

## TWO NEW SPECIES OF ORIBATID MITES OF THE GENUS *EPIDAMAEUS* (ACARI: ORIBATIDA: DAMAEIDAE) FROM MONGOLIA

## ДВА НОВЫХ ВИДА ПАНЦИРНЫХ КЛЕЩЕЙ РОДА *EPIDAMAEUS* (ACARI: ORIBATIDA: DAMAEIDAE) ИЗ МОНГОЛИИ

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### ABSTRACT

Two new species of oribatid mites of the genus *Epidamaeus* are described from larch and birch forests in Central Mongolia. The first new species, *Epidamaeus crassisensillatus* sp.n. can be distinguished from the closely related species by having a relatively thick and expanded sensillus, the structure of ventral enantiophyses, the presence of fewer setae on the femur II and tarsus IV, and the smaller body size. The second new species, *E.brevisetosus* sp.n. can be distinguished from its congeners by the character of notogastral setae and sensillus, the complete absence of the ventral enantiophyses *E2*, *V* and discidium, the different number of setae on femora II–IV, tarsi II–IV, and smaller body size.

### РЕЗЮМЕ

Два новых вида панцирных клещей рода *Epidamaeus* описаны из подстилки лиственного и березового лесов Центральной Монголии. *Epidamaeus crassisensillatus* sp.n. отличается от близких видов наличием утолщенных, не утончающихся дистально трихоботрий, строением вентральных энантиофиз, наличием меньшего количества щетинок на бедре II и лапке IV и меньшими размерами тела. Второй новый вид, *E.brevisetosus* sp.n. отличим от других видов рода по строению ногогастральных щетинок и трихоботрий, по полному отсутствию вентральных энантиофиз *E2a*, *E2p*, *Va*, *Vp* и дисцидиума, по количеству щетинок на бедрах II–IV, лапках II–IV и меньшим размерам тела.

### INTRODUCTION

The oribatid mite genus *Epidamaeus* was proposed by Bulanova-Zachvatkina [1957a,b,c] with *Oribata bituberculata* Kulczynski, 1902 as the type species. When Bulanova-Zachvatkina [1957a]

firstly proposed *Epidamaeus*, she defined this genus as follows: “Projection of proterosoma (it should be propodolateral apophyses *P*) between legs I and II with a single apex; proterosomal tubercles represented by one pair, very rarely by two pairs; *a.p.a* and *a.p.p* (it should be postbothridial tubercles *Ba* and *Bp*), almost same in length and situated parallel to each other; notogastral spines (it should be spinae adnatae *sa*), very long, straight, excluding those in *E.pavlovskii* and *E.microspinus* sp.n.”.

In her subsequent classifications, Bulanova-Zachvatkina [1967, 1975] rediagnosed *Epidamaeus*, and slightly modified the previous definition. However, at the view of the present concept of classification, the characters used by Bulanova-Zachvatkina [1957 a,b,c, 1967, 1975] are mostly not useful for the distinguishing *Epidamaeus* from the other related genera of Damaeidae, and many of the characters are known to be commonly developed in several different genera of Damaeidae.

Later, Norton [1978a, 1979c] defined the genera of Damaeidae including *Epidamaeus* on the basis of ontogenetic and phylogenetic studies and proposed a new subgenus *Akrodamaeus* with *Oribata longiseta* Banks, 1906 as the type species.

The following combination of character states is diagnostic for this genus: Tibjæ I–IV without associated setae *d*; setal formula of genua I–IV: 4–4–3–3; associated setal (setae *d*) formula of genua I–IV: 1–1–1–0; setal formula of trochanters I–IV: 1–1–2–1 or 1–1–3–1; spinae adnatae present (subgen. *Epidamaeus*) or absent (subgen. *Akrodamaeus*); propodolateral apophyses *P* mostly absent, but rarely present.

*Epidamaeus* is one of the largest genera of the family Damaeidae, and according to the author's estimation, more than 70 species have already been described. The genus is known to be very

diverse in the Northern Hemisphere. The representatives of this genus are mostly described and recorded from Palearctic and Nearctic Regions and widely distributed in both these regions [Bulanova-Zachvatkina, 1973, 1979; Norton, 1979a]. According to the present knowledge, the genus appears to be poorly represented in the Southern Hemisphere, and only a few species have been described from the Neotropical Region [Balogh and Mahunka, 1969; Norton, 1979b; Palacios-Vargas, 1984].

Although the family Damaeidae shows great taxonomic diversity in the European continent and in some parts of Asia, the Mongolian damaeid fauna remained completely unknown. However, the collection materials of damaeid mites from different regions of Mongolia revealed the species-richness similar to that in other parts of the Palearctic region.

The present work is a part of the series of studies on the oribatid mite fauna of Mongolia, and this is the third part dealing with the genus *Epidamaeus*. The descriptions of two new species are presented heretofore. Both species belong to a nominate subgenus *Epidamaeus*, since they possess well-developed spinae adnatae. The results of studying the other representatives of Damaeidae of Mongolia will be presented in further works.

#### MATERIAL AND METHODS

Representatives of both species were collected from birch and larch forest soil litter in Central Mongolia in 1996. The type locality and habitat characteristics for each species are given in the "material examined" section. Immatures for both these species are unknown.

The specific terminology used in this paper is based on that (with a few modifications) developed by Grandjean [1960], Norton [1977a, b, 1978b, 1979b] and Behan-Pelletier and Norton [1983, 1985].

All measurements are given in micrometers ( $\mu\text{m}$ ), and the average measurement values are given in parentheses after the range. The body length is measured in lateral view, from the tip of rostrum to the posterior edge of ventral plate, to avoid discrepancies caused by different degrees of notogastral distension. The length of proterosoma is measured in lateral aspect, from the tip of rostrum to the dorsosejugal groove, which is visible posterior to bothridium. The width of proterosoma is measured in dorsal aspect, from the left edge to the right edge along the level of bothridia or just in front of acetabula II. Length of hysterosoma is measured in lateral aspect from the anterior to the posterior edge of ventral plate. The length of notogaster is measured in lateral aspect, from the anterior edge to the posterior one. The

width of notogaster is refers to maximum width in dorsal aspect. The dorso-ventral thickness of hysterosoma is measured in lateral aspect, from the edge of ventral plate to the dorsal edge of notogaster in postgenital transect. The thickness of notogaster is measured in lateral aspect, from the dorsal edge to the ventral edge of notogaster. All measurements of body setae are made in lateral aspect. The length of leg segments is measured in lateral aspect, including the portion inserted in the next segment.

#### DESCRIPTION OF SPECIES

##### *Epidamaeus crassisensillatus* sp.n.

Figs. 1–5.

**Diagnosis.** Relatively small species with general characters of *Epidamaeus*. Propodolateral apophyses *P* absent; postbothridial tubercle *Ba* present, tubercles *Bp*, *Da* and *Dp* absent; sensilli long, thick, slightly expanded distally, distal half with distinct barbs; notogastral setae medium long, conspicuously barbed unilaterally (except *ps*<sub>2</sub> and *ps*<sub>3</sub>), not darkly pigmented, but lighter in color; posterior two pairs of setae *ps*<sub>2</sub> and *ps*<sub>3</sub> smooth, slightly thinner than the other setae; spinae adnatae *sa* large, very wide at the base; ventral enantiophyses *E2*, *V* and *S* well developed; tubercles *E2p* and *Va* connected to each other by an arc shaped ridge; discidium strongly developed, sharply pointed; coxisternal regions III and IV with three and four setae, respectively; seta *1b* longer than others; all epimeral and ano-genital setae smooth; tarsus II 17, tarsus III with 16 and tarsus IV with 11 setae; trochanter III with two setae; leg IV (1.2 times) longer than body length.

**Measurements.** Body length 442–477 (460); length of proterosoma 190–218 (204); width of proterosoma 173–181 (177); length of hysterosoma 279–304 (292); length of notogaster 305–335 (320); width of notogaster 269–380 (274).

