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The Scientific Results of the Hungarian Soil Zoological Expeditions to South America*

5. Acari: Data to the Oribatid Fauna of the Environment of Córdoba, Argentina

By

J. BALOGH and S. MAHUNKA**

In the course of the evaluation of the collections made by the Hungarian Soil Zoological Expedition, the authors discuss the Oribatid material extracted from the soil samples taken in the region of the mountains at Córdoba (Sierra de Córdoba), Argentina.

A comparatively high number of species have been found in the rather small amount of samples; 18 of the species proved to be new for science. The rest of the species was indubitably identifiable with taxa already described from South America, but, concurrently with obvious relationships, also some differences have been observed with respect to some species; these forms have been assessed and described, respectively, as geographical subspecies.

Since the material under consideration derives from a single locality and no more than 11 different habitats, we submit herewith their relevant data, indicating them with a serial number in the discussion of the respective species. The Holotypes and the major part of the Paratype specimens are deposited in the Zoological Department of the Hungarian Natural History Museum, Budapest; if some specimens have been sent to other Collections, these data will be mentioned at the description of the species.

*Present article is of the material of the First Expedition (1965—66). Leader: Prof. Dr. J. BALOGH; other participants: Dr. I. ANDRÁSSY, Dr. I. LOKSA, Dr. S. MAHUNKA and Dr. A. ZICSI.

**Dr. JÁNOS BALOGH, ELTE Állatrendszertani Tanszék (Zoosystematical Institute of the L. Eötvös University), Budapest, VIII. Puskin u. 3, and Dr. SÁNDOR MAHUNKA, Természettudományi Múzeum Állattára (Zoological Department of the Hungarian Natural History Museum), Budapest, VIII. Baross u. 13.

Habitats

No. 317. Fanti, Sierra de Córdoba, 11 Jan., 1966. — Berlese samples from rocks facing east: *1:* soil with plant-roots filling cleft rock; *2:* litter from under bushes at foot of rock wall.

No. 318. Fanti, Sierra de Córdoba, 11 Jan., 1966. — Berlese samples from a ferny site on an eastern slope: *1:* moss and soil from under ferns, *2:* dry fern-litter, *3:* soil from same site; *4:* soil and litter from a wet site.

No. 319. Fanti, Sierra de Córdoba, 11 Jan., 1966. — Berlese sample from open sites on an eastern slope, from stems of *Stipa*.

No. 320. Fanti, Sierra de Córdoba, 11 Jan., 1966. — Berlese samples from shrubby area on a western slope: *1:* litter and ground of a grassy, weedy mosaic vegetation among bushes, *2:* soil and litter under bushes growing in drier sites.

No. 321. Fanti, Sierra de Córdoba, 11 Jan. 1966. — Berlese sample from epiphytons of bushes.

Fam. BRACHYCHTHONIIDAE BALOGH, 1943

1. Brachychthonius foliatus HAMMER, 1958

Material examined: 7 ex. (0—407—68): No. 318—1.

2. Brachychthonius rapoporti n. sp.

(Fig. 1)

Length: 180—198 μ, width: 100—110 μ.

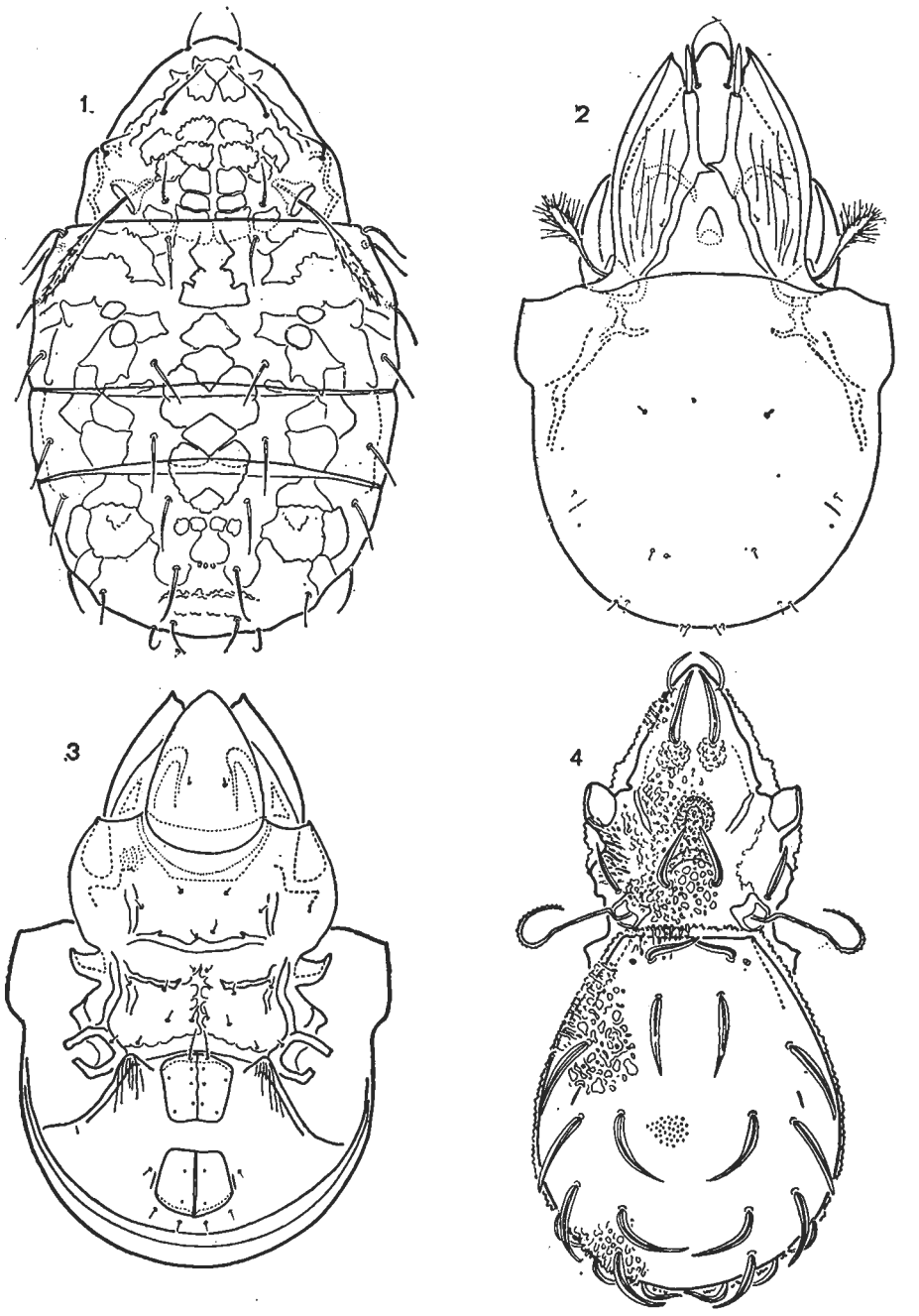
Sensillus long, pointed, of the *B. berlesei* type. Interlamellar and especially lamellar hairs long, latter ones longer than half of distance between them. Hairs c_1, d_1, and e_1 rather long, hair c_1 as long as d_1. Notogastral areolae agree, with respect to typical configuration, with those of *B. berlesei* WILLMANN, 1929, yet with striking but hardly describable differences in details.

Material examined: 1 ex. (Holotype: 0—361—68): No. 320—1; 13 ex, (Paratypes: 0—362—68): data as for Holotype; 1 ex. (Paratype: 0—363—68): No. 317—2. Some Paratypes deposited also in the collections of Dr. J. AOKI, Dr. E. PIFFL, Dr. A. RAJSKI, and Dr. T. WOOLLEY.

Remarks: The majority of the *Brachychthonius* species are adequately described and figured, but the specific differences are rather hard to express in words. Difficulties increase owing to the fact that the authors of new species fail to submit identification keys or a differential diagnosis covering most of the allied species. Based on merely artificial features, the following species-groups might provisionally be distinguished:

A) Notogastral setae, partly at least, ensiform, lanceolate, or in various other ways dilated: *B. zelawaiensis* SELLNICK, 1929 (Holarctic); *B. griseus* HAMMER, 1958 (Argentina); *B. elsosneadensis* HAMMER, 1958 (Argentina); *B. foliatus* HAMMER, 1958 (Bolivia, Peru).

B) Notogastral hairs setiform, but hair c_1 essentially shorter than hair d_1, and lamellar hair essentially shorter than rostral hair: *B. similis* HAMMER, 1961 (Peru); *B. novazealandicus* HAMMER, 1966 (New Zealand).



Figs. 1—4. *1: Brachychthonius rapoporti* n. sp. — *2—3: Rhopalozetes plumifer* n. sp. — *4: Pseuderemulus gladiator* n. sp.

