CHECKLIST AND KEY TO SPECIES OF CARABODES (ACARI, ORIBATIDA, CARABODIDAE) OF THE CAUCASIAN REGION, WITH DESCRIPTION OF A NEW SPECIES

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ABSTRACT: A revised checklist is presented for the 28 species in the oribatid mite genus Carabodes (Carabodidae) that are known from the Caucasian region, including distributional data and new records from Georgia. An identification key for Caucasian Carabodes species and a table of characters are included. A new species from the West Georgian subtropical region, Carabodes kintrishiana sp.n., is proposed.

KEY WORDS: Oribatid mites, Carabodes, Caucasus, Kintrishi Reserve

INTRODUCTION

The oribatid mite genus Carabodes C.L. Koch, 1835 has a nearly world-wide distribution and includes about 115 named species (Subias 2004). These inhabit soil and litter, mosses and lichens, fungi, the bark of twigs, branches and tree trunks, rock surfaces and rotten wood (Reeves 1987; Reeves and Behan-Pelletier 1998). They are considered to be panphytophages (unspecialized feeders), which explains their ability to inhabit a great diversity of habitats (Reeves 1987).

The need for a taxonomic revision of the Carabodes of Georgia was recently noted (Murvanidze and Weigmann 2007) but this is also true of the whole Caucasus region, which represents a “hotspot” of biodiversity (Meyers et al. 2000) and therefore is of high biogeographical interest. In a recent checklist of the Caucasian oribatid fauna (Shtanchaeva 2001) Carabodes was represented by 19 named species and three undetermined species. The most recent key that includes Carabodes species from this region was that of Bulanova-Zakhvatkina (1975). After 1975 several new species were described (Djaparidze 1990 a, b; Kulijev 1979; Shtanchaeva 2004; Weigmann and Murvanidze 2003; Murvanidze and Weigmann 2007) and relevant new distributional records were published (Arabuli and Murvanidze 2003; Murvanidze and Weigmann 2007).

In this paper I present a revised checklist of the Caucasian Carabodes species, which includes previously known data on their distribution and new records from Georgia. An identification key for the Caucasian Carabodes species and a table of characters (Table 1) are also given. During this work a new species of Carabodes was discovered in the West Georgian subtropical region, which is described immediately below as C. kintrishiana sp. n.

MATERIAL AND METHODS

FOR C. KINTRISHIANA

Material of the new species was collected on 31.07.2005 in Kintrishi Reserve, located in the West Georgian subtropical region of Ajaria. The site was a Castanea forest with a few Carpinus and Alnus trees and an understory of Vaccinium myrtillus. Specimens were extracted by modified Berlese-funnels, stored in alcohol and studied in lactic acid in an open hollow-ground slide. The terminology of morphological structures follows Weigmann (2006).

SYSTEMATICS

Family Carabodidae

Genus Carabodes C.L. Koch, 1835

Carabodes kintrishiana Murvanidze, sp. n.

Fig. 1.

Diagnosis. Large, dark reddish-brown, almost black mite. Interlamellar setae — short, ss — short, clavate, distally barbed. Anterior part of prodorsum punctuate, posterior part with sclerotized ridges. Sculpture of the notogaster composed of heavily sclerotized wrinkles and punctuated. 10 pairs of smooth, bacilliform notogastral setae are present. Dorsosejugal groove is absent. Legs are typical to the genus. With the general characters of Carabodes, as given by Weigmann (2006).

Description. Length 670 µm. Color — dark reddish-brown.