**Integument.** Yellowish-brown to deep reddish brown in color. Dorsal and ventral plates of body and leg segments with relatively thin cerotegument. Conspicuously microtuberculate on all enantiophyses and tubercles, lateral part of podosoma and around leg acetabula. Fine granules present on the lateral part of podosoma. Notogaster with exuvial scalps. All leg segments with loosely attached adherent debris.

**Prodorsum.** Rostrum broadly rounded in dorsal view. Rostral setae (*ro*) long 66–71 (68), finely barbed unilaterally. Lamellar setae (*le*) long (71–76), slightly longer than rostral ones. Interlamellar setae (*in*) slightly longer (73–80), but thinner than *ro* and *le*, smooth. Exobothridial setae (*ex*) shorter (30–38) and thinner than the former setae, weakly barbed unilaterally. Sensillus (*ss*) long (139–152), thick, slightly expanded distally, distal half with distinct barbs. Bothridium irregular funnel-shaped,

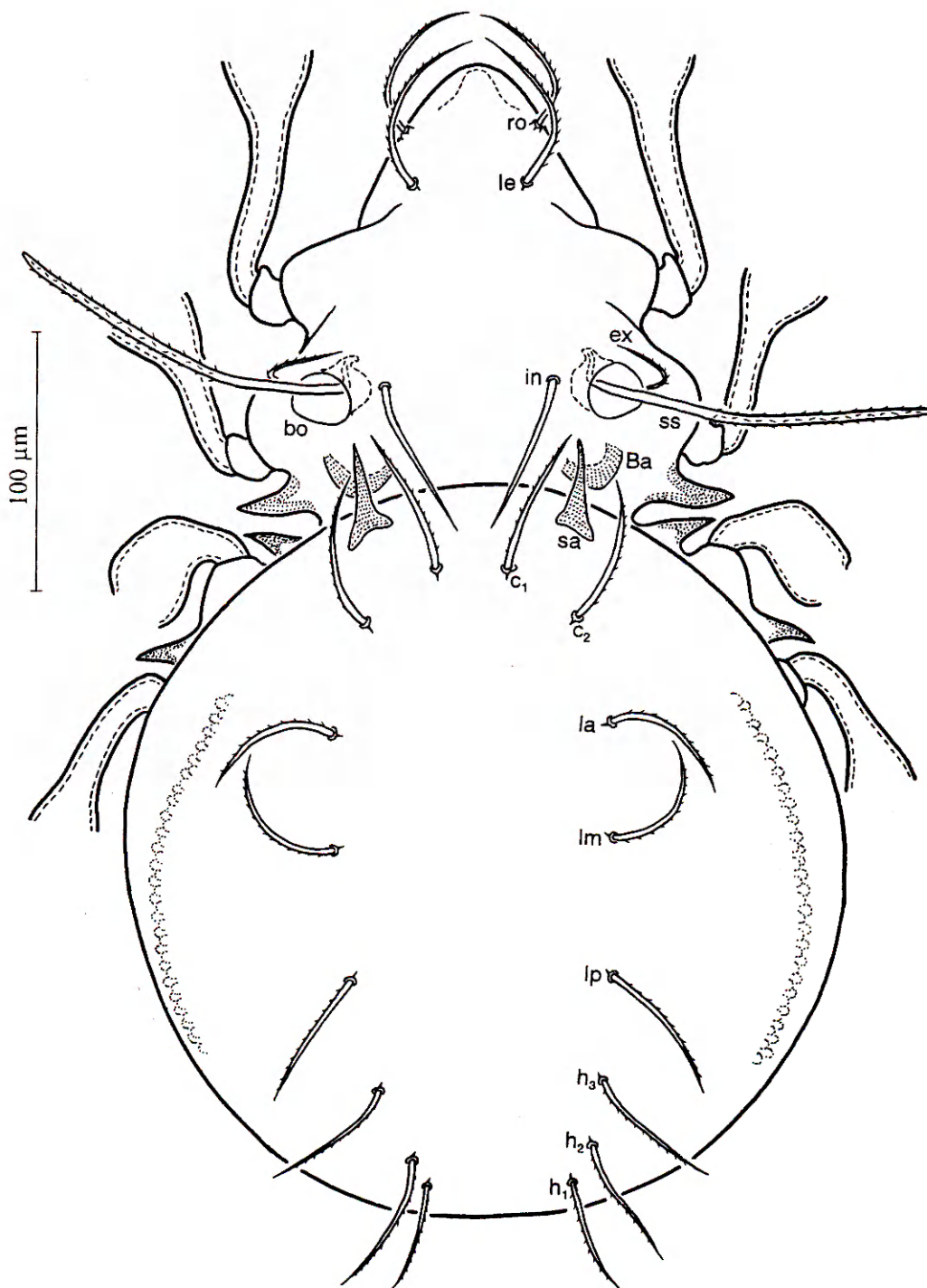


Fig. 1. *Epidamaeus crassisensillatus* sp.n., dorsal view.  
Рис. 1. *Epidamaeus crassisensillatus* sp.n., дорсально.

directed posterolaterad. Postbothridial tubercles *Ba* large, nearly semicircular, widely spaced from each other, situated posteriad to each bothridium; tubercles *Bp*, *Da* and *Dp* absent. Propodolateral apophyses *P* absent (Fig.1).

**Notogaster.** With exuvial scalps and loosely attached adhered debris. Numerous muscle sigillae found along lateral and posterolateral margins. Very slightly ovate viewed perpendicular to cir-

cumgastric scissure; about 1.02 times as long as wide. Spinae adnatae (*sa*) large (35–40 in length), with very broad base and distally tapered in a fine tip; distance between their bases approximately equal to that between tubercles *Ba*. Notogastral setae medium long (51–66), conspicuously barbed unilaterally (except *ps*<sub>2</sub> and *ps*<sub>3</sub>), not darkly pigmented, but lighter in color; posterior two pairs of setae *ps*<sub>2</sub> and *ps*<sub>3</sub> smooth, slightly thinner than

