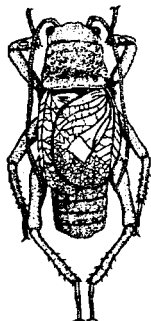


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## A REVIEW OF THE PALAEARCTIC GENUS *MEZORHIZOGLYPHUS* KADZHAJA, 1966 (ACARI, ACARIDAE)

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A redescription of genus *Mezorhizoglyphus* Kadzhaja and key to related genera are given. *M. bratskensis* sp. n. (Siberia) is described and *M. colchicus* Kadzhaja, 1966 is redescribed.

KEY WORDS: Acaridae, mites, *Mezorhizoglyphus*, new species, Siberia, Far East of Russia.

**П.Б.Климов. Обзор клещей палеарктического рода *Mezorhizoglyphus* Kadzhaja, 1966 (Acarı, Acaridae) // Дальневосточный энтомолог. 1996. N 25. С. 1-8.**

Приводится переписание рода *Mezorhizoglyphus* Kadzhaja и определительная таблица близких к нему родов. Описан *M. bratskensis* sp. n. из Сибири и переписан малоизвестный *M. colchicus* Kadzhaja, 1966.

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## INTRODUCTION

The genus *Mezorhizoglyphus* was known by *M. colchicus* Kadzhaja only. New species described below was discovered by author in Eastern Siberia, while *M. colchicus* was found in Russian Far East also. The diagnosis of the genus and the type species were incomplete. In this paper generic diagnosis is specified and added, *M. bratskensis* sp. n. is described and *M. colchicus* is redescribed. The holotype and paratype of *M. bratskensis* sp. n. are deposited in the Zoological Museum of the Moscow State University, other material is kept in author's collection.

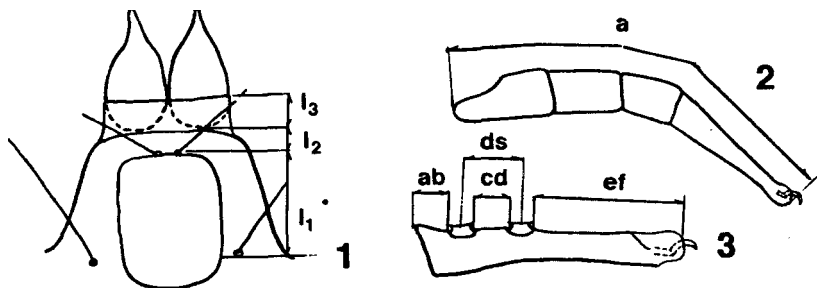
The term of body parts and leg Chaetotaxy follow to Volgin (1975) with some corrections (Fig. 18). Metric characters of male tarsus IV follow to Zachvatkin (1941) (Fig. 3); the same of leg as in Fig. 2. Measurements are given in micrometers.

### Genus *Mezorhizoglyphus* Kadzhaja, 1966

Type species: *Mezorhizoglyphus colchicus* Kadzhaja, 1966 by original designation.

**REDESCRIPTION.** Idiosoma short, roundish oval. Propodosoma with three pair of setae; *ve* and *sce* long, *sci* weak-developed. Propodosomal shield extending beyond the *sce*-level. Sejugal furrow of the adults smoothed outside. Histerosoma with a normal setal set or without *hi*. Setae *d*<sub>1</sub>, *d*<sub>2</sub>, *hi* (if they developed) and *la* shorter than other setae. Genital "suckers" long and thin. Epimeritae II joined with epimerae III. Male *ad*<sub>2</sub>, *sat*, *ad*<sub>3</sub> near the anal suckers, the latter comparatively large, with large central disks. Female anus not extending to edge of body. Genital pore subterminal, W-shaped, located in the small platelet; *ad* and *a* in three pairs. Legs are of medial size. Legs III and IV not reaching the hind level of Idiosoma. Genua and tibiae approximately of equal length. Tarsi III, IV longer than I, II ones. Tarsi I, II: *d* absent; *e* robust, spiniform as the distidorsal spines; *e* filiform; *i* short; distiventral spines sharply asymmetrical, while those on tarsi III, IV almost equal (but internal spines slightly longer than external ones); dilated setae absent. Male Solenidion  $\phi$  on tibia IV short and thick. Ventral parts of pretarsi turned into acute processes, which protruding to the half claws or more. Male tarsal suckers may be variously arranged. Legs Chaetotaxy is as follows: 1-1-2+(2)-2+(1)-12+(3+1), 1-1-2+(1)-2+(1)-12+(1), 1-0-1+(1)-1+(1)-10, 1-1-0-1+(1)-10,

