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## 【Research report】

### 臺灣革璫亞目之分類研究(璫蟬亞綱：無氣門目)(II)【研究報告】

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## Abstract

### 摘要

本文是臺灣革璫亞目分類研究之續刊；前文筆者已概略的提及革璫亞目之生活習性、經濟重要性及現階段之分類體系並詳述了臺灣發現的缺翼背板團 (Apterogasterina) 之所有種類及翼背板團 (Pterogasterina) 之二種共三十五種。本報告續敘述臺灣已發現翼背板團之所有種類共四十一種。迄至目前為止，臺灣革璫亞目共發現有28科、56屬、76種，這些種類中，58種為新種及14新屬。

### Key words:

#### 關鍵詞:

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TAXONOMICAL STUDY OF ORIBATID MITES FROM TAIWAN  
(ACARINA: ASTIGMATA) (II)<sup>1</sup>

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ABSTRACT

To continue the previous paper, the taxonomical study of 35 oribatid species from Taiwan were conducted. The present data the author describes and illustrates 41 species of oribatid mites from Taiwan. 31 species and 6 genera are described as new.

Genus *Zygoribatula* Berlese

Generic diagnosis . 12-13 pairs of notogaster setae, simple, short, areae porosae present. 4 pairs of genital setae. Lamellae and translamella present. Legs tridactylous. 6 species were found throughout this island.

Type species. *Oribatula connexa* Berlese

36. *Zygoribatula gratiosa* new species  
(Figs. 95 — 98)

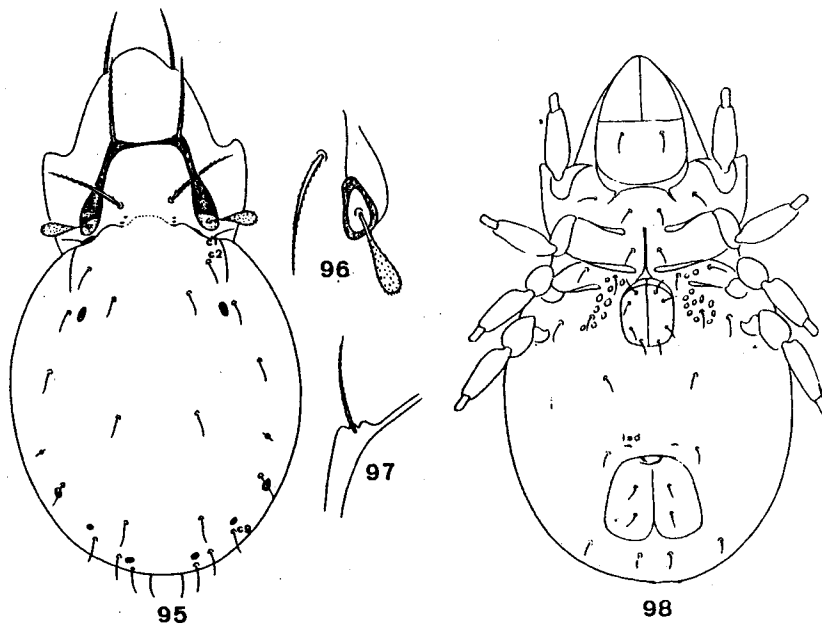
12 pairs of notogasteral setae and distinctly dorsosejugal suture will be distinguished the other species of *Zygoribatula*.

Rostrum slight concave in anterior of rostral setae, round tip. Rostral setae thin, fine barbed, situated lateral margin, almost twice the length from their base to the tip of rostrum. Lamellae slight swollen apex. cusps with indistinct 3 teeth. Translamella straight and equal length throughout. Lamellar setae arising from the middle teeth of the cusps, moderate long and barbed, almost extends beyond to the tip of rostrum. Interlamellar setae slight shorter than lamellar setae. strong barbed and almost equal length to their mutual distance. Interlamellar region rather broad, about 1.5-1.7 as wide as long. Bothridium opening postreior. Pseudostigmatic organ with broad oval-shaped head, and set with setae.

Notogaster as long as wide, anterior broader, but slight convex posteriorly. Dordosejugal suture indistinctly. From the anterior of notogaster, beside setae cl with a longitudinal line, downward, extending to the middle of setae c2 and c4. Notogasteral setae simple, short and subequal length, each socket connected with a pore. Aa situated interior of c3, elongated, almost twice as long as wide. Fissure im situated almost in a transverse line with c5. A1 situated just behind c7, elongated, A2 situated in front of c9, A3 situated anterior c11.

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1. Financial was supported by National Science Council, R.O.C.

Figs. 95-98. *Zygoribatula gratiosa*

95. Dorsal aspect 96. Pseudostigmatic organ 97. Cusp 98. Ventral aspect

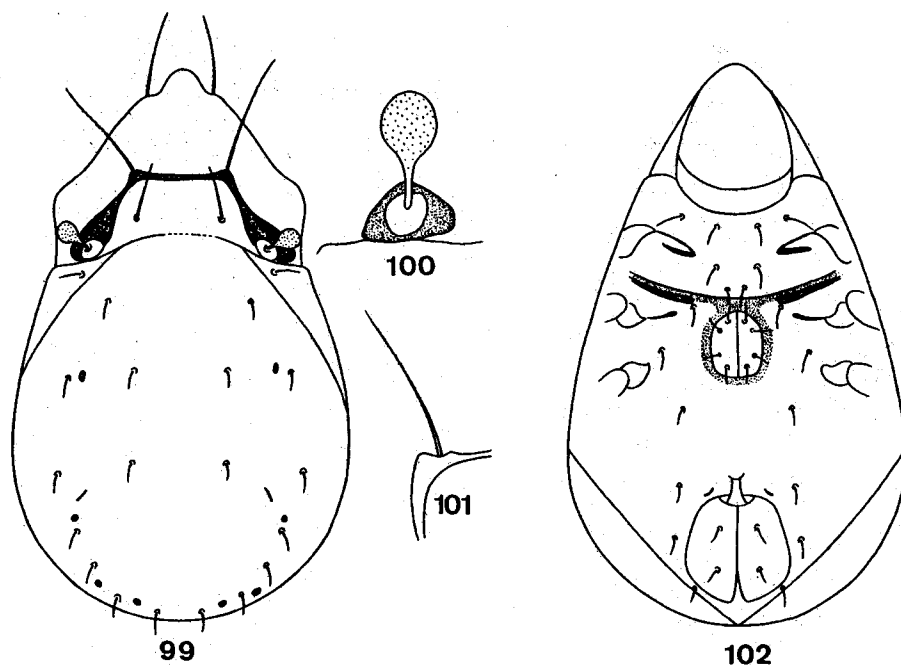
Ventral with round dots. Apodemata II short, not converging anterior, sejugal apodemata developed, converging anterior to form a transverse band across the anterior border of genital aperture. Apodemata IV aligned transversely. Epimeral setae simple, setae formula 2-1-3-2. Genital aperture as long as wide, bearing 4 pairs of genital setae. One pair of aggenital setae, 2 pairs of anal setae and 3 pairs of adanal setae subequal length. Anal fissure situated far distance to the anterior border. The distance between genital and anal aperture almost 1.8 length of the former, and slightly longer than latter. Legs tridactylous.

