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The *Clivina komareki*-species group from Asia with the description of a new species from the Philippines (Coleoptera, Carabidae, Scaritinae)

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A b s t r a c t : The Oriental *Clivina komareki*-species group is revised. The new species *Clivina excisa* nov.sp. from Mindanao is described. The *Clivina* species recorded for the Philippines are summarized.

K e y w o r d s : *Clivina*, *komareki*-species group, Philippines, revision, taxonomy.

Introduction

The species rich genus *Clivina* LATREILLE, 1802 (Coleoptera, Carabidae, Scaritinae) is represented on the Philippines with nine species. The catalogues of Philippine and Indian Carabidae (ANDREWES 1926, 1930) list three species from the Philippines (*C. castanea* WESTWOOD, 1837, *C. extensicollis* PUTZEYS, 1846, *C. vulgivaga* BOHEMAN, 1861). KULT (1951) recorded another species (*C. moerens* PUTZEYS, 1873) and described four new species, which also occur on the Philippines (Tab. 1). LOUWERENS (1967) also recorded *C. vulgivaga*. *C. castanea* has been revised recently in the context of a revision of the *castanea*-species group (BALKENOHL 2021).

Working on undetermined Clivinini material of my collection, two interesting specimens of a smaller species from the Island of Mindanao came to my attention. The specimens could not be identified by comparative material as well as with the aid of the available keys and descriptions from the Oriental and neighbouring regions (i.e., ANDREWES 1929; DARLINGTON 1962; KULT 1951; LOUWERENS 1967, 1969; NAKANE 1978; MOORE et al. 1987; BAEHR 2008, 2015, 2017). However, the specimens resemble in the basic characters *C. komareki* KULT, 1951. This species was described from New Guinea based on one specimen with the erection of a separate species group (KULT 1951). It has not been treated since the description and figures are missing. Therefore, this contribution has the goal to revise the *Clivina komareki*-species group including the description of the new species. In addition, all *Clivina* species recorded for the Philippines are summarized in a table.

Material and methods

For the description of the new species, terms, descriptions of characters and methods were based on BALKENOHL (2001, 2021). Specimens were examined with a Leica M205-C

stereomicroscope and a Reichert-Jung Polyvar compound microscope. Measurements were taken electronically using the integrated and automatically calibrating measurement system of the IMAGIC Client software.

The dissected genitalia were treated and investigated as described in BALKENOHL (2021) and photographs were taken as described there in detail.

The following acronyms are used:

OLML.....Oberösterreichisches Landesmuseum, Linz, Austria

CBB.....Collection M. Balkenohl, Bonstetten near Zürich, Switzerland

L/W.....ratio of length divided by width (used for the pronotum and elytra).

Results

Faunistic overview of the *Clivina* species

The *Clivina* species listed in the catalogues of ANDREWES (1926, 1930) as well as the records provided by CSIKI (1927, 1933), KULT (1951) and LOUWERENS (1967) were compared with the systematic list provided in LORENZ (2005, 2019). An up to date list is provided. Moreover, the new species is added to the list (Tab. 1).

Tab. 1: *Clivina* species recorded for the Philippines. [1)]LOUWERENS (1967); [2)]this contribution.

***Clivina* species published for the Philippines**	**catalogue / records**				**recorded for**
species	ANDREWES 1926	ANDREWES 1930	KULT 1951	other authors	Island / province
C. castanea WESTWOOD, 1837	x	x	x		Luzon, Bohol
C. extensicollis PUTZEYS, 1846		x			"Philippine Is."
C. vulgivaga BOHEMAN, 1858 (= *humilis* MORAWITZ, 1863)	x	x		1)	Luzon, Mindanao, Balabac
C. moerens PUTZEYS, 1873			x		"Philippines"
C. baenningeri KULT, 1951			x		Luzon
C. zebi KULT, 1951			x		Luzon
C. subdepressa KULT, 1951			x		"Philippines"
C. wallacei philippinensis KULT, 1951			x		Luzon
C. excisa nov.sp.				2)	Mindanao

Taxonomy

Family C a r a b i d a e LATREILLE, 1802

Subfamily S c a r i t i n a e BONELLI, 1810

Tribe C l i v i n i n i RAFINESQUE, 1815

Genus *Clivina* LATREILLE, 1802

In the Oriental region, the speciose genus *Clivina* is represented with five subgenera. These are *Clivina* s.str., *Dacca* PUTZEYS, *Eoclivina* KULT, *Reichardtula* WHITEHEAD, and *Leucocara* BOUSQUET. For the larger subgenera, species groups have been described. *Clivina komareki* KULT and the new species belong to the *C. komareki*-species group erected by KULT (1951). Following BALL (2001) and BOUSQUET (2009), the characters clearly arrange the group in the subgenus *Clivina* s.str.

