

## Three new species of *Clivina* LATREILLE, 1802 (Coleoptera: Carabidae: Scaritinae: Clivinini) from Asia

Alexander DOSTAL

### Abstract

Three new species of *Clivina*, belonging to the subgenus *Leucocara* BOUSQUET, 2009, are described: *Clivina (Leucocara) donabaueri* sp.n. from northern India, *Clivina (Leucocara) kirschenhoferi* sp.n. from Afghanistan, India, and Nepal, and *Clivina (Leucocara) legorskyi* sp.n. from northern Thailand and Laos. The *Clivina semicarinata* species group is newly established. It comprises the three new species, *C. semicarinata* PUTZEYS, 1877 from India, *C. hoberlandti* KULT, 1951 from Indonesia (Sumatra) and Thailand (first record), and *C. clypealis* BAEHR, 2008 from Australia. The six species are differentiated in a key.

Key words: Coleoptera, Carabidae, Scaritinae, Clivinini, *Clivina*, *Leucocara*, Afghanistan, India, Thailand, new species, identification key.

### Zusammenfassung

Drei neue Arten aus der *Clivina*-Untergattung *Leucocara* BOUSQUET, 2009 werden beschrieben: *Clivina (Leucocara) donabaueri* sp.n. aus Nordindien, *Clivina (Leucocara) kirschenhoferi* sp.n. aus Afghanistan, Indien und Nepal sowie *Clivina (Leucocara) legorskyi* sp.n. aus Nordthailand und Laos. Die *Clivina semicarinata*-Artengruppe wird neu etabliert; sie umfasst neben den drei neuen Arten auch *C. semicarinata* PUTZEYS, 1877 aus Indien, *C. hoberlandti* KULT, 1951 aus Indonesien (Sumatra) und Thailand (Erstnachweis) sowie *C. clypealis* BAEHR, 2008 aus Australien. Die sechs Arten der Gruppe werden in einem Bestimmungsschlüssel differenziert.

### Introduction

The subgenus *Leucocara* was established by Yves Bousquet in 2009 by separation from *Reichardtula* WHITEHEAD, 1977 (BOUSQUET 2009: 43 ff.) and is characterized and easily distinguishable by the closely-set pores of the anal ventrite and the absence of the spur on the external side of the mesotibia.

*Leucocara* has world-wide distribution and is divided into several species groups: the Nearctic and Neotropical *C. americana* species group, the Palaearctic *C. laevifrons* species group, the Ethiopian *C. natalensis* and *C. rugiceps* species groups (KULT 1959: 176 ff.), and the Oriental *C. tranquebarica* species group (KULT 1951: 17 ff.) including also seven species from the Australian Region, six of them recently described (BAEHR 2008: 44-45).

The species within the *C. tranquebarica* species group are more or less difficult to determine because of a relatively high variability of characters. This is also reflected in the

studies of BALKENOHL (2001: 13-17; 2003: 219-220), where the subdivision of the genus *Clivina* into species groups is omitted and subgenera are not mentioned at all.

However, some species of the former *C. tranquebarica* species group are better defined than others by specific characters, e.g., the microsculptured elytra of *C. balfourbrownnei* KULT, 1951, and *C. opacidermis* BAEHR, 1989, or by shortened facial carinae, which are not developed as a ridge on the anterior half of the frons in *C. semicarinata* PUTZEYS, 1877, *C. hoberlandti* KULT, 1951, and *C. clypealis* BAEHR, 2008. The three new species described in this study are closely related to the latter three, and the author considers them as a group distinct from the *C. tranquebarica* species group in a strict sense. *Clivina semicarinata* as the earliest described species is selected as the name giver for the *C. semicarinata* species group.

There are no further details available for the bionomy or the collecting circumstances of the new species. Most likely the individuals of the new species were captured at light, as macropterous *Clivina* species are often found under such circumstances, sometimes in huge quantities, especially during night at temperatures above 25°C. They usually live near rivers, lakes or other wet places like swamps.

### Material and methods

Preserved specimens from the authors collection are used, which are mounted on commercially available paper cards. I strongly recommend cutting away the right front corner of the mounting card or to use triangular ones, for more convenient investigation of the lower surface of the pronotum; and to remove the abdomen and to mount it, ventral side up, beside the specimen because the abdomen carries important distinguishing characters. Male and female genital organs were dissected and also glued to the cards beneath the specimens from which they were removed.

The species descriptions are based on the most distinguishing external characters as defined by BAEHR (2008: 9). Label data for examined material are given in full length, with exact label wording, except for the date format, which is transcribed to the format “dd.mm.yyyy”.

Measurements were taken with a calibrated Leica ocular scale at absolute magnifications of 39.1× for pronotal length and width, and 19.4× for all other measurements. L = total body length in mm, from apex of mandible to apex of elytra. W = maximum body width in mm (situated at apical third or near mid-length of elytra). PL = maximum pronotum length, measured along median line from base of anterior bristle fringe to base of posterior one. PW = maximum pronotum width, measured normal to midline (situated in most cases near posterior angles). P-LW = length-width-index of pronotum (length : width); if the value is smaller than 1, it means that the pronotum is wider than long, for values above 1: the pronotum is longer than wide. F-LW = length-width-index of both elytra, same as previous. DL, Dr = number of dorsal setiferous punctures in third interval of left (DL) and right side (Dr), respectively; including the preapical puncture.

