

HYDROPHILIDAE:

III. Additional notes on the genus *Laccobius* ERICHSON in China and neighbouring areas

(Coleoptera)

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Abstract

Four new species of *Laccobius* ERICHSON (Coleoptera: Hydrophilidae) are described, *L. yunnanensis* from China (Yünnan) and Myanmar, *L. birmanus* from Myanmar, *L. kyrgyzicus* from Kyrgyzstan and *L. schawalleri* from Nepal. Eight species are new for China or neighbouring countries: *L. chiesai* GENTILI (Nepal), *L. cinereus* MOTSCHULSKY (Liaoning, Nei Mongol), *L. elegans* GENTILI (Laos), *L. himalayanus* GENTILI (Yünnan), *L. minutus* (LINNAEUS) (Nei Mongol), *L. nepalensis* GENTILI (Hainan, Yünnan), *L. pallidissimus* REITTER (Kazakhstan, Kyrgyzstan), and *L. syriacus* GUILLEBEAU (Kyrgyzstan). Eight species are new for some Provinces or Autonomous Regions of China: *L. binotatus* d'ORCHYMONT (Guizhou, Hubei, Nei Mongol), *L. elegans* GENTILI (Sichuan), *L. formosus* GENTILI (Gansu, Liaoning, Shandong), *L. fragilis* NAKANE (Gansu, Shaanxi, Taiwan), *L. hammondi* GENTILI (Anhui, Fujian, Gansu, Guangdong, Guizhou, Liaoning, Shandong, Sichuan), *L. inopinus* GENTILI (Fujian, Guangdong, Liaoning), *L. nitidus* GENTILI (Anhui, Fujian, Sichuan, Zhejiang), and *L. oscillans* SHARP (Liaoning). New keys and new figures for the species from China and neighbouring areas are included.

Introduction

Since the first report on *Laccobius* ERICHSON from China and neighbouring areas by GENTILI (1995) one new species was described from China (JIA 1997), one from Vietnam, one from northeast India (GENTILI 1997), and one from Nepal (HEBAUER 2002). Additional material studied by the author revealed novelties of interest. This paper intends to bring the information up to date.

Material and methods

Specimens were examined with a Beck Kassel CBS stereoscopic microscope; the aedeagi figured were glued in DMHF (Di-methyl-hydanthoin-formaldheyde) on transparent plastic card, studied and drawn with a GALILEO LG transmitted light microscope, equipped with a projection device.

Acronyms & CWBS localities:

- CASF California Academy of Sciences, San Francisco
CASS Chinese Academy of Sciences, Institute of Applied Ecology, Shenyang
CFH Collection Franz Hebauer
CWBS China Water Beetle Survey
HNHM Hungarian Natural History Museum, Budapest
MHNL Muséum d'Histoire Naturelle de Lyon

MSNV	Museo di Storia Naturale, Verona
NHME	Naturhistorisches Museum, Erfurt
NHML	Natural History Museum, London
NMW	Naturhistorisches Museum Wien
MTD	Staatliches Museum für Tierkunde, Dresden
SMNS	Staatliches Museum für Naturkunde, Stuttgart
ZMUB	Zoologisches Museum der Humboldt Universität, Berlin

CWBS locs. 39 - 40, 45, 50 - 60, 62, 146 - 147, 153, 155 - 158, 161, 163 - 167 (Liaoning); 63, 64, 66, 70 - 73, 76 (Shandong); 178, 192, 198, 201, 202, 212 (Hainan); 221, 224, 227, 229 - 231, 234, 236, 237 (Sichuan); 240, 243, 245, 247, 255, 256, 258, 259, 262, 263 (Fujian); 265, 266, 269, 271, 272, 274, 281, 283 (Guizhou); 289, 290, 297 (Anhui); 311 (Shaanxi); 324 - 326 (Gansu); 327 - 331 (Nei Mongol); 361, 381 - 385, 387, 394, 396, 397, 408, 410 (Yunnan); 472, 480 (Guangdong).

For detailed information concerning CWBS localities, refer to JÄCH & JI (1995, 1998, 2003).

Faunistic records and taxonomic notes

For the subgenera I follow the same sequence here of my first paper on Chinese *Laccobius* (GENTILI 1995); under each subgenus the species are listed alphabetically.

Subgenus *Glyptolaccobius* GENTILI, 1989

The key to the species of the subgenus *Glyptolaccobius* (GENTILI 1995: 251) has been modified to include *L. eliogentilii* HEBAUER:

- 4a Less extended dark elytral colour leaving distinct yellow stripes and isolated spots beside suture. Basal piece of aedeagus distinctly shorter, parameres much more slender, median lobe surpassing parameres (Figs. 22 a, b).....*eliogentilii* HEBAUER
- 4b Dark elytral colour more extended. Basal piece of the aedeagus longer, parameres wider, median lobe shorter than parameres.....*jaechi* GENTILI

New Nepalese locality data for *L. (Glyptolaccobius) affinis* KNISCH, *L. incisus* GENTILI, *L. jaechi* GENTILI, and *L. munus* GENTILI were published by HEBAUER (2002).

Laccobius (Glyptolaccobius) celsus GENTILI, 1989

MATERIAL EXAMINED:

NEPAL: MID-WESTERN REGION: Karnali province, Dolpa district, Kaghara Leckh, stream near steep cliff, 3800 m, 13.V.1985, leg. A. Weigel, 3 ♂♂ + 7 ♀♀ (NHME, MSNV).

Laccobius (Glyptolaccobius) eliogentilii HEBAUER, 2002 (Figs. 22 a, b)

HEBAUER 2002: 14 (NEPAL, Western region: Annapurna Mts., NW Pokhara, S side of Krapa Danda, 1800 – 1900 m a.s.l., 27.–28.V.1997, leg. O. Jäger, holotype MTD).

MATERIAL EXAMINED:

NEPAL: type locality; Annapurna Mts., Mt. Panchhase, 15 km W Pokhara, stream above Sidhane, 2000 m a.s.l., 18.V.1997, leg. O. Jäger (HEBAUER 2002).

Laccobius (Glyptolaccobius) sharmai GENTILI, 1995

MATERIAL EXAMINED:

NEPAL: WESTERN REGION: Annapurna Mts., Mt. Panchhase, 2000 - 2300 m a.s.l., W Pokhara, 18.V.1997, leg. A. Schmidt, 1 ♀ (CFH); see also HEBAUER (2002).

Subgenus *Cyclolaccobius* GENTILI, 1991

The key of GENTILI (1995) is modified here to include *L. confusus*, *L. vietnamita*, and the two new species described herein (*L. yunnanensis* and *L. schawalleri*):

- 8' Upper side smooth, without shagreen 8a
- 8a Elytral punctures irregularly scattered near scutellum and elsewhere. Aedeagus as in Figs. 1-3 *confusus* GENTILI
- 8 a' Primary elytral rows consisting of punctures regularly disposed in straight lines. Postlabium shagreened, not rugose, with detectable punctures 9
- 10 Elytral base with a small yellow spot 10a
- 10 a Postlabium smooth; clytra dark testaceous; elytral puncture rows straight and conspicuous at 100 x; aedeagus as in Figs. 7, 8; penis slightly longer than parameres, with rounded apex, parameres narrower than penis in lateral view *yunnanensis* sp.n.
- 10 a' Postlabium more or less rugose; clytra black; elytral puncture rows less straight or less conspicuous, aedeagus different 11
- 13 Pronotal and elytral borders chestnut-coloured; elytral punctures more distinct; aedeagus as in Figs. 4-6 *vietnamita* GENTILI
- 13' Pronotal and elytral borders yellow; elytral systematic punctures scarcely conspicuous at 40 x 14
- 14 Interocular space nearly four times width of eye; interserial punctures conspicuous at 40 x; aedeagus as in Figs. 9-11: penis shorter than parameres, tegmen longer than free part of parameres *schawalleri* sp.n.
- 14' Interocular space nearly three times width of eye; interserial punctures not conspicuous at 40 x; penis longer than parameres, tegmen shorter than free part of parameres *kumaonicus*, *politus*

New locality data for *Laccobius (Cyclolaccobius) bacchusi* GENTILI, *L. cribratus* GENTILI, *L. imperialis* KNISCH, and *L. regalis* KNISCH from Nepal were published by HEBAUER (2002).

Laccobius (Cyclolaccobius) confusus GENTILI, 1996 (Figs. 1 - 3)

GENTILI 1996: 23 - 24 (Pakistan: Hazara: N.W.F. Prov., Upper Kagan Valley, Naddi 8000', holotype NHML); HANSEN 1999: 131.

MATERIAL EXAMINED:

INDIA: HIMACHAL PRADESH: Kulu Valley, 20 km N Kulu, Naggar river, 1800 m a.s.l., 11.VI.1996, leg. A. Stauder, 1 ♂ (NMW).

NEPAL: WESTERN REGION: Myagdi district, Beni-Baglung, 5.IV.1996, leg. Graf et al., 2 ♀ ♀ (NMW) (identification uncertain).

New for India.

Laccobius (Cyclolaccobius) fuscus GENTILI, 1995

MATERIAL EXAMINED:

INDIA: HIMACHAL PRADESH: Kulu Valley, 2000 m a.s.l., 6.VII.1995, leg. A. Stauder, 1 ♂ (CFH).

New for Himachal Pradesh.

