

NEW SPECIES OF PTYCTIMOUS ORIBATID MITES
FROM THE NEOTROPICAL REGION*

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Descriptions of 4 new species of ptyctimous mites from Neotropical region are dedicated to an outstanding Hungarian scientist Prof. dr. J. BALOGH: *Austrophthiracarus baloghi* sp. n. from Chile, *Arphthiarius baloghi* sp. n. from Cuba, *Protrophthiracarus baloghi* sp. n. and *Notrophthiracarus baloghi* sp. n. from Brazil.

Key words: Acari, *Arphthiarius*, *Austrophthiracarus*, *Protrophthiracarus*, new species, Chile, Cuba, Brazil

INTRODUCTION

The outstanding Hungarian zoologist and ecologist Professor J. BALOGH, who would have celebrated his 90th birthday this year, was a particularly renowned authority in oribatid mites. His highly appreciated contributions to science include many descriptions of new species from all parts of the world, classification systems proposed, keys for identification of genera, and zoogeographical theses.

In the beginning of the 1980s my interest was directed to a rich group of Oribatida – ptyctimous mites. Since that time Professor J. BALOGH has been for me someone to look up to. I carefully followed his work, which he continued with another well-known Hungarian acarologist Dr. S. MAHUNKA, and after some time, with his son P. BALOGH. They have brought substantial contribution to recognition of oribatid mite species from different zoogeographic regions: Ethiopian, Australian and most of all, Neotropical region, including Argentina, Bolivia, Brazil, Chile, Colombia and Paraguay.

In 1987 J. BALOGH together with his son published a fundamental work summing up the knowledge of ptychoid Mixonomata of the Neotropical region, including identification keys to over 50 species and almost 15 genera of Phthiracaroidea and to the 8 genera and over 15 species of the Euphthiracaroidea, rich in illustrations much helpful in identification.

To honour late Professor BALOGH I would like to dedicate to him descriptions of four new species of ptyctimous mites from poorly studied regions of the Neotropics.

* This paper dedicated to the memory of late Prof. JÁNOS BALOGH

The material includes the specimens, identified by the author, from following museums and collections: The Field Museum, Chicago, Department of Entomology, Natural History Museum, London, prof. Dr. R. SCHUSTER (Graz) and dr. J. STARÝ, (České Budějovice) collections. Selected specimens were subjected to microscopic morphological analysis and described.

Explanations and abbreviations – Formula of genital setae 4+2: 3 – genital setae inserted in two rows, one of them forms setae g_{6-9} distant from inner (paraxial) margin of genito-aggenital plate, the second row forms setae g_{4-5} near the inner (paraxial) one with setae g_{1-3} situated near in progenital position, on the margin of tectum *kag*.

In the chaetome (setation) of Phthiracaroida legs the number of solenidia is given in parenthesis and follows the number of simple setae; the complete or normal chaetome is: I: 1-4-2(2)-5(1)-17(3)-1, II: 1-3-2(1)-3(1)-12(2)-1, III: 2-2-1(1)-2(1)-10(0)-1, IV: 2-2-2(0)-2(1)-10(0)-1; if one or more setae are absent chaetome is reduced or incomplete.

in – interlamellar setae; *le* – lamellar setae; *ro* – rostral setae; *ex* – exobothridial setae.

DATE – Department of Animal Taxonomy and Ecology, Poznań; FMHD – The Field Museum, Chicago; NHM – Department of Entomology, Natural History Museum, London.

Austrophthiracarus baloghi sp. n.

(Figs 1–7)

Description – Measurements of holotype: prodorsum: length 369, width 268, height 141, sensillus 88, setae: *in* 210, *le* 132, *ro* 63, *ex* 20; notogaster: length 727, width 505, height 454, setae: c_1 139, h_1 114, ps_1 139; genitoaggenital plate 177x141, anoadanal plate 303x177.

