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Four new species of the genus *Aleochara* GRAVENHORST, 1802, subgenus *Coprochara* MULSANT & REY, 1874 [1]

(Coleoptera: Staphylinidae)

With 7 figures

CHRISTIAN MAUS

Summary

Aleochara (Coprochara) klimaszewskii sp. n. from Yemen, A. (C.) *fuldneriana* sp. n. from Tadjikistan, A. (C.) *eicasta* sp. n. from the Caucasus, and A. (C.) *peschkeana* sp. n. from Colombia are described. Diagnoses are given to distinguish these specimens from other *Coprochara* species occurring in the respective regions.

Zusammenfassung

Aleochara (*Coprochara*) *klimaszewskii* sp. n. aus dem Jemen, *A.* (*C.*) *fuldneriana* sp. n. aus Tadjikistan, *A.* (*C.*) *eicasta* sp. n. aus dem Kaukasus und *A.* (*C.*) *peschkeana* sp. n. aus Kolumbien werden beschrieben. Differentialdiagnostische Merkmale zur Unterscheidung dieser Arten von anderen in diesen Gebieten vorkommenden *Coprochara*- Arten werden angegeben.

Key words

Coleoptera, Staphylinidae, Aleocharinae, *Aleochara*, *Coprochara*, new species, taxonomy

Introduction

Although some species of the *Aleochara* subgenus *Coprochara* have been intensively investigated with regard to their biology, ecology, parasitoid behaviour and economic importance (for a survey of host records see MAUS et al. 1998), this subgenus has consistently been problematic from taxonomical view. Recently, some studies have resulted in numerous taxonomical and nomenclatorical changes (e. g. KLIMASZEWSKI 1984, LOHSE 1986, KLIMASZEWSKI & JANSEN 1994, MAUS 1998), however, some problems still need to be solved.
Within the scope of taxonomical studies of *Coprochara* species, specimens were found that proved to represent undescribed species. These species are described here. Like my previous taxonomical contributions to the subgenus *Coprochara* (MAUS 1998), this paper should be considered as a preliminary study for a comprehensive, worldwide revision of *Coprochara* which is planned to be published within the next few years.

[1] 2nd taxonomical contribution to the subgenus *Coprochara* MULSANT & REY, 1874 of the genus *Aleochara* GRAVENHORST, 1802

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Material and Methods

The investigated specimens were dissected, with genitalia embeded in water soluble polyvinyl pyrrolidone and mounted on a transparent plastic microslide attached to pins with the regarding specimens. Outlines of genitalia were made using a Leitz Dialux microscope with a drawing tube.
Morphological terminology used (especially regarding male and female genitalia) follows KLIMASZEWSKI 1984 and MAUS 1998. Labels of type specimens are cited using a double backslash (\\) separating different labels, and a single backslash (\) separating different lines on one label.

Abbreviations

Institutions: BMNH: The Natural History Museum (formerly: British Museum of Natural History), London, UK. CNC: Canadian National Collection of Insects, Arachnids and Nematodes, Ottawa, Ontario, Canada. DEI: Deutsches Entomologisches Institut, Eberswalde, Germany. FMNH: Field Museum of Natural History, Chicago, Illinois, USA. MNHUB: Museum für Naturkunde der Humboldt-Universität, Berlin, Germany. NHMW: Naturhistorisches Museum, Wien, Austria.
Morphometric data: WHP = quotient width head : width pronotum; WPE = quotient width pronotum : width elytra; PLW = quotient length pronotum : width pronotum; LPE = quotient length pronotum : length elytra; 8AWL = quotient width 8th antennal segment : length 8th antennal segment; L = body length; LWA = body length without abdomen (measured from labrum to sutural angle of elytra).

Descriptions of the new species

Aleochara (Coprochara) klimaszewskii sp. n.

Type specimens: Holotype (male): Yemen: \ San'a, ca. 7,900 ft. \ Xii. 1938 \ Dr. P.W.R. Petrie. \ B.M. 1938 - 482 \\ in gardens.\\ Aleochara (Coprochara) \ klimaszewskii Maus \ 1999 Holotypus. Paratypes: 1 male: Yemen: \ San'a, ca. 7,900 ft. \ Xii. 1938 \ Dr. P.W.R. Petrie. \ B.M. 1938 - 482 \\ in gardens.\\ Aleochara (Coprochara) \ klimaszewskii Maus \ 1999 Paratypus. 2 males: Yemen. \ Birkat Gheil Masnah, \ S.W. of Ma'bar, \ ca. 8,300 ft. \ 9.iii.1938. \\ B.M. Exp. to \ S.W. Arabia. \ H. Scott & \ E.B. Britton \ B.M. 1938 - 246 .\\ Aleochara (Coprochara) \ klimaszewskii Maus \ 1999 Paratypus. 1 male: W. Aden Prot. \ Jebel Jihaf \ ca. 7,000 ft. \ 7. - 12.1937. \\ B. M. Exp. to \ S. W. Arabia. \ H. Scott & \ E. B. Britton. \ B.M. 1938 - 246 \\ from cow-dung. \\ Aleochara (Coprochara) \ klimaszewskii Maus \ 1999 Paratypus.

