

## New Oribatids (Acarina) from Chile

By

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Although in the extensive work of MARIE HAMMER (1962, 1962 *a*), a high number of species, new both to science and to the Chilean fauna, have already been described, the Oribatids of the entire — geographically so complicated — structure of the country is still far from being known.

In the present, first paper, we submit a study of the Oribatid mites of a series of samples taken from several representative localities from North, Central and South Chile.

In this venture, 14 species new to science are described, including also a new genus. Distributional data for other species are also given.

The working up of this material was carried out in the laboratory of Prof. Dr. J. BALOGH at the Zoosystematical Institute, Eötvös Loránd University, Budapest, as a part of the cooperation program between the latter and the University of Chile.

In the descriptions, the terminology of F. GRANDJEAN is adopted, as also the general nomenclature stated in J. BALOGH's key (1955). For the descriptions of the shape and texture of the setae, the conventional terms proposed by J. I. AOKI (1965) were used.

The holotype of all the species described herein is deposited in the Invertebrate Collection of the Ecology Division, Institute of Hygiene and Animal Production, University of Chile, Santiago.

Special thanks are given to Prof. Dr. J. BALOGH and to all those who, working in the Zoosystematical Institute of the Eötvös Loránd University, have eventually helped me. I am also indebted to Prof. DI CASTRI, INÉS RUBIO, W. HERMOSILLA, F. SÁIZ, and E. HÁJEK, with whose collaboration the material was collected and separated.

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## *Phyllhermannia tuberculata* n. sp.

(Figs. 1-3)

*Color*: Yellowish-brown.

*Length*: 588  $\mu$ ; observed range: 515  $\mu$ —637  $\mu$ .

*Width*: 330  $\mu$ ; observed range: 275  $\mu$ —352  $\mu$ .

*Prodorsum*: Rostrum oval. Rostral hairs slightly roughened. Lamellar hairs barbed, bristle-like. Interlamellar hairs thick, distinctly barbed, lanceolately incarsate but without a definite configuration. Lamellar ridges extending from vicinity of each pseudostigma and convergent to form an open V, embracing hairs *in*. Anteriorly to apex of this V, a transversal, short and curved ridge. Pseudostigmata opening dorso-laterally, outer face of cups strongly punctate. Sensillus cylindrical, roughened on its distal two-thirds. Exopseudostigmatic hairs short, thorn-like, slightly roughened and inserted under external side of pseudostigma.

Surface between pseudostigmata and behind lamellar ridges strongly punctate and with a longitudinal depression on sagittal part. Posterior border of prodorsum parasagittally with a pair of strong condyles, separated by a row of small tubercles. Zone between acetabula I and II showing numerous rounded and well detached tubercles, discernible in both dorsal and ventral views.

*Notogaster*: Elliptical. Sixteen pairs of setae, all of equal length; hair shape and texture as described for setae *in*. Surface covered with definite and ordered granules of cerotegument.

*Subcapitular zone*: Diarthral. Hairs *h*, *m* and *a* **glabrous**, latter much shorter than others. Mandibula presented on Fig. 2-a; **both jaws with 3 teeth**; dorsal and lateral hairs slightly roughened, former rather **parasagittal**, latter anti-sagittal. Mandibular length: 123  $\mu$ .

*Epimeral zone*: Epimeral formula (3-1-3-5), all hairs bristle-like and glabrous. Shape of sternal and epimeral plates, also epimeral ridges, as described for genus; medial margin of each epimeral plate I sinuous, with low tubercles. Posterior margin of epimeral plate III bordered by 7 to 9 irregular but well detached tubercles, posterior border of epimeral plate IV also with a similar group of tubercles (condyles?).

*Genito-anal region*: Genital plates with 6 pairs of short hairs aligned on medial border, and with 3 other pairs, long and external with respect to preceding ones; 2 pairs of aggenital, 2 pairs of anal, and 3 pairs of adanal hairs, all of same type as epimeral ones.

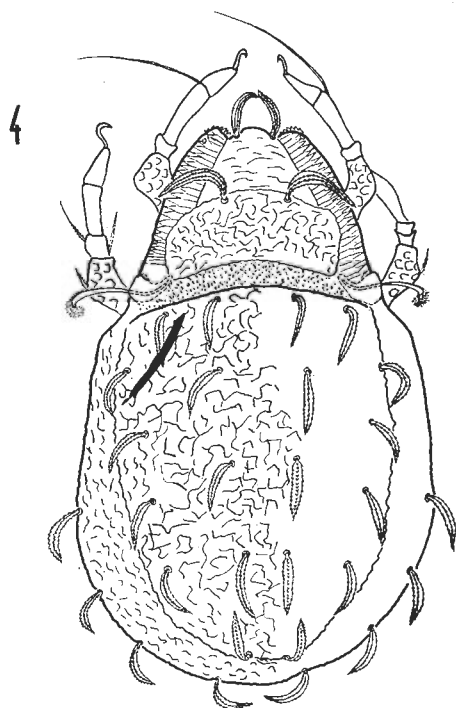
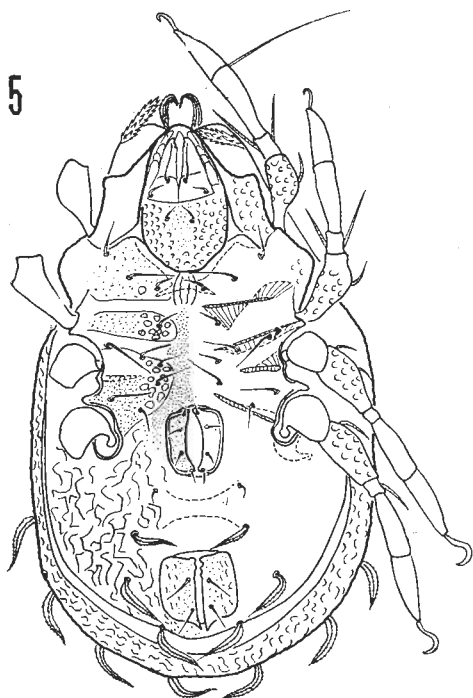
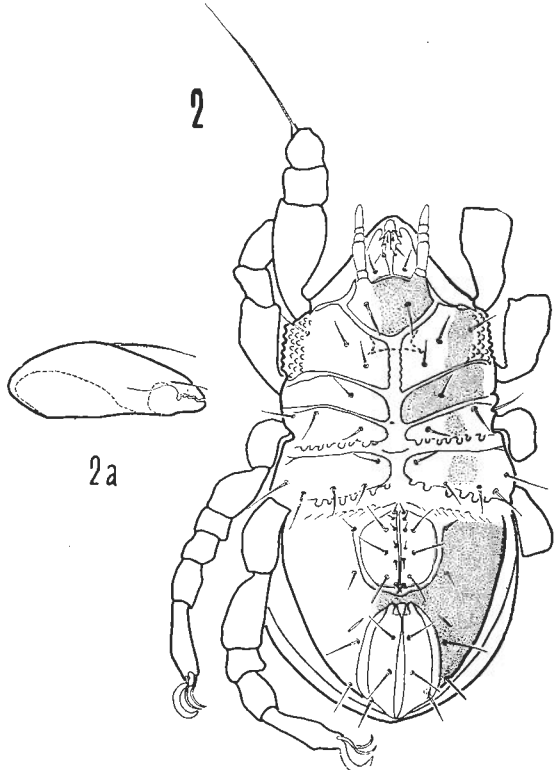
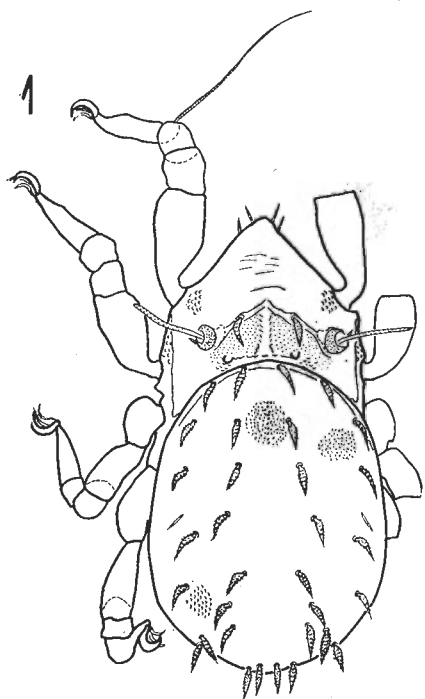
Adanal fissures oblique, adjacent to sides of anal aperture at level of its anterior border.

Surface of mentum, epimeral, and ventral plates with a fine, dense granulation. Anal plates at both sides with a longitudinal line each, reaching anterior border and incurving to symmetry plane, forming a protruding, curved crest.

*Legs*: Leg I as shown on Fig. 3. Two phaneria, marked by "Cl-?", apparently corresponding to a pair of slender claws, making apotheles tridactyle.

*Remarks*: *Phyllhermannia tuberculata* is nearly related to *P. dentata* TRÄGÄRDH, 1931, but it can be distinguished by the following features:

A) The new species possesses, whereas *P. dentata* lacks: 1. a pair of large condyles on the posterior border of the prodorsum; 2. a file of tubercles on the posterior border of epimeral plate III. (Also, TRÄGÄRDH's detailed description does not mention the tuberculated zone between acetabula I and II); 3. pro-



Figs. 1–2 a. *Phyllhermannia tuberculata* n. sp. (2 a: right chelicera, antisagittal). — Figs. 4–5. *Austrocarabodes pseudoreticulatus* n. sp.

podosomal ridges, both the lamelliform and the curved ones in front of the setae *in*; 4. longitudinal lines on the anal plates.