Collection data. Holotype, ♀, Lushan, Nantou Hsien, 16-I-1982, ex litter of maple leaf, Y. H. Tseng; paratype, 2 ♀♀, Nanshan, Yilan Hsien, 21-VIII-1981, ex lichen, L. L. Lai.

Paratype specimens are some differentiated from the type specimens for having Aa round, anal fissure situated close to anterior border of anal aperture. I do not see that these characters are of new species importance.

### 37. *Zygoribatula egelida* new species (Figs. 99 - 102)

*Zygoribatula egelida* is identical with the preceding species in almost all characters only the few differentiations will be mentioned. Rostral, lamellar and interlamellar setae thin, minute barbed. Lamellar setae 1.4 longer than interlamellar setae. Interlamellar region rather wide, almost

Figs. 99-102. *Zygoribatula egelida*

99. Dorsal aspect 100. Pseudostigmatic organ 101. Cusp 102. Ventral aspect

2.2 as wide as long. Bothridium opening anterior. Pseudostigmatic organ with broad oval-shaped setae head, the diameter almost 1.4 longer than pedicel. Areae porsae tiny, discernible hardly. 3 pairs of adanal setae, the distance Ad1-Ad2 equal length to Ad2-Ad3.

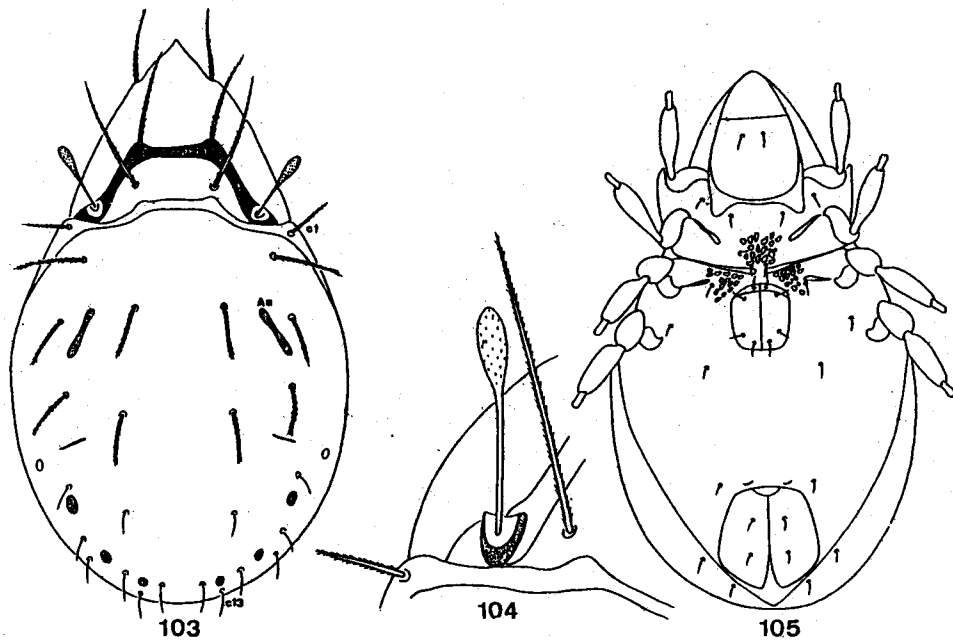
Collection data. Paratype, ♀, Kuankao. Nantou Hsien, 2-II-1982, ex-unknown plant, S. S. Wu.

### 38. *Zygoribatula vegeta* new species (Figs. 103 – 105)

The new species can be distinguished by having a pointed tip of rostrum. Interlamellar region much broader than wide. Areae porosae elongated, almost as long as c3, A1 rounded.

Prodorsum broad, triangular-shaped.

Rostrum pointed tip. Rostral setae thin and barbed, almost twice as long as their base to the tip of rostrum. Lamellae removed from median to the prodorsal margin, broadest apex. Cusps rather round, no precess. Translamella rather short, straight and broad. Lamellar setae arising from the median of cusps, stout, strong barbed, and blunt tip, about 1.9 longer than their mutual distance, also 1.3 length to distance from their base to the tip of rostrum. Interlamellar setae 1.2 longer than lamellar setae, stout and strong barbed, 1.7 longer than their mutual distance. Interlamella region broad, almost 3 times as broad as long. Bothridium opening anterior. Pseudos-

Figs. 103-105. *Zygoribatula vegeta*

103. Dorsal aspect 104. Lateral region of prodorsum 105. Ventral aspect

tigmatic organ with oval-shaped setose head, almost as long as pedicel.

Notogaster round, anterior broad rounded, but slight convex posterically, with sparse indistinct round dots. Dorsosejugal suture distinct straight. 13 pairs of rather long notogastral setae, c1-c6 strong pectinate, c7-c13 setiform with minute barbed, length ratio of c1-c6 = 1/1.4/1.13/0.93/0.67/0.73. c1 36  $\mu$  long. As elongated, as long as c4, situated inside of c4, fissure im situated between c6 and c7, almost equal length to c7. S1 located in front of im, A1 oval round, situated outeroposterior c7, A2 rounded, situated inside of c9, A3 rounded, situated between c10 and c11.

Apodemata II and IV short, subequal length. Sejugal apodemata developed, converging anterior to form a transverse band across anterior border of genital aperture. Integument between apodemata with irregular reticulation. Epimeral setae formula 2-1-1-2. Genital aperture rounded, bearing 4 pairs of genital setae, g1-g2 about 0.3 as long as g2-g3, g3-g4 as long as g1-g2. One pair of aggenital setae, 2 pairs of anal setae and 3 pairs of adanal setae subequal length, Ad1 situated anterior corner of anal border, Ad2 and Ad3 arranged in transverse line and situated the level of anal aperture. Anal fissure situated far distance to anterior border of anal aperture. The distance between genital and anal apertures almost twice length of the former, and almost 1.2 longer than the latter.

Collection data. Holotype, ♀, Tsungteh, Hualien Hsien, 2-VII-1979, ex weed, Y. H. Tseng.

