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A new species and new faunistic records of Heteroceridae from Bangladesh, and critical notes on the species recorded from Bhutan and Tibet (Coleoptera: Heteroceridae)

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Abstract

A new species of Heteroceridae, *Augyles bendai* SKALICKY sp.n. (Coleoptera: Heteroceridae), is described from Bangladesh. An annotated checklist of the Heteroceridae from Bangladesh is provided. *Augyles ivojenisi* (MASCAGNI, 1995), *A. kubani* SKALICKÝ, 2004, *A. modicus* MILLER, 1995, *A. riedeli* SKALICKÝ, 2003, *A. weigeli* SKALICKÝ, 2003 and *Micilus minutissimus* (SAHLBERG, 1900) are reported from Bangladesh for the first time.

The Heteroceridae hitherto recorded from Bhutan and Tibet are critically reviewed; six species purportedly collected by the insect dealer Jingke Li in Bhutan (Thrumshingla) (published by SKALICKÝ 2020) and two species allegedly collected in Tibet (published by JÄCH et al. 2012) are here removed from the fauna of Bhutan and Tibet. In fact, there is currently no evidence for the occurrence of the family Heteroceridae in Tibet. *Augyles luciae* (MASCAGNI, 1993) is here deleted from the fauna of the Palearctic Region.

Key words: Coleoptera, Heteroceridae, *Augyles*, taxonomy, new species, new records, faunistics, Bangladesh, Bhutan, Tibet, taxonomic fraud.

Introduction

The family Heteroceridae (Coleoptera: Dryopoidea) currently comprises about 370 known, morphologically uniform species distributed on all continents except Antarctica. They live in shallow tunnels in damp soil near aquatic habitats. For digging these tunnels they are equipped with a number of strong spines on the tibiae. The family currently includes six genera (*Augyles* SCHIÖDTE, 1866, *Elythomerus* WATERHOUSE, 1874, *Haraia* GARCÍA & JIMÉNEZ-RAMOS, 2020, *Heterocerus* FABRICIUS, 1792, *Micilus* MULSANT & REY, 1872, *Tropicus* PACHECO, 1964).

Fourteen taxa of Heteroceridae (nine *Augyles* and five *Heterocerus*) were so far known to occur in Bangladesh. In 2022, Daniel Benda (Prague, Czechia) collected 1,185 specimens of Heteroceridae in Bangladesh, which belong to 14 species, one of which turned out to be new to science and six of which were identified as new for Bangladesh: *Augyles ivojenisi* (MASCAGNI, 1995), *A. kubani* SKALICKÝ, 2004, *A. modicus* MILLER, 1995, *A. riedeli* SKALICKÝ, 2003, *A. weigeli* SKALICKÝ, 2003, and *Micilus minutissimus* (SAHLBERG, 1900). The new species, *Augyles bendai*, is described below.

An annotated checklist of the 21 heterocerid taxa now known from Bangladesh is provided together with notes on their general distribution and their distribution within Bangladesh.

Critical notes on the Heteroceridae recorded from Bhutan and Tibet so far are provided.

Acronyms:

CSU	Coll. S. Skalický, Ústí nad Orlicí, Czechia
NHML	Natural History Museum, London, UK
NHMP	National Museum, Museum of Natural History, Prague, Czechia
NMW	Naturhistorisches Museum Wien, Vienna, Austria

Separate labels are indicated by double slashes, locality data are cited verbatim in "quotation marks". Genitalia of the holotype were mounted in Canada balsam after examination.

Augyles bendai SKALICKÝ sp.n.

TYPE MATERIAL: **Holotype** ♂ (NHMP): "BANGLADESH; Dhaka [Division] Chowbari Chokdoi [village], sands near river Jamuna [lower Brahmaputra River], light trap 24.2567[°N], 89.7860[°E], 13 m D. Benda lgt., 3.xii.2022" // "HOLOTYPE AUGYLES bendai Skal. det. Skalický 2024" [red label]. **Allotype** ♀ (NHMP): same data as holotype, but with red "Allotype" label. **Paratypes**: 1 ♂, 1 ♀ (CSU), 2 ♀♀ (NHMP): same data as holotype, but with red "Paratype" label.