### Taxonomy

#### Key to the species groups of the subgenus *Leucocara* BOUSQUET, 2009

- 1 Anal ventrite with one pair of setiferous pores (very rarely and asymmetrically with additional setae, but without additional pores). Africa. .... ***C. rugiceps* group**
- Anal ventrite with two pairs of setiferous pores. .... 2

- 2 Species from the Americas. .... ***C. americana* group**
- Species from Africa, Europe, Asia, and Australia. .... 3
- 3 Species from Africa, southeastern Europe, and western Asia. ....  
..... ***C. natalensis* group and *C. laevifrons* group**
- Species from the Oriental and Australian Regions. .... 4
- 4 Head dorsally with facial carinae not developed as a ridge in anterior half and hardly  
extending forward beyond mid-eye level. Pronotum convex to somewhat flattened,  
nearly smooth. Front margin of clypeus concave, median part much more extended  
in front than its lateral wings. .... ***C. semicarinata* group**
- Head dorsally with facial carinae developed as a ridge in anterior half almost to cly-  
peal suture. Pronotum distinctly convex, with fine but distinct transversal wrinkles  
and often also with a group of punctures. Front margin of clypeus convex or straight,  
generally on same level in front as its lateral wings. .... ***C. tranquebarica* group**

#### **The *Clivina semicarinata* species group**

**Diagnosis:** Labrum with 7 setae. Facial carina on dorsal surface of head shortened, extended anteriorly to about mid-eye level. Supraantennal plates not longer than eye length. Frons not deeply concave. Anterior margin of the middle part of clypeus concave, distinctly produced in comparison to its lateral wings, and clearly separated from them. Median tooth of mentum about as long as lateral parts. Antennomeres 4 - 10 with continuous dense pubescence, without smooth, less pubescent area in the middle. Impunctate proepisternum without stridulation organ. Elytral striae 1 - 3 free at base and not limited by basal border. Mesotibia without distinct preterminal spur at its outer edge. Anal ventrite (sternum VII) at each lateral margin with two setae in close proximity.

The *Clivina semicarinata* species group consists of six species known from the Oriental, Palearctic, and Australian region.

#### **Key to species of the *C. semicarinata* species group**

- 1 Elytral intervals smooth and shiny, with traces of microsculpture at base, humeri, intervals 8, and extreme apex of elytra. Pronotum distinctly convex. .... 2
- Elytral intervals glossy, but entirely microsculptured. Pronotum flatter. .... 4
- 2 Antennomeres 6 - 10 moniliform, nearly as long as wide (Fig. 7). Anterior margin of labrum slightly convex. Apex of median lobe of aedeagus more triangular (Fig. 12); length 6.20 - 6.68 mm. Northern Thailand. .... ***C. legorskyi* sp.n.**
- Antennomeres 6 - 10 distinctly longer than wide (Fig. 8). Anterior margin of labrum triangularly produced. .... 3
- 3 Abdominal sterna smooth and glossy, with very fine microreticulation, without punctures at sides. Neck slightly constricted. Apex of median lobe of aedeagus more lobi-form (Fig. 16); length 6.83 - 7.34 mm. Eastern Afghanistan. ***C. kirschenhoferi* sp.n.**
- Abdominal sterna smooth and glossy, with very fine microreticulation, and distinct fine punctures at side. Neck distinctly constricted. Length 7.34 mm. Northern India (Uttar Pradesh). .... ***C. donabaueri* sp.n.**
- 4 Pronotum elongate, slightly longer than wide and depressed, on disc with scattered, coarse punctures. Abdominal sterna at sides with dense, somewhat rugose puncturation. Size large, body length 6.3 mm. Australia. (After BAEHR 2008: 44 - 45.) ....  
..... ***C. clypealis* BAEHR, 2008**

- Pronotum about as long as wide or distinctly wider than long, and slightly convex, smooth, without punctures on disc. Abdominal sterna at sides without dense puncturation, at most with singular punctures, with or without wrinkles. Length under 6.3 mm. Oriental species. .... 5
- 5 Pronotum about as long as wide. Elytra narrower, sides more parallel; elytral striae finely punctate; intervals flat. Antennomeres rather moniliform. Abdominal sterna wrinkled at sides, at most with singular punctures. Anal sternum grossly wrinkled, without punctures. Length 5.7 mm. India. .... ***C. semicarinata* PUTZEYS, 1877**
- Pronotum distinctly wider than long. Elytra wider, sides more rounded; elytral striae coarsely punctate, intervals convex. Antennomeres longer than wide. Abdominal sterna at most with very fine traces of wrinkles and singular punctures at sides. Anal sternum without wrinkles. Length 6.0 - 6.1 mm. Indonesia (Sumatra), Thailand. .... ***C. hoberlandti* KULT, 1951**

