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New species and new records of Heteroceridae (Coleoptera) from Pakistan, and first records for some other Asian countries

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Skalický S. 2025: New species and new records of Heteroceridae (Coleoptera) from Pakistan, and first records for some other Asian countries. *Acta Musei Moraviae, Scientie biologicae* **110(1–2):** 35–45. – A new species of Heteroceridae, *Augyles gurkoi* sp. nov. (Coleoptera: Heteroceridae), from Pakistan (Khyber Pakhtunkhwa Province) is described and illustrated. Five species of Heteroceridae are added to the latest checklist of Pakistan species and eight species are recorded as new occurrences for individual provinces of Pakistan. *A. ivojenisi* (Mascagni, 1995) is synonymized with *A. bellus* (Grouvelle, 1911). The following species are recorded for the first time from the respective countries: *A. hiekei* (Mascagni, 1995) for Thailand and Indonesia (Sumatra), *H. dubius* Fabricius, 1798 for Vietnam, *H. mus* Charpentier, 1965 for Jordan and Oman and *H. virgatus* Mamitza, 1933 for Vietnam.

Keywords. Taxonomy, Coleoptera, *Augyles*, *Heterocerus*, new species, new synonymy, new records, Pakistan

Introduction

Knowledge of the distribution of Heteroceridae in Pakistan is based on five primary works – Hashmi & Tashfeen (1992), Skalický (2005), Mascagni & Rada (2012), Ahmed *et al.* (2015) and Skalický (2021). The latest checklist Skalický (2021) lists 16 species from this country in total (eight species of *Augyles S*chiödte, 1866 and eight species of *Heterocerus* Fabricius, 1792). In addition to the species listed there, Hashami & Tashfeen (1992) lists *A. bellus* (Grouvelle, 1911), *H. unicolor* Motschulsky, 1858 (listed as junior synonyms of *H. dubiosus* Zaitzev, 1910), *A. feae* (Grouvelle, 1896) and *H. philippensis javanicus* (Grouvelle, 1896) (listed as junior synonyms of *H. fryi* Grouvelle, 1896 and *H. parvulus* Grouvelle, 1896 respectively). These species are listed without further locality information, only their occurrence in the country is recorded. Later, *H. dubius* was re-included in the list of Pakistani species, with occurrence in Sind province (Ahmed *et al.* 2015). During the study of 455 specimens of Heteroceridae collected by M. Gurko (Chernovtsi, Ukraine) at six Pakistan localities, and 141 Pakistan specimens from two localities collected by Z. Ahmed, deposited in FUUAST and NHML, I have identified a total of thirteen species of Heteroceridae from Pakistan, and added the occurrence of four additional species – *A. hiekei* (Mascagni, 1995), *A. obliteratus* (Kiesenwetter, 1843), *H. fenestratus* (Thunberg, 1784) and *H. parallelus* Gebler, 1830) to the latest checklist of Pakistani species. I further confirm the occurrence of the formerly questionable *A. bellus* and describe *A. gurkoi* sp. nov. as a new species to science. I record eight species new for administrative divisions of Pakistan. The total number of taxa known from Pakistan is raised to 25, three of them (*H. philippensis javanicus*, *A. feae* and *H. unicolor*) are doubtful and need to be confirmed by further

research. Seven taxa (*A. atratus* (Grouvelle, 1896), *A. marshalli* (Mamitza, 1928), *A. royi* Skalický, 2005, *A. scharlottae* Skalický, 2005, *A. siyo* (Mascagni, 1995), *A. skalei* Skalický, 2001 and *H. philippensis cinctus* Motschulsky, 1858, mentioned by Skalický (2005) and Mascagni & Skalický (2007) from the area "Dinajpur, East Pakistan" are removed from this list. Dinajpur currently belongs to the Rangpur division of Bangladesh.

In addition, I confirm the first record of *A. hiekei* in Indonesia (Sumatra) and Thailand, *H. dubius* in Vietnam, *H. mus* in Jordan and Oman, as well as *H. virgatus* in Vietnam.

After examining specimens of *A. bellus* and *A. ivojenisi* Mascagni, 1995, I concluded they represent the same species, and established *A. ivojenisi* as a junior subjective synonym of *A. bellus*.

Material and methods

All specimens mentioned in the present paper are deposited in the author's collection (CSU), unless otherwise stated. Locality data are cited verbatim between "quotation marks". The author's remarks are given in square brackets. Separate labels are indicated by double slashes.

