

NEW DATA ON DISTRIBUTION OF TWO PALAEARCTIC *LEPTALEUS* LAFERTÉ-SÉNECTÈRE, 1849 (COLEOPTERA: ANTHICIDAE) SPECIES WITH NEW RECORDS AND A CORRECTION

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Abstract

New country and regional records provided for *Leptaleus chaudiroidi* (Kolenati, 1846), morphological variability of this species is discussed. Correction to the general distribution of *L. uralensis* (Pic, 1905) is reported.

Keywords: Anthicinae, Anthicini, faunistic, morphology

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INTRODUCTION

Leptaleus LaFerté-Sénectère, 1849 is a small genus of anthicine Anthicini distributed in the Afrotropical, Palaearctic and Oriental regions (Telnov, unpublished data). In the Palaearctic fauna, *Leptaleus* is represented by 18 species (Telnov 2020), most diverse in the eastern Mediterranean and Central Asia (Telnov 2020). Species composition of *Leptaleus* is poorly known in many countries with few exceptions.

Leptaleus chaudiroidi was erected by Kolenati (1846), originally described in *Anthicus* Paykull, 1798, from an unspecified number of individuals from ‘provinciae Karabagh desertis salinis’ and named for Maximilien, baron de Chaudoir. Chaudoir (1816–1881), born in the Russian Empire in what is now Ukraine, was an aristocrat and entomologist of French origin (Cambefort 2006) who in 1845 was the first entomologist to travel to SW Caucasus and discover many species, especially carabids (Kolenati 1846). *Leptaleus*

chaudoiri is one among a series of ant-like flower beetles species described and reported from Karabakh region (= Artsakh or Lērnayin Garabag in Armenian, Dağlıq Qarabağ in Azerbaijani, Nagorno-Karabakh in Russian) for the first time (see Kolenati 1846 for the list). This species was erected based on the combination of the following features (translated from Latin, adapted by the authors in accordance with contemporary coleopterological terminology): head rufo-piceous with rounded base, convex in dorsal aspect, barely punctate wider than pronotum; pronotum elongate, rounded at lateral margins in anterior, converging in posterior part, with dorsal hump, barely punctate, constricted laterally postmedium, yellowish rufous; elytra parallel-sided, apex rounded, distinctly, roughly punctate on anterior part, nigro-piceous with two pale yellow transverse bands, elytral disc impressed in dorsal aspect in basal part; antennae barely extending towards pronotal base, rufo-fuscous; legs yellow. As of the author (Kolenati 1846), the type series was deposited in the collection of the Zoological Institute (ZIN), St. Petersburg, Russia. The authors failed to allocate the type specimens in ZIN during the present study (A. Kirejtshuk, personal communication).

Leptaleus uralensis (Pic, 1905) was hitherto considered the only *Leptaleus* species yet known from Russia (Chandler et al. 2008, Telnov 2020).

Here we provide new country and regional records for the Palearctic *Leptaleus chaudoiri* from Israel, Jordan, Pakistan (also a first report of the genus for the country), southern part of European Russia (Fore-Caucasus), and Uttarakhand State of India, as well as a correction to the global distribution of *L. uralensis* (Pic, 1905).

MATERIAL AND METHODS

All taxa are listed in alphabetical order since a phylogenetic arrangement is not yet possible. New records are listed chronologically. All label text is reproduced verbatim, with no corrections or additions. Labels (if more than one for the same specimen) are separated by double slash. Data on specimens' depositories are given in square brackets.

Dissected genitals were mounted on microscope slides and fixed in Dimethyl hydantoin formaldehyde (DMHF) to make permanent mounts. Adults were studied using a Leica S6D (Leica Microsystems, Wetzlar, Germany) and Bresser Optik Advance ICD Stereomicroscope Trinokular 10x–160x (Bresser, Rhede, Germany) stereo microscopes. Images of adult and genital organs were made using a Pentax K20D mounted on Nikon Labophot 1 Binocular Microscope with Zeiss Apochromatic 16X objective; for the photo of the habitus, Pentax K20D digital camera placed on a Nikon Labophot 1 Binocular Microscope with Lomo 3.7X lens. The images were subsequently processed with the CombineZP software. Further image manipulations were performed using the GNU Image Manipulation Program (GIMP).