B) Further differences: 5. The new species lacks any line or ridge at the level of the lamellar setae, present in *P. dentata*; 6. the lamellar hairs of the new species are of the same type as the setae *ro*, that is, they are short, setiform, roughened and not of the pseudofoliate type as the *in* or the notogastral hairs (as described in TRÄGÄRDH's species); 7. the anterior border of the mentum is widely curved in the new species, but angled in *P. dentata*; 8. the epi-

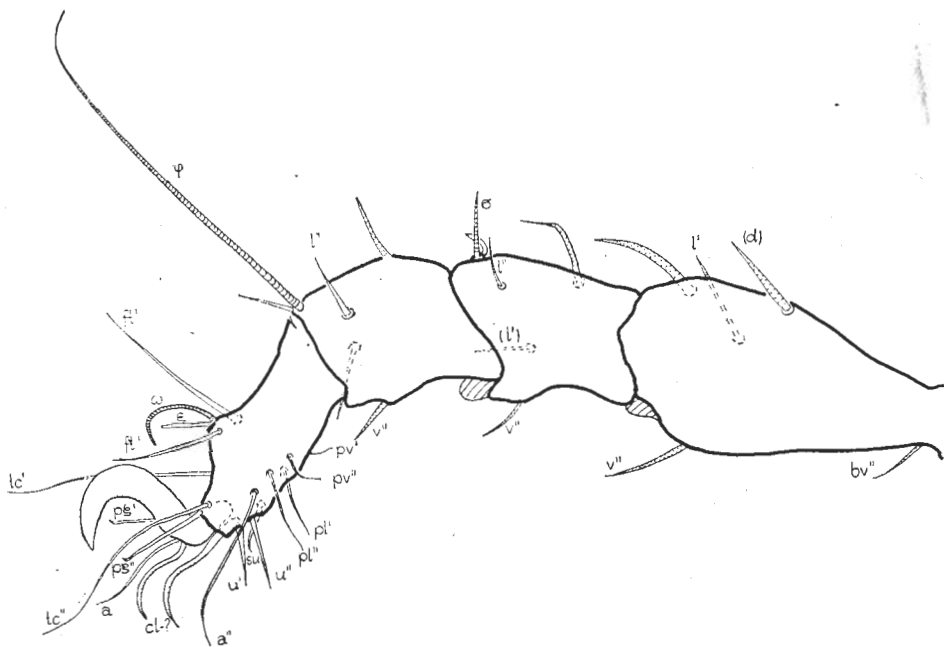


Fig. 3. *Phyllhermannia tuberculata* n. sp. Leg I, antisagittal

meral formula of the new species is (3-1-3-5), whereas that of *P. dentata* (3-2-3-4); 9. the genital hairs are situated in two rows of different lengths in the new species; for *P. dentata*, the description states "two rows of 4 small hairs each". The difference in number for the internal row can be either an error or an omission (TRÄGÄRDH worked on dry material), but the number and length of hairs on the external row constitute differences; 10. the body length, as given for *P. dentata*, is beyond the range observed for the new species; 11. some other differences can also be found in the leg chaetotaxy (after the description of *P. dentata*), but a direct study of the two species is needed in this respect.

In establishing a new species for the Chilean specimens, it was significant that all described differences were found to be constant in the individuals examined, belonging to two different populations originating from distant localities.

The problem, namely a definite statement as to the actual categories of these two species and also *P. foliata* HAMMER, 1966, evidently related to them,

can be solved only by means of more detailed morphological and biological studies, the results of which will be of major interest in biogeography.

Type-locality: 20 km north of Valdivia City, Province Valdivia, Chile.

Material examined: Three specimens from a temperate rain-forest, 13 Oct. 1963. One paratype deposited in the Zoological Department of the Hungarian Natural History Museum, Budapest.

Further specimens: Nahuelbuta National Park, Province Malleco, Chile. Seven specimens from a hygrophilous temperate rain-forest, 3 Febr., 1963.

### *Carabodes australis* BALOGH, 1963

Two specimens from Fray Jorge National Park, Province Coquimbo, Chile. Found in a temperate rain-forest, 22 May, 1962.

### *Austrocarabodes pseudoreticulatus* n. sp.

(Figs. 4-5)

*Color*: Brownish-orange.

*Length*: 612  $\mu$ ; observed range: 785-602  $\mu$ .

*Width*: 388  $\mu$ ; observed range: 510-347  $\mu$ .

*Prodorsum*: Rostrum rounded. Rostral setae lanceolate, with two definite faces; along one face two longitudinal, serrated ridges, with also margins of setae finely serrate. Lamellae wide, at their posterior end as wide as length of cup of pseudostigmata. Lamellar hairs inserted on ventro-lateral face of lamella and near its anterior end; hairs long and with three rows of long pectinations (best seen from a ventral view; Fig. 5).

Interlamellar setae of same type as hairs *ro*. Surface between lamellae of two main different levels; posterior one wide and with setae *in* on its anterior border, anterior one narrow and in a low position; both parts separated by an apparent ridge formed by sudden change in level.

Pseudostigmata opening laterally, their cups in an horizontal axis and placed between lamella and anterior border of humeral zone. Sensillus ribbon shaped, slightly incrassate, with one face (posterior) glabrous, other one covered with minute bristles, their apical portion reclinate.

Tutorium situated under lamellae and following their course; posterior part low, middle part lamellar, anterior one ending in a tip not reaching border of camerostome. Surface of prodorsum between lamellae irregularly reticulated, large foveolations under lamellae and on tutorium.

*Notogaster*: Suture dorsojugalis slightly arched. Fourteen pairs of setae of equal length and type; lanceolate, with serrated borders and with only one median ridge, also serrated. Two different zones: one central, strongly convex and containing all setae except series *ps*; other one external, U-shaped, separated from preceding one by a ridge (change of level), and bearing setae of series *ps*.

Surface ornamented by a reticulate pattern, with open meshes (a very characteristic feature, giving the name of the species).

*Acetabular region*: Pedotectum I a semicircular lamella, extending from under pseudostigmata to border of camerostome, behind acetabulum I.

Pedotectum II lamellar, as long as diameter of acetabulum II, partially

covering it. Acetabular tecta III and IV of position and form similar to those of pedotectum II. Discidium a ridge, triangular in a ventral view.

*Subcapitular region*: Diarthral. Hairs *h*, *m* and *a* glabrous, latter much longer than others. Mentum with a large foveolation.

*Epimeral region*: Epimeral formula (3-1-3-3); hairs glabrous, lateral ones longer than medial setae.

Sternal plate and epimeral ridges well delineated by a different texture and thickness of tegument. Epimeral plates III and IV partly fused, containing clear spots appearing also on epimeral plates II. Two parallel and longitudinal ridges present between epimeral plates I. (These characteristics are represented on the left side of Fig. 5.)

*Genito-anal region*: Four pairs of genital, 1 pair of aggenital, and 2 pairs of anal hairs, all bristle-like and glabrous, latter ones longer than others. Three pairs of adanal setae of same complex type as notogastral ones.

*Legs*: All apothemes monodactyle.

*Remarks*: *A. pseudoreticulatus* is clearly distinguishable from all other species by the characteristic type of reticulation of the notogastral surface, and also by the type of the sensillus and setae.

*Type-locality*: Papos hills, Province Antofagasta, Chile.

*Material examined*: 30 specimens, under dense thornbush-type vegetation, 25 Aug. 1963. Two paratype deposited in the Zoological Department of the Hungarian Natural History Museum, Budapest.

### ***Rhabdozetes pennata* HAMMER, 1962**

Three specimens. Collected 20 km north of Valdivia City, Province Valdivia, Chile. Found in a temperate rain-forest, 13 Oct. 1963.

### ***Hymenobelba ramulosa* n. sp.**

(Figs. 6-7)

*Color*: Yellow.

*Length*: Specimen 1: 378  $\mu$ ; Specimen 2: 385  $\mu$ .

*Width*: Specimen 1: 193  $\mu$ ; Specimen 2: 182  $\mu$ .

*Prodorsum*: Rostrum oval. Rostral hairs barbed on one side only, with a faint line between their alveoli. Lamellar setae long, reaching to rostrum, inserted over a conspicuous apophysis resembling a cuspis of a short and incomplete lamellar ridge; hairs weakly barbed on one side, as also exopseudostigmatic and interlamellar hairs.

Interlamellar hairs shorter than setae *ro* and *le*; preceded by a semicircular ridge with a posterior concavity, setae *in* extending slightly further anteriorad than this ridge. Exopseudostigmatic setae as long as hairs *in*, situated far anteriorly of each pseudostigma. Anterior pair of longitudinal ridges — convex antiaxially — extending along anterior third of space between pseudostigmata and lamellar setae. Entire surface of propodosoma covered with a thick, granulated cerotegument accumulating near ridges. Pseudostigmata opening wide and dorsally. Sensillus long, with 9-11 pectinations.

*Notogaster*: Oval. Ten pairs of long setae, thick at base and tapering rapidly apicad, densely barbed along one side only, all barbs of equal length, those



Figs. 6-7. *Hymenobelba ramulosa* n. sp. — 8-9. *Hymenobelba flagellata* n. sp.

of series *ps* slightly shorter. Surface covered with cerotegument, but under it smooth.

*Subcapitular region*: Diarthral. Setae *h*, *m*, and *a* long, with secondary branches in 2 rows.

*Acetabular region*: Pedotectum I lamellar only near ventral and posterior

borders of acetabulum I, then continuing as a small ridge, extending posteriorad and surmounting all other acetabula, although removed from them. At level of acetabulum IV, this ridge constituting dorsally a condyle, articulating with another and opposite condyle situated on internal surface of dorsal plate, posteriorly and externally to setae *ta*. These condyles connivent at point of dorsal plate descending to embrace ventral part of idiosoma. Beyond formation of above condyle, ridge descending abruptly and meeting posterior border of acetabular tectum IV, there becoming again somewhat enlarged. Entire ridge-system easily observable, yet only in a lateral view. In Fig. 6., position of internal notogastral condyle between setae *ta* and *te* marked by dotted and shaded lines. Acetabular tecta III and IV well developed, covered with granules of cerotegument.