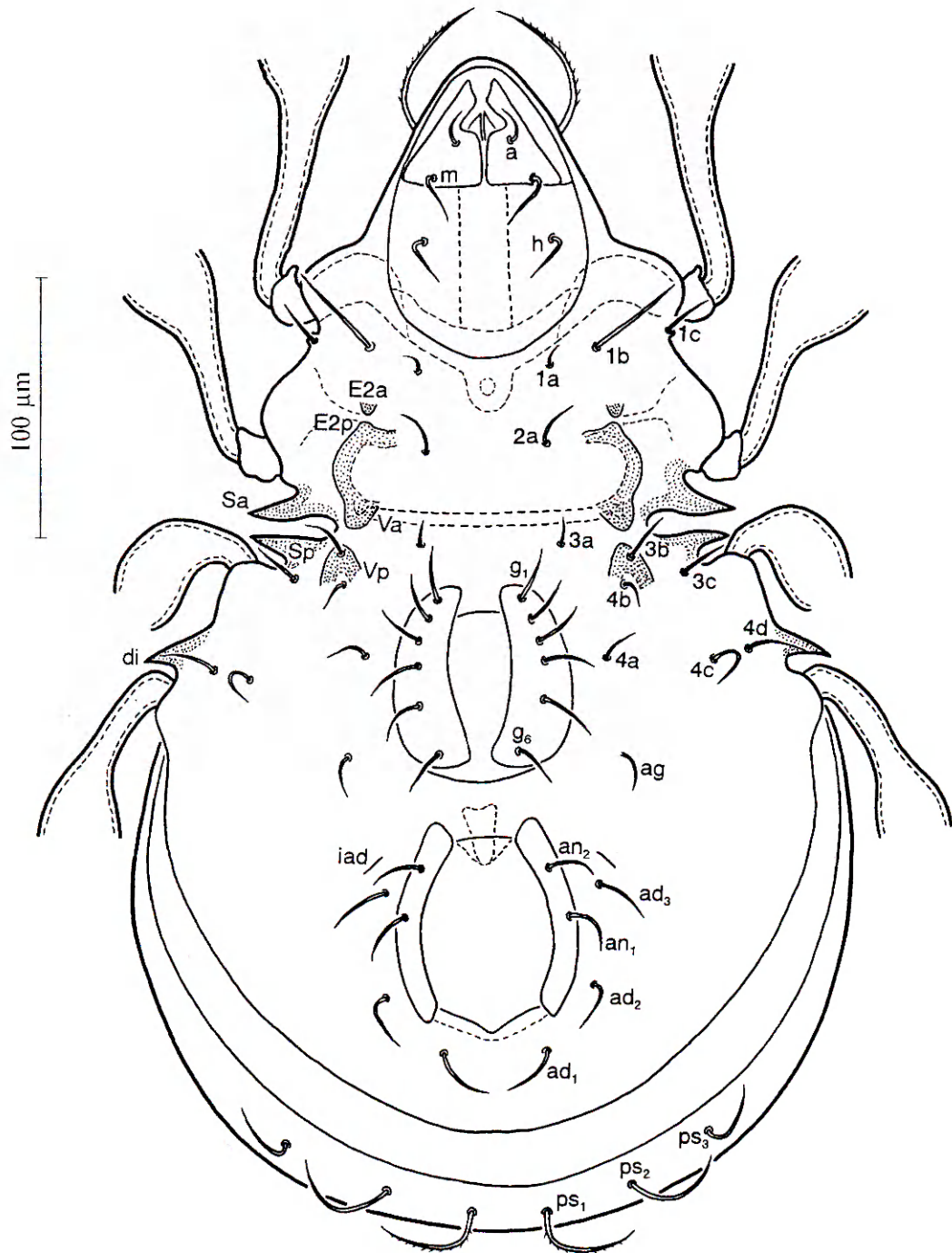


Fig. 2. *Epidamaeus crassisensillatus* sp.n. ventral view.  
Рис. 2. *Epidamaeus crassisensillatus* sp.n., вентрально.

other setae (Figs. 2,3). Notogastral lyrifissures and latero-opisthosomal gland opening inconspicuous in dorsal view (Fig. 1).

**Lateral aspect.** Relatively robust in lateral view, dorso-ventral thickness of hysterosoma in postgenital transect 184–208 (194); thickness of notogaster 87–95 (92). Dorsal edge of notogaster almost evenly rounded, but slightly flattened anteriorly. Rostrum distinctly projected anteroventrally; rostral and lamellar setae inserted on the

lateral side of prodorsum. Exobothridial region and lateral part of podosoma with numerous granules. Exobothridial setae thin, weakly barbed unilaterally, situated posteroventrad of bothridium. Spinae adnatae (*sa*) slightly curved downwards, well extending beyond the anterior margin of notogaster, but not reaching the level of posterior margin of bothridium. Lyrifissures *ia*, *im*, *ih*, and *ips* well developed, *ip* inconspicuous. Latero-opisthosomal gland opening *gla* well de-

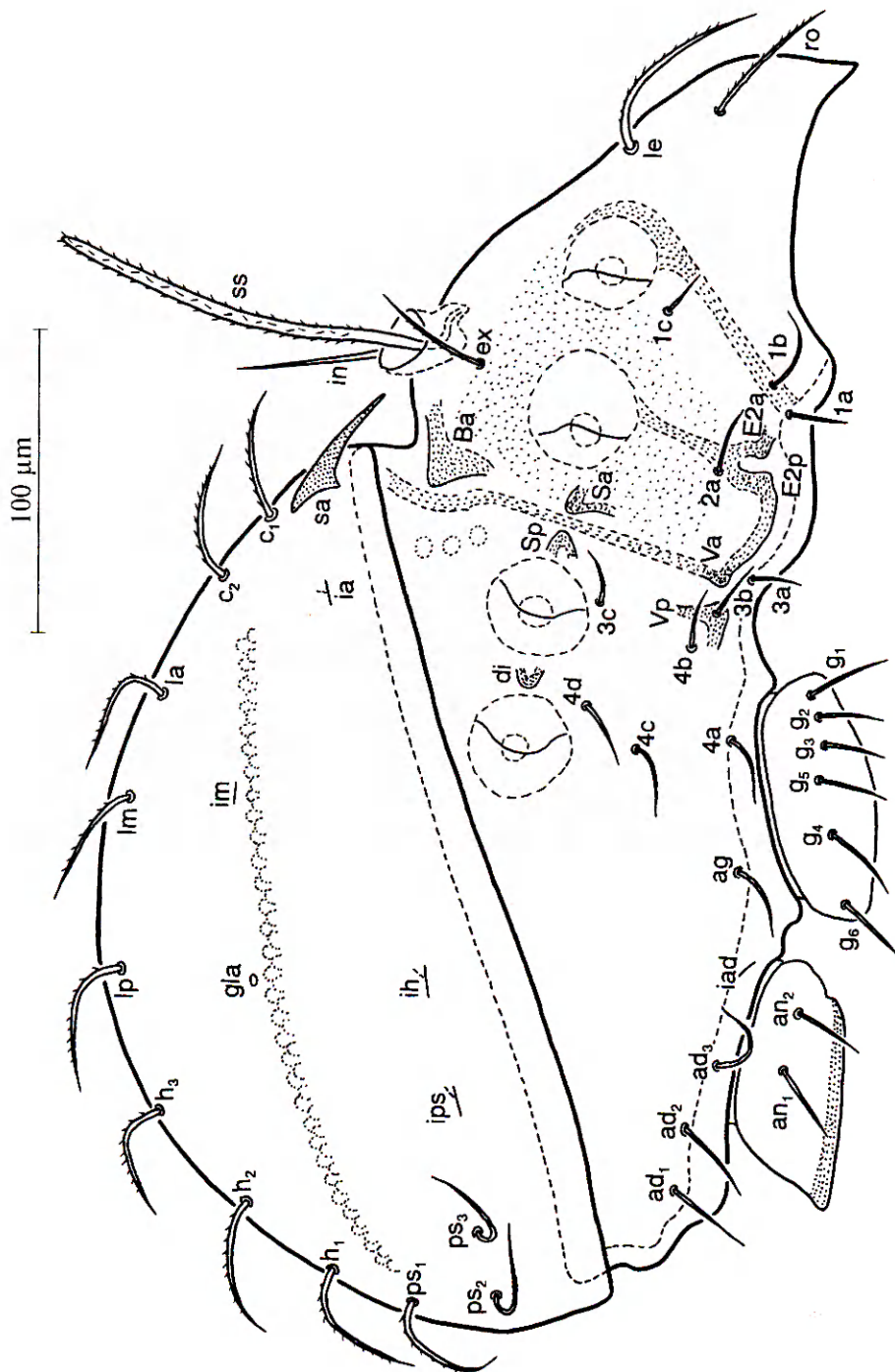


Fig. 3. *Epidamaeus crassisensillatus* sp.n., lateral view.  
Рис. 3. *Epidamaeus crassisensillatus* sp.n., вид сбоку.

veloped, situated at the level between seta *lp* and lyrifissure *ih*. Coxisterna *I*, *II* and *SJ* conspicuously visible. Epimeral tubercles *E2a* and *E2p* situated close to each other; ventrosejugal tubercles *Va* and *Vp*, parastigmatic tubercles *Sa* and *Sp* and discidium *di* well visible in lateral aspect (Fig. 3).

**Gnathosoma.** Infracapitular mentum slightly wider than long, without noticeable microtubercles. Hypostomal setae *h* and *m* long, *a* short, all of them smooth (Fig. 2). Chelicerae relatively

small (88 in length), fixed and movable digits with a few blunt teeth. Setae *cha* conspicuously barbed, *chb* smooth; porose area not evident (Fig. 4a). Palp slender (94), normal for genus, palpal setation: 0-2-1-3-9, including solenidion  $\omega$  (Fig. 4b).

