

A new *Byturus* Latreille, 1797 species from China, with a list of known Byturidae (Coleoptera) of the world

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Abstract. The new species *Byturus holzschuhi* sp. nov. from China: Hunan Province is described, illustrated and compared with known Chinese species. The species *Byturus tomentosus* (DeGeer, 1774) is recorded for the first time from Lebanon; *Haematoides davidis* Fairmaire, 1878 is recorded for the first time from China: Hubei Province; *Xerasia punica* Goodrich & Springer, 1988 is recorded for the first time from Jordan. A list of Byturidae of the world is presented.

INTRODUCTION

The Byturidae Gistel, 1848 is a small family of beetles with two subfamilies comprising only seven genera and 18 species in the world fauna (Springer & Goodrich 1983, 1986, 1990, 1994, 1995, Goodrich & Springer 1987, 1988, 1993, Rosa 2000, Malloch et al. 2001, Löbl 2007, Ivie 2011, Sazhnev & Karpenko 2024, Háva 2024). The Palaearctic Byturidae are represented by three genera (*Byturus* Latreille, 1797, *Haematoides* Fairmaire, 1878, and *Xerasia* Lewis, 1895) with eleven species; four species of *Byturus* were recorded for the Chinese fauna (Springer & Goodrich 1990, Löbl 2007).

While examining the unidentified material deposited in Naturkundemuseum, Erfurt, Germany, the author found a new species collected in China belonging to the genus *Byturus* Latreille, 1797.

MATERIAL AND METHODS

The material is deposited in the following collection:

JHAC Jiří Háva, Private Entomological Laboratory & Collection, Únětice u Prahy, Prague-West, Czech Republic;

NHMW Naturhistorisches Museum, Wien, Austria (M. Seidel);

NMED Naturkundemuseum, Erfurt, Germany (M. Hartmann).

The size of beetles or of their body parts can be useful in species recognition and thus, the following measurements were made:

total length (TL) - linear distance from anterior margin of head to apex of elytra.

elytral width (EW) - maximum linear transverse distance.

Acronyms: N - north, S - south, W - west, E - east.

Specimens of the presently described species are provided with a red, printed label with text as follows: „HOLOTYPE [or PARATYPE] *Byturus holzschuhi* sp. nov. Jiří Háva det. 2024.”

TAXONOMY

Byturus holzschuhi sp. nov.

(Figs. 1, 3, 5, 7)