***Clivina (Leucocara) legorskyi* sp.n. (Figs. 1, 4, 7, 9, 12 - 15, 20, 21)**

**Material examined:** Holotype (male): Thai, Nakhon Thai, 20.05.1993, leg. Pacholatko & Dembicky leg., coll. Dostal (Vienna). Paratypes: Thailand: 2 females, same data as holotype, coll. Dostal (Vienna); 2 females, NO-Thailand, Nan-Pha, 11.-16.05.1993, leg. Pacholatko, in coll. Dostal (Vienna); 1 male, NW-Thailand, Chom Thong, 24.-27.04.1991, J. Horak leg., in coll. Dostal (Vienna); 2 ex., Thailand, Nan Prov., Ban Huay Kon env., 27.05.-10.06.2002, P. Průdek & M. Obořil leg., coll. Bulirsch (Prague); 14 ex., Thailand, Nan Prov., Ban Bon Khua env., 13.-26.05.2002, P. Průdek & M. Obořil leg., coll. Bulirsch (Prague); 16 ex., Thailand N, Tha Ton env., 60 km W of Chiang Rai, 28.-30.10.2003, O. Šafránek leg., coll. Bulirsch (Prague); Laos: 6 males, 19 ex., Laos centr., Khammouan prov., 04.-30.11.2000, Ban Khoun Ngeun env., N 18°07', E 104°29', alt. 250 m, E. Jendek & P. Pacholátko leg., coll. Bulirsch (Prague); 12 ex., Laos, Borikhan prov., Muang Pakxan, 16.-20.05.2003, O. Šafránek leg., coll. Bulirsch (Prague); 2 ex., N Laos, Viang Chan pr., Vangviang, N from Vientiane, 14.-16.05.1997, leg. S Becvar j. & se., coll. Bulirsch (Prague); 1 female, Laos P.D.R., Vangvieng, 30.04.1994, K Miura leg., coll. Bulirsch (Prague).

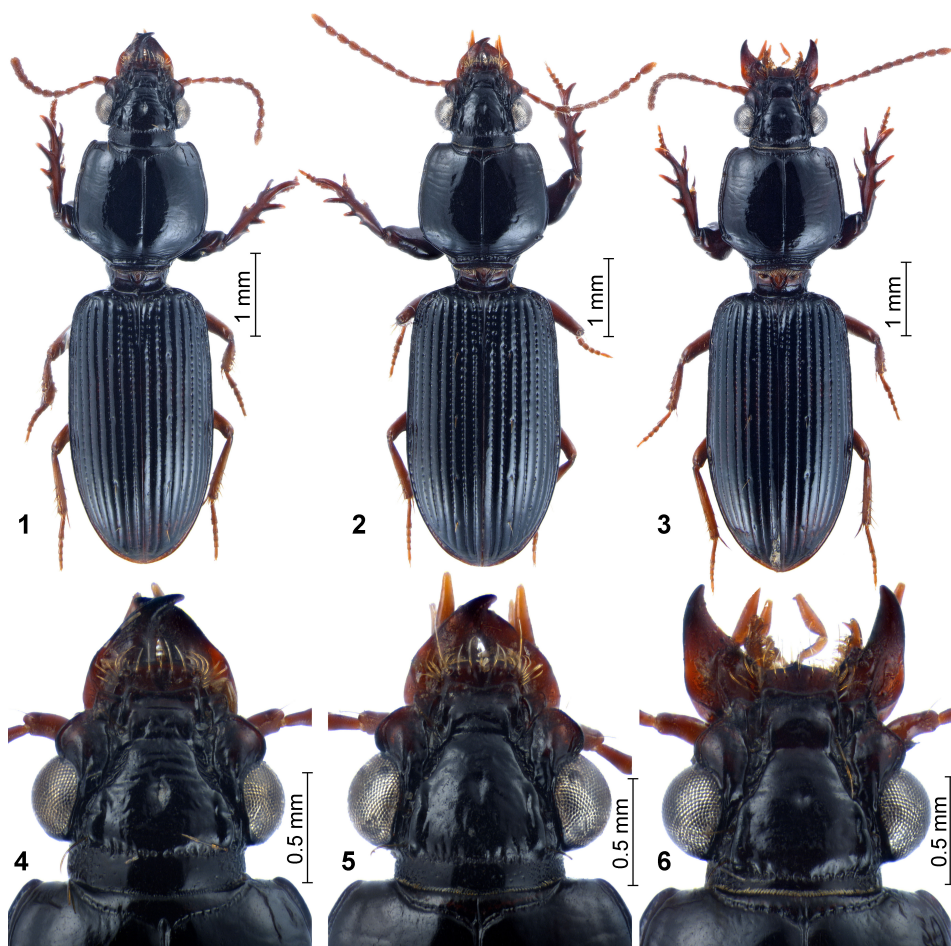
**Recognition:** A typical species of *Leucocara*, with antennomeres moniliform, facial carina of frons not developed as a ridge in anterior half, elytra smooth and glossy, without any traces of microsculpture.

**Description:** Measurements (n = 6): L = 6.20 - 6.68 mm (holotype 6.43 mm), W = 1.68 - 1.79 mm (holotype 1.73 mm); PL = 1.40 - 1.51 mm (holotype 1.51 mm), PW = 1.55 - 1.66 mm (holotype 1.66 mm).

**Color:** Unicolorous piceous to black. Annexes lighter, reddish-brown; anterior legs somewhat darker, especially profemora.