**Ventral aspect.** Tectum of podocephalic fossa not projected, but slightly rounded under trochanter I. Epimeral tubercles *E2a* and *E2p* small, broadly triangular in shape, situated very close to each other. Ventrosejugal tubercles *Va* and *Vp*

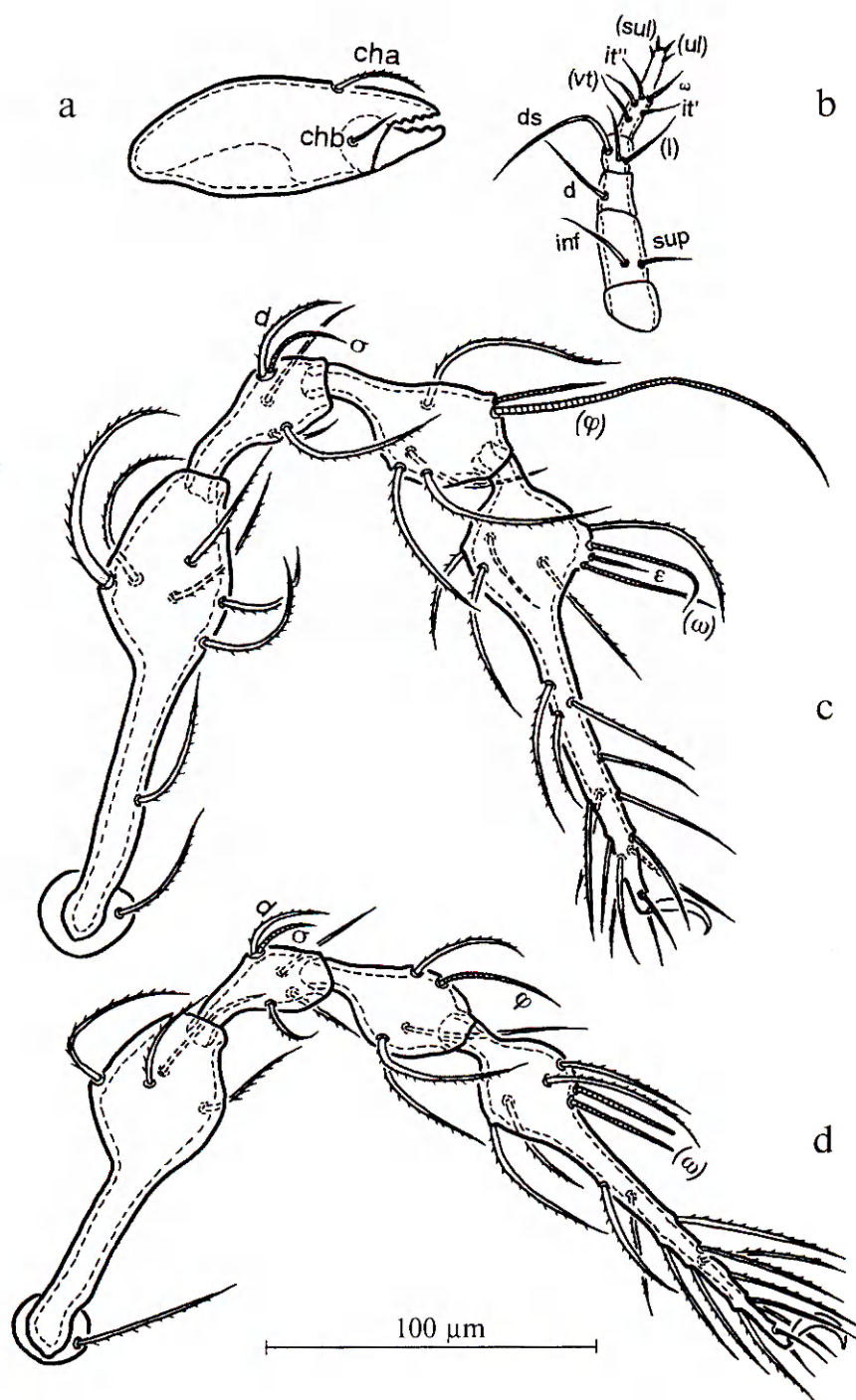


Fig. 4. *Epidamaeus crassisensillatus* sp.n. a — chelicera (right, antiaxial aspect), b — palp (left, antiaxial aspect), c — leg I (right, antiaxial aspect), d — leg II (right, antiaxial aspect).

Рис. 4. *Epidamaeus crassisensillatus* sp.n. а — хелицера, б — пальпа, с — нога I, д — нога II.

strongly developed, large, broadly rounded to subtriangular; *Vp* bearing epimeral seta *3b*. Parastigmatic tubercles *Sa* and *Sp* large, elongated triangular and sharply projected laterally. Tubercles *E2p* and *Va* connected to each other by the arch-like shaped ridge. Discidium *di* well developed, elongate triangular, sharply pointed. Epimeral setae smooth, seta *1b* distinctly longer than others. Setal formula of epimerata: 3-1-3-4.

Structure and setation of ano-genital region normal for genus, all ano-genital setae medium long, smooth. Paired adanal lyrifissures *iad* situated obliquely, at the level a little anterior to adanal setae *ad<sub>3</sub>* (Fig. 2).

**Legs.** All the leg segments with loosely attached adherent debris. Length measurements of leg segments are shown in Table 1. Solenidia  $\sigma$  on genera I-II almost equal or a little shorter than

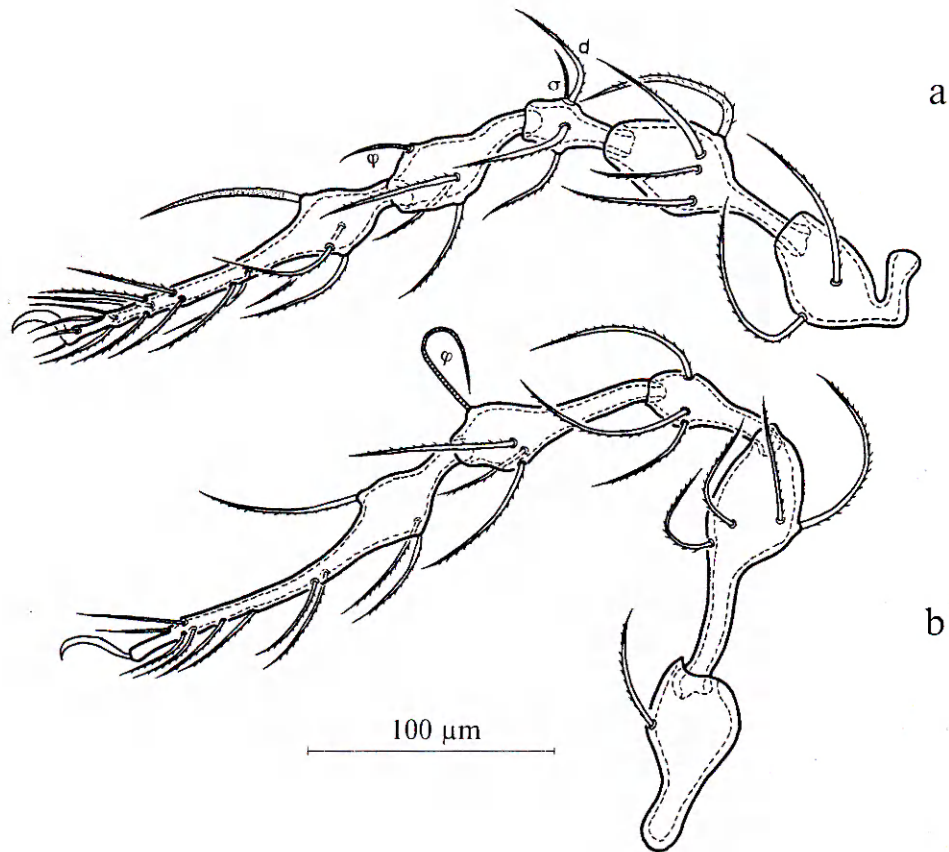


Fig. 5. *Epidamaeus crassisensillatus* sp.n. a — leg III (right, paraxial aspect), b — leg IV (right, paraxial aspect).  
 Рис. 5. *Epidamaeus crassisensillatus* sp.n. a — нога III, b — нога IV.

their associated setae *d*; solenidion  $\sigma$  on genu III about half as long as its associated seta *d*. Tarsi II with 17, III with 16 and IV with 11 setae. Femora I with 7, and II-IV with 4 setae each. Formula of leg setation (including famulus): I (1-7-4-4-20); II (1-4-4-4-17); III (2-4-3-3-16); IV (1-4-3-3-11); formula of solenidia: I (1-2-2); II (1-1-2); III (1-1-0); IV (0-1-0). Structure and setation of legs I-IV as shown in Figs. 4c, d and 5.