Recognition of the *Clivina komareki*-species group: Species-group of the subgenus *Clivina* s.str., distinguished from all other Oriental *Clivina* species by the combination of the following characters: Median part of the clypeus fused with the clypeal wings; labrum six-setose; supraorbital plate widened; elytron with striae one to four ending free at the base; elytra with inner striae concavely impressed in apical quarter; interval three with one to three setigerous punctures; terminal sternum of the abdomen laterally with the two apical setigerous punctures widely separated; mesotibia with a distinct protuberance preapically with acuminate apex and the seta inserted laterally, with few fine setae at the inner side; hind wings fully developed or atrophied; colour piceous, surface glossy.

Type species of the group: *Clivina komareki* KULT, 1951, by original designation.

The species

***Clivina komareki* KULT, 1951 (Figs 1, 3)**

T y p e m a t e r i a l : Holotype: ♂, with labels and data: white, printed in black, "Simbang Huon Golf" / "N Guinea Biro 1898" / white, handwritten in pencil "XIX" / red, handwritten in black ink "coll. m." and with red pencil "2" / white, handwritten with pencil "C. Komareki" / red, printed in black "HOLOTYPUS? Coll. K. KULT Dostal fecit 1999" / white, handwritten in black ink and printed "*Clivina komareki* KULT 1951 det. Dr. A. Dostal 1999" (CDW).

N o t e : The species was characterized with reasonable accuracy in an one-page description (KULT 1951, p. 31, 32). Based on one other specimen, DARLINGTON (1962) provided additional information and a line sketch of the anterior margin of the clypeus. The holotype studied is in good condition but with two terminal tarsomeres of the left mesotibia missing.

The specimen does not carry a label with the direct writing of the word "typus", but a red "coll. m." label. In 1999 and after the acquisition of the collection Kult, Dostal added a red holotype label to the specimen indicated with "fecit". On the label he added a question mark, obviously to indicate some reluctance.

After investigating the specimen and comparing it with the description in detail, I am convinced it is the holotype Kult based the description on due to the following reasons:

The holotype fits exactly with the description and as well with the key provided by Kult (1951). The locality the specimen was found is correctly indicated. The species is conspicuously different from the other Oriental species. In addition, it is well documented that the collector Lajos Biró collected at the type locality in New Guinea in 1898 (HORN et al. 1990).

However, dissection revealed the holotype is a male and not a female as indicated in the description by KULT (1951, p. 32).

Because the description does not include figures and some characters are not described in detail, a full redescripten is given.

D i a g n o s i s : See recognition of the *Clivina komareki*-species group.

R e d e s c r i p t i o n :

Measurements: Holotype: Body length 5.57 mm, width 1.63 mm; ratio length/width of pronotum 0.96; ratio length/width of elytra 1.85.

Colour: Glossy. Piceous. Legs uniformly fuscous, antenna and mandible slightly paler fuscous.

Head: Nearly a third narrower than pronotum. Clypeus straight anteriorly; wing wide, prominent, distinctly more protruding anteriorly than clypeus, fused with clypeus; supraantennal plate wide, convex in dorsal and frontal view; clypeus, wing, and supraantennal plate reflexed margined. Supraantennal plate extended up to mid-eye level as obtuse carina, separated from wing by a notch. Clypeus transverse, moderately convex, separated from frons by a wide and moderately deep furrow with irregular punctures. Frons moderately convex, with triangle-like depression at middle. Clypeus, frons, and supraantennal plates smooth, separated by deep moderately wide furrow continuing posteriorly up to posterior eye-level as wide supraorbital furrow. Two supraorbital setigerous punctures situated at mid and posterior eye level. Neck constriction developed as distinct step, with uninterrupted row of punctures of moderate size. Eye hemispherical, projecting laterally. Gena small. Antenna reaching up to posterior seta of pronotum, antennomeres four to ten of moderate length (ratio L/W around 1.3). Labrum straight, indistinctly reticulated, six setose. Mandible wide. Mentum with lateral lobe like an askew trapezium, margin straight anteriorly, median tooth short, keeled.