**Microsculpture** smooth and glossy. Head and pronotum with extremely fine, microscopic puncturation. Pronotum at base with fine, sometimes barely visible, more or less isodiametric microsculpture. Elytra with traces of such microsculpture at base, humeri, interval 8, and at extreme apex, but still glossy.

**Head** (Fig. 4): Antennomeres 6 to 10 moniliform, nearly as long as wide (Fig. 7). Mandibles triangular; left mandible broader than right one; inner edge straight, apex acute, shortly bent inwards; both mandibles in basal part with distinct ridge ending at mid-length; outer border of mandible basally strongly bent inwards, outside of this with a short, dilated plate. Anterior margin of labrum slightly convex. Middle part of clypeus more produced than lateral wings; anterior margin somewhat upturned and slightly concave, anteriorly and laterally slightly marginate; wings not marginate, triangular; in



Figs. 1 - 6: (1 - 3) Habitus, dorsal aspect, of holotypes of (1) *C. legorskyi* sp.n., (2) *C. kirschenhoferi* sp.n., and (3) *C. donabaueri* sp.n. (4 - 6) Head and anterior portion of pronotum, dorsal aspect, of holotypes of (4) *C. legorskyi* sp.n., (5) *C. kirschenhoferi* sp.n., (6) *C. donabaueri* sp.n.

middle with transversal torus in front of border to frons; divided from frons by transverse furrow; upper surface of clypeus glossy, without microsculpture, except for microscopic, fine punctures. Supraantennal plates convex and finely bordered, about as long as wide. Longitudinal sulci broad, reaching from hind-eye-level to anterior border of clypeal wings, with oblique ridge beginning at clypeo-frontal suture directed laterally and backwards to eye; surface finely wrinkled, bearing one pair of setae at posterior part of clypeus. Frons glossy, somewhat uneven, sometimes with a few low wrinkles, with distinct central foveola, above supraorbital setae with broad ridge reaching to mid-eye level. Neck slightly constricted, with fine puncturation uninterrupted at middle; at sides behind eye densely, grossly punctured.

Lower surface of head (Fig. 9): Submentum quadrisetose. Apex of median tooth of mentum triangular, its sides more or less parallel, slightly constricted to base; at base with one

pair of setae; sides of mentum wings distinctly constricted anteriorly, their anterior margin strongly convex, continuously rounded with side margin, without antero-lateral denticle; without oblique ridge, but with distinct prebasal torus; basal suture with deep, wide paramedian transverso-oval fovea on each side; mentum wings without border, except on inner side next to median tooth, their surface glossy, with distinct microreticulation; base of mentum bisetose. Glossa truncated at apex, bisetose. Penultimate labial palpomere bisetose at inner edge; last labial palpomere straight on outer side, strongly convex and constricted to base on inner side, widest before middle. Last maxillary palpomere straight on outer side, inner side convex and constricted to base, widest before middle.

Pronotum convex, P-LW = 0.87 - 0.94 (n = 6; holotype 0.91); surface glossy, without microreticulation, except for some traces around postangular setae; some transverse striae in middle of disc, above base with distinct transversal wrinkles; anterior angle barely produced forward; posterior angle with sharp, small denticle, breaking through outline of pronotum; lateral channel broad, about twice as wide as basal channel between posterior angle and peduncle; basal channel above peduncle as wide as lateral one; anterior transversal sulcus and median line both well impressed; anterior sulcus punctured, short, triangular, joining anterior edge at about beginning of lateral fourth. Prosternum smooth and glossy, with traces of border before procoxa, with deep and punctured transversal furrow along anterior margin. Proepisternum glossy, with very fine transversal wrinkles, without microreticulation.

Elytra: E-LW = 1.94 - 2.00 (n = 6; holotype 1.97); DI = 4, Dr = 4; subparallel, slightly convex at sides; disc slightly convex, glossy, smooth, without microreticulation except traces of microsculpture at base, humeri, interval 8, and extreme apex of elytra. Elytral striae distinctly engraved from base to apex, with gross punctures at base which become finer towards apex; intervals 7 and 8 narrowed at base and elevated to keels for very short distance; striae 1 - 3 free at base; scutellar striae present, joining scutellar pore inserted at base of a small tubercle; two further tubercles at base in middle of intervals 3 and 4; intervals slightly convex.

Legs: Protibia with four teeth, proximal one very small, triangular; upper surface without sulcus. Mesotibia without distal spur on upper edge.