Table 1. Length of leg segments of *E. crassisensillatus* sp.n.  
 Таблица 1. Длина сегментов ног у *E. crassisensillatus* sp.n.

Legs	Trochanter	Femur	Genu	Tibia	Tarsus
I	—	147	58	68	167
II	—	109	48	58	147
III	73	96	48	73	172
IV	106	129	63	94	172

**Material examined.** Holotype (female) and two paratypes (male and female): from litter of larch forest (*Larix sibiricus*), Mt. Ih Ereen, Nature Reserve "Uvur Gorhi", District Erdene, Central Province, 48° 10' N., 107° 30' E., 1920 m above sea level, 17.VII.1996, leg. B. Bayartogtokh. Holotype and one paratype (alcohol-preserved) are depos-

ited in the collection of the Department of Zoology, National University of Mongolia, Ulaanbaatar, Mongolia. Second paratype (alcohol-preserved) is deposited in the collection of the Zoological Museum of the Moscow Lomonosov State University, Moscow, Russia.

#### REMARKS

The new species, *E. crassisensillatus*, can be readily distinguished from most of the known species of *Epidamaeus* by the relatively thick and expanded sensilli, the structure of ventral enantiophyses and the presence of fewer setae on femur II and tarsus IV. Among the known species of the genus *Epidamaeus*, only *E. globifer* and *E. michaeli* described by Ewing [1909, 1913] and redescribed by Woolley [1957] from North America, and *E. tritylos* described by Behan-Pelletier and Norton [1983] from the former Soviet Union and Alaska somewhat similar to *E. crassisensillatus* sp.n. in the character of sensilli. However, the first species, *E. globifer*, is different from *E. crassisensillatus* sp.n. in 1) the absence of the postbothridial tubercle *Ba*; 2) the much longer, but smooth notogastral setae; 3) the absence of the ventral tubercles *E2a*, *E2p*, *Va* and *Vp*; 4) the smooth sensillus, rostral and lamellar setae; 5) the laterally curved spinae adnatae, and 6) the much larger

body size. Another North American species, *E. michaeli* is distinguishable from the new species by 1) the absence of the postbothridial tubercle *Ba*; 2) the far longer, but weakly barbed sensilli; 3) the absence of the ventral enantiophyses *E2a* and *E2p*; 4) the far longer notogastral setae of *h* series, and 5) the larger body size. Both the original description and redescription of these two species were very inadequate, and only short description and illustration of dorsal and ventral aspects are available. Therefore, it is not possible to compare the other characters such as structure and setation of legs, lateral aspects, which are now regarded as being important for the definition of *Epidamaeus* species. The last species, *E. tritylos*, is readily distinguishable from *E. crassisensillatus* sp.n. by 1) the presence of well-developed prodorsal tubercles *Da* and *Bp*; 2) the shorter interlamellar setae and sensillus; 3) the short and distally rounded tubercle *Sp*; 4) the different (lateral) direction of the spinae adnatae; 5) proximally widened and not darkly pigmented notogastral setae; 6) the marginal position of notogastral setae; 7) the long, distinctly barbed epimeral and ano-genital setae 8) the absence of the arch-like ridge between tubercles *E2p* and *Va*; 9) the different number of setae on femur II, tarsi I–IV, and 10) far larger body size.

#### ETYMOLOGY

The specific epithet "*crassisensillatus*" refers to the character of thick and distally expanded sensilli.

#### *Epidamaeus brevisetosus* sp.n.

Figs. 6–10.

**Diagnosis.** Relatively small species with general characters of *Epidamaeus*. Propodolateral apophyses *P* absent; postbothridial tubercle *Ba* present, tubercles *Bp*, *Da* and *Dp* absent; sensillus long, slightly tapered distally, distal part flagellate; notogastral setae relatively short, smooth, darkly pigmented (except *ps<sub>1</sub>*–*ps<sub>2</sub>*); posterior three pairs of setae *ps<sub>1</sub>*–*ps<sub>3</sub>* distinctly thinner than the other setae, not darkly pigmented, but lighter in color; spinae adnatae *sa* medium in size, relatively narrow at the base; ventral enantiophyses *E2*, *V* and discidium *di* completely absent; parastigmatic tubercle *Sa* large, sharply pointed laterally, *Sp* small, subtriangular; coxisternal regions III and IV with three setae on each; seta *1a*, *2a* and *3a* slightly shorter than others; all epimeral and ano-genital setae smooth; tarsus II with 19, tarsus III with 16 and tarsus IV with 14 setae; trochanter III with two setae; leg IV (1.2 times) longer than body length.

**Measurements.** Body length 335–361 (345); length of proterosoma 147–152 (150); width of proterosoma 158–164 (162); length of hystero-

soma 218–240 (229); length of notogaster 257–266 (263); width of notogaster 223–234 (227).

**Integument.** Yellowish-brown in color. Dorsal and ventral plates of body and leg segments with relatively thick cerotegument of irregular structure that is conspicuously microtuberculate on all enantiophyses and tubercles, lateral part of podosoma and around leg acetabula. Without exuvial scalps; notogaster, sensillus and all the leg segments with loosely attached adherent debris.

**Prodorsum.** Rostrum rounded in dorsal view. Rostral setae (*ro*) long (38–43), thin, smooth. Lamellar setae (*le*) thin, almost as long as rostral setae (41–46), smooth. Interlamellar setae (*in*) thin, longer (46–54) than two formers, smooth. Exobothridial setae (*ex*) thin, smooth, almost as long as rostral setae (34–39). Sensillus (*ss*) long (125–134), smooth, distinctly tapered distally, distal part flagellate. Bothridium irregular funnel-shaped, with large opening, directed posterolaterad. Postbothridial tubercle *Ba* medium in size, slightly projected posteriorly, relatively close to each other, situated posteromedial of bothridium; tubercles *Bp*, *Da* and *Dp* absent. Propodolateral apophyses *P* absent (Fig. 6).

**Notogaster.** With loosely attached adherent debris. Numerous muscle sigillae found along lateral and posterolateral margins. Almost circular viewed perpendicular to circumgastric scissure; nearly as long as wide. Spinae adnatae (*sa*) medium in size (20–25 (23) in length), with slightly broad base and distally tapered in a fine tip; distance between their bases a little longer than that between tubercles *Ba*. Notogastral setae smooth, moderately short 25–33 (29), but relatively thick. Most setae darkly pigmented, only posterior three pairs of setae *ps<sub>1</sub>*–*ps<sub>3</sub>* lighter in color and slightly thinner than the others. Lyrifissures *im* well visible, other lyrifissures and latero-opisthosomal gland opening inconspicuous in dorsal view (Fig. 6).

**Lateral aspect.** Very robust in lateral view, dorso-ventral thickness of hysterosoma in post-genital transect 188–195; thickness of notogaster 87–94. Dorsal edge of notogaster almost evenly rounded, but slightly flattened anteriorly. Rostrum slightly projected anteroventrad; rostral and lamellar setae inserted on the lateral side of prodorsum. Exobothridial region and lateral part of podosoma without microtubercles or granules. Exobothridial setae thin, smooth, situated ventrad of bothridium. Spinae adnatae (*sa*) slightly curved downwards, almost reaching the anterior margin of notogaster. Lyrifissures *im*, *ih* and *ips* well developed, *ia* and *ip* inconspicuous. Latero-opisthosomal gland opening *gla* well developed, situated at the level between seta *lp* and lyrifissure *ips* (Fig. 8).