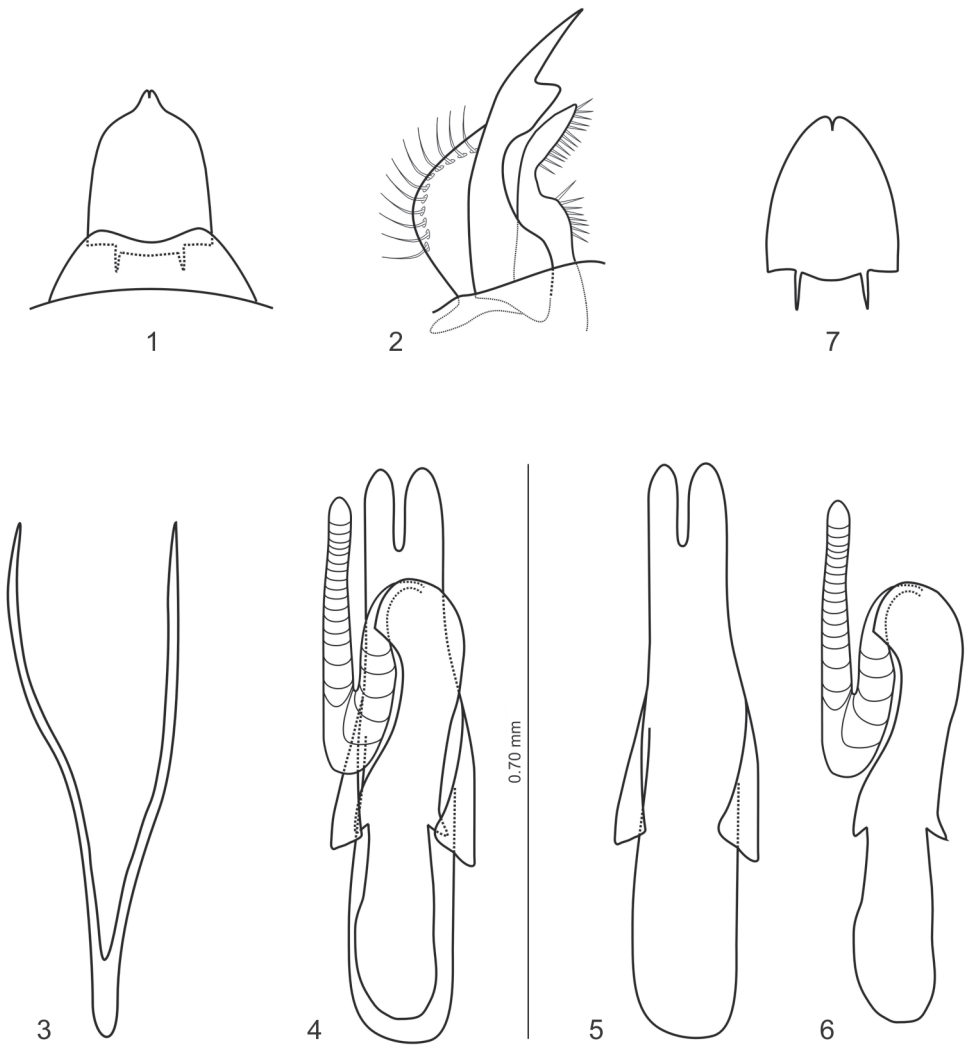
DESCRIPTION: Holotype ♂: Total length 3.20 mm (to apex of labrum); elytra 1.90 mm long, 1.15 mm wide across shoulders. Ground colour uniform pale brown, elytra and pronotum without visible spots, only eyes black. Ventral surface pale brown. Visible part of labrum (Fig. 1) about 1.25 times as long as wide, rounded laterally, anterior edge with apex in the middle; finely granulate; setae short, adjacent, with intermixed thin, long erect setae. Mandibles (Fig. 2) relatively long, slightly curved, with acute apex. Inner edge with one large tooth; without dorsal subapical tooth;. lateral surface large with a row of comb of spines. Prostheca (Fig. 2) with prosthecal notch, with series of about 12 long teeth. Clypeus without pair of anterior horns, anterior margin shallowly emarginate; coarsely granular, with short, adjacent setae. Head finely granular, setae sparse and short except for long setae above eyes. Antennae 10-segmented, with 6-segmented club. Scape triangular, pedicel oval, funicles very short. First two antennomeres with long erect setae, club setae very short and adjacent. Pronotum oval, 1.45 times as wide as long, as wide as base of elytra; pronotal base completely rimmed. Surface of pronotum granular without longer punctures, punctures approximately as large as eye facets; setae yellowish, short, semi-erect, adjacent, longer laterally. Scutellum triangular, pointed, about 1.5 times long as wide, base of scutellum under elytral line, convex. Elytra without longitudinal furrows, with small and shallow scutellar depressions, humeral depressions shallow, short, extending obliquely almost to one third of the length of elytra. Surface of elytra coarsely granular, granules approximately the same size (or up to 1.2× as large) as eye facets; setae yellowish, short, adjacent. Ventral surface relatively densely and finely granular; setae adjacent, yellowish, very short. Epipleural ridge absent. Metaventrite without post-mesocoxal ridge. Mesosventrite neither spinose nor tuberculate in front of each mesocoxa. Prosternal spine short, rounded. Post-metacoxal line complete. Stridulatory arch marked, with well-developed striae. Protibia with 11 stout spines, mesotibia with 10 weak spines. Spines of metatibia weak, concealed by setae. Spiculum gastrale (Fig. 3) 0.70 mm long, V-shaped, arms narrow, firmly connected apically. Aedeagus (Figs. 4–6) 0.60 mm long, elongate, well sclerotized, parameres long, rounded, fused with phallobase, supporting sheath with border posteriorly. Penis with internal sac cut on the left side, processus accessorius lying in this cut and bent upwards. Long processus accessorius transversely notched.