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Acronyms of collections

CSH . . . . . Coll. A. Skale, Gera, Germany
CSU . . . . . Coll. S. Skalický, Ústí nad Orlicí, Czechia
FUUAST . . . . . Department of Zoology, Federal Urdu University of Arts, Science & Technology, Karachi, Pakistan)
NHML . . . . . The Natural History Museum, London, U.K.
MNHP . . . . . Museum national d'Histoire naturelle, Paris, France
MMB . . . . . Moravské Zemské Museum v Brně, Czechia
NMP . . . . . Natural History Museum, Prague, Czechia
NMBS . . . . . Naturhistorisches Museum Basel, Switzerland
NMW . . . . . Naturhistorisches Museum Wien, Vienna, Austria
OUMNH . . . . . Oxford University Museum of Natural History, U.K.

Newly studied samples of Heteroceridae from Pakistan

Literature data on the distribution of the species are based on the following articles: Ahmed *et al.* (2015), Hashmi & Tashfeen (1992), Hebauer (1991), Mamitza (1930), Mascagni (2016), Mascagni & Sforzi (1999), Prokin et al. (2019), Sazhnev (2018), Skalický (2001, 2010, 2014, 2021), Skalický & Jäch (2024), Litovkin & Sazhnev (2018).

Augyles bellus (Grouvelle, 1911)

Augyles ivojenisi (Mascagni, 1995) **syn. n.**

Type material. 1 spec. syntype of *A. bellus* "Ind. Mus. Rajmahal Bengal 6-VII-09. Annandale" // "1335 16" // "at light on banks of R. Ganges" // "Type" // "TYPE" [red label] // "MUSEUM PARIS 1917 Coll. GROUVELLE" [yellow label] // "Litorimus" [handwritten label] // "bellus Grouv." [handwritten label] // "SYNTYPE" [red label] // "SYNTYPE Augyles bellus (Grouvelle, 1911) MNHN, Paris EC40088" [+ RQ code] (MNHP); Holotype of *A. ivojenisi* "Nepal Centr. Sauraha, 20.–25.5. 1992, leg. Ivo Jenis" // "HOLOTYPUS" [red label] // "Littorimus ivojenisi Mascagni ´95 Det. Dott. A. Mascagni" (NMW).
Material examined. Pakistan: 6 spec. (3 ♂♂, 3 ♀♀): "Pakistan [Khyber Pakhtunkhwa province] NWFP 2005 S Waziristan agenci near Tanai vill 1500–2500m, 2–12.9.V. Gurko leg.".
India: 5 spec.: "Haldwani Dist., Kumaon, India. H.G.Champion." // "H.G.Champion Coll. B.M. 1953-156." // "Heterocerus bellus Gr. Det. Charpentier 1971" (NHML). 1 spec.: "India. Fyzabad, Unit. Prov. R.W.G. Hingston. B.M.1923-293" // "bellus Grouv det. Mamitza" // "Heterocerus bellus Gr. Det. Charpentier 1971" (NHML); 1 spec.: "Pusa Bengal By the river side D.N" // "20.II.08" // "B.N.H.S." [Bombay Natural History Society] // "Andrewes Bequest. B.M. 1922-221" // "Heterocerus bicolor Grouv." // "Heterocerus bellus Gr. Det. Charpentier 1971" (NHML); 1 spec.: "Haldwani Dist. Kumaon, U.P. June ´[19]23. H.G.C." // "4034" // "AT LIGHT" // "H.G.Champion Coll. B.M. 1953-156." // "bellus Grouv. Det.Mamitza" // "Heterocerus bellus Gr. Det. Charpentier 1971" (NHML); 1 spec.: "West Bhatkot. Kumaon. 4000´ May´ [19]20 HGC." // "3395" // labels with drawing of prosternum by Charpentier // "Heterocerus bellus det. Charpentier 1971" (NHML); 8 spec.: "Haldwani Dist., Kumaon, India."// "H.G.Champion Coll. B.M.1953-156" // "Heterocerus bellus Gr. Det. Charpentier 1971" (NHML); 3 spec.: "Sarda, Bengal. F. W. C." // "H.G.Champion Coll. B.M. 1953-156." // label with drawing of prosternum by Charpentier // "Heterocerus bellus Gr. Det. Charpentier 1971" (♂ CSU, 2 spec. NHML); 1 spec.: "NE INDIA Assam Bhalukpong, 26.v.–3.vi.2006, 27°02´N 92°35´E, 150m, P.Pacholátko leg." // "L.Dembický & P.Pacholátko BMNH{E}2006-48" (NHML); 2 spec.: "NE INDIA, ASSAM, Bhalukpong 27°02´N 92°35´E, 150m, L. Dembický leg, 26.v.–3.vi.2006 BMNH 2006-48" (NHML).
Nepal: 1 spec.: "NEPAL S, Bagmati Prov., Chitwan Distr., Chitwan NP, Sauraha, Hotel "Sweet Home" 27°35´09´´N 84°29´28´´E, 05–08.vii.2022, 188 m, rice fields & secondary vegetation, UV light, leg. D. Telnov # 2022-28 BMNH{E} 2022-117" (NHML); 222 spec.: "NEPAL c. Prov. Narayani Saurahra, Rapti River 27°34´51´´N 84°29´30´´E 14./15.VII. 2001, LF, 180m riverside. leg. A. Kopetz" (30 ♂♀ CSU, 192 ♂♀NME); 1 spec.: "NEPAL, 700 feet Chitwan National Pk. Sauraha, 4.vi.1983 At MV Light M.J.D. Brendell BMNH{E}1983-222" (NHML); 10 spec.: "NEPAL P: Narayani/ D: Chitwan 2 km NW Sauraha, Bagmara" 170m, N27°35´18´´, E84°28´34´´ 08.VII.2009 leg. A.Weigel #68" (CSH); 1 spec.: "NEPAL, P: Narayani Chitawan, Gunagar 27°39´N, 84°19´E V.2005, leg. D. Ahrens" (CSH).

