: Gyeong-Gi-Do and Gyeong-Sang-Bug-Do.
provinces; in China it is known from 10 provinces: Heilongjiang, Hebei, Shaanxi, Sichuan, Henan, Jiangsu, Hubei, Hunan, Jiangxi, Fujian.


**Purpuricenus sideriger richardi** ssp. n.  
(Figs. 19-21)

**Type locality.** China, Gansu prov., Longnan, Tanchang, Qinyuxiang env.

**Diagnosis.** Lateral thoracic tubercles usually rather big, elytra with fine punctuation anteriorly, a pair of humeral black spots usually absent (present in two females); a large round black spot behind middle less elongated with indistinct lateral emarginations anteriorly; body length in males: 18.0-18.1mm, width – 5.5-5.6mm; body length in females: 18.0-19.7mm; width – 5.9-7.0mm.

**Distribution.** Only one locality known: China, Gansu prov., Longnan, Tanchang, Qinyuxiang env.

**Materilas.** Holotype, male, China, Gansu prov., Longnan, Tanchang, Qinyuxiang env., 5-10.6.2008, Wang Xing leg. – MD; paratypes, 2 males and 4 females with same label – MD (1 female), IZAS (1 female) and RA.

**Etymology.** The new subspecies is dedicated to Richard Ambrus (Prague), who supplied me with the type series for study.

**Purpuricenus temminckii** Guérin-Méneville, 1844  
(Figs. 22-39)

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Japan, Korea, China, Laos” [“Shanghai” as type locality]; Ohbayashi et al., 1992: 506; Niisato, 2007: 474; Löbl & Smetana, 2010: 199 [original combination was wrongly published as *Sternoplistes temminckii*] – China: Fujian (Fukien), Guandong (Kwantung), Guizhou (Kweichow), Guangxi (Kwangsii), Hebei (Hopei), Henan (Honan), Hubei (Hupeh), Hunan, Jiangxi (Kiangsi), Jiangsu (Kiangsu), Liaoning, Sichaun (Szechwan), Shaanxi (Shensi), Shandong (Shantung), Yunnan, Zhejiang (Chekiang); Taiwan; South Korea; Oriental Region.


*Purpuricenus temmincki*, Semenov-Tian-Shansky, 1908: 263; Winkler, 1929: 1183 - Japan, China [“temincki” – wrong subsequent spelling – not available].

*Purpuricenus (?Sternoplistes) temmincki*, Plavilstshikov, 1940: 558 – China, Japan.


**Type locality.** Japan – according to the original description; most probably Honshu Is.

Most of modern publications wrongly indicated the type locality of the species as “Shanghai”, following (probably) Gressitt (1951): Gressitt & Rondon (1970); Lee (1982, 1987); Hayashi (1983); Kusama & Takakuwa (1984); Nakamura et al. (1992); Wang (2003); Niisato (2007). Also the wrong original combination (“*Sternoplistes temminckii*”) was accepted by Gressitt (1951) and others.

Pronotum with wide regular swelling similar to *P. globiger*; elytra with or without a pair of small black posterior spots, dorsal side of the body without erect black setae; body length in males: 9.9-16.0mm, body length in females: 10.5-18.0mm.

The species is a little similar to *P. spectabilis* Motschulsky, 1858 because of same elytral design with usual presence of a pair of small black posterior spots, but pronotal sculpture of *P. spectabilis* is rather different with a small sharpened central tubercle instead of
regular wide convexity; head, pronotum and elytra with long dense erect black setae.

Available materials demonstrate a great degree of geographical variability. Specimens from marginal localities of species area look very different, so the division of the species in island and continental subspecies is necessary, but small number of available specimens from each population does not allow indicating several subspecies inside Japan or China.

**Distribution.** From South Korea, Japan (Honshu) and North China to Laos. The records of the species for Russia and Mongolia (Hua et al., 1993) were wrong.

**Purpuricenus temminckii temminckii** Guérin-Méneville, 1844 (Figs. 22-28)


*Purpuricenus japanus* Motschulsky, 1858: 37 - “Simoda au Japon”.

*Sternoplistes temmincki* var. *kiotensis* Matsushita, 1933: 312 – “Honshu (Kyoto)”.


*Purpuricenus temminckii*, Hayashi et al., 1984: 75.

**Type locality.** Japan – according to the original description; most probably Honshu Is.

Lateral pronotal tubercles are usually shorter, less sharpened, often obliterated apically; body length in males: 9.9-16.0mm, body length in females: 10.5-18.0mm.