**REMARKS.** One of main characters of genus *Mezorhizoglyphus* is position of *vi*: "*vi* located approximately at the half distance between propodosomal anterior edge and *sce*-level", perhaps, was erroneous (Kadzhaja, 1966; Volgin, 1975). The real propodosomal edge in 2 females of *M. colchicus*



Figs. 1-3. Diagram of body parts measuring. 1) propodosoma and gnathosoma. Measured part explained in the text; 2) leg, *a* - length from the proximal end of tarsus to the distal end of pretarsus along the dorsal margin; 3) male tarsus IV.

in my material is transparent, weak-visible, turns into paracheliceral "collar" (Fig. 1). Probably, previous authors understood the distance  $l_2+l_3$  instead of  $l_2$ , i.e.,  $l_2+l_3/l_1$  in *M. colchicus* (Kadzhaja, 1966; Volgin, 1975), 0.75-0.80 in *M. bratskensis*; 0.71-0.76 in *M. colchicus* (my material). The real ratio  $l_2/l_1$  measured in Kadzhaja's figure is approximately 0.5 (0.3 in my material of *M. colchicus*), does not much differ from other Acaridae and therefore cannot be considered a particular character of this genus. The key to related genera is given below [the data on *Rhizoglyphoides* and *Boletacarus* are taken from Volgin (1978) and Volgin & Mironov (1980), respectively].

### Key to Genera related to *Mezorhizoglyphus*

1. Propodosomal shield not extending beyond the level of *sce* ..... 2
- Propodosomal shield extending beyond the level of *sce*. - Genital "suckers" digitiform. Epimeritae II joined with epimerae III. Ventral process of pretarsi (legs III, IV) developed (unknown in *Boletacarus*) ..... 3
2. Genital "suckers" short, not digitiform. Male solenidion *fi* (tibia IV) short, thick, tarsal suckers placed at distal part of tarsus,  $ad_2$  longer than diameter of anal suckers. Female anus drawn together to end of body .....  
..... *Rhizoglyphus* Claparede, 1896
- Genital "suckers" digitiform. Male solenidion *fi* (tibia IV) filiform, tarsal suckers' in middle part of tarsus,  $ad_2$  shorter than diameter of anal suckers. Female anus moved off the end of body for its length .....  
..... *Rhizoglyphoides* Volgin, 1978

3. Anal suckers located before posterior anal edge .....  
 ..... *Boletacarus* Volgin et Mironov, 1980  
 - Hind edge of anal suckers located on line of posterior anal edge ...  
 ..... *Mezorhizoglyphus* Kadzhaja, 1966