C) Hair c_1 not strikingly shorter than hair d_1; lamellar hair not conspicuously shorter than rostral hair: *B. rotundatus* HAMMER, 1958 (Argentina, Bolivia); *B. heterotrichus* BALOGH, 1963 (Angola); *B. monticola* HAMMER, 1961 (Peru); *B. berlesei* WILLMANN, 1928 (Holarctic); *B. jacoti* EVANS, 1952 (England); *B. cricoides* WEIS-FOGH, 1948 (Europe); *B. semiornatus* EVANS, 1952 (Europe); *B. italicus* BERLESE, 1910 (Europe); *B. jugatus suecica* FORSSLUND, 1942 (Holarctic, New Zealand); *B. berlesei erosus* JACOT, 1938 (N. America); *B. arcticus* HAMMER, 1952 (N. America); *B. rostratus* (JACOT, 1938) (Holarctic); *B. hungaricus* (BALOGH, 1943) (Europe); *B. rapoporti* n. sp. (Argentina).

Of the above species, *B. heterotrichus* differs from the new species by the very long hairs c_1, d_1, e_1, and f_1, while *B. rostratus* and *B. hungaricus* by their extremely short predorsal setae. Basically different notogastral areolae are exhibited by *B. italicus*, *B. semiornatus*, *B. arcticus*, *B. jugatus suecicus*, *B. cricoides*, and *B. jacoti*.

With respect to the other four species, hair c_1 and the interlamellar and lamellar hairs are essentially shorter in *B. berlesei*, *B. berlesei erosus*, and *B. rotundatus*; these three species also differ by its notogastral areolae.

The hairs of the last species to be compared are not strikingly shorter than those of the new taxon, but its rostrum is finely dentate (smooth in the new species!) and the notogastral areolae also rather different.

This new species is dedicated to Professor Dr. O. RAPOPORT, the outstanding soil biologist in Argentina.

Fam. MICROZETIDAE GRANDJEAN, 1936

3. **Rhopalozetes plumifer** n. sp.

(Figs. 2—3)

Length: 187—208 μ, width: 112—128 μ.

Sensillus proclinate, short, apically slightly incrassate, with long cilia all round. Interlamellar hairs minute, situated anteriorly to inner margin of lamellae, on lamellae themselves. Lamellar hairs short, thick, straight, spiniform, proclinate, arising on inner side of cuspis and reaching to rostrum. Rostral hairs thin, inclinate, slightly projecting beyond rostrum. Lamellae slightly convergent, ornamented with some longitudinal lines, inner margins incrassate, with a horizontal appendage each at half length of prodorsum. The entire chitinous configuration resembling a capital *H*. A squamiform structure on interlamellar area, anteriorly to dorsosejugal suture.

Nine pairs of notogastral hairs present, all very short and fine. Ventral side characteristic of family. Six pairs of genital hairs present, merely first pair long, all other represented by alveoli.

Material examined: 1 ex. (Holotype: 0—381—68): No. 320—1; 26 ex. (Paratypes: 0—382—68): data as for Holotype; 3 ex. (Paratypes: 0—383—68): No. 317—2. Some further paratypes deposited in the collections of Dr. J. AOKI, Dr. E. PIFFL, Dr. A. RAJSKI, and Dr. T. WOOLEY.

Until now, 4 *Rhopalozetes* species have been described. The specific differences are shown in the table:

Species	Locality	A	B	C	D	E
milloti BAL., 1961	Madagascar	1	2	2	1	1
fusiger BAL., 1962	Central Peru	2	1	1	1	3
reticulatus BAL., 1962	Eastern Peru	2	1	1	2	1
topali B. et Cs., 1963	Argentina	1	1	2	1	2
plumifer n. sp.	Argentina	2	1	1	1	4

Key of signs:

A: lamellae touching = 1 not touching = 2
B: dorsosejugal present = 1 absent = 2
C: interlamellar hair present = 1 absent = 2
D: notogaster smooth = 1 reticulate = 2
E: sensillus: long with dilated head = 1, slightly fusiform = 2, short fusiform = 3, with plumose head = 4.

Fam. EREMOBELBIDAE BALOGH, 1961

Pseuderemulus n. gen.

Eleven pairs of notogastral hairs, 5 pairs of genital, 5 pairs of aggenital, 3 pairs of adanal, and 2 pairs of anal hairs. Pedotecta 2 absent, as in *Eremulus*.

Type-species: *Pseuderemulus gladiator* n. sp.

Remarks: The above combination of characters does not occur in either the family Eremobelbidae or in any of the genera of the allied families.

4. Pseuderemulus gladiator n. sp.

(Figs. 4—5)

Length: 341—373 μ, width: 167—199 μ.

Sensillus exclinate and slightly reclinate, filiform, apical half arcuately recurving, finely ciliate on external side. Interlamellar hairs, exostigmatal, and lamellar hairs large, rather thick, rostral hairs considerably smaller. Interlamellar hairs connected by an arcuate chitinous line, with a chitinous ring in front of it. Pedotecta 1 large, pedotecta 2 absent. Prodorsum covered by an irregularly granulose cerotegument.

Notogaster with eleven large, ensiform, pointed hairs, but hairs *p* only about half as long as other hairs. Notogaster with irregularly granulose cerotegument, surface punctate.

Ventral side: coxisternal formula: 3—1—3—4; all coxisternal hairs long; 5 pairs of longitudinally arranged genital, 5 pairs of aggenital, 3 pairs of adanal, and 2 pairs of anal hairs, all rather long and resembling notogastral hairs. Anal plate far removed from posterior margin of ventral plate; entire ventral side covered with cerotegument of same structure as on notogaster.

Material examined: 1 ex. (Holotype: 0—370—68): No. 317—2; 16 ex. (Paratypes: 0—371—68): data as for Holotype; 40 ex. (Paratypes: 0—372—68): No. 318—2; 5 ex. (Paratypes: 0—373—68): No. 318—4; 1 ex. (Paratype: 0—374—68): No. 318—3. Paratypes also in the collections of Dr. J. AOKI, Dr. E. PIFFL, Dr. A. RAJSKI, and Dr. T. WOOLLEY.

Fam. STAUROBATIDAE GRANDJEAN, 1966

5. **Staurobates schusteri cordobensis** n. ssp.

(Figs. 6—7)

This interesting species, representing a family as yet unknown from South America, was recently described by GRANDJEAN from Brasil. The notogastral hairs of the specimens from Córdoba are longer than those of the nominate form, and there are also smaller differences, as portrayed on the Figures given here. It seems that we have to deal with a far-ranging species of extensive area, separated into geographical races in South America. Length: 431—443 μ, width: 217—252 μ

Material examined: 1 ex. (Holotype: 0—387—68): No. 317—1; 6 ex (Paratypes: 0—388—68): data as for Holotype. Paratype alzo in the collections of Dr. J. AOKI, Dr. E. PIFFL, and Dr. T. WOOLEY.

Fam. XENILLIDAE WOOLLEY, 1966

6. **Xenillus lawrencei** n. sp.

(Figs. 8—9)

Length: 625—666 μ, width: 285—377 μ.

Sensillus long, apically slightly incrassate, ciliate. Interlamellar hairs long, divergent, apically hardly discernibly incrassate, ciliate. Lamellae characteristic of genus, reaching almost to rostrum. Lamellar and rostral hairs of equal length, former thicker than latter.

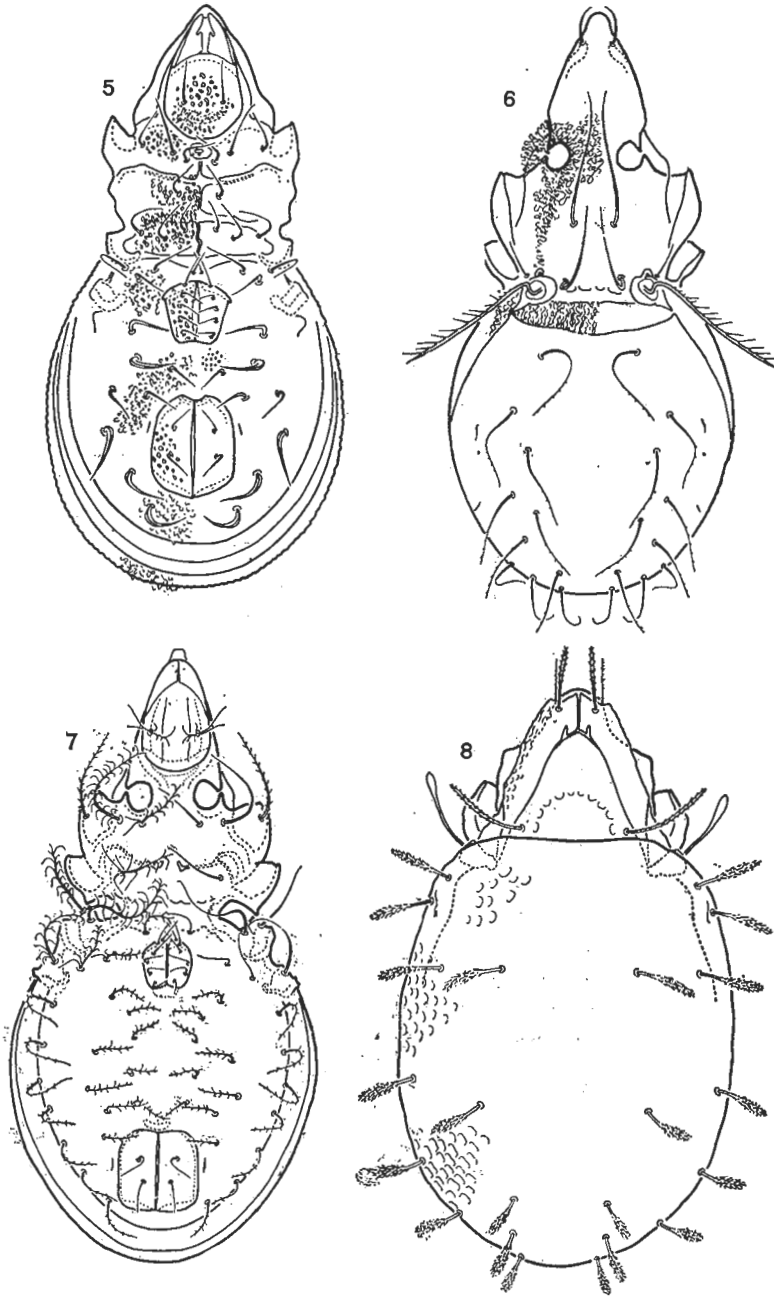
Notogaster: 11 pairs of notogastral hairs, apically slightly widening, densely ciliate. Notogaster with rather large, slightly irregularly shaped foveolae.