Laccobius (Cyclolaccobius) hingstoni d'ORCHYMONT, 1926

MATERIAL EXAMINED:

CHINA: TIBET Autonomous Region ["Xinjang" according to label data]: 30 km W Shigatse, 4514 m a.s.l., leg. L.W. Swan, 1 ♀ (CASF).

Laccobius (Cyclolaccobius) nitidus GENTILI, 1984

MATERIAL EXAMINED:

CHINA: SICHUAN: CWBS loc. 237, 1 ♀ (NMW); ANHUI: CWBS loc. 297, 1 ♀ (NMW); ZHEJIANG: Anji County, Lang Wang Shang NR, 500 m a.s.l., 12.-14.V.1996, leg. J. Cooter, 1 ♀ (NMW); FUJIAN: 2 ♀ ♀ (NMW), CWBS locs. 243, 245.

New for Sichuan, Anhui, Zhejiang, Fujian.

Laccobius (Cyclolaccobius) patruelis KNISCH, 1924

MATERIAL EXAMINED:

INDIA: HIMACHAL PRADESH: Kulu Valley, 20 km N Kulu, Karol river, 2300 m a.s.l., 4.V.1986, leg. A. Stauder, 1 ♂ (NMW).

NEPAL: MID-WESTERN REGION: Prov. Karnali, Jumla district, N Maharigaon, 3200 - 3700 m a.s.l., 29°20'-21°N 82°22'-23.5'E, 16.VI.1997, leg. M. Hartmann, 1 ♀ (CFH); see also HEBAUER (2002).

Laccobius (Cyclolaccobius) politus GENTILI, 1979

MATERIAL EXAMINED:

CHINA: TAIWAN: Taipei, Wulai, 20.III.1995, leg. C.-F. Lee, 1 ♂ + 1 ♀ (NMW, MSNV); Nantou, Aowanta, 2.VII.1989, leg. C.-F. Lee, 1 ♂ (NMW); Pinghang, Wanli, 13.VIII.1990, leg. M.-L. Jeng, 1 ♂ (NMW).

Laccobius (Cyclolaccobius) schawalleri sp.n. (Figs. 9 – 11)

TYPE LOCALITY: NE Surkhet, 700 - 1200 m a.s.l., Surkhet district, Nepal.

TYPE MATERIAL: Holotype ♂ (SMNS): "554 NEPAL: Surkhet Distr. NE Surkhet 700-1200 m, 27.V.1998 leg. W. Schawaller / ♂ / Holotype ♂ E. Gentili 2001 [upper side] *Laccobius schawalleri* m. [under side] / *Laccobius schawalleri* n.sp. E. Gentili 2001". Paratypes: 1 ♂ + 1 ♀ (MSNV, CFH), same data as holotype.

DESCRIPTION: 2.2 – 2.3 mm long, 1.4 – 1.5 mm wide. Upper side shining smooth. Head black, sparsely punctate, spaces between punctures wider than diameter of puncture; eyes oblique, interocular space nearly four times as wide as eye. Pronotum black with yellow borders (base entirely black, yellow margin sinuate); punctures as on the head. Scutellum equilateral, black. Elytra black with yellow borders and apex, nearly ten longitudinal rows of small punctures; interstices with larger and irregularly scattered punctures. Under side black. Postlabium flat and smooth, without punctures. Prosternum tectiform, with hardly visible keel; mesoventrite keeled,

high lamina anteriorly provided with tooth and two lateral spurs; metaventrite pubescent except along central zone. Epipleura scarcely reaching level of metacoxae. Procoxae with basal hairs, and tibial grooves along flexory margin; meso- and metacoxae sparsely punctate; tibiae with spiny borders, metatibiae bent; forcarsi expanded in males. Aedeagus/body length nearly 2/9, tegmen longer than free part of parameres, penis shorter than parameres (Figs. 9–11).

DISCUSSION: The new species belongs to the group of *L. kumaonicus*, *L. politus*, and *L. vietnamita*. The aedeagus is quite characteristic; other differences are more difficult to detect: eyes not as large as in the named species; the elytral non-systematic punctures more conspicuous.

ETYMOLOGY: The species is named after the collector, Dr. Wolfgang Schawaller.

***Laccobius (Cyclolaccobius) vietnamita* GENTILI, 1997**
(Figs. 4 – 6)

GENTILI 1997: 302 (N Vietnam: Tam Dao, holotype NMW); HANSEN 1999: 132.

MATERIAL EXAMINED:

VIETNAM: type locality, 29.V.1995, leg. C.-F. Lee, 7 ♂♂ + 5 ♀♀ (NMW, MSNV).

***Laccobius (Cyclolaccobius) yunnanensis* sp.n.**
(Figs. 7, 8)

TYPE LOCALITY: W Hopin, ca. 380 m a.s.l., 24°59'25 N 96°22'46 E, Kachin State, Myanmar.

TYPE MATERIAL: Holotype ♂ (NMW): "MYANMAR: Kachin State, W Hopin, ca. 380 m, 28.5.1999, 24°59.25'N 96°22.46'E, leg. Schuh & Schillhammer (53) / ♂ / Holotype ♂ E. Gentili 2002 [upper side] Laccobius yunnanensis m. [under side] / Laccobius yunnanensis n.sp. E.Gentili 2002". **Paratypes:** 1 ♂ + 3 ♀♀ (NMW, MSNV), same data as holotype; 1 ♂ + 4 ♀♀ (CASS, NMW, MSNV); CHINA: YÜNNAN, CWBS loc. 396.

DESCRIPTION: 1.8 – 2.0 mm long, 1.1 – 1.2 mm wide. Widely oval, maximum width at anterior third of elytra. Head entirely shining black, smooth with scarce and small punctures, only the lateral end of Y-suture conspicuous; eyes elongate oblique, nearly as wide as interocular space. Pronotum shining black as head, with scarce and small setiferous punctures; lateral borders yellowish, yellow area widening posteriorly. Scutellum shining black. Elytra dark testaceous, yellowish near borders and apex, small yellow spot crossing base of 7th puncture row; bearing nearly twenty longitudinal rows of punctures, primary rows consisting of deep and small, secondary ones of larger and scarce punctures. Under side black, palpi, antennae and legs yellowish. Postlabium swollen, smooth and shining; gula granulous. Prosternum tectiform with longitudinal keel. Mesoventrite keeled before the trochanters, the keel expanding anteriorly. Metaventrite hairy except central glabrous area. Antennal cupule large, intermediate segments slender. Profemur hairy in small cavity near trochanters and along anterior border; mesofemur with sparse setae; metafemur glabrous. Tibiae spiny, metatibiae curved. Elytral epipleura very oblique, narrowing from base to level of metafemora. Aedeagus nearly 1/5 of body length, penis longer than parameres, which are longer than tegmen (Figs. 7, 8).

DISCUSSION: *Laccobius tibialis* and *L. politus* are devoid of a yellow spot at elytral base, with a slightly different aedeagus (*L. tibialis* with parameres wider in lateral view, *L. politus* with tegmen shorter and penis more bent); *L. imperialis*, *L. bacchusi* and *L. globulus*, as in *L. yunnanensis*, with yellow spot at elytral base, but with a different aedeagus (penis of *L. imperialis* more cylindrical and wider in frontal view and parameres wider in lateral view; penis deeply excised apically in *L. bacchusi*; in *L. globulus* penis much shorter than parameres), a

more rugose postlabium, and elytral rows less straight (*L. bacchusi* and *L. globulus*) or more faintly developed (*L. imperialis*).

Laccobius (Cyclolaccobius) zugmayeri KNISCH, 1910

MATERIAL EXAMINED:

NEPAL: MID-WESTERN REGION: Prov. Karnali, Jumla district, N Maharigaon, 3200 - 3700 m a.s.l., 29°20'-21'N 82°22'-23.5'E, 16.VI.1997, leg. M. Hartmann, 1 ♀ (CFH); see also HEBAUER (2002).

Subgenus *Dimorpholaccobius* ZAITZEV, 1938

The key to the species of the subgenus *Dimorpholaccobius* (GENTILI 1995: 258) has been modified to include *L. chiesai* and *L. syriacus*. *Laccobius ziguiensis*, known to me only by the description, is not included:

- 1 Male without specula. Body short, posteriorly round. Pronotum shagreened. Mentum flat, shagreened, weakly punctate. Aedeagus as in GENTILI (1995: Figs. 78, 79) *bipunctatus* (FABRICIUS).....
- 1' Male with specula. Aedeagus different..... 2
- 2 Elytral punctures more or less scattered, at least near scutellum and elytral base. Mentum flat, weakly punctate. Midfemora of male without bristly hairs 2a
- 2' Elytral punctures in conspicuous rows, more or less regular 3
- 2a Pale preocular spots large and conspicuous. Elytral rows well defined on elytral disc. Aedeagus as in Figs. 12, 13..... *syriacus* GUILLEBEAU
- 2a' Pale preocular spots small and scarcely conspicuous. Elytral punctures scattered, only here and there in conspicuous rows. Aedeagus as in GENTILI (1995: Figs. 76, 77)..... *kashmirensis* d'ORCHYMONT
- 4' Punctures of 5th elytral row in straight line. Fore margin of male head nearly evenly curved. Mentum granulated and shagreened 4a
- 4a Body more elongated, posteriorly oval. Head conspicuously shagreened, pronotum with obsolete shagreen. Aedeagus as in Figs. 14, 15 *chiesai* GENTILI
- 4a' Body shorter, posteriorly round. Head and pronotum bright, not shagreened. Aedeagus as in GENTILI (1995: Figs. 84, 85)..... *hindukuschi* CHIESA

Laccobius (Dimorpholaccobius) bipunctatus (FABRICIUS, 1775)

MATERIAL EXAMINED:

KAZAKHSTAN: EASTERN KAZAKHSTAN: S Altaj, Ustj Kamenogorsk, Sewernoje env., 26.-30.VI.1995, leg. Dolin, 1 ♂ + 3 ♀ (NMW).