RESULTS

New material examined, *Leptaleus chaudoiri*
6 specimens [private collection A. Degiovanni; Fig. 1]: 'Pakistan: NWFP, S. Waziristan agency near Tanai vill. 28.VII–12.VIII.2005, 1500–2500m. Leg. Gurko'; 1 specimen [Staatliches Museum für Naturkunde Stuttgart, Germany]: 'ISRAEL (North distr.) Upper Galilee N. sea shore of Sea of Galilee Klar Nakhum (Capenaum) ~200 m 32°53.011'N/35°34.707'' E (shore with stones and gravel) 22.IV.2006 D.W. Wrase (4)' // 'LEPTALEUS chaudoiri (Kolen.) det. D. Telnov', 2014; 1 specimen [Daugavpils University Beetle Collection, Daugavpils, Latvia]: 'N INDIA, Uttarakhand, left side of Kosi River, 5 km N Ramnagar, N29°432, E79°140, 7–11.06.2011, A. Anichtchenko & A. Shavrin' // 'LEPTALEUS chaudoiri (Kolen.) det. D. Telnov, 2018'; 2 specimens [one each in the private collections A. Gontarenko & S. Blinsein, label text translated from Russian]: [Russia] 'Krasnodar Krai, Lazarevskoye distr., Soloniki env., leg. A.V. Gontarenko, 2.06.017' // 'under stones near river' // 'Leptaleus chaudoiri Kolenati 1846, S. Blinsein det., 2021'; 5 specimens [3 specimens Naturkundemuseum Erfurt & 2 private collection D. Telnov]: N30°58'25.8'' E 035°38'22.5'' Jordanien, Afra, N at-Tafila, Bachschlucht (hot

springs) 07.05.2010 251m üNN JD 07 leg.: SCHNITTER/SHELLHORN' // 'LEPTALEUS chaudoiri (Kolen.) det. D. Telnov, 2021'; 1 specimen [private collection A. Degiovanni]: 'PAKISTAN: Islamabad sect. 7, 33°43'N 73°03'E, 600 m, 1–15.IX.2012 leg. G. Sabatinelli'.

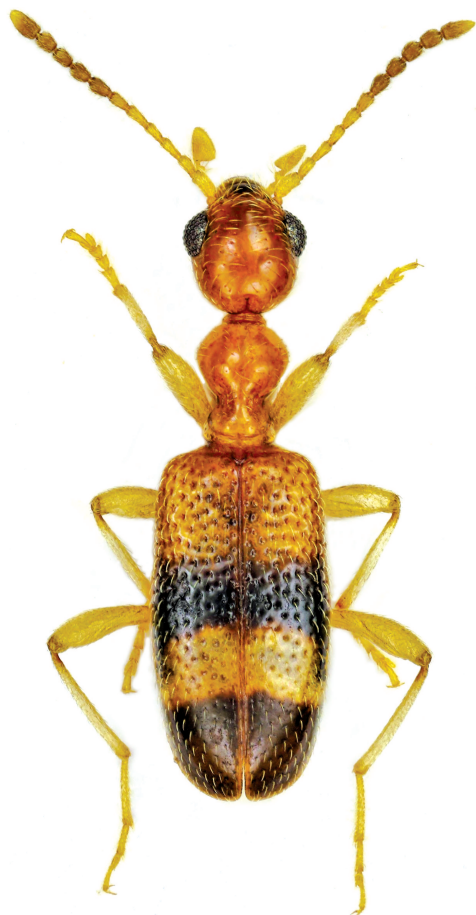


Figure 1. *Leptaleus chaudoiri* (Kolenati, 1846), ♂ specimen from Islamabad, Pakistan.

Male aedeagus of *Leptaleus chaudoiri* (Fig. 2) appears variable both in general shape (apex of apicale slenderer to wider acute; apex of tegmen narrow and elongate to moderately wide) and shape and dimensions of gonopore armature (narrow to occupying nearly whole inner space of apicale; lateral margins of apicale internally without or with distinct bracket-like emargination (Fig. 2C)), maximum width of tegmen at mid-length or closer to its apex. This variability does

not appear randomly in the studied specimens and can be attributed to specific populations. Specimens from the eastern part of the distribution area (N India, Nepal, Pakistan) have maximum width of tegmen across its midlength (Fig. 2D–E), while the specimens from central and western parts of the distribution area have tegmen with maximum width across apical third of its length (Fig. 2A–C). We tentatively attribute all studied specimens to *L. chaudoiri* considering that the specimens from the eastern part of the range may represent a separate taxon. *Leptaleus chaudoiri* varies in external morphology in a somewhat lesser extent: size and density of dorsal punctures on head and elytra, intensity of dorsal colouration, size of pale elytral markings.