Species with neotrichy of notogastral and adanal setae. Colour light brown. Surface of body punctated.

Prodorsum with distinct sigillar fields. Posterior furrows and lateral carinae absent. Sensilli long, narrow, rigid, without head, covered with small spines in distal half. Interlamellar and lamellar setae long, erect, rigid, similar to notogastral setae, rostral setae spiniform, rough; $in > le > ro > ex$.

Notogaster with 20 pairs of rather short ($c_1 < c_1-d_1$), rigid setae, covered with small spines in distal half. Additional setae in rows *h* and *ps*. Setae c_1 and c_3 near anterior margin, setae c_2 far from margin. Vestigial setae f_i situated posteriorly of ps_1 setae. Two pairs of lyrifissures (*ia* and *im*) present.

Ventral region. Setae *h* of mentum considerably longer than distance between them.

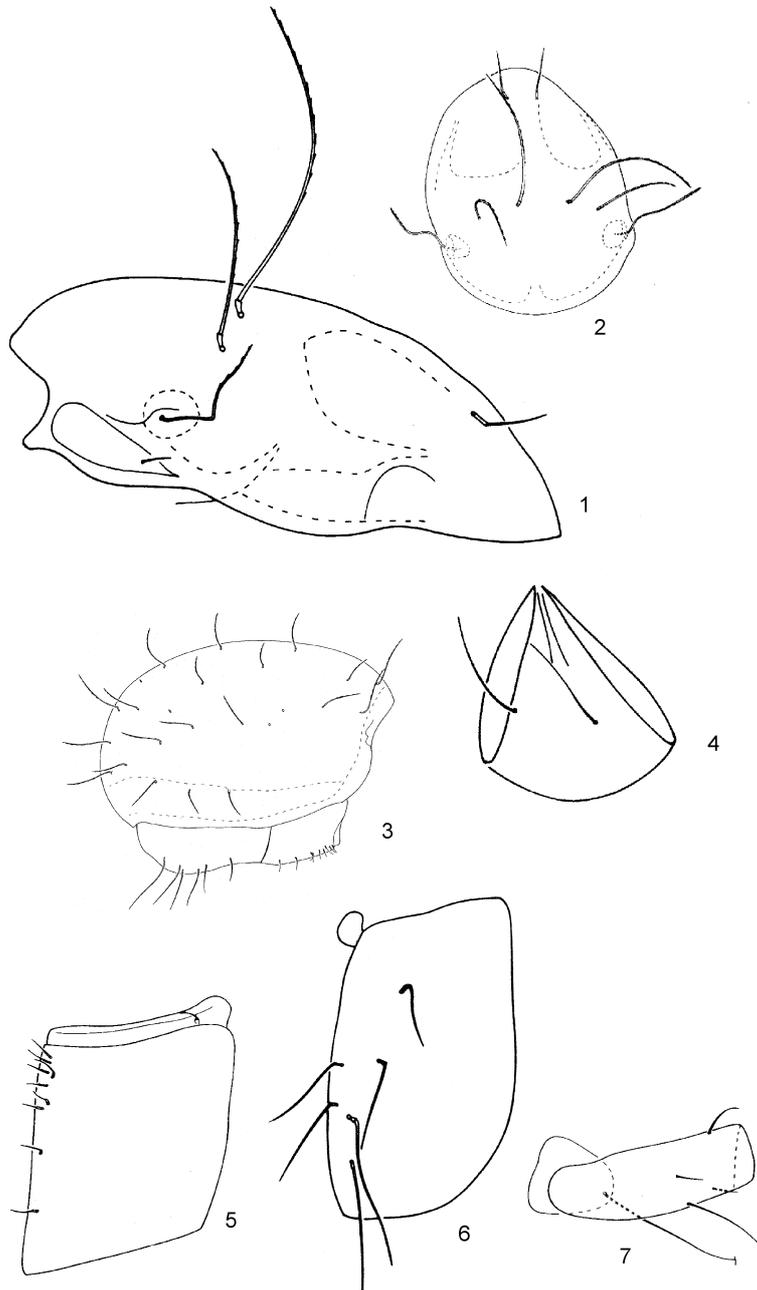
Formula of genital setae: 9(4+5): 0. Anoadanal plates with 6 pairs of rough setae, 2 anal and 4 adanal setae, 2 posterior adanal setae longer than anal, two anterior adanal setae the shortest.

