

Taxonomic notes on Chinese *Ametor* and *Hydrocassis*
(Coleoptera: Hydrophilidae: Sperchopsini)

Fenglong JIA^{1,2)} Shuang ZHAO¹⁾

¹⁾ Institute of Entomology, Life Science School, Sun Yat-sen University, Guangzhou, 510275, Guangdong, China; emails: fenglongjia@yahoo.com.cn, topzs@yahoo.com.cn

²⁾ Corresponding author

Abstract. Two new species, *Hydrocassis gansu* sp. nov. and *Ametor xizangensis* sp. nov., are described from Gansu Province and Xizang Autonomous Region, China, respectively. *Hydrocassis hebaueri* Schödl, 2000, is reported firstly from China. Additional faunistic data of *Hydrocassis metasternalis* Ji & Schödl, 1998, *H. anhuiensis* Ji & Schödl, 1998, *H. scapulata* Deyrolle & Fairmaire, 1878, *H. imperialis* (Knisch, 1924), *H. scapha* d'Orchymont, 1942, and *Ametor rudesculptus* Semenov, 1900 from China are reported. A key to all known species of both genera is given.

Key words. Coleoptera, Hydrophilidae, *Hydrocassis*, *Ametor*, new species, China, Palearctic region, Oriental region.

Introduction

Hydrocassis Deyrolle & Fairmaire, 1876 and *Ametor* Semenov, 1900 are both members of the hydrophilid tribe Sperchopsini, containing medium-sized aquatic species characterized by denticulate lateral margins of the elytra. The genus *Hydrocassis* currently contains 16 species of which 13 occur in China. *Hydrocassis lacustris* (Sharp, 1884) and *H. jengi* Satô, 1998 are known only from Japan, while *H. hebaueri* Schödl, 2000 is known only from Laos currently. *Hydrocassis scapha* d'Orchymont, 1942 extends to Vietnam, *H. uncinata* Ji & Schödl, 1998 to Laos and Thailand, *H. metasternalis* Schödl & Ji, 1995 to Thailand, and *H. scaphoides* d'Orchymont, 1942 to Myanmar (HANSEN 1999, SCHÖDL 2000, MINOSHIMA & HAYASHI 2011, SHORT & FIKÁČEK 2011). *Ametor* occurs in Asia and North America, and 5 species are known at present (Ji & SCHÖDL 1998). SCHÖDL & Ji (1995) revised both genera taxonomically and described three new species of *Hydrocassis* from China. Three years later, Ji & SCHÖDL (1998) described four new species of *Hydrocassis* and a new species *Ametor* from China, and provided an updated checklist of the species of both genera. Two additional species were described after 1998: SCHÖDL (2000) described *H. hebaueri* from Laos, and LIU et al. (2008)

described *H. mongolica* Liu, Ji & Jing, 2008 from Nei Mongol (northern China), which is the northernmost record of the Sperchopsini in Asia.

In 2011, the first author examined the specimens of *Hydrocassis* and *Ametor* in the collection of Chinese Academy of Sciences, Institute of Zoology, Beijing (IZCAS) and found a new species of *Hydrocassis* and a new species of *Ametor*. Here, we describe both new species and include additional faunistic data of known species resulting from our study.

Material and methods

Morphological terminology largely follows HANSEN (1991) and KOMAREK (2004). The studied specimens of *Hydrocassis* and *Ametor* are listed in 'Systematics' and 'Additional faunistic records' parts below. In addition, the types of *Hydrocassis mongolica*, *H. anhuiensis* Ji & Schödl, 1998, *H. pseudoscapha* Ji & Schödl, 1998 and *Ametor elongatus* Ji & Schödl, 1998 deposited in Chinese Academy of Sciences, Institute of Applied Ecology, Shenyang were studied. Examined specimens are deposited in the following collections:

IZCAS	Chinese Academy of Sciences, Institute of Zoology, Beijing, China (J. Chen);
CASS	Chinese Academy of Sciences, Institute of Applied Ecology, Shenyang, China (L. Z. Ji);
NMPC	Department of Entomology, National Museum, Praha, Czech Republic (M. Fikáček);
SYSU	Collection of Sun Yat-sen University, Guangzhou, China (F. L. Jia).

Systematics

Ametor xizangensis sp. nov.

(Figs 1, 7, 11)