Prodorsum, Rostrum rounded. ro and le setae are smooth, directed medially. Lamellae typical to the family: large and wide, joined to the bothridia. in setae inserted on the prodorsum, near to the lamellar edges, smooth, bacilliform, apically pointed; length approximately 15 µm. Anterior part of the prodorsum is punctuated, posterior part is made up by sclerotized, irregular ridges. Sensilli with short peduncle and clavate head, distally
<table>
<thead>
<tr>
<th>Characters species</th>
<th>body length (µm)</th>
<th>prodorsal sculpture</th>
<th>size of in setae (µm)</th>
<th>shape of in setae</th>
<th>ss shape</th>
<th>dorsosejugal groove</th>
<th>notogastral sculpture</th>
<th>size of ng setae (µm)</th>
<th>shape of ng setae</th>
<th>c2 setae</th>
<th>genital setae</th>
</tr>
</thead>
<tbody>
<tr>
<td>areolatus</td>
<td>480–615</td>
<td>areolae</td>
<td>60</td>
<td>long, curved inside</td>
<td>“finger”-shaped</td>
<td>absent</td>
<td>areolae</td>
<td>40</td>
<td>widened, barbed</td>
<td>normal</td>
<td>short</td>
</tr>
<tr>
<td>auriculatus</td>
<td>574–689</td>
<td>fine</td>
<td>?</td>
<td>short, smooth</td>
<td>peduncle long, head spinose</td>
<td>absent</td>
<td>three longitudinal ridges</td>
<td>?</td>
<td>baciliform</td>
<td>normal</td>
<td>minute</td>
</tr>
<tr>
<td>bidens</td>
<td>540</td>
<td>longitudinal ridges</td>
<td>130</td>
<td>long, strong, erect</td>
<td>“finger”-shaped</td>
<td>wide</td>
<td>rosette-like</td>
<td>50–60</td>
<td>phylliform, barbed</td>
<td>long, strong, 110 µm</td>
<td>short</td>
</tr>
<tr>
<td>comas</td>
<td>500</td>
<td>longitudinal ridges</td>
<td>15</td>
<td>long, strong, erect</td>
<td>“finger”-shaped</td>
<td>wide</td>
<td>irregular wrinkles</td>
<td>20</td>
<td>thin, fine</td>
<td>normal</td>
<td>?</td>
</tr>
<tr>
<td>coriaceus</td>
<td>565–725</td>
<td>two chitinized elevations</td>
<td>?</td>
<td>lanceolate</td>
<td>fusiform</td>
<td>wide</td>
<td>irregular ridges</td>
<td>?</td>
<td>lanceolate</td>
<td>normal</td>
<td>long</td>
</tr>
<tr>
<td>djaparidzae</td>
<td>510</td>
<td>areolae and irregular ridges</td>
<td>90</td>
<td>long, strong, erect</td>
<td>“finger”-shaped</td>
<td>moderately wide</td>
<td>rosette-like</td>
<td>38–50</td>
<td>phylliform, barbed</td>
<td>long, strong, 85 µm</td>
<td>short</td>
</tr>
<tr>
<td>dubius</td>
<td>420–517</td>
<td>longitudinal ridges</td>
<td>80</td>
<td>long, strong, erect</td>
<td>“finger”-shaped</td>
<td>wide</td>
<td>rosette-like</td>
<td>25–30</td>
<td>fusiform, barbed</td>
<td>long, strong, 85 µm</td>
<td>short</td>
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<tr>
<td>egregios</td>
<td>400</td>
<td>areolae</td>
<td>50</td>
<td>smooth, erect club-shaped</td>
<td>absent</td>
<td>areolae</td>
<td>40–50</td>
<td>baciliform</td>
<td>normal</td>
<td>?</td>
<td></td>
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<tr>
<td>femoralis</td>
<td>600–715</td>
<td>fine ridges</td>
<td>8</td>
<td>short</td>
<td>“finger”-shaped</td>
<td>absent</td>
<td>longitudinal ridges and granulation</td>
<td>8–10</td>
<td>short, smooth</td>
<td>normal</td>
<td>medium size</td>
</tr>
<tr>
<td>granulatus</td>
<td>415</td>
<td>areolae, irregular ridges</td>
<td>30</td>
<td>phylliform, barbed</td>
<td>“finger”-shaped</td>
<td>narrow</td>
<td>with areolae, punctate</td>
<td>20–30</td>
<td>phylliform, barbed</td>
<td>normal</td>
<td>short</td>
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<tr>
<td>horreo</td>
<td>490</td>
<td>irregular ridges</td>
<td>100</td>
<td>long, erect club-shaped</td>
<td>narrow</td>
<td>rosette-like</td>
<td>28–35</td>
<td>thick baciliform</td>
<td>long, strong, 75 µm</td>
<td>short</td>
<td></td>
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<tr>
<td>intermedius</td>
<td>480–540</td>
<td>tubercles, irregular ridges</td>
<td>80</td>
<td>long, erect club-shaped</td>
<td>narrow</td>
<td>rosette-like</td>
<td>35</td>
<td>lanceolate</td>
<td>long, strong, 70 µm</td>
<td>short</td>
<td></td>
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<tr>
<td>kintrishiana sp. n.</td>
<td>670</td>
<td>with longitudinal ridges, punctate</td>
<td>15</td>
<td>baciliform, smooth</td>
<td>clavate</td>
<td>absent</td>
<td>with thick wrinkles, punctate</td>
<td>25</td>
<td>straight, smooth</td>
<td>normal</td>
<td>minute</td>
</tr>
<tr>
<td>labirinthicus</td>
<td>430–580</td>
<td>irregular ridges</td>
<td>30</td>
<td>straight, serrate</td>
<td>clavate</td>
<td>absent</td>
<td>joint tubercles</td>
<td>30</td>
<td>straight, fine</td>
<td>normal</td>
<td>short</td>
</tr>
<tr>
<td>marginatus</td>
<td>470–560</td>
<td>areolae and tubercles</td>
<td>40</td>
<td>lanceolate</td>
<td>fusiform</td>
<td>narrow</td>
<td>tubercles</td>
<td>40</td>
<td>lanceolate</td>
<td>normal</td>
<td>long</td>
</tr>
</tbody>
</table>