*Epimeral region*: Epimeral formula (3-1-3-3); lateral setae of epimera longer than medial ones; these setae bearing 2 lines of opposite branches; number of branches varying according to different lengths of setae between 11 and 5 pairs. (The specific name was based on this characteristic type of setae). Sternal plates and epimeral ridges not specifically drawn due to changes in thickness of tegument. Apodeme I fused in sagittal plane; with lateral, pointed prolongations. Apodeme II short and perforated. Apodeme sejugal short, not perforated. Apodemes III and IV absent. Acetabulum IV characteristically enlarged and reaching almost to epimero-ventral plate, apparently without apodemes. (Apodemes omitted from figure, for sake of clarity of picture).

*Genito-anal region*: Five pairs of genital and 6 pairs of aggenital hairs, all of branched type, as described for epimeres and subcapitulum; more posteriorly situated aggenital setae in an adanal position but distinguishable by a texture entirely different from that of adanal setae. Two pairs of anal and 3 pairs of adanal setae, with a texture as described for notogastral hairs. Adanal fissures parallel and adjacent to external border of anal aperture at its medial third.

*Legs*: All apotheles monodactyle.

*Remarks*: The new species is clearly distinguishable from all of its known congeners by its length and the characteristic type of its setae. The form of the sensillus resembles that of *H. annulus* BALOGH & MAHUNKA, 1966, but the setae of the latter have an entirely different structure, and it is also a big Oribatid with strong claws and a typical, chitinous "ring" on its prodorsum.

Type-locality: 20 km north of Valdivia City, Province Valdivia, Chile.

Material examined: two females, from a hygrophilous, temperate rain-forest, 13 Oct. 1963.

### *Hymenobelba flagellata* n. sp.

(Figs. 8-9)

*Color*: Brownish-yellow.

*Length*: 300  $\mu$ . *Width*: 147  $\mu$ .

*Prodorsum*: Rostrum oval, narrow. Rostral hairs long and glabrous, flagelliform, inserted laterally approximately at level hairs *le*. Lamellar hairs of same shape and texture as hairs *ro*, but slightly shorter and finer, inserted on low cuspides representing anterior end of lamellar ridges; these latter somewhat sigmoid, short, extending only along anterior two-thirds of distance between setae *le* and pseudostigmata. Interlamellar setae parallel, of same shape and texture as hairs *ro* and *le*, inserted on a low and round cuspid; interlamellar



setae situated medially on a circular, convex and low protuberance. Exopseudostigmatic setae glabrous and shorter than other prodorsal ones, implanted far anteriorly with respect to each pseudostigma. Sensillus long, with 7—9 pectinations. Pseudostigmata opening wide and dorsally.

*Notogaster*: In shape resembling an amphora. Ten pairs of glabrous setae, long and apically flagelliform (hence the name of the species). Setae *ta* conspicuously thicker than others. All specimens examined bearing laterally two pteromorph-like formations, consisting of cerotegument forming curious configurations also on rostrum, around base of setae *le* and *in* and in some parts of legs. Tegument, however, smooth all over.

*Acetabular region*: Pedotectum I lamellar only under and posteriorly of acetabulum I, continuing posteriorad in a ridge surmounting other acetabula. Pedotectum II absent. Acetabular tecta III and IV thick, covered with cerotegument. Discidial region without ridges. Custodial point sharp, its tip nearly touching zone posterior to acetabulum II.

*Subcapitular region*: Diarthral. Hairs *h*, *m*, and *a* with secondary branches; setae *h* being longest.

*Epimeral region*: Epimeral formula (3-1-3-3). All setae with secondary branches. Number of branches varying approximately between 4 and 8, and inserted only on one side of hair. Lateral setae longer, especially on epimeral plate I. Sternal and epimeral ridges not excelling by any special change in thickness of tegument.

Apodeme I fused at sagittal plane, parasagittally with two pointed formations extending upwards to level of internal epimeral setae. Apodeme II, sejugal, and III very short, not perforated. Apodeme IV longer and linear.

*Genito-anal region*: Six pairs of genital and 6 pairs of aggenital setae of same type as described for subcapitular and epimeral regions; two more posterior ones in an adanal position. (Despite this position, they are probably of true aggenital or ventral type.) Three pairs of adanal and 2 pairs of anal setae, as in case of *H. ramulosa*, differing from other setae on ventral side, of a shape and texture similar to those of notogastral hairs.

Adanal fissures parallel and situated near medial third of lateral borders of anal aperture.

*Legs*: All apothemes monodactyle.

*Remarks*: By the size and type of its setae, *H. flagellata* is easily distinguishable from all of its known congeners.

*Type-locality*: Fray Jorge National Park, Province Coquimbo, Chile.

*Material examined*: Four female and two male specimens from a hygrophilous cloud-forest, 20 Aug. 1963. One paratype deposited in the Zoological Department of the Hungarian Natural History Museum, Budapest.

### *Liacarus ornatus* n. sp.

(Figs. 10—11a)

*Color*: Reddish-brown.

*Length*: 1020  $\mu$ ; width: 673  $\mu$ .

*Prodorsum*: Rostrum wide, rounded. Rostral, lamellar, and interlamellar hairs long, thick, strongly barbed, of unequal length, former ones being shortest, latter ones being longest. Lamellae wide, convergent, then fused together; cuspis also wide and lamelliform, terminating anteriorly in a sharp

point; at base and between cuspides a triangular, sharp, free tooth; lamellar system covered with slightly striated cerotegument, only sagittal free tooth remaining smooth. Lamellar hairs inserted in median section of oblique anterior border of cuspis. Interlamellar hairs emerging from posterior margin of prodorsum. Between lamellae, a triangular field, ornamented with regular granules. Pseudostigmata completely hidden by anterior border of dorsal shield, opening laterally. Sensillus represented by thick and long stalks with an enlargement medially, also covered throughout by small scales. Tutorium lamelliform, extending from under each pseudostigma, almost in a straight line up to base of hairs *ro*, and also covered with cerotegument.

*Notogaster*: Eleven pairs of hairs, all long, thick, and strongly roughened; those inserted on anterior half of dorsal shield longer than posterior ones. Dorsal tegument ornamented with slit-like fissures and covered with transparent but densely granulated cerotegument. (The specific name is based on the former feature).

*Acetabular region*: Pedotectum I represented by long and large lamellae extending from a zone posterior to each pseudostigma, hiding completely acetabulum I (in a lateral view) and terminating at circumcapitular furrow under aforesaid acetabulum; covered by thick cerotegument and having a granulated tegument. Pedotectum II absent. Acetabular tecta III and IV represented by low lamellae, partly covering respective acetabulum. Discidium a conspicuous ridge extending from a zone posterior to each pseudostigma, decurrent first longitudinally then obliquely and ventrally to anterior border of acetabulum IV, emitting a secondary branch, shaped as a small ridge, reaching, from above, posterior border of acetabulum III.

*Subcapitular region*: **Diarthral. Hairs** *h*, *m*, and *a* thick and glabrous. Rutellum with 2 large, rounded, and a third, small teeth. Chelicerae (Fig. 11a) with roughened dorsal and antiaxial hairs, surface granulated. Each jaw with 4 rounded teeth. Length of mandibula 210  $\mu$ .

*Epimeral region*: Epimeral formula (3? -1-2-2), all hairs setiform and glabrous. Narrow sternal and epimeral ridges present, their tegument slightly thicker than that of surrounding area. Epimeral ridges IV absent. Apodemes I fused, forming a narrow band, their lateral prolongations situated transversely. Apodemes II and sejugal well developed, not perforated, insertions linear. Apodeme III short. Apodeme IV absent.

*Genito-anal region*: Five pairs of genital, 1 pair of aggenital, and 2 pairs of anal hairs, all bristle-like and glabrous. Three pairs of strongly roughened adanal hairs. Adanal fissures parallel and touching lateral border of anal aperture near anterior angle.

Type-locality: Palms of Cocalán, Province O'Higgins, Chile.

Material examined: One female from Palm Forest, 6 Sept. 1962.

### *Amerioppia similis* n. sp.

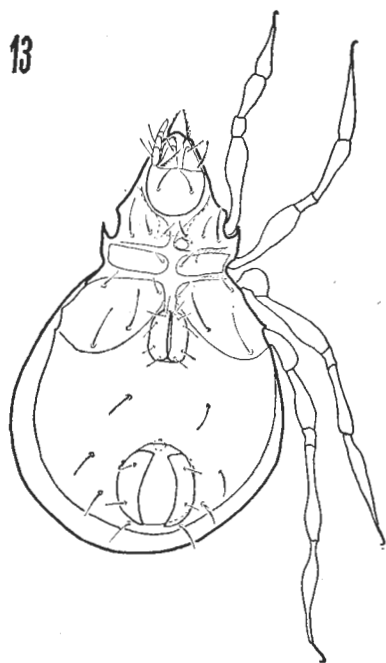
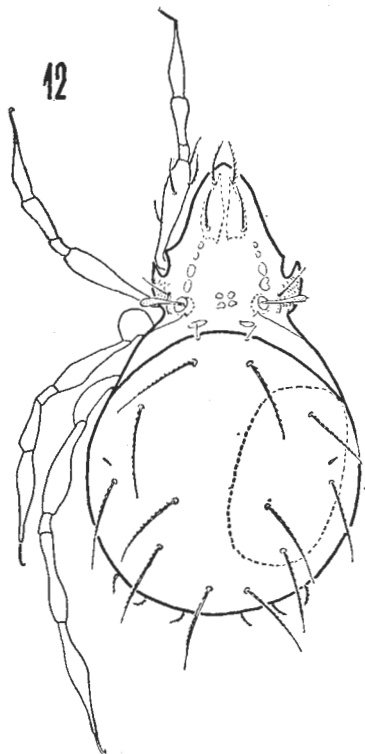
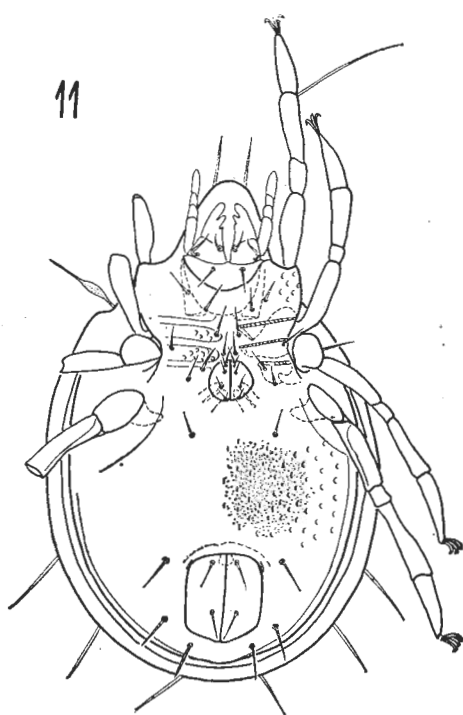
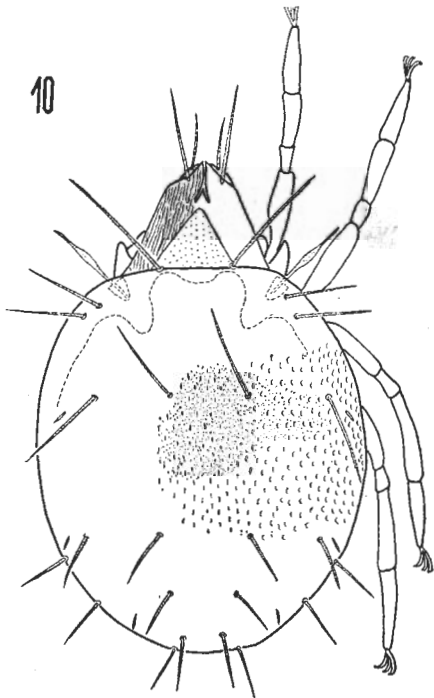
(Figs. 12-13a)