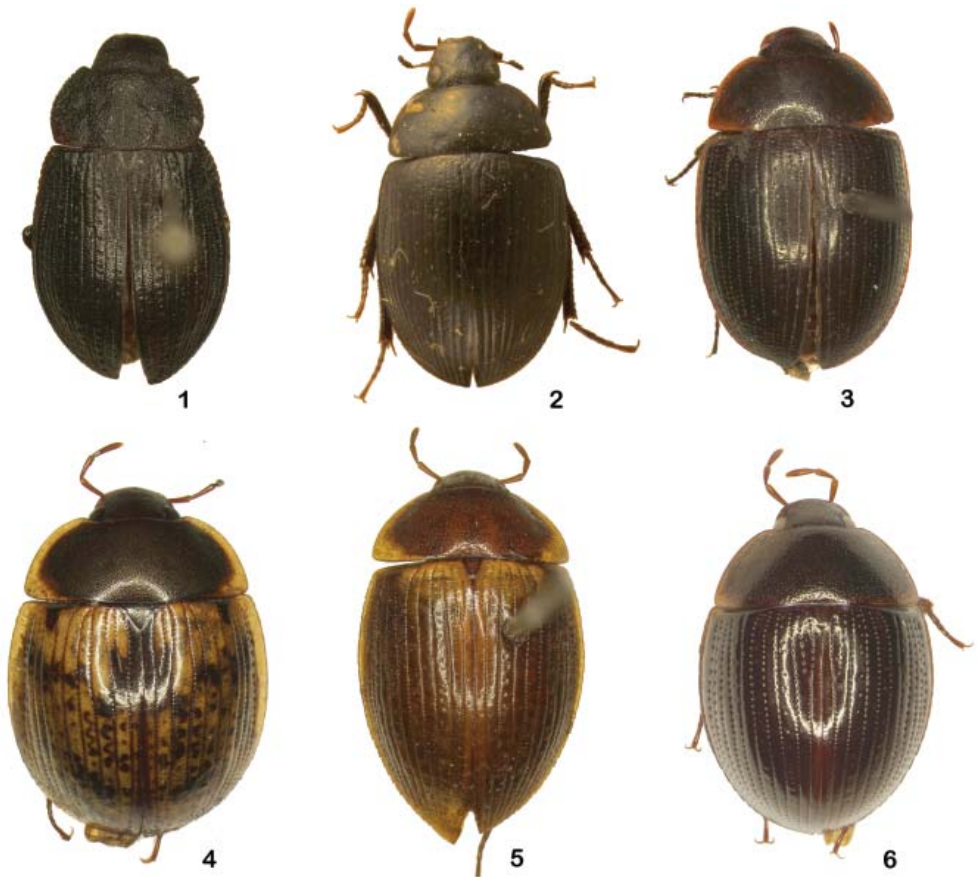
Type locality. China, Xizang autonomous region, Nyelam, 2400–3400 m a.s.l., 27°57'N 86°19'E.

Type material. HOLOTYPE: ♂ (IZCAS: IOZ (E.) 1359174): Xizang, Nyelam, Zhangmu, 2400–3400m, 4.v.1966, Shuyong Wang lgt. [transcribed from Chinese]. PARATYPES: 1 ♂ (IZCAS: IOZ (E.) 1359171, aedeagus lost), same data as holotype, with a label 'aedeagus has been dissected, Pu, 1972.x.1' [transcribed from Chinese]; 1 ♀ (IZCAS: IOZ (E.) 1359175): same data as holotype. All specimens bear a label 'Helochares sp. n. 1972, IX'.

Diagnosis. Dorsal coloration black, without metallic sheen. Body slightly convex, distinctly interrupted between pronotum and elytra. Head and pronotum rugose, with dense coarse punctures, fine punctures undetectable except on extreme anteromedial portion of frons and clypeus. Pronotum with irregular coarse punctures, without the fine ground punctures. Elytra with sharp lateral denticles basally, surface coarsely sculptured between punctures; alternate intervals distinctly elevated apically. Aedeagus with median lobe gradually narrowed apicad, rounded apically (Fig. 11). Parameres slightly curved distally, evenly narrowed apically, conspicuously surpassing median lobe.

Description. Form and color. Body elongately oval, depressed in lateral view, distinctly interrupted between pronotum and elytra; coloration black. Length 8.1–8.3 mm, width 4.3–4.4 mm. Eyes, maxillary and labial palpomeres, glabrous portion of antennae, glabrous portion of femora, tibiae and tarsi reddish brown; antennal club black. Ventral surface black.

