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Actualized checklist of Chinese Haliplidae, with new provincial records (Coleoptera: Haliplidae)

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Abstract

An actualized checklist of the Haliplidae (Coleoptera) of China is presented, with new locality data, including nine new provincial records. A total of 27 species is now recorded from China. Variations of *Haliplus* (*Liaphlus*) *abbreviatus* WEHNCKE, 1880 and *H.* (*L.*) *sharpi* WEHNCKE, 1880 are illustrated.

Key words: Coleoptera, Haliplidae, *Haliplus*, *Liaphlus*, new provincial records, variation, China.

Introduction

The latest catalogue of the Chinese Haliplidae was published by JIA & VONDEL (2011), who recorded a total of 29 species. Since then, no new species or new records were reported from China. Recently, VONDEL & LITOVKIN (2017) synonymized five species of *Haliplus* subgenus *Liaphlus* GUIGNOT, 1928 based on the variability of the left paramere. Two of these junior synonyms, *Haliplus davidi* VONDEL, 1991 and *H. holmeni* VONDEL, 1991, had previously been recorded from China. Based on the examination of specimens deposited in the entomological collection of the Sun Yat-sen University (Guangzhou, China) and the Royal Alberta Museum (Edmonton, Canada) nine new provincial records are provided here. An actualized checklist of the 27 Chinese Haliplidae, including data on their provincial distribution, is presented.

Material and methods

Most of the material examined is deposited in the entomological collection of the Sun Yat-sen University, Guangzhou, China (SYSU), while two specimens (see *Peltodytes pekinensis* VONDEL, 1992) are deposited in the Royal Alberta Museum (Edmonton, Canada). A total of 24 Chinese species is deposited in the SYSU – these species are marked with an asterisk (*) in the checklist below. Only unpublished locality data are listed. For additional distribution data see JIA & VONDEL (2011), VONDEL (1995, 2005, 2013, 2017) and VONDEL & LITOVKIN (2017).

Photographs of habitus and male genital sclerites were taken with a Zeiss SteREO Discovery V20 Microscope and a Zeiss Axioskop 40 Microscope respectively, then montaged with Axio Vision SE64 and Auto-Montage software.

Annotated checklist of Chinese Haliplidae

1. *Haliplus* (*Haliplidius*) *confinis* STEPHENS, 1828*

Distribution: West Palearctic and western part of East Palearctic, reaching north-western China (Xinjiang).

2. *Haliplus* (*Haliplidius*) *rejseki* ŠŤASTNÝ & BOUKAL, 2003*

Material examined:
QINGHAI: 29 exs., Golog, roadside pools near Yematan, 34°40'47"N 98°03'57"E, 4240 m, 8.VI.2013, leg. F. Jia, R.B. Angus & Y. Zhang.

Distribution: Endemic to China (Sichuan, Qinghai). First record for Qinghai.

3. *Haliplus* (s.str.) *aliae* VONDEL, 2003

Distribution: Endemic to China (Tianjin).

4. *Haliplus* (s.str.) *furcatus* SEIDLITZ, 1887

Distribution: Widely distributed in the Palearctic Region, reaching north-eastern China: Heilongjiang, Inner Mongolia.

5. *Haliplus* (s.str.) *harminae* VONDEL, 1990*

Distribution: Endemic to China (Hubei, Hunan, Shaanxi).

6. *Haliplus* (s.str.) *japonicus* SHARP, 1873*

Material examined:
CHONGQING: 1 ex., without detailed locality data, 8.III.1942, leg. X. Chen.

Distribution: East Palearctic Region. Recorded from several provinces of eastern and southwestern China: Beijing, Chongqing, Guizhou, Jiangsu, Shanghai, Sichuan, Yunnan, Zhejiang. First record for Chongqing.

7. *Haliplus* (s.str.) *latreillei* JIA & VONDEL, 2011*

Distribution: Endemic to China (Guizhou).

8. *Haliplus* (s.str.) *regimbarti* ZAITZEV, 1908*

Distribution: China and Japan (recently recorded from Okinawa by IWATA 2016). Wide-spread in southern and eastern China: Anhui, Fujian, Guangdong, Guangxi, Guizhou, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Shaanxi, Shandong, Taiwan, Yunnan, Zhejiang.