Legs. Chaetome of “complete type”; setae *d* on femora I remote from distal end of article.

Comparison. The new species is similar to *A. andinus* (Balogh, 1984) but interlamellar setae are longer and rostral setae are not so long and do not exceed the end of rostrum.

Holotype: Chile, Osorno, Puyehue N. P., Anticura, Repucura Tr., forest litter, 6 II 1985, S. and J. Peck; 3 paratypes: Malleco, 10 km W Puren, P.N. Contulmo, mixed forest litter, 12 XII 1982, leg. A. Newton and M. Thayer.

Holotype and one paratype in FMHD; two paratypes in DATE.



Figs 1–7. *Austrophthiracarus baloghi* sp. n.: 1 = prodorsum, lateral view, 2 = prodorsum, dorsal view, 3 = notogaster, lateral view, 4 = mentum of infracapitulum, 5 = genitoaggenital plate, 6 = anoadanal plate, 7 = trochanter and femur of leg I

Arphthycarus baloghi sp. n.
(Figs 8–12)

Description – Measurements of holotype: prodorsum: length 262, width 192, height 86; sensillus 23, setae: *in* 25, *le* 18, *ro* 30; notogaster: length 485, width 364, height 338; setae: c_1 86, h_1 88, ps_1 76; genitoaggenital plate 137×94; anoadanal plate 164×83.

Colour brown. Surface of body covered with very strong sculpture.

Prodorsum without lateral carinae. Sigillar fields not visible. Sensilli very short with short stalk and rounded, smooth head. Setae fine, spiniform, rough; $ro > in > le$. Exobothridial setae vestigial.

Notogaster with 15 pairs of short ($c_1 < c_1-d_1$), rigid setae, covered with small setae in distal half, only setae ps_4 spiniform, rough. Setae c_{1-3} remote from anterior margin, c_2 more than setae c_1 and c_3 . Vestigial setae and lyrifissures not visible because strong sculpture.

Ventral region. Setae h of mentum shorter than distance between them. Genitoaggenital plates with 9 pairs of setae with formula: 5(4+1): 4. Anoadanal plates each with 5 short setae anal setae longer than adanal setae. Adanal setae situated near the paraxial margin.

Legs. Formulae of setae and solenidia of “complete type”. Setae d on femora I distinctly remote from distal end of article.

Comparison and diagnosis. The new species is distinguishable from congeners by the very short, globose sensilli, spiniform setae ps_4 , different in shape than other setae and adanal setae situated near paraxial margin of adanal plates.

Holotype and 2 paratypes (in DATE): Cuba, Province Habana, Arroyo Bermejo, semi-deciduous forest, north-slope, litter sample, 16 XI 1981, leg. J. Rusek (from dr. J. STARÝ collection).

Protophthiracarus baloghi sp. n.
(Figs 13–18)