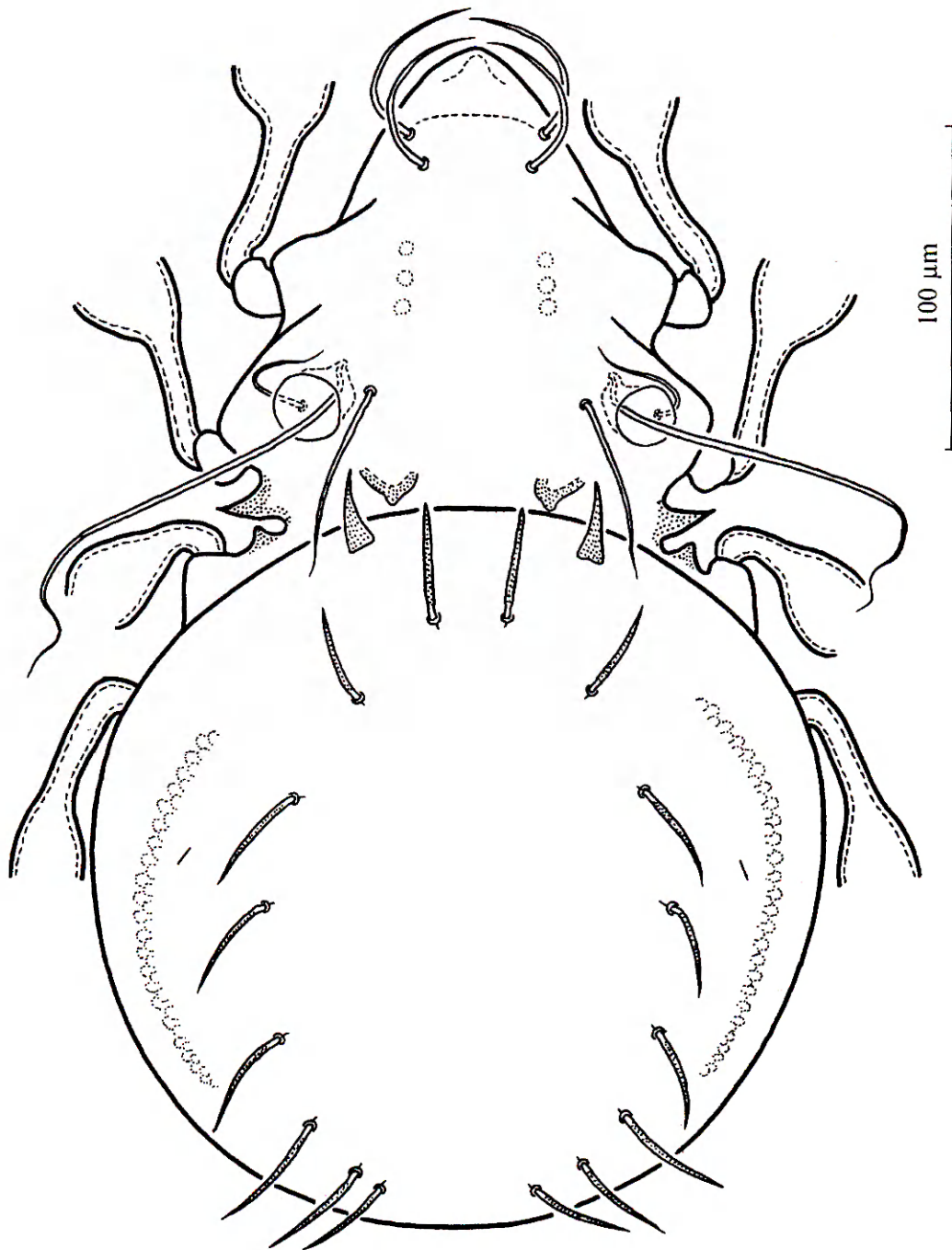


Fig. 6. *Epidamaeus brevisetosus* sp.n., dorsal view.  
Рис. 6. *Epidamaeus brevisetosus* sp.n., дорсально.

**Gnathosoma.** Infracapitular mentum slightly wider than long, without noticeable microtubercles. Hypostomal setae *h* and *m* long, *a* short, all of them smooth (Fig. 7). Chelicerae normal for genus (78 in length), fixed and movable digits with a few blunt teeth. Setae *cha* and *chb* conspicuously barbed, porose area present (Fig. 9a). Palp slender (81), normal for genus, palpal setation: 0-2-1-3-9, including solenidion  $\omega$  (Fig. 9b).

**Ventral aspect.** Tectum of podocephalic fossa not projected, but slightly rounded under tro-

chanter I. Epimeral tubercles *E2a* and *E2p* and ventrosejugal tubercles *Va* and *Vp* completely absent. Parastigmatic tubercle *Sa* large, elongated triangular and sharply projected laterally; *Sp* small subtriangular. Discidium completely absent. Epimeral setae smooth, setal formula of epimerata: 3-1-3-3. Structure and setation of ano-genital region normal for genus, anal and adanal setae slightly longer than genital and aggenital setae. Paired adanal lyrifissures *iad* situated obliquely, at the level a little anterior to anal setae *an*<sub>2</sub> (Fig. 7).

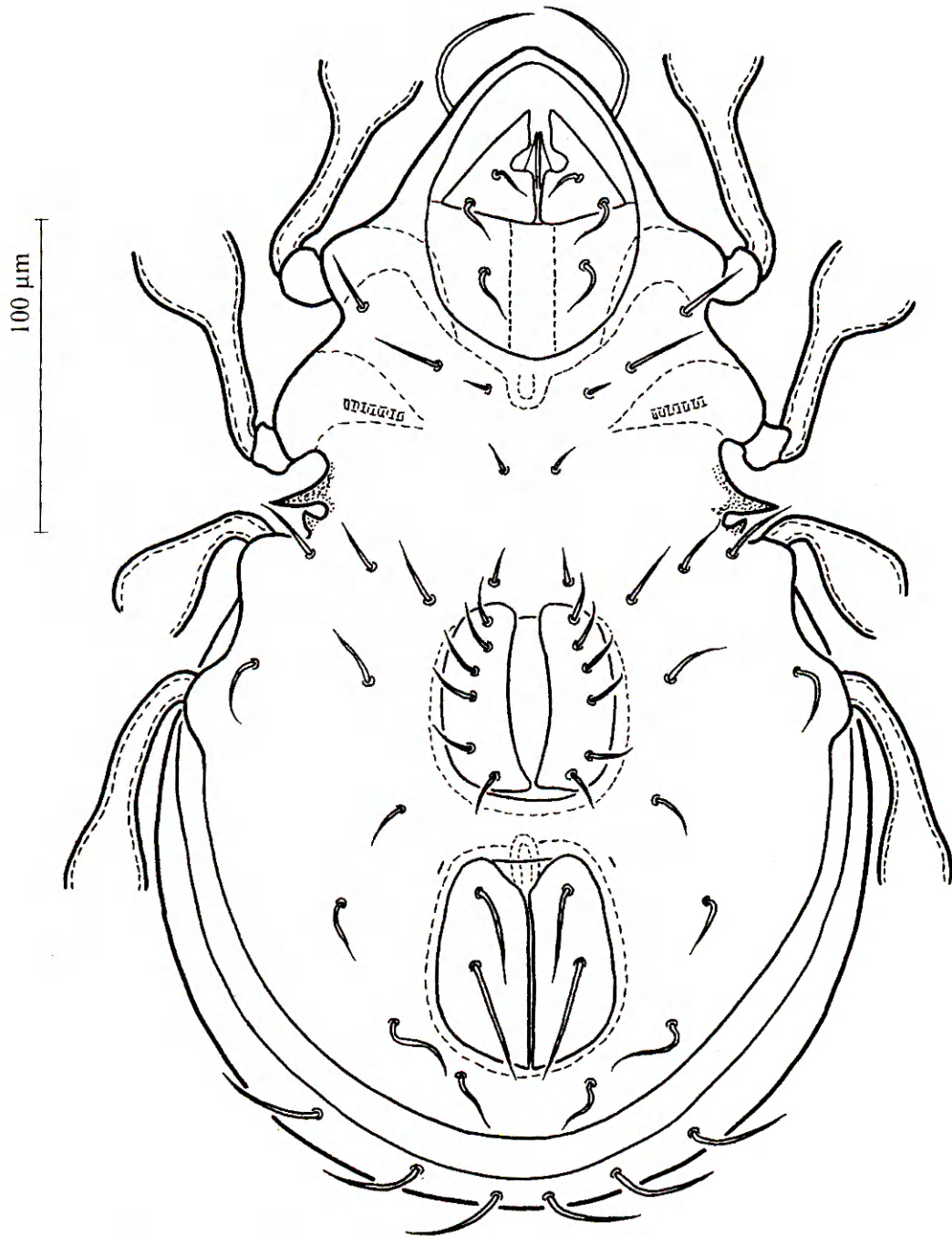


Fig. 7. *Epidamaeus brevisetosus* sp.n., ventral view.  
Рис. 7. *Epidamaeus brevisetosus* sp.n., вентрально.