The types are housed in the BMNH.

Body shape fusiform to subfusiform, slightly depressed to subdepressed.
Head orbicular, black to dark brown. Punctures moderately coarse to coarse, scarce, with an unpunctured stripe along midline and two extremely indistinct additional unpunctured stripes directed from anterior edge of eyes diagonally to middle of head. Pubescence directed forward laterally, towards the midline or obliquely backwards centrally, and anteriorly in frontal regions. Micropunctures fine but mostly distinct, sometimes very dense.
Pronotum transversely oval to subrectangular, relatively strongly convex transversely, blackish brown to dark reddish brown. Punctures except of dorsal rows fine to coarse (mostly different sizes of punctures present on each individual), scarce to moderately scarce, mainly

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concentrated in areas adjoining basis and side edges and reaching from posterior corners obliquely forward towards middle of front edge. Punctures of dorsal rows fine to moderately fine, scarce to moderately dense, mostly irregularly grouped. In the apical part of pronotum, at most two punctures stand side by side in the rows, in the basal part three. At the basis of pronotum, the rows are slightly impressed and enlarged, punctures are somewhat blurred. Sometimes there are single, conspicuously larger punctures among the row punctures. Pubescence few conspicuous, directed obliquely backwards. Micropunctures fine, but distinct, frequently very dense.

Basis of elytra black, basal part and sides dark to light brown, rest of elytra yellowish brown. In the area around suture, the darkened area is frequently triangularly extended backwards. In one case, elytra are nearly homogenously yellowish except for the basis. Punctures fine to moderately coarse and scarce to moderately dense, subcircular, impressed slightly and indistinctly from outside behind. Elytral pubescence directed backwards at the sides of elytra, obliquely backwards in an angle of less than 45° basally and more than 45° apically. Micropuncture extremely fine and hardly visible to absent.

Abdomen depressed to slightly depressed, subparallel to slightly conical, blackish brown, apical parts of tergites lighter to a variable extent. Basal impression on tergite III deep to very shallow, on tergite IV deep to moderately deep, on tergite V deep to shallow. Punctures fine to moderately fine, dense to scarce. The punctures are mostly finer on the apical part of the tergites, mainly of the basal tergites and of tergite VIII. The punctures are suborbicular to distinctly oblong, the latter shape of punctures is most pronounced on tergite VII. On tergite VIII and on the apical edges of the subapical tergites, punctures are partially rasp-like. Micropunctures extremely fine and indistinct. Male sternum VIII bluntly and indistinctly produced ventrally.

Antennae moderately long and moderately slender, thickened towards the apex, dark brown to blackish brown, lightened basally. Legs brown to dark brown, tarsi light brown to yellow.

Proportions: WHP: 0.66 (0.63 - 0.71) (N = 5); WPE: 0.86 (0.84 - 0.88) (N = 5); PLW: 0.78 (0.75 - 0.81) (N = 5); LPE: 1.45 (1.43 - 1.47) (N = 5); 8AWL: 1.93 (1.88 - 2.00) (N = 5)

Body size: L: 5.10 mm (4.10 - 5.87 mm) (N = 5); LWA: 2.01 mm (1.55 - 2.32 mm) (N = 5)

Aedeagus (fig. 1): Venter of median lobe basally curved, apically straight, slightly to distinctly sinuate, its tip distinctly reflexed ventrally. Sclerites present: Y, Z. Sclerite Z medium-sized to small, apical tip relatively long and curved produced, not or hardly rising above tip of median lobe. Sclerite Y relatively large, usually slightly to distinctly sinuate towards the tips, which are slightly to distinctly pointed (especially lower one). Flagellum not or hardly reaching basis of bulbus of median lobe. Apical lobes of lateral lobes short.