Figure 2. *Leptaleus chaudoiri* (Kolenati, 1846), male aedeagus. A – specimen from Cyprus, 'CYPRUS TROODOS Mts. Dhiarizos Riv., on light east Agios Georgios leg. PREISS', 18 VII 99; B – specimen from 'Greece, Rodos, Koljmbia, 18–25.06.2001 Leg. L. Fancello'; C – specimen from Iran, 'IRAN, Gilan Province S Astara, 5 km W Lavandvil: Koteh Komeh, 180 m 38°18'26" N, 048°47'14" E 10.10.2011, leg. Frisch'; D – specimen from Nepal, 'NEPAL, Prov. Bheri 28°38'23" N, 81°17'14" E Chisapani, Karnali-Ufer 17.VI.2005; 180 m leg.: J. Weipert'; E – specimen from Pakistan, Islamabad sect. 7 (see studied material).

Leptaleus uralensis (Pic, 1905) was hitherto considered the only *Leptaleus* species yet known from Russia (Chandler et al. 2008, Telnov 2020). However, as pointed out by Medvedev (1975), this taxon was described from banks of Ural River in “Gurjew”, the Russian Empire, which now is Atyrau in W Kazakhstan. Since Atyrau is located on both the European and Asian banks of River Ural, occurrence of *L. uralensis* in both European and Asian parts of Kazakhstan is expected. There are no published records from Russia exists for *L. uralensis* and it should be deleted from the list of the Russian fauna. Though, considering a relatively short distance from Atyrau to the Russian frontier and presence of similar, suitable habitats both in Kazakhstan and Russia, its occurrence in Russian Federation is not excluded but requires further confirmation.

DISCUSSION

Leptaleus chaudoiri was subsequently reported from the following countries: Afghanistan, Azerbaijan (politically Karabakh, the type locality, also belongs to Azerbaijan), Albania, Bulgaria, Cyprus, Georgia (= Sakartvelo), Greece, India (Sikkim), Iran, Lebanon, Nepal, Syria, Turkmenistan, Turkey, former Yugoslavia (all as in Telnov 2020), Serbia (Uhmman et al. 2005). Telnov & Ghahari (2018) mentioned Mauritania in the general distribution of *L. chaudoiri* followed by Telnov (2020). Though no published record of this species from the African continent exists, but its occurrence in Egypt including Sinai Peninsula is likely. Additional data on the collecting localities of the specimens of *L. chaudoiri* are provided by LaFerté-Sénéctère (1849a, b) based on the material from the collection Chaudoir: Georgia (town of Akhaltsikhe and Samegrelo-Zemo Svaneti (former Mingrelia) Region), “Persian provinces” [of the Russian Empire]. Schneider & Leder (1878) reported *L. chaudoiri* from Central Georgia (Surami) and Богачев (Bogachev 1934) – from saline marshes and sides of saline lakes in Azerbaijan (Putu; Sumquait). All exactly known

localities of this species in Transcaucasia are from up to 100 m elevation but the record from “Karabakh” is likely from higher elevation. Surprisingly, *Leptaleus chaudoiri* has not yet been reported from Armenia, a country adjacent to Karabakh region. The distribution chorotype of this species appears close to the Saharo-Turano-Sindian 5.10 STS type (Vigna Taglianti et al. 1999, Telnov & Ghahari 2018) but also includes Caucasus and Central Asia.

Occurrence of *L. chaudoiri* in Israel, Jordan and Pakistan was expected considering the general distribution of this species. The record from the Black Sea coast north of Sochi in Russian Fore-Caucasus appears, in turn, highly interesting illustrating the presence of a suitable ecological migration corridor for small-sized Coleoptera from arid Transcaucasia towards the precipitation-rich eastern coast of Black Sea along this coast. In Russia, the beetles were sampled at River Tsuskhvandzh [Цусхвандж in Russian transcription] mouth, from under stones at sun-exposed, well-heated sandy-pebble bank at about 3 m above sea level.

Five *Leptaleus* species, namely *L. arabs* (Marseul, 1879), *L. glabellus* (Truqui, 1855), *L. klugii klugii* (LaFerté-Sénéctère, 1849), *L. maximicollis* Pic, 1893, and *L. triguttatus* (LaFerté-Sénéctère, 1849), were hitherto known from Israel (Telnov 2020). *Leptaleus chaudoiri* readily different from them in the combination of the elytral pattern, the slender body, and the shape and structure of the male aedeagus.

Leptaleus glabellus (Truqui, 1855) was hitherto the only species of its genus reported from Jordan (see Telnov 2020 for the general distribution). *Leptaleus chaudoiri* is different in the slenderer body, the dorsally flattened, on basal part strongly punctured elytra, the elongate head with a fine notch at its base.

The genus *Leptaleus* has not yet been recorded for Pakistan and the present record represents both a new genus and species for the country.

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