New for Kazakhstan.

Laccobius (Dimorpholaccobius) chiesai GENTILI, 1974 (Figs. 14, 15)

GENTILI 1974: 556 - 558 (Iran, Elburz Mountains, Lashgarak Valley, holotype MSNV); HANSEN 1999: 138.

MATERIAL EXAMINED:

NEPAL: WESTERN REGION: Mustang district, Jharcot, Muktinath Khola, 19.XI.1993, leg. S. Sharma, 1 ♂ + 1 ♀ (NMW).

New for Nepal.

Laccobius (Dimorpholaccobius) hindukuschi* CHIESA, 1966*MATERIAL EXAMINED:**

INDIA: HIMACHAL PRADESH: Kulu Valley, 2000 m a.s.l., 10.VI.1995, leg. A. Stauder, 2 ♂ ♀ (NMW, CFH).
 NEPAL: MID-WESTERN REGION: Jumla district, Karnali zone, near Jumla, 2400 m a.s.l., 10.VII.1945, leg. Ahrens & Pommeranz, 1 ♂ (MTD); WESTERN REGION: Mustang Jharcot, Muktinath Khola, 19.XI.1993, leg. S. Sharma, 1 ♂ + 1 ♀ (NMW); Annapurna Mts., Kali-Gandaki Valley, near Tukche, 2600 m a.s.l., 10.VI.1993, leg. Schmidt, 1 ♂ + 1 ♀ (MTD); see other locality data in HEBAUER (2002).
 KYRGYZSTAN: Alaj Range, Majdan gorge, ca. 2000 m a.s.l., 12.VII.1997, leg. Dolin, 1 ♂ (NMW).

New for Kyrgyzstan and Himachal Pradesh.

Laccobius (Dimorpholaccobius) simulans* d'ORCHYMONT, 1923*MATERIAL EXAMINED:**

CHINA: YÜNNAN: 6 ♂ ♂ + 10 ♀ ♀ (NMW) CWBS locs. 361, 383, 384, 387, 394, 396, 397, 408.
 INDIA: UTTAR PRADESH: Shiwalik Chain, 600 m a.s.l., 13 km SW Dehra Dun, 21.VIII.1985, leg. G. Schulze, 3 ♂ ♂ + 5 ♀ ♀ (ZMUB, MSNV).
 MYANMAR: CHIN STATE: Suzan – Tidim, 2013 m a.s.l., 21.VI.2000, leg. M.-L. Jeng, 5 ♂ ♂ 3 ♀ ♀ (NMW, MSNV).
 NEPAL: MID-WESTERN REGION: Jumla district, env. Jumla, 2300 m a.s.l., Tila river, 29.IV.1995, leg. A. Weigel, 1 ♀ (NHME); WESTERN REGION: Annapurna Mts., 4 km NE Siklis, lower Taunja Danda, 2200 - 2400 m a.s.l., 6.VIII.1995, leg. O. Jäger, 24 ♂ ♂ + 19 ♀ ♀ (MTD, MSNV); Lamjung Himal, southern Taunja Danda, 3700 m a.s.l., 9.VIII.1995, leg. O. Jäger, 1 ♂ + 1 ♀ (MTD); Marsyandi Valley, below waterfall, 1650 m a.s.l., 6.VIII.1995, leg. O. Jäger, 3 ♀ ♀ (MTD); Kaski district, 15 km N Pokhara, Chipli, 2500 m a.s.l., 31.VII.1995, leg. O. Jäger, 9 ♂ ♂ + 6 ♀ ♀ (MTD); 10 km N Pokhara, Garlang, 2000 m a.s.l., temporary puddle, 14 ♂ ♂ + 5 ♀ ♀ (MTD); see other locality data in HEBAUER (2002).

First record for Myanmar.

Laccobius (Dimorpholaccobius) striatulus* (FABRICIUS, 1801)*MATERIAL EXAMINED:**

KYRGYZSTAN: Fergana Mts., Kysyl Umkur, 1360 m a.s.l., 10.-11.VI.1995, leg. Dolin, 4 ♂ ♂ + 4 ♀ ♀ (NMW, MSNV); Fergana Mts., Urumbasch valley, 2000 m a.s.l., 14.VI.1997, leg. Dolin, 2 ♀ ♀ (NMW); Fergana Mts., 1430 m a.s.l., 11.VI.1998, leg. Dolin, 1 ♂ + 1 ♀ (NMW); Fergana Mts., nr. Bergut pass, 2015 m a.s.l., 24.VI.1996, leg. Dolin, 1 ♂ + 2 ♀ ♀ (NMW); Sandalasch Mts., Chapchama pass env., 1600 m a.s.l., 6.VII.1997, leg. Dolin, 1 ♀ (NMW); Sosnowka env., Karabalta gorge, 1520 m a.s.l., 1.-2.VI.1996, leg. Dolin, 4 ♂ ♂ + 1 ♀ (NMW); Tien Shan, Besch Aral env., 1400 m a.s.l., 8.VI.1998, leg. Dolin, 1 ♀ (NMW); Tien Shan, Chatkal gorge, Stab env., 1800 m a.s.l., 29.VI.1998, leg. Dolin, 2 ♀ ♀ (NMW).
 KAZAKHISTAN: Panfilow env., bank of Ili river, 28.VII.1996, leg. Dolin, 1 ♂ (NMW).

***Laccobius (Dimorpholaccobius) syriacus* GUILLEBEAU, 1896
(Figs. 12, 13)**

GUILLEBEAU 1896: 228 (Israel, Carmel, lectotype MHNL by GENTILI & CHIESA 1976); HANSEN 1999: 142.

MATERIAL EXAMINED:

KYRGYZSTAN: Alaj Range, Majdan gorge, 2270 m a.s.l., 13.VII.1997, leg. Dolin, 4 ♂ ♂ + 4 ♀ ♀ (NMW); Alaj Range, Taldyk pass env., 2800 m a.s.l., 19.VII.1996, leg. Dolin, 1 ♀ (NMW); Arslanbob, 1900 m a.s.l., Baubashata Range, 19.V.1993, leg. Schawaller, 1 ♂ (SMNS); Fergana Mts., Urumbasch valley, 2000 m a.s.l., 14.VI.1997, leg. Dolin, 4 ♂ ♂ + 3 ♀ ♀ (NMW); Fergana Mts., Kasarman env., 2000 m a.s.l., 14.VI.1995, leg. Dolin, 9 ♂ ♂ + 10 ♀ ♀ (NMW, MSNV); Fergana Mts., Kysyl Unkur env., 1400 - 1430 m a.s.l., 11.VI.1998, leg. Dolin, 3 ♂ ♂ + 6 ♀ ♀ (NMW); Fergana Mts., nr. Bergut pass, 2015 m a.s.l., 24.VI.1996, leg. Dolin, 1 ♂ (NMW);

Issyk - Kul area, Ortotokoj env., 1750 m a.s.l., 20.VII.1997, leg. Dolin, 2 ♂♂ + 5 ♀♀ (NMW); Moldotoo range, 60 km N Naryn, 1350 m a.s.l., 29.VI.1996, leg. Dolin, 3 ♂♂ + 2 ♀♀ (NMW); Sandalasch Mts., Chapchama pass env., 1600 m a.s.l., 6.VII.1997, 1 ♂ (NMW); Sarv-Celek 1400 - 1600 m a.s.l., Chatkalskij Alatau, 27.-31.V.1993, leg. Schwaller, 1 ♀ (SMNS); W Tien Shan, Besch Aral env., 1400 m a.s.l., 8.VI.1998, leg. Dolin, 1 ♀ (NMW); W Tien Shan, Chatkal gorge, Stab env., 1800 m a.s.l., 29.VI.1998, leg. Dolin, 1 ♀ (NMW); Toktogul water reservoir, 980 m a.s.l., 5.VI.1995, leg. Dolin, 8 ♂♂ + 10 ♀♀ (NMW); Tschatkal ridge, Stab env., 28.VII.1999, leg. Dolin, 5 ♂♂ + 1 ♀ (NMW).

New for Kyrgyzstan.

Laccobius (Dimorpholaccobius) ziguiensis JIA, 1997

JIA 1997: 649; HANSEN 1999: 143.

TYPE MATERIAL: Holotype ♀, paratype ♀, Julingtou, Zigui County, Hubei Province, 9.IX.1994, collected by Li Fasheng, deposited in the Insect Collection of Institute of Zoology, Chinese Academy of Sciences, Beijing.

Despite considerable efforts I was not able to examine the types.

Original description: "The new species resembles *L. bipunctatus* (F.), but can be identified by small size (2.2 mm); punctures on head and pronotum very sparse; the secondary series puncture on elytra arranged much regular [sic!]. The new species can be distinguished from *L. binotatus* Orchymont by small size; nearly no punctures on anterior portions of head and pronotum but with distinct shagreen; mentum not rugose and with punctures; claws not crooked at base; secondary series punctures on elytra varies in size and distance".