**Legs.** All the leg segments with loosely attached adherent debris. Length measurements of leg segments are shown in Table 2. Solenidia  $\sigma$  on genua I–III almost equal or a little shorter than their associated setae *d*. Tarsi II with 19, III with 18 and IV with 14 setae. Femora I and II with 7, III and IV with 4 setae each. Setae *d* on femora I–IV thicker than other setae and darkly pigmented. Formula of leg setation (including famulus): I (1–7–4–4–20); II (1–7–4–4–19); III (2–4–3–3–18); IV (1–4–3–3–14); formula of solenidia: I (1–2–2); II (1–1–2); III (1–1–0); IV (0–1–0).

Structure and setation of legs I–IV as shown in Figs. 9c, d and 10.

Table. 2. Length of leg segments of *E. brevisetosus* sp.n.  
Таблица 2. Длина сегментов ног *E. brevisetosus* sp.n.

Legs	Trochanter	Femur	Genu	Tibia	Tarsus
I	—	116	43	58	126
II	—	94	43	45	99
III	53	63	40	53	109
IV	91	83	51	71	132

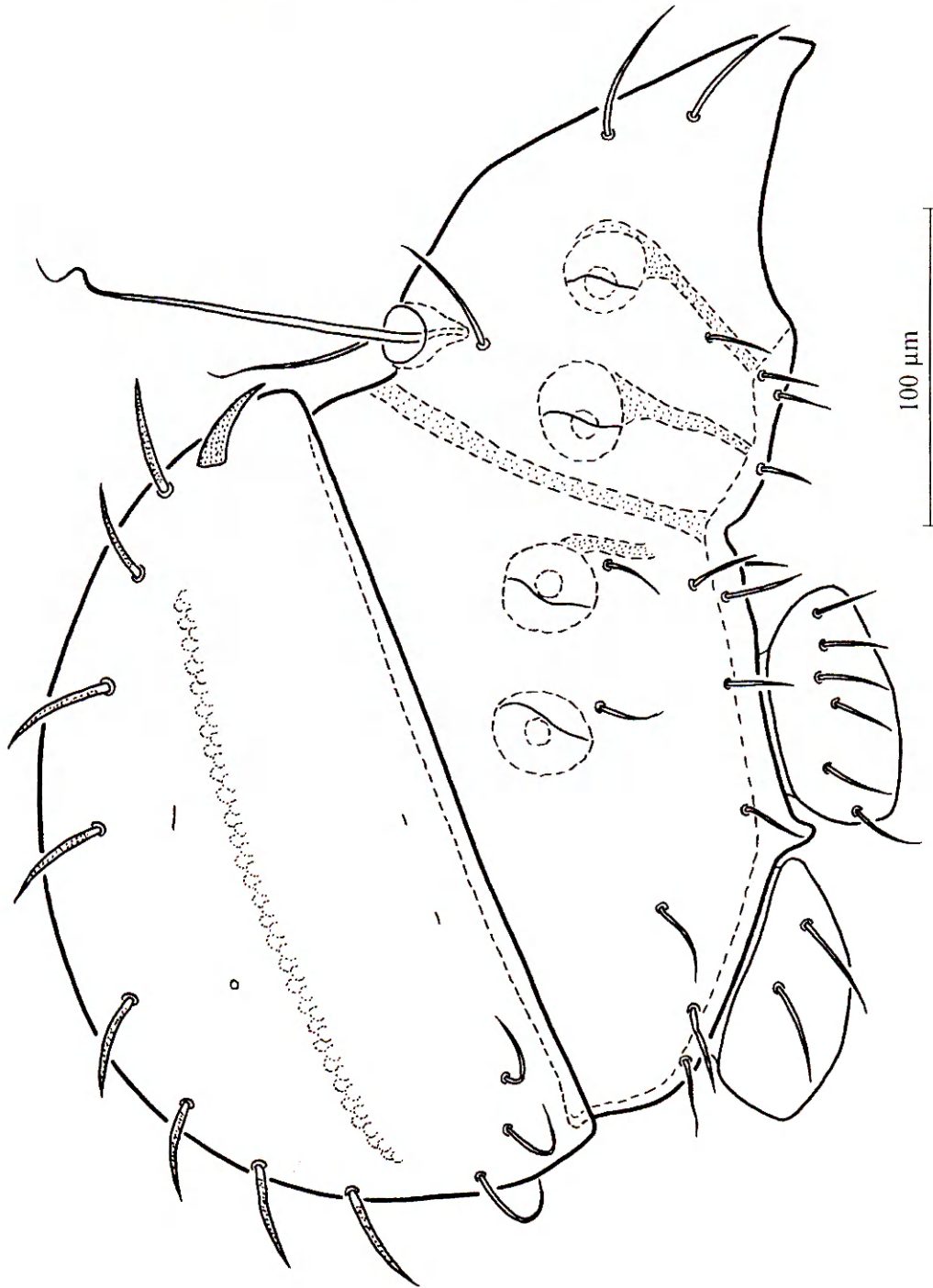


Fig. 8. *Epidamaeus brevisetosus* sp.n., lateral view.  
Рис. 8. *Epidamaeus brevisetosus* sp.n., вид сбоку.

**Material examined.** Holotype (female) and paratype (male): from litter of birch forest (*Betula plataphylla*), Mt. Orog Yamaat, Nature Reserve "Uvur Gorhi", District Erdene, Central Province, 48° 10' N., 107° 30' E., 1750 m above sea level, 18.VII.1996, leg. B. Bayartogtokh. The holotype (alcohol-preserved) is deposited in the collection of the Department of Zoology, National University of Mongolia, Ulaanbaatar, Mongo-

lia, and a paratype (alcohol-preserved) is deposited in the collection of the Zoological Museum of the Moscow Lomonosov State University, Moscow, Russia.