9. *Haliplus* (s.str.) *ruficollis* (DE GEER, 1774)*

Distribution: West Palearctic and western part of East Palearctic, reaching north-western China (Xinjiang).

10. *Haliplus* (s.str.) *sibiricus* MOTSCHULSKY, 1860*

Distribution: West Palearctic and western part of East Palearctic, reaching western China (Qinghai, Xinjiang).

11. *Haliplus* (s.str.) *simplex* CLARK, 1863*

Material examined:

SHANXI: 1 ex., Lishan Nature Reserve, Qinshui County, Xiashan Village, 35°26'52"N 112°01'24"E, 1590 m, 23.VII.2013, leg. F. Jia, W. Xie & R. Lin.

Distribution: East Palearctic Region. Recorded from several provinces in eastern China: Anhui, Beijing, Guangdong, Heilongjiang, Inner Mongolia, Jiangsu, Jilin, Liaoning, Shaanxi, Shanxi, Shandong, Zhejiang. First record for Shanxi.

12. *Haliplus* (s.str.) *steppensis* GUIGNOT, 1954*

Material examined:

XIZANG: 4 exs., Rikaze, Jiamudui Village, 2.VIII.2013, leg. Y. Jia.

Distribution: East Palearctic Region. In China recorded from Gansu, Heilongjiang, Inner Mongolia, Qinghai and Xizang. First record for Xizang.

13. *Haliplus* (*Liaphlus*) *abbreviatus* WEHNCKE, 1880*

Material examined:

SHANXI: 2 ♂♂, Lishan Natural Reserve, Qinshui County, Dongchuan Village, 35°26'20"N 112°00'54"E, 1560 m, 23.IX.2013, leg. F. Jia, W. Xie & R. Lin.

XINJIANG: 1 ♂, Aletai, Habahe County, Tamqi Village, Birch Forest Scenic Spot, 48°04'12"N 86°20'24"E, 520 m, 7.VIII.2017, leg. R. Zhang & S. Wang.

Discussion: *Haliplus abbreviatus* is a variable species. Recently, *H. kulleri*, *H. jaechi* and *H. ortali* were synonymized with *H. abbreviatus* by VONDEL & LITOVKIN (2017), based on the variability of the left paramere and the elytral color pattern.

The specimens from Shanxi have only one apical elytral blotch (specimen A), or one additional small median elytral blotch (specimen B) (Figs. 1–2); they lack a digitus on the left paramere (Fig. 3). Penis and right paramere as in Figs. 4–5.

The specimen from Xinjiang is more oval in shape, with extended elytral maculation, and with a small triangular appendix on the left paramere (Figs. 6–7); besides, the apical part of the penis is slightly narrower (Fig. 8). Right paramere as in Fig. 9.

Considering the general variability of *H. abbreviatus*, we believe that these three specimens are conspecific.