**39. *Zygoribatula talis* new species**

(Figs. 106 – 110)

Interlamellar region rectangular, as long as wide. The mutual distance of lamellar setae equal length to interlamellar setae. Pseudostigmatic organ with broad setose head, the terminal of head truncated, pedicel very short. Notogasteral setae short stout and strong barbed. Apodemata IV distinct shorter than apodemata II, sejugal apodemata to form a transverse band, situated far distance to the anterior border of genital aperture. Epimeral setae formula 2-2-1-2. The distance  $g1-g2$  about 0.7 as long as  $g2-g3$ . Integument between genital and anal apertures with sparse round dots. Anal fissure situated close to anterior border of anal aperture and shown a small discernible slit. Aa smaller, ball-shaped. Abovementioned characters are distinguished the others species of the genus *Zygoribatula*.

Collection data. Holotype, ♀, Tsungteh, Hualien Hsien, 2-VII-1979, ex weed, Y. H. Tseng.

**40. *Zygoribatula longiporsa* Hammer**

(Figs. 111 – 116)

Areae porosae Aa elongated, narrow in middle, and almost equal length to c4, A1 elongated, about half as long as Aa, A2 oval-shaped, 0.25 as long as Aa, A3 oval rounded. Notogasteral setae rather long and barbed. Pseudostigmatic organ with narrow oval setose head. The cusps with 2 indistinct round teeth.

This species wide distribution in damp region of Taiwan, especially always found associated with the weeds on paddy fields.

**Genus *Neolucoppia* new genus**

This new genus closed resembles *Scutovertex* Micheal by notogaster having quadratic lenticulus, but it is differentiated by having 13 pairs of notogasteral setae and legs monodactyle. Also allied to *Leucoppia* for having 5 pairs of genital setae, but it differs by notogaster with quadratic lenticulus, and legs monodactyle.

Generic diagnosis. Prodorsum with obsolescent lamellae and translamella. Rostral, lamellar and interlamellar setae present. Pseudostigmatic organ deliated. Areae porosae discernible hardly. Notogaster with anterior quadratic lenticulus, 13 pairs of notogasteral setae. 5 pairs of genital setae. Legs monodactyle.

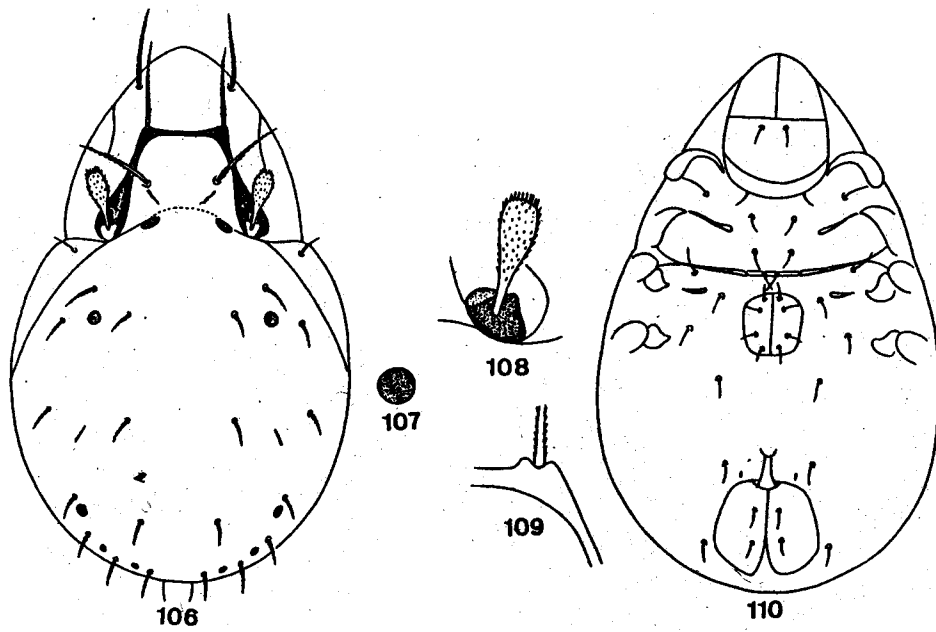
Type species. *Neolucoppia luculenta* new species

**41. *Neolucoppia luculenta* new species**

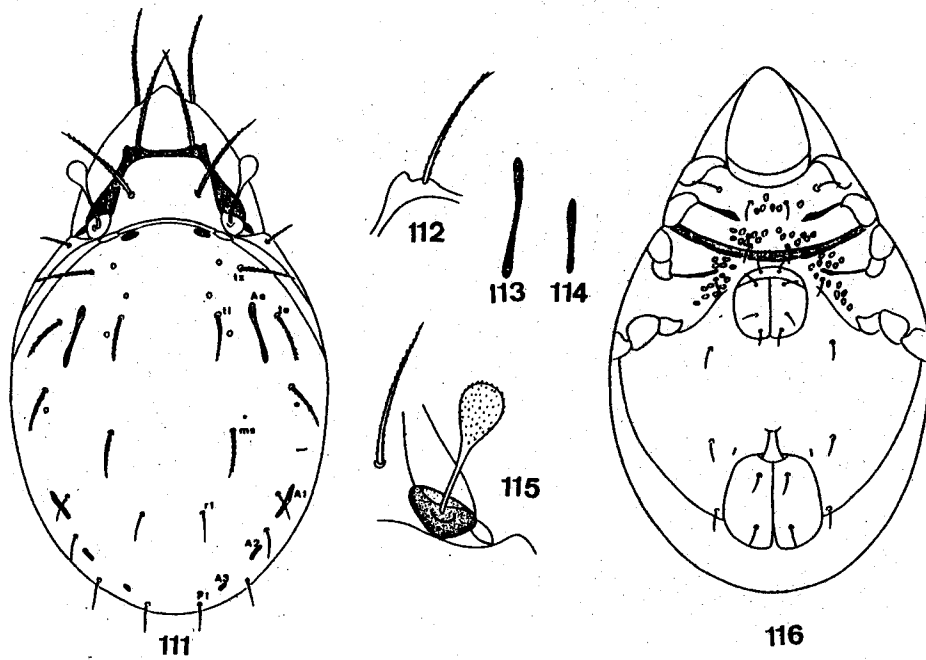
(Figs. 117 – 119)