Spermatheca: unknown

Differential diagnosis: From the other *Coprochara* species that occur (or may occur) in the same area, *A. klimaszewskii* can be distinguished by the following characteristics: *A. bilineata* has mostly darker elytra and a much larger sclerite Z in the male aedeagal median lobe. *A. lineatocollis* has a more slender body shape, and darker elytra. *A. verna* has mostly dark elytra with distinct lighter terminal spots and additionally a larger sclerite Z in the male aedeagal median lobe. *A. bipustulata* and *A. bisolata* both have usually dark elytra with distinct lighter terminal spots, too, and elytral punctures which are distinctly impressed from outside-behind. *A. binotata* and *A. pauxilla* both have a more narrow, convex body shape, frequently more distinctly impressed pronotal dorsal rows, mostly more densely punctured elytra and abdomen, a mostly more distinctly produced sternum VIII in males, a male

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aedeagal median lobe whose venter is apically more weakly reflexed ventrally, and longer apical lobes of the aedeagal lateral lobes. Additionally, *A. pauxilla* is a much smaller species.

Distribution: Known only from Yemen.

Bionomics: One of the type specimens was collected from cow dung, some were taken in gardens. The type material was collected at an altitude of about 2100 - 2500 m (7000 - 8300 ft), the collection dates are March, October and December.

Phylogenetic relationships: *A. klimaszewskii* roughly resembles *A. binotata*, but since it does not share some important, probably apomorphic characteristics of this species (e.g. apically produced male sternum VIII, more or less cylindrical body shape), there is probably no close relationship between these two species. There may rather be closer relationships to *A. bipustulata*, although there are no apparent certain synapomorphies.

Derivatio nominis: This species is named after JAN KLIMASZEWSKI, honoring his taxonomic work on *Aleochara*.

Aleochara (Coprochara) fuldneriana sp. n.

Holotype (male): SU: Tads.: Pamir: \ Muksu-Gebiet, b.\ Kishlak Kandou, \\ 2800 m, VII.1990 \ leg. Schmidt \\ Aleochara \ reinigi Bh. cf. \ Zerche det. 1991 \\ coll. Zerche \\ Aleochara (Coprochara) \ fuldneriana Maus 1999 \ Holotypus

The holotype is housed in the DEI.

Body shape slightly depressed, fusiform.
Head circular, black. Punctures moderately coarse and moderately dense, with a broad unpunctured stripe along the midline. Pubescence directed forward on lateral areas, medially or obliquely anteriorly or posteriorly in central and frontal areas. Micropunctures fine but distinct.
Pronotum broadly oval, relatively strongly convex transversely, blackish brown. Punctures except of the dorsal rows fine, scarce, regularly distributed. Punctures of dorsal rows fine and dense. In the apical part of the pronotum, at most two punctures stand side by side in the rows, in the apical part three. Dorsal rows not impressed, only slightly deepened and enlarged at their base. Pronotal pubescence directed obliquely backwards. Micropunctures fine and dense.
Elytra orange, basis and lateral areas slightly and very diffusely darkened, suture darker, too. Punctures fine, dense, impressed slightly obliquely from behind, slightly obliquely wrinkeled, bluntly rasp-like. Elytral pubescence partially rubbed off in holotype, but apparently directed backwards laterally, more or less obliquely backwards in other parts of elytra. Microsculpture absent.
Abdomen subcylindrical, very slightly tapered apically, slightly depressed dorsally, blackish brown, tergites very slightly lightened apically. Basal impressions very weak on tergite III, moderately deep on tergite IV, and absent on tergite V. Punctures moderately coarse, on tergite VII finer, in particular on its apical part, dense, only on the apical part of tergite VII more scarce. Punctures oblong on tergites V and VI, circular or suboblong on the other tergites. Punctures partially more or less rasp-like on the posterior part of the tergites. Microsculpture absent. Male sternum VIII apically bluntly and indistinctly produced.