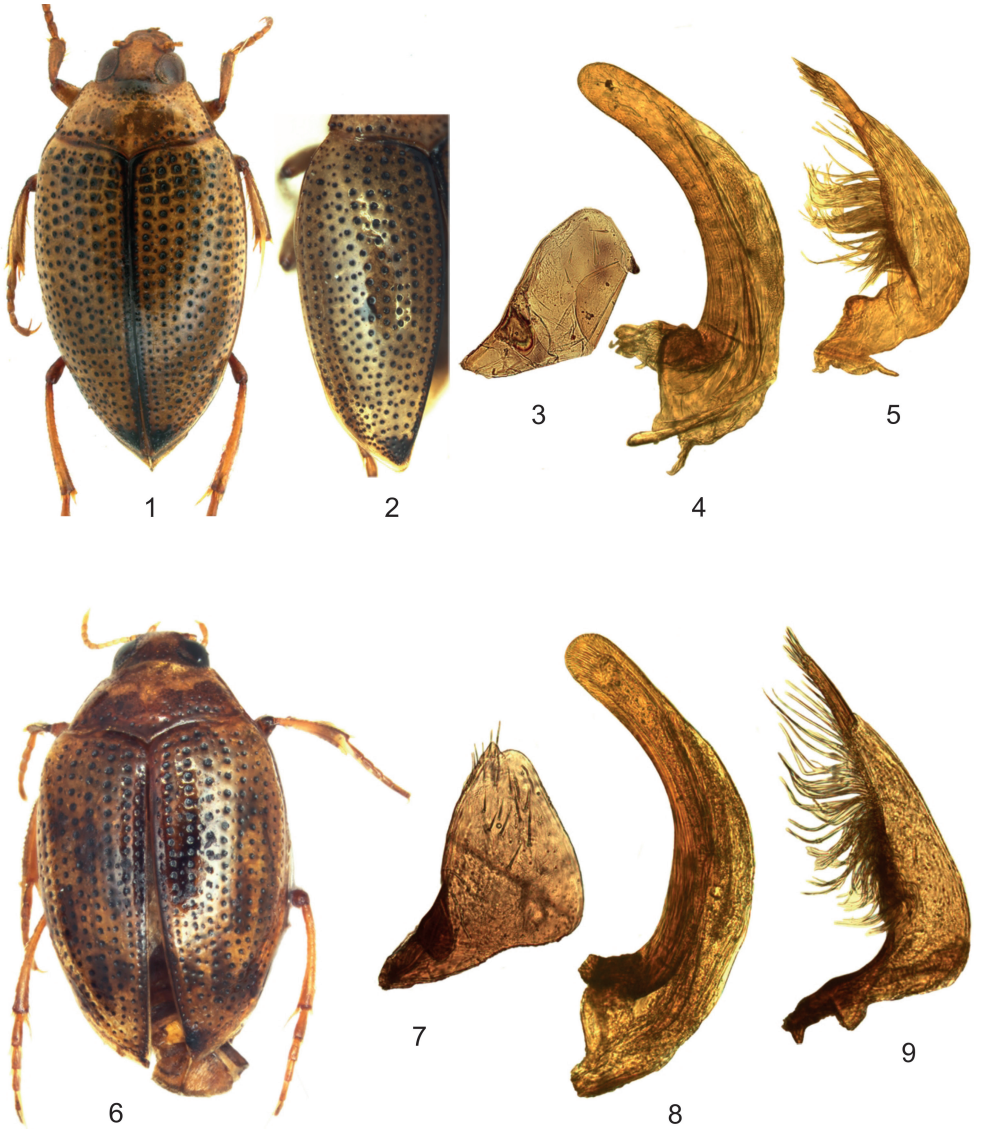
Distribution: Wide-spread in the Palearctic Region. In China recorded from Shanxi and Xinjiang. First record for Shanxi.

14. *Haliplus* (*Liaphlus*) *basinotatus* ZIMMERMANN, 1924*

Distribution: East Palearctic Region, including north-eastern China (Heilongjiang, Inner Mongolia, Jilin, Liaoning).

15. *Haliplus* (*Liaphlus*) *chinensis* FALKENSTRÖM, 1932*

Distribution: Korea and China, where it is widely distributed: Beijing, Fujian, Guizhou, Inner Mongolia, Jiangsu, Shandong, Shanghai, Shanxi, Sichuan, Xinjiang, Yunnan, Zhejiang.



Figs. 1–5: *Haliplus abbreviatus* from Shanxi (1: specimen A, 2–5: specimen B): 1) habitus, 2) left elytron, 3) left paramere, 4) penis, 5) right paramere.
Figs. 6–9: *Haliplus abbreviatus* from Xinjiang: 6) habitus, 7) left paramere, 8) penis, 9) right paramere.

16. *Haliplus* (*Liaphlus*) *diruptus* Balfour-Browne, 1946*

Distribution: East Palearctic and north-eastern Oriental regions. Wide-spread in China: Anhui, Beijing, Fujian, Guizhou, Hainan, Heilongjiang, Hong Kong, Hubei, Hunan, Jiangsu, Liaoning, Shaanxi, Shandong, Shanghai, Taiwan, Tianjin, Yunnan, Xinjiang.

17. *Haliplus* (*Liaphlus*) *excoffieri* VONDEL, 1991*

Distribution: Endemic to south-western China (Guizhou, Yunnan).