Subgenus *Compsolaccobius* GANGLBAUER, 1904

Laccobius (Compsolaccobius) pallidissimus REITTER, 1899 (Figs. 16 – 18)

REITTER 1899: 197 (Tadzhikistan, Sefid-kuh, Pyandzh, lectotype HNHM, by GENTILI & CHIESA 1976); ZAITZEV 1908: 394; 1938: 113 (in part); 1951: 67; GENTILI & CHIESA 1976: 32; SHATROVSKIY 1984: 304; GENTILI 1988: 40; HANSEN 1999: 143.

MATERIAL EXAMINED:

KAZAKHSTAN: Panfilow env., bank of Ili river, 28.VII.1996, leg. Dolin, 2 ♂♂ + 2 ♀♀ (NMW, MSNV).

KYRGYZSTAN: Fergana Valley, Kurshabad, VIII.1999, leg. Gurko, 3 ♂♂ + 4 ♀♀ (NMW, MSNV)

DISTRIBUTION: Turkmenistan, Uzbekistan, Kyrgyzstan, Tajikistan, Kazakhstan, Afghanistan.
New for Kazakhstan and Kyrgyzstan.

Subgenus *Laccobius* s.str. ERICHSON, 1837

Following the strict priority law of the 1985 International Code of Zoological Nomenclature, a change of name was proposed by HEBAUER & KLAUSNITZER (1998): *L. colon* (STEPHENS, 1829) for *L. biguttatus* GERHARDT, 1877. The name *L. colon* formerly was considered a nomen oblitum [GENTILI & CHIESA 1976: 45–46].

Laccobius (Laccobius) binotatus d'ORCHYMONT, 1935

MATERIAL EXAMINED:

CHINA: LIAONING: CWBS locs. 45, 53 - 60, 62, 146 - 147, 153, 155 - 158, 161, 163, 165; SHANDONG: CWBS locs. 63, 64, 66, 70 - 73, 76; SICHUAN: CWBS locs. 221, 224, 229 - 231, 234, 237; W Sichuan, 20 km N Luhuo, road Luhuo - Sertar, 31°32'N 100°42'E, 3800 m a.s.l., 21.VII.1997, leg. J. Turna, 14 ♂♂ + 3 ♀♀ (NMW); HUBEI: Lichuan district, Hsiao - Ho, 11.VIII.1994, leg. Gressitt - Djou, 1 ♂ (CASF); GUIZHOU: 11 ♂♂ + 22 ♀♀ (NMW, MSNV) CWBS locs. 265, 266, 269, 271, 272, 274, 281; SHIAXANXI: Qin Ling Shan, 108°49'E 34°00'N, river valley 30 km SSW Xian, Autoroute km 33, 600 m a.s.l., sifted, 31.VIII.1995, leg. M. Schülke, 1 ♂ (NMW); FUJIAN: 1 ♀ (NMW), CWBS loc. 263; NEI MONGOL: 24 ♂♂ + 19 ♀♀ (NMW, MSNV), CWBS locs. 327 - 331; YÜNNAN: 4 ♂♂ + 1 ♀ (NMW), CWBS locs. 383 - 385, 410; Daju, 50 km N Lijang, 27°21'N 100°19'E, 21.-27.VI.1993, leg. S. Beccvar, 1 ♂ + 1 ♀ (NMW); 2 km N Shizong, 10.IX.2000, leg. J. Bergsten, 1 ♂ + 1 ♀ (NMW); 4 km S Shizong, 11.IX.2000, leg. J. Bergsten, 2 ♂♂ + 2 ♀♀ (NMW); 2 km S Shizong, 12.-16.IX.2000, leg. J. Bergsten, 2 ♂♂ + 2 ♀♀ (NMW).

New for Guizhou, Hubei, Nei Mongol.

Laccobius (Laccobius) cinereus MOTSCHULSKY, 1860 (Figs. 19 - 21)

MATERIAL EXAMINED:

CHINA: LIAONING: 1 ♀ (NMW), CWBS loc. 156; NEI MONGOL: 18 ♂♂ + 12 ♀♀ CWBS locs. 328, 329. KYRGYZSTAN: Suusamyr Plateau, 2250 m a.s.l., 13.VII.1996, leg. Dolin, 3 ♂♂ + 3 ♀♀ (NMW); Issyk-Kul area, Ortotokoj env., 1750 m a.s.l., 20.VII.1997, leg. Dolin, 1 ♂ (NMW). MONGOLIA: Chovsgol Aimak, Moron, leg. R. Bellstedt 1990, 1 ♂ (NMW).

New for China. The Chinese specimens differ from the Siberian by the paler pronotum.

Laccobius (Laccobius) colon (STEPHENS, 1829)

HEBAUER & KLAUSNITZER 1998: 55; HANSEN 1999: 144.

Specific name reinstated by HEBAUER & KLAUSNITZER (1998) for *L. biguttatus* GERHARDT, 1877.

Laccobius (Laccobius) inopinus GENTILI, 1980

MATERIAL EXAMINED:

CHINA: LIAONING: 45 ♂♂ + 36 ♀♀ (NMW, MSNV), CWBS locs. 52, 55, 56, 158, 161; FUJIAN: 1 ♂ (NMW), CWBS loc. 259; GUANGDONG: 1 ♂ (NMW) CWBS loc. 472. RUSSIA: PRIMORYE: Kroskino, Azaizanovka env., 13.-16.VII.1992, leg. Snížek, 1 ♂ (NMW).

New for Liaoning, Fujian, and Guangdong.

Laccobius (Laccobius) minutus (LINNAEUS, 1758)

MATERIAL EXAMINED:

CHINA: NEI MONGOL: 2 ♂♂ + 1 ♀ (NMW, MSNV), CWBS locs. 327, 330.

New for China.

Laccobius (Laccobius) nobilis* GENTILI, 1979*MATERIAL EXAMINED:**

CHINA: FUJIAN: 17 ♂♂ + 20 ♀♀ (NMW, MSNV), CWBS locs. 240, 243, 245, 247, 255, 256, 259, 262; YÜNNAN: 1 ♂ + 1 ♀ (NMW), CWBS loc. 410; 4 km S Shizong, 11./13.IX.2000, leg. J. Bergsten, 4 ♂♂ + 6 ♀♀ (NMW).

Subgenus *Microlaccobius* GENTILI, 1974

In the key to the species of *Microlaccobius* (GENTILI 1995: 263-265) number 5' ("Pronotum without shagreen") leads to number 12 (not 11). *Laccobius assamita*, *L. birmanus* and *L. kyrgyzicus* are included in the revised key below.

- 1 Eyes larger: frons between eyes twice (or less) width of eye 1a
- 1' Eyes of normal size: frons between eyes 2.5 - 3.0 times width of eye 5
- 1a Body form elongate, length nearly twice its width. Aedeagus as in Figs. 23-25 ... *assamita* GENTILI
- 1a' Body form widely oval. Pale preocular spots large and confluent. Dark pronotal spot small 2
- 13' Elytral rows straight and regularly incised from base 14a
- 14a Colour of pronotum and elytra darker. Elytral epipleura and pseudopleura gradually narrowing. Aedeagus as in GENTILI (1995: Figs. 142-143). Length 2.1 – 2.5 mm *hammondi* GENTILI
- 14a' Colour of pronotum and elytra lighter. Elytral epipleura and pseudopleura suddenly narrowing. Aedeagus as in Figs. 26, 27. Length 2.5 mm *kyrgyzicus* sp.n.
- 15a Only basal part of fifth elytral row out-of-line. Aedeagus as in GENTILI (1995: Figs. 146, 147). Length 2.2 – 2.6 mm *tonkinensis* GENTILI
- 15b Basal part of third, fifth, seventh and ninth elytral rows out-of-line. Aedeagus as in Figs. 28–30. Length 2.4 – 2.8 mm: *birmanus* sp.n.

New Nepalese locality data are supplied for *Laccobius (Microlaccobius) laotianus* GENTILI and *L. gangeticus* GENTILI by HEBAUER (2002).

Laccobius (Microlaccobius) argillaceus* SAHLBERG, 1900*MATERIAL EXAMINED:**

NEPAL: WESTERN REGION: Myagdi district, Himalaya, Dhaulagiri Mts., Myagdi Khola, 1000 m a.s.l., Babi Choar, 15.III.1994, leg. Ahrens, 1 ♂ (MTD); see also HEBAUER (2002).

***Laccobius (Microlaccobius) assamita* GENTILI, 1997
(Figs. 23 – 25)**

GENTILI 1997: 306 (INDIA: Meghalaya, W Garo Hills, Bagmara, ca. 100 m a.s.l., 25°11'N, 90°38'E, holotype NMW); HANSEN 1999: 147.

MATERIAL EXAMINED:

INDIA: MEGHALAYA: type locality; holotype and 1 ♂ paratype (MSNV); Meghalaya, W Garo Hills, Balphakram NP, 300 - 500 m a.s.l., 25°11'N, 90°51'E, 22.-27.V.1996, leg. Jendek & Šauša, 1 ♀ paratype (NMW).

DISTRIBUTION: This species is known only from Meghalaya. The type locality was erroneously attributed to Assam by GENTILI (1997) and HANSEN (1999).

***Laccobius (Microlaccobius) birmanus* sp.n.**
(Figs. 28 – 30)

TYPE LOCALITY: 50 km NW Kalaw, Miytsone river, ca. 450 m a.s.l., 20°48'457N 96°21'610E, Mandalay Division, Myanmar.