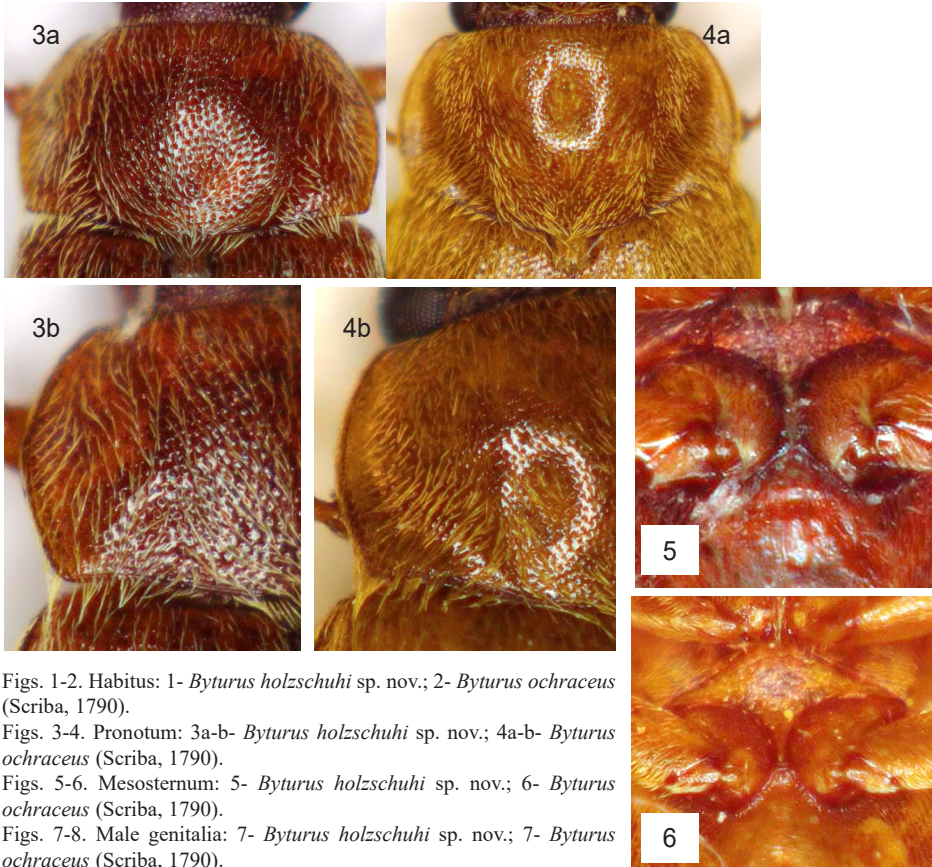
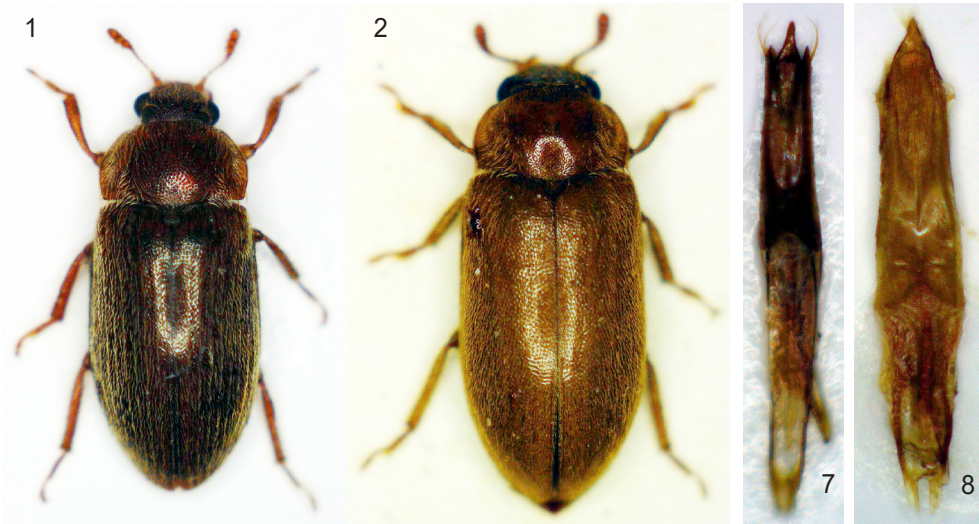
Type material. Holotype (♂): China, NW Hunan, Zhang Jia Jie - National park, 1400-1600 m, 15-17.vii.1992, leg. C. Holzschuh, (NMED). Paratypes (1 ♂, 1 ♀): same data as holotype (NMED, JHAC).

Description. Male. Body: TL 4.7 mm, EW 2.0 mm; elongated and oval (Fig. 1), slightly convex; dorsally and ventrally unicolorous dark brown, shiny; dorsum covered with short and recumbent, white setation; thoracic underside with comparatively short and recumbent, white setation; visible abdominal ventrites with recumbent, white setation, sparser than that on thoracic surface. Head finely punctate, covered by white setation. Labrum yellow, palpomeres brown. Eyes large, dorsal interocular distance less than 2x longitudinal eye length. Antennae brown with short, white setation, composed with 11 antennomeres, antennal club compact, black with 3 antennomeres. Pronotum coarsely punctate, without lateral depressions (Figs. 3a-b). Hypomeron finely punctate. Scutellum small and triangular, shining, with white setation. Elytra unicolorous, brown covered by white setation, without patterns or fasciae, coarsely punctate on humera and with one very small humeral bump, other parts finely punctate. Epipleuron brown, broad and short, with short white setae. Prosternal process long and narrow. Mesosternum finely punctate with white, recumbent setation (Fig. 5). Metasternum finely punctate with white setation. Abdomen brown, with five visible abdominal ventrites, covered by recumbent, white setation. Legs brown, covered with comparatively short and thick, white setation. Tarsi moderately short. Protibiae very slightly curved, dorsally with one very small thorn. Male genitalia (Fig. 7).

Female. Externally similar to male.

Differential diagnosis. The new species differs from other known Chinese *Byturus* species by the characters mentioned in the following key.