18. *Haliplus* (*Liaphlus*) *eximius* CLARK, 1863*

Material examined:

JIANGXI: 1 ex., Ji'an County, Zaodu Town, Nanshan Village, 29°00'36"N 115°09'36"E, 315 m, at light, 19.VII.2014, leg. R. Lin; 1 ex., Jinggangshan, Dajin Forest Farm, 26°33'56"N 114°07'55"E, 1160 m, 7.VIII.2017, leg. W. Xie & S. Wang.

Distribution: East Palearctic and Oriental regions. Wide-spread in China: Beijing, Fujian, Guangdong, Guizhou, Hunan, Jiangsu, Jiangxi, Liaoning, Shanghai, Sichuan, Xinjiang, Yunnan, Zhejiang. First record for Jiangxi.

19. *Haliplus* (*Liaphlus*) *kotoshonis* KANO & KAMIYA, 1931

Distribution: Known only from Japan (Ryukyu Islands) and Taiwan.

20. *Haliplus* (*Liaphlus*) *pulchellus* CLARK, 1863*

Distribution: Wide-spread in the Oriental Region. In China recorded from Fujian, Guangxi and Yunnan. The record from Yunnan was not listed in JIA & VONDEL (2011).

21. *Haliplus* (*Liaphlus*) *sharpi* WEHNCKE, 1880*

Material examined:

JIANGXI: 2 exs., Ji'an County, Zaodu Town, Nanshan Village, 29°0'36"N 115°9'36"E, 315 m, 19.VII.2014, leg. R. Lin.

YUNNAN: 1 ♀, Yingjiang County, Tongbiguan, Lake Kaibangya, 24°34'48"N 97°40'12"E, 1317 m, 25.V.2016, leg. Y. Tang & R. Zhang.

Discussion: The specimen from Yunnan has a slightly smaller eye distance than the specimens from Jiangxi (Figs. 12–13), and the pronotum has two longitudinal marks on the disk (Figs. 10–11).

Distribution: Korea and China, where it is widely distributed: Anhui, Chongqing, Fujian, Guizhou, Jiangxi, Liaoning, Shanghai, Taiwan, Yunnan. The record from Sichuan in VONDEL (2005) refers to Chongqing. First record for Jiangxi.

22. *Peltodytes* (s.str.) *caesus* (DUFTSCHMID, 1805)*

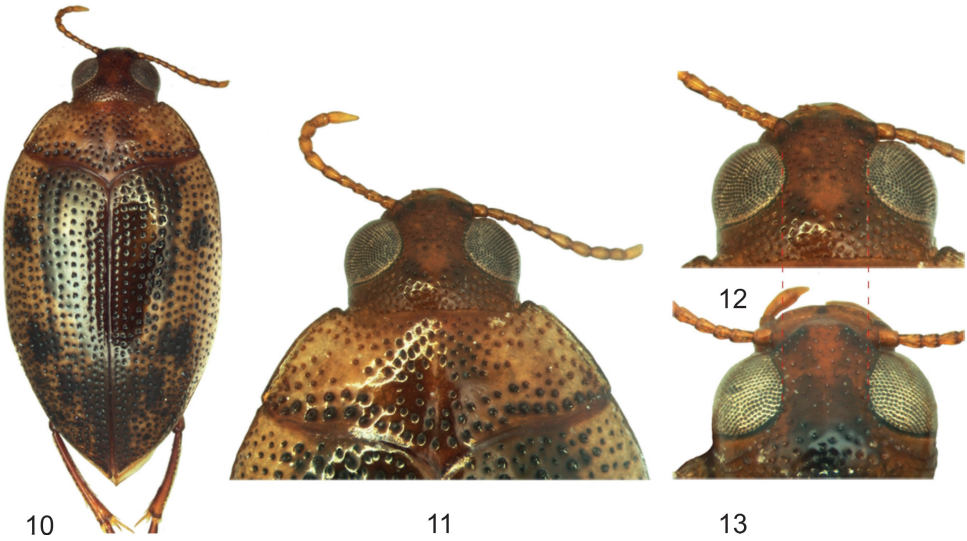
Distribution: Wide-spread in the Palearctic Region, reaching north-western China (Xinjiang).