Ventral side: 5 pairs of genital, 1 pair of aggenital, 3 pairs of adanal, and 2 pairs of anal, hairs; the 3 pairs of adanal hairs considerably smaller than first and second pairs. Ventral plate with large, irregular foveolae, anal plate with minute, punctiform foveolae.

The new species is the first known representative of the genus on the South American continent. Some *Xenillus* species display similarly thickening notogastral hairs, e.g. *X. penicilliger* CSISZÁR, 1961 (Bulgaria), but this species essentially differs, by reason of its size, the shape of the notogastral hairs and the lamellae, and so on, from the new taxon.

Material examined: 1 ex. (Holotype: 0—351—68): No. 320—1; 4 ex. (Paratypes: 0—352—68): data as for Holotype. Paratypes also in the collections of Dr. J. AOKI, and Dr. T. WOOLLEY.

We dedicate the new species to Dr. R. F. LAWRENCE, Pietermaritzburg, Natal Museum, of great merits in the investigation of the African soil fauna.



Figs. 5—8. *5: Pseuderemulus gladiator* n. gen., n. sp. — *6—7: Staurobates schusteri cordobensis* n. ssp. — *8: Xenillus lawrencei* n. sp.

Sternoppia n. gen.

General habits as in *Oppia* sensu lato. Prodorsum very large as related to notogaster; longitudinal ratio about 1:1. Ten pairs of notogastral hairs present; hairs *ta* well developed. Six pairs of genital hairs. A part of epimeral hairs hypertrophic, all plumose. Genital plates preceded by two peculiarly shaped, trapezoidal plates extending anteriorad, largely covering epimeral region.

Type-species: *Sternoppia mirabilis* n. sp.

Remarks: The new genus is sharply distinguished by the hypertrophic hairs of the epimeral region, and especially by the two chitinous plates partly covering the epimeral region, from all hitherto known Oppiid genera. As far as known, no similar structure has been found in the entire Oribatei group.

7. **Sternoppia mirabilis** n. sp.

(Figs. 10—11)

Length: 273—322 μ, width: 161—180 μ.

Sensillus long, exclinate, apical half slightly incrassate, with 6—7 pectiniform branches, apex of branches ramifying. Prodorsum long and wide, pedotecta 1 very large. Interlamellar hairs arising on base of lamellae, long, fine, ciliate. Lamellae parallel, extending beyond half length of prodorsum; lamellar hairs originating below their apices. Rostrum rounded, rostral setae short.

Notogaster: Ten pairs of notogastral hairs, hairs *ta* as long as the four other pairs of hairs behind them, hairs *p* somewhat shorter than others. Notogaster round.

Ventral side: 6 pairs of genital, 1 pair of aggenital, 3 pairs of adanal, and 2 pairs of anal hairs. Genital hairs long, plumose; adanal and aggenital hairs long and ciliate. Epimeral setae very long and plumose, hairs 3*a* and 4*c* hypertrophically incrassate. Epimeral region covered by chitinous plates described in generic diagnosis.

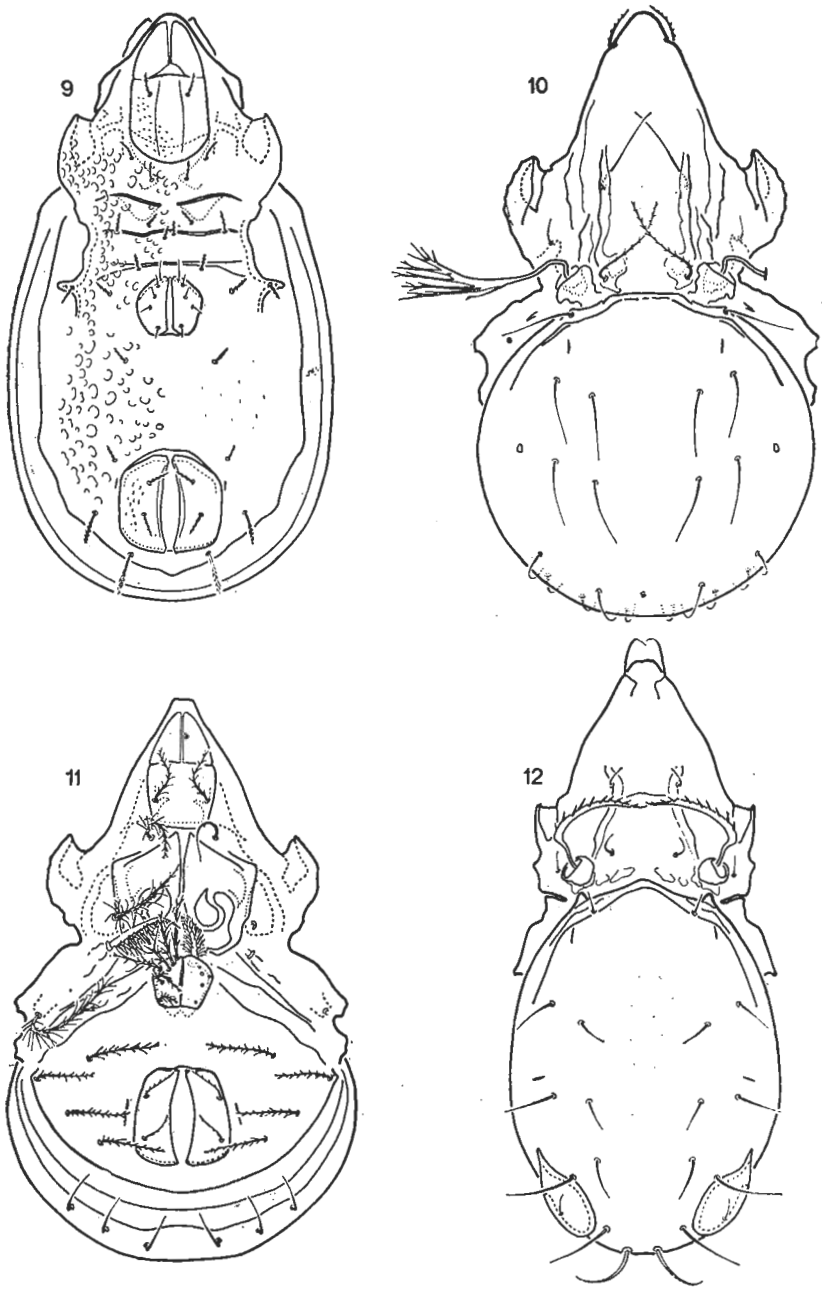
Material examined: 1 ex. (Holotype: 0—391—68): No. 317—1; 14 ex. (Paratypes: 0—392—68): data as for Holotype. Paratypes also in the collections of Dr. J. AOKI, Dr. E. PIFFL, Dr. A. RAJSKI, and Dr. T. WOOLLEY.

Sacculoppia n. gen.

Ten pairs of notogastral and five pairs of genital hairs. One pair of enantiophyses, in line of bothrydium on dorsosejugal suture. Posteriorly on notogaster, between hairs *r* and *p*, a peculiar, cap-shaped, chitinous excrescence each, a unique structure in Oribatei.

Type-species: *Sacculoppia singularis* n. sp.

Remarks: The unique chitinous structure mentioned in the diagnosis sharply differentiates the new genus from all other genera of the family. As regards general habits, the taxon resembles the *Striatoppia-Stachyoppia* group.



Figs. 9—12. *9: Xenillus lawrencei* n. sp. — *10—11: Sternoppia mirabilis* n. gen., n. sp. — *12: Sacculoppia singularis* n. gen., n. sp.