TYPE MATERIAL: Holotype ♂ (NMW): "MYANMAR, Mandalay Division, ca. 50 km NW Kalaw, ca. 450 m a.s.l., 20°48'457 N 96°21'610E, Miytsone River, 25.10.1998 leg. Schillhammer"; aedeagus in DMHF; Paratypes: 3 ♀♀, same data (NMW, MSNV); MYANMAR, KACHIN STATE, Indawagyi Lake, ca. 250 m a.s.l., 7 km S Lonton, 25°02'42N 96°16'52E, 22.–25.V.1999, rainwater potholes, leg. Schillhammer & Schuh, 1 ♂ (NMW).

DESCRIPTION: Length 2.4 – 2.8 mm (holotype 2.6 mm); width 1.3 – 1.6 mm (holotype 1.4 mm). Short oval, maximum width at anterior third of elytra. Head shining black with two yellowish preocular spots before lateral branches of Y-suture; smooth, with small punctures scarcely conspicuous at 100 x. Eyes large, slightly protruding laterally, nearly circular in dorsal view; one eye, in dorsal view, nearly as wide as 1/3 of interocular space. Pronotum shining black as head, lateral borders yellowish; black patch reaching anterior and posterior margins in centre, with two anterolateral projections behind eyes. Scutellum equilateral, shining black. Elytra yellow, with numerous black punctures and spots; bearing nearly twenty longitudinal rows of punctures, primary rows differing from secondary; punctures of 3rd, 5th, 7th and 9th rows not regularly set. Under side black. Labrum without specula, centrally bent as V towards postlabium; postlabium smooth, slightly sinuate, without punctures; gula posteriorly granulous. Prosternum tectiform, with longitudinal keel. Mesoventrite provided with a high keel, bidentate and simple (without lateral spurs). Metaventrite pubescent, only in centre glabrous and shining. First four abdominal sternites smooth and glabrous, last two rough and pubescent. Elytral epipleura narrowing from base to level of metafemora. Palpi, antennae and legs as in *Microlaccobius*. Aedeagus nearly 1/5 of body length; tegmen shorter than parameres; penis cylindrical, scarcely longer than parameres, notched at apex in frontal view (Figs. 28–30).

DISCUSSION: The new species resembles *L. tonkinensis* GENTILI in external appearance and colour; differs by having bases of 3rd, 5th, 7th and 9th rows of punctures not regularly set (in *L. tonkinensis* only the 5th), and apex of the penis notched apically (frontal view) and devoid of expansion (lateral view).

***Laccobius (Microlaccobius) elegans* GENTILI, 1979**

MATERIAL EXAMINED:

CHINA: SICHUAN: 36 exs. (NMW, MSNV), CWBS locs. 227, 236; 20 km N Luhuo, road Luhuo – Sertar, 31°32'N 100°42'E, 3800 m a.s.l., 21.VII.1997, leg. J. Turna, 1 ♂ (NMW).

LAOS: CENTRAL: Bolikhamsai Prov., Ban Nape – Kaew Nua Pass, 600 - 1100 m a.s.l., 18°22'3N 105°09'1E, 18.IV.–1.V.1998, leg. Štrba & Hergovits, 3 ♂♂ + 2 ♀♀ (NMW); Ban Nape, 18.IV.1998, leg. Jendek, 1 ♂ + 1 ♀ (MSNV).

VIETNAM: NE Na Hang, 160 km NNW Hanoi, 150 - 200 m a.s.l., 26.–30.V.1996, leg. Napolov & Roma, 1 ♂ (NMW).

New for Sichuan and Laos.

Laccobius (Microlaccobius) exilis GENTILI, 1974

MATERIAL EXAMINED:

NEPAL: WESTERN REGION: Kaski district, Pokhara, 3.VI.1992, leg. I. Jenis, 1 ♀ (NMW); Palpa, Dobhan, Tinai Khola, 310 m a.s.l., 2.I.1994, leg. S. Sharma, 1 ♂ + 5 ♀ ♀ (NMW, MSNV); Syangja district, Putalikhet, Andhi Khola, 860 m a.s.l., 4.I.1994, leg. S. Sharma, 1 ♀ (NMW); Arghakhanchi district, Chidika, Saure Khola 800 m a.s.l., 17.I.1994, leg. S. Sharma, 1 ♂ (NMW); Himalaya, Annapurna Mts., Marsyandi Valley, stream near Besi Sahar 800 m a.s.l., 28.VIII.1995, leg. O. Jäger, 19 ♂♂ + 9 ♀ ♀ (MTD, MSNV); MID-WESTERN REGION: Jumla district, 1700 - 1900 m a.s.l., lower Sinja Khola, 9.VI.1998, leg. W. Schawaller, 3 ♂♂ + 3 ♀ ♀ (SMNS); Surkhet district, NE Surkhet, 700 - 1200 m a.s.l., 27.V.1998, leg. W. Schawaller, 2 ♀ ♀ (SMNS).

Laccobius (Microlaccobius) formosus GENTILI, 1979

MATERIAL EXAMINED:

CHINA: LIAONING: 18 ♂♂ + 23 ♀ ♀ (NMW, MSNV), CWBS locs. 39, 50, 51, 57; SHANDONG: 2 ♂♂ + 4 ♀ ♀ (NMW), CWBS locs. 64, 66; SHAANXI: 1 ♂ + 1 ♀ (NMW), CWBS loc. 311; river bank, tributary of Wei He, 7 km E Zhouzhi, 400 m a.s.l., Autoroute 100, km 72, 24.VIII.1995, leg. Wrase & Pütz, 7 ♂♂ + 7 ♀ ♀ (NMW, MSNV); GANSU: 2 ♂♂ + 2 ♀ ♀ (NMW), CWBS locs. 324, 326; TAIWAN: Taipei Wulai, 24.IV.1991, leg. M.-L. Jeng, 2 ♂♂ + 1 ♀ (NMW, MSNV).

New for Liaoning, Shandong, Gansu.

Laccobius (Microlaccobius) fragilis NAKANE, 1966

MATERIAL EXAMINED:

CHINA: LIAONING: 1 ♂ (NMW), CWBS loc. 39; SHAANXI: 1 ♂ + 1 ♀ (NMW), CWBS loc. 311; GANSU: 1 ♂, CWBS loc. 324; 1 ♀, CWBS loc. 326; TAIWAN: Taitung, 20.IX.1993, leg. M.-L. Jeng, 1 ♂ (NMW).

RUSSIA: PRIMORYE: Ussurijske Sapovednik, 18.VII.1990, leg. A. Pütz, 1 ♂ (CFH).

New for Gansu, Shaanxi, Taiwan and Russia.

Laccobius (Microlaccobius) hammondi GENTILI, 1984

MATERIAL EXAMINED:

CHINA: LIAONING: 51 ♂♂ + 56 ♀ ♀ (NMW, MSNV), CWBS locs. 40, 51 - 53, 55 - 57, 59, 60, 158, 163 - 167; SHANDONG: 60 ♂♂ + 67 ♀ ♀ (NMW, MSNV), CWBS locs. 63, 64, 71, 73; SICHUAN: 12 ♂♂ + 16 ♀ ♀ (NMW, MSNV), CWBS locs. 221, 231, 234; FUJIAN: 8 ♂♂ + 11 ♀ ♀ (NMW, MSNV), CWBS locs. 245, 247, 255, 258; GUIZHOU: 6 ♂♂ + 6 ♀ ♀ (NMW), CWBS locs. 265, 283; 30 km NW Jiangkou, Fanjing Shan - Kuaichang, 500 m a.s.l., 9.V.2000, 1 ♀ (NMW); ANHUI: 10 ♂♂ + 2 ♀ ♀ (NMW), CWBS locs. 289, 290; GANSU: 2 ♀ ♀ (NMW), CWBS loc. 325; SHAANXI: Qin Ling Shan, 1200 m a.s.l., river valley 40 km S Xian, Autoroute km 50, river bank, 33°55'N 108°49'E, 31.VIII.1995, leg. A. Pütz, 1 ♂ (NMW); GUANGDONG: 9 ♂♂ + 10 ♀ ♀ (NMW), CWBS loc. 480; TAIWAN: Nantou, Chenyulan Stream, 2.II.1993, leg. M.-L. Jeng, 1 ♂ + 7 ♀ ♀ (NMW); Hsinchu, Dalu Forest Road, 5.X.1991, leg. M.-L. Jeng, 1 ♂ (NMW); Taipei, Wulai, 24.IV.1991, leg. M.-L. Jeng, 1 ♀ (NMW); Taipei, Gongliao, 12.XI.1995, leg. M.-L. Jeng, 1 ♂ + 1 ♀ (NMW).

New for Liaoning, Shandong, Anhui, Gansu, Sichuan, Guizhou, Fujian, Guangdong.

Laccobius (Microlaccobius) himalayanus GENTILI, 1988

MATERIAL EXAMINED:

CHINA: YÜNNAN: 1 ♂ + 1 ♀ (NMW), CWBS loc. 381.

INDIA: MEGHALAYA: W Garo Hills, Meghalaya, 300 - 500 m a.s.l., Balphra Kram NP, 25°11'N 90°51'E, 22.-25.VII.1996, leg. Jendek & Šauša, 2 ♂♂ + 8 ♀♀ (NMW); W Garo Hills, Meghalaya, 100 m a.s.l., Bagmara, 25°11'N 90°38'5E, 19.-21.V.1996, leg. Jendek & Šauša, 5 ♂♂ + 7 ♀♀ (NMW, MSNV).

LAOS: CENTRAL: Bolikhamsai Prov., Ban Nape – Kaew Nua Pass, 600 - 1100 m a.s.l., 18°22'3N 105°09'1E, 18.IV.–1.V.1998, leg. Štrba & Hergovits, 1 ♀ (NMW).