#### REMARKS

The new species, *Epidamaeus brevisetosus* sp.n., is easily distinguishable from most known species of *Epidamaeus* in the character of notogas-

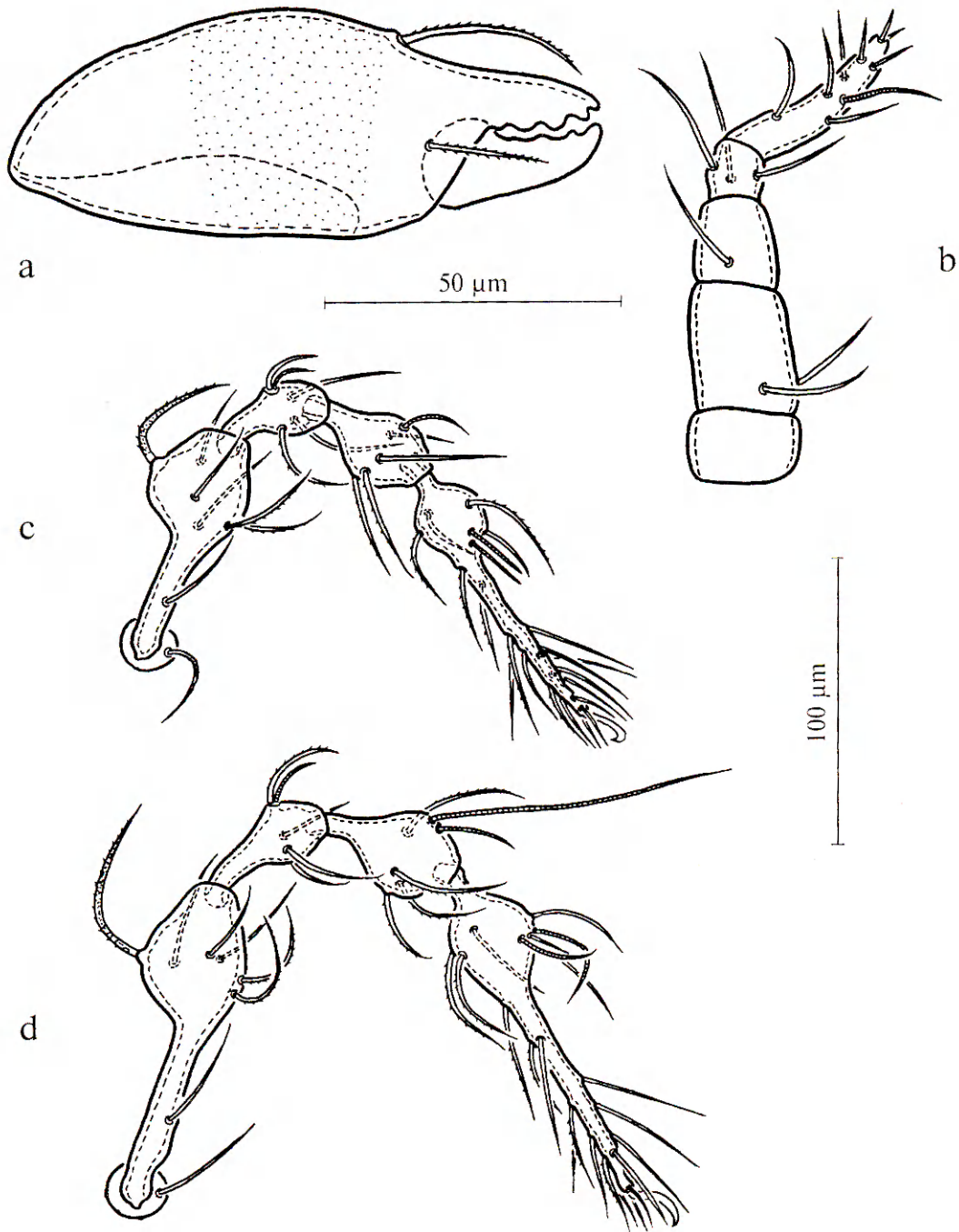


Fig. 9. *Epidamaeus brevisetosus* sp.n. a — chelicera (right, anti-axial aspect), b — palp (left, anti-axial aspect), c — leg I (right, anti-axial aspect), d — leg II (right, anti-axial aspect).

Рис. 9. *Epidamaeus brevisetosus* sp.n. а — хелицера, б — пальпа, с — нога I, д — нога II.

tral setae, sensillus, the absence of the discidium and ventral enantiophyses *E2* and *V*. The complete absence of the ventral tubercles *E2a*, *E2p*, *Va*, *Vp* and discidium *di* is the unique feature of the new species, because most of the known species of *Epidamaeus* have at least one pair of tubercles or discidium on the ventral plate. In spite of these characters, in the shape of sensillus and notogastral setae, the following species are somewhat similar to the new species. They are *E.aborigensis*,

*E.koyukon* described by Behan-Pelletier and Norton [1985] from the former Soviet Union, Canada and Alaska. However, both species are different from *E.brevisetosus* sp.n. in 1) the absence of the postbothridial apophyses *Ba*; 2) the short, smooth interlamellar setae; 3) the large and strongly developed tubercles *Sp*; 4) the strongly developed discidium; 5) the different number of setae on femora II–IV, tarsi II–IV, and 6) much larger body size.

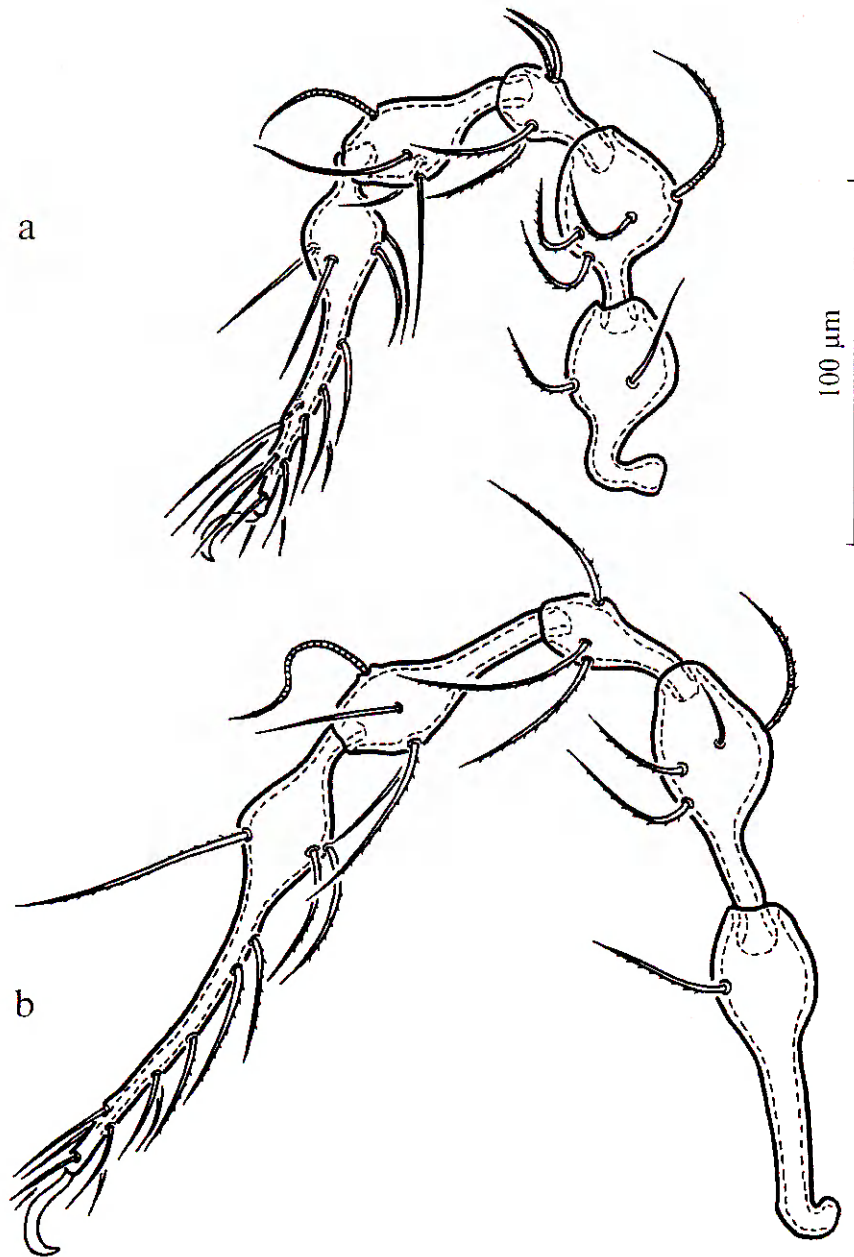


Fig. 10. *Epidamaeus brevisetosus* sp.n. a — leg III (right, paraxial aspect), b — leg IV (right, paraxial aspect).  
Рис. 10. *Epidamaeus brevisetosus* sp.n. a — нога III, b — нога IV.

#### ETYMOLOGY

The specific epithet “*brevisetosus*” refers to the character of short, but stout notogastral setae.

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