8. Sacculoppia singularis n. sp.

(Figs. 12—13)

Length: 231—250 μ width: 110—125 μ

Sensillus arcuately inclinate, pointed, outer margin pectinately ciliate. Interlamellar hairs situated on inner, lammellar hairs on ounter, margins of costulae; these hairs short. Costulae first slightly converging, then apically diverging, connected by a translamelliform lath at height of lamellar hairs.

Notogaster: 10 pairs of notogastral hairs, hair *ta* proclinate. Hair p_2 shorter than others, and situated beneath chitinous cap described in generic diagnosis. Notogastral hairs smooth.

Ventral side: 5 pairs of genital, 1 pair of aggenital, 3 pairs of adanal, and 2 pairs of anal setae; all hairs smooth. Pori *iad* long, arranged symmetrically. Epimeral hair 4*a* thick, arcuate, insertion surrounded by a characteristic ring.

Material examined: 1 ex. (Holotype: 0—366—68): No. 318—1; 15 ex. (Paratyes: 0—367—68): data as for Holotype; 7 ex. (Paratypes: 0—368—68): No. 319—1; 5 ex. (Paratypes: 0—369—68): No. 318—4. Paratypes also in the colletions of Dr. J. Aoki, Dr. E. Pieffl, Dr. A. Rajski, and Dr. T. Woolley.

9. Oppia cordobensis n. sp.

(Figs. 14—15)

Length: 267—329 μ, width: 168—217 μ.

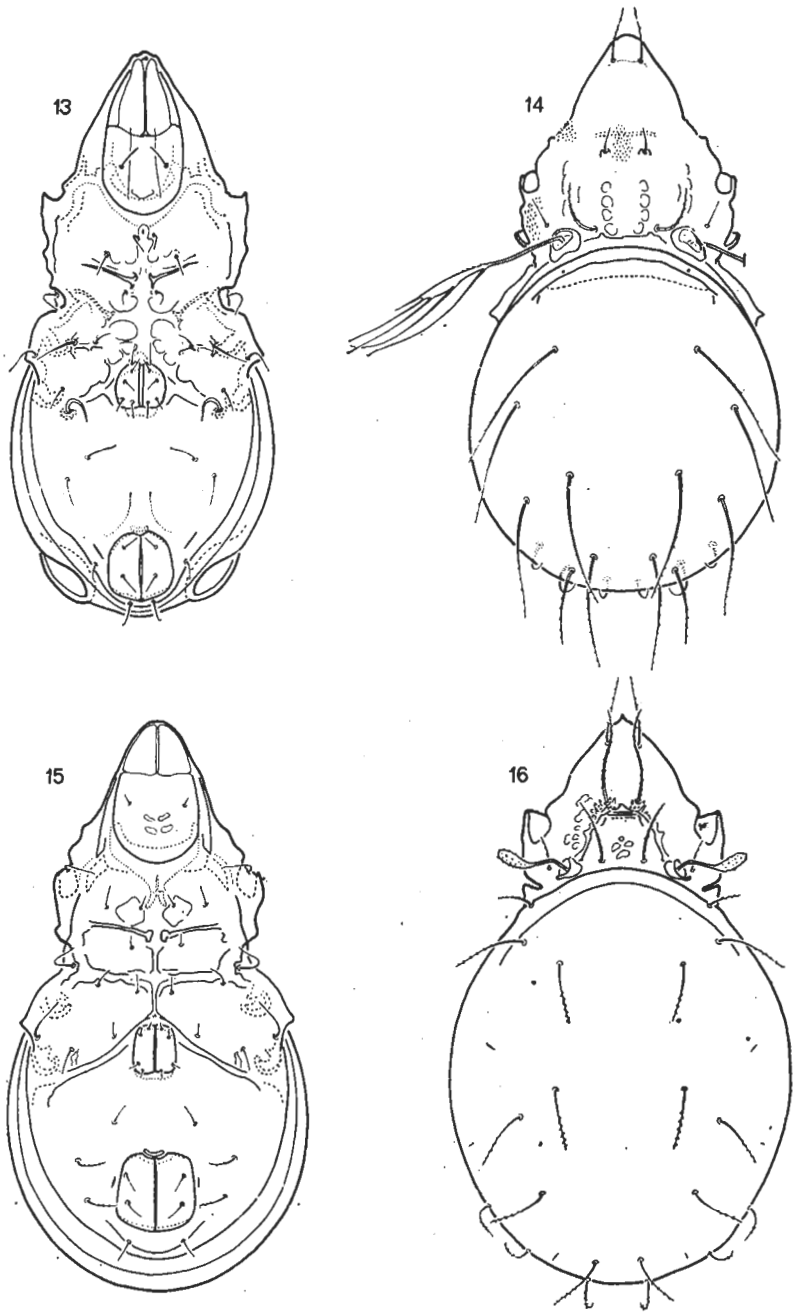
Sensillus long, apically slightly incrassate, with 4—5 long branches on posterior edge and some short cilia on anterior one. Interlamellar hair longer than other prodorsal hairs, lamellar hair shorter than rostral hair. Prodorsum without costulae, Rostrum rounded.

Notogaster: Hair *ta* indicated only by alveolus. Five pairs of notogastral hairs: hairs *te*, *ti*, *ms*, r_1, and r_3 essentially longer than hair *p*; hair r_2 only about two-thirds as long as above five pairs of setae.

Ventral side: Epimeral setal formula: 3—1—3—3. Four pairs of genital, 1 pair of aggenital, 3 pairs of adanal, and 2 pairs of anal hairs. Hairs ad_1 arising on a postanal tectum, hairs ad_3 in a paraanal position. Pori *iad* situated parallel, near anus.

Remarks: With reference to the shape of the sensillus, the new species seems to be related to those South American species which have been described by M. Hammer in the genera *Brachyoppia* and *Brachyoppiella*. However, *O. cordobensis* displays but 4 genital hairs, the other related species possess no notogastral heterotrichy.

Material examined: 1 ex. (Holotype: 0—389—68): No. 317—1; 24 ex. (Paratypes: 0—390—68): data as for Holotype. Paratypes despited also in the collections of Dr. J. Aoki, Dr. E. Pieffl, Dr. A. Rajski, and Dr. T. Woolley.



Figs. 13—16. *13: Sacculoppia singularis* n. gen., n. sp. — *14—15: Oppia cordobensis* n. sp. — *16: Oribella spinifera monoceros* n. ssp.

10. **Oribella spinifera monoceros** n. ssp.

(Figs. 16—17)

The nominate form has been described from North Canada, the subspecies *fissurata* HAMMER, 1958 from Bolivia, at 4658 m.a.s.l. The specimens from Cordoba rather differ from both forms by the length of the notogastral hairs, the structure of the translamellar region, the shape of the sensillus, etc. The relevant features are to be seen on the Figures submitted herein. The Cordoban form is considered to represent a distinct subspecies. Length: 318—342 μ, width: 186—218 μ.

Material examined: 1 ex. (Holotype: 0—384—68): No. 317—2; 15 ex. (Paratypes: 0—385—68): data as for Holotype: 2 ex. (Paratypes: 0—386—68): No. 318—4. Paratypes also in the collections of Dr. J. AOKI, Dr. E. PIFFL, Dr. A. RAJSKI, and Dr. T. WOOLLEY.

Fam. SUCTOBELBIDAE GRANDJEAN, 1954

11. **Suctobelba complexa** HAMMER, 1958

Material examined: 4 ex. (0—408—68): No. 320—1.

12. **Suctobelba subcomplexa** n. sp.

(Fig. 18)

Length: 205—239 μ, width: 108—120 μ.

Basic type as in *S. complexa* HAMMER, 1958, but with well distinguishable differences in details. Notocephalic fenestra not sharply defined, clavus of sensillus blunt, not symmetric with respect to its longitudinal axis (resembling a niblick golf club). Anterior section of notogaster with an aberrant chitinization, head of median, chitinous tooth acute, posteriorly long, extending beyond point of origin of hairs d_1; these latter arise between former ones, basally slightly widened.

Material examined: 1 ex. (Holotype: 0—364—68): No. 320—1; 3 ex. (Paratypes: 0—365—68): data as for Holotype. Some Paratypes also in the collections of Dr. J. AOKI and Dr. E. PIFFL.

13. **Suctobelba scrofa** n. sp.