Distribution. Bangladesh, India, Nepal, Myanmar, Sri Lanka. The only known record of this species for Pakistan (without locality data) is in Hashmi & Tashfeen (1992). I now confirm its occurrence for the Khyber Pakhtunkhwa province of Pakistan.

Note. The original description of *A. bellus* is based on an unspecified number of specimens with locality data "Bengal, Rajmahal, edge of R. Ganges (Annandale)". Rajmahal is part of the state of Jharkhand. Annandale refers to the collector (T. N. Annandale 1876–1924). Type specimens were deposited in the Collection of the Indian Museum, Calcutta and in the collection of A. Grouvelle (Grouvelle 1911). I have not been able to locate these specimens from the Grouvelle collection to date. After examining the syntype of *A. bellus* (Fig.1), deposited in MNHP, specimens determined by R. Mamitza and R. Charpentier [NHML, CSU] and the holotype of *A. ivojenisi* [NMW] it is clear that all general external characters (clypeus without anterior horns, antennae 11 segmented, epipleura without epipleural ridges, metasternum with a post-mesocoxal ridge, presence of post-metacoxal ridge, punctation and pubescence of

pronotum and elytra) are the same in *A. ivojenisi* and *A. bellus*. Morphology of male genitalia was also found to be identical. There is no doubt that *A. ivojenisi* is a junior synonym of *A. bellus*. The species is quite variable in size (3.30–4.80 mm), its general coloration and the coloration of the elytral spots (most often the colour is pale brown with a dark brown spot on the elytra) is somewhat variable and there are also specimens with pale elytra with a less pronounced pattern (for example, the syntype deposited in MNHP). However, externally, the species is relatively uniform in other features, and is easily distinguished from other Heteroceridae species. Characteristic overall appearance is shown in Fig. 2 (dark form) and Fig. 3 (pale form).

Augyles flavidus (Rossi, 1794)

Material examined. Pakistan: 18 spec. (4 ♂♂, 14 ♀♀): "Pakistan [Khyber Pakhtunkhwa province] NWFP 2005 S Waziristan agenci near Tanai vill 1500–2500m, 2–12.9.V. Gurko leg."; 6 spec. (2 ♂♂, 4 ♀♀) "Pakistan, Balochistan province Zhob valley sand desert 27–31.08.2008, V. Gurko leg."; 7 spec. (2 ♂♂, 5 ♀♀) "Pakistan, Balochistan prov. Suleiman mnts., Zhob vall., h-1700, 08.2005, V. Gurko leg.".

Distribution. Widely distributed in Africa, Asia and Europe. In Pakistan it is known from Balochistan province. First record for Khyber Pakhtunkhwa province of Pakistan.

Augyles gurkoi sp. nov. (Figs 4–10)

urn:lsid:zoobank.org:act:BD9D653F-89FF-4E41-83E5-5D441F71222D

Type material. Holotype ♂ (CSU): "Pakistan, [Khyber Pakhtunkhwa province] Peshavar Kabul riv. Vall. 1.9.2004, V. Gurko leg." // "Holotype Augyles gurkoi Skalický det. Skalický 2025" [red label]; Allotype ♀ (CSU): same data as holotype, but second red "Allotype" label; Paratype 1♀ (CSU): same data as holotype, but with red "Paratype" label.