NEPAL: CENTRAL REGION: Kabrepalanchowk district, Jhikhu Khola, Panchkhal, 5.XI.1993, leg. Moog et al., 1 ♂ (NMW); WESTERN REGION: Kaski district, Pokhara, 28.-31.III.1994, leg. Ahrens (MTD).

VIETNAM: NE Na Hang, 150 - 200 m a.s.l., 160 km N Hanoi, 26.-30.V.1996, leg. Napolov & Roma, 2 ♂♂ + 3 ♀♀ (NMW).

New for China, Meghalaya, Laos, Vietnam.

***Laccobius (Microlaccobius) kyrgyzicus* sp.n.**
(Figs. 26, 27)

TYPE LOCALITY: 60 km N Naryn, Moldotoo range, 1350 m a.s.l., Kyrgyzstan.

TYPE MATERIAL: Holotype ♂ (NMW): "KYRGYZSTAN, Moldotoo range, 60 km N Naryn, 1350 m a.s.l., 29.6.1996 leg. Dolin (n. 38) / Holotype ♂ E. Gentili 2001 [upper side] *Laccobius kyrgyzicus* m. [under side] / *Laccobius kyrgyzicus* n. sp. E. Gentili 2001".

DESCRIPTION: 2.5 mm long, 1.5 mm wide. Short oval, maximum width at anterior third of elytra. Head black with metallic green reflections, two pale preocular spots before lateral branches of Y-suture, smooth shining with scarce and small punctures; eyes in dorsal view nearly circular, interocular space nearly 2.5 times breadth of eye. Pronotum black with metallic green reflections as head, with two lateral projections into yellow sides. Scutellum metallic green. Elytra yellowish with black punctures set in nearly twenty rows, elytral borders and apex completely yellow, blackish spots near suture; primary rows differing from secondary and straight, excluding base of 9th elytral row. Under side black, antennae, palpi and legs yellowish. Labrum arched, without specula, postlabium smooth and alutaceous, gula granulous. Prosternum tectiform with longitudinal keel. Mesoventrite provided with a longitudinal keel before midfemora. Metaventrite hairy excepting central, oval smooth and shining area, bearing longitudinal engraving. Abdominal sternites pubescent except central zone of 2nd, 3rd and 4th. Elytral epipleura and pseudepipleura of same width until level of metafemur, then suddenly narrowing and disappearing. Femora glabrous, excepting base of profemur; tibiae spiny, metatibiae curved. Aedeagus long, nearly 1/5 of body length; penis shorter than parameres, apex swelling button-shaped (Figs. 26, 27).

DISCUSSION: The new species is externally similar to *L. hammondi*, but the paler elytra, the epipleura suddenly narrowing and the central engraved zone of the metaventrite sufficiently characterize *L. kyrgyzicus*. The button-shaped apex of the penis is a character unique in the entire subgenus *Microlaccobius*.

***Laccobius (Microlaccobius) mistus* GENTILI, 1989**

MATERIAL EXAMINED:

NEPAL: WESTERN REGION: Himalaya, Annapurna Mts., Marsyandi-Tal, Syange, 1000 m a.s.l., rice field, 25.VIII 1995, leg. O. Jäger, 2 ♂♂ (MTD); CENTRAL REGION: Ramechap district, Shivalaya, 1800 m a.s.l., Khimti Khola, 5.V.1997, leg. W. Schawaller, 2 ♂♂ + 1 ♀ SMNS, MSNV.

Laccobius (Microlaccobius) nepalensis GENTILI, 1982

MATERIAL EXAMINED:

CHINA: HAINAN: 9 ♂♂ + 12 ♀♀ (NMW, MSNV), CWBS locs. 178, 192, 198, 201, 202, 212; YÜNNAN: 1 ♀ (NMW), CWBS loc. 382.

LAOS: 10 km N Luang Prabang, 250 m a.s.l., Mekong bank, at light, XI.1992, leg. I. Somsy, 1 ♂ (NMW).

THAILAND: S Pattaya, 30.I.1995, leg. Wolf, 2 ♂♂ + 1 ♀ (CFH).

NEPAL: CENTRAL REGION: Ramechaap district, Shivalaya, 1800 m a.s.l., Khimti Khola, 5.V.1997, leg. W. Schawaller, 3 ♂♂ + 1 ♀ SMNS.

New for China, Laos, and Thailand.

Laccobius (Microlaccobius) orientalis KNISCH, 1924

MATERIAL EXAMINED:

INDIA: MEGHALAYA: Meghalaya, W Garo Hills, Nokrek NP, 1000 m a.s.l., 25°29'6N 90°19'5E, 9.-17.V.1996, leg. Jendek & Šauša, 1 ♀ (NMW).

NEPAL: CENTRAL REGION: Chitwan district, Baratpur, 12.XI.1993, leg. Moog et al., 1 ♂ (NMW); Chitwan district, Davghat, Trisuli river, 7.XI.1993, leg. Moog et al., 1 ♀ (NMW); Ramechap district, Shivalaya, 1800 m a.s.l., Khimti Khola, 5.V.1997, leg. W. Schawaller, 3 ♂♂ + 1 ♀ (SMNS); WESTERN REGION: Kaski district, Suikhet, Samoujighat, Jhupra Khola, 19.XII.1993, leg. S. Sharma, 3 ♂♂ + 3 ♀♀ (NMW, MSNV); Himalaya, Annapurna Mts., Madi Khola Valley, 900 m a.s.l., Bhaise, 15.V.1996, leg. O. Jäger, 2 ♂♂ + 2 ♀♀ (MTD).

New for Meghalaya.

Laccobius (Microlaccobius) oscillans SHARP, 1884

MATERIAL EXAMINED:

CHINA: LIAONING: 1 ♂ (NMW), CWBS loc. 166.

New for Liaoning.

Laccobius (Microlaccobius) problematicus GENTILI, 1988

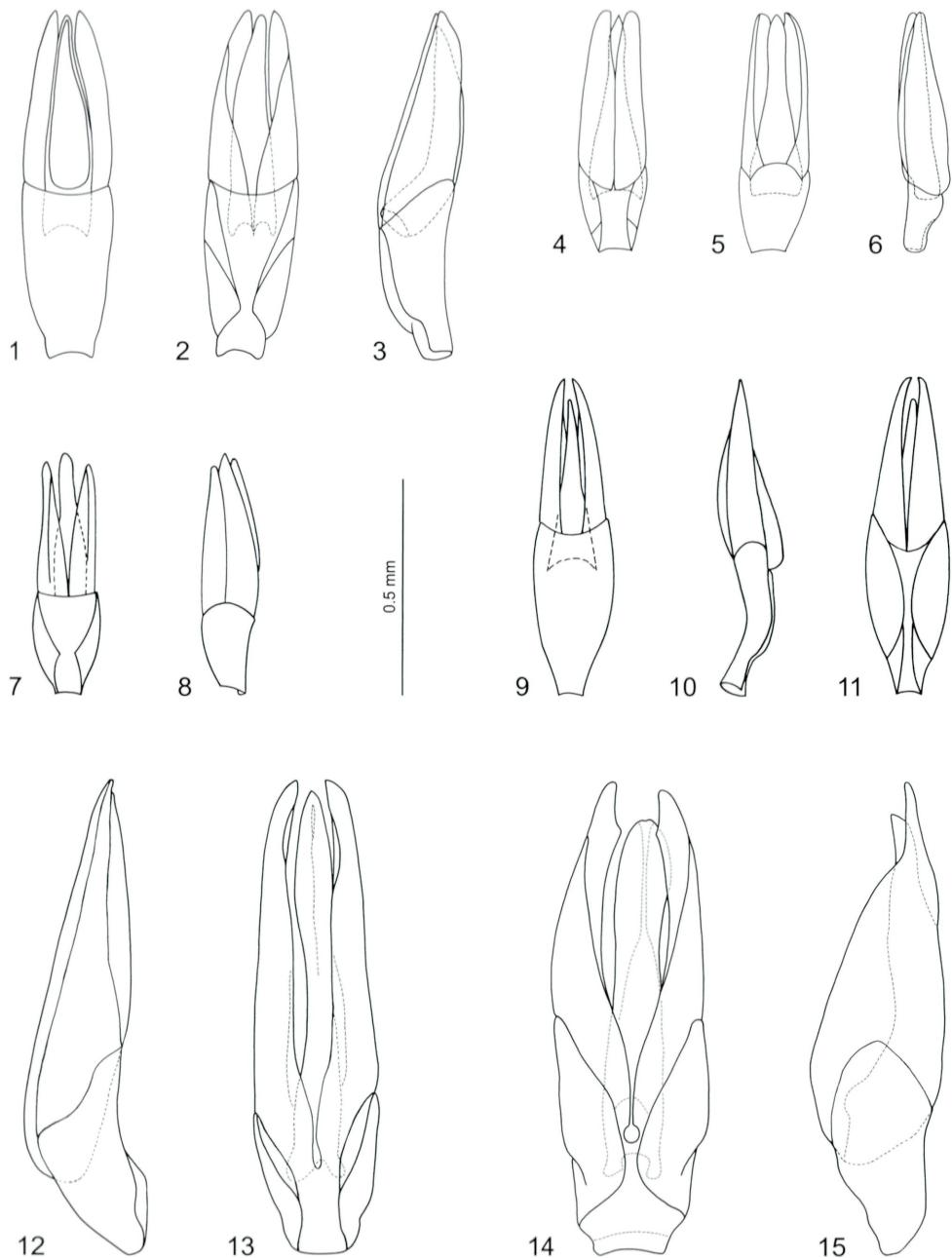
MATERIAL EXAMINED:

NEPAL: CENTRAL REGION: Kabrepalanchowk district, Dolalghat, Cha Khola, 7.XI.1993, leg. Moog et al., 1 ♀ (NMW); MID-WESTERN REGION: Jumla district, Karnali province, Tatapani, Tila river, 2200 m a.s.l., 24.V.1995, leg. Weigel, Weipert & Hartmann, 3 ♂♂ + 11 ♀♀ (NHME; MSNV); WESTERN REGION: Himalaya, Annapurna Mts., Marsyandi Valley, Syange, 1000 m a.s.l., rice field, 25.VIII.1995, leg. O. Jäger, 1 ♂ + 1 ♀ (MTD); see also HEBAUER (2002).