Allotype ♀ externally similar to male: Total length 3.05 mm (incl. labrum); elytra 1.95 mm long, 1.20 mm wide across shoulders. Pronotum slightly narrower than base of elytra. Labrum as in Fig. 7.

VARIABILITY: Size with slight variation (total length 3.0–3.4 mm in both sexes). Elytra with suggestion of longitudinal furrows in some paratypes.

BIONOMICS: The bank of the Jamuna River at the location where the samples were collected is sandy with very sparse vegetation (see Fig. 8). In this area, the river bed is unstable and changes very quickly. A UV light trap was placed approximately 10 meters from the river margin.

DIFFERENTIAL DIAGNOSIS: Due to the shape of the aedeagus, *A bendai* belongs to the *A. cribratellus* group. According to CHARPENTIER (1965), this group contains mainly species with the parameres firmly connected to the phallobase and the processus accessorius on the left side.



Figs. 1–7: *Augyles bendai*, 1–6) holotype: 1) labrum, dorsal view; 2) right mandible and prostheca, dorsal view; 3) spiculum gastrale, dorsal view; 4) aedeagus, dorsal view; 5) tegmen, dorsal view; 6) penis, dorsal view; 7): allotype: labrum, dorsal view. Figs. 1–2, 7 not to scale.

Augyles bendai is partially similar to *A. gigas* MASCAGNI et al., 2017 from Vietnam (see MASCAGNI et al. 2017: Figs. 1–4) from which it differs mainly in the elytral pattern, the number of antennal segments (club 7-segmented in *A. gigas*), and mainly in the morphology of the male genitalia (Figs. 4–6; MASCAGNI et al. (2017: Fig. 5)), as well as in the geographical distribution.

Externally, the new species is fairly similar to *Heterocerus harteni* MASCAGNI, 2009 from the United Arab Emirates, which distinctly differs in the shape of the aedeagus (see MASCAGNI 2009: Fig. 3).

ETYMOLOGY: Dedicated to Dr. Daniel Benda (Department of Zoology, Charles University, Prague, Czechia), distinguished worker on Hymenoptera, collector of the type series.

Fig. 8: Type locality of *Augyles bendai*: Bangladesh, Dhaka, Chowbari Chokdoi, Jamuna River. Photo: B. Mikátová.

Annotated checklist of the Heteroceridae known from Bangladesh

All specimens listed below were collected by D. Benda at the following three localities:

Loc. 1: Dhaka Division, Jamuna River [lower course of Brahmaputra River] near Chowbari Chokdoi [village], 24.2567°N 89.7860°E, 13 m a.s.l., light trap, 2.–3.XII.2022.