23. *Peltodytes* (s.str.) *coomani* PESCHET, 1923*

Distribution: Narrowly distributed in the northern Oriental Region, reaching southern China (Guangdong, Guangxi, Hainan).

24. *Peltodytes* (s.str.) *dauricus* ZIMMERMANN, 1924*

Distribution: Narrowly distributed in the eastern Palearctic Region, including north-eastern China (Heilongjiang, Inner Mongolia, Liaoning).



Figs. 10–13: *Haliplus sharpi* (10–12: specimen from Yunnan, 13: specimen from Jiangxi): 10) habitus, 11) dorsal view of head and pronotum, 12–13) dorsal view of head.

25. *Peltodytes* (s.str.) *intermedius* (Sharp, 1873)*

Distribution: East Palearctic Region. Recorded from eastern and central China: Beijing, Fujian, Guangdong, Liaoning, Shanghai, Sichuan, Taiwan, Zhejiang.

26. *Peltodytes* (s.str.) *pekinensis* Vondel, 1992*

Material examined:
SHANGHAI: 2 exs., without detailed locality data, 19.VII.1922, leg. A. Svenson.

Distribution: Russian Far East and eastern China: Beijing, Fujian, Guangdong, Hebei, Liaoning, Shaanxi, Shandong, Shanghai, Tianjin. First record for Shanghai.

27. *Peltodytes* (s.str.) *sinensis* (Hope, 1845)*

Material examined:
TIANJIN: 1 ex., Nanda, IV.1956, collector unknown.

Distribution: South-eastern Palearctic and Oriental regions. Wide-spread in eastern and central parts of China: Anhui, Beijing, Chongqing, Fujian, Guangdong, Guangxi, Guizhou, Hainan, Hebei, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Jilin, Liaoning, Shaanxi, Shandong, Shanghai, Sichuan, Taiwan, Tianjin, Yunnan, Zhejiang. First record for Tianjin.

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References

IWATA, T. 2016: A new record of *Haliplus regimbarti* (Coleoptera: Haliplidae) from Japan. – Japanese Journal of Systematic Entomology 22 (1): 99–100.

JIA, F. & VONDEL, B. van 2011: Annotated catalogue of the Haliplidae of China with the description of a new species and new records from China (Coleoptera, Adephaga). – ZooKeys 133: 1–17.

VONDEL, B.J. van 1995: Haliplidae: Review of the Haliplidae of China (Coleoptera), pp. 111–154. – In Jäch, M.A. & Ji, L. (eds.): Water Beetles of China. Vol. I. – Wien: Zoologisch-Botanische Gesellschaft in Österreich and Wiener Coleopterologenverein, 410 pp.

VONDEL, B.J. van 2005: Haliplidae, pp. 20–86. – In Nilsson, A.N. & Vondel, B.J. van (eds.): World Catalogue of Insects. Vol. 7. Amphizoidae, Aspidytidae, Haliplidae, Noteridae and Paelobiidae (Coleoptera, Adephaga). – Stenstrup: Apollo Books, 171 pp.

VONDEL, B.J. van 2013: World Catalogue of Haliplidae – corrections and additions, 2 (Coleoptera: Haliplidae). – Koleopterologische Rundschau 83: 23–34.

VONDEL, B.J. van 2017: Family Haliplidae Aubé, 1836, pp. 838–843. – In Löbl, I. & Löbl, D. (eds.): Catalogue of Palaearctic Coleoptera. Vol. 1. Archostemata – Myxophaga – Adephaga. Revised and updated edition. – Leiden: Brill, XXXIV + 1443 pp.

VONDEL, B.J. van & LITOVKIN, S.V. 2017: Five new synonymies in *Haliplus* subgen. *Liaphlus* Guignot, based on the variability of the left paramere (Coleoptera: Haliplidae). – Koleopterologische Rundschau 87: 31–35.