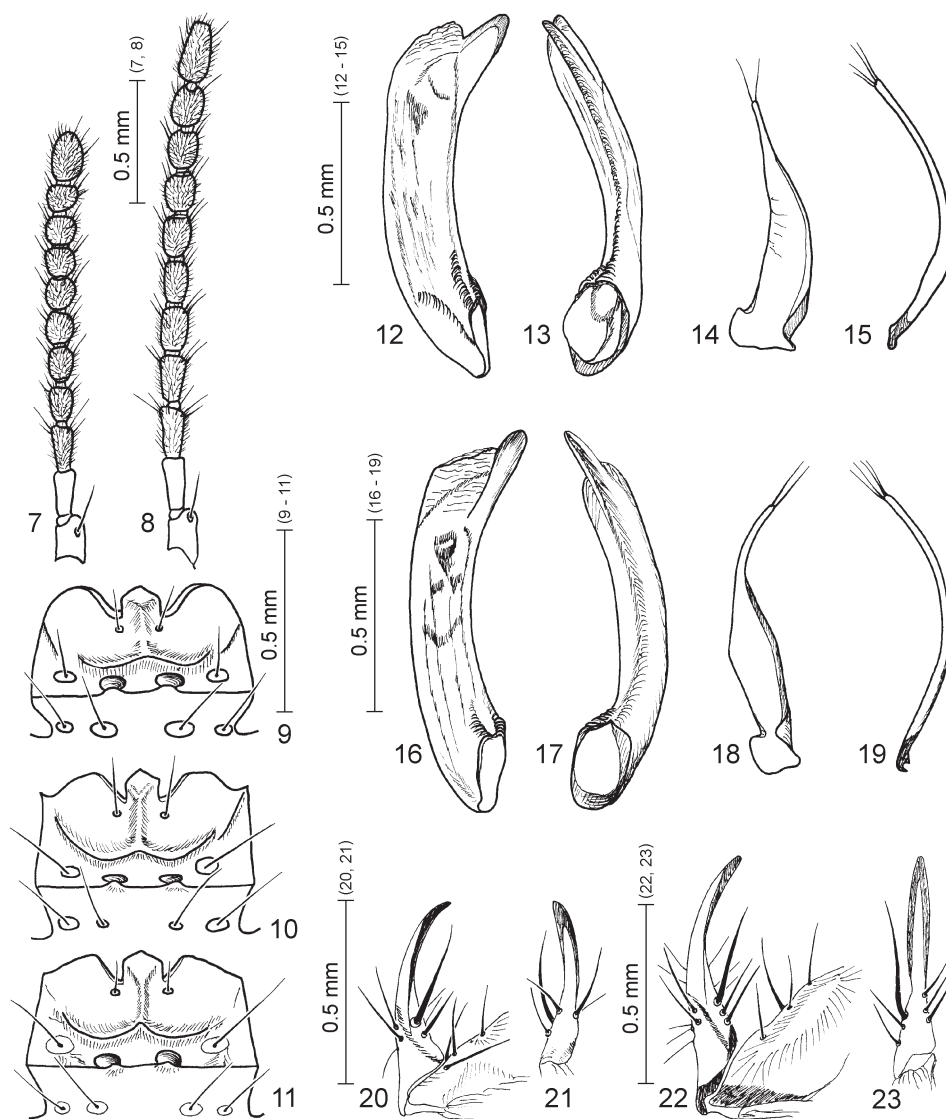
Abdominal sterna IV - VI finely, transversally microreticulate, more isodiametrically at sides; sternum VII completely isodiametrically microsculptured, each side with two marginal setae in both sexes, closely set together, without punctures at side.

Male genitalia: Apex of median lobe (Figs. 12, 13) flattened, lobiform, slightly triangular, top rounded. Parameres (Figs. 14, 15) long and slender, left one about 4× as broad as right one; left one with two setae at apex, right one with four.

Female genitalia (Figs. 20, 21): Stylus 2 tall, slender, slightly bent inwards, blade-like; apex acute, laterally with one large seta and two smaller ones, ventrally with 5 - 6 smaller setae, no distinct suture to stylomere 1, the latter with two apical and one dorsal setae.

Geographical distribution: Northern Thailand, northern and central Laos.

Specific epithet: Latinized noun, genitive case, an eponym based on the surname of my colleague and friend Franz Johann Legorsky, in honor of his 90<sup>th</sup> birthday.



Figs. 7 - 23: Morphological details of new *Clivina* species (drawn from holotypes, except 20 and 21 from paratype). (7, 8) Antenna, dorsal aspect, of (7) *C. legorskyi* sp.n. and (8) *C. kirschenhoferi* sp.n. (9 - 11) Mentum and submentum, ventral aspect, of (9) *C. legorskyi* sp.n., (10) *C. kirschenhoferi* sp.n., (11) *C. donabaueri* sp.n. (12 - 19) Male genitalia of (12 - 15) *C. legorskyi* sp.n. and (16 - 19) *C. kirschenhoferi* sp.n.: (12, 16) Median lobe of aedeagus, lateral aspect; (13, 17) same, ventral aspect; (14, 18) left paramere, ventral aspect; (15, 19) right paramere, ventral aspect. (20 - 23) Right stylomeres of ovipositor of (20, 21) *C. legorskyi* sp.n. and (22, 23) *C. donabaueri* sp.n., in lateral and ventral aspect, respectively.

***Clivina (Leucocara) kirschenhoferi* sp.n.** (Figs. 2, 5, 8, 10, 16 - 19)

**Material examined:** Holotype (male): O-Afghanistan, Sarobi, am Kabulfluß, 12.06.1952, J. Klapperich, coll. Dostal (Vienna). Paratypes: India: 1 female, India, Maharashtra; ca 15km, E of Savantvadi, riverside, 15°55'N; 75°53'E; alt. ca 40m, 22.05.2006, Z. Kejval lgt., coll. Bulirsch (Prague); 1 male, 1 female, NE India, Assam, Bhalukpong, 26.05.-03.06.2006, 27°02' N, 92°35' E, 150 m, P. Pacholátko leg., coll. Bulirsch (Prague); Nepal: 1 female, C Nepal, Chitwan (Roy. Nat. Park), Sauraha vill., 166m, 27.35 N, 84.30 E, 21.-27.07.2000, coll. Bulirsch (Prague).