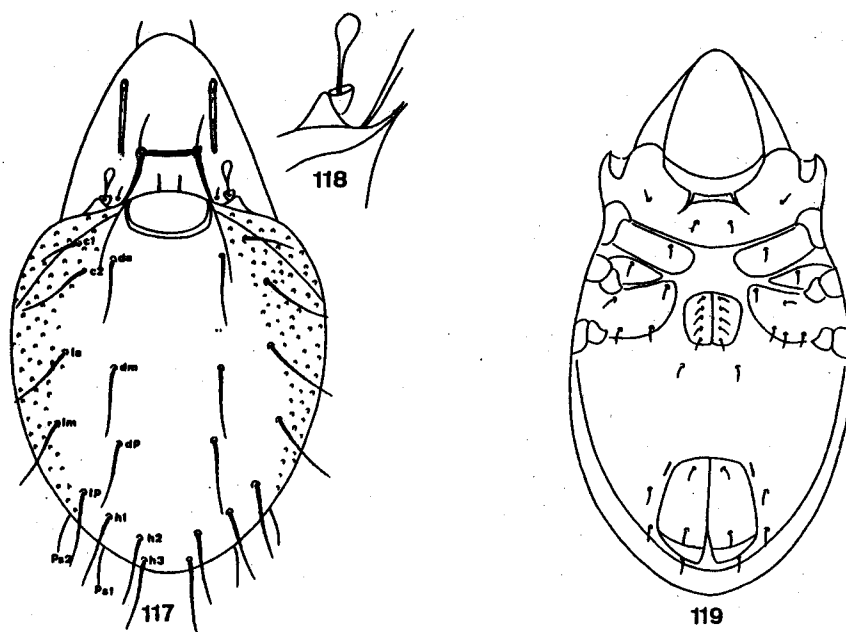
Prodorsum nearly pentagonal.

Rostrum broad rounded. Rostral setae short, situated ventrolaterally, reach beyond to the tip of rostrum. Lamellae linear-shaped, obsolescent. Translamella straight obsolescent. situated apex

Figs. 106-110. *Zygoribatula talis*

106. Dorsal aspect 107. Aa 108. Pseudostigmatic organ 109. Cusp 110. Ventral aspect

Figs. 111-116. *Zygoribatula longiporsa*111. Dorsal aspect 112. Cusp 113. Aa 114. Al 115. Pseudostigmatic organ  
116. Ventral aspect



Figs. 117-119. *Neohucoppia luculentan*  
 117. Dorsal aspect 118. Pseudostigmatic organ 119. Ventral aspect

of the lamellae. Lamellar setae arising from the tip of lamellae, short, smooth, not longer than their mutual distance. Interlamellar setae short, close together, almost as long as their mutual distance. The middle of dorsolateral margin of prodorsum with a round chitinous tubercle. Lamelliform expansion present, situated lateral of bothridium. Bothridium small, cup-shaped. Pseudostigmatic organ with broad head set on narrow pedicel.

Notogaster oval rounded, anterior corner with a triangle-shaped tubercle. Dorsosejugal suture indistinctly. A quadratic lenticulus situated anteromedian of notogaster, wider than long. Anterolateral region of notogaster with rather large granules, the other area tinged with sparse round dots. 13 pairs of short notogasteral setae thin, barbed and subequal length. Ventral shown as figure. Apodemata II, III and sj developed, each converging anterior, hence the epimerata II, III and IV to form a completely plate. Apodemata IV converging anterior with sejugal apodemata, therefore, epimerata IV to form a triangle plate. Anterior of genital aperture with a broad sternum expansion, brown colour. Genital aperture pale brown, slight longer than wide, bearing 5 pairs of genital setae, arranged in linear-shaped. One pair of aggenital setae, 2 pairs of anal setae and 3 pairs of adanal setae, simple and subequal length, Ad1 situated mediolateral border of anal, Ad1-Ad2 equal length to Ad2-Ad3. Anal fissure situated close to anterolateral border and parallel to the border. Legs monodactyle.

Collection data. Holotype, ♀, Nanliao, Tainan Hsien, 29-VI-1981, ex humus, Y. H. Tseng.



### Genus *Oribatula* Berlese

Generic diagnosis. 12-14 pairs of notogasteral setae. 4 pairs of areae porosae. 4 pairs of genital setae, one pair aggenital. 2 pairs of anal setae and 3 pairs of adanal setae. Legs tridactylous.

Type species. *Notospis tibialis* Nicolet

#### 42. *Oribatula nativa* new species (Figs. 120-124)

This species is readily differentiated from other known *Oribatula* by having notogasteral setae c2 broad lanceolate and plumose, sejugal apodemata converging anterior to form a transverse band.

Body dark brown, sclerotized heavily. Prodorsum rather small, about 1/3 as long as notogaster.

Rostrum conical. Rostral setae stout, barbed, about 3 times longer than from their base to the tip of rostrum. Lamellae dark brown, rather long, straight, equal length throughout. The cusps with fine tip, incurved. Lamellar setae stout, barbed, slight shorter than lamellae, almost 1.5 as long as their mutual distance. Interlamellar setae stout and barbed, about 1.3 as long as lamellar setae, the length ratio of distance in-in/ls-ls=1.3. Pseudostigmatic organ with clavated setose head set on pedicel.

Notogaster slight longer than wide, anterior broad, slight convex posteriorly. 13 pairs of notogasteral setae simple, seta-like, relative long, except c2 setae broad lanceolate and plumose. 4 pairs of areae porosae present. Aa oval rounded, A1, A2 and A3 rather small and oval rounded. Apodemata II and IV pale brown, short, not converging anterior, sejugal apodemata brown, stout, converging anterior, to form a broad transverse band across the anterior border of genital aperture. Integument of epimerata pale brown with reticulation. 7 pairs of the epimeral simple setae, the setal formula 2-1-3-1. 4 pairs of genital, One pair of aggenital, 2 pairs of the anal and 3 pairs of adanal setae, simple, subequal length. Anal fissure situated at anterior border of the anal aperture. Legs tridactylous.