Pronotum: Disk slightly convex in lateral view, moderately convex in frontal view. Quadrate, slightly wider than long. Anterior margin indistinctly emarginated. Reflexed lateral margin smooth, straight at middle, slightly attenuating in anterior half, widest in posterior third; anterior angle obtuse but distinct; posterior angle marked by distinct tooth, laterally projecting as far as lateral margin in posterior third. Lateral channel indistinctly foveolate, of equal width in its whole length. Median line narrow, line-like, joining anterior transverse line and basal constriction; anterior transverse line deeper than median line, not reaching lateral channel. Surface with microscopic punctures, with group of few moderately sized punctures laterally in basal third, with few transverse wrinkles laterally and at base.

Elytron: Disk slightly convex in lateral view, distinctly convex on frontal view. Elytra concavely impressed in apical quarter (best visible in anterior-frontal view at an angle of 45°). Outline elongate, nearly twice as long as wide, long oval, with maximum width at middle. Humerus rounded but distinct, without humeral tooth. Reflexed lateral margin nearly smooth. Lateral channel wide. Scutellar striole indistinct; with distinct setigerous

puncture at base of first stria. Striae deep, indistinctly punctuate, one to four free at base, five to seven joining at humerus, one running up to apex, two ending free at apex, three and four, and five and six joining apically. Intervals distinctly convex, third to fifth more elevated at base, seventh wider and more elevated apically. Third interval with three small setigerous punctures. Surface of intervals glossy, striae indistinctly reticulated.

Hind wing: Fully developed.

Lower surface: Proepisternum covered with slight punctures. All terminal sternites of abdomen laterally with moderately sized punctures. The two setigerous punctures on each side of the abdominal sternum VII are very widely separated.

Legs: Legs covered with longitudinal reticulation. Protibia with three spines of moderate length, not sulcate dorsally, movable spur regularly arcuate. Mesotibia with distinct and moderately long protuberance preapically with acuminate apex and with its seta inserted laterally, with four fine seta at the inner side.

Male genitalia (Fig. 3): Median lobe regularly slender, moderately arcuate in basal half, apex developed as moderately slender arcuate shank, distinctly arcuate at tip pf apex. Endophallus with central group of spines, spines slender. Parameres slender, slightly distorted, acuminated in apical half, apex pointed, at apex with one moderately sized seta and one minute seta preapically.

Female genitalia: Unknown.

Variation: Unknown.

D i s t r i b u t i o n : Known from the type locality Simbang at the Huon Golf in Papua New Guinea and from Hollandia, New Guinea.

Clivina excisa nov.sp. (Figs 2, 4)

T y p e m a t e r i a l : Holotype: ♂, with labels and data: white, printed in black, "Kapatagan, Davao de Sur, Mindanao JANUARY 2020" / "local coll. lgt." (CBB). Paratype: 1♂, with labels and data: white, printed in green, "Kidapawan, South Cotabato, Mindanao MARCH 2020" / "local coll. lgt." (OLML).

E t y m o l o g y : The name refers to the excised anterior margin of the clypeus, the labrum, and the pronotum which is expressed by the Latin adjective excisa in the feminine genus.

D i a g n o s i s : The new species differs from *C. komareki* KULT mainly in the head with the gently excised clypeus and the emarginated labrum, the missing triangle-like depression at middle of the frons, and the distinctly moniliform antennomeres; in the pronotum which is distinctly wider than long, and the anterior margin is distinctly excised. In addition, the lateral channel of the pronotum is distinctly wider between the lateral setigerous punctures. The elytra are shorter oval and the humerus exhibits a humeral tooth.

D e s c r i p t i o n : Measurements: Holotype / paratype: Body length 5.97 / 5.57 mm, width 2 / 1.84 mm, ratio L/W of pronotum 0.75 / 0.76, ratio L/W of elytra 1.64 / 1.63.

Colour: Glossy. Piceous. Legs uniformly fuscous, antenna and mandible slightly paler fuscous.