***Mezorhizoglyphus bratskensis* Klimov, sp. n.**

Figs. 4-8

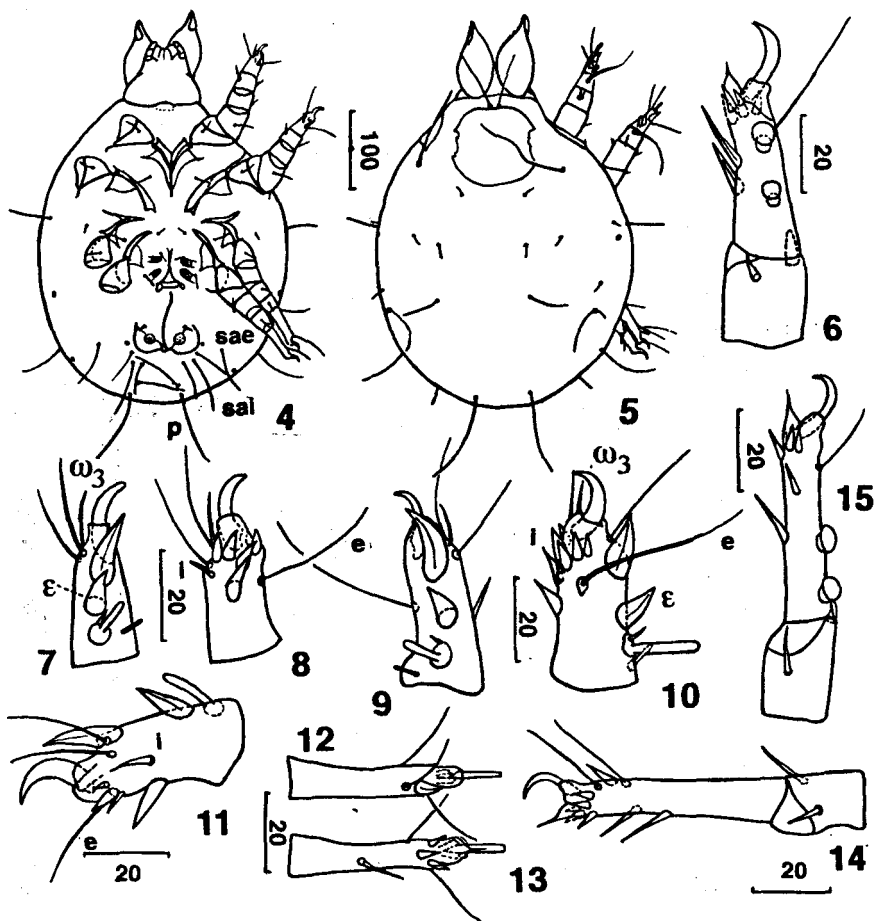
MATERIAL. Holotype - male, Russia: Irkutsk region, Bratsk, Energetik, suburban mixed forest, decaying bracket-fungus on fallen birch, 15.X 1995 (P. Klimov). Paratype - male with the same label as holotype. Holotype and paratype mounted on the same slide.

ETYMOLOGY. The species epithet is derived from the type locality, "Bratsk".

DESCRIPTION. MALE. Idiosoma roundish oval, 400 long, 329 wide. Total length 495. Terminal end of Granjean's organ not divided. Supracoxal seta short, not thick. Propodosomal shield extending beyond the level of *sce*. Number of hysterosomal setae complete; *hi*, *d*<sub>1</sub>, *d*<sub>2</sub>, *la*, *sh* shorter than other setae. Length of some hysterosomal setae: *vi* 71, *sce* 134, *d*<sub>1</sub> 10, *d*<sub>2</sub> 9, *d*<sub>3</sub> 62, *d*<sub>4</sub> 134, *he* 63, *hi* 10, *la* 17, *lp* 73, *sae* 81, *sai* 99, *p* 99, *ad*<sub>2</sub> 53, *ad*<sub>3</sub> 63. Distance between the setae: *sce-sce* 181, *sci-sci* 71, *d*<sub>1</sub> - *d*<sub>1</sub> 188, *d*<sub>2</sub> - *d*<sub>2</sub> 90, *d*<sub>3</sub> - *d*<sub>3</sub> 95, *d*<sub>4</sub> - *d*<sub>4</sub> 73. Setae *d*<sub>1</sub> placed far from lateral edge of hysterosoma. Sternum long. Epimeritae II joined with epimerae III, directed obliquely to the front. Distal segments of genital "suckers" brown. Penis not projecting beyond the "socle". Anus drawn with the genital apparatus. Anal suckers directed obliquely to anus, their posterior margins near the hind anal edge. Central disk of the suckers large, with located around pores. Anal pores and *sae* placed before posterior edge of anal suckers; *sai* located between *ad*<sub>2</sub> and *ad*<sub>3</sub> slightly longer than *ad*<sub>2</sub>. Bases of *ad*<sub>2</sub>, *sai*, *ad*<sub>3</sub> formed two arcs on each side beyond the anal suckers; *p* comparatively short, located ventrally near the apex of body. Length of legs I-IV=130,122,105,134, respectively. Length ratios of legs segments as 2.3:1.0:1.0:1.8, 2.5:1.0:1.0:1.9, 1.8:1.0:1.0:2.3, 1.8:1.0:1.0:2.1. Solenidion w3 short, noticeable not reaching to tip of claw. Tarsal suckers are in distal part of tarsus (Fig. 6). Distance ab 12.8, cd 11.6, dc 15.9, ef 14.3 (tarsus IV 47.4 long); ef/ab 1.1, ab/cd 1.1. Ventral processes of tarsi (legs III, IV) ending near the middle of claw. The size range of idiosoma and total length is as follows (n=2): idiosoma 337-400 long, 284-329 wide; total length of body 400-495.

Female and hypopus unknown.