- 1(6) Eyes small, dorsal interocular distance more than 2x longitudinal eye length
- 2(5) Male with strongly arcuate protibiae
- 3(4) Lateral margin of pronotum smoothly curved, not sinuate *B. affinis*
- 4(3) Lateral margin of pronotum sinuate *B. oblongulus*
- 5(2) Male with only very slightly curved protibiae *B. tomentosus*
- 6(1) Eyes large, dorsal interocular distance less than 2x longitudinal eye length
- 7(8) Pronotum (Fig. 3) with lateral depressions, and punctuation; mesosternum (Fig. 6); aedeagus (Fig. 8)
.....*B. ochraceus*
- 8(7) Pronotum (Fig. 4) without lateral depressions, and punctuation; mesosternum (Fig. 5); aedeagus (Fig. 7)
..... *B. holzschuhi* sp. nov.



Figs. 1-2. Habitus: 1- *Byturus holzschuhi* sp. nov.; 2- *Byturus ochraceus* (Scriba, 1790).
 Figs. 3a-4. Pronotum: 3a-b- *Byturus holzschuhi* sp. nov.; 4a-b- *Byturus ochraceus* (Scriba, 1790).
 Figs. 5-6. Mesosternum: 5- *Byturus holzschuhi* sp. nov.; 6- *Byturus ochraceus* (Scriba, 1790).
 Figs. 7-8. Male genitalia: 7- *Byturus holzschuhi* sp. nov.; 7- *Byturus ochraceus* (Scriba, 1790).

Etymology. Patronymic, dedicated to Carolus Holzschuh (Austria), collector of the new species.

FAUNISTIC

Byturus oblongulus Fairmaire, 1891

Material examined: „China, E Hubei, Dabie Shan, 31.1N 115.8E, Wujiashan forest park, 7-10.v.2004, V. Ryjáček lgt.“, 3 ♂♂, 1 ♀, (JHAC).

Remarks. Additional faunistic data from China: Hubei Province.

Byturus tomentosus (DeGeer, 1774)

Material examined: „China, Sichuan prov., 50 km W Dayi, Xiling Mts., 2500 m, 5-8.v.2006, S. Murzin lgt.“, 77 spec., (JHAC); „China, Sichuan, NW Heishui, 3800 m, 32°13'08N 102°36'38E, 14-20.vi.2018, Reuter leg.“, 3 spec., (2 NMED, 1 JHAC); „SW China, Sichuan, Emei Shan, 22-24.vi.1991, 2500 m, 5 spec.“, (4 NMED, 1 JHAC); „Lebanon, Bekaa El Gharbi, Machghara, 33°37'N 35°46'E, 12.iv.2017, E. Nassir-Eddin lgt.“, 1 spec., J. Háva det., (JHAC).

Remarks. Additional faunistic data from China: Sichuan Province. New to Lebanon.

Haematoides davidis Fairmaire, 1878

Material examined: „China NW Sichuan, Dande, 3340 m, 27.6.2005, V. Beneš lgt.“, 1 spec., (JHAC); „China, Sichuan, Lushan Mt. Luochunshan, Feibi Road, 1600 m, v.2018, ex Ebay“, 1 spec., (JHAC); „China, Sichuan pr., Emeishan, 160 km NNW Chengdu, 1700-2400 m, 21.6.1992, Schillhammer lgt.“, 3 spec., J. Háva det., (2 NHMW, 1 JHAC); „China, E Hubei, Dabie Shan, 31.1N 115.8E, Wujiashan forest park, 7-10.v.2004, V. Ryjáček lgt.“, 1 spec., (JHAC); „China, Yunnan, 50 km N Lijiang, Yulongshan Nat. Res., 24-29.6.1993, E. Jendek & O. Šauša lgt.“ / „Haematodes davidis Fairmaire, det. M. A. Ivie 2000“, 1 spec., (NHMW); „China Fairm. 1889“ [printed] / „Haematoides Davidis Frm Chin. Centr“ [hand written], 1 spec., J. Háva det., (NHMW).

Remarks. Additional faunistic data from China: Sichuan Province and new record from Hubei province. Ivie (2001) erroneously mentioned the species as *Haematoides davidii* [sic!]; Fairmaire (1878: 116) originally described the species as *Haematodes davidis*.

Xerasia punica Goodrich & Springer, 1988

Material examined: „Jordan NW, W of Jarash, NE Rájib, 11.4.2009, m. Snížek lgt.“, 1 spec., J. Háva det., (JHAC).

Distribution: Israel, Lebanon, Syria, Turkey, new to Jordan.