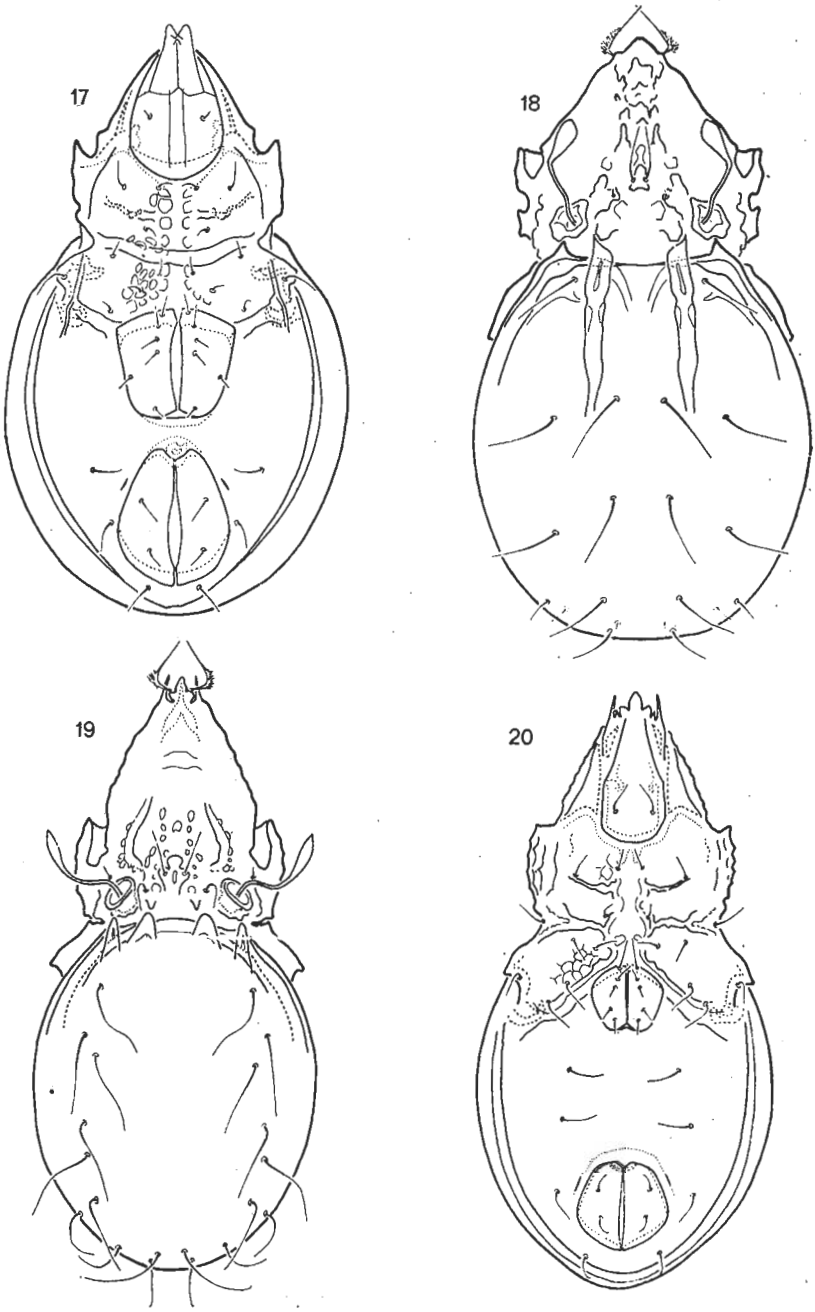
(Figs. 19—20)

Length: 292—323 μ, width: 149—174 μ.

Sensillus fusiform, apically rounded, smooth. Interlamellar and lamellar hairs relatively long. Rostrum medially with a trilobate appendage, on two sides with an acuminate, spiniform tooth each.

Notogaster: two pairs of teeth frontally on notogaster; lateral teeth narrower. Ten pairs of ratner long notogastral hairs.

Ventral side: 5 pairs of genital hairs; all hairs of ventral side rather long. Hairs ad_3 in a preanal position.



Figs. 17—20. *17: Oribella spinifera monoceros* n. spp. — *18: Suctobelba subcomplexa* n. sp. — *19—20: Suctobelba scrofa* n. sp.

Remark: The configuration of the rostrum distinguishes the new taxon from all species described hitherto.

Material examined: 1 ex. (Holotype: 0—393—68): No. 317—2; 4 ex. (Paratypes: 0—394—68): data as for Holotype: 2 ex. (Paratypes: 0—395—68): No. 318—4. Some Paratypes also in the collections of Dr. J. AOKI and Dr. E. PIFFL.

Fam. EREMELLIDAE BALOGH, 1961

14. **Eremella ensifera** n. sp.

(Figs. 21—22)

Length: 279—311 μ, width: 136—168 μ.

Until now, three *Eremella* species have been described, two from Java (one of them found also in West Africa), and one from Europe. The species from Córdoba can be easily distinguished from the above three by the following features: notogastral hairs smooth, long, ensiform, acute. Hairs *p* not differring essentially, either as to shape of length, from other notogastral setae. Entire body covered with large granules. Six pairs of genital hairs. All other characters easily discernible on Figs. 21—22.

Material examined: 1 ex. (Holotype: 0—358—68): No. 320—2; 54 ex. (Paratypes: 0—359—68): data as for Holotype: 1 ex. (Paratype: 0—360—68): No. 318—3. Some Paratypes deposited also in the collections of Dr. J. AOKI, Dr. E. PIFFL, Dr. A. RAJSKI, and Dr. T. WOOLLEY.

Fam. CYMBEREMEIDAE SELLNICK, 1928

15. **Scapheremaeus ornatus** n. sp.

(Figs. 23—24)

Length: 568 μ, width: 294 μ.

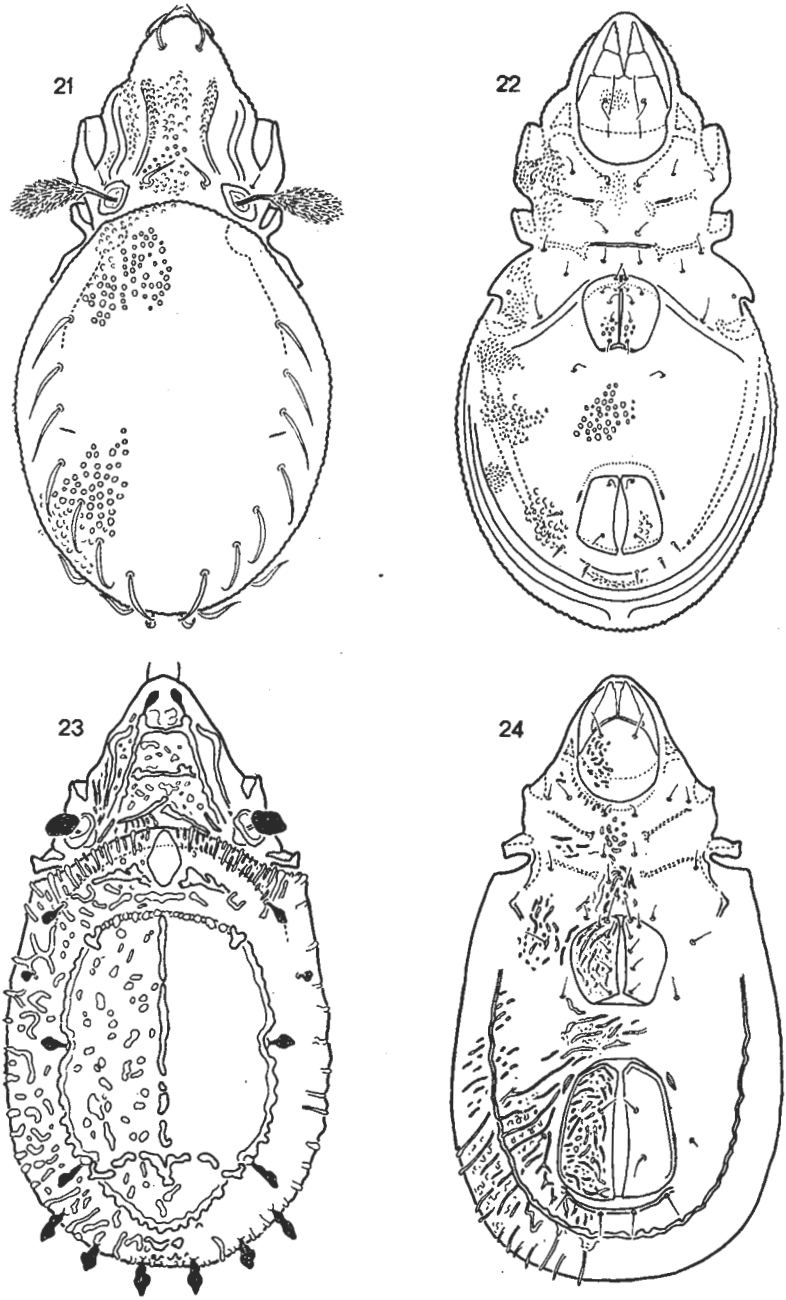
Sensillus directed upwards, apically dilating. Lamellar hair black, apically fusiform. Prodorsum with lamellae and translamella. Rostral hairs short, nearly straight.

Notogaster: 7 pairs of hairs discernible: hairs black, irregularly dilating apicad, resembling blowing flames, their axis (pedicel) similar to the rachis of a leaf. Notogaster with a rough, irregular sculpture showing a distinct marginal zone.

Ventral side: 6 pairs of genital, 1 pair of aggenital, 3 pairs of adanal, and 2 pairs of anal hairs. Hairs ad_1 and ad_2 in a postanal position, hair ad_3 situated at half length of anal plate. Ventral plate with a slightly dissimilar sculpture consisting of oblique lines.