Table 1

Characters of *Carabodes* species known from the Caucasus area
<table>
<thead>
<tr>
<th>Species</th>
<th>Range</th>
<th>Characteristics</th>
<th>Areolae</th>
<th>Longitudinal Ridges</th>
<th>Tubercles</th>
<th>Smoothness</th>
</tr>
</thead>
<tbody>
<tr>
<td>minusculus</td>
<td>340–385</td>
<td>tubercles 45 smooth, baciliform club-shaped</td>
<td>15–25</td>
<td>phylliform normal</td>
<td>short</td>
<td></td>
</tr>
<tr>
<td>ornatus</td>
<td>540–690</td>
<td>tubercles 50 smooth, baciliform club-shaped</td>
<td>40</td>
<td>lanceolate normal</td>
<td>very long</td>
<td></td>
</tr>
<tr>
<td>paraspinosus</td>
<td>374</td>
<td>areolae 60 long, setiform “finger”-shaped narrow areolae 30 phyliform normal short</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>procerus</td>
<td>450–550</td>
<td>nodules, irregular ridges 10 short, smooth rounded to “finger”-shaped nodules, irregular ridges 15 short, fine normal short</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>pulcher</td>
<td>450</td>
<td>areolae 45 long, curved club-shaped absent tubercles 10–25 long, thin, erect normal short, fine</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>rugosior</td>
<td>520–650</td>
<td>two tubercles in posterior part 10 short, smooth flat to “finger”-shaped absent one long and several irregular ridges 15 short, fine normal short, fine</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>subarcticus</td>
<td>400–490</td>
<td>areolae 110 long, curved “finger”-shaped absent with areolae, punctate 30 lanceolate normal short</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>tenuis sbsp.</td>
<td>480</td>
<td>tubercles, longitudinal ridges 85 long, setiform club-shaped narrow tubercles 40 long, setiform normal short</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>scopulae</td>
<td>467–637</td>
<td>tubercles, irregular ridges 95–116 long, erect “finger”-shaped narrow separated rosettes 48–53 distally widened 95–110 µm short</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>tarbae</td>
<td>475–635</td>
<td>areolae, irregular ridges 100–120 long, erect “finger”-shaped narrow rosette-like 55–57 slightly widened or baciliform 100–120 µm minute</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>willmannii</td>
<td>310–450</td>
<td>areolae 30 baciliform, smooth club-shaped absent tubercles 15–20 lanceolate normal short</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>schatzi</td>
<td>310–385</td>
<td>tubercles 30 baciliform, smooth club-shaped absent tubercles 17–25 thin, short normal short</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
slightly barbed. Dorsosejugal groove is absent (Fig. 1a).