LIST OF BYTURIDAE OF THE WORLD

Byturidae Gistel, 1848

Byturinae Gistel, 1848

Byturus Latreille, 1797

= *Horticola* Lindemann, 1865

= *Terobyturus* Ohta, 1930

1. *Byturus affinis* Reitter, 1874

= *Byturus atricollis* Reitter, 1874

= *Terobyturus fallax* Ohta, 1930

= *Byturus ferrugineus* Reitter, 1874

= *Terobyturus japonicus* Ohta, 1930

= *Byturus ohtai* Barber, 1942

= *Byturus olivaceus* Fournel, 1840

= *Terobyturus shibakawai* Ohta, 1930

Distribution: Russia: Siberia; Japan; China; South Korea; Taiwan

2. *Byturus holzschuhi* sp. nov.

Distribution: China: Hunan

3. *Byturus ochraceus* (Scriba, 1790)*

= *Byturus aestivus* var. *fleischeri* Plavilstshikov, 1924

= *Byturus fumatus* var. *bicolor* Reitter, 1911

Distribution: Europe; Afghanistan; NW China; Russia; Japan; Kazakhstan;

Mongolia; Turkey; North Korea

4. *Byturus oblongulus* Fairmaire, 1891

Distribution: China: Hubei

5. *Byturus tomentosus* (DeGeer, 1774)

= *Byturus bhutanicus* Sen Gupta, 1978

= *Dermestes flavescens* Marsham, 1802

= *Byturus formosanus* Hatta, 1970

= *Byturus fumatus* var. *grisescens* Fleischer, 1910

= *Byturus fumatus* var. *obscurus* Reitter, 1911

= *Byturus meridionalis* Grouvelle, 1905

= *Byturus oakanus* Ohta, 1930

= *Byturus tomentosus* Fabricius, 1775

= *Horticola urbana* Lindemann, 1865

Distribution: Europe; Afghanistan; Bhutan; NE China; Russia; Iran;

India: Uttaranchal; Japan; Kazakhstan; Lebanon; Mongolia; North Korea;

Nepal; South Korea; Taiwan; Turkey; U.S.A.: California; Argentina (intr.)

6. *Byturus unicolor* Say, 1823
 = *Byturus americanus* Gemminger & Harold, 1868
 = *Byturus bakeri* Barber, 1942
 = *Byturus brevicollis* Casey, 1916
 = *Byturus punctatus* Casey, 1916
 = *Byturus rubi* Barber, 1942
 = *Byturus sordidus* Barber, 1942
 Distribution: Canada; U.S.A.
7. *Byturus wittmeri* Sen Gupta, 1978
 Distribution: India: Uttaranchal; Nepal
- Haematoides* Fairmaire, 1878
 = *Byturodes* Barber, 1942
8. *Haematoides atriceps* Pic, 1910
 Distribution: China: Yunnan
9. *Haematoides davidis* Fairmaire, 1878
 = *Byturodes grahami* Barber, 1942
 = *Haematoides davidii* [sic!]: Ivie, 2001
 Distribution: China: Sichuan, Yunnan, Hubei; India: Assam
- Xerasia* Lewis, 1895
 = *Byturellus* Barber, 1942
 = *Satorystia* Reitter, 1905
10. *Xerasia grisescens* (Jayne, 1882)
 = *Byturellus grisescens* ssp. *dubius* Barber, 1942
 = *Byturus inflatulus* Casey, 1916
 Distribution: USA: Arizona, California, Oregon
11. *Xerasia meschniggi* (Reitter, 1905)
 Distribution: Hungary; Russia: Krasnodar; Slovakia; Ukraine
12. *Xerasia punica* Goodrich & Springer, 1988
 Distribution: Israel; Jordan; Lebanon; Syria; Turkey
13. *Xerasia variegata* Lewis, 1895
 Distribution: Japan; South Korea

Platydascillinae Pic, 1914

Platydascillus Everts, 1909

14. *Platydascillus sumatranus* Everts, 1909
= *Dascillocyphon major* Everts, 1909
Distribution: Indonesia: Sumatra; Malaysia: Selangor

Dascillocyphon Everts, 1909

15. *Dascillocyphon minor* Everts, 1909
= *Dascillocyphon timorensis* Pic, 1924
Distribution: Indonesia: Sumatra, Timor; Malaysia: Kuala Lumpur

Bispinatus Springer & Goordich, 1994

16. *Bispinatus capillatus* Goodrich & Springer, 1995
Distribution: Thailand

17. *Bispinatus vietnamensis* Springer & Goordich, 1994
Distribution: Vietnam

Remigera Springer & Goordich, 1994

18. *Remigera laticornis* (Pic, 1938)
= *Dascillocyphon laticornis* var. *obscuripennis* Pic, 1938
= *Remigera securiformis* Springer & Goodrich, 1994
Distribution: Malaysia: Pahang; Philippines: Palawan