**Recognition:** A typical species of *Leucocara*, with antennomeres distinctly longer than wide, facial carina of frons not developed as a ridge in anterior half, elytra smooth and glossy, with a few traces of microsculpture, and apex of aedeagus lobiform.

**Description:** Measurements: (n = 2; smaller values = holotype): L = 6.83 - 7.18 mm, W = 1.99 - 2.03 mm; PL = 1.59 - 1.65 mm, PW = 1.74 - 1.81 mm.

**Color:** Unicolorous black; annexes lighter, reddish-brown; anterior legs somewhat darker, especially profemora.

Microsculpture smooth and glossy. Head and pronotum with extremely fine, microscopic puncturation. Pronotum at base with fine, sometimes barely visible, more or less isodiametric microsculpture, also elytra at base, humeri, and interval 8, but still glossy.

**Head** (Fig. 5): Antennomeres 6 - 10 distinctly longer than wide (Fig. 8). Mandibles triangular; left mandible broader than right one, its inner edge straight, apex acute, shortly bent inwards; both mandibles in basal part with distinct ridge ending at mid-length of mandibles; its outer border basally strongly bent inwards, outside of this with short, dilated plate. Anterior margin of labrum triangularly produced. Middle part of clypeus more produced than its lateral wings, anterior margin markedly concave, anteriorly and laterally slightly bordered; wings unbordered, triangular, in middle with slight, transversal torus before border to frons, divided from frons by transverse furrow; upper surface of clypeus glossy, without microsculpture. Supraantennal plates convex and finely bordered, as long as wide. Longitudinal sulci broad, reaching from hind-eye-level to anterior border of clypeal wings, with oblique ridge beginning at clypeo-frontal suture directed laterally and backwards to eye; surface finely wrinkled, bearing one pair of setae at posterior part of clypeus. Frons glossy, somewhat uneven, but without wrinkles, with distinct central foveola, above supraorbital setae with broad ridge, reaching to mid-eye level. Neck slightly constricted, with fine puncturation uninterrupted at middle; at sides behind eye densely, more finely punctured.

**Lower surface of head** (Fig. 10): Submentum quadrisetose. Apex of median tooth of mentum triangular, sides more or less parallel, slightly constricted to base, at base with one pair of setae; sides of mentum wings more or less parallel, slightly constricted anteriorly, their anterior margin strongly convex, antero-laterally with distinct, short, and very acute denticle; with oblique ridge beginning at denticle passing inwards and posteriorly, joining other side shortly before base, basal suture with deep paramedian transversal, narrow fovea on each side; mentum wings without border, except on inner side next to median tooth, surface glossy with distinct microreticulation; base of mentum bisetose. Glossa truncated at apex, bisetose. Penultimate labial palpomere bisetose at inner edge, last labial palpomere straight on outer side, strongly convex and constricted to base on inner side, widest before middle. Last maxillary palpomere straight on outer side, inner side convex and constricted to base, widest before middle.

Pronotum convex, P-LW = 0.91 (n = 2); surface glossy, without microreticulation except some traces around postangular seta, some transverse striae in middle of disc, above base with distinct transversal wrinkles; anterior angle barely produced forward; posterior angle with sharp, small denticle, breaking through outline of pronotum; lateral channel broad, about twice as wide as basal channel between posterior angle and peduncle; basal channel above peduncle as wide as lateral one; anterior transversal sulcus and median line both well impressed, but anterior sulcus somewhat deeper and punctured; anterior sulcus short, sinuate, joining anterior edge at about beginning of lateral fourth. Prosternum smooth and glossy, with traces of border before procoxa, with deep and punctured transversal furrow along anterior margin. Proepisternum glossy, with fine transversal wrinkles, with very fine traces of microreticulation along border to epipleura.

Elytra: E-LW = 1.89 - 1.92 (n = 2; holotype 1.92); DI = 4, Dr = 4; subparallel, slightly convex at sides; disc slightly convex, glossy, smooth, without microreticulation except traces of microsculpture at base, humeri, interval 8, and extreme apex of elytra; elytral striae distinctly engraved from base to apex, with gross punctures at base which become finer towards apex; intervals 7 and 8 narrowed at base and elevated to keels for a very short distance; striae 1 - 3 free at base; scutellar striae present, joining scutellar pore inserted at base of a small tubercle; two further tubercles at base in middle of intervals 3 and 4; intervals slightly convex.

Legs: Protibia with four teeth, proximal one very small, triangular, upper surface without sulcus. Mesotibia without distal spur on upper edge.

Abdominal sterna III - VII without punctures at side; sterna IV - VI finely transversally microreticulate, more isodiametrically at sides; sternum VII completely isodiametrically microsculptured, with two pairs of marginal setae, in both sexes closely set together, without punctures at side.

Male genitalia: Apex of median lobe (Figs. 16, 17) flattened, lobiform, slightly triangular, top rounded. Parameres (Figs. 18, 19) long and slender, left one about 4× as broad as right one; left paramere with one seta at apex, right one with two.

Female genitalia: Not examined.

Geographical distribution: Eastern Afghanistan, India, Nepal.