Loc. 2: Chittagong Division (officially Chattogram Div.), environments of Chittagong University, 22.46076°N 91.79340°E, ca. 12 m a.s.l. [acc. to Google Earth the elevation is 16 m], light trap, 20.XI.2022.

Loc. 3: Sylhet Division, near Bhatera, 24.64988°N 91.94487°E, 27 m a.s.l. [acc. to Google Earth the elevation is 56 m], light trap in ruderal environment, 27.XI.2022.

There are currently eight divisions in Bangladesh (Barisal, Chittagong, Dhaka, Khulna, Mymensingh, Rajshahi, Rangpur, Sylhet). Heteroceridae are currently known only from four of these divisions (Chittagong, Dhaka, Rangpur, Sylhet). The species from "East Pakistan, Dinajpur" listed in SKALICKÝ (2005a) were actually collected in Bangladesh (Rangpur Division).

Literature data on the distribution of the species are based on the following articles: AHMED et al. (2015), GROUVELLE (1896a–b, 1911), LITOVKIN & SAZHNEV (2018), MAMITZA (1928, 1930, 1933), MASCAGNI (1993, 1995, 1998, 2003), MASCAGNI & SFORZI (1999), MASCAGNI & SKALICKÝ (2007), PACHECO (1964), SAHLBERG (1900), SAZHNEV (2020), SKALICKÝ (2000a–b, 2001a–b, 2003a–b, 2004, 2005a–b, 2008, 2010a–c, 2012, 2019).

Records published by SKALICKÝ (2020) from Bhutan are not included in the checklist, because these specimens were obviously not collected in Bhutan (see below).

***Augyles atratus* (GROUVELLE, 1896)**

DISTRIBUTION: Bangladesh (Rangpur), Myanmar. MASCAGNI (2016) erroneously listed this species also for Pakistan, but this record is based on specimens from "East Pakistan" (= Bangladesh) (A. Mascagni, pers. comm.).

***Augyles bendai* SKALICKÝ, 2024**

MATERIAL EXAMINED:
Loc. 1: 2 ♂♂, 4 ♀♀ (CSU, NHMP).

DISTRIBUTION: Known only from Bangladesh (Dhaka).

***Augyles bellus* (GROUVELLE, 1911)**

DISTRIBUTION: Bangladesh (Rangpur), India (Bihar, Jharkhand).

***Augyles feae* (GROUVELLE, 1896)**

MATERIAL EXAMINED:
Loc. 1: 220 exs. (CSU, NHMP).

DISTRIBUTION: Bangladesh (Dhaka, Rangpur), India (Assam, Rajasthan, Uttarakhand, Uttar Pradesh, West Bengal), Nepal, Philippines, Myanmar; recorded also from Sri Lanka, but without detailed locality data. MASCAGNI (2016) erroneously listed this species also for Pakistan, but this record is based on specimens from "East Pakistan" (= Bangladesh) (A. Mascagni, pers. comm.).

***Augyles ivojenisi* (MASCAGNI, 1995)**

MATERIAL EXAMINED:
Loc. 1: 89 exs. (CSU, NHMP).

DISTRIBUTION: First record for Bangladesh (Dhaka). So far known only from Nepal and India (Assam, Uttar Pradesh); it has been recorded also from Myanmar and Sri Lanka, but without detailed locality data.

***Augyles kubani* SKALICKÝ, 2004**

MATERIAL EXAMINED:
Loc. 3: 9 exs. (CSU, NHMP).

DISTRIBUTION: First record for Bangladesh (Sylhet); it was so far known only from Laos.

***Augyles manfredjaechi* (MASCAGNI, 1995)**

MATERIAL EXAMINED:
Loc. 1: 1 ex. (NHMP).

DISTRIBUTION: Bangladesh (Chittagong, Dhaka), Pakistan, China (Hong Kong, Hunan), Nepal, India (Goa, Meghalaya, Uttar Pradesh), Myanmar, Vietnam.