*Color*: Yellow.

*Length*: 520  $\mu$ ; observed range: 480-550  $\mu$ .

*Width*: 323  $\mu$ ; observed range: 294-343  $\mu$ .

*Prodorsum*: Rostral setae parallel, thick and strongly barbed along one side. Lamellar setae parallel, slightly longer and finer than setae *ro*, slightly barbed



Figs. 10—11. *Liacarus ornatus* n. sp. — Figs. 12—13. *Amerioppia similis* n. sp.

along one side. Exopseudostigmatic setae long, thin, slightly barbed, inserted on anterior end of a fine, chitinous ridge. Pseudostigmata rounded, opening dorsolaterally, their posterior border contacting anterior point of a well defined triangular tooth. Sensillus long, regularly and slightly incrassate from emergence, its distal, globular section bearing 15–18 thick spines. Several clear spots of muscular insertions between and posteriorly as well as anteriorly of pseudostigmata (for configuration see Fig. 12).

*Notogaster*: Almost a perfect circle, surface smooth. Setae *ta* present though very thin and short; other 9 pairs of setae of equal length, except for approximately one-third shorter series *ps*; this latter inclinate downwards. All nine pairs also slightly barbed, setae *ti* and *te* more conspicuously so.

*Subcapitular region*: Diarthral. Setae *a* and *h* bristle-like and glabrous, setae *m* thicker, longer, and shortly barbed. Chelicerae (Fig. 13a) with 3 teeth on each jaw. Dorsal hair with secondary branches; length of chelicerae 113  $\mu$ .

*Epimeral region*: Epimeral formula (3–1–2–2). All setae bristle-like and glabrous, lateral hairs on epimere I, and 2 of epimera IV, longer than others. Epimeral and sternal ridges well defined by differences in tegument thickness.

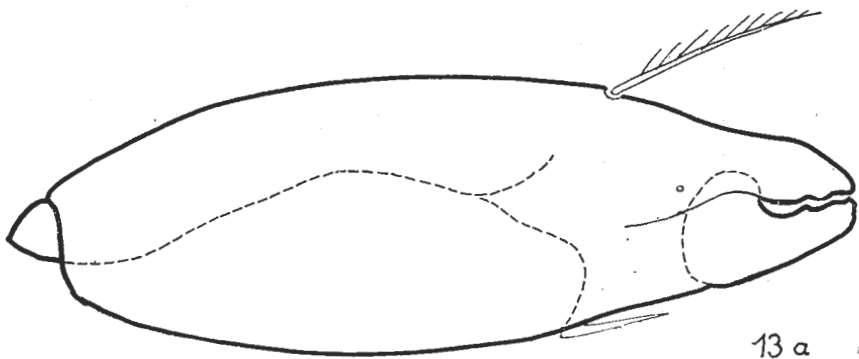
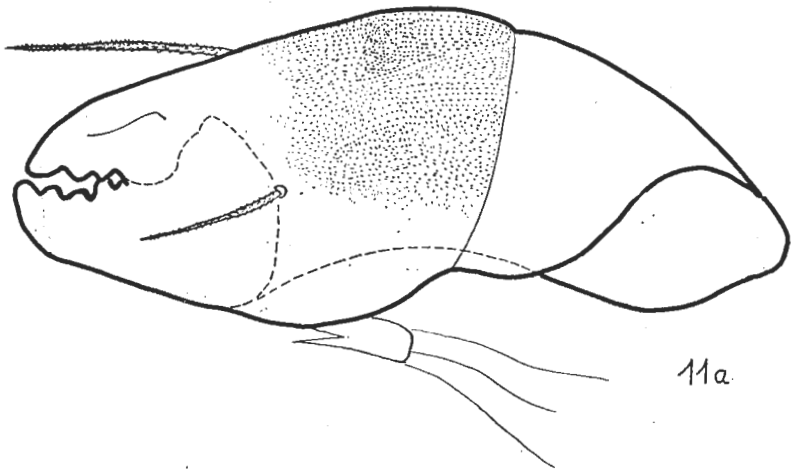


Fig. 11 a. *Liacarus ornatus* n. sp. Left chelicera, antisagittal. — Fig. 13 a. *Amerioppia similis* n. sp. Right chelicera, antisagittal

Several rounded, clear spots on epimeral plates. Apodemes I fused in sagittal plane, forming a broad lamella extending considerably posteriorad. Apodemes II not perforated, and, like sejugal ones, not reaching symmetry plane. Apodemes III and IV absent.

*Genito-anal region*: Five pairs of genital, 1 pair of aggenital, 3 pairs of adanal, and 2 pairs of anal setae, all long, bristle-like, glabrous. Adanal fissures touching and parallel to anterior third of lateral border of anal aperture.

*Legs*: All apotheles monodactyle.

*Systematic position*: This species is highly similar to three of its congeners (hence its name), namely *A. trichosa*, *A. trichosoides*, and *A. hexapilis*, and especially to this latter. However, there are certain differences in size (all 3 of the above species are out of the size range of *A. similis*), in the form of the hysterosoma (relatively elongated in the 3 related forms, but almost circular in *A. similis*), and in the position and relative length of the notogastral setae, especially as regards setae *ta*, *te*, *ti*, *ms*, and *r*<sub>2</sub>. For the three species listed above, the number of genital setae is not mentioned in the respective descriptions, hence it is presumably that given for the genus (HAMMER, 1961), namely six; if this is truly so, it would constitute another feature against *A. similis* which has only five. The differences are tabulated on page 108.

*Type-locality*: Paposo hills, Province Antofagasta, Chile.

*Material examined*: 29 specimens. Under dense thornbush vegetation, 25 Aug. 1963.

### Lamellozetes n. gen.

Rostral setae fine and small. Lamellae wide, convergent and fused, leaving a triangular field free between their internal borders and dorsosejugal suture. Cuspis long, reaching further anteriorad than rostrum; cuspides touching along their internal borders or at least along part of them. Lamellar setae inserted on tip of cuspis, their form resembling a much elongated rhomboid with 2 well defined faces. Lateral longitudinal ridges on lamello-cuspidal system. Sensillus voluminous, pyriform; stalk not emerging from pseudostigma. Tutorium as a long and low band. Pedotectum I well developed. Dorsosejugal suture straight or slightly arched. Humeral processes protruding slightly from outline of body, reaching to border of each pseudostigma. Eleven pairs of notogastral setae. Epimeral formula (3-1-2-2). Five pairs of genital, 1 pair of aggenital, 2 pairs of anal, and 2 pairs of adanal hairs. All setae fine and short, epimeral ones slightly longer than others. Sternal plates and epimeral ridges not defined by special changes in tegument thickness. Apodeme I fused in sagittal plane, other apodemes never reaching symmetry plane. Adanal fissure longitudinal adjacent to anterior part of external border of anal aperture.

*Legs*: all apotheles monodactyle.

It is difficult to ascertain the correct systematical position of this genus. The ventral habitus and the fused lamellae relate it to the genus *Cultrorobula* BERLESE, 1908, thus it is assigned temporarily to the family Astegistidae BALOGH, 1961. However, certain other features, namely the width and the length of the lamellae, (which conceal most of the prodorsum), the areae porosae-like formations of the type-species, and the small though conspicuous humeral processes (pteromorphs?), would place the new genus to the Oribatellids, though in no case typical for it. The eventual discovery of further

species could clear the family assignment; the finding of other species with pseudo-areae porosae would require the splitting of the genus in accordance with the two species herein described.

Type-species: *Lamellozetes pseudareolatus* n. sp.

### *Lamellozetes pseudareolatus* n. sp.

(Figs. 14–15)

*Color*: Brownish-yellow.

*Length*: 200  $\mu$ . *Width*: 130  $\mu$ .

*Prodorsum*: Cuspides connivent along their entire length in symmetry plane. Rostrum with 3 protuberances: a rounded, sagittal one, situated at bottom of a channel formed by two sharp, lateral teeth. Rostral hairs inserted on anti-axial border of lateral teeth. Interlamellar setae inserted on postlamellar triangular field, near internal margin of lamellae. Tutorium with two branches: one reaching as far as rostral hairs, other one — approximately perpendicular to former — extending to lateral border of camerostome. Pseudostigmata contacting postero-laterally anterior part of humeral processes; opening laterally, their anterior border showing a free tip. Dorsosejugal suture slightly arched.