Description. Holotype ♂: total length 3.35 mm (including labrum); elytra 2.00 mm long, 1.15 mm wide across shoulders. Ground colour pale brown, elytra and pronotum with diffuse darker brown pattern as in Fig.4, elytra and pronotum shiny, eyes black; Ventral surface pale brown, abdomen with pale brown. Mandibles robust, without dorsal subapical tooth, with well-developed latero-ventral ridge with a series of strong spines; Visible part of labrum almost as wide as long, rounded laterally; surface of labrum coarsely granular with dense, yellowish setae laterally. Antennae 10-segmented with 6-segmented club. Scape and pedicel triangular, with long erect setae, scape coarsely granular. Clypeus without anterior horns; anterior margin shallowly emarginate, surface coarsely granular, setae short, strongly, adjacent, yellowish, with intermixed thin, long erect setae. Head finely granular, setae short, adjacent, intermixed with long erect setae above eyes. Pronotum oval, wider than long (ratio 1.45 : 1), as wide as base of elytra, pronotal base completely margined. Surface of pronotum finely granular (punctures approximately as large as eye facets) without intermixed larger punctures. Setae on pronotum sparse, yellowish, short, adjacent, with longer and erect setae laterally. Scutellum triangular, about 1.6 times as long as wide, anterior corners rounded, posterior corner pointed; surface regularly granulate, granules approximately as large as eye facets.

Elytra with short shallow humeral depressions; without scutellar depression, with shallow longitudinal furrows reaching about halfway up the elytra (Fig. 5). Surface of elytra densely granular, size of punctures approximately as large as eye facets. Setae on elytra yellowish, sparse, adjacent, without intermixed longer setae. Epipleural ridges absent. Ventral surface relatively finely and rarely granular, setae adjacent, rarely short. Metaventrite without post-mesocoxal ridge. Mesoventrite U-shaped, neither spinose nor tuberculate in front of each mesocoxum. Prosternal spine wide, triangular. Post-metacoxal line present. Stridulatory arch marked with very fine transverse striae. Protibia with 10 stout spines, mesotibia and metatibia with inconspicuous setae. Spiculum gastrale (Fig. 6) 0.70 mm long, V-shaped, arms narrow, firmly connected by membrane apically. Aedeagus (Figs 7–10) oblong, 0.60 mm long, well sclerotized; parameres long, rounded, fused with phallobase, supporting sheath with border posteriorly. Penis without internal sac, with long processus accessorius on the left side, ending in a pointed triangular part.

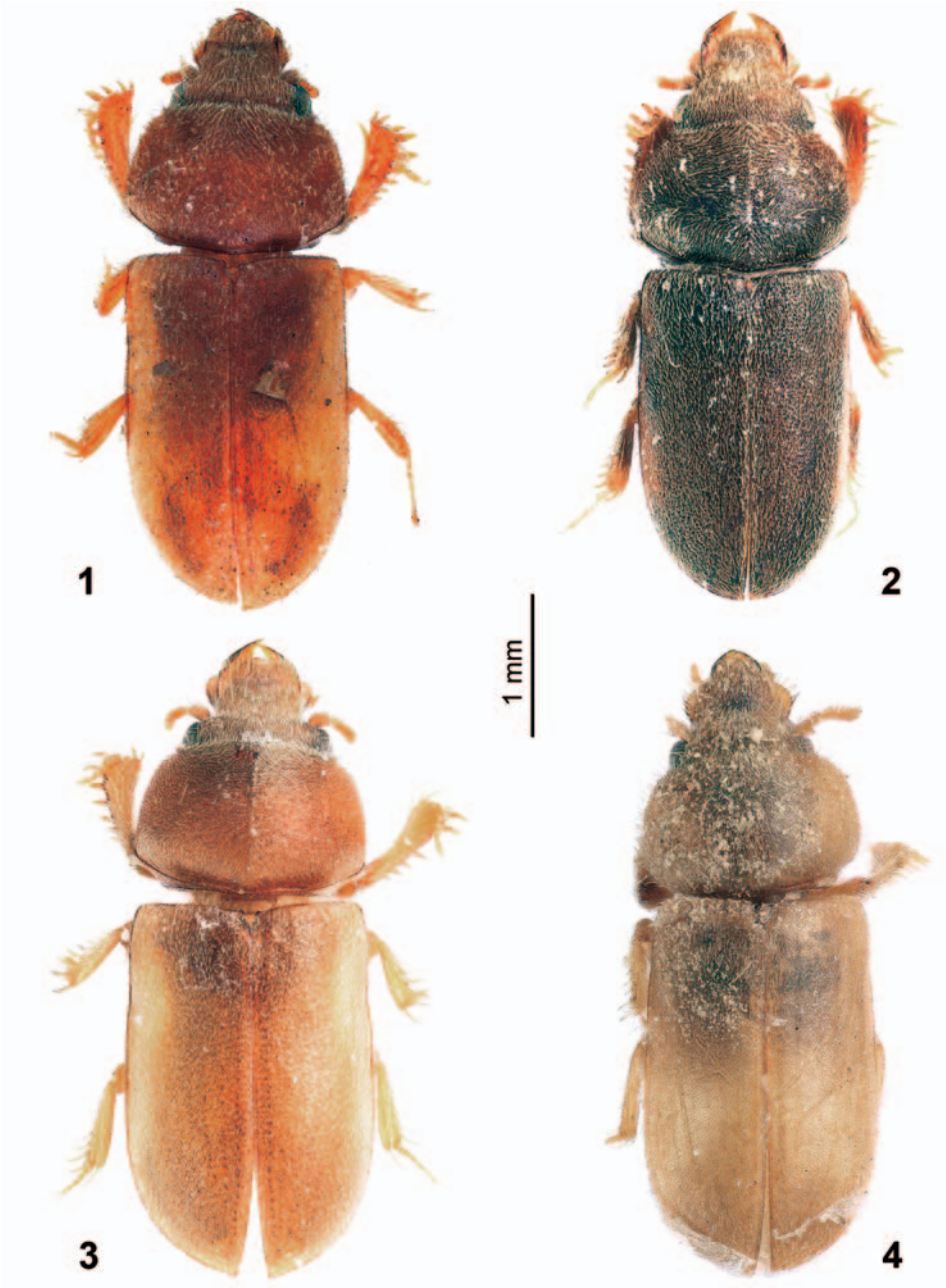
Allotype ♀: externally similar to male. Total length 2.85 mm (including labrum); elytra 1.85 mm long, 1.10 mm wide across shoulders. Latero-ventral ridge on mandibles less developed.