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Buchbesprechung

FOSTER, G.N., BILTON, D.T., HAMMOND, M. & NELSON, B.H. 2018: Atlas of the hydrophiloid beetles of Britain and Ireland. – Telford: FSC Publications, xii + 305 pp. Paperback, £ 25.00.-

Dieser Atlas umfasst die Familien Helophoridae, Georissidae, Hydrochidae, Spercheidae und Hydrophilidae (Hydrophiloidea) der Britischen Inseln (einschl. Irland, Hebriden, Orkney, Shetland, Man, Kanalinseln). Es ist praktisch der Folgeband zum "Atlas of the predaceous water beetles (Hydradephaga) of Britain and Ireland", welcher in der Koleopterologischen Rundschau (Band 86: pp. 50, 60) vor zwei Jahren besprochen wurde.

In ihrem Aufbau sind die beiden Werke nahezu identisch. Die einleitenden Kapitel (pp. 1–8) enthalten Angaben über Sammelmethoden, Datenbasis, Identifikation, Genetik, Entwicklungsstadien, Ernährung, Phänologie, Sexualdimorphismus, Lauterzeugung, Flugfähigkeit sowie eine ausführliche Übersicht über die natürlichen Feinde und Kommensalen der Hydrophiloidea.

In der Tabelle auf den Seiten 9–17 sind auch die Hydradephaga gelistet, da im ersten Atlas eine sehr fehlerhafte Version zum Druck gelangte. Die Hydrophiloidea finden sich auf den Seiten 14–17. Die Spalten für Großbritannien und Irland enthalten, wie im Hydradephaga Band, zusätzlich Angaben über den Gefährdungsstatus der jeweiligen Art. Neben den üblichen IUCN Kategorien findet sich noch die zusätzliche Kategorie „NS" („nationally scarce") in der Spalte Großbritannien. Eine Art (*Spercheus emarginatus*) gilt im behandelten Gebiet als ausgestorben; allerdings gibt es im Buch unterschiedliche Angaben darüber, wann diese Spezies zuletzt nachgewiesen wurde; auf Seite 8 steht im ersten Absatz: „… not seen in England since 1956, …", während auf derselben Seite in der letzten Zeile folgendes vermerkt ist: „… was last found in England in 1954"; 1956 ist korrekt, 1954 ist ein Tippfehler (G.N. Foster, email vom 27.VIII.2018).

Beeindruckend ist die Datenmenge, auf der dieser Atlas beruht: 149 000 Funddaten von 670 Personen zusammengetragen.

Im Hauptteil des Werkes (pp. 18–267) werden die einzelnen Arten im Detail behandelt. Auf der ersten Seite finden sich kurze Angaben zu Taxonomie, Identifikation, Entwicklungsstadien, Habitat und Verbreitung sowie natürliche Feinde („natural enemies"). Dieser Untertitel ist allerdings nicht ganz zutreffend, denn die zahlreichen hier genannten epibiontischen Ziliaten kann man nicht als Feinde bezeichnen. Auch manche aquatische Milbe, z.B. *Allopygmephorus matthesi*, im besprochenen Buch in der nicht mehr gültigen Kombination *Bakerdania matthesi* gelistet, gilt als phoretisch und schadet dem Käfer in keiner Weise.

Auf die Verwendung von englischen Trivialnamen wird in diesem Buch weitgehend verzichtet. Zu den wenigen Ausnahmen zählen *Hydrophilus piceus* („Great Silver Water Beetle") und *Hydrochara caraboides* („Lesser Silver Water Beetle").

Die nahezu ganzseitigen Verbreitungskarten sind auf Rasterbasis erstellt. Ein Punkt entspricht einer Fläche von 10 × 10 km. Die einzelnen Fundpunkte sind entweder schwarz (ab 1980) oder grau (bis 1979). Bei einigen Arten sind zusätzlich subfossile Funde (×) eingetragen. *Helophorus brevipalpis* und *Anacaena globulus* sind die im Untersuchungsgebiet am weitesten verbreiteten Arten. Bei *Cercyon castaneipennis*, *Laccobius simulatrix* und *Sphaeridium substriatum* wurde auf eine Verbreitungskarte verzichtet; *Cercyon castaneipennis* ist nur in einer Fußnote (p. 234) erwähnt: „… now confirmed in Kent", und *Sphaeridium substriatum* ist nur in der Tabelle (p. 17) und im Text (p. 258) kurz erwähnt, da der Nachweis noch nicht publiziert wurde.

(Fortsetzung auf p. 22)