Head: A third narrower than pronotum. Clypeus gently excised anteriorly; wing moderately developed, not more protruding anteriorly than clypeus, fused with clypeus; supraantennal plate wide, long-convex in dorsal and moderately convex in frontal view; clypeus

and wing indistinctly margined, supraantennal plate distinctly reflexed margined. Supraantennal plate extended up to mid-eye level, separated from wing by right-angled notch, separated from supraorbital carina by a transverse sulcus. Clypeus transverse, flattened, separated from frons by a moderately sharp furrow. Frons convex. Clypeus with longitudinal irregular carinae, frons with few scattered microscopic punctures. Supraantennal plate separated from clypeus and frons by deep moderately wide furrow continuing posteriorly up to mid-eye level as wide supraorbital furrow. With blunt distinct supraorbital carina at posterior half of eyes. With two supraorbital setigerous punctures situated over posterior third of eye. Neck constriction not developed. Eye hemispherical, projecting laterally. Gena small, enclosing completely eye posteriorly. Antenna not reaching posterior seta of pronotum, antennomeres four to ten distinctly moniliform (ratio L/W around 1.02). Labrum moderately excised, isodiametrically to irregularly reticulated, six setose. Mandible wide. Mentum with lateral lobe long oval anteriorly, with two indistinct longitudinal carinae, median tooth much shorter than lobe, distinctly keeled.

Pronotum: Disk slightly convex in lateral view, moderately convex in frontal view. Quadrate, distinctly wider than long. Anterior margin distinctly excised. Reflexed lateral margin smooth, straight to slightly concave at middle, slightly attenuating in anterior half, widest in posterior third; anterior angle distinct; posterior angle marked by distinct tooth, laterally not projecting. Lateral channel indistinctly foveolate, distinctly wider between lateral setigerous punctures. Median line narrow, line-like, joining anterior transverse line and basal constriction; anterior transverse line as deep as median line, not reaching lateral channel. Surface with microscopic punctures, with small group of few moderately sized punctures laterally in basal half, with few transverse wrinkles laterally and at base.

Elytron: Disk slightly convex in lateral view, distinctly convex on frontal view. Elytra concavely impressed in apical quarter (best visible in anterior-frontal view at an angle of 45°). Outline long oval, distinctly less than twice as long as wide, with maximum width at middle. Humerus broadly rounded off, with small humeral tooth pointing backwards. Reflexed lateral margin smooth. Lateral channel moderately wide. Scutellar striole short, indistinct; with distinct setigerous puncture at base of first stria, with blunt tubercle at base of third interval. Striae moderately deep, with distinct punctures, one to four free at base, five to seven joining at humerus, one running up to apex, two ending free at apex, three and four, and five and six joining apically. Intervals moderately convex, third to fifth indistinctly more elevated at base, seventh more elevated apically. Third interval with two setigerous punctures (but see variation). Surface of intervals smooth, glossy.

Hind wing: Distinctly reduced, around half as long as elytron.

Lower surface: Proepisternum covered with distinct punctures. All terminal sternites of abdomen laterally with moderately sized punctures. The two setigerous punctures on each side of the abdominal sternum VII are very widely separated.

Legs: Legs nearly smooth. Protibia with three spines of moderate length and a small but distinct one basally, sulcate dorsally, movable spur regularly arcuate. Mesotibia with distinct and moderately long protuberance preapically with acuminate apex and with its seta inserted laterally, with four fine seta at the inner side.

Male genitalia (Fig. 4): Median lobe broadened apically, with longitudinal basal opening, nearly straight, apex with wide and distinct arcuate lamella. Endophallus with longitudinal group of short slender spines. Parameres slender, nearly straight, acuminated in apical half, at apex with one long and one minute seta.

Female genitalia: Unknown.

Variation: On the clypeus, the two specimens differ in form and number of the longitudinal irregular carinae. In the holotype, the third interval of the elytron shows one setigerous puncture at the right side and two at the left side. In the paratype, there is no puncture at the right side.

D i s t r i b u t i o n : Known from two localities on the Island of Mindanao.

Final remarks

As it is with several *Clivina*-species groups from the Oriental region, some of the summarized recordings from the Philippines have to be treated with some caution because the Scaritinae fauna of the Philippines is not well known and some of the species respectively species-groups have not been revised for over 90 years. For example, BAEHR (2008) assumes, *C. zebi* occurs only on the greater Sunda Islands Borneo and Sumatra. At present, and beside the species described in this contribution, there is only one species-group completely revised, the *Clivina castanea*-species group. *C. castanea* occurs on the Philippines, only (BALKENOHL, 2021).