DISCUSSION. The males of *M. bratskensis* differ from *M. colchicus* by



Figs. 4-15. *Mezorhizoglyphus*. 4-8) *M. bratskensis* sp n., male: 4) ventral view; 5) dorsal view; 6) tarsus and tibia IV; 7, 8) tarsus I, dorsal and ventral view; 9-15) *M. colchicus* Kadzhaja, 9-14) female, 15) male: 9, 10) tarsus I, dorsal and lateral view; 11) tarsus II; 12, 13) tarsus III, dorsal and ventral view; 14, 15) tarsus and tibia IV.

short supracoxal seta, well-developed *hi*, central disks of anal suckers with pores, position of tarsal suckers in proximal part of tarsus and arrangement of  $d_1$ ,  $d_4$ ,  $p$ ,  $ad_1$ ,  $ad_2$ ,  $sai$ ,  $sae$  (see these characters in the redescription of *M. colchicus* below).

DISTRIBUTION. Russia (Eastern Siberia).

### ***Mezorhizoglyphus colchicus* Kadzhaja, 1966**

Figs. 9-28

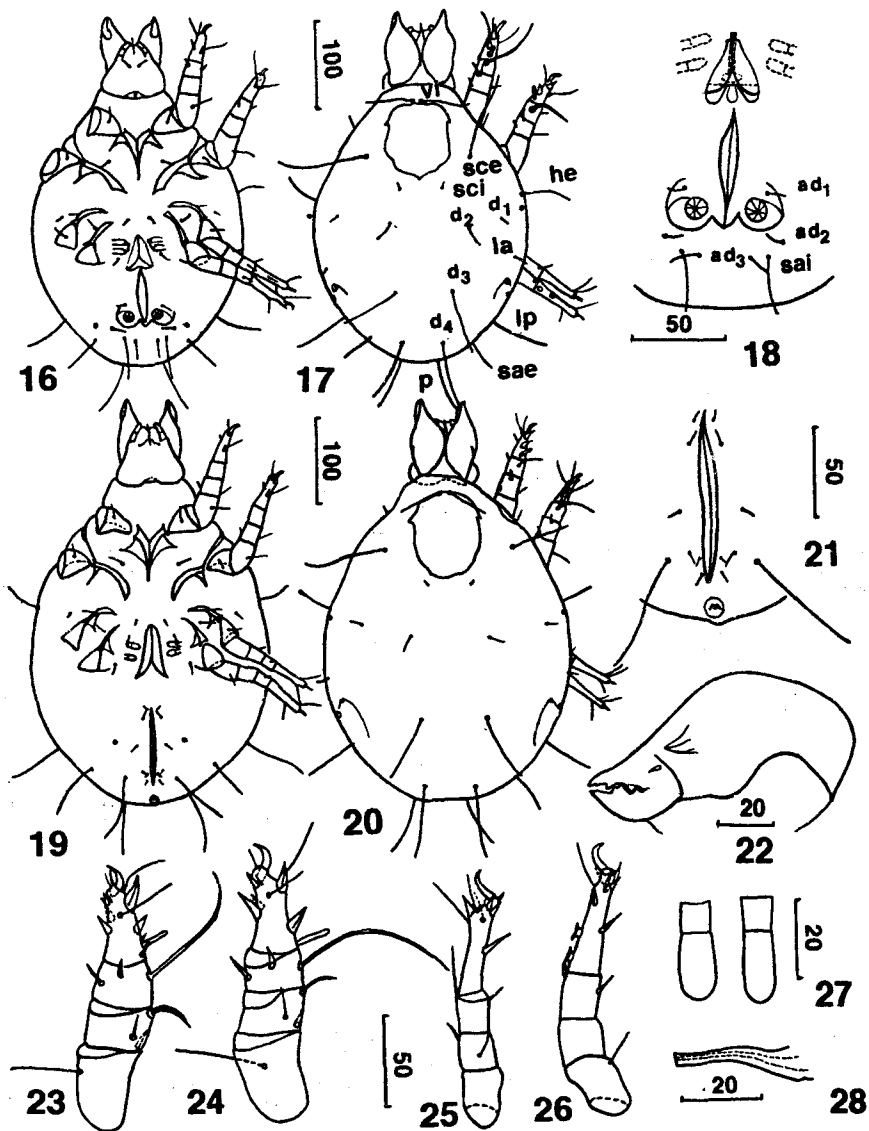
*Mezorhizoglyphus colchicus* Kadzhaja, 1966: 1257; Figs. 1. 2; Volgin, 1975: 439, fig. 1159.