Differential diagnosis. Due to the shape of the aedeagus, *A gurkoi* sp. nov. belongs to the *A. cribratellus* group according to Charpentier (1965) and in external marks is similar to *A. bendai* Skalický, 2024 occurring in Dhaka division of Bangladesh (Skalický & Jäch 2024) from which it differs in the very fine transverse striae on the stridulatory arch (coarse in A. bendai), the presence of longitudinal furrows on the elytra (absent in *A. bendai*) and mainly in the morphology of the male genitalia (compare Figs 4–6 in Skalický & Jäch 2024 and Figs 7–10 in this work). The faint darker spots on the elytra and scutellum (absent in *A. bendai*) are an inconclusive character.

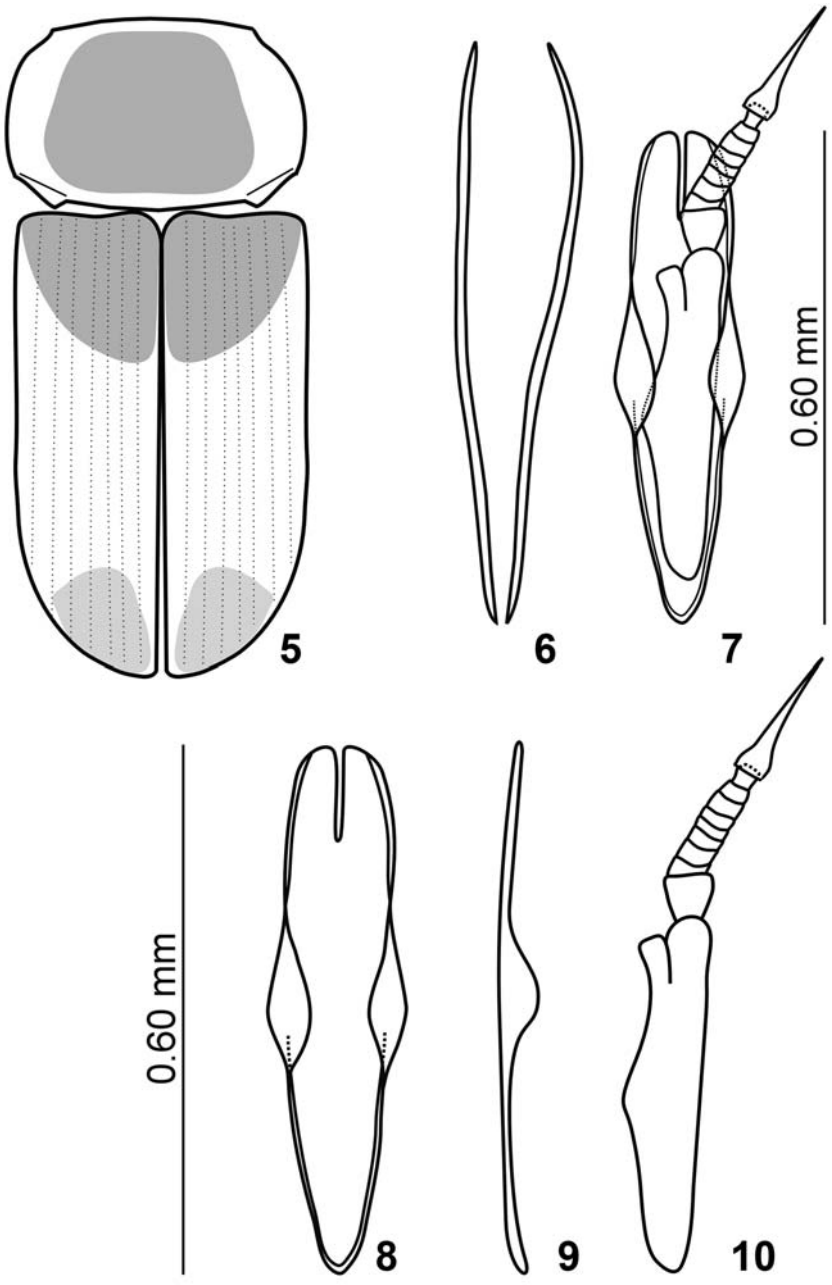
Etymology. Dedicated to Vladimir Gurko (Chernivtsi, Ukraine) who collected the type series.