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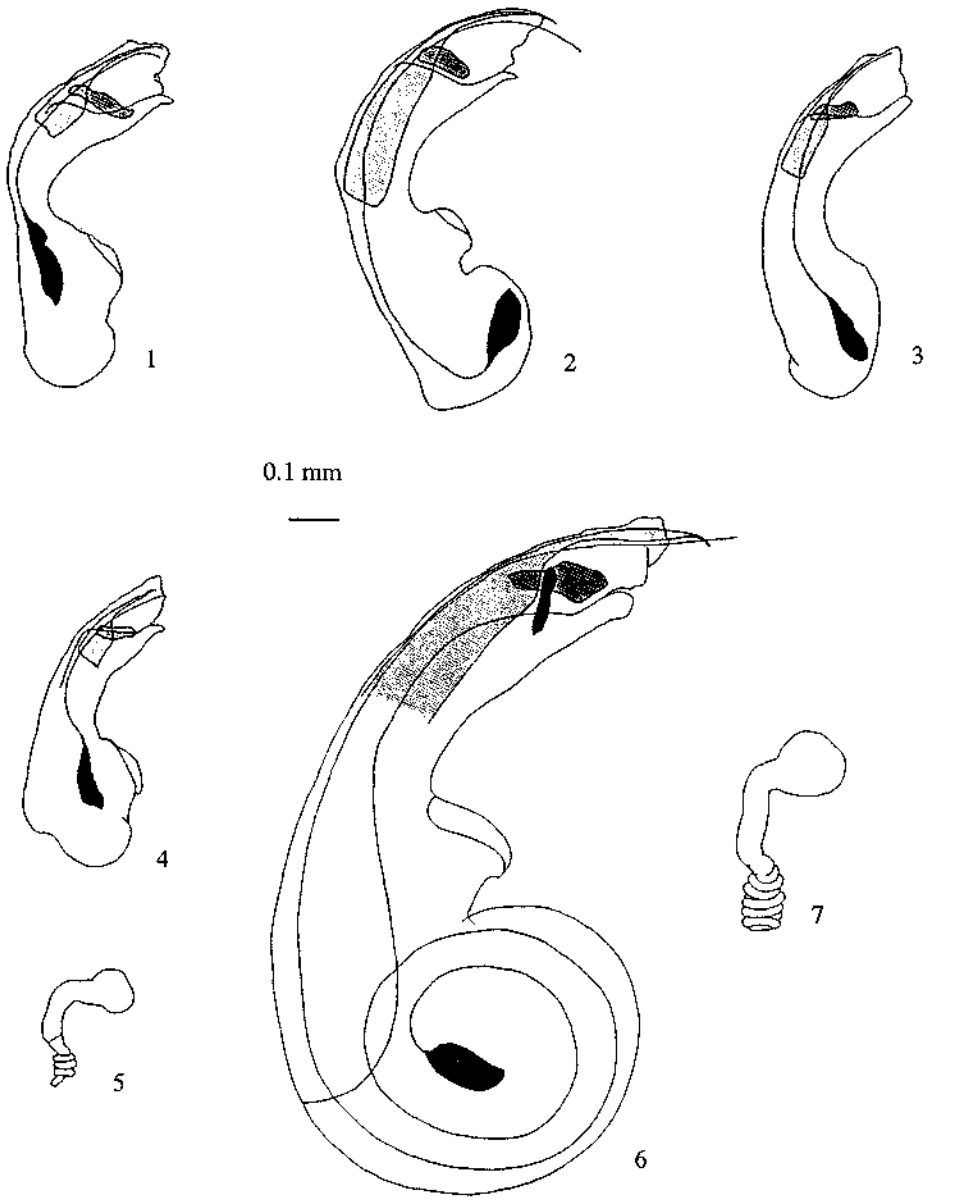

Figs. 1 - 7: 1. *Aleochara (Coprochara) klimaszewskii* sp. n., median lobe of the male aedeagus; **2.** *A. (C.) fuldneriana* sp. n., median lobe of the male aedeagus; **3.** *A. (C.) reinigi*, median lobe of the male aedeagus; **4.** *A. (C.) eicasta* sp. n., median lobe of the male aedeagus; **5.** *A. (C.) eicasta* sp. n., female spermatheca; **6.** *A. (C.) peschkeana* sp. n., median lobe of the male aedeagus; **7.** *A. (C.) peschkeana* sp. n., female spermatheca.

Antennae relatively short, slender, dark brown, segment 1, 2 and the basal part of segment 3 yellowish brown. Legs light brown.

DOI: 10.21248/contrib.entomol.49.2.357-367

Proportions: WHP: 0.65 (N = 1); WPE: 0.87 (N = 1); PLW: 0.73 (N = 1); LPE: 1.35 (N = 1); 8AWL: 1.75 (N = 1)
Body size: L: 3.97 mm (N = 1); LWA: 1.65 mm (N = 1)
Aedeagus (fig. 2): venter of median lobe strongly curved basally, nearly straight apically, its tip slightly reflexed ventrally. Sclerites present: Y, Z. Sclerite Z large, apical tip long and slightly curved produced. Flagellum reflexed in basis of bulbus.
Spermatheca: unknown