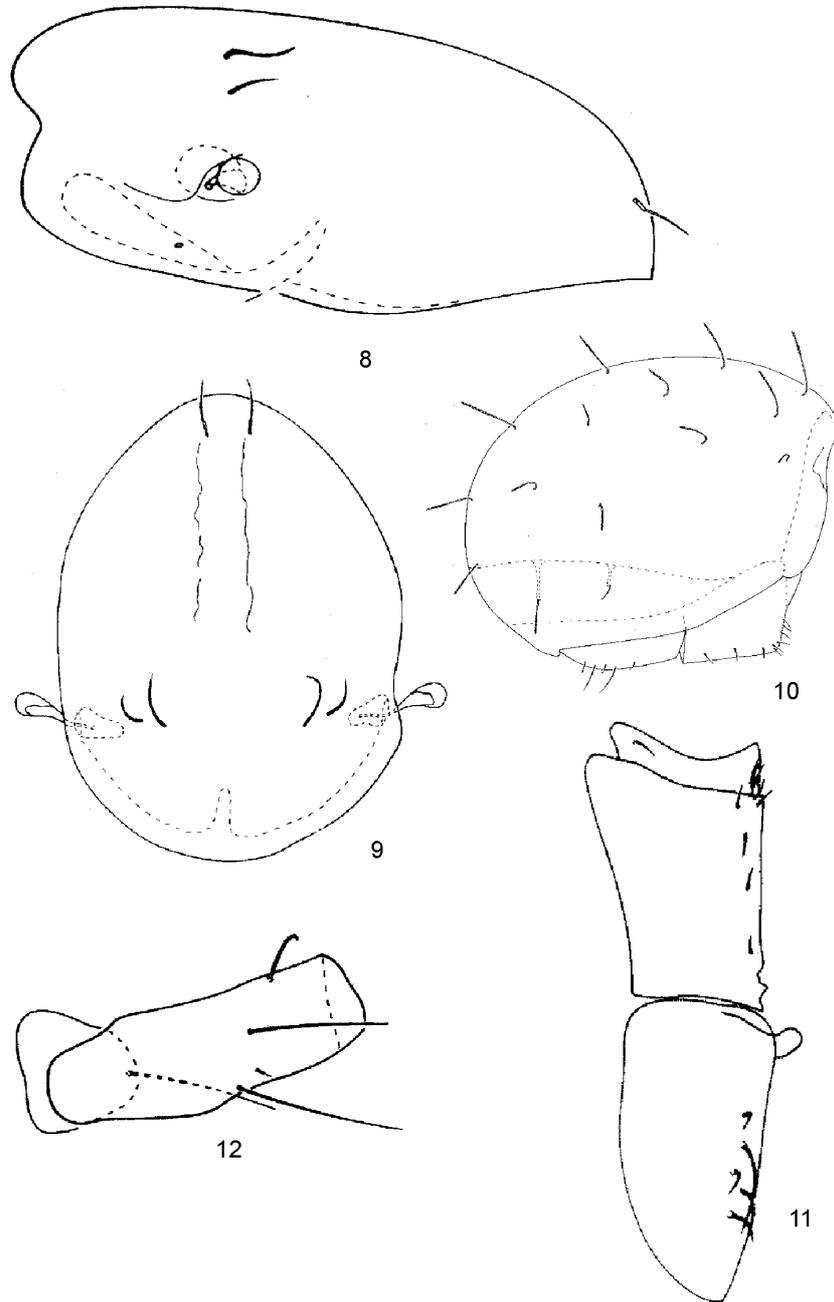
Description – Measurements of holotype: prodorsum: length 291, width 192, height 126; sensillus 71, setae: *in* 56, *le* 18, *ro* 38; notogaster: length 550, width 404, height 364; setae: c_1 101, h_1 91, ps_1 96; genitoaggenital plate 131×96; anoadanal plate 187×101.

Colour light brown. Surface of body covered with deep concavities.