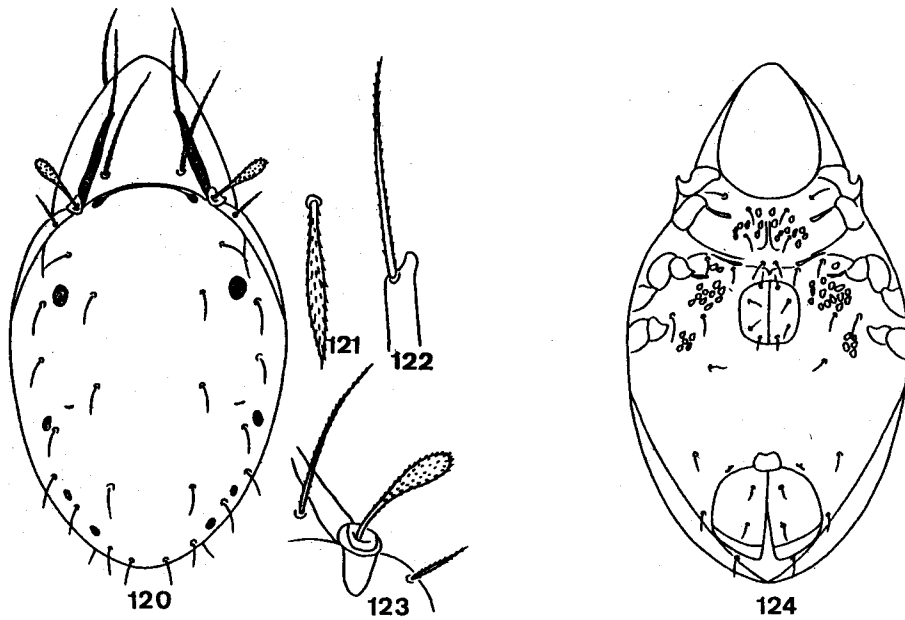
Collection data. Holotype, ♀, Lishand, Taichung Hsien, 12-VI-1980, ex moss, Y. H. Tseng.

### Genus *Dometorina* Grandjean

Generic diagnosis. Dorsosejugal suture present, straight, 10 pairs of notogasteral setae. Bothridium entire covered by anterior position of notogaster. 4 pairs of genital setae, one pair of aggenital setae, 2 pairs of anal and 3 pairs of adanal setae. Notogaster with sacculi. Legs tridactylous.

Type species. *Oribatula plantivaga* Berlese

#### 43. *Dometorina taiwanica* new species (Figs. 125 - 127)

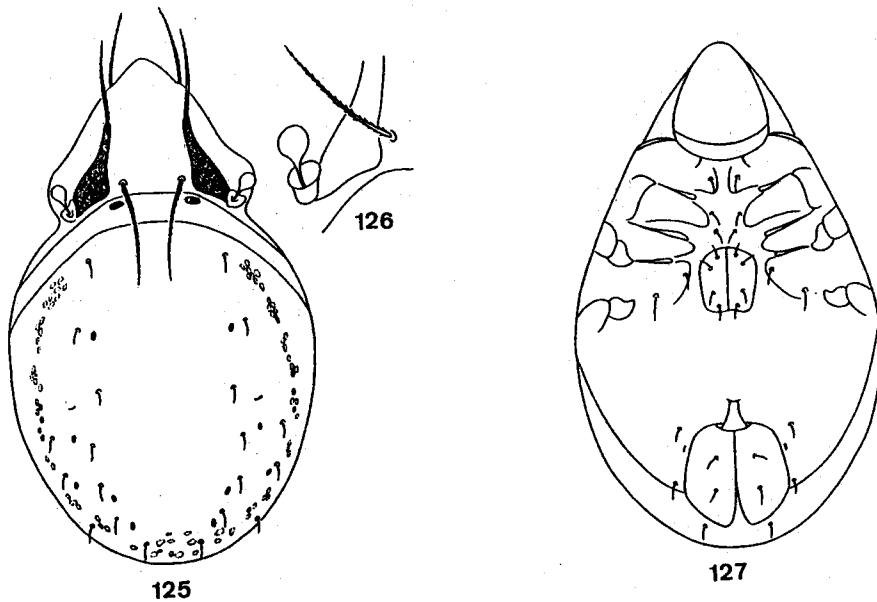
Figs. 120-124. *Oribatula nativa*

120. Dorsal aspect 121. Setae ta 122. Cusp 123. Pseudostigmatic organ 124. Ventral aspect

This species is readily differentiated by having no aggenital setae, 8 pairs of the notogasteral setae.

Rostrum narrow rounded tip. Rostral setae rather thin, barbed unilaterally, situated 2/3 way from anterior border to the apex of rostrum, about twice as long as the length from their base to the apex of rostrum, and equal length to their mutual distance. Lamellar setae rather stout, barbed, straight directed forward, slightly longer than rostral setae, and about equal length to their mutual distance. Interlamellar setae stout, strong barbed and blunt tip, almost 1.4 as long as rostral setae. the length ratio of ro/ls/ln = 1/1.1/1.4, the length ratio of ro-ro/ls-ls/in-in = 1/1.1/0.75. Lamellae short, about half as long as the prodorsum, straight, equal length throughout, Just anterior of the rostral setae, dorsal surface, with a M-shaped transverse ridge. Bothridium covered by anterior notogaster. Bothridium opening exterior. Pseudostigmatic organ with setose broad head set on narrow pedicel, the diameter of head equal length to pedicel.

Notogaster round as long as wide. 8 pairs of notogaster setae, short, simple, arising from a large socket. Dorsosejugal suture nearly straight. Sa situated inside of la, im located exterior of 1m, S1 situated exterior of h 3, S2 situated in front of ps1, S3 situated anterior of h1. Apodemata II and sejugal apodemata aligned obliquely, parallel to each other, the former distinct shorter than the latter, sejugal apodemata connected with anterior border of genital aperture, while the apodemata III aligned transversely, anterior nearly converging with sejugal apodemata. Sternum extension poor sclerotized, from anterior of the epimerata I extends to the anterior border of



Figs. 125-127. *Domotorina taiwanica*  
 125. Dorsal aspect 126. Pseudostigmatic organ 127. Ventral aspect

genital aperture. Integument of the epimerata pale brown, with reticulation. Epimeral setae simple, the setae formula 2-2-2-1. Genital aperture longer than wide, bearing 4 pairs of genital setae, the length ratio of  $g1-g2/g2-g3/g3-g4 = 1/3.6/1.6$ . Aggenital setae absent. 3 pairs of adanal setae, Ad1 situated close to the anterolateral border of anal aperture, the distance of Ad1-Ad1 equal length Ad2-Ad2, Ad2 and Ad3 arranged nearly in a transverse line. Anal fissure situated close to mediolateral border and parallel to the border. 2 pairs of anal setae present. The distance of genital and anal apertures almost 1.3 length of the former and 0.8 as long as the latter. Legs tridactylous.

Collection data. Holotype, ♀, Kuanmaio, Tainan Hsien, 29-VI-1981, ex leaf of *Morus* sp., Y. H. Tseng; paratype, 4 ♀♀, the same data as holotype; 4 ♀♀, Fenchihu (1500m), Chiayi Hsien, 14-XII-1980, ex *Bangolia* sp., Y. H. Tseng; 1 ♀, Puli, Nantou Hsien, 18-XI-1981, ex *Polygonum hydropiper*, S. C. Wu; 1 ♀, Tongyin, Chiayi Hsien, ex *Cordia dichotoma*, Y. H. Tseng; 5 ♀♀, Tsushan, Nantou Hsien, 8-VIII-1982, ex *Leleba* sp., Y. H. Tseng.