Differential diagnosis: This species can be distinguished from all other *Coprochara* species occurring in central Asia (except for *A. reinigi*) by its nearly homogenous orange elytral coloration. *A. bipustulata* and *A. verna* have dark elytra with yellow or orange terminal spots in most cases, *A. bilineata* usually has homogenously brown or black elytra. From *A. pamirensis*, it can additionally be distinguished by the pronotal dorsal rows which are not impressed in *A. fuldneriana*.
A. binotata may sometimes have a similar elytral coloration as *A. fuldneriana*, but it is different from this species by having mostly more or less distinctly impressed pronotal dorsal rows, an elytral punctuation which is not rasp-like, a male sternum VIII which is produced apically, and characteristics of the male aedeagal median lobe (tip not or indistinctly reflexed ventrally, sclerite Z much smaller).
No material of *A. polychroma* from Armenia could be examined, but according to the original description, this species is very conspicuous by its completely different coloration (which is apparently not due to immaturity).
A. reinigi is extremely similar to *A. fuldneriana*, and it probably cannot be distinguished from this species by ectosceletal characteristics. There are a few minor differences between *A. fuldneriana* and a few specimens of *A. reinigi* investigated, but to judge whether these difference are really consistent, more specimens of *A. fuldneriana* and a larger series of *A. reinigi* would need to be compared. Possibly, these characteristics exist in both states described in the ranges of variation of both species. The holotype of *A. fuldneriana* has a pronotum slightly less convex transversely than the *A. reinigi* specimens investigated, pronotal dorsal rows that are slightly more extensive, more distinct pronotal micropunctures, slightly more densely punctured elytra, and shorter and more slender antennae. There may be further differences in the elytral pubescence patterns, but elytral pubescence is partially rubbed off in the holotype of *A. fuldneriana*, so no exact description of this characteristic can be given.
In contrast to this ectosceletal similarity, both species can easily be distinguished by an examination of the male aedeagal median lobe (figs. 2, 3): its tip is distinctly pointed and reflexed ventrally in *A. fuldneriana* but straight and bluntly rounded in *A. reinigi*. The flagellum is longer and reflexed in the basis of the bulbus in *A. fuldneriana*, but shorter and straight in the bulbus in *A. reinigi*. Furthermore, sclerite Z is larger in *A. fuldneriana* than in *A. reinigi*.

Distribution: Only known from the locus typicus in Tajikistan.

Bionomics: unknown except for the collection date in July and the altitude of the locus typicus (2800 m).

Phylogenetic relationships: *A. fuldneriana* is extremely similar to *A. reinigi* in all ectosceletal characteristics, but since there are important differences in the male aedeagi, it is not proved whether this similarity really reflects close relationship.

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Derivatio nominis: Named in honor of Professor Dr. DIETRICH FULDNER who published important contributions to biology and ecology of *Aleochara* species.

Aleochara (Coprochara) eicasta sp. n.

Type specimens: Holotype (male): N-Kaukasus \ Dombai-Tal \ 27.6.1968 \ leg. F. Hieke \\ Aleochara (Coprochara) \ eicasta Maus 1999 \ Holotypus. Paratypes: 1 male, 2 females: N-Kaukasus \ Dombai-Tal \ 27.6.1968 \ leg. F. Hieke \\ Aleochara (Coprochara) \ eicasta Maus 1999 \ Paratype. 1 male, 2 females: N-Kaukasus \ Dombai-Tal \ 27.6.1968 \\ Aleochara (Coprochara) \ eicasta Maus 1999 \ Paratype.

The types are housed in the MNHUB.