Zusammenfassung

Die orientalische *Clivina komarki*-Artengruppe wird revidiert. Die neue Art *Clivina excisa* nov.sp. von Mindanao wird beschrieben. Die für die Philippinen gemeldeten *Clivina* Arten werden zusammenfasst.

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References

ANDREWES H.E. (1926): A catalogue of Philippine Carabidae. — The Philippine Journal of Science **31**: 345-361.

ANDREWES H.E. (1929): The fauna of British India, including Ceylon and Burma. Coleoptera, Carabidae, Vol. I., Carabinae. — Taylor & Francis, London, pp. 431.

ANDREWES H.E. (1930): Catalogue of Indian Insects. Part 18, Carabidae. — Government of India Central Publication Branch, Calcutta, pp. 389.

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*-, *planicpes*-, *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.

BAEHR M. (2015): The Australian Clivinini 2. The *ambigua*-, *bataviae*-, *bullata*-, *cava*-, *emarginata*-, *heterogena*-, *impressipes*-, and *sloanei*-groups of the genus *Clivina* LATREILLE, the new genus *Rubidiclivina*, and additions to the 1st part (Coleoptera, Carabidae, Scaritinae). — Entomologische Blätter und Coleoptera **111**: 59-446.

BAEHR M. (2017): Revision of the Australian Clivinini 3. The *procera* and *elegans* groups of the genus *Clivina* LATREILLE (Coleoptera, Carabidae, Scaritinae). — Spixiana **40**: 197-304.

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, Clivinini). — Pensoft Series Faunistica **21**. Pensoft Publ., Sofia-Moscow, pp. 83.

BALKENOHL M. (2021): Revision of the *Clivina castanea*-species group from Asia (Coleoptera: Carabidae: Clivinini). — Belgian Journal of Entomology **115**: 1-83.

BALL G.E. (2001): The subgenera of *Clivina* LATREILLE in the Western Hemisphere, and a revision of subgenus *Antroforceps* BARR (new status), with notes about evolutionary aspects (Coleoptera: Carabidae: Clivinini). — Special Publication of the Japan Coleopterological Society of Osaka **1**: 129-156.

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.

CSIKI E. (1927): Coleopterorum Catalogus auspiciis et auxilio. W. Junk editus a S. Schenkling **91**: Carabidae: Carabinae I. — W. Junk, Berlin, 1-553.

CSIKI E. (1933): Coleopterorum Catalogus auspiciis et auxilio. W. Junk editus a S. Schenkling. **127**: Carabidae: Carabinae III, Corrigenda et Addenda. — W. Junk, Berlin, 623-641.

DARLINGTON P.J. (1962): The Carabid beetles of New Guinea Part I. Cicindelinae, Carabinae, Harpalinae through Pterostichini. — Bulletin of the Museum of Comparative Zoology **126**: 321-564.

HORN W., KAHLE I., FRIESE G. & R. GAEDIKE (1990): Collectiones entomologicae. Akademie der Landwirtschaftswissenschaften der Deutschen Demokratischen Republik. — Berlin, pp. 573.

KULT K. (1951): Revision of the genus *Clivina* LATR., from Oriental region. (Col. Carabidae). — Časopis Československé Společnosti Entomologické **48**: 16-32.

LORENZ W. (2005): Systematic list of extant Ground Beetles of the World (Insecta Coleoptera "Geadephaga": Trachypachidae and Carabidae incl. Paussinae, Cicindelinae, Rhysodidae), Second Edition 2005. Tutzing, printed by the author, 530 pp.

LORENZ W. (2019): CarabCat: Global database of ground beetles (version Oct 2017). — In: Species 2000 & IT IS catalogue of life, 2019 Annual Checklist (ROSKOV Y., OWER G., ORRELL T., NICOLSON D., BAILLY N., KIRK P.M., BOURGOIN T., DEWALT R.E., DECOCK W., NIEUKERKEN E. van, ZARUCCHI J. & L. PENEV, eds). Species 2000: Naturalis, Leiden, The Netherlands. www.catalogueoflife.org/annual-checklist/2019.

LOUWERENS C.J. (1967): Philippine Carabidae (Col.) collected by the Noona Dan Expedition. — Entomologiske Meddelelser **35**: 195-214.