***Augyles marshalli* (MAMITZA, 1928)**

DISTRIBUTION: Bangladesh (Dhaka, Rangpur), Nepal, India (Assam). It possibly occurs also in Bhutan (see SKALICKÝ 2008: 28). MASCAGNI (2016) erroneously listed this species also for Pakistan, but this record is based on specimens from "East Pakistan" (= Bangladesh) (A. Mascagni, pers. comm.).

***Augyles modicus* MILLER, 1995**

MATERIAL EXAMINED:
Loc. 1: 392 exs. (CSU, NHML, NHMP, NMW).

DISTRIBUTION: First record for Bangladesh (Dhaka); this species was so far known only from Nepal.

***Augyles riedeli* SKALICKÝ, 2003**

MATERIAL EXAMINED:
Loc. 1: 2 exs. (CSU, NHMP).

DISTRIBUTION: First record for Bangladesh (Dhaka); it was so far known only from India (Rajasthan).

***Augyles royi* SKALICKÝ, 2005**

MATERIAL EXAMINED:
Loc. 1: 242 exs. (CSU, NHML, NHMP, NMW).

DISTRIBUTION: So far known only from Bangladesh (Dhaka, Rangpur). MASCAGNI (2016) erroneously listed this species also for Pakistan, but this record is based on specimens from "East Pakistan" (= Bangladesh) (A. Mascagni, pers. comm.).

COLOR: The original description of this species (SKALICKÝ 2005a) was based on a total of 33 specimens, which are all black with brownish mandibles, antennae and tibiae and with brown ventral side. In the material examined here (242 specimens), in addition to black specimens, there are also brown to chestnut brown specimens, including combinations of shades on the elytra and pronotum in one specimen.

***Augyles scharlottae* SKALICKÝ, 2005**

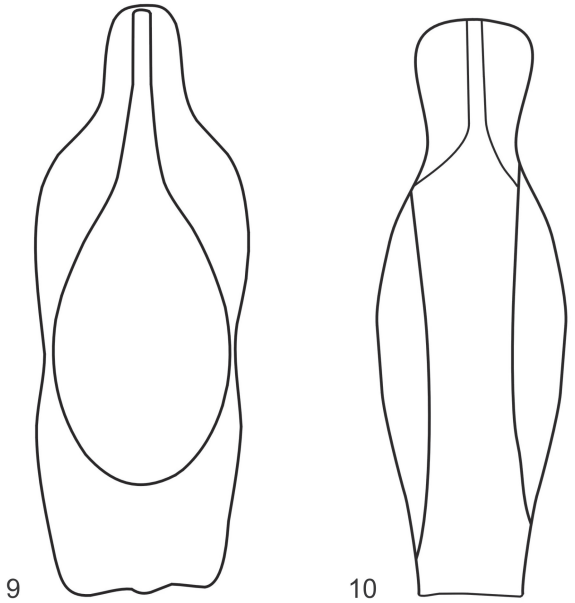
DISTRIBUTION: So far known only from Bangladesh (Rangpur). MASCAGNI (2016) erroneously listed this species also for Pakistan, but this record is based on specimens from "East Pakistan" (= Bangladesh) (A. Mascagni, pers. comm.).

***Augyles siyo* (MASCAGNI, 1995)**

DISTRIBUTION: Bangladesh (Rangpur), Nepal. MASCAGNI (2016) erroneously listed this species also for Pakistan, but this record is based on specimens from "East Pakistan" (= Bangladesh) (A. Mascagni, pers. comm.).

***Augyles skalei* SKALICKÝ, 2001**

MATERIAL EXAMINED:
Loc. 1: 132 exs. (CSU, NHMP).



Figs. 9–10: *Augyles skalei*: 9) holotype, phallobase, dorsal view; 10) modified phallobase found in some specimens from Bangladesh, dorsal view. Figs. 9–10 not to scale.

DISTRIBUTION: Bangladesh (Dhaka, Rangpur), Nepal. MASCAGNI (2016) erroneously listed this species also for Pakistan, but this record is based on specimens from "East Pakistan" (= Bangladesh) (A. Mascagni, pers. comm.).

AEDEAGUS: In some studied specimens, the shape of the phallobase partly deviates; see Figs. 9–10 in comparison with SKALICKÝ (2001b: Figs. 3–5).