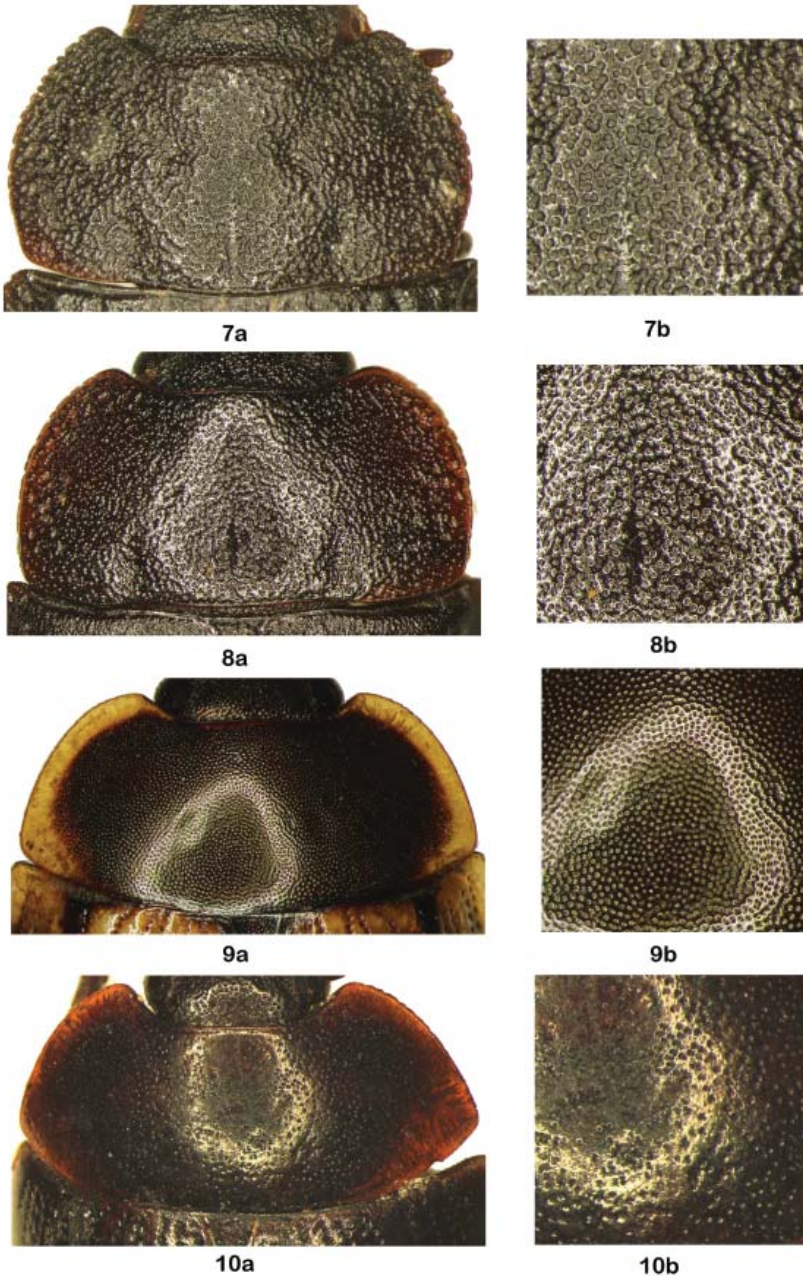
Head. Clypeus with dense, fine punctures medially and anterolaterally, with a few coarse punctures posterolaterally, interstices without microsculpture; anterior clypeal margin stron-



Figs 1–6. Habitus of selected Chinese *Ametor* and *Hydrocassis*. 1 – *A. xizangensis* sp. nov. (holotype, dorsal view); 2 – *A. elongatus* Ji & Schödl, 1998 (holotype, dorsal view); 3 – *H. gansu* sp. nov. (holotype, dorsal view); 4 – *H. hebaueri* Schödl, 2000; 5 – *H. scapulata* Fairmaire, 1878; 6 – *H. imperialis* (Knisch, 1921).

gly and broadly concave. Frontoclypeal suture undetectable. Frons rather rugose, bearing densely arranged coarse punctures, fine punctures only present on a small anteromedian portion; microsculpture on interstices absent, with a ridge near inner edge of eye. Eyes small, slightly protruding, interocular distance ca. $6.5\times$ as wide as one eye in dorsal view. Mentum ca. $1.5\times$ as wide as long, densely and coarsely punctate, not depressed anteromedially. Maxillary palpomere 2 ca. $1.4\times$ as long as palpomere 4, last palpomere asymmetrical, equal to palpomere 3 in length.

Thorax. Pronotum ca. $2.0\text{--}2.1\times$ as wide as long, evenly arched, widest in the middle of the lateral margin, bearing only densely arranged coarse punctures, some punctures fused and forming irregular large pits laterally. Pronotal disc with a characteristic pattern of impressions,



Figs 7-10. Pronotum of selected species of *Ametor* and *Hydrocassis* (a – pronotum at 30 \times , magnification; b – part of pronotal disc at 60 \times magnification). 7 – *A. xizangensis* sp. nov. (holotype, dorsal view); 8 – *A. rudesculptus* Semenov, 1900; 9 – *Hydrocassis hebaueri* Schödl, 2000; 10 – *Hydrocassis gansu* sp. nov. (holotype, dorsal view).

consisting of a transverse row of 3 impressions posteriorly (median impression small) and a transverse row of 4 impressions in front of these. Posterior margin clearly bisinuate, lateral bead narrow, sharply dented anteriorly but somewhat bluntly dented posteriorly. Prosternum with a transverse groove, not carinate before groove, slightly carinate behind groove; anterior margin protruding anteriorly but forming a tooth. Mesoventrite with mesal protuberance with angulate transverse anterior portion and longitudinal keel posteriorly. Metaventricle protruding between mesocoxae and contacted with mesoventral keel, not concave. Elytra with 10 punctate striae and short scutellary stria between first and second striae; systematic punctures present on alternate intervals, clearly coarser than punctures of striae. Intervals rugosely punctate, coarsely sculptured between punctures; alternate intervals elevated apically; epipleura almost horizontal; lateral margins with blunt dents. All coxae with stout, golden setae. Basal half of anterior and posterior femora with dense golden pubescence; basal two-thirds of mesofemora densely pubescent. All femora with distinct tibial grooves. Tarsi with densely arranged whitish setae ventrally, metatarsomere 5 a little longer than metatarsomeres 3–4 combined.