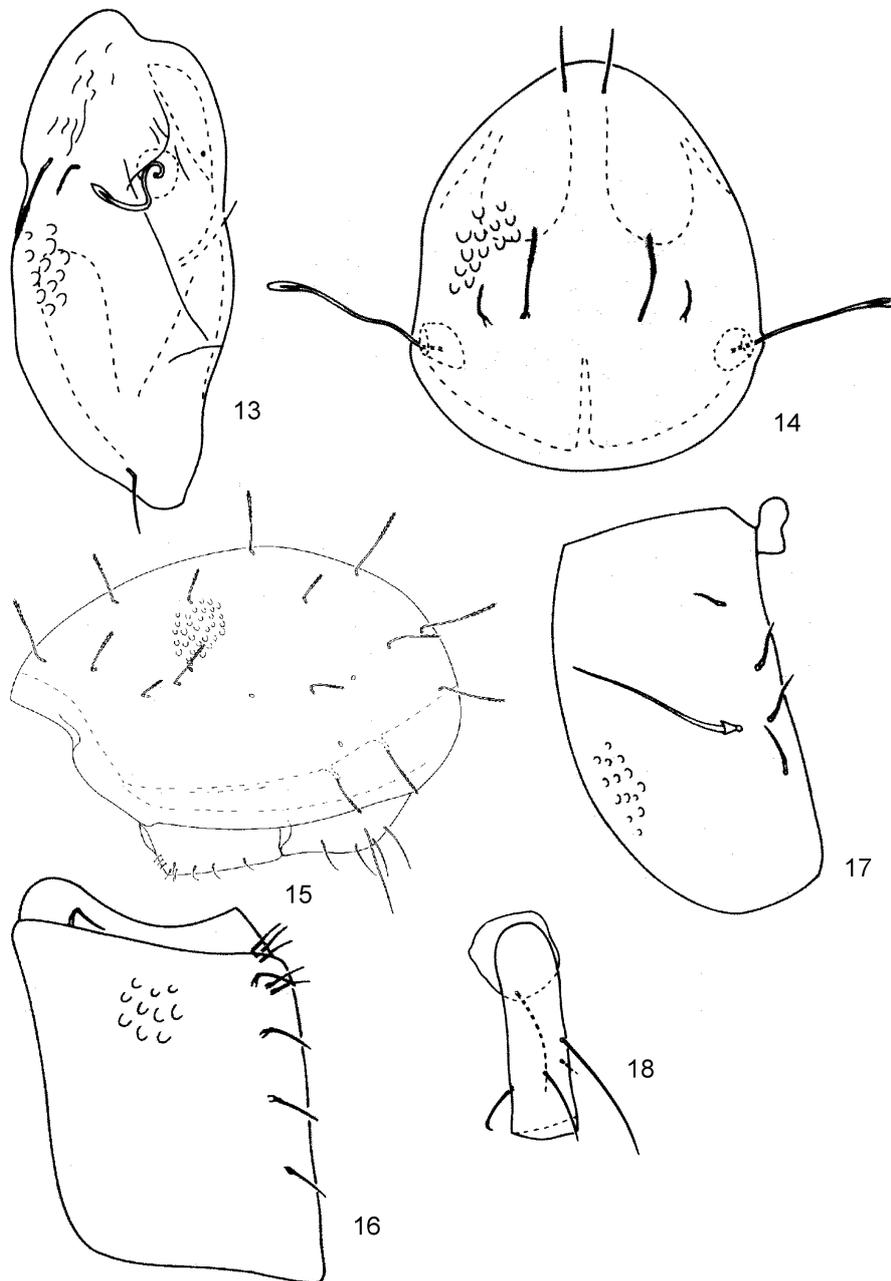
Prodorsum with weak median and distinct lateral carinae. Posterior furrows and sigillar fields distinct. Sensilli fairly long, with long narrow stalk and dilated, fusiform, smooth head rounded distally. Interlamellar setae rather short, procumbent, robust covered with small spines in distal half, similar to notogastral setae. Lamellar and rostral setae spiniform but lamellar covered with small spines and rostral setae rough; $in > ro > le$. Exobothridial setae vestigial.

Notogaster with 15 pairs of rigid, short ($c_1 < c_1-d_1$), covered with small spines in distal half. Dorsal setae slightly longer than laterals. Setae c_{1-3} remote from anterior margin, setae c_3 considerably further and setae c_1 less than setae c_2 . Vestigial setae invisible. All four pairs of lyrifissures (*ia*, *im*, *ip*, *ips*) present.