**Distribution.** Japan: about whole Honshu without most northern areas, Kyushu and Shikoku with several small islands.

**Materials.** Holotype (the original description was based on a single specimen – **fig. 17**), female with 6 labels (**fig. 18**): 1) TYPE, 2) Type / Guérin-Mén, 3) *Purpuricenus / (Sternoplistes) / temminckii / Guer. Je. R. a. / (type) Japon*, 4) *Temminkii / Guer Je. Type / Sinensis White C. / S. Haï*, 5) Ex *Musæo / JAMES THOMSON*, 6) *MUSEUM PARIS / 1952 / Coll. R. OBERTHÜR - MNHP*; male (**fig. 19**), Japan, Tokyo, v. Bodemyer - ZMM; male, Japan, Harima, A.Kricheldorff – ZMM; male (**fig. 20**), Japan, Gifu – ZMM; female (**fig. 21**), Japan (?Honshu) – ZMM; female (**fig. 22**), Japan,

Purpuricenus temminckii sinensis A. White, 1853, new rank
(Figs 29-35)

Purpuricenus sinensis A. White, 1853: 139 - “N. China (Shanghai)”.
Sternoplistes temmincki var. similis Pic, 1923: 8 - “Chine” [“temnicki” – wrong subsequent spelling – not available];
Purpuricenus temminckii, Hua et al., 1993: 213 – “Guangdong (Longmen), Liaoning, Shaanxi, Hebei, Henan, Hubei, Jiangsu, Zhejiang, Fujian, Jiangxi, Hunan, Guangxi, Guizhou; Korea, former USSR; Mongolia”; Qi, 1999: 51 - Shandong; Yiu, 2009: 55 – “Hong Kong”.
Purpuricenus (Sternoplistes) temminckii, Chou, 2004: 226 – Taiwan.

Type locality. China, Shanghai environs - according to the original description.

Lateral pronotal tubercles longer, more or less sharpened; length of males: 11.0-16.0mm, length of females: 12.0-18.0mm.

Distribution. South Korea; South part of North China, all Central and South China: Liaoning, Hebei, Shandong, Shanxi, Shaanxi, Henan, Jiangsu, Hubei, Zhejiang, Sichuan, Hunan, Jiangxi, Fujian, Guangxi, Guizhou, Yunnan, Guandong, Hong Kong, Haynan; Taiwan; Laos.

Purpuricenus temminckii oliveri ssp. n.  
(Figs 36-39)

Type locality. China, Gansu prov., Longnan, Tanchang, Qinyuxiang env.

Description. The new taxon is characterized by very long lateral pronotal spines slightly curved backwards; antennae in male relatively short; 8th antennal joint hardly reaching elytral apex; pronotum usually with 5 black dots, which sometimes could be partly conjugated; elytra always with a typical pair of very small black dots; length of male: 14.8mm, length of females: 13.9-17.0mm; width of male (near humeri): 4.1mm; width of females (near humeri): 4.4-5.4 mm.

Materials. Holotype, male (fig. 36), China, Gansu prov., Longnan, Tanchang, Qinyuxiang env., 5-10.6.2008, Wang Xing leg. – MD: 6 paratypes (figs. 37-39), females with same label – MD (1 female), IZAS (1 female) and RA (2 females); 2 females, China, Gansu prov., Longnan city, 15.6.2007 – RA.

Etymology. The new subspecies is dedicated to Oliver Ambrus – son of Richard Ambrus (Prague), who supplied me with the type series for study.

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REFERENCES


M.L. Danilevsky


Kusama K. & Hayashi M., 1971. Generic names and type species applied Japanese Cerambycidae (Coleoptera).- Reports of Faculty of Science, Shizuoka University, 6: 95-126.


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INSRIPTIONS FOR FIGURES

Figs. 1-7. *Purpuricenus globiger globiger*. 1 – Male, lectotype (present designation) from near Beijing; 2 – labels of the lectotype; 3 – prothorax (lateral view) of the lectotype; 4-5 – male and female from Shanxi,Yongji; 6-7 – male and female from Shaanxi, 15km N Lueyang.

Figs. 8-12. *Purpuricenus globiger ambrusi*, **ssp. n.** 8 – male, holotype; 9 – male, paratype; 10-11 – females, paratypes; 12 – prothorax of the holotype (lateral view).


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