Body shape fusiform to subfusiform, slightly depressed to subdepressed.
Head orbicular to suborbicular, black, punctures moderately coarse, scarce to very scarce, with an unpunctured stripe along the midline. Pubescence fine, very scarce, directed forward laterally, inwards to obliquely forward centrally and in frontal regions. Micropunctures fine, scarce and indistinct, rarely distinct and relatively dense.
Pronotum transversely oval, trapezoid-shaped or subrectangular, strongly convex transversely, black to blackish brown. Punctures except in the dorsal rows fine to moderately fine (sometimes there are a few coarser punctures scattered among the fine ones), scarce to very scarce, nearly regularly to irregularly distributed, usually more scarce in the apical 1/3 than in the basal 2/3. Punctures of dorsal rows fine to very fine, rarely moderately fine, moderately dense to scarce. Dorsal rows not impressed, sometimes slightly impressed and enlarged at their base, where the punctures are often somewhat indistinct and blurred. In the apical part of the pronotum, at most two punctures stand side by side in the rows, in the basal part three (but more frequently only two). Pronotal pubescence fine, very scarce, directed obliquely backwards. Micropunctures extremely fine and indistinct, or absent.
Elytra black to blackish brown, the inner and apical areas or an indistinct terminal spot lightened, dark orange, dark reddish brown, or chestnut brown. Sometimes the lightened area is farther extended, and only base and sides of elytra are black. The lighter area is very indistinctly defined. Punctures fine, sometimes moderately fine, scarce, sometimes moderately scarce. Punctures impressed obliquely from outside-behind, but nevertheless subcircular, slightly rasp-like. Elytral pubescence scarce, directed posteriad at the sides of the elytra, and obliquely backwards in the inner parts, mostly in an angle of less than 30°, sometimes of more than 30° in the apical parts. Microsculpture extremely fine and indistinct, or absent.
Abdomen slightly depressed to subdepressed, mostly slightly, rarely indistinctly tapered apically, black, the apical parts of the tergites sometimes lightened. Basal impression on tergite III deep to shallow, on tergite IV deep to moderately deep, on tergite V moderately deep to very shallow. Abdominal punctures fine, less frequently moderately fine, moderately to very scarce. Punctures mostly distinctly oblong except for the punctures in the basal impressions of tergite III and IV. On tergite VIII (or on its apical part) punctures frequently finer and/or more scarce, sometimes also in the middle of the apical part of tergite VII. Sometimes there is a weak and indistinct microsculpture on the apical tergites. Male sternum VIII not or very weakly and indistinctly produced apically.
Antennae moderately long and slender to moderately slender, dark brown to blackish brown, segment 1-3 sometimes very slightly lightened. Legs reddish brown to dark brown, tarsi yellowish brown to dark reddish brown.

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Proportions: WHP: 0.67 (0.62 - 0.70) (N = 7); WPE: 0.89 (0.86 - 0.92) (N = 7); PLW: 0.77 (0.75 - 0.79) (N = 7); LPE: 1.40 (1.33 - 1.46) (N = 7); 8AWL: 1.66 (1.4 - 1.86) (N = 7)
Body size: L: 4.56 mm (3.65 - 5.03 mm) (N = 7); LWA: 1.87 mm (1.55 - 2.03 mm) (N = 7)
Aedeagus (fig. 4): venter of median lobe slightly curved, slightly sinuate, its tip distinctly reflexed ventrally. Sclerites present: Y, Z. Sclerite Z small, subtriangular, its apical tip produced, not or slightly curved, hardly rising above tip of median lobe. Flagellum very short, not reaching the basis of the bulbus. Aedeagus very similar to that of *A. bipustulata*.
Spermatheca (fig. 5): capsule sphaerical or subsphaerical. Chamber moderately robust, coils relatively robust, number of turns: 3 (2 - 3) (N = 4). Spermatheca very similar to that of *A. bipustulata*.

Differential diagnosis: *A. eicasta* can be distinguished from *A. bilineata* by an usually more densely punctured abdomen, a much larger male aedeagal sclerite Z, and by the female spermathecal duct that is usually more strongly coiled. *A. verna* usually has more distinct and lighter elytral terminal spots, a larger male aedeagal sclerite Z, and a more strongly coiled female spermathecal duct, furthermore its spermatheca is less robust. *A. polychroma*, of which no material could be investigated, has, according to the original description, a completely different coloration and a densely punctured abdomen. *A. binotata* and *A. pauxilla* can be distinguished from *A. eicasta* by mostly more or less distinctly impressed pronotal dorsal rows, an usually more densely punctured abdomen, in males by sternum VIII which is mostly distinctly produced apically and the aedeagal median lobe which is mostly more weakly reflexed ventrally, in females by the spermathecal duct which is coiled much more strongly. *A. eicasta* is most similar to *A. bipustulata*; it can be distinguished from this species by the pronotum which is strongly convex transversely, the fine and scarce pronotal, elytral and abdominal punctures and the darker terminal spot; its body shape is relatively robust and large compared with most *A. bipustulata* specimens. Aedeagus and spermatheca of both species are virtually indistinguishable.

Distribution: Only known from the locus typicus (Dombai Valley in Northern Caucasus, Russia).

Bionomics: unknown except for the collection date in June.

Phylogenetic relationships: Due to external and genitalic similarity, *A. eicasta* is probably closely related to *A. bipustulata*. However, it is not clear which of the characteristics that both species share, represent synapomorphies.