Ventral region. Setae h of mentum shorter than distance between them. Genitoaggenital plates with 9 pairs of setae with formula: 6(4+2): 3. Anoadanal plates each with 5 rough setae, 2 anal and 3 adanal. Setae ad_2 the longest and thickest, setae ad_3 the smallest.



Figs 8–12. *Arphthycarus baloghi* sp. n.: 8 = prodorsum, lateral view, 9 = prodorsum, dorsal view, 10 = notogaster, lateral view, 11 = genital and anal plates, 12 = trochanter and femur of leg I



Figs 13–18. *Protophthiracarus baloghi* sp. n.: 13 = prodorsum, lateral view, 14 = prodorsum, dorsal view, 15 = notogaster, lateral view, 16 = genitoaggenital plate, 17 = anoadanal plate, 18 = trochanter and femur of leg

Legs. Formulae of setae and solenidia of "complete type". Setae *d* on femora I remote from distal end of article.

Comparison and diagnosis. This species is distinguishable from congeners by the long sensilli, similar shape of notogastral setae, dorsal slightly longer than laterals, 4 pairs of lyrifissures, setae *h* of mentum shorter than distance between them.

Holotype and 7 paratypes (in DATE): Brazil, State S. Paulo, south of São Sebastião, rain forest at the base of the Serra do Mar, near Baía da Guaeca, 05.IX.1980, leg. R. Schuster (from prof. dr R. SCHUSTER collection).

Notophthiracarus baloghi sp. n.

(Figs 19–24)

Description – Measurements of holotype: prodorsum: length 273, width 207, height 106, sensillus 45, setae: *in* 141, *le* 20, *ro* 35; notogaster: length 510, width 333, height 348, setae: *c*₁, *h*₁ and *ps*₁ 111; genitoaggenital plate 141×81, anoadanal plate 182×76.

Colour light brown. Integument finely punctate but anterior part of prodorsum and lower margin of notogaster covered with concavities.

Prodorsum with lateral carinae that reach the sinus. Sigillar fields distinct and short. Posterior furrows well marked. Sensilli relatively short with narrow pedicel and swollen distal part, covered with small spines. Interlamellar setae very long, thick, erect, covered with small spines in distal half, similar in shape to notogastral setae. Lamellar setae minuscule, smooth. Rostral setae spiniform, rough; *in* > *ro* > *le*. Exobothridial setae vestigial.