Abdomen. First abdominal ventrite not carinate medially, fifth ventrite clearly emarginate apically.

Male genitalia. Aedeagus with median lobe gradually narrowed apicad, rounded apically (Fig. 11). Parameres slightly curved distally, evenly narrowed apically, their apex rounded, conspicuously surpassing median lobe.

Differential diagnosis. This species belongs to the *Ametor rudesculptus* group as defined by SCHÖDL & JI (1995), based on the following characters: body elongate, slightly convex, markedly interrupted between pronotum and elytra; dorsal surface rugosely punctuate, coarsely sculptured between punctures; epipleura almost horizontal.

The new species is very similar to *A. rudesculptus* Semenov, 1900 by elytra without a ridge on eleventh interval and last visible abdominal sternite with distinct emargination fringed by stiff setae, but it can be easily separated from *A. rudesculptus* by much coarser punctures on the head, pronotum and elytra (compare Figs. 7 and 8, both are in the same magnification). The following additional characters can be used to distinguish both species: head without fine punctures except on extreme anteromedial portion of frons; pronotum and elytra without fine punctures intermixed with the large ones; elytra with alternate intervals elevated apically; aedeagus with median lobe gradually narrowed apicad, rounded apically (median lobe subparallel subapically in *A. rudesculptus*, Fig. 12); pronotum with 5 deeper impressions on disc and much coarser punctures.

Etymology. This new species is named according to the type locality, Xizang Autonomous Region in West China.

Biology. Unknown.

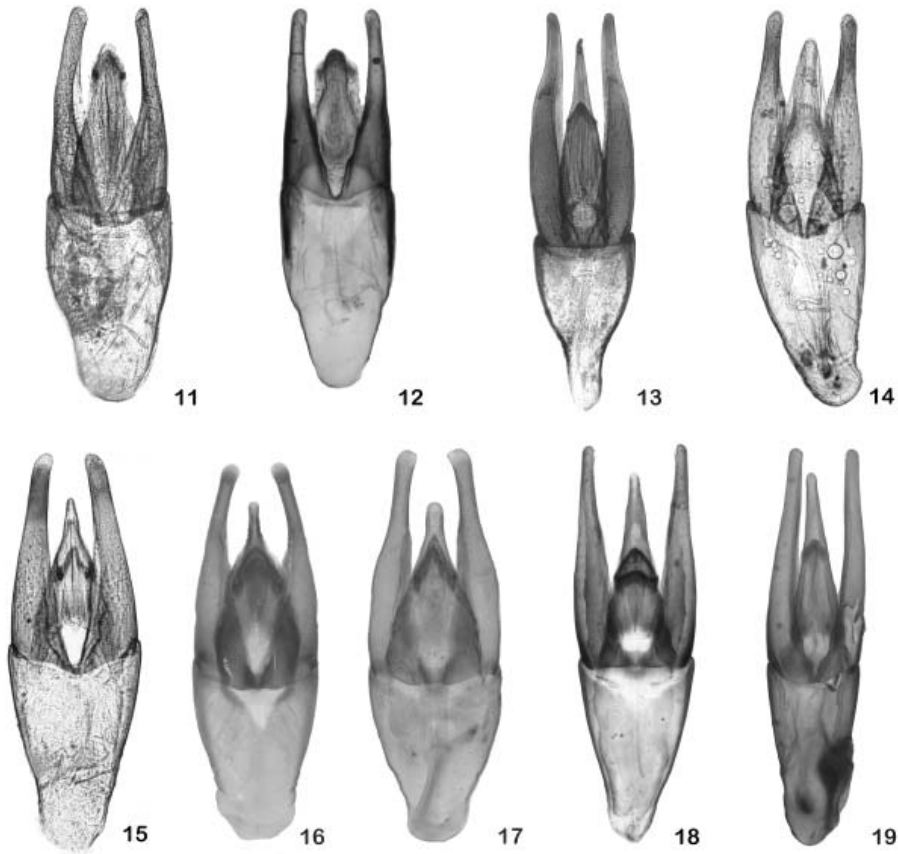
Distribution. Only known from the type locality.

Hydrocassis gansu sp. nov.

(Figs 3, 10, 13)

Type locality. China, Gansu province, Wenxian county, 720 m a.s.l., ca. 32.73°N, 105.19°E.

Type material: HOLOTYPE: ♂ (IZCAS): 'China, Gansu, Wenxian County, Bikou town, Bifenggou village, 720 m, 25-v-1998, lgt. Zhang Guoqing [transcribed from Chinese]'. PARATYPE: ♂ (IZCAS), same data as the holotype.



Figs 11–19. Aedeagus of selected species of *Ametor* and *Hydrocassis* (dorsal view). 11 – *A. xizangensis* sp. nov. (holotype); 12 – *A. rudesculptus* Semenov, 1900; 13 – *H. gansu* sp. nov. (holotype); 14 – *H. hebaueri* Schödl, 2000; 15 – *H. metasternalis* Schödl & Ji, 1995; 16 – *H. anhuiensis* Ji & Schödl, 1998; 17 – *H. scapulata* Fairmaire, 1878; 18 – *H. imperialis* (Knisch, 1921); 19 – *H. scapha* Orchymont, 1942.