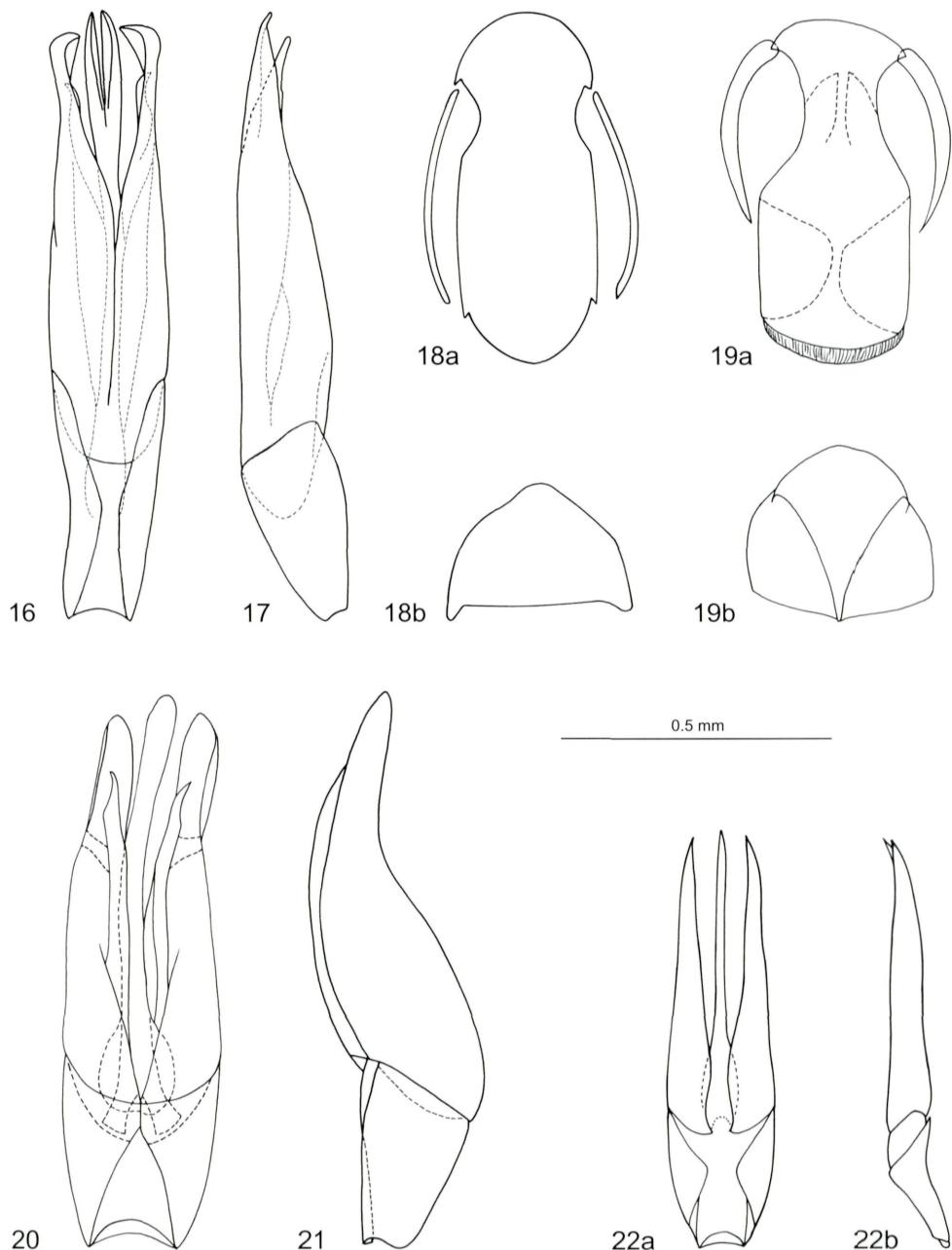
Laccobius (Microlaccobius) quaesitus GENTILI, 1988

MATERIAL EXAMINED:

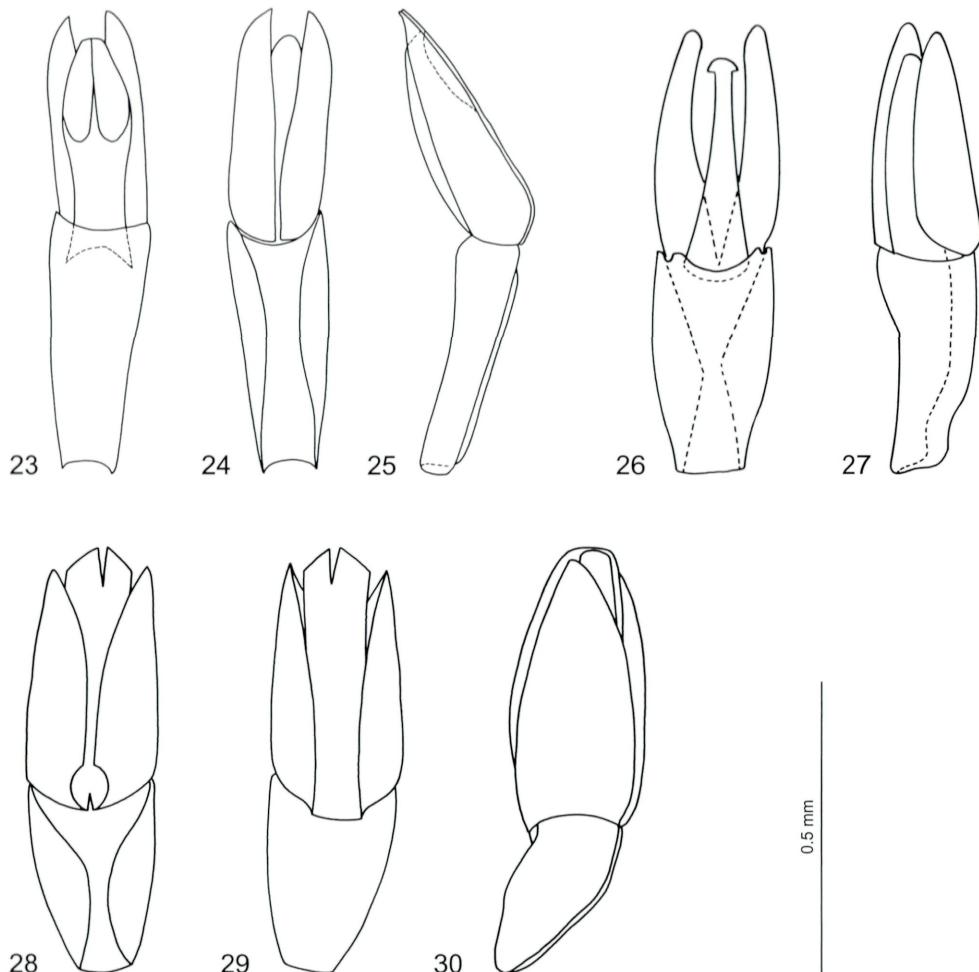
NEPAL: WESTERN REGION: Himalaya, Annapurna Mts., Marsyandi Valley, Syange, 1000 m a.s.l., rice field, 25.VIII.1995, leg. O. Jäger, 8 ♂♂ + 3 ♀♀ (MTD, MSNV).



Figs. 1 – 15: Aedeagi of 1) *Laccobius confusus*, holotype, ventral view; 2) same, dorsal view; 3) same, lateral view; 4) *L. vietnamita*, holotype, dorsal view; 5) same, ventral view; 6) same, lateral view; 7) *L. yunnanensis*, holotype, dorsal view; 8) same, lateral view; 9) *L. schawalleri*, holotype, ventral view; 10) same, lateral view; 11) same, dorsal view; 12) *L. syriacus*, Azerbaijan, Geok-Tapa, lateral view; 13) same, dorsal view; 14) *L. chiesai*, holotype, dorsal view; 15) same, lateral view.



Figs. 16 – 22: 16) *Laccobius pallidissimus*, lectotype, dorsal view; 17) same, lateral view; 18) same, genital segment, 9th sternite and 9th tergite; 19-22: *L. cinereus*, China, Nei Mongol (CWBS loc. 327), 19) genital segment, 9th sternite and 9th tergite; 20) aedeagus, dorsal view; 21) same, lateral view; 22) *L. eliogentilii*, holotype, a) dorsal view; b) lateral view (from HEBAUER 2002).