Augyles weigeli SKALICKÝ, 2003

MATERIAL EXAMINED:
Loc. 1: 53 exs. (CSU, NHMP).

DISTRIBUTION: First record for Bangladesh (Dhaka); it was so far known only from Nepal.

Heterocerus dubius FABRICIUS, 1801

DISTRIBUTION: Bangladesh (Rangpur), Pakistan, India (Odisha, Tamil Nadu, West Bengal), Sri Lanka.

Heterocerus lorenzevae MASCAGNI, 1993

MATERIAL EXAMINED:
Loc. 1: 6 exs. (CSU, NHMP). **Loc. 2**: 1 ex. (NHMP).

TAXONOMY: *Heterocerus lorenzevae* is very probably a junior synonym of *H. dubius* described from "India", but the synonymy has not been established so far.

DISTRIBUTION: Bangladesh (Chittagong, Dhaka), Pakistan, Nepal, India (Meghalaya, Rajasthan), Myanmar, Thailand, Laos, Vietnam.

***Heterocerus philippensis cinctus* MOTSCHULSKY, 1858**

MATERIAL EXAMINED:
Loc. 1: 4 exs. (NHMP). **Loc. 2**: 6 exs. (CSU, NHMP). **Loc. 3**: 1 ex. (NHMP).

DISTRIBUTION: Bangladesh (Chittaging, Dhaka, Rangpur, Sylhet), India (Andaman Islands, Kerala), Sri Lanka.

***Heterocerus philippensis javanicus* GROUVELLE, 1896**

DISTRIBUTION: Bangladesh (Chittagong), India (Odisha, Uttar Pradesh, West Bengal), Nepal, Laos, Myanmar, Thailand, Vietnam, Indonesia (Java, Philippines, Sulawesi, Sumatra). MASCAGNI (2016) erroneously listed this subspecies also for Pakistan, but this record is based on specimens from "East Pakistan" (= Bangladesh) (A. Mascagni, pers. comm.).

***Heterocerus virgatus* MAMITZA, 1933**

MATERIAL EXAMINED:
Loc. 1: 7 exs. (CSU, NHMP).

DISTRIBUTION: Bangladesh (Dhaka, Rangpur), Cambodia, Kyrgyzstan, Pakistan, Nepal, India (Goa, Karnataka, Odisha, Rajasthan, Uttar Pradesh, West Bengal), Myanmar, China (Hong Kong, Yunnan), Thailand, Laos, Indonesia (Java).

***Micilus minutissimus* (SAHLBERG, 1900)**

MATERIAL EXAMINED:
Loc. 1: 14 exs. (CSU, NHMP).

DISTRIBUTION: First record for Bangladesh (Dhaka). So far known only from Kazakhstan, Turkmenistan, India (Uttarakhand, Uttar Pradesh), Vietnam. This species recorded from the Amu Darya River (without detailed data) by SAHLBERG (1900); this record most probably refers to Turkmenistan, but the Amu Darya also flows through Afghanistan, Tajikistan, and Uzbekistan.

Heteroceridae from neighbouring Indian states and Myanmar not confirmed from Bangladesh so far

The following species of Heteroceridae have been recorded from neighbouring Indian states and Myanmar but are not known from Bangladesh:

West Bengal (bordering Bangladesh in the west and northwest): *Augyles exiguus* (MAMITZA, 1933), *A. fornicatus* (MAMITZA, 1933), *A. hiekei* (MASCAGNI, 1995), *A. indicus* (MOTSCHULSKY, 1858), *Heterocerus magnus* MAMITZA, 1933, *H. nigricornis* MOTSCHULSKY, 1858, *H. punctatissimus* MAMITZA, 1930.

Assam (bordering Bangladesh in the northwest and the northeast): *Augyles cantus* MILLER, 1995, *A. suturalis* (GROUVELLE, 1896).

Meghalaya (bordering Bangladesh in the northeast): *Heterocerus nepalensis* MASCAGNI, 1993.