Augyles hiekei (Mascagni, 1995)

Material examined. Pakistan: 2 spec. (♂♂): "Pakistan, [Khyber Pakhtunkhwa province] NWFP 2005 S Waziristan agenci near Tanai vill 1500–2500m, 2–12.9.V. Gurko leg.".
Indonesia: 1spec: (♂): "E. SUMATRA Riau prov. Bukit Tigapuluh N.P.; 0°50´S 102°26´E; 18.–25.i.2000 J.Bezděk" (NMP).
Thailand: 1 spec. (♂): "Thai[land] 9–14.5.1991 CHIANG DAO 350m 19°22′N 98°57′E David Král lgt." // "Thailand 91 "Thanon Thong Chai" D. Král V. Kubáň" (CSU); 4 spec. "THAI[LAND] 26.IV.–6.V.1991 UMPHANG 500m. 16°04´N 98°53´E Vít Kubáň leg. " (NMBS); 1 spec. Thailand 91 "Thanon Thong Chai" D. Král & V. Kubáň" // "THAI 26.IV.–6.V.1991 UMPHANG 500m. 16°04´N 98°53´E David Král lgt. " (NMBS); 5 spec. "Thailand 91 "Thanon Thong Chai" D.Král & V. Kubáň" // "THAI 26.IV.–6.V.1991 UMPHANG 500m. 16°04´N 98°53´E Vít Kubáň leg." (NMBS); 1 spec. "Thailand 91 "Thanon Thong Chai" D.Král & V. Kubáň" // "THAI 18–24/4.1991 Lansang nat. park 16°48´N 98°57´E 500m D. Král lgt." (NMBS); 2 spec. "Thailand 91 "Thanon Thong Chai" D.Král & V. Kubáň" // "Thai Umphang river 16°07´N 99°00´E 1000m 28/4–6/5.91 lgt. D. Král" (NMBS); 1 spec. "Thailand 91 "Thanon Thong Chai" D.Král & V. Kubáň" // "THAI Chiang Dao 600m 19°24´N 98°55´E 10.–16./5.1991 David Král lgt." (NMBS).



Figs 1–4. Dorsal habitus.1 Syntype *Augyles bellus* (Grouvelle, 1911) in dorsal view; 2 *A. bellus* –Pakistan, NWFP 2005 S Waziristan agenci near Tanai vill. 1500–2500m", dark form; 3 *A. bellus* – Bangladsh, Dhaka, Chowbari Chokdoi (pale form); 4 *Augyles gurkoi* sp. nov, holotype.



Figs 5–10. *Augyles gurkoi* sp. nov, holotype, drawings. 5 dorsal habitus; 6 spiculum gastrale, dorsal view; 7 aedeagus dorsal view; 8 parameres, phallobase and supporting sheath, dorsal view; 9 aedeagus, lateral view; 10 penis, dorsal view.

Distribution. India, Indonesia (Sumatra), Laos, Thailand, Vietnam. First records for Pakistan (Khyber Pakhtunkhwa province), Thailand and Sumatra.