Material examined: 1 ex. (Holotype: 0—400—68): No. 321.

Remarks: The shape of the hairs and the sculpture distinguishes the new species from all known allies.



Figs. 21—24. *21—22: Eremella ensifera* n. sp. — *23—24: Scapheremaeus ornatus* n. sp.

16. **Passalozetes prominens** n. sp.

(Figs. 25—26)

Length: 380 μ, width: 175 μ.

Sensillus ex- and reclinate, setiform, finely ciliate. Interlamellar, lamellar, and rostral hairs rather short, smooth. Prodorsum with an intricate sculpture consisting of granules and irregularly spaced lines. Legs tridactylous, lateral claws longer and thinner than median claw.

Notogaster: 10 pairs of short, smooth notogastral hairs and 3 pairs of areae porosae. Dorsosejugal suture sharply projecting. Lenticulus round. Notogaster with a dense, obliquely decurrent, irregularly interrupted, linear sculpture.

Ventral side: 5 pairs of genital, 1 pair of aggenital, 3 pairs of adanal, and 2 pairs of anal hairs. Hairs ad_1 in a postanal, hairs ad_2 and ad_3 in a paraanal, position. Hairs *ag* removed far anteriorad. Structure of ventral plate composed of granules and irregularly scattered chitinous line, hardly expressible in words.

Material examined: 1 ex. (Holotype: 0—357—68): No. 321.

Remark: The number of claws, the shape of the dorsosejugal suture, and the notogastral sculpture distinguish the new species from all species described hitherto.

Fam. ORIBATULIDAE JACOT, 1929

17. **Oribatula fraenzlei** n. sp.

(Figs. 27—28)

Length: 425 μ, width: 262 μ.

Sensillus rather short, fusiform granulated. Interlamellar, lamellar, and rostral hairs densely ciliate. Lamellae thin, lamellar hairs arising in front of cuspides.

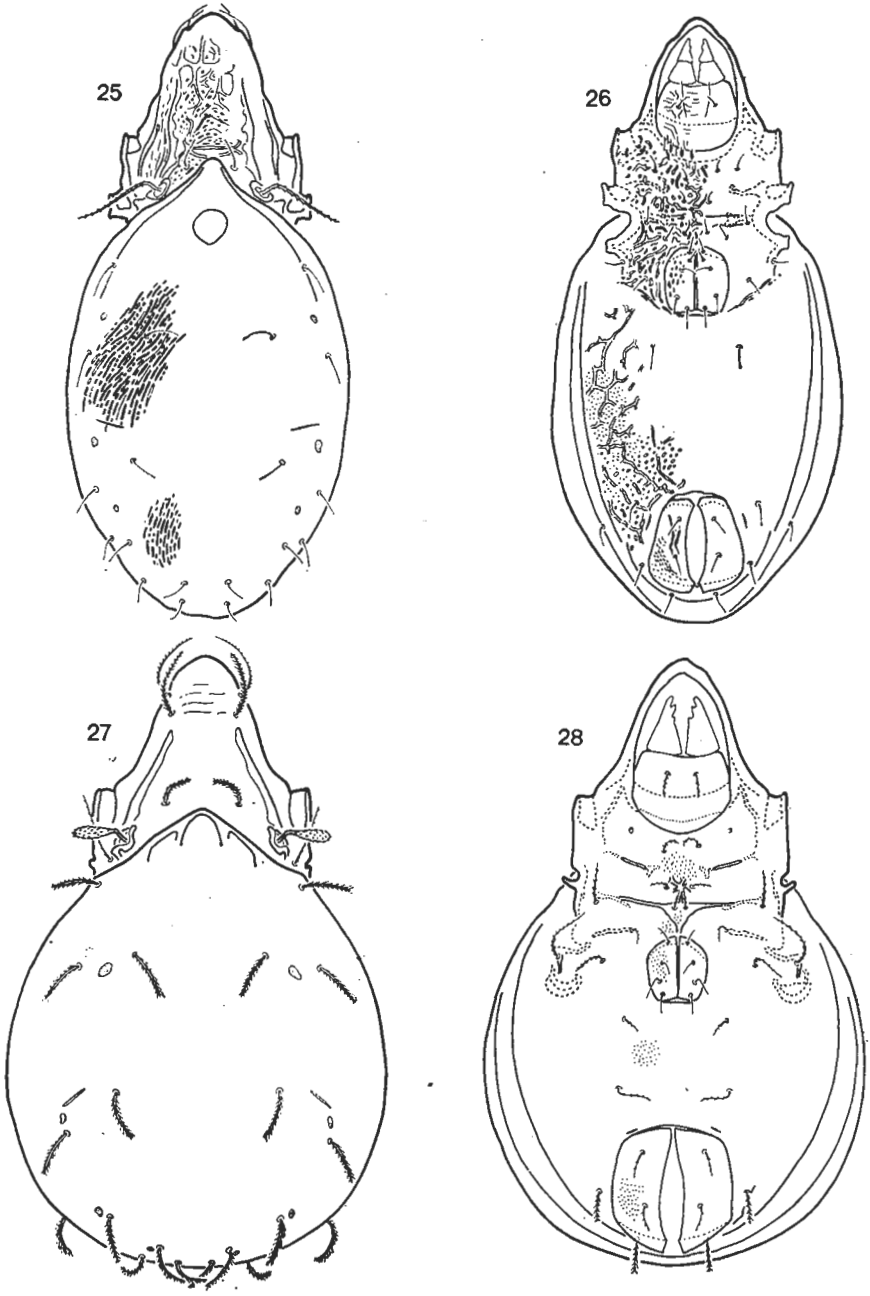
Notogaster: 10 pairs of strongly ciliate and plumose notogastral hairs, and 4 pairs of rather small areae porosae. Dorsosejugal suture strongly arcuate anteriorad, medially with an obtuse corner.

Ventral side: 4 pairs of genital, 1 pair of aggenital, 3 pairs of adanal, and 2 pairs of anal hairs. Hairs ad_1 and ad_2 densely ciliate. Hair ad_3 and pori *iad* in a preanal position. Ventral side finely punctate.

Material examined: 1 ex. (Holotype: 0—404—68): No. 321.

Remarks: The prodorsum and the plumose setae of the notogaster distinguish the new species from all related taxa described hitherto.

We dedicate the new species to Prof. Dr. O. FRÄNZLE, of pioneering work in the organisation of the First Soil Biological Symposium in Latin America.



Figs. 25—28. *25—26: Passalozetes prominens* n. sp. — *27—28: Oribatula fraenzlei* n. sp.

18. **Oribatula dactyloscopica** n. sp.

(Figs. 29—30)

Length: 490 μ, width: 250 μ.

Sensillus weakly fusiform, apex rounded. All prodorsal hairs ciliate, exostigmatal and lamellar hairs strikingly elongate. Prodorsum densely lineated.

Notogaster: 10 pairs of rather long, ciliate notogastral hairs, and 4 pairs of small, circular areae porosae. Dorsosejugal suture arcuate anteriorad, parabolic, medially with an obtuse apex. Notogaster with extremely sharp, dense lines, decurrent toward apex of dorsosejugal suture, of a nearly parabolic course, so that the entire surface of the animal resembles a human fingerprint.

Ventral side: 5 pairs of genital, 1 pair of aggenital, 3 pairs of adanal, and 2 pairs of anal hairs. Haris ad_1 in postanal, hairs ad_2 in paraanal, and hairs ad_3 and pori *iad* preanal, positions. Lineate structure of ventral side similar to that of notogastral surface.

Material examined: 1 ex (Holotype: 0—403—68); No. 321.

Remarks: The projection of the dorsosejugal suture and the extremely sharp and characteristic lineate structure of the notogaster distinguish the new species from all known allies.

Fam. HAPLOZETIDAE Grandjean, 1936

19. **Peloribates longicoma** Hammer, 1958

(Figs. 31—32)

The specimens from Córdoba probably represent Hammer's animals. The single difference lies in the longer lamellae as given by Hammer; most *Peloribates* species display short lamellae. Our exemplars are also bigger than Hammer's. Length: 410—459 μ, width: 261—297 μ.

Material examined: 18 ex. (0—353—68): No. 320—2; 12 ex. (0—354—68): No. 319—1; 3 ex. (0—355—68): No. 317—2; 1 ex. (0—356—68): No. 318—4.