Notogaster. Sculpture of the notogaster is made up by strongly sclerotized, thick, interconnected, punctuated transverse wrinkles (Fig. 1c). 10 pairs of notogastral setae smooth and bacilliform, apically pointed, with their length about 25 µm (Fig. 1a).

Ventral region. Surface is covered by strongly chitinized, finely punctuated wrinkles around the ano-genital region. Epimeral seta formula is: 3:1:2:3. Genital seta formula — 4g: 1ag: 2a: 3ad. The genital and anal plates are finely punctuated. Genital, aggenital and anal setae are minute; ad setae smooth, fine, bacilliform, apically pointed (Fig. 1b).

Legs with 1 claw.

Type material. A single specimen, the holotype female, was collected at the location indicated above, by L. Jgenti and Er. Kvavadze. It is mounted on a permanent slide and deposited in the collections of LEPL Institute of Zoology.

Etymology. The name C. kintrishiana refers to the Kintrishi Reserve where this species was found.

DISCUSSION

The new species resembles C. labyrinthicus by (1) type of notogastral sculpturing; (2) absence of dorsosejugal groove; (3) shape of in setae; (4) shape of sensillus; (5) shape of ng setae; (6) shape of ad setae. It differs from C. labyrinthicus in the following characters: (7) Length of C. labyrinthicus varies from 430–580 µm (Pérez-Iñigo 1997; Weigmann 2006). C. kintrishiana is much larger at 670 µm. (8) The notogastral sculpture of C. labyrinthicus is made of rounded, joint tubercles that form short, irregular transverse ridges. Sculpturing of C. kintrishiana is made up by strongly sclerotized, thick, transverse, interconnected, punctuated wrinkles, (9) in setae of C. kintrishiana are shorter (15 µm), than those of C. labyrinthicus (30 µm).

Carabodes comas Kulijev, 1979 is similar to C. kintrishiana in regard of the type of notogastral sculpturing (sclerotized wrinkles), but the wrinkles of C. comas are thin and prolonged; the body size is smaller (500 µm); interlamellar and notogastral setae are setiform; sensillus head is split into “fingers”; the sculpture of prodorsum is different.

The comparative table of characters (Table 1) shows the difference between C. kintrishiana and all other Carabodes species known from the Caucasus area.

TAXONOMICAL REMARKS

1. Carabodes forsslundi Sellnick, 1953, given in the checklist of Shtancaeva (2001), has been considered a junior synonym of C. ornatus (cf. Perez-Iñigo 1997; Subías 2004).

2. The genus Flexa Kuliev, 1977 has been considered a synonym of Carabodes (Murvanidze
and Weigmann 2007), and in Subias (2004) is regarded as a subgenus.

3. In the original descriptions of C. comas (Kulijev, 1979) and C. egregius (Djaparidze, 1990) the shape and size of genital setae is not mentioned. I could not examine the type specimens, so these character states remain unknown.

4. Distributional records in Georgia are grouped into two larger units: Western Georgia (marked as WG) and Eastern Georgia (marked as EG), because of fundamental differences in climate between the two regions: subtropical humid in the west and dry continental climate in the east.