Remarks: As already mentioned, *A. eicasta* is very similar to *A. bipustulata*. Each of the single distinctive marks described above can rarely occur in *A. bipustulata* individuals too, but since they consistently occur in combination in the *A. eicasta* specimens investigated, it is very unlikely that it is just an individual variation of *A. bipustulata*. However, *A. eicasta* possibly could be an endemic race of *A. bipustulata*, restricted to certain valleys or mountain ranges in the Caucasus area. A similar case is *A. lindbergi*, an endemic species from Madeira (see MAUS 1998).

Derivatio nominis: from εἰκαστός (Ancient Greek: similar), referring to the similarity of this species to *A. bipustulata*.

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***Aleochara (Coprochara) peschkeana* sp. n.**

Type specimens: Holotype (male): Bogota, Columb. \ Thieme\\ coll. Kraatz \\ Bernhauer det.[2] \\ coll. DEI \ Eberswalde \\ Aleochara (Coprochara) \ peschkeana Maus 1999 \ Holotypus. Paratypes: 1 male: Bogota, Columbien \ Thieme \ coll. Kraatz (DEI) \\ Aleochara \ notula Erichson\ det. Bernhauer \\ Aleochara (Coprochara) \ peschkeana Maus 1999 \ Paratypus. 1 male: Bogota \\ notula Er. \\ [unlettered, green label] \\ ex coll. \ Scheerpeltz \\ Aleochara (Coprochara) \ peschkeana Maus 1999 \ Paratypus. 4 males: Colom., C. Amara \ Tequendama, VII. \ 6.I.1970, 7600' \ J.M. Campbell \\ Aleochara (Coprochara) \ peschkeana Maus 1999 \ Paratypus. 1 male: Colom., 12 km E \ Silvia, Cauca, VII. \ 15.I.1970, 10,000' \ J.M. Campbell \\ Aleochara (Coprochara) \ peschkeana Maus 1999 \ Paratypus. 1 male: Bogota, Columb \ Thieme. \\ notula Er. \ det. Bernhauer \ Mus. Germ. \\ Chicago NHMus \ M. Bernhauer \ Collection \\ Aleochara (Coprochara) \ peschkeana Maus 1999 \ Paratypus. 1 female: Bogota \ coll. Waagen. \ Bang Haas \\ notula Er \ det. Bernh. \\ Chicago NHMus \ M. Bernhauer \ Collection \\ Aleochara (Coprochara) \ peschkeana Maus 1999 \ Paratypus.

The holotype and one paratype (ex coll. Kraatz) are housed in the DEI, one further paratype (ex coll. Scheerpeltz) in the NHMW and five ones in the CNC. The two specimens from the Bernhauer collection are housed in the FMNH.

Body shape fusiform or subfusiform, slightly depressed.
Head round, slightly elongate or approximately square with strongly rounded-off corners, black, punctures coarse to moderately coarse, moderately scarce, rarely moderately dense, with an unpunctured stripe along midline and two additional unpunctured stripes directed from anterior edge of eyes diagonally to middle of head. Pubescence directed forward laterally, inwards centrally and in all directions in front of the additional unpunctured stripes. Micropunctures fine to very fine, dense to scarce.
Pronotum broadly oval to subconical, mostly strongly transverse, frontally distinctly tapered, black. Punctures except dorsal rows moderately dense to scarce, fine to coarse, frequently there are a few very coarse punctures scattered among the punctuation. Punctures denser in areas adjoining basal and lateral margins of pronotum. Punctures of dorsal rows fine, moderately dense to dense, slightly to very slightly impressed, at most two punctures stand side by side in the rows apically, and three basally. Rows slightly enlarged and impressed basally, where the punctures are frequently somewhat indistinct and blurred. Pubescence relatively long and erected, directed obliquely backwards. Micropunctures fine to very fine (sometimes hardly visible) and dense to moderately dense.
Elytra black to dark brown, inner apical part lightened in very variable extent, dark yellowish orange to dark brown, the lighter area is very indistinctly defined. Rarely there is an indistinct and indistinctly defined terminal spot. Punctures fine to moderately fine, dense to moderately dense, frequently distinctly wrinkeled obliquely, often punctures more or less rasp-like. Punctures impressed obliquely from outside-behind, but nevertheless sometimes subcircular. Pubescence relatively long and dense, directed posteriad at the sides of elytra, in the inner basal parts obliquely backwards in an angle of less than 45°, in the inner apical parts of more than 45°. Sometimes there are very fine and indistinct micropunctures.
Abdomen mostly distinctly tapered apically, rarely nearly parallel, depressed to slightly depressed, black, sometimes apical margin of tergites slightly lightened. Basal impression on

[2] This specimen has been formerly identified as *A. notula* by M. BERNHAUER.