Myanmar (bordering Bangladesh in the southeast): *Augyles grohmanni* (MASCAGNI, 1987), *A. indicus*, *A. myanmarus* SKALICKÝ, 2000, *A. rangoonensis* SKALICKÝ, 2004, *A. saano* (MASCAGNI, 1995), *A. sagaingensis* SKALICKÝ, 2004, *A. schillhammeri* SKALICKÝ, 2000, *A. suturalis*, *Heterocerus birmanicus* GROUVELLE, 1896, *H. ernsti* SKALICKÝ, 2006, *H. inornatus* SKALICKÝ, 2004, *H. nepalensis*, *H. philippensis philippensis* GROUVELLE, 1896.

There are no representatives of Heteroceridae known the Indian states of Mizoram and Tripura so far.

Critical notes on the Heteroceridae recorded from Bhutan

SKALICKÝ (2008) reported three species of Heteroceridae from a single locality in Bhutan (Punakha Prov., Mo River, ca. 1,230 m a.s.l., ca. 27°37'4"N, 89°50'20"E, 24.XI.2005, leg. M.A. Jäch, loc. 20).

***Augyles laticollis* (MAMITZA, 1933)**

DISTRIBUTION: Bhutan, India (Uttarakhand), Nepal. MASCAGNI (2016) listed this species also for the Oriental Region ("ORR", without detailed additional information), but we are not aware of any confirmed published record outside the Palearctic Region (as defined in the "Catalogue of Palaearctic Coleoptera").

***Augyles schmidtjaegeri* MASCAGNI, 1998**

DISTRIBUTION: Bhutan, Nepal.

***Augyles terzanii* (MASCAGNI, 1995)**

DISTRIBUTION: Bhutan, Nepal.

These are the only species, which are confirmed for Bhutan so far. Unfortunately, these three confirmed records from Bhutan have not been included in the second edition of the "Catalogue of Palaearctic Coleoptera" (MASCAGNI 2016) and they are not included in the "Checklist of the Heteroceridae of the World" (SAZHNEV 2024).

In addition to these three species, SKALICKÝ (2008) reported also an unidentified single female (Bhutan, Sarpang Prov., Bhur River, ca. 380 m a.s.l., ca. 26°55'23"N 90°23'51"E. 27.XI.2005, leg. M.A. Jäch, loc. 30), which had been collected about two km north of the border to Assam (India); the author assigned this female tentatively to *A. marshalli* (known so far from Bangladesh, India (Assam), and Nepal), but this identification should be confirmed by the examination of males from the same area.

Twelve years later, SKALICKÝ (2020) recorded six additional species of Heteroceridae from Bhutan: *Augyles feae*, *A. luciae* (MASCAGNI, 1993), *Heterocerus lorenzevae*, *H. philippensis cinctus* MOTSCHULSKY, 1858, *H. virgatus* and *Micilus minutissimus*. All specimens were purportedly collected at "Thrumshingla" (eastern Bhutan) in 2010 and eventually sent (in exchange for literature) to the NMW by the well-known Chinese insect dealer Jingke Li, who lived in Laos at that time.

"Thrumshingla" may refer to Thrumshing La, the second highest mountain pass of Bhutan culminating at 3,780 m elevation, lying about 27 km NW of Mongar Town (located on top of a mountain ridge at about 1,600 m a.s.l.). Thrumshingla may also refer to Phrumsengla National Park (formerly Thrumshingla National Park) northwest of Mongar Town. The altitudes of the national park range from 1,000 to over 4,000 m a.s.l.

The material that was sent to the NMW by J. Li contained several thousand unmounted dried specimens (stored in plastic bags) that have obviously been collected at light traps and were proved to be in poor condition since most specimens were disintegrated. About 500 intact specimens were mounted; the remaining insect debris (see Fig. 11) will be discarded. The material consists of mainly wide-spread lowland species of a few aquatic and terrestrial beetle families (Carabidae, Dytiscidae, Noteridae, Hydrophilidae, Scarabaeidae, Byrrhidae, Limnichidae, Tenebrionidae, Coccinellidae, Chrysomelidae, a single Scydmaeninae (Staphylinidae), and some fragments of Scirtidae, Dascillidae and Elateridae) and some other insects, mainly Heteroptera and Orthoptera. With the exception of the Dytiscidae, Heteroceridae and a few Carabidae, the specimens are still unidentified. According to the literature (e.g., KATAEV & WRASE 2016, BALKENOHL 2017, ASSING 2018, SHETH et al. 2018), specimens from the same

"collection" were also acquired by other museums or private collectors; for instance, there are four additional species of Heteroceridae ("BHUTAN: Mongar City, Thrumshingla National Park, June 20-27, 2010", no collector mentioned) stored in the NHMP that have not been recorded from Bhutan so far – one of these species is known only from Malaysia.