Figs. 23 – 30: Aedeagi of 23) *Laccobius assamita*, holotype, ventral view; 24) same, dorsal view; 25) same, lateral view; 26) *L. kyrgyzicus*, holotype, ventral view; 27) same, lateral view; 28) *L. birmanus*, holotype, dorsal view; 29) same, ventral view; 30) same, lateral view.

Laccobius (Microlaccobius) roseiceps RÉGIMBART, 1903

MATERIAL EXAMINED:

LAOS: CENTRAL: Bolikhamsai Prov., Bam Nape – Kaew Nua Pass, 600 ± 100 m a.s.l., 18°22'3N 105°9'1E, 18.IV.-1.V.1998, leg. Štrba & Hergovits, 1 ♀ NMW (determination to be confirmed with males).

MYANMAR: KACHIN STATE: 7 km S Lonton, Indawgyi Lake, 250 m a.s.l., 25°02'42N 96°16'52E, 22.–25.V.1999, leg. Schillhammer & Schuh, rainwater potholes, 1 ♂ (NMW).

THAILAND: S Pattaya, 30.I.1995, leg. Wolf, 1 ♂ (CFH).

VIETNAM (south): Vung Tao, 14.-26.IV.1989, leg. Snižek, 1 ♀ NMW.

First record for Myanmar, Thailand, and possibly Laos; HEBAUER (2002) first cited it for Nepal.

Laccobius (Microlaccobius) sublaevis SAHLBERG, 1900

MATERIAL EXAMINED:

NEPAL: WESTERN REGION: SW Dhaulagiri, Uttar Ganga river, Doropathan Plain, 3000 m a.s.l., 6.-8.III.1994, leg. Ahrens, 4 ♂♂ + 1 ♀ (MTD); Himalaya, Annapurna Mts., Tukuche bis, Kalopani, 2500 m a.s.l., 11.VI.1993, leg. Ahrens, 5 ♂♂ + 2 ♀♀ (MTD); Mustang district, Jomsom, Thini river, 18.XI.1993, leg. B. Pradhan, 2 ♂♂ 1 ♀ (NMW); Kabhre district, N Dhulikel, Laukeni Khola, 1000 m a.s.l., 27°40'14N 85°36'14E, 16.III.2000, leg. C. Hörl, 1 ♀ (NMW); see also HEBAUER (2002).

KYRGYZSTAN: Alaj Range, Majdan gorge, ca. 2000 m a.s.l., 12.VII.1999, leg. Dolin, 2 ♂♂ + 7 ♀♀ (NMW, MSNV); SE Charyn Valley, Chundxha, 16.VI.1990, leg. M. Nesterov, 1 ♀ (NMW); Fergana Mts., E-slopes, Urumbasch valley, 2000 m a.s.l., 14.VI.1997, leg. Dolin, 1 ♂ (NMW); Fergana Mts., nr. Bergut pass, 2015 m a.s.l., 24.VI.1996, leg. Dolin, 1 ♀ (NMW); Fergana Mts., Djalaabad area, below Bergut pass, 2000 m a.s.l., 24.VII.1999, leg. Dolin, 1 ♀ (NMW); Issyk-Kul area, Ortotokoj env., 1750 m a.s.l., 20.VII.1997, leg. Dolin, 1 ♀ (NMW); W Tien Shan, Besch Aral env., 1400 m a.s.l., 8.VI.1998, leg. Dolin, 1 ♀ (NMW).

Laccobius (Microlaccobius) tonkinensis GENTILI, 1979

MATERIAL EXAMINED:

LAOS: Oudomxay, 12.-13.V.1996, leg. C.-F. Lee, 2 ♀♀ (NMW, MSNV).

First record for Laos.

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References

- GENTILI, E. 1974: Descrizione di nuove entità appartenenti al genere *Laccobius* Erichson, 1837 e proposta per un nuovo inquadramento sottogenetico (Coleoptera Palpicornia). – Memorie del Museo Civico di Storia Naturale di Verona XX (1972): 549-575.
- GENTILI, E. 1988: Verso una revisione del genere *Laccobius* (Coleoptera, Hydrophilidae). - Annuario Osservatorio di Fisica terrestre e Museo A. Stoppani del Seminario Arcivescovile di Milano (n.s.) 9 (1986): 31-47.
- GENTILI, E. 1995: Hydrophilidae: 3. The genus *Laccobius* Erichson in China and neighbouring areas, pp. 245-286. – In Jäch, M.A. & Ji, L. (eds.): Water Beetles of China, Vol. I. - Wien: Zoologisch-Botanische Gesellschaft in Österreich and Wiener Coleopterologenverein, 410 pp.
- GENTILI, E. 1996: *Laccobius* nuovi o poco noti di Sierra Leone, Pakistan, Vietnam, Australia, Sumatra, Filippine e Nuova Guinea (Coleoptera Hydrophilidae). – Memorie della Società entomologica italiana, Genova, 74: 21-32.
- GENTILI, E. 1997: *Laccobius* nuovi o poco noti (Coleoptera, Hydrophilidae). – Giornale italiano di Entomologia 8: 301-308.
- GENTILI, E. & CHIESA, A. 1976: Revisione dei *Laccobius* paleartici (Coleoptera Hydrophilidae). – Memorie della Società entomologica italiana 54 (1975): 1-187.

- GUILLEBEAU, F. 1896: Descriptions de quelques espèces de Coléoptères inédites. – Bulletin de la Société Entomologique de France (1896): 226-232, 239-245.
- HANSEN, M. 1991: The Hydrophiloid Beetles. Phylogeny, classification and a revision of the genera (Coleoptera, Hydrophiloidea). – Biologiske Skrifter 40: 1-368.
- HANSEN, M. 1999: Hydrophiloidea (Coleoptera). In Hansen, M. (ed.): World Catalogue of Insects, Vol. 2. – Stenstrup: Apollo Books, 416 pp.
- HEBAUER, F. 2002: Hydrophilidae of Northern India and Southern Himalaya (Coleoptera: Hydrophilidae). – Acta Coleopterologica 18: 3-72.
- HEBAUER, F. & KLAUSNITZER, B. 1998: Insecta: Coleoptera: Hydrophiloidea (exkl. *Helophorus*). – Süsswasseraufauna von Mitteleuropa 20, part 7, 8, 9, 10-1. - Stuttgart: Fischer, XII + 134 pp.
- JÄCH, M.A. & JI, L. 1995: Introduction, pp. 5-32. - In Jäch, M.A. & Ji, L. (eds.): Water Beetles of China, Vol. I. - Wien: Zoologisch-Botanische Gesellschaft in Österreich und Wiener Coleopterologenverein, 410 pp.
- JÄCH, M.A. & JI, L. 1998: China Water Beetle Survey (1995 - 1998), pp. 1-23. - In Jäch, M.A. & Ji, L. (eds.): Water Beetles of China, Vol. II. - Wien: Zoologisch-Botanische Gesellschaft in Österreich und Wiener Coleopterologenverein, 371 pp.
- JÄCH, M.A. & JI, L. 2003: China Water Beetle Survey (1999 - 2001), pp. 1-20. - In Jäch, M.A. & Ji, L. (eds.): Water Beetles of China, Vol. III. - Wien: Zoologisch-Botanische Gesellschaft in Österreich und Wiener Coleopterologenverein, VI + 572 pp.
- JIA, F. 1997: Coleoptera: Hydrophilidae, pp. 644-650. - In Yang, X. (ed.): Insects of the Three Gorge Reservoir Area of the Yangtze River, Part I. - Chongqing: Chongqing Publishing House, xx + 974 pp.
- REITTER, E. 1899: Beitrag zur Coleopteren-Fauna des russischen Reiches und der angrenzenden Länder. - Deutsche entomologische Zeitschrift (1899): 193-209.
- SHATROVSKIY, A.G. 1984: Obzor vodolyubov roda *Laccobius* Er. (Coleoptera, Hydrophilidae) fauny SSSR. - Entomologicheskoe Obozrenie 63: 301-325.
- WOLLASTON, T.V. 1867: Coleoptera Hesperidum, being an enumeration of the Coleopterous insects of the Cape Verde Archipelago. - London: J.V. Voorst, 39 + 285 pp.
- ZAITZEV, Ph.A. 1908: Catalogue des Coléoptères aquatiques des familles des Dryopidae, Georyssidae, Cyathoceridae, Heteroceridae et Hydrophilidae. - Horae Societatis entomologicae rossicae XXXVIII: 283-420.
- ZAITZEV, Ph.A. 1938: Vidy r. *Laccobius* Er. v faune SSSR i sopredel'nykh stran (Coleoptera, Hydrophilidae). - Trudy zoologicheskogo Sektora. Akademiya Nauk SSSR, Gruzinskoe Otdelenie, Zakavkaskii Filial, Tiflis 2: 109-124.
- ZAITZEV, Ph.A. 1951: Water beetles of Turkmenistan. - Trudy Murgabskoy Gidrobiologicheskoy Stantsii 1: 53-76.

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Errata

In GENTILI (1995) (Hydrophilidae: 3. The genus *Laccobius* Erichson in China and neighbouring areas, pp. 245-286. - In Jäch, M.A. & Ji, L. (eds.): Water Beetles of China, Vol. I. - Wien: Zoologisch-Botanische Gesellschaft in Österreich und Wiener Coleopterologenverein, 410 pp.) the following figure captions were exchanged: 30 with 31; 42 with 43; 86 with 87; and 156 with 158. Fig. 99 refers to *L. nobilis*, lateral view; Fig. 100 refers to *L. nobilis*, dorsal view; and Fig. 101 refers to *L. bedeli*, lateral view.

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