Augyles obliteratus (Kiesenwetter, 1843)

Material examined. Pakistan: 11 spec. (7 ♂♂, 4 ♀♀) "Pakistan [Khyber Pakhtunkhwa province] NWFP, Orakzay ageney 50 km W from Hanhu 28–30.8.2005, 1500m V. Gurko leg."; 1 spec. (♀) "Pakistan Balochistan prov. Suleiman mnts., Zhob vall., h-1700, 08.2005, V. Gurko leg."

Distribution. Distributed in Europe, Afghanistan, Iran, Iraq, Kazakhstan, Mongolia, Russia, Syria, Tajikistan, Turkey, Turkmenistan, United Arab Emirates, Uzbekistan, Yemen. First record for Pakistan (Balochistan and Khyber Pakhtunkhwa province).

Augyles pucholti Skalický, 2001

Material examined. Pakistan: 11 spec. (2 ♂♂, 9 ♀♀) "Pakistan, [Khyber Pakhtunkhwa province] Peshavar Kabul riv. Vall. 1.9.2004, V. Gurko leg."; 2 spec. (♂♂) "Pakistan, [Khyber Pakhtunkhwa province] 80 km E Peshavar, Ind. Riv. Vall. Kabul riv. Vall. 08.05.2005, V. Gurko leg."; 2 spec. (♀♀) "Pakistan, Balochistan prov. Suleiman mnts., Zhob vall., h-1700, 08.2005, V. Gurko leg."; 76 spec. (both sex) "PAKISTAN Sindh prov. Noshehroferoz [Naushehroferoz], 8-V-2013 leg. Zubair Ahmed " (52 spec. FUUAST, 16 spec. NHML, 8 spec CSU).

Distribution. India (Rajasthan and Uttar Pradesh), Nepal, Pakistan (Punjab and Sindh Province). First record for Balochistan and Khyber Pakhtunkhwa province of Pakistan.

Heterocerus fenestratus (Thunberg, 1784)

Material examined. Pakistan: 56 spec. (both sexes): "Pakistan, [Khyber Pakhtunkhwa province] NWFP, Orakzay ageney 50 km W from Hanhu 28–30.8.2005, 1500m V. Gurko leg.".

Distribution. Widely distribution in more states of the Palaearctic, Oriental and Nearctic regions. First record for Pakistan (Khyber Pakhtunkhwa province).

Heterocerus flexuosus Stephens, 1828

Material examined. Pakistan: 2 spec. (♂♂): "Pakistan, [Khyber Pakhtunkhwa province] NWFP, Orakzay ageney 50 km W from Hanhu 28–30.8.2005, 1500m V. Gurko leg."; 1 spec. "PAKISTAN Sindh prov. Thar desert, Milhi 26-VII-2012 leg. Zubair Ahmed".

Distribution. Widespread in many Palaearctic states. From Pakistan known from Sindh province so far. First record for Khyber Pakhtunkhwa province of Pakistan.

Heterocerus lorenzevae Mascagni, 1993

Material examined. Pakistan: 1 spec. (♂) "Pakistan, Balochistan prov. Suleiman mnts., Zhob vall., h-1700, 08.2005, V. Gurko leg."; 7 spec. (6 ♂♂, 1 ♀) "Pakistan, [Khyber Pakhtunkhwa province] Peshavar Kabul riv. Vall. 1.9.2004, V. Gurko leg.".

Distribution. Bangladesh, India (Meghalaya and Rajasthan state), Laos, Myanmar, Nepal, Thailand and Vietnam. In Pakistan is known in Balochistan and Sindh province. First record for Khyber Pakhtunkhwa province of Pakistan.

Heterocerus dubius Fabricius, 1798

Material examined. Pakistan: 3 spec. "PAKISTAN Sindh prov. Noshehroferoz, 8-V-2013 leg. Zubair Ahmed" (2 spec. FUUAST, 1 spec CSU).
Vietnam: 6 spec. "S VIETNAM, 11.25N 107.26E Nam Cat Tien – Nat. Park 24.–27.v.1996 Pacholátko & Dembický leg." (NMBS).

Distribution. China (Hong Kong), India (Tamil Nadu, Odisha, West Bengal), Sri Lanka. First record for Vietnam.