*Notogaster*: Humeral processes horizontal, slightly protruding from outline of notogaster, extending from each pseudostigma to anterior third of notogaster, there terminating as a faint line each. Hairs *ta*, *te*, and *ti* slightly longer than other ones. Four pairs of rounded spots on usual places of areae porosae. These formations slightly clearer than surrounding tegument, but showing no porosity up to available magnification of  $\times 1350$ . (The presence of these pseudoareae porosae supplied the name of the new species).

*Subcapitular region*: Diarthral. Setae *h*, *m*, and *a* short, fine and glabrous.

*Ventral region*: Epimeral formula (3–1–2–2). Five pairs of genital, 1 pair of aggenital, 2 pairs of anal, and 2 pairs of adanal setae, all short, fine and smooth; epimeral setae slightly longer than other ones. Epimeral insertion of apodemes represented on Fig. 15, shaded with parallel lines. Apodeme II perforated, apodeme sejugal not perforated, apodeme III short, apodeme IV absent. Epimeral plates I and II with one and two clear spots respectively, but many more observable on epimeral plates III and IV.

Characteristics not cited as described for genus.

Type-locality: Muñoz Gamero Island, Province Magallanes, Chile.

Material examined: One female, from a hygrophilous cold forest, 24 Jan. 1965.

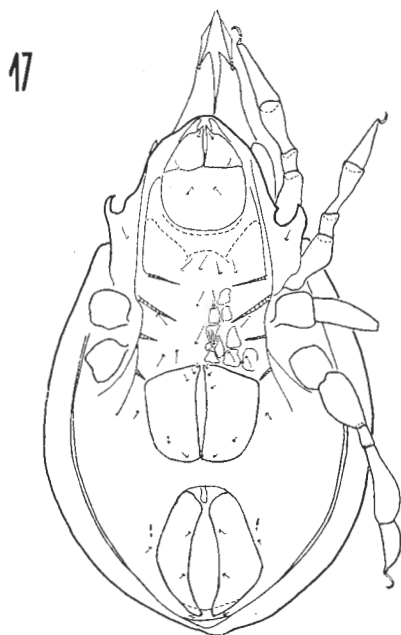
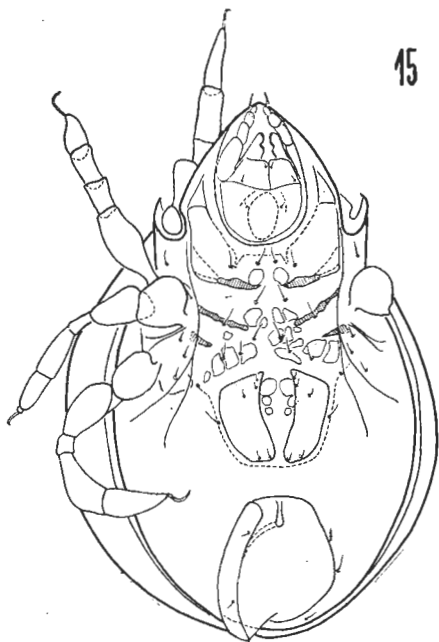
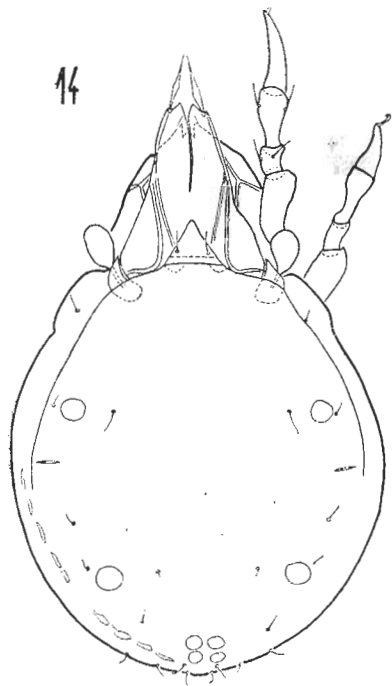
### *Lamellozetes chilensis* n. sp.

(Figs. 16–17)

*Color*: Yellow.

*Length*: 210  $\mu$ . *Width*: 128  $\mu$ .

*Prodorsum*: Cuspides long and slender, reaching far beyond rostrum, originating separated but meeting after a short space at sagittal plane, thus forming a second free, triangular space. Rostrum rounded, slightly pointed in



Figs. 14–15. *Lamellozetes pseudareolatus* n. sp. — Figs. 16–17. *Lamellozetes chilensi* n. sp.

middle. Rostral hairs very small, fine and glabrous, hardly discernible, as nearly all other hairs of holotype. Interlamellar hairs inserted on lamellae, fine but relatively longer, their length approximating two-thirds of their mutual distance. Tutorium as a single band, terminating anteriorly in a small free tip, discernible even in a ventral view.

*Notogaster*: elongated, rather fusiform, its posterior end a rounded point. Only 10 pairs of hairs observable, all equally short, fine and smooth; no traces of sacculi or areae porosae.

*Ventral region*: Apodeme IV present, short. Anal plates narrower than genital plates but longer. Adanal fissures slightly removed from border of anal aperture.

Characteristics not cited as described for genus.

*Remarks*: This species, despite the absence of the "pseudo-areae porosae", the lamellar insertion of the setae *in*, and the ten notogastral hairs, displays all other characteristics of the type-species of the genus, and is thus apparently related to it, and to be assigned to the same genus on the basis of the high number of features common to both.

*Type-locality*: Muñoz Gamero Island. Province Magallanes, Chile.

*Material examined*: Five specimens from a hygrophilous cold-forest, 24 Jan. 1965.

### ***Pelops apicalis* HAMMER, 1962**

One specimen. There is a small difference in the length of the tutorium, whose anterior end is shorter as illustrated in the description of the species.

*Locality*: Ahui, Province Chiloé, Chile. Found in an artificial pasture, 15 Febr. 1964.

### ***Williamszetes elsosneadensis* HAMMER, 1958**

The species was found in the following localities: 1. El Sauzal, Province O'Higgins, Chile. One specimen under the vegetation of a savanna, 12 July 1962. 2. El Arrayán, Province Santiago, Chile. Four females and eleven males; in an evergreen hardwood forest, 8 Oct. 1962. 3. Quebrada de la Plata (Maipu), Province Santiago, Chile. One specimen from an evergreen hardwood forest, 19 June 1961. 4. Talinay, Province Coquimbo, Chile. Five specimens found on a shrubby steppe, 2 Oct. 1961.

### ***Physobates spinipes* HAMMER, 1962**

One specimen. *Locality*: Nahuelbuta National Park, Province Malleco, Chile. Found in a temperate rain-forest, 22 April 1962.

The specimen concerned displays some slight differences against the description, namely: the dorsosejugal suture is straight, the rostral setae are straight and glabrous, and the tegument is not reticulated.



*Eremeozetes acutus* n. sp.

(Figs. 18—19)

*Color*: Dark brown.

*Length*: 469  $\mu$ ; observed range: 510—428  $\mu$ .

*Width*: 245  $\mu$ ; observed range: 286—224  $\mu$ .

*Prodorsum*: Rostrum oval, without teeth. Rostral hairs very short, glabrous. Lamellae converging and fused. Cuspis very long, reaching well beyond rostrum, bearing apically short and smooth lamellar hairs. Lamellar system representing a large and triangular scale covering almost entire prodorsum; removable, leaving a triangular and smooth field delimited laterally by tutorium; this latter shaped like a ridge, convergent and almost touching a clear, rounded zone behind rostrum. Interlamellar and exopseudostigmatic hairs not observed. Pseudostigmata lobulate, their aperture elongated and extending vertically, placed immediately between posterior border of lamellae and anterior section of pteromorph but not fused to them. Sensillus somewhat flabellate, its two faces covered with dense, short pectinations.

*Notogaster*: Dorsosejugal suture subtending an angle well surpassing level of pseudostigmata anteriorly. Immediately posterior to sagittal angle, an approximately circular lenticulus present. Pteromorphs immovable, bending downwards as narrow and long prolongations. Ten pairs of hairs present, all short and most of them inserted on cuspis of low protuberances of which those bearing series *ps* are most conspicuous. Entire notogastral surface, pteromorphs, and prodorsum covered with thick layer of cerotegument showing a polygonal pattern. Surface without ornamentation under cerotegument.

*Acetabular region*: Pedotectum I a large and convex lamella almost wholly covering acetabulum I, its insertion extending from posterior part of each pseudostigma, behind and down to inferior border of acetabulum cited above. Pedotectum II also large and emerging perpendicularly from body, well observable in a ventral view, yet shorter than pedotectum I. Discidial zone with a long, vertical ridge, protecting anteriorly leg IV during contraction, and also observable partly in a ventral view.

*Subcapitular region*: Diarthral. Mentum long, genae short, rutellum wide. Hairs *h*, *m* and *a* relatively long, bristle-like and glabrous.

*Epimeral region*: Epimeral formula (3<sup>?</sup>-1-2-2). Setae short and glabrous. Posterior part of sternal plate with a quadrangular protuberance having two free lobes. Apodeme I fused, forming a band, with two narrow lateral prolongations. Apodeme II straight and perforated. Apodeme sejugal straight. Apodeme III short and with little perforation. Apodeme IV absent.

*Genito-anal region*: Five pairs of genital, 1 pair of aggenital, 2 pairs of anal, and 3 pairs of adanal hairs, all short, bristle-like and glabrous. Adanal fissures parallel and near to anterior fourth of lateral sides of anal aperture. All plates of ventral side covered with same type of cerotegument as dorsal region.

*Legs*: All apotheles monodactyle.