LOUWERENS C.J. (1969): Carabidae (Col.) collected by the Noona Dan Expedition in the Bismarck Islands. — Entomologiske Meddelelser **37**: 351-372.

MOORE B.P., WEIR A. & J.E. PYKE (1987): Carabidae. — In: Zoological Catalogue of Australia, **4**: 23-443. Australian Governmant Publishing Service, Canberra.

NAKANE T. (1978): The beetles of Japan (new series) (46), Scaritidae. — Nature and Insects **13**: 4-8.

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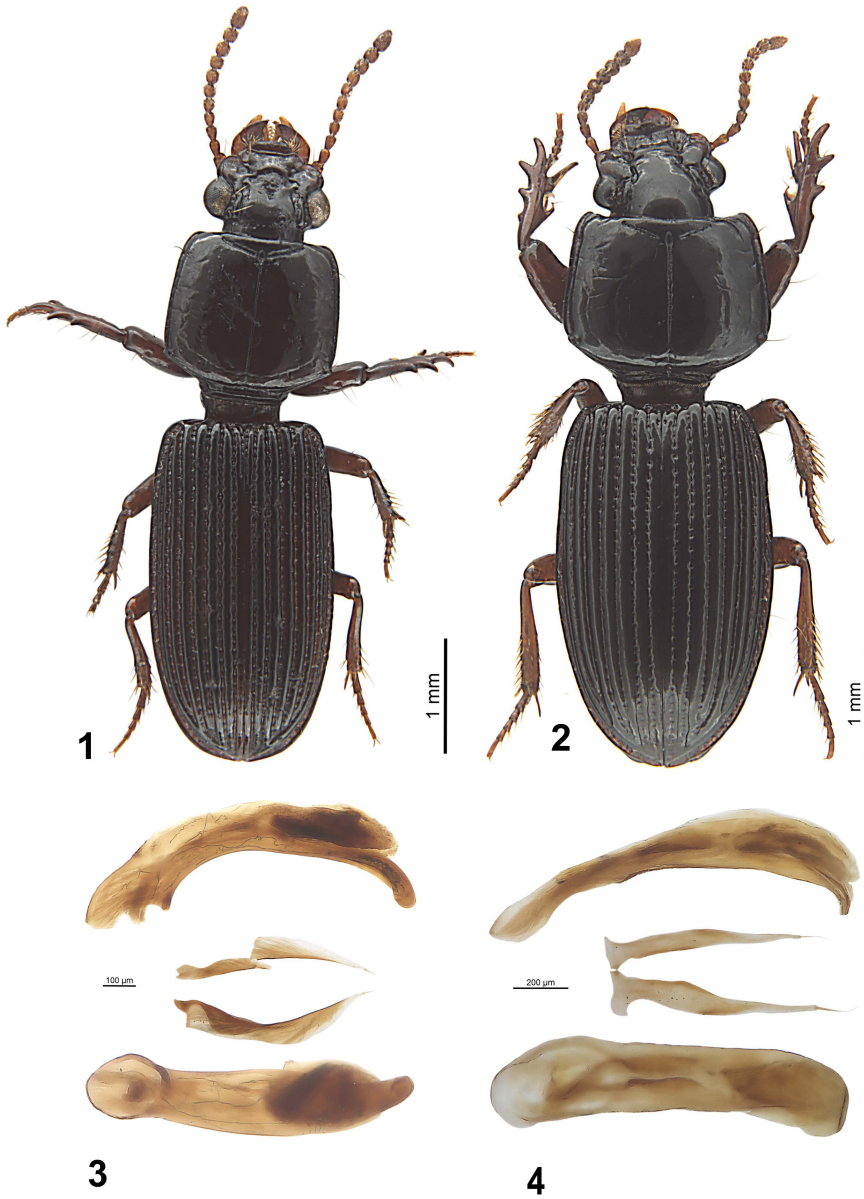

Figs 1-2: *Clivina* species, habitus, dorsal view; (**1**) *C. komareki* KULT, holotype; (**2**) *C. excisa* nov.sp., holotype.
Figs 3-4: *Clivina* species, male genitalia, ventral and lateral view of median lobe with parameres in between; (**3**) *C. komareki* KULT, holotype; (**4**) *C. excisa* nov.sp., holotype.

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