5. The biogeographic distribution of species is given according to Subias (2004).

6. Fig. 1 is original; Figs 2, 3, 7–9, 11, 14, 16–18, 20, 24, 26 are reproduced from Weigmann (2006); Figs 4, 22, 25 from Djaparidze (1990 a,b); Figs 5, 10, 19, 21 from Kulijev (1979); Fig. 6. from Mahunka (1986); Figs 12, 13, 15 from Bernini (1976), Fig. 27 from Shtanchaeva (2004).

7. The identification key is based on modified keys of Weigmann (2006) and Shtanchaeva (2004).

REVISED CHECKLIST OF CAUCASIAN SPECIES OF CARABODES

1. C. areolatus Berlese, 1916

2. C. auriculatus Mahunka, 1987

3. C. bidens (Djaparidze, 1990)

4. C. comas Kulijev, 1979

5. C. coriaceus C. L. Koch, 1835


7. C. dubia (Kulijev, 1968)

8. C. egregius Djaparidze, 1990

9. C. femoralis (Nicolet, 1855)

10. C. granulatus Banks, 1895

11. C. horreo (Djaparidze, 1990)

12. C. intermedius Willmann, 1951

13. C. kintrishiana sp. nov.

14. C. labyrinthicus (Michael, 1879)

15. C. marginatus (Michae, 1884)

16. C. minusculus Berlese, 1923

17. C. ornatus Storkan, 1925


Georgia. WG: Kintrishi Reserve, riv. Chorokhi gorge; EG: Shuamta.
Distribution. Caucasus.
20. *C. pulcher* Bernini, 1976

Russia. The Krasnodar Territory: Novorossiysk; the Stavropol Territory: Teberda.
Distribution. Mediterranean.
21. *C. reticulates* Berlese, 1913
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22. *C. rugosior* Berlese, 1916
23. *C. schatzi* Bernini, 1976
24. *C. scopulæ* (Kulijev, 1968)
25. *C. subarcticus* Tragardh, 1902
26. *C. tarbæ* Shtanchæva, 2004
27. *C. tenuis var. longisetosus* Kulijev, 1968
28. *C. willmanni* Bernini, 1975