*Remarks*: The new species rather resembles *E. reticulatus* BALOGH, 1958. By a direct comparison with the holotype of this African species, the following differences could be noted: 1. Dorsosejugal suture moderately arched in *E. reticulatus*, but conspicuously angular and pointed in *E. acutus* (hence specific name) and projecting anteriorad beyond level of pseudostigmata; 2. Lenticulus situated anteriorly with respect to hypothetical line connecting anterior

borders of pteromorphs in *E. acutus*, but posterior to this line in *E. reticulatus*; 3. This latter species short and entirely out of dimensional range (length and width) observed for *E. acutus*. *E. reticulatus* also narrower and evidently more compressed dorso-ventrally; 4. A pregenital chitinous formation present in *E. acutus*, but absent in BALOGH's species; 5. Both anal setae of *E. reticulatus* situated on anterior half of plates, but posterior anal hairs inserted on posterior fourth of plate in *E. acutus*; 6. Adanal fissures at level of median third of anal aperture in *E. reticulatus*, but at anterior fourth in *E. acutus*; 7. Cerotegumental pattern different in the respective species.

Type-locality: Paposo hills, Province Antofagasta, Chile.

Material examined: Nineteen females, nine males, under dense thornbush-vegetation, 25 Aug. 1963. Two paratypes deposited in the Zoological Department of the Hungarian Natural History Museum, Budapest.

### *Arcozetes intermedia* n. sp.

(Figs. 20–21)

*Color*: Yellowish-orange.

*Length*: 275  $\mu$ . *Width*: 173  $\mu$ .

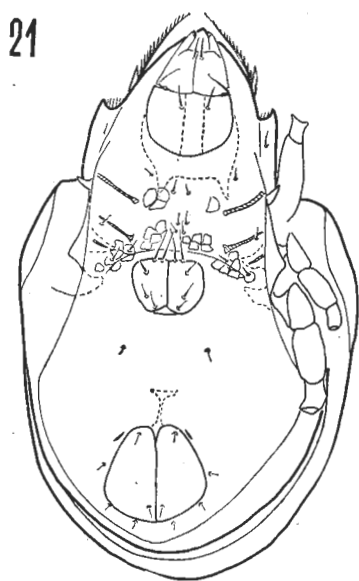
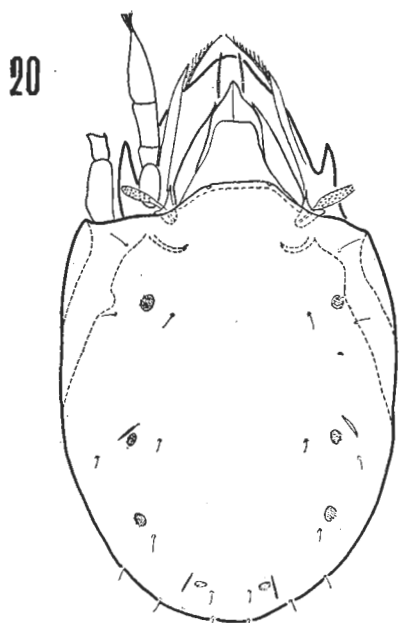
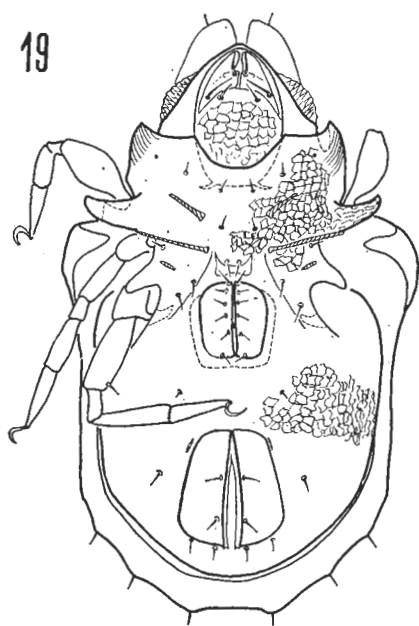
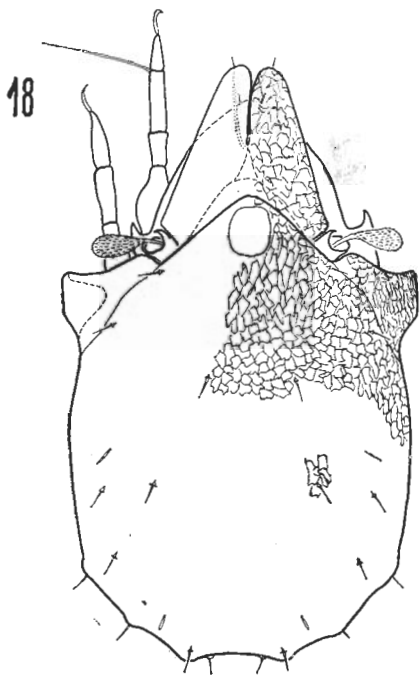
*Prodorsum*: Rostrum rounded, with two lateral teeth (tips of prolamellae). Rostral hairs inserted laterally at tip of tutorium, long, and with 10–11 pectinations in one row. Lamellae slightly convergent, terminating in sharp cusps. Translamellae forming an inverted V whose branches hiding anterior half of lamellae; translamellae anteriorly with two points connivent along sagittal plane. Between translamella and rostrum, two parallel ridges or "prolamellae" extending longitudinally, their anterior apices reaching beyond rostrum and constituting lateral pair of teeth described above. Only insertional points of hairs *le* and *in* observed, at points of lamellae and under interpteromorphical ridge respectively. Sensillus with an elongated head entirely covered with small spines. Pseudostigmata with a sharp, pointed, anterior lobe, and a rounded posterior one. Tutorium well developed, terminating anteriorly in a tip reaching beyond border of camerostome.

*Notogaster*: Ten pairs of hairs, all fine, small and smooth. Pteromorphs immovable, slightly bending downwards, connected by a narrow chitinous ridge along dorsosejugal suture. Four pairs of rounded areae porosae. Slit-pores *im* and *ip* long, situated at sides of areae porosae  $a_1$  and  $a_3$  respectively.

*Acetabular region*: Pedotectum I a semicircular lamella, its insertion extending from under pseudostigma to postero-ventral border of acetabulum I. Pedotectum II a lamella not longer than diameter of acetabulum II, partially covered by it. Acetabular tecta III and IV similar in form to Pedotectum II. Discidium as an elongated triangle in a ventral view. A small ridge extending anteriorad from acetabulum I, parallel with tutorium and ending at border of camerostome.

*Subcapitular region*: Diarthral. Setae *h*, *m* and *a* bristle-like, long and smooth.

*Epimeral region*: Epimeral formula (3–1–2–2). All hairs short and smooth; no specially defined epimera or sternal ridges present. Apodeme I fused in sagittal plane, laterally with a pointed prolongation. Apodeme II with a linear insertion and small perforation. Apodeme sejugal as long as apodeme II, not perforated. Apodeme III short. Apodeme IV absent. Light spots near points



Figs. 18—19. *Eremeozetes acutus* n. sp. — Figs. 20—21. *Arcozetes intermedia* n. sp.

of apodemes II, and others forming a semicircle to anterior border of genital aperture. A transversal ridge near anterior border of latter aperture.

*Genito-anal region*: Five pairs of genital hairs, two of which located on anterior border of plates and much longer than others. One pair of aggenital, 2 pairs of anal, and 3 pairs of adanal setae, all fine, short and glabrous. Adanal

	<i>A. similis</i>	<i>A. hexapilis</i>	<i>A. trichosa</i>	<i>A. trichosoides</i>
Size between 480—554 $\mu$	+	shorter, 450 $\mu$	longer, 560—570 $\mu$	shorter, 450 $\mu$
Form, hysterosome	rounded	oval	oval	oval
Setae <i>ti</i> , <i>te</i> , <i>ms</i> longer than others	—	+	—	—
Length of setae <i>ti</i> as related to mutual distance	much long, approx. twice	equal or shorter	equal	slightly longer
Length of setae <i>te</i> , <i>r</i> <sub>2</sub> as related to mutual distance	longer	slightly shorter	much shorter	much shorter
Length of setae <i>ms</i> and <i>r</i> <sub>2</sub> as related to mutual distance	much longer approx. twice	much longer	equal	equal
Presence of setae <i>ta</i>	+	+	—	—
	longer than width of pore	as long as width of pore		
Presence of chitinous tooth posterior to bothridia	+	+	—	—
Sensillus with terminal tip	—	—	+	+
Other characters of sensillus	15—20 spines on distal part only	scattered and minute scales on distal part	minute bristles on head	minute setae, also in basal section
Number of genital setae	5	6?	6?	6?

fissures oblique, near and parallel with anterior extremity of lateral border of anal aperture. A linear ridge concentric with external margin of ventral plate, continuing at lateral sides of epimeral zone and reaching up to region of pedotectum I (circumpedal ridge).

*Legs*: All apotheles tridactyle.

*Remarks*: The species seems to be related to two genera, namely *Arcozetes* HAMMER, 1958, and *Lobozetes* HAMMER, 1958. On the basis of most of the prodorsal features, especially the characteristic lamellar — interlamellar system and the form of the sensillus, the species should be assigned to *Arcozetes*. However, some features, e.g. the tutorium ending anteriorly with a free tip, the form and type of the pteromorphs, the number and position of the genital hairs (5 pairs in the new species, but only 4 in *Arcozetes*), the type, form, and

insertion-site of the rostral setae, and especially the structure of the notogaster with the configuration of the ten pairs of hairs, the area porosae, and the slit-pores *im* and *ip*, would speak for a relegation to the genus *Lobozetes*. These two genera would accordingly seem to be nearly related, and at least belonging to the same family. Owing to the interesting combination of the independent features characterizing the two different genera, the new species is named *intermedia* and described provisionally under *Arcozetes*.

Type-locality: El Arrayán, Province Santiago, Chile.

Material examined: One specimen (Holotype), from an evergreen hardwood forest, 8 Oct. 1962.

### *Magellozetes brevitatorium* n. sp.

(Figs. 22–23)

*Color*: Brownish-orange.

*Length*: Specimen I: 637  $\mu$ , Specimen II: 661  $\mu$ .

*Width*: Specimen I: 353  $\mu$ , Specimen II: 392  $\mu$ .