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tergite III deep to moderately deep, on tergite IV deep, and on tergite V deep to moderately deep. Punctuation moderately coarse to moderately fine, scarce to moderately dense. On the apical parts of tergites punctures often more scarce, sometimes very scarce, especially on the apical tergites; on the apical part of tergites VI and VII punctures sometimes finer. Punctures orbicular or suborbicular, on the apical tergites, especially on tergite VI and VII sometimes somewhat elongate. On tergite VIII punctures frequently more or less rasp-like. Sometimes there is a very fine microreticulation and micropunctuation on the apical tergites. Male sternum VIII truncated or slightly rounded apically.
Antennae moderately long and moderately slender, black to blackish brown, rarely somewhat lighter at their bases, legs relatively long and slender, dark brown to dark reddish brown, tarsi reddish brown.
Proportions: WHP: 0.60 (0.57 - 0.63) (N = 10); WPE: 0.87 (0.84 - 0.89) (N = 10); PLW: 0.77 (0.75 - 0.79) (N = 10); LPE: 1.40 (1.32 - 1.51) (N = 10); 8AWL: 1.92 (1.73 - 2.22) (N = 10)
Body size: L: 6.21 mm (5.42 - 6.94 mm) (N = 10); LWA: 2.41 mm (2.13 - 2.58 mm) (N = 10)
Aedeagus (fig. 6): venter of median lobe straight or slightly sinuate, sometimes slightly curved, its tip bluntly thickened, sometimes very slightly and indistinctly pointed ventrally. Bulbus circular or broadly oval, very large; the angle between the ventral projection of the aedeagal median lobe at the base of the bulbus that bears the external carina and the bulbus is distinctly smaller than 90°. Sclerites present: X, Y, Z. Sclerite Z with a long produced, curved tip which reaches above the tip of median lobe; extent and structure of the basal part of sclerite Z could not be clearly recognized. Sclerite Y irregularly polygon-shaped, sometimes about irregularly hourglass-shaped, the apico-ventral part is mostly larger than the baso-dorsal. Sclerite X slender, mostly stick-shaped. Flagellum long, twice coiled in the bulbus. Aedeagus very similar to that of *A. bimaculata*.
Spermatheca (fig. 7): capsule spherical, chamber slender, slightly sinuate, reflexed towards the chamber, duct moderately robust, number of turns: 6 (N = 1). Spermatheca very similar to that of *A. bimaculata*.

Differential diagnosis: *A. peschkeana* can be distinguished from *A. sulcicollis* by less strongly impressed pronotal dorsal rows and less coarse elytral punctuation, *A. densissima* is smaller, has more distinctly rasp-like elytral punctuation, and a more densely punctured abdomen. *A. verna* is smaller, too, and has a male aedeagus without sclerite X and coiled flagellum. *A. bimaculata* has pronotal dorsal rows which are more densely punctured and in which stand more punctures side by side on average, more densely and much more strongly rasp-like punctured elytra with a mostly lighter terminal spot, and a more densely punctured abdomen with usually more elongate punctures. *A. mutare* and *A. solieri* can be distinguished from *A. peschkeana* by more strongly impressed pronotal dorsal rows, more densely punctured abdomen and broader head. *A. notula* is smaller on average, and has mostly lighter legs, shorter and more scarcely distributed pronotal pubescence, mostly shorter elytra, a male aedeagus without coiled flagellum, and a differently shaped spermatheca.

Distribution: All type specimens were collected in Colombia.

Bionomics: Unknown except for the collection dates in January and the collection altitudes of about 2300 - 3000 m of some of the paratypes.

Phylogenetic relationships: The presence of three types of aedeagal sclerites and a coiled flagellum clearly shows the affiliation of *A. peschkeana* to the *A. bimaculata* group (sensu

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MAUS & ASHE 1998). It may be the sister species of *A. bimaculata* since in both species aedeagal flagella are slightly more strongly coiled than in *A. mutare* and *A. solieri*, which is probably an apomorphic character state.

Remarks: *A. peschkeana* superficially resembles *A. notula* and *A. bimaculata*. There may be literature records of these species that actually regard *A. peschkeana*.

Derivatio nominis: I dedicate this species to Professor Dr. KLAUS PESCHKE whose research work substantially increased our knowledge of biology and ecology of *Aleochara* species.

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