Specific epithet: Latinized noun, genitive case, an eponym based on the surname of my colleague and friend, the well-known specialist for Carabidae, Erich Kirschenhofer.

### ***Clivina (Leucocara) donabaueri* sp.n.** (Figs. 3, 6, 11, 22, 23)

Material examined: Holotype (female): India bor., Uttar Pradesh bor., Haridwar – Chila, 300m, 05.-14.08.1994, lgt. M. Valenta (coll. Dostal, Vienna).

Recognition: A typical species of *Leucocara*, with antennomeres distinctly longer than wide, facial carina of frons not developed as a ridge in anterior half, elytra smooth and glossy, with few traces of microsculpture, and abdominal sterna with punctures at sides.

Description: Measurements (holotype): L = 7.34 mm, W = 2.04 mm, PL = 1.66 mm, PW = 1.81 mm.

Color: Unicolorous piceous to black. Annexes lighter, reddish-brown; anterior legs somewhat darker, especially profemora.

Microsculpture smooth and glossy. Head and pronotum with extremely fine, microscopic puncturation. Pronotum at base with fine, sometimes barely visible, more or less isodiametric microsculpture, also elytra at extreme apex, at base, humeri, interval 8, and interval 7 in humeral fourth, but still glossy.

Head (Fig. 6): Antennomeres 6 - 10 distinctly longer than wide (as in Fig. 8). Mandibles triangular; left mandible broader than right one, its inner edge straight, apex acute, shortly bent inwards; both mandibles in basal part with distinct ridge ending at mid-length; outer border basally strongly bent inwards, outside of this with short, dilated plate. Anterior margin of labrum triangularly produced. Middle part of clypeus more produced than lateral wings, anterior margin markedly concave, anteriorly and laterally with traces of a border; wings unbordered, triangular, in middle with slight, transversal, anteriorly convex torus before border to frons, separated from frons by transverse furrow; upper surface of clypeus glossy, without microsculpture. Supraantennal plates convex and finely bordered, as long as wide. Longitudinal sulci broad, reaching from hind-eye-level to anterior border of clypeal wings, with oblique wrinkles on surface bearing one pair of setae at posterior part. Frons smooth and glossy, with distinct central foveola, above supraorbital setae with broad ridge, reaching to mid-eye level. Neck distinctly constricted, with distinct puncturation uninterrupted at middle; at sides behind eye densely punctured.

Lower surface of head (Fig. 11): Submentum quadrisetose. Apex of median tooth of mentum triangular, sides more or less parallel, slightly constricted to base, at base with one pair of setae; sides of mentum wings distinctly constricted anteriorly, anterior margin of mentum wings convex, antero-laterally angulate, with oblique ridge beginning at angle passing inwards and posteriorly, joining other side shortly before base; basal suture with deep paramedian, transversal fovea on each side; mentum wings without border, except on inner side next to median tooth, surface glossy with distinct microreticulation; base of mentum bisetose. Glossa truncated at apex, bisetose. Penultimate labial palpomere bisetose at inner edge, last labial palpomere straight on outer side, strongly convex and constricted to base on inner side, widest before middle. Last maxillary palpomere straight on outer side, inner side convex and constricted to base, widest before middle.

Pronotum convex,  $E-LW = 0.92$  (holotype); surface glossy, without microreticulation except some traces around postangular setae, some slight, transverse striae in middle of disc, above base with distinct transversal wrinkles; anterior angle barely produced forward; posterior angle with sharp, small denticle, breaking through outline of pronotum; lateral channel broad, about twice as wide as between posterior angle and peduncle; basal channel above peduncle as wide as lateral one; anterior transversal sulcus and median line both well impressed, but anterior sulcus somewhat deeper and punctured; anterior sulcus short, sinuate, joining anterior edge at about beginning of lateral fourth. Prosternum smooth and glossy, with traces of border before procoxa, with punctured transversal furrow along anterior margin. Proepisternum glossy, with fine transversal wrinkles.

Elytra:  $E-LW = 1.90$  (holotype);  $DI = 4$ ,  $Dr = 4$ ; subparallel, slightly convex at sides; disc slightly convex, glossy, smooth, without microreticulation except traces of microsculpture at base, humeri, interval 8, and extreme apex of elytra; elytral striae distinctly engraved from base to apex, with gross punctures at base which become finer towards apex; intervals 7 and 8 narrowed at base and elevated to keels for a very short distance, striae 1 - 3 free at base, scutellar striae present, joining scutellar pore inserted at base of a small tubercle, two further tubercles at base in middle of intervals 3 and 4; intervals slightly convex.

Legs: Protibia with four teeth, proximal one very small, triangular, upper surface without sulcus. Mesotibia without a distal spur on upper edge.

Abdominal sterna III -VII with a group of fine, but distinct punctures at sides. Sterna IV to VI finely transversally microreticulate, more isodiametrically at sides. Sternum VII completely isodiametrically microsculptured, with two pairs of marginal setae closely set together, without punctures at side.

Male genitalia: Unknown.

Female genitalia (Figs. 22, 23): Stylus 2 tall, slender, distinctly bent inwards, blade-like, apex acute, laterally with one large seta and two smaller ones, ventrally with five smaller setae, no distinct suture to stylomere 1, the latter with two apical and three dorsal setae.