19. *Remigera spatulata* Springer & Goodrich, 1994
Distribution: Papua New Guinea

*According to Springer & Goodrich (1986) the most common name *Byturus fumatus* (Fabricius, 1775) is rejected as a junior homonym of *Dermestes fumatus* Linnaeus, 1767 (synonym of Mycetophagidae species *Typhaea stercorea* Linnaeus, 1758). The second common name *Byturus aestivus* (Linnaeus, 1758) is based on *Silpha aestiva* Linnaeus, 1758, correctly placed in the genus *Epuraea* (Nitidulidae).

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REFERENCES

- FAIRMAIRE L. 1878: *Haematoides* pp. 116-117. In: DEYROLLE H. & FAIRMAIRE L.: Coléoptères recueillis par M. l'abbé David dans la Chine centrale. *Annales de la Société Entomologique de France* 5° 8: 87-140.
- GOODRICH M. A. & SPRINGER C. A. 1987: A new synonym for *Byturus tomentosus* (De Geer) (Byturidae). *The Coleopterists Bulletin* 41: 232.
- GOODRICH M. A. & SPRINGER C. A. 1988: A new species of *Xerasia* (Coleoptera: Byturidae) from the Middle East, with a key to the *Xerasia* of the World. *The Coleopterists Bulletin* 42(4): 345-351.
- GOODRICH M. A. & SPRINGER C. A. 1993: A European byturid, *Byturus tomentosus* (De Geer), in southern California (Coleoptera: Byturidae). *The Coleopterists Bulletin* 47(1): 74-75.
- HÁVA J. 2024: The family Byturidae (Insecta: Coleoptera) in the Himalayas. *VERNATE* 43: 397-399.
- IVIE M. A. 2001: The familial placement of the genus *Haematoides* Fairmaire (Coleoptera: Dascillidae, Byturidae). *The Coleopterists Bulletin* 55(3): 338-340.
- IVIE M. A. 2011: How we love our specimens: notes on curatorial dedication, synonymy, and biology in the Platydascillinae (Coleoptera: Byturidae). *The Coleopterists Bulletin* 65(1): 50-52.
- LÖBL I. 2007: Family Byturidae, p. 546-547. In: LÖBL I. & SMETANA A. (eds.): *Catalogue of Palaearctic coleoptera. Vol. 4. Elateroidea-Derodontoidea-Bostrichoidea-Lymexyloidea-Cleroidea-Cucujoidea*. Stenstrup: Apollo Books, 935 pp.
- MALLOCH G., FENTON B. & GOODRICH M. A. 2001: Phylogeny of raspberry beetles and other Byturidae (Coleoptera). *Insect Molecular Biology* 10(3): 281-291.
- ROSA R. 2000: Notes on fruitworm beetles (Coleoptera: Byturidae) of Europe. *Wiadomosci Entomologiczne* 18(4) [1999]: 223-232. (in Poland)
- SAZHNEV A. S. & KARPENKO D. K. 2024: New Record of *Xerasia meschniggi* (Reitter, 1905) (Coleoptera, Byturidae) - a Rare Species in Russia. *Field Biologist Journal* 6(1): 68-71.
- SPRINGER C. A. & GOODRICH M. A. 1983: A revision of the family Byturidae (Coleoptera) for North America. *The Coleopterists Bulletin* 37(2): 183-192.
- SPRINGER C. A. & GOODRICH M. A. 1986: A revision of the family Byturidae (Coleoptera) in Europe. *The Coleopterists Bulletin* 40(4): 335-352.
- SPRINGER C. A. & GOODRICH M. A. 1990: A revision of the family Byturidae (Coleoptera) in Asia. *The Coleopterists Bulletin* 44(4): 461-483.
- SPRINGER C. A. & GOODRICH M. A. 1994: A revision of the subfamily Platydascillinae (Coleoptera: Byturidae) from Southeast Asia, with descriptions of two new genera and three new species. *The Coleopterists Bulletin* 48(1): 60-78.
- SPRINGER C. A. & GOODRICH M. A. 1995: A new species of *Bispinatus* Springer and Goodrich from Thailand (Coleoptera: Byturidae: Platydascillinae), with notes on the distribution of the subfamily. *The Coleopterists Bulletin* 49(2): 183-190.

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