*Prodorsum*: Rostrum with two lateral incisions leaving a rounded naso free in middle. Rostral hairs longer than their mutual distance, roughened, with sparse but prominent spines. Lamellae straight, narrow, slightly converging, cusps about as long as half mutual distance between cuspidal bases, bearing apically lamellar hairs longer than setae *ro*, weakly roughened. Interlamellar hairs approximately two-thirds longer than mutual distance, slightly roughened, their insertions removed anteriorad with respect to dorsosejugal suture. Setae *ro*, *le*, and *in* roughened, more distinctly than former ones, though less conspicuously in basal section. Pseudostigmata opening lateroanteriorly, their margin placed between lamellae and pteromorphs, and displaying a rounded anterior lobe. Lamellae originating at a low crest bearing exopseudostigmatic hair, then decurrent in front of each pseudostigma and turning anteriorad to form their longest section. Exopseudostigmatic hairs setiform and smooth, emerging from a crest on external side of each pseudostigma. Sensillus pyriform in a lateral view, apically covered with small and well separated spines. Tutorium curved and short, terminating at level of genal teeth, far posterior to setae *ro*, without a free tip (as usual for the genus, and giving the name of the species). Genal teeth long, apically extending to some distance from hairs *ro*. Genal incision visible but virtual.

*Notogaster*: Hysterosoma ovoid. Pteromorphs immovable, bending slightly downwards, connected by a narrow band decurrent along dorsosejugal suture; this latter forming a regular arch. Ten pairs of setae, all fine and glabrous, two pairs situated on pteromorphs longer than others. Four pairs of rounded areae porosae, adalaris being largest of all, others small and approximately of same size. Slit-pores *im* and *ip* present.

*Acetabular region*: Pedotectum I a long lamella of approximately uniform width in a lateral view, born at crest bearing exopseudostigmatic setae, and reaching downwards to inferior border of acetabulum I. Pedotectum II a small lamella, bigger than acetabulum II; triangular in a ventral view. Acetabular tecta III and IV conspicuous and large, longer and bigger than Pedotectum II in a lateral view. Discidium a longitudinal crest, an elongated triangle in a ventral view. Custodium short and pointed.

*Subcapitular region*: Diarthral. Hairs *h*, *m*, and *a* glabrous and long.

*Epimeral region:* Epimeral formula (3-1-2-2). All hairs long, bristle-like, glabrous, and relatively thick. Sternal plate, epimeral ridge, and epimeral plates not marked by changes in thickness of tegument. Apodeme I fused at symmetry plane, with pointed prolongations in a lateral position. Apodeme II not perforated, its epimeral insertion a narrow line. Apodeme sejugal not perforated. Apodeme III short, oblique, emitting an internal, narrow branch to apodeme sejugal. Apodeme IV absent. Except for apodeme I, none reaching sagittal plane.

*Genito-anal region:* Five pairs of genital, 1 pair of aggenital, 2 pairs of anal, and 3 pairs of adanal setae, all similar to epimeral ones, but genital hairs more slender than others. Adanal fissures near to and parallel with anterior third of lateral border of anal aperture.

*Legs:* All apothemes tridactyle.

*Remarks:* Owing to the short type of the tutorium and the number of the genital setae, the species is rather atypical for the genus. The differences given above clearly separate it from *M. processus* HAMMER, 1962, and *M. clathratus* HAMMER, 1967.

*Type-locality:* Muñoz Gamero Island, Province Magallanes, Chile.

*Material examined:* Two females from a cold rain-forest, 24 Jan. 1965.

### *Porozetes cuspidatus* n. sp.

(Figs. 24-25)

*Color:* Brownish-yellow.

*Length:* Female: 617  $\mu$ , Male: 534  $\mu$ .

*Width at hysterosome level:* Female: 412  $\mu$ , Male: 347  $\mu$ .

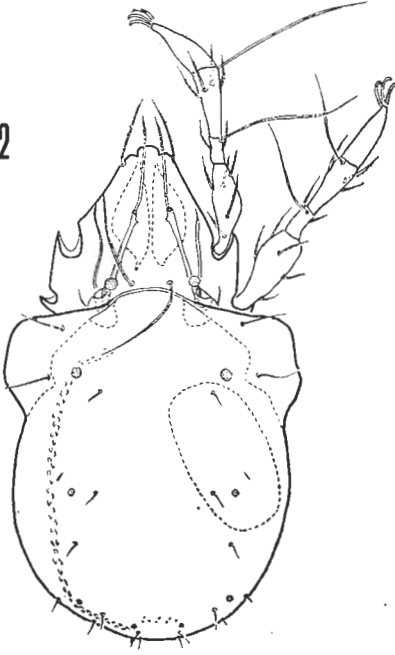
*Width at pteromorph level:* Female: 412  $\mu$ , Male: 380  $\mu$ .

*Prodorsum:* Rostral setae thick, slightly barbed, approximately as long as mutual distance. Rostrum rounded, in most animals also incised on each side, leaving medially free a very low naso. Lamellae well detached, straight bands, slightly convergent. Translamellae narrow and straight, cuspis long (hence the name of the species), about as long as half their mutual distance, bearing apically very thick and much roughened lamellar setae, length of hairs *le* approximately twice as long as cuspis. Some granulation present between lamellae. Interlamellar hairs very long, as thick as hairs *le*, but only slightly roughened. Pseudostigmata located deep, with a long lobe reaching up to crossed terminations of lamellae and pteromorphs and concealing them; lobe pointed anteriorad. Sensillus almost entirely hidden (in a dorsal view), with a rounded head lacking any hairs or scales. Tutorium long, reaching rostral hairs with its apex not extending further than border of camerostome.

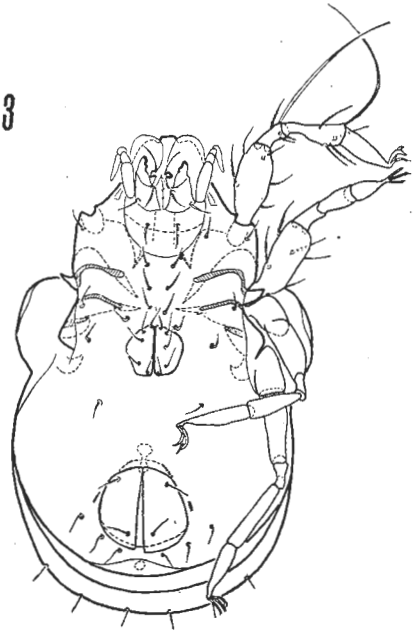
*Notogaster:* Dorsosejugal suture slightly arched, with a very narrow chitinous band decurrent between anterior terminations of pteromorphs. These latter immovable, bent downwards but not reaching acetabular level. Ten pairs of setae present, all fine and glabrous, rather flagelliform, those of series *ps* slightly shorter than others. Five pairs of areae porosae; A. dorsosejugal as described for genus,  $A_3$  eventually elongated as shown on Fig. 24, but occasionally also small and rounded. Slit-pores *im* and *ip* present, latter situated obliquely between hairs  $ps_1$  and  $ps_2$ .

*Acetabular region:* Pedotectum I a large lamella, conspicuously striated and

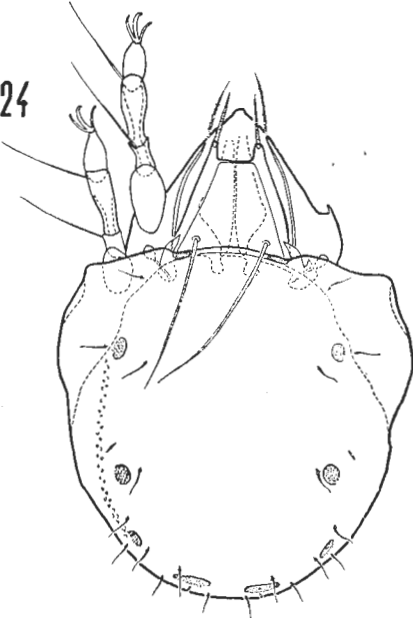
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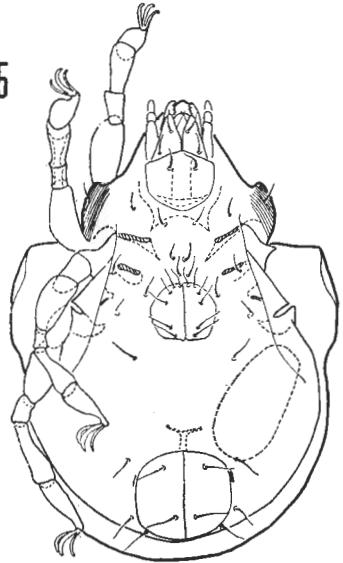
23



24



25



Figs. 22—23. *Magellozetes brevitutorium* n. sp. — Figs. 24—25. *Porozetes cuspidatus* n. sp.

semicircular (in a lateral view), its insertion extending from over acetabulum II down to postero-ventral border of acetabulum I. **Pedotectum II** a small lamella surmounting posteriorly acetabulum II. **Acetabular tecta III and IV** well developed. **Discidium** a longitudinal crest with a **tubercle medially**; triangular in a ventral view. **Custodium** a long lamellar point, reaching anteriorly up to level of posterior border of acetabulum II.

*Subcapitular region:* Diarthral. Hairs *h*, *m*, and *a* long and smooth.

*Epimeral region:* Epimeral formula (3-1-2-2). Sternal plates, epimeral ridges, and epimeral plates not specially drawn, thickness of tegument being uniform throughout. Apodemes I fused at symmetry plane, with pointed lateral prolongations. Apodemes II and sejugal short and not perforated. Apodeme III very short. Apodeme IV absent.

*Genito-anal region:* Six pairs of genital, 1 pair of aggenital, 2 pairs of anal, and 3 pairs of adanal hairs, all relatively long and glabrous, similar to epimeral ones. Genital setae, however, slightly finer than others. Adanal fissures adjacent to and parallel with lateral border of anal aperture at its anterior third.

*Legs:* All apotheles tridactyle.