MATERIAL. Russia: Vladivostok, environs of Botanical Garden, decaying bracket-fungus on fallen birch, 12.V 1995, 1 male, 2 females (P.Klimov); same locality, 30.VI 1995, 2 females (P.Klimov); Bratsk, Energetik, suburban mixed forest, decaying bracket-fungus on fallen birch, 15.X 1995, 2 males (P.Klimov).

REMARK. This species was described from Georgia (Adjaria). Volgin (1975) recorded *M. colchicus* from Magadanskaya oblast'. Original description was incomplete and redescription of species is given below.

REDESCRIPTION. Cheliceral shape is typical (Fig. 22). Cheliceral seta short, narrow-conical; internal process of chelicera slightly sharpened. "Lingula" of gnathosoma long, transparent, its terminal part projecting beyond gnathosoma. Apex of Granjean's organ divided. Supracoxal seta long, filiform. Setae *sci*,  $d_1$ , *la*, *sh* weakly developed, other setae of media] length or short; *hi* probably absent;  $d_1$  placed near the lateral edge of hysterosoma. Epimeritae II joined with epimerae III, directed approximately perpendicularly to median line of body. Distal segments of genital "suckers" transparent as the rest ones. Dorsal solenidia of genu approximately equal in size, drawn together (look like one). Pretarsal processes (legs III, IV) scarcely reaching the tip of claws.

MALE. Size range of total length and idiosoma is as follows (n=3): total length 399-402, idiosoma 323-329 long, 248-257 wide. Total idiosomal length/width=1.6. Length of some setae: *vi* 65, *sce* 85,  $d_2$  24,  $d_3$  63,  $d_4$  77, *he* 63, *lp* 72, *sae* 54, *sai* 67, *p* 72,  $ad_2$  11,  $ad_3$  40 (idiosoma 329 long, 246 wide). Anal suckers comparatively large, directed almost perpendicularly to anus; central disk large, sclerotized, with radial ornamentation. Setae  $ad_1$  short;  $ad_2$ , *sai*,  $ad_3$  arranged not far from the suckers, their bases forming a concave line. Anal pore placed approximately near the hind edge of suckers. Distal part of penis protruded from "socle". Penis double curved - at middle and then hardly near tip. Besides widened basal part, channel of penis is approximately equal diameter. Length of legs I-IV=119; 121; 111; 126, respectively (idiosoma 329 long). Length ratios



Figs. 16-28. *Mezorhizoglyphus colchicus* Kadzhaja. 16-18, 22-28) male, 19-21) female: 16) ventral view; 17) dorsal view; 18) genitoanal region; 19) ventral view; 20) dorsal view; 21) anus; 22) chelicera; 23-26) legs I-IV, respectively; 27) genital "suckers" ; 28) penis.

of legs segments: 2.0:1.0:1.0:1.7, 2.3:1.1:1.0:2.0, 1.9:1.1:1.0:2.8, 1.6:1.1:1.0:2.7. Tarsal suckers occupy the distal half of tarsus.

FEMALE. Size range of total length is as follows (n=4): 435-501. Total length/idiosomal width=1.6-1.7. Length of some setae: *vi* 63, *sce* 135, *d*<sub>2</sub> 36, *d*<sub>3</sub> 25, *d*<sub>4</sub> 88, *he* 101, *la* 14, *lp* 85, *sae* 72, *sai* 86, *p* 81 (idiosoma 380 long, 279 wide). Anus moved off the hind edge of body (Fig. 21), furnished with six pairs of setae (3 pairs of *ad* and 3 pairs of *a*), arranged as follows: two pairs placed near the front; one pair near the middle; three pairs at hind edge of anus. The *sai* located slightly before of the posterior anal level, *p* located at hind edge of body. Genital pore weakly W-shaped, placed in genital well-sclerotized platelet. Length of legs I-IV=121; 119; 109; 126, respectively (idiosoma 380 long). Length ratios of legs segments: 2.1:1.1:1.1:1.9; 2.3:1.2:1.0:2.1; 1.8:1.2:1.0:2.7; 1.7:1.2:1.0:2.9.

DISTRIBUTION. Georgia (Adjaria), Russia (Irkutskaya oblast', Magadan-skaya oblast', Primorskii krai).

## ACKNOWLEDGMENTS

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