An unusual species which may possibly belong to a new genus, but because of the obvious close relationship is placed under this combination until further information is available.

#### 44. *Domotorina crystallina* new species (Figs. 128 - 129)

As the following species is most characters are similar to the preceding species, only the most important different will be mentioned. Rostrum with nose-shaped apex. Rostral setae as long as their mutual distance. Lamellar setae 1.6 longer than their mutual distance. Interlamellar setae shorter than lamellar setae, and about 1.38 as long as their mutual distance. The length ratio  $ro/1s/in = 1/1.45/1.1$ . The mutual distance of  $ro-ro/1s-1s/in-in = 1/0.9/1.25$ . Anterior of rostral setae with a transverse ridge. 10 pairs of notogasteral setae arranged in linear-shaped, the distance of  $c1-c2/c2-c3/c3-c4 = 1/0.65/0.9$ . 5 pairs of sacculi, Sa situated interior of 1a, S1 situated exterior of 1p, S2 situated anter-exterior of h3, S3 situated between h2 and h3, S4 situated between h1 and h2. Genital aperture longer than wide, bearing 4 pairs of genital setae, the length ratio  $g1-g2/g2-g3/g3-g4 = 1/3.5/1.7$ . The distance between genital and anal apertures about 1.75 of the former and 1.25 of the latter. The length ratio  $ag-ag/Ad1-Ad1/Ad2-Ad2 = 1/0.8/0.92$ . One pair of aggenital setae.

Collection data. Holotype, ♀, Tonyin, Chiayi Hsien, 29-VI-1981, ex *Biden pilosa*, Y. H. Tseng; paratype, 3 ♀♀, Neiman, Kaohsiung Hsien, 19-VI-1982, ex *Alpinia* sp., Y. H. Tseng; 4 ♀♀, Kukuan, Taichung Hsien, 2-I-1980, ex *Pinus taiwanicus*, Y. H. Tseng; 7 ♀♀, Sitou, Nantou Hsien, 24-II-1980, ex *Pinus* sp., Y. H. Tseng; 2 ♀♀, Kuanmiso, Tainan Hsien, 10-IX-1980, ex *Miscanthus* sp., Y. H. Tseng; ♀, Tongyin, Chiayi Hsien, ex *Bidens pilosa*, Y. H. Tseng; 3 ♀♀, Sweiswei, Hualien Hsien 7-X-1981, ex *Alternanthes sessilis*, L. L. Lai.

#### 45. *Domitorina limpida* new species (Figs. 130 – 131)

This species is different from the other *Domitorina* by having stout and short legs, broader genital region and the median claw much stoutest than the lateral two.

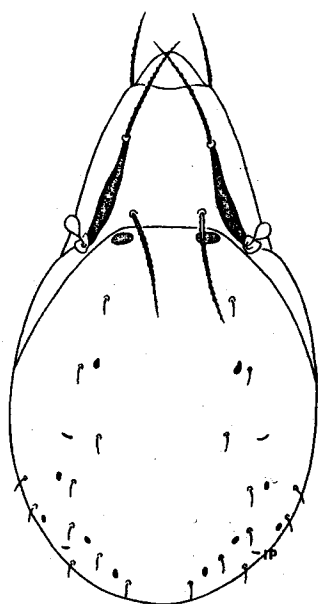
Tip of rostrum rounded. Prodorsum rather broad, pentagonal. Lamellae situated medially, removed from prodorsal margin. Pseudostigmatic organ with broad setose clavated. Notogaster oval-shaped, slight longer than wide, with 10 pairs of setae and sacculi smaller than the preceding species. Bordering genital with broader chitinous region, brown, which connected with the anterior of apodemata IV and sejugal apodemata. Apodemata II indistinctly, and shorter than apodemate III and sj. Integument between apodemata pale brown and smooth, epimerate II and II narrow, about half as wide as epimerate I or IV, setal formula 2-1-2-2. 4 pairs of genital setae. One pair of aggenital setae, 2 pairs of anal setae and 3 pairs of adanal setae, simple and subequal length. Integument between anal and genital aperture with many wave-shaped transverse folds. Legs stouter than the preceding species, pretarsus with 3 claws, the middle one stoutest than the laterals.

Collection data. Holotype, ♀, Femchihu, Chiayi Hsien, 30-V-1980, ex *Juniperus chinenses* Y. H. Tseng.

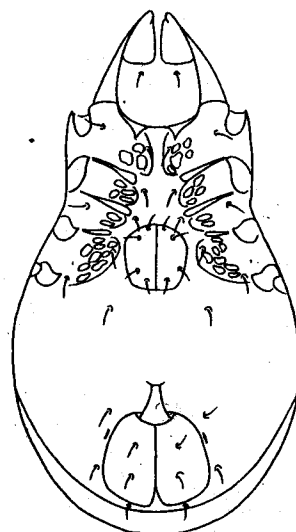
### Oribaulidae Thor

#### Genus *Muliercula* Coetzer

Generic diagnosis. Dorsosejugal suture present. Interlamellar setae present. Pseudostigmatic

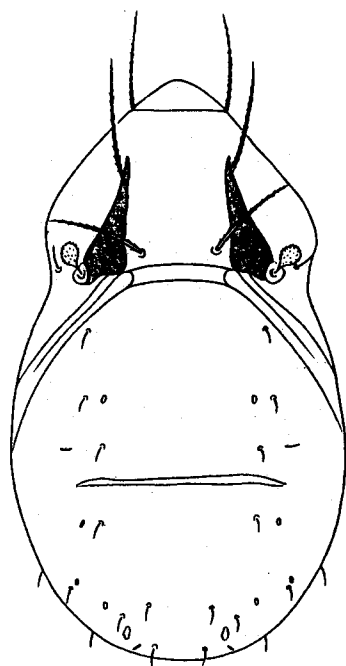


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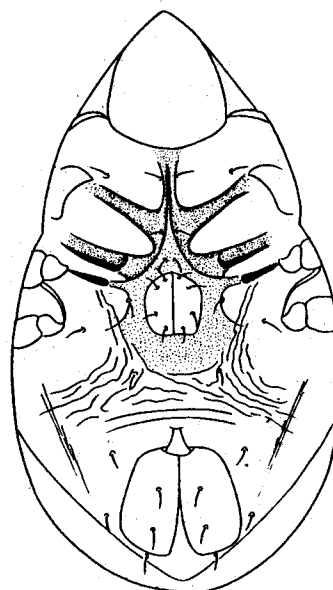


129

Figs. 128-129. *Dometorina crystallina* 128. Dorsal aspect 129. Ventral aspect



130



131

Figs. 130-131. *Dometorina limpida* 130. Dorsal aspect 131. Ventral aspect

organ oval head. 10 pairs of notogasteral setae, 4 pairs of sacculi, 4 pairs of genital setae, one pair of aggenital setae, 2 pairs of anal setae, 3 pairs of adanal setae and legs monodactyle.