Diagnosis. Pronotum with irregular coarse punctures mixed with fine ground punctures, clearly serrate anteriorly but almost smooth posteriorly. Aedeagus elongate with phallobase shorter than parameres; outer margin of parameres distinctly pointing laterad apically, curved on apical third, and considerably longer than median lobe.

Description. Form and Color. Body oval, rather convex in lateral view, length 6.9–7.0 mm, width 4.2–4.3 mm. Head, pronotum, scutellum and elytra black, clypeus with somewhat pale margins, lateral margins of pronotum brown. Maxillary palpomeres dark brown, each palpomere somewhat paler distally. Labial palpomeres dark brown. Antennae dark brown, antennal club darker. Ventral surface and legs black.

Head. Clypeus with dense fine punctures, interstices without microsculpture. Anterior margin of clypeus strongly convex medially. Frontoclypeal suture undetectable. Frons with dense fine ground punctures on medioanterior portion, with dense and coarse punctures

mixed with some fine punctures on posterior and lateral portion, without microsculpture on interstices. Eyes small, not protruding, interocular distance ca. $4.6\times$ as wide as one eye in dorsal view. Mentum ca. $1.5\times$ as wide as long, densely and coarsely punctate, not depressed anteromedially. Antennae with close club. Maxillary palpomere 4 asymmetrical, equal to palpomere 2 in length, slightly longer than palpomere 3.

Thorax. Pronotum ca. $2.1\text{--}2.2\times$ as wide as long, with densely arranged coarse punctures mixed with fine punctures. Lateral bead narrow, clearly serrate anteriorly but almost smooth posteriorly. Prosternum moderately elevated medially and with sharp, tooth-like projection anteromedially. Mesoventrite with a strongly elevated mesal protuberance with angulate transverse anterior portion and a longitudinal keel posteriorly. Metaventrite protruding between mesocoxae and contacted with mesoventral carina, with a \cap -shaped cavity behind metaventral projection. Elytron with 10 punctate striae and a short scutellary stria between the first and second stria; systematic punctures present on alternate intervals; apex of elytra somewhat sharpened. Ground punctures on intervals very fine, interstices without microsculpture. All coxae with stout, golden setae. Femora with dense golden pubescence ventrally on basal half, with distinct tibial groove. Tarsi with densely arranged whitish setae ventrally, metatarsomere 5 about as long as metatarsomeres 3–4 combined.

Abdomen. First abdominal ventrite not carinate medially, fifth ventrite clearly emarginate apically.

Male genitalia. Aedeagus elongate. Phallobase shorter than parameres, almost symmetrical basally, strongly narrowed posteriad; outer margin of parameres distinctly pointing laterad apically, curved mesally on apical third, and considerably longer than median lobe. The median lobe gradually narrowed toward apex, pointed apically, gradually widened towards base.

Differential diagnosis. This species belongs to the *Hydrocassis scapha* group as defined by SCHÖDL & Ji (1995), based on aedeagus slender and elongate. It is very similar to *H. scapha*, but it can be distinguished from the latter by following characters: elytra sharper apically; median lobe narrowly pointed apically, gradually widened towards base; outer margin of parameres distinctly pointing laterad apically, curved on apical third, and considerably longer than median lobe (Fig. 13).

Etymology. This new species is named according to Gansu province in Northwest China where the type locality of the species is situated. Noun in apposition.

Biology. Unknown.

Distribution. Only known in type locality.

Additional faunistic records

Ametor rudesculptus Semenov, 1900

(Figs 8, 12)

Material examined. CHINA: SICHUAN: 3 spec. (SYSU): Baoxing, 1500 m, 13.viii.1995, Peiyu Yu lgt.; 2 spec. (SYSU): Baoxing, Guoba, 1300 m, 16.viii.1995, Peiyu Yu lgt.; 1 spec. (SYSU): Baoxing, Mahuanggou, 2400 m, 19.viii.1995, Peiyu Yu lgt.; 2 spec. (IZCAS): Baoxing, Guoba, under rock, 1300m, 16.viii.1995, Peiyu Yu lgt.; 1 spec. (IZCAS), Baoxing, 1300 m, 17.viii.1995, Peiyu Yu lgt.

Distribution. China (Yunnan, Sichuan, Tibet), northern Tadzhikistan, Nepal, Sikkim (SCHÖDL & Ji 1995, SCHÖDL 2000).

***Hydrocassis hebaueri* Schödl, 2000**

(Figs. 4, 9, 14)

Material examined. CHINA: GUANGDONG: 1 ♂ (SYSU): Danxiashan, near Yangyuanshan, Huiyuan pool, 10.vi.2011, Fenglong Jia lgt.; 1 ♂ (SYSU): Danxiashan, plant nursery, light trap, 8.vi.2012, Fenglong Jia lgt.

Biology. Chinese specimens were collected at the edge of very large pond with muddy bottom; a small stream flows into the pond on the other side. The specimens from Laos mentioned by SCHÖDL (2000) were collected at light.