Fig. 11: Sample of insect specimens allegedly collected by Jingke Li in Bhutan (Thrumshingla) and sent to the NMW in 2010.

In fact, at least two new species of Carabidae (*Oxycentrus scabericollis* ITO, 2013, *Trilophidius gemmatus* BALKENOHL, 2017) have been so far described from material allegedly collected by J. Li in Bhutan (Thrumshingla) in 2010. According to B. Kataev (pers. comm. 2021), *Oxycentrus scabericollis* is likely a synonym of *O. foveicollis* BATES, 1889, described from Cambodia. Examination of specimens *Trilophidius gemmatus* by the second author revealed that they perfectly agree morphologically with specimens of *T. impunctatus* PUTZEYS, 1868 described from Thailand.

By the years it became more and more evident that Li has intentionally used fake locality data to attract possible customers for his collections (see e.g., JÁKL, S. & BEZDĚK 2016: 17, SHAVERDO et al. 2021: 194). And it has turned out that specimens from other "interesting localities", for instance from Tibet (JÄCH et al. 2012, SHAVERDO et al. 2012), had also been faked by the infamous insect dealer, and, in unawareness of the true provenance of the material, led to the creation of a new synonym in the family Dytiscidae (WEWALKA 2023: 11, 17). Finally, a particularly significant case of fraudulent tampering by Jingke Li has been revealed most recently by DNA barcoding (LEE et al. 2024).

Evaluation of the entire "Bhutan material" sent by Jingke Li to the NMW revealed that the specimens predominantly represent common lowland species that prefer swampy muddy habitats. Such habitats do not exist in Bhutan, especially not in the area around Thrumshingla, which is dominated by steep valleys and mountain forest (see: https://www.google.at/search?q=thrumshingla&source=lnms&tbm=isch&sa=X&ved=2ahUKEwjy1KzGg_jtAhXGyIUKHdiAB7YQ_AUoAnoECAUQBA&biw=1680&bih=910#imgrc=eVixizbBB6_4vM).

Therefore we decided to delete these six species of Heteroceridae recorded by SKALICKÝ (2020) from the fauna of Bhutan.

Critical notes on the Heteroceridae recorded from Tibet

JÄCH et al. (2012) recorded two species of Heteroceridae from the Autonomous Region of Tibet (China): *Augyles luciae* and *Heterocerus fenestratus* THUNBERG, 1784. The specimens were collected in 2011 by Liu Yun with a light trap near Xiachayu (28°29'44"N 97°01'26"E), Zayü County (southeastern Tibet) and eventually sent to the NMW by Jingke Li as a gift. It can of course not be entirely excluded that some of the 170 specimens from Xiachayu were indeed collected in Tibet, but certainly, the majority of the material originates from lowland habitats. It is quite possible that the original material has been unintentionally mixed with samples from Laos or intentionally "laced" with lowland specimens, In any case, with regard to data plausibility and in view of the notoriously untrustworthy sender, we decided to delete both species from the fauna of Tibet. We should wait until additional faunistic surveys are carried out in SE Tibet.

Augyles luciae is here deleted also from the entire Palearctic fauna, because it is so far confirmed only for the Oriental Region.

Heterocerus fenestratus is very wide-spread, occurring almost in every country of the Palearctic Region. According to ZAITZEV (1908: 317) it is known from "Thibet sept. (Tsaidam)"; however, "Tsaidam" refers to the Qaidam Basin, which belongs to the province of Qinghai today. Therefore, "XIZ" resp. "Xizang (Tibet)" must be deleted under *H. fenestratus* in the "Catalogue of Palaearctic Coleoptera" (MASCAGNI 2016) and in the "Checklist of the Heteroceridae of the World" (SAZHNEV 2024), and instead, "QIN" (for Qinghai) resp. "Western Plateau" should be added.

In fact, there is currently no evidence for the occurrence of the family Heteroceridae in Tibet.

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