Geographical distribution: Northern India (Uttar Pradesh).

Specific epithet: Latinized noun, genitive case, an eponym based on the surname of my colleague and friend, the well-known specialist for Carabidae, DI Martin Donabauer.

### ***Clivina (Leucocara) semicarinata* PUTZEYS, 1877**

Material examined: 1 ex., India, Calcutta, Compared with type, K. Kult 1946, semicarinata Putz. det. Kult 1946, coll. Dostal (Vienna).

### ***Clivina (Leucocara) hoberlandti* KULT, 1951**

Material examined: Holotype, sex unknown (genitalia missing), labels: yellowed paper, printed in black: "Sumatra, Manna, 1901, M. Knappert.", dtto.: "Dr. H. J. Veth", dtto.: "Ex. Mus. Leiden", dtto.: "coll. Bänninger", dtto., with black margin: "semicarinata Putz. (handwritten), det. H. E. Andrewes. (printed)", red paper, printed in black with black margin: "Type", red paper: "Holotypus (printed) *Clivina hoberlandti* Kult, 1959 (handwritten), det. Dr. Alex. Dostal 1993 (printed)", coll. Dostal (Vienna). Additional material: 1 male, Thailand, Pai City, 29.04.1993, Pacholatko & Dembicky leg., coll. Dostal (Vienna); 1 female, Thailand, Namuang, 21.-26.05.1993, Pacholatko & Dembicky leg., coll. Dostal (Vienna).

Geographical distribution: The species has been described from Sumatra in Indonesia and is here recorded from Thailand for the first time.

### **Acknowledgements**

I am very grateful to Dr. Martin Baehr (Munich), Petr Bulirsch (Prague), Dipl.Ing. Martin Donabauer (Vienna), and Dr. Herbert Zettel (Vienna) for reviewing the manuscript and to Harald Bruckner (Vienna) for taking the photographs.

### **References**

- BAEHR M., 2008: The Australian Clivinini 1. The genera *Ancus* PUTZEYS, *Aspidoglossa* PUTZEYS, *Clivinarchus* SLOANE, *Platysphyrus* SLOANE, *Pseudoclivina* KULT, *Rhysocara* SLOANE, *Syleter* ANDREWES, the subgenera *Paraclivina* KULT, *Semiclivina* KULT, and the *atrata*-, *biplagiata*-, *brevicornis*-, *coronata*-, *coryzoides*-, *cribrosa*-, *debilis*-, *denticollis*-, *grandiceps*-, *incerta*-, *lobata*-, *obliquata*-, *obsoleta*-, *orbitalis*-, *planiceps*-, *sulcaticeps*-, *tranquebarica*-, and *wurargae*-groups of the genus *Clivina* LATREILLE. With a note on a record of the genus *Parathlibops* BASILEWSKY (Scapterini) (Carabidae, Scaritinae). – *Coleoptera* 12: 1-220.

- BALKENOHL M., 2001: Key and catalogue of the tribe Clivinini from the Oriental realm, with revisions of the genera *Thliboclivina* KULT and *Trilophidius* JEANNEL (Insecta, Coleoptera, Carabidae, Scarititae). – Pensoft Publishers, Sofia, 83 pp.
- BALKENOHL M., 2003: Subfamily Scaritinae BONELLI, 1810. In: LÖBL I. & SMETANA A. (eds.): Catalogue of Palaearctic Coleoptera, Volume 1, Archostemata – Myxophaga – Adephaga. – Apollo Books, Stenstrup, pp. 219-234.
- BOUSQUET Y., 2009: Rediscovery of *Clivina morio* DEJEAN with the description of *Leucocara*, a new subgenus of *Clivina* LATREILLE (Coleoptera, Carabidae, Clivinini). – ZooKeys 25: 37-48.
- KULT K., 1951: Revision of the genus *Clivina*, LATR., from the Oriental region. Revise rodu *Clivina* LATR. z orientální oblasti (Col. Carabidae). – Acta Societatis Entomologicae Cechoslovakiae (Casopis Čsl. Společnosti Entomologické) 48(1): 16-32.
- KULT K., 1959: Revision of the African species of the old genus *Clivina* LATR. (Col. Carabidae). – Revue de zoologie et de botanique africaines 60(1-2): 172-225.
- WHITEHEAD D.R., 1977: 17. *Clivina* LATREILLE, 1802. In: REICHARDT H. (ed.): A synopsis of the genera of Neotropical Carabidae (Insecta: Coleoptera). – Quaestiones Entomologicae 13: 346-493 (p. 391).
- Author's address: Dr. Alexander DOSTAL, Ducheckgasse 39, 1220 Vienna, Austria  
E-mail: [dostal.alexander@aon.at](mailto:dostal.alexander@aon.at)

# ZOBODAT - [www.zobodat.at](http://www.zobodat.at)

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Zeitschrift der Arbeitsgemeinschaft Österreichischer Entomologen](#)

Jahr/Year: 2012

Band/Volume: [64](#)

Autor(en)/Author(s): Dostal Alexander

Artikel/Article: [Three new species of \*Clivina\* Latreille, 1802 \(Coleoptera: Carabidae: Scaritinae: Clivinini\) from Asia. 33-44](#)