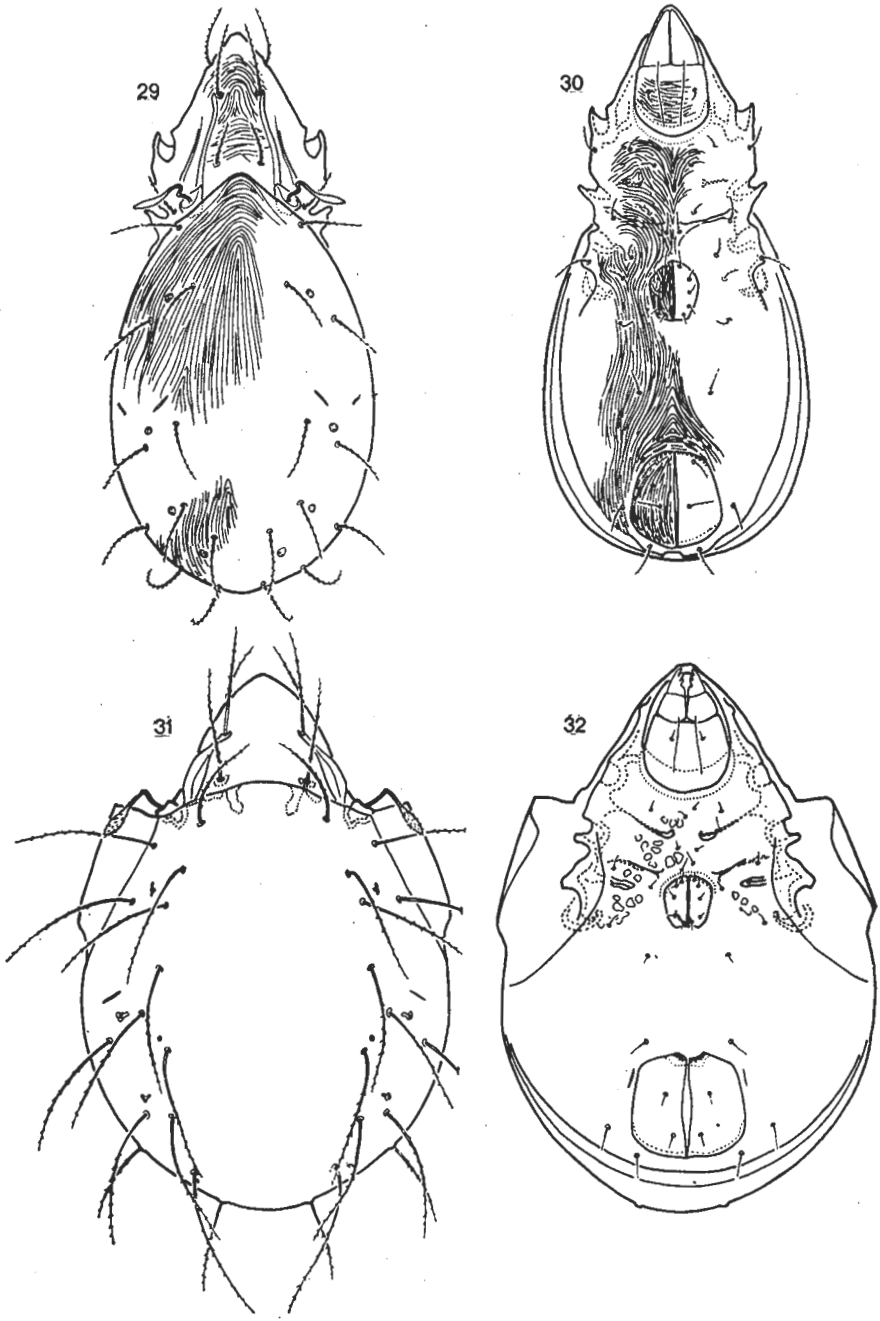
20. **Rostrozetes pseudofurcatus** n. sp.

(Figs. 33—34)

Length: 302—322 μ, width: 200—248 μ.

Apex of sensillus globular, densely aciculate. Interlamellar hair arising extremely laterally, inclinate, smooth. Lamellar and rostral hairs originating in rostral region. Lamellae in a lateral position. Prodorsum roughly foveolate.

Notogaster: 12 pairs of notogastral hairs; 3—3 centrodorsal pairs dilating and actually bifurcate, but the two branches are connected by a chitinous membrane so that, in a certain view, the hairs appear as if apically truncate. Distal end of these 3 pairs of hairs finely ciliate. Nine pairs of other notogastral hairs simple, smooth. Notogaster with an elevated crest largely parallel with margins, obtusely 7—9-angulated. Notogaster with irregular foveolae.



Figs. 29—32. *29—30: Oribatula dactyloscopica* n. sp. — *31—32: Peloribates longicoma* HAMMER, 1958

Pteromorphae characteristic of genus. Triple arc of dorsosejugal suture not expressed. Legs monodactyle.

Ventral side: 4 pairs of genital, 1 pair of aggenital, 3 pairs of adanal, and 2 pairs of anal hairs. Hairs ad_1 in postanal, hairs ad_2 in paraanal position; hairs ad_3 arranged in one line with anterior margin of anus. Ventral side foveolate. Genital and anal plates with smaller, irregular foveolae.

Material examined: 1 ex. (Holotype: 0—396—68): No. 317—1; 50 ex. (Paratypes: 0—397—68): data as for Holotype. Some Paratypes in the collections of Dr. J. AOKI, Dr. E. PIFFL, Dr. A. RAJSKI, and Dr. T. WOOLLEY.

Remarks: The new species sharply differs from all known Rostrozetes species, resembling to a certain extent only *R. dimorphichaites* HIGGINS, 1966 (British Guiana). This is the sole species displyaing notogastral heterotrichy, with the same 3 pairs of dilating hairs. However, the differences are so weighty that the two taxa cannot be considered conspecific. We submit, in the followings, the main differential characteristics (in brackets those referring to *R. dimorphichaites*):

1) 12 pairs of notogastral hairs (10 pairs);

2) 4 pairs of genital hairs (5 pairs);

3) 3 pairs of bifurcate notogastral hairs, branches connected by a chitinous membrane (3 pairs of unistalked, fusiform, notogastral hairs);

4) aggenital hair present (aggenital hair absent);

5) anal plate with smaller foveolae than ventral plate (foveolae of equal size on both plates).

Fam. TRUNCOPIDAE GRANDJEAN, 1956 (sensu WOOLLEY, 1966)

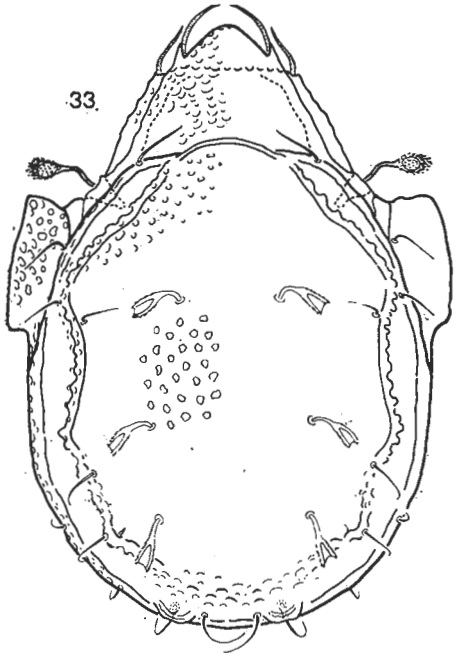
21. **Truncopes australis** n. sp.

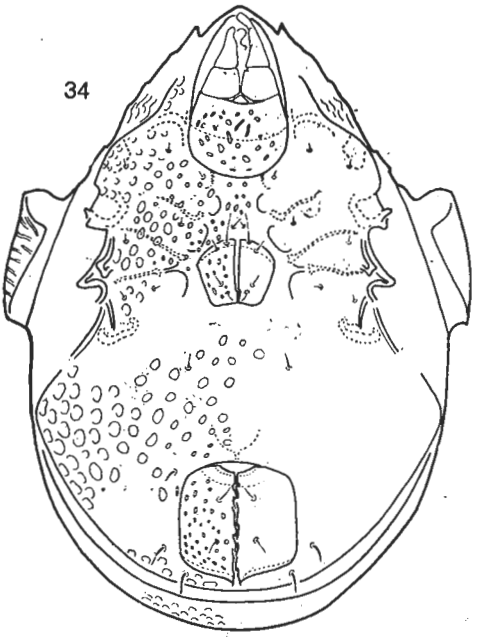
(Figs. 35—36)

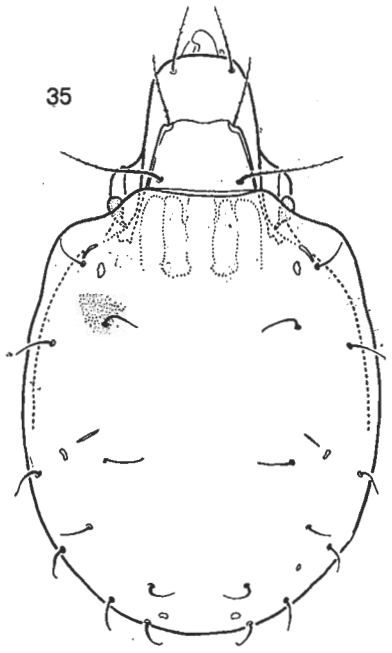
Length: 521—577 μ, width: 310—348 μ.