**IDENTIFICATION KEY FOR CAUCASIAN SPECIES OF CARABODES**

1. Notogastral sculpture with tubercles or chitinized ridges ........................................... 5
   — Notogastral sculpture with areolae ........... 2
2. All notogastral setae of similar shape ........ 3
   — Notogastral setae differ in shape ............. 4
3. p1, p2 and p3 setae are shorter than other notogastral setae. Interlamellar setae are very long, curved inside. Interbothridial region with two chitinized elevations. Sensillus distally split into “fingers”. Notogastral setae lanceolate, distally slightly barbed. Body length 400–490 µm (Fig. 2). .................................. *C. subarcticus* Tragardh, 1902
   — p1, p2 and p3 setae not shorter than other notogastral setae. Interlamellar setae shorter, curved inside. Interbothridial region without chitinized elevations. Sensillus distally split into “fingers”. Notogastral setae distally widened, barbed. Body length 480–615 µm (Fig. 3). .................................. *C. areolatus* Berlese, 1916
   — Seven pairs of notogastral setae short, thick, bacilliform, distally slightly barbed. p1, p2 and p3 setae are short, thin, smooth. Interlamellar setae are situated on the prodorsum, near to the lamellae, smooth, long, erect. Sensillus club-shaped. c1 setae are twice longer than other notogastral setae. Body length 400µm(Fig.4). .................................. 
   — Seven pairs of notogastral setae are phylliform and barbed, p1, p2, p3 setae are short, thin and smooth. Interlamellar setae are situated on the prodorsum, near to the lamellae, long, strong, erect. Sensillus distally split into “fingers”. Body length 374µm(Fig.5). ..................................
   — Seven pairs of notogastral setae short, thick, barbed. Body length 520–650 µm (Fig. 7). .................................. *C. egregius* Djaparidze, 1990
5. Dorsosejugal groove present .......................... 16
   — Dorsosejugal groove absent ...................... 6
6. Notogastral sculpture with longitudinal chitinized ridges ............................................. 7
   — Notogastral sculpture without longitudinal chitinized ridges; comprised of chitinized wrinkles or tubercles .................................. 10
7. Prodorsum with a pair of very large chitinized elevations covering the lamellae. Interlamellar setae are short and smooth. Peduncle of the sensillus is very long, curved forward; the head is very small and spinose. On the notogaster three longitudinal chitinized ridges are present. Notogastral setae bacilliform. c setae is located at the shoulder. Body length 574–689µm(Fig.6).
   — Prodorsum without elevations .................... 8
8. Notogastral sculpture with one strong longitudinal ridge and small irregular ridges. Interlamellar setae are very short and straight. Sensillus is slim, distally split into “fingers” (this character varies from “finger”-shaped to almost setiform). Notogastral setae are short and straight. c setae is situated at the shoulder. Body length 520–650 µm (Fig. 7). ............... *C. rugosior* Berlese, 1916
   — Notogaster without one strong longitudinal ridge ............................................. 9
9. A large species. Interlamellar setae are minute and rough. Notogaster with several longitudinal ridges covered by rough tubercles. Sensillus split into “fingers”. 10–11 pair of notogastral setae present. c3 is located near to c2. Body length 600–715 µm (Fig. 8). ..................
   — A small species. Notogaster without one strong longitudinal ridge .................................. 10
C. kintrishiana pointed. Body length 670 µm (Fig. 1). ...togastral setae are short, baciliform, apically
dorsum, near to the lamellae, baciliform, apically
tuation. Interlamellar setae are situated on the pro-
— Wrinkles on the notogaster are thick, fine punc-
Kulijev, 1979
C. comas ....................................…
size, setiform. Body length 500 µm (Fig. 10). ...
ntalus setae are of medium
— Notogastral sculpture is made up by separated
or interconnected tubercles ................. 12
11. Notogastral sculpture is made up by thin, lon-
gitudinal wrinkles. Interlamellar setae are situated
on the lamellae, setiform. Sensillus distally split
into “fingers”. Notogastral setae are of medium
size, setiform. Body length 500 µm (Fig. 10). .....  
— Notogastral sculpture is made up by joint tu-
bercles. Interlamellar setae are short, sensillus is
clavate. Notogastral setae are of medium size, ba-
ciliform, apically pointed. Sensillus distally split
— Prodorsal sculpture with areolae ............ 15
14. Notogastral setae are curved, phylliform. In-
terlamellar setae are of medium size. Sensillus
distally club-shaped. Body length 340–385 µm
(Fig. 12). .................. C. minusculus Berlese, 1923
— Notogastral setae are thin, straight. Interlamel-
lar setae of medium size, curved inside. Sensillus
with short peduncle and club-shaped head. Body
length 310–390 µm (Fig. 13). ......................  