Type species: *Muliercula muliercula* Coetzer.

46. *Muliercula chiayiensis* n. sp.

(Figs. 132 – 133)

The species closely resembling the species *Muliercula muliercula* Coetzer, but can be distinguished by the shape of the pseudostigmata organs and lamellae and without aggenital setae.

Colour light brown, tip of the rostrum is rounded. Rostral, lamellar and interlamellar setae are subequal in length. Pseudostigmatid organs are with slender club, set with minute bristles distally, narrow pedicel slender and slightly longer than the club expanded apex. Lamellae which are broadest in their base, narrow distally, ending with a faint translamellar line, which is interrupted in the middle.

Hysterosoma is a little longer than broad, hysterosomal setae are scarcely discernible. There are 4 pairs of rounded sacculi and 3 pairs of pori.

Apodemata II and sejugal apodemata are distinct, short and heavily sclerotized extending to condyle coxae I and II, not jointed to sternum. Apodemata IV much short about half as long as apodemata sejugale. Sternum is Y-shaped, sejugal apodemata and apodemata IV do not reach the anterior border of genital organ.

Collection data. Holotype, 1 ♀, Chiayi, 25-VII-1980, ex humus, Y. H. Tseng; paratype, 3♀♀, the same data as holotype.

47. *Muliercula cuticulata* n. sp.

(Figs. 134 – 135)

This species closely resembling *chiayiensis*. But it can be easily distinguished by body heavily sclerotized, pseudostigmatid organ with a short club, which about 0.6 in length to the pedicel of organ, apodemata II rather long, sejugal apodemata are also long and reach the anterior border the genital organ.

Collection data. Holotype, 1 ♀, Paintienyen, Chiayi Hsien, 12-X-1980, ex root of unknown plant, Y. H. Tseng; Paratype, 2♀♀, the same data as holotype; 1 ♀, Loongchi, Tainan Hsien, 26-VI-1980, ex litter, Y. H. Tseng.

Genus *Hammerabates* Balogh

Generic diagnosis. Dorsosejugal suture present, straight. Pseudostigmatic 10 pairs of notogasteral setae, 4 pairs of areae porosae, 3 pairs of genital setae, one pair of aggenital setae, 2 pairs of anal and 3 pairs of adanal setae. Legs tridactylous.

Type species: *Hammerabates trisetosus* Balogh.

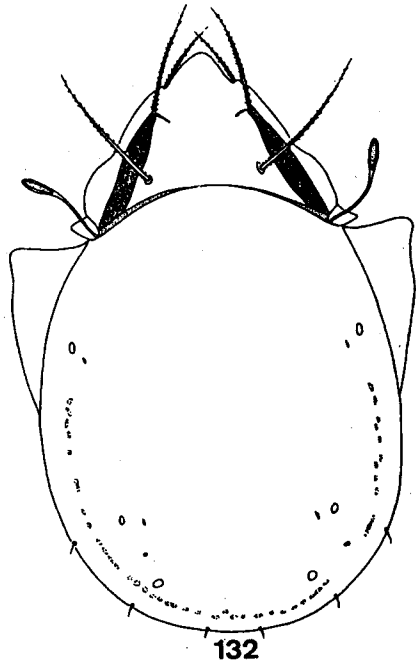


Fig. 132. Dorsal of *Muliercula chiayiensis*

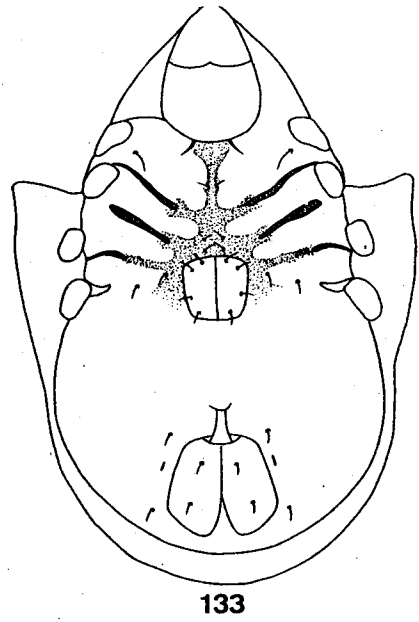


Fig. 133. Ventral of *Muliercula chiayiensis*

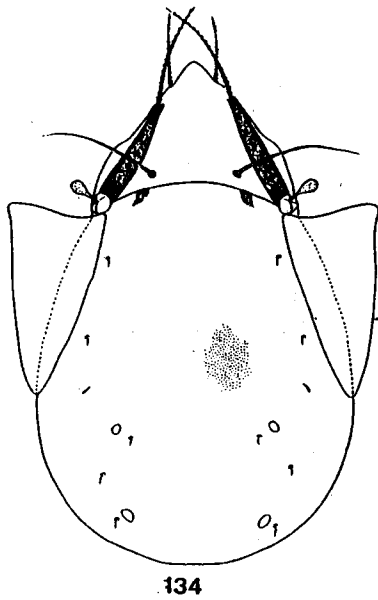


Fig. 134. Dorsal of *Muliercula cuticulata*

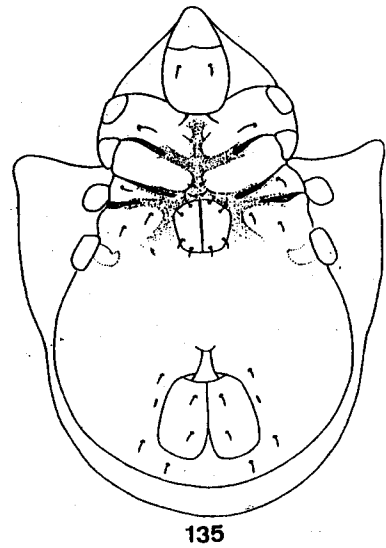


Fig. 135. Ventral of *Muliercula cuticulata*

48. *Hammerabates elongatus* n. sp.  
(Figs. 136 – 137)

This species fits near *trisetosus* Balogh from New Guinea. *H. elongatus* has distinctly different the adanal setae long, vantral of hysterosoma with sparse granulates, and the Sa elongated.

Body elongated.