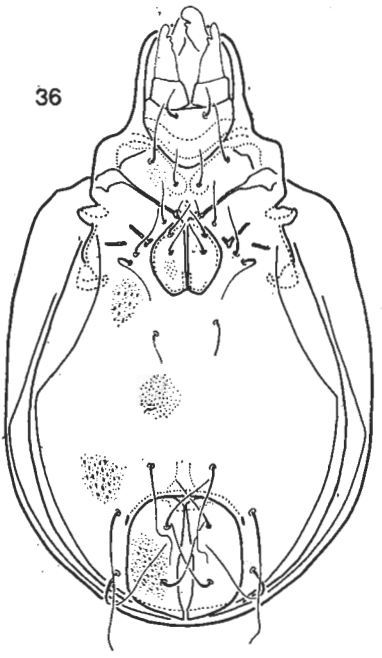
There are two species known heretofore of this genus, namely *T. optatus* GRANDJEAN, 1959 (South Europe), and *T. angolensis* BALOGH, 1963 (Angola). Together with the new species, the three taxa can be safely distinguished mainly with respect to the position of the notogastral and ventral setae. The epimeral hairs of *T. angolensis* are largely short, those of the new species mainly long. The anal hairs of *T. angolensis* are flagelliform, and as long as the adanal hairs, whereas in *T. australis* the anal hairs are shorter than the adanal ones. Hair r_3 of *T. optatus* is longer than all other *r* hairs, in the new species it is of the same length. *T. optatus* and *T. angolensis* possess no translamellar linea, but the new species displays one. All other minor differences are readily discernible on the Figures. *T. angolensis* is also much smaller (322×191 μ).

Material examined: 1 ex. (Holotype: 0—398—68): No. 321; 6 ex. (Paratypes: 0—399—68): data as for Holotype. Some Paratypes in the collections of Dr. J. AOKI, and Dr. E. PIFFL.









Figs. 33—36. *33—34*: *Rostrozetes pseudofurcatus* n. sp. — *35—36*: *Truncopes australis* n. sp.

22. Pirnodus imitans n. sp.

(Figs. 37–38)

Length: 348–422 μ, width: 220–298 μ.

Similar to *P. detectidens* GRANDJEAN, 1956 (Pyrenées Orientales), but essentially smaller (*P. detectidens* ♀: 440–525×300–365 μ). The main differentiating characters against the above species are: hairs *4a* and *4b* extremely long, hairs *ad* and *an* long, flagelliform. All other minor differences as given on the Figures.

Material examined: 1 ex. (Holotype: 0–405–68): No. 321; 4 ex. (Paratypes: 0–406–68): data as for Holotype. Some Paratypes in the collections of Dr. J. AOKI, and Dr. E. PIFFL.

Parapirnodus n. gen.

Legs monodactyle. One pair of genital hairs. Pori *iad* in preanal position. Body elongated. Oral parts covered. Bothrydium and sensillus uncovered.

Type-species: *Parapirnodus longus* n. sp.

Remarks: The monodactyle legs and the uncovered bothrydium distinguish the new genus from all other genera of the family. At the first glance, we thought it to represent the male of *Pirnodus imitans*, but there were also some females containing eggs among our specimens.

23. Parapirnodus longus n. sp.

(Figs. 39–40)

Length: 292–347 μ, width: 124–168 μ.

Bothrydium and sensillus uncovered, sensillus short, clavate, smooth. Lamellae linear, lateral. Interlamellar hair arising on dorsosejugal suture; this latter arching considerably anteriorad, medially interrupted.

Notogaster: 9 pairs of short, smooth notogastral hairs (we have been unable to detect the tenth pair); 3 pairs of sacculi, structurally resembling areae porosae.

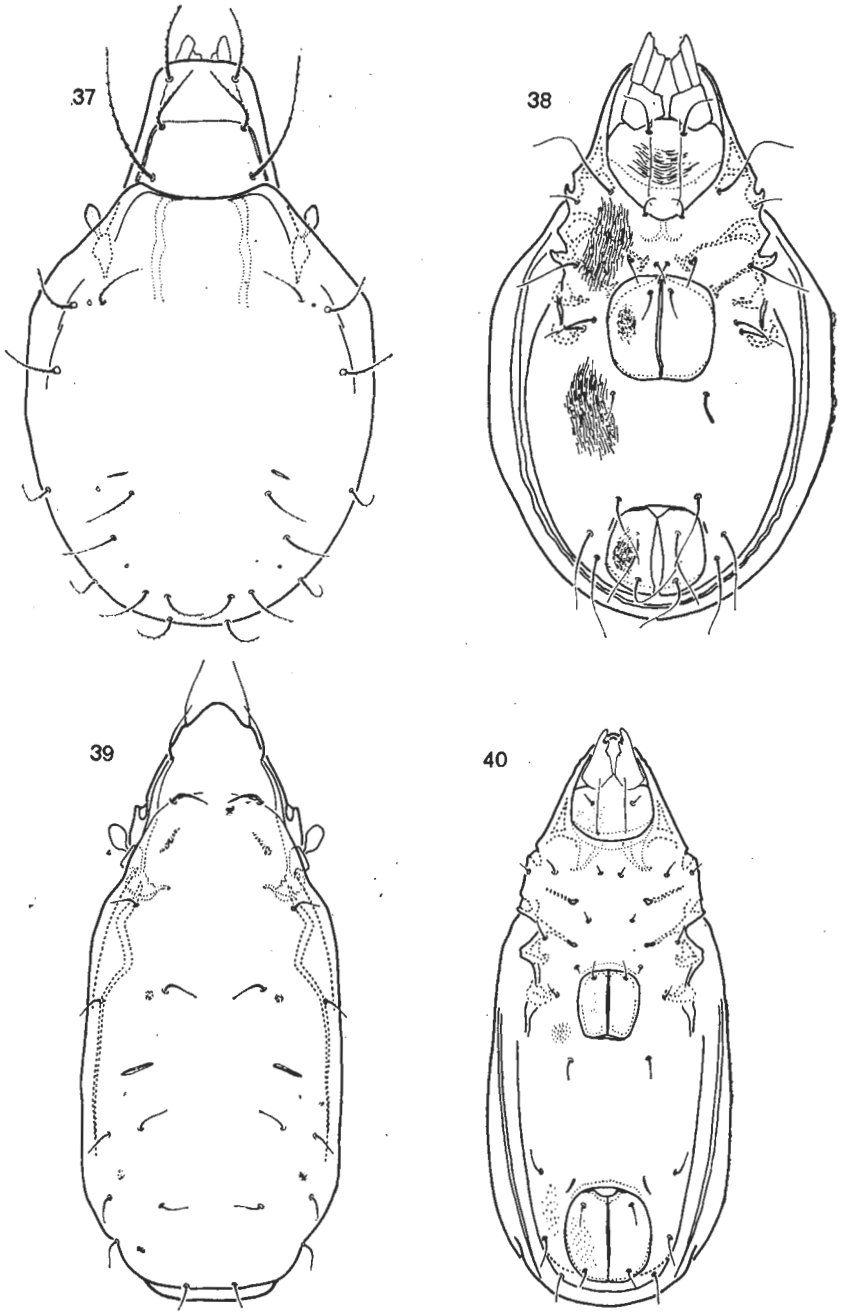
Ventral side: 1 pair of genital, 1 pair of aggenital, 3 pairs of adanal, and 2 pairs of anal hairs, all short, fine. Pori *iad* and hair ad_3 in a preanal position. Ventral side finely punctate.

Material examined: 1 ex. (Holotype: 0–401–68): No. 321; 14 ex. (Paratypes: 0–402–68): data as for Holotype. Some Paratypes in the collections of Dr. J. AOKI, Dr. E. PIFFL, Dr. A. RAJSKI, and Dr. T. WOOLLEY.

ZUSAMMENFASSUNG

Beiträge zur Kenntnis der Oribatiden-Fauna der Gegend von Córdoba, Argentinien

Die Verfasser besprechen das Oribatiden-Material, das sie im Rahmen der ersten ungarischen bodenzoologischen Expedition nach Südamerika im Córdoba-Gebirge (Argen-



Figs. 37—40. *37—38: Pirnodus imitans* n. sp. — *39—40: Parapirnodus longus* n. gen., n. sp.

tinien) gesammelt haben. Sie zählen 23 Oribatiden-Arten auf, von denen 18 Arten — *Brachychthonius rapoporti, Rhopalozetes plumifer, Pseuderemulus gladiator, Xenillus lawrencei, Sternoppia mirabilis, Sacculoppia singularis, Oppia cordobensis, Suctobelba complexa, Suctobelba scrofa, Eremella ensifera, Scapheremaeus ornatus, Passalozetes prominens, Oribatula fraenzlei, Oribatula dactyloscopica, Rostrozetes pseudofurcatus, Pirnodus imitans* und *Parapirnodus longus* n. spp. — bzw. 2 Unterarten — *Staurobates schusteri cordobensis* und *Oribella spinifera monoceros* n. sspp. — neu für die Wissenschaft sind. Es werden ferner 4 neue Gattungen aufgestellt, und zwar *Pseuderemulus, Sternoppia, Sacculoppia* und *Parapirnodus* n. genera.