*Remarks:* The new species is clearly distinguishable from *P. polygonalis* by: 1. The long cuspis (not emergent in *P. polygonalis*); 2. The short tutorium whose point fails to surpass the border of the camerostome as in HAMMER's species; 3. The rostrum which has no lateral teeth in the new species.

There are some other minor differences in the relative length and texture of the propodosomal setae, the texture of the epimeral and subcapitular hairs, and the degree of emergence of the sensillus.

*Type-locality:* Muñoz Gamero Island, Province Magallanes, Chile.

*Material examined:* Three females and one male from a hygrophilous cold-forest, 24 Jan. 1965.

### **Porozetes rostratus n. sp.**

(Figs. 26-27)

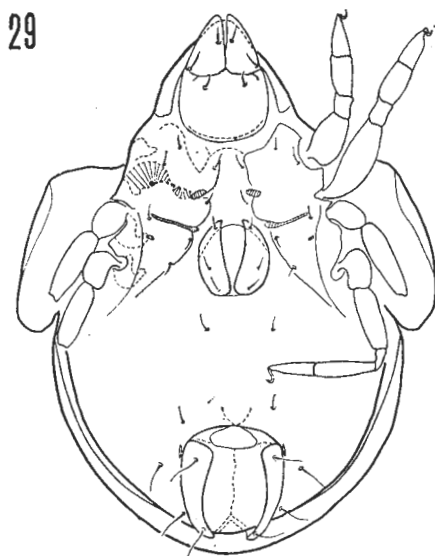
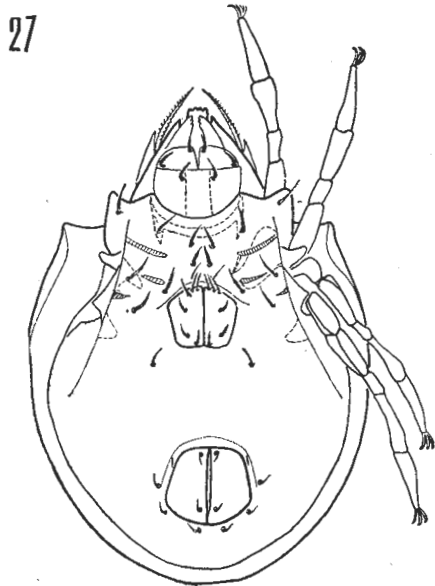
*Color:* Brownish-yellow.

*Length:* Specimen I: 520  $\mu$ , Specimen II: 500  $\mu$ .

*Width:* Specimen I: 357  $\mu$ , Specimen II: 350.  $\mu$ .

*Prodorsum:* Rostrum complicated, anterior border with 4 rounded teeth, and laterally also another pair of sharp teeth, separated from preceding central ones, by means of deep furrows. Rostral hairs long and thick, roughened with long spines (more dense along one side), inserted at lateral border of rostrum, immediately paraxial to anterior extremity of tutorium. Lamellae slightly convergent. Translamellar insertion straight. Cuspis long, large and with a sharp anti-axial tip, emitting from its paraxial angle (posteriorad) a ridge subtending with opposite one a semicircle with anterior concavity, corresponding to anterior border of translamella. Lamellar hairs inserted medially on anterior border of cuspis, longer than hairs *ro*, thick, strongly and evenly roughened. Pseudostigmata opening laterally, with an anterior, rounded lobe surmounting origin of lamella, and a posterior lobe, also rounded, partially hidden under anterior border of pteromorphs. Sensillus long and oval in a lateral view, covered with thick bristles. Tutorium straight and lamelliform, its rostral end as a lamellar margin perpendicular to surface of camerostome; this border





Figs. 26—27. *Porozetes rostratus* n. sp. — Figs. 28—29. *Tuxenia brevis* n. sp.

terminating superiorly in a sharp angle and displaying also medially a secondary, small sharp point; superior tip of border (in a dorsal view) appearing as free tip of tatorium, but (in a lateral view) manifestly not extending much beyond rostral border.

*Notogaster*: Pteromorphs immovable, connected by a narrow bridge along dorsosejugal suture; this latter one arched. Ten pairs of hairs, long bristle-like and glabrous. Setae *ta*, *te*, and *ti* longest of all; hairs *ms*, *r*<sub>1</sub>, *r*<sub>2</sub>, and *r*<sub>3</sub> slightly shorter, series *ps* even shorter and bending downwards. Five pairs of areae porosae; A. dorsosejugal typical of genus; areae *Ad*, *A*<sub>1</sub>, *A*<sub>2</sub>, and *A*<sub>3</sub> rounded and small. Notogastral tegument smooth, with a granulated cerotegument over it.

*Acetabular region*: Pedotectum I a large lamella extending obliquely from a zone inferior to each pseudostigma, almost completely hiding acetabulum I (in a lateral view) and terminating on ventral border of latter. Pedotectum II a lamella, extending perpendicularly from posterior border of acetabulum II and not larger than diameter of latter, triangular in a ventral view. Acetabular tecta III and IV well developed, protecting larger part of respective acetabular apertures. Discidium a longitudinal crest, extending from anterior border of acetabulum IV and reaching ventral border of acetabulum II, shaped like an elongated triangle in a ventral view. Acetabular tectum III prolonged dorsally by a linear ridge extending vertically upwards to a zone posterior to pseudostigmata.

*Subcapitular region*: Diarthral. Hairs *h*, *m*, and *a* bristle-like, roughened with long spines.

*Epimeral region*: Epimeral formula (3-1-2-2). All hairs as described for subcapitular hairs. Sternal and epimeral ridges not especially defined by changes in thickness of tegument. Apodeme I fused, forming a long band, at its extremity a prolongation. Apodeme II not perforated. Apodeme sejugal with little perforation. Apodeme III very short. Apodeme IV absent.

*Genito-anal region*: Six pairs of genital and 1 pair of aggenital hairs, all strongly roughened. Two pairs of anal and 3 pairs of adanal hairs, all curved, glabrous and shorter than anterior ones. Adanal fissures parallel with and close to lateral border of anal aperture near anterior angle.

*Legs*: All apothees tridactyle.

*Remarks*: The species is satisfactorily characterized by the special form of the rostrum and the cuspis.

*Type-locality*: Talinay, Province Coquimbo, Chile.

*Material examined*: Two females from a shrubby steppe, 2 Oct. 1961.

### *Tuxenia brevis* n. sp.

(Figs. 28-29)

*Color*: Yellow.

*Length*: 360  $\mu$ . *Width*: 230  $\mu$ .

*Prodorsum*: Rostrum rounded. Setae *le* and *ro* very short, fine and glabrous, hardly discernible. Setae *in* glabrous and longer than preceding ones, approximately as long as distance between their alveoli and lamellae. Nitid and oblong spots of muscular insertions present posterior to hairs *in*. Pseudostigmata opening laterally, in a dorsal view completely hidden by anterior part of pteromorph base. Sensillus rounded apically, without hairs, granules, or scales, but

filled with a homogeneous and slightly granulated content; stalk not emergent and discernible only by transparency.

*Notogaster*: No dorsosejugal line or even its traces. Notogaster relatively short with respect to proterosomal length (approximately 1.8 times longer than latter). Pteromorphs movable, their posterior end extending further posteriorad than insertion, and reaching level of slit-pores *im*. Pteromorphs bent far downwards, protecting legs III and IV, and part of leg II. Ten pairs of setae, all fine, glabrous, and with an almost flagelliform tip. Three pairs of round areae porosae, *Ad* being largest. Slitpores *im* and *ip* present, latter (not represented on Fig. 28) situated obliquely between hairs *ps*<sub>1</sub> and *ps*<sub>2</sub>.

*Subcapitular region*: Diarthral. Setae *h*, *m*, and *a* glabrous, shorter than dorsal hairs.

*Epimeral region*: Epimeral formula (3-1-2-2). All hairs glabrous, similar to subcapitular ones. Epimeral plates I large, occupying more than half distance between mentum and genital plates. Epimeral plates III and IV fused and placed at sides of genital aperture. Sternal plate well defined, prolonged posteriorly at sides of genital aperture. No special epimeral ridges present, merely insertions of apodemes defining limits of region. Apodeme I fused at sagittal plane, with a pointed prolongation at each side (marked by a dotted line in Fig. 29). Apodeme II largely perforated, its insertion a small oval point at each side of sternal plate (shaded by oblique lines in Fig. 29). Also in Fig. 29, inferior border of this approximately straight apodeme represented by doubly dotted lines, and superior border by a single dotted line; this latter making a sigmoid curve. Apodeme sejugal also slightly perforated, touching epimeral region by means of a long, transversal band ending at side of enlarged sternal plate. Apodeme III extremely small but discernible. Apodeme IV absent.

*Genito-anal region*: Genital plates with 3 pairs of setae, one on anterior border and two others on medial part of posterior half of plates; one pair of aggenital, 2 pairs of anal, and 3 pairs of adanal hairs. Of these latter, hairs *ad*<sub>3</sub> situated anteriorly with respect to anal aperture. Adanal fissures parallel with and close to anterior extremity of lateral sides of anal aperture. All setae glabrous, anal and adanal ones being slightly longer than others.

*Legs*: All apotheles monodactyle.

*Remarks*: The new species is satisfactorily distinguishable from the related *T. complicata* HAMMER, 1958, and *T. manantialis* HAMMER 1962, by the following features: 1. The form of the notogaster, not elongated in the new species as in the two other ones; 2. The form of the sensillus (simple and rounded in the new species); 3. The relative lengths of the pteromorphs (much longer relatively in the new species); 4. The absolute size, the new species being considerably smaller than the other two.

Further differences appear in the length of the setae (shorter in the new species than in *T. complicata*), and in apodemes IV (which reach to the sternal plate in HAMMER's species, but are absent in *T. brevis*). With respect to *T. manantialis*, the new species deviates in the relative length and texture of the rostral, lamellar, and interlamellar setae, as well as the disposition of the genital hairs.

*Type-locality*: Muñoz Gamero Island, Province Magallanes, Chile.

*Material examined*: Two females from a hygrophilous cold-forest, 24 Jan. 1965.

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