Distribution. China (Guangdong), Laos (SCHÖDL 2000). **First record for China.**

***Hydrocassis metasternalis* Ji & Schödl, 1995**

(Fig. 15)

Material examined. CHINA: YUNNAN: 1 ♂ (IZCAS): Lushui, Pianma, 2300 m, 30.v.1981, Subai Liao lgt.

Distribution. China (Yunnan: Baoshan, Gaoligongshan, Lushui), Thailand (SCHÖDL & Ji 1995, SCHÖDL 2000).

***Hydrocassis anhuiensis* Ji & Schödl, 1998**

(Fig. 16)

Material examined. CHINA: JIANGXI: 2 ♂♂ (SYSU), 1 ♂ 2 ♀♀ (IZCAS): Jinggangshan, Jingzhushan, 910 m, 25.iv.2011, Fenglong Jia lgt.

Distribution. China (Anhui, Jiangxi) (Ji & SCHÖDL 1998).

Remark. *Hydrocassis taiwana* Satô, 1971 was first described by SATÔ (1971) based on one male and one female from Mt. Daibu-san (Tawushan), Taiwan. It is considered an endemic species to Taiwan because there has not been any reports of the species outside Taiwan until now. Ji & SCHÖDL (1998) described the species *H. anhuiensis* based on specimens from Huangshan (Anhui province) and Jiulingshan (Jiangxi province) which was supposed as very similar to *H. taiwana*. According to Ji & SCHÖDL (1998), the characters to distinguish *A. anhuiensis* from *A. taiwana* are as follows: more subcircular body outline (EI 1.12-1.15 in *H. anhuiensis*, EI 1.19 in *H. taiwana*), elytral striae distinctly more deeply impressed, and the morphology of the aedeagus. However, we were not able to find any difference between the two species based on the figures of the aedeagus provided by Ji & SCHÖDL (1998). The second author examined and measured the paratypes of *H. anhuiensis*. Based on these studies, it seems that there is no difference between *H. taiwana* and *H. anhuiensis* and the slight difference of elytral index (EI) is not enough to separate them. The two species are therefore probably conspecific. Here, we treated the specimens from Jinggangshan as *H. anhuiensis*.

***Hydrocassis scapulata* Deyrolle & Fairmaire, 1878**

(Figs 5, 17)

Material examined. CHINA: HEBEI: 2 spec. (IZCAS): Hebei, Wulingshan, 6.x.1993, lgt. Peiyu Yu. **SHICHUAN:** 1 spec. (IZCAS): Baoxing, 1500 m, 13.viii.1995, Peiyu Yu lgt.; 1 spec. (IZCAS): Baoxing, Guoba, 1300 m, 16.viii.1995, Peiyu Yu lgt. **SHAANXI:** 4 spec. (SYSU): Huashan mount foot, 9.v.2011, Fenglong Jia lgt.; 4 spec. (SYSU): Qinling, Qinling Ridge, 12.v.2011, Fenglong Jia lgt.; 1 spec. (SYSU): Qinling, Houzhenzi, 1546 m, 15.vi.2005; 1 spec. (SYSU): Qinling, Ningshanxian, Ningdong, Forest Agency, Dacigou, 11.vi.2005, 1437 m; 1 spec. (SYSU): Shaanxi,

Qinling, Pingheliang, 2056 m, 33°26.165'N, 108°29.223'E, 13.vii.2012, Fenglong Jia lgt.; 1 spec. (SYSU): Qinling, Huditang, 1554 m, 33°26.050'N, 108°26.843'E, 12.vii.2012, Fenglong Jia lgt. **SHANXI**: 1 ♂, (SYSU): Lishan National Nature Reserve, Zhongcun town, Xiachuan village, in running river, 1515 m, 35°25.770'N 112°00.628'E, 23.vii.2012, Zeyu Wang lgt.; 1 ♂ (SYSU): Lishan National Nature Reserve, Jihe river, in running river, 1106 m, 35°25.749'N, 111°54.739'E, 28.vii.2012, Zeyu Wang lgt.

Distribution. Only known from China (Shaanxi, Shanxi, Hebei, Sichuan) (Ji & SCHÖDL 1998).
First record from Hebei and Shanxi.

Hydrocassis imperialis (Knisch, 1924)

(Figs 6, 18)

Material examined. CHINA: JIANGXI: 1 spec. (SYSU): Jinggangshan, Shuangxikou, 24.iv.2011, Fenglong Jia lgt.; 5 spec. (SYSU): Jinggangshan, Xiangzhou, 26.iv.2011, Fenglong Jia lgt.; 1 spec. (NMPC): same locality and date, Fikáček & Hájek lgt.; 5 spec. (SYSU): Jinggangshan, Wankeng, 29.iv.2011, Fenglong Jia & Shuang Zhao lgt.; 5 spec. (NMPC): same locality and date, Fikáček, Hájek, Jia & Song lgt.; 12 spec. (SYSU): Jinggangshan, Baiyinhu, 27.iv.2011, Fenglong Jia lgt.; 7 spec. (NMPC): Jiangxi prov., Jinggangshan Mts., Baiyinhu env., 23.–29.iv.2011, Fikáček & Hájek lgt.; 5 spec. (SYSU): Jinggangshan, Huyangta, 28.iv.2011, Fenglong Jia lgt.; 3 spec. (NMPC): same locality and date, Fikáček & Hájek lgt.; 2 spec. (SYSU): Jinggangshan, Xiping, 24.iv.2011, Fenglong Jia lgt.; 6 spec. (SYSU): Jinggangshan, Jingzhushan, 24.iv.2011, Fenglong Jia & Shuang Zhao lgt.; 2 spec. (NMPC): same locality and date, Fikáček & Hájek lgt.; 6 spec. (SYSU): Jinggangshan, 1.iv.2011, Yun Li lgt.; 2 spec. (NMPC): Pingshuishan, 1590 m, 28.iv.2011, Fikáček, Hájek, Kubeček, Jia, Song & Zhao lgt.