Heterocerus mus Charpentier, 1965

Material examined. Pakistan: 1 spec. (♂) "Pakistan, Balochistan province Zhob valley sand desert 27–31.08.2008, V. Gurko leg."; 24 spec. (8 ♂♂, 16 ♀♀) "Pakistan Balochistan prov. Suleiman mnts., Zhob vall., h-1700, 08.2005, V. Gurko leg."; 208 spec. (both sex) "Pakistan, [Khyber Pakhtunkhwa province] NWFP 2005 S Waziristan agenci near Tanai vill 1500–2500m, 2–12.9.V. Gurko leg."; 9 spec. (7 ♂♂, 2 ♀♀) "Pakistan, [Khyber Pakhtunkhwa province] Peshavar Kabul riv. Vall. 1.9.2004, V. Gurko leg."; 1 spec. (♀) "Pakistan, [Khyber Pakhtunkhwa province] 80 km E Peshavar, Ind. Riv. Vall. Kabul riv. Vall. 08.05.2005, V. Gurko leg."; 52 spec. "PAKISTAN Sindh prov. Noshehroferoz 8-V-2013 leg. Zubair Ahmed" (33 spec. FUUAST, 13 spec. NHML, 6 spec CSU); 3 spec. "PAKISTAN Sindh prov. Thar desert, Milhi 26-VII-2012 leg. Zubair Ahmed" (2 spec. FUUAST, 1 spec CSU).
Jordan: 1 spec. "JO[RDAN] Karak gov., 470m Wadi al-Hasa, shore N30°57´23,0´´ E35°46´12,3´´ Hetzel leg. 08.III.2015" (CSH).
Oman: 5 spec. "N22°30′44.2″ E59°25′17.8″ Oman, Prov. Al-Sharqiyah, SW Sur, Maslaq, Wadi, Sand/agriculture 28.02.2011 37m üNN leg.: Schnitter OM 11 LF" // "collection NATURKUNDE MUSEUM ERFURT" (yellow label) (CSH).

Distribution. Palaearctic part of Africa, Afghanistan, India, Iran, Jordan, Kazakhstan, Kyrgyzstan, Oman, Tajikistan, Turkmenistan, United Arab Emirates, Uzbekistan, Pakistan (Balochistan and Sindh province). First record for Khyber Pakhtunkhwa province of Pakistan, Jordan and Oman.

Heterocerus parallelus Gebler, 1830

Material examined. Pakistan: 9 spec. (2 ♂♂, 7 ♀♀): "Pakistan [Khyber Pakhtunkhwa province] NWFP, Orakzay ageney 50 km W from Hanhu 28–30.8.2005, 1500m V. Gurko leg.".

Distribution. Widely distributed in Europe, Russia, Turkmenistan, Kyrgyzstan, Mongolia, Lebanon, Uzbekistan. First record for Pakistan (Khyber Pakhtunkhwa province).

Heterocerus virgatus Mamitza, 1933

Material examined. Pakistan: 2 spec. (♀♀) "Pakistan, Balochistan province Zhob valley sand desert 27–31.08.2008, V. Gurko leg."; 35 spec. (both sexes) "Pakistan, Balochistan prov. Suleiman mnts., Zhob vall., h-1700, 08.2005, V. Gurko leg."; 24 spec. (8 ♂♂, 16 ♀♀) "Pakistan, [Khyber Pakhtunkhwa province] Peshavar Kabul riv. Vall. 1.9.2004, V. Gurko leg."; 7 spec. (4 ♂♂, 3 ♀♀) "Pakistan, [Khyber Pakhtunkhwa province] 80 km E Peshavar, Ind. Riv. Vall. Kabul riv. Vall. 08.05.2005, V. Gurko leg."; 6 spec. "PAKISTAN Sindh prov. Noshehroferoz 8-V-2013 leg. Zubair Ahmed" (3 spec. FUUAST, 2 spec. NHML, 1 spec CSU).
Vietnam: 13 spec. "VIETNAM: Dong Nai Prov. Vinh Cuu Dist. Tri An Lake 21.viii.2005, blue light at water edge coll. D.J.Mann" // "OUMNH-2006-075 D.J.Mann colln. Vietnam Oxford University Museum of Natural History" (OUMNH); 1 spec. "VIETNAM: Lam Dong Prov. Bao Loe dist., Bao Loc Pass 11°25´30´´ E107°41´17´´, 800m blue light trap next to River coll. D.J.Mann" // "OUMNH-2006-075 D.J.Mann colln. Vietnam Oxford University Museum of Natural History" (OUMNH).

Distribution. Bangladesh, Cambodia, China (Hong Kong, Yunnan), India (Goa, Karnataka, Orrisa, Rajasthan, West Bengal, Uttar Pradesh), Indonesia (Java), Kyrgyzstan, Laos, Myanmar, Nepal, Thailand. In Pakistan it is known from Sindh province. First record for Vietnam, and for Khyber Pakhtunkhwa and Balochistan provinces of Pakistan.

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