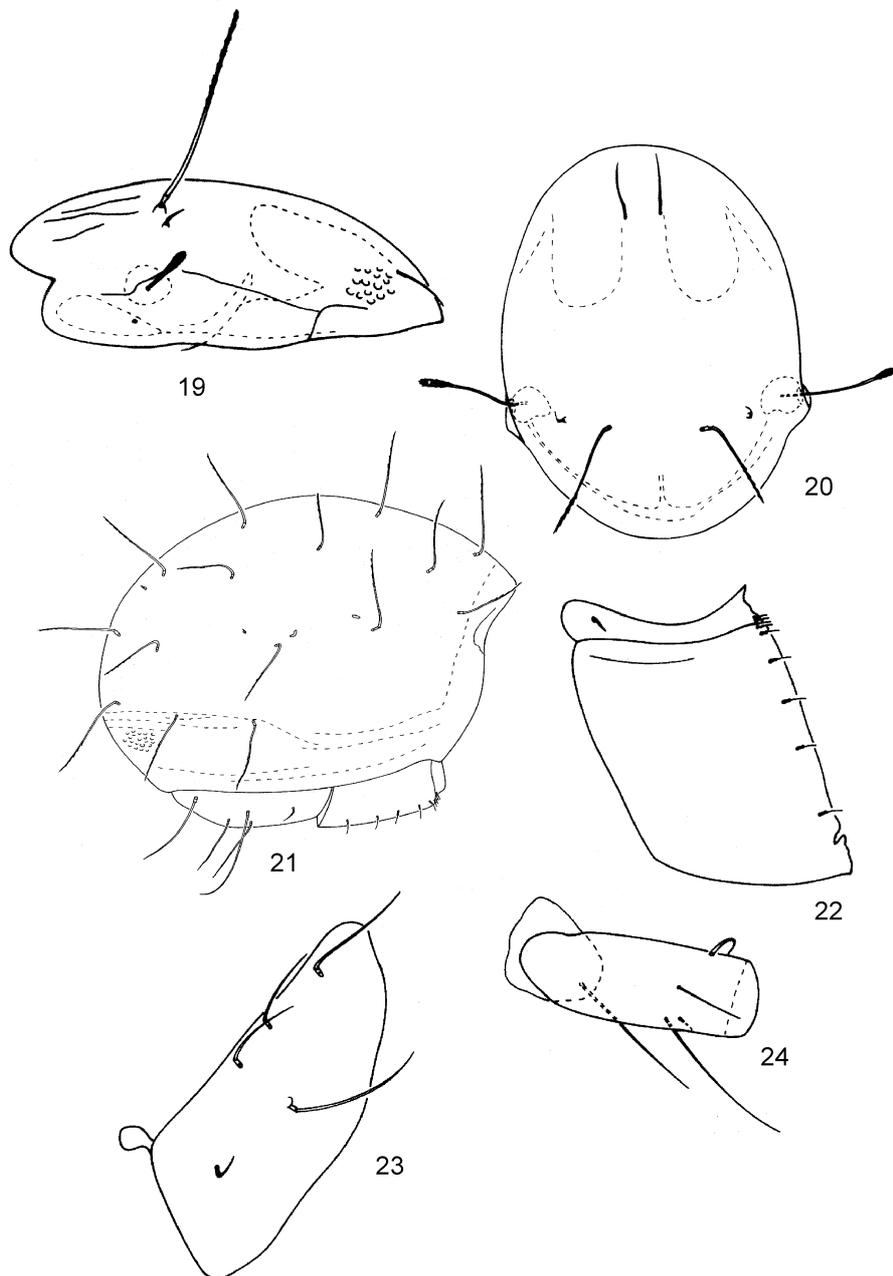
Notogaster with 15 pairs of fairly long (*c*₁ almost equal to distance *c*₁-*d*₁) setae, rigid, thick, pointed distally, sparsely covered with strong, small spines in distal half. Setae *c*₁ and *c*₃ slightly remote from anterior margin, setae *c*₂ far from margin. Vestigial setae *f*₁ posterior to *h*₁. Two pairs of lyrifissures (*ia* and *im*) present.

Ventral region. Setae *h* of mentum longer than distance between them. Genitoaggenital plates with formula: 5: 4. Anoadanal plates with 5 pairs of setae; 2 anal and 3 adanal setae; setae *ad*₁ and *ad*₂ the longest and thickest, setae *ad*₂ bent distally, setae *ad*₃ minuscule.

Chaetome of legs of "complete type". Setae *d* on femora I slightly remote from distal end of article.

Comparison and diagnosis. This species is distinguishable from congeners by the short sigillar fields and clublike shape of sensilli with head covered with distinct spines.

Holotype and 6 paratypes: Brazil. 27; 7 paratypes: Brazil, 26. Holotype and 8 paratypes in NHM, 5 paratypes in DATE. The labels of these samples were impossible to find, so there are denoted only by the number of the samples originated from Department of Entomology, Natural History Museum, London.



Figs 19–24. *Notophthiracarus baloghi* sp. n.: 19 = prodorsum, lateral view, 20 = prodorsum, dorsal view, 21 = notogaster, lateral view, 22 = genitoaggenital plate, 23 = anoanal plate, 24 = trochanter and femur of leg I

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