Distribution. Only known from China (Jiangxi, Hunan, Fujian) (SCHÖDL & Ji 1995, Ji & SCHÖDL 1998).

Hydrocassis scapha d'Orchymont, 1942

(Fig. 19)

Material examined. CHINA: JIANGXI: 11 spec. (SYSU): Jiangxi, Shangrao, Sanqingshan, 15-20.iv.2007, Fenglong Jia lgt. **GUANGDONG:** 18 spec. (SYSU): Guangdong, Fengkai, Nature Reserve, 20.xi.2010, Fenglong Jia lgt.; 21 exs. (SYSU): same locality data but 2.v.2011; 7 spec. (NMPC): W of Qixing, Heishiding nature reserve (forested stream valley), 1.-3.v.2011, M. Fikáček & J. Hájek lgt. **SICHUAN:** 1 ♂ (IZCAS: IOZ (E) 1381278): Guanxian, 700-1000 m, 5-11.iv.1964, Xuezhong Zhang lgt. **GUANGXI:** 2 ♂♂ 3 ♀♀ (SYSU): Shiwandashan, stong river, 497 m, 9.vii.2011, Song Keqing lgt.; 6 spec. (IZCAS): same label data.

Distribution. China (Hunan, Guangxi, Fujian, Guangdong, Sichuan), northern Vietnam (SCHÖDL & Ji 1995, Ji & SCHÖDL 1998).

Key to all known *Ametor* and *Hydrocassis* species

The genus *Ametor* is closely related to *Hydrocassis* and it is difficult to distinguish between them using only external features. However, the median lobes are clearly different between the two genera. As stated by SCHÖDL & Ji (1995), the corona is always situated on the apex of the median lobe in *Ametor*, but more basally in *Hydrocassis*.

KNISCH (1921) described *Hydrocycylus formosus* Knisch, 1921 (later transferred to *Hydrocassis*) from Fujian, China. However, the type of the species was destroyed during World War II and it is impossible to diagnose the species from other species of the genus only based on the original description. SCHÖDL & Ji (1995) mentioned that 'it is impossible to state whether

[any other species of *Hydrocassis*] is a synonym of *Hydrocycclus formosus*' but listed the name as a dubious synonym of *Hydrocassis schillhammeri* Schödl & Ji, 1995. Here, *Hydrocassis formosa* is not treated.

The following key is a modified version of the keys by SCHÖDL & JI (1995) and LIU et al. (2008). Aedeagi are illustrated by SATÔ (1971, 1998), SCHÖDL & JI (1995), JI & SCHÖDL (1998), SCHÖDL (2000) and LIU et al. (2008).

1. Median lobe with gonopore situated apically (genus *Ametor* Semenov, 1900). 2
 - Median lobe with gonopore situated more basally (genus *Hydrocassis* Deyrolle & Fairmaire, 1878). 7
2. Body elongate oval, slightly convex in lateral view, rugulose sculptured between elytral punctures (*Ametor scabrosus* group). 3
 - Body moderately to strongly convex in lateral view; smooth between punctures. 5
3. Body length 3.8–6.5 mm. Eleventh elytral interval forming a ridge which conceals lateral margin at least in distal half. Hind margin of last visible abdominal sternite entire, without apical emargination. *Ametor scabrosus* (Horn, 1873)
 - Body length 8.0–9.5 mm. Elytra without lateral ridge. Hind margin of last visible abdominal sternite distinctly emarginated and fringed by stiff setae. 4
4. Head, pronotum and elytra strongly rugose, strongly punctate, without fine punctures intermixed among coarse ones (except on extreme anteromedial portion of frons); alternate elytral intervals elevated apically; aedeagus with median lobe gradually narrowed apicad, rounded apically. *Ametor xizangensis* sp. nov.
 - Head, pronotum and elytra less rugose and less coarsely punctate, with fine punctures mixed with coarse punctures; elytral intervals not elevated; aedeagus with median lobe subparallel towards apex. *Ametor rudesculptus* Semenov, 1900
5. Brown species. Hind angles of pronotum broadly rounded, distinctly interrupted between pronotum and elytra (*Ametor latus* group). Length 5.8–6.7mm. Nearctic Region. *A. latus* (Horn, 1873)
 - Black species. Hind angle of pronotum narrowly rounded, widest at base (*Ametor rugosus* group). Length 6.5–9.0 mm. Oriental and southern Palaearctic Regions. 6
6. Head and pronotum with metallic sheen; pronotum with less distinct and more scattered, coarser punctures. Aedeagus with slender median lobe. *Ametor elongatus* Ji & Schödl, 1998
 - Head and pronotum without metallic sheen; pronotum with more distinct and less scattered coarser punctures. Aedeagus with wider median lobe. *Ametor rugosus* (Knisch, 1924)
7. Parameres with tooth-like projections on inner surface (*Hydrocassis scaphoides* group). 8
 - Parameres without tooth-like projections on inner surface. 11
8. Projections situated near the apex of the parameres, slightly pointing to base. 9
 - Projections situated in distal half but closer to the midlength of the paramere. 10
9. Tooth-like projections on the inner face of parameres situated closer to apex, apical area of parameres thus being shorter; median lobe apically acutely pointed, as long as parameres. *Hydrocassis uncinata* Ji & Schödl, 1998
 - Tooth-like projections on the inner face of parameres situated more distal to apex, apical