— C. schatzi Bernini, 1976
15. Seven pairs of notogastral setae lanceolate. p1,
p2, p3 setae short and thin. Interlamellar setae of
medium size. Sensillus with short peduncle, dis-
tally club-shaped. Body length 340–450 µm (Fig.
14). .................. C. willmanni Bernini, 1975
— Long, thin, erect notogastral setae. All setae of
equal shape. Interlamellar setae of medium size.
Sensillus distally club-shaped. Body length 450
µm (Fig. 15). .................. C. pulcher Bernini, 1976
16. c2 setae very long, strong, erect, directed for-
— c2 setae normal. Notogastral sculpture differ-
et ....................................................... 17
17. Notogastral sculpture is made up by irregular
chitinized ridges. In the interbothridial region the
chitinized sculpture is present resembling the
“spectacles”. Interlamellar setae long, widened,
barbed. Notogastral setae long, lanceolate, barbed.
p1, p2, p3 setae short, thin. Sensillus distally fus-
form, barbed. Body length 565–725 µm (Fig. 16).
.................. C. coriaceus C. L. Koch, 1835
— Notogastral sculpture without irregular chi-
inized ridges. No “spectacle”-shaped sculpture on
the prodorsum .......................................... 18
18. Interlamellar setae phylliform, barbed. Sensil-
lus distally split into “fingers”. Notogastral sculp-
ture is made up by bright foveolae with fine punc-
tuation. The dorsosejugal groove is narrow.
Notogastral setae are phylliform, barbed. Body
length 415 µm (Fig. 17). ..........................
— C. granulatus Banks, 1895
— Interlamellar setae of different shape ...... 19
19. Dorsosejugal groove wide. At the shoulders
the chitinized projections are presented. Interla-
merellar setae moderately long, lanceolate, barbed.
Sensillus fusiform, barbed. Notogastral sculpture
with dense tubercles. Notogastral setae lanceolate,
distally barbed. Body length 540–690 µm (Fig.
18). .................. C. ornatus Storkan, 1925
— Dorsosejugal groove narrow. No chitinized
projections at the shoulders ...................... 20
20. All prodorsal and notogastral setae thin, long,
setiform. Interlamellar setae very long, straight.
Notogastral and prodorsal sculpture is made up by
dense tubercles. Sensillus distally club-shaped. c2
setae are longer than other notogastral setae. Body
length 480 µm (Fig. 19). ..........................
— C. tenuis longisetosus Kulijev, 1968
— Prodorsal and notogastral setae are different.
Interlamellar setae lanceolate and barbed. Sensil-
lus fusiform, barbed. Notogastral sculpture is
made up by dense tubercles. Notogastral setae
weakly lanceolate, barbed. Body length 470–560
µm (Fig. 20). .................. C. marginatus (Michael, 1884)
21. Nine pair of notogastral setae are fusiform and
totally barbed. Sensillus distally split into “fin-
gers”. Dorsosejugal groove wide. Body length
420–517 µm (Fig. 21). ... C. dubius Kulijev, 1968
— Notogastral setae of different shape ........ 22
22. Sensillus distally club-shaped. The peduncle is
long. Interbothridial region with chitinized eleva-
tion and longitudinal ridges. Notogastral setae short, thick, distally slightly widened and barbed. Dorsosejugal groove narrow. Body length 490 µm (Fig. 22). ............... C. horreo (Djaparidze, 1990) — Sensillys distally split into “fingers” ........... 23. Rosette-like sculptures on the notogaster are isolated from each other. Posterior part of prodorsum is sculptured by longitudinal ridges. Dorsosejugal groove narrow. Notogastral setae distally widened and barbed. Body length 467–657 µm (Fig. 23). ..................... C. scopulata Kulijev, 1968 — Rosette-like sculptures on the notogaster are interconnected .................................................... 24. Notogastral setae distally widened and barbed. Sculpture on the prodorsum is made up by bright foveolae and irregular longitudinal ridges. Dorsosejugal groove moderately wide. Body length 510 µm (Fig. 24). .................................. C. djaparidzae Murvanidze et Weigmann, 2007 — Notogastral setae are not widened ........... 25. Interbothridial region with chitinized elevation and longitudinal ridges ...................................... 26 — Interbothridial region without elevation Anterior part of the prodorsum with areolae and posterior part with longitudinal ridges. Dorsosejugal groove narrow. Notogastral setae vary in size and shape from smooth setiform to lanceolate or fusiform and barbed. Body length 475–635 µm (Fig. 27). ..................... C. tarbae (Shhtanchaeva, 2004) 26. Notogastral setae thick, baciliform, distally slightly barbed Dorsosejugal groove wide. Body length 540 µm (Fig. 25). .......................................................... C. bidens (Djaparidze, 1990) — Notogastral setae thinner, hardly widened, barbed. Posterior part of the prodorsum with longitudinal chitinized ridges, anterior part with areolae. Dorsosejugal groove moderately wide (Fig. 26). ..................... C. intermedius Willmann, 1951

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