- area of parameres thus being longer; median lobe apically not so acutely pointed, shorter than parameres. *Hydrocassis scaphoides* Orchymont, 1942
10. Head and pronotum black, densely and regularly punctate with coarse punctures; sides of clypeus and pronotal margins brown. Elytra usually brown with dark spots, seldom black. Projections on parameres somewhat curved, pointing dorsally. Length 8.5–9.0 mm.
..... *Hydrocassis schillhammeri* Schödl & Ji, 1995
- Head and pronotum black, with few scattered coarse punctures. Head with metallic sheen. Elytra black. Projections on parameres flat, pointing towards middle. Length 7.2–8.5mm. *Hydrocassis baoshanensis* Schödl & Ji, 1995
11. Median lobe and parameres slender, gradually narrowed to apex. (*Hydrocassis scapha* group). 12
- Median lobe abruptly narrowed towards apex, apical portion sometimes compressed. (*Hydrocassis scapulata* group). 18
12. Median lobe of aedeagus with accessory ventral plate, wider than median lobe (see SCHÖDL 2000: Figs. 1a,b). *Hydrocassis hebaueri* Schödl, 2000
- Median lobe of aedeagus without accessory ventral plate. 13
13. Outer margin of parameres distinctly pointing laterad apically, curved mesally on apical third, considerably longer than median lobe, median lobe gradually narrowed toward tip and pointed apically, gradually widened towards base. *Hydrocassis gansu* sp. nov.
- Outer margin of parameres at most slightly curved; median lobe obtuse apically. 14
14. Aedeagus slender and elongate; sides of parameres almost straight on inner margin and little longer than median lobe. 15
- Aedeagus stouter; parameres narrowed and slightly sinuate on inner margin in apical third and conspicuously longer than median lobe. 16
15. Aedeagus slender. Median lobe slender, gradually widened to base.
..... *Hydrocassis scapha* Orchymont, 1942
- Aedeagus robust. Median lobe stout, in apical third distinctly narrowed, almost parallel-sided towards apex. *Hydrocassis pseudoscapha* Ji & Schödl, 1998
16. Median lobe gradually widened to base, apical portion not digitate.
..... *Hydrocassis imperialis* (Knisch, 1921)
- Median lobe strongly narrowed in apical portion, digitate. 17
17. Median lobe strongly narrowed in apical third, apex expanded.
..... *Hydrocassis sichuana* Ji & Schödl, 1998
- Median lobe narrowed in apical third, almost parallel-sided towards apex.
..... *Hydrocassis mongolica* Liu, Ji & Jing, 2008
18. Median lobe of aedeagus slender, not strongly dilated to base.
..... *Hydrocassis jengi* Satô, 1998
- Median lobe of aedeagus strongly dilated to base. 19
19. Endemic to Japan. *Hydrocassis lacustris* (Sharp, 1884)
- Distributed in China and Southeast Asia. 20
20. Large species, 8.5–9.0 mm. Median lobe strongly narrowed and compressed on apical portion. 21
- Smaller species, 6.5–8.0 mm. Median lobe not so strongly narrowed and compressed on apical portion. 22

21. Median lobe narrower apically, parameres distinctly arcuate at apical third, bent towards middle. *H. anhuiensis* Ji & Schödl, 1998
- Median lobe somewhat broader apically, parameres gradually bent towards middle.
..... *H. taiwana* Satô, 1971
22. Brown to dark brown. Coarse punctures on pronotum arranged densely and evenly. Elytral striae distinctly impressed, lateral intervals convex; primary punctures on elytra situated on minute protuberances (especially on posterior portion). Apical portion of median lobe narrow, abruptly widened towards base; parameres narrowed in apical portion, roundly widened apically, abruptly widened towards base.
..... *Hydrocassis scapulata* Fairmaire, 1878
- Dark brown to black. Pronotum smooth and shining, with sparse coarser punctures; elytral intervals flat, primary punctures not situated on protuberances. Median lobe narrowly rounded towards apical half, widened more gradually; parameres gradually widened towards base, somewhat angulate. *Hydrocassis metasternalis* Schödl & Ji, 1995

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