The rostrum is rounded. The rostral setae are located dorsally near the side of rostrum, coarse proximally. The lamellae is slightly broad in middle, proximally and distally are narrow. The lamellar setae, interlamellar setae and the rostral setae are subequal in length. Pseudostigmata with short hairy broad head and short pedicel.

Hysterosoma with dorsosejugale suture straight, shown in figure, There have 10 pairs of minute hysterosomal setae and 4 pairs of sacculi. Sa elongated.

Epimeric region with olive-shaped pattern. Apodemata I converging to form transverse line. Apodemata II and apodemata sejugale are subequal in length. The latter reach to the field of genital, Ventral of idosoma filling with sparse, elongated dots. The epimeric setae formula is 2-1-2-1; the setae 1c twice as long as the other setae on the epimeric region. There are 3 pairs of genital setae, one pair of aggenital setae, 2 pairs of anal setae and 3 pairs of adanal setae. The anal and adanal setae are long whip like. Legs tridactylous.

Collection data, Holotype, 1 ♀, Fushing, Taoyuan Hsien, 2-IX-1980, ex *Cryptomeria* sp. Y. H. Tseng; paratype, 2 ♀♀, the same data as holotype.

**Ceratozetidae**

**Pseudogeminozetes n.g.**

This genus closely resembles *Geminozetes* for having lamellae very narrow, only cuspides expanding. It is readily differentiated by having the basal half of interior margin of lamellae fused; fused portion more or less 1/4 as long as free apical portion, by having the cuspides obliquely truncate.

Generic diagnosis. The rostral setae plumose, arising from 1/3 way of lateral margin from base of propodosoma. The lamellae very narrow, but cuspside much broad, the base half of interior margin of lamellae fused, fused portion more or less 1/4 as free apical portion. The cuspsides obliquely truncate, and with one sharp outer pointed. The lamellar setae dagger-shaped with minute barbed. The interlamellar. setae very long and with strongly barbed. The pseudostigmata clavated. Hysterosoma with 4 pairs of area porosae, 8 pairs of hysterosomal setae, 2 pairs of anal setae and 3 pairs of adanal setae. Legs tridactylous.

Type species; *Pseudogeminozetes obliquus* n. sp.

49. *Pseudogaminozetes obliquus* n. sp.  
(Figs. 138-139)

This tip of rostrum is rounded. The rostral setae strongly plumose, which are located 1/3 way of propodosoma margin from base, extending beyond the tip of rostrum. The lamellar, and interlamellar setae are as generic characters. Interlamellar setae arising from the anterior border of dorsosejugal suture and extending to the tip of rostrum. The pseudostigmata lanceolate, with



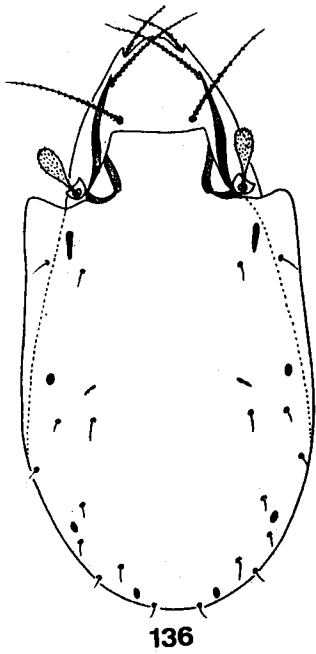


Fig. 136. Dorsal of *Hammerobates elongatus*

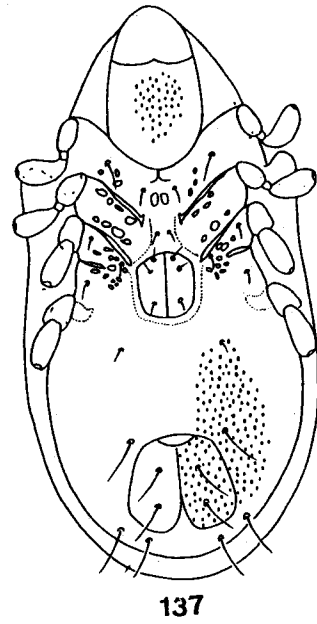


Fig. 137. Ventral of *Hammerobates elongatus*.

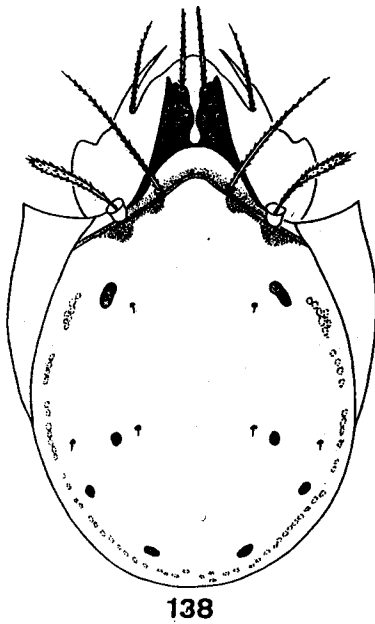


Fig. 138 Dorsal of *Pseudogeminozetes obliquus*

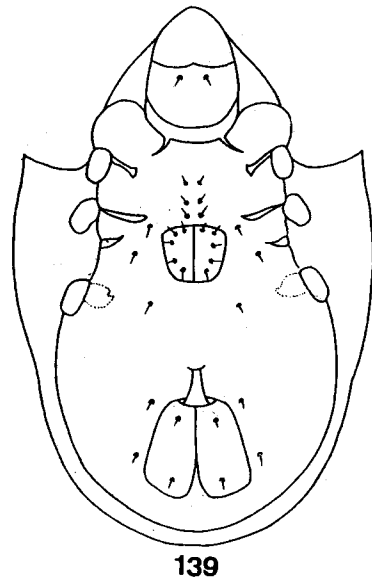


Fig. 139. Ventral of *Pseudogeminozetes obliquus*

minute barbed and with a sharp point apex. Tectorium long and with longitudinal striae.

Dorsosejugal suture is point convex in middle. There are 4 pairs of area porosae on the hysterosoma. Aa sharp, A1-A3 are rather small and rounded. 8 pairs of minute hysterosomal setae.

Apodemata are rather short, apodemata sejugal are not reach to the field of genital. The epimeric setae formula is 1-1-2-2. Genital organ with 6 pairs of setae. One pair of aggenital setae, 2 pairs of anal setae and 2 pairs of adanal setae on the ventral of hysterosoma.

Collection data. Holotype, 1 ♀, Neihu, Taipei Hsien, 13-II-1981, ex *Youngia japonica*, L. L. Lai; paratype, 3 ♀♀ the same data as holotype.

#### Genus *Allozetes* Berlese

Generic diagnosis. Dorsosejugal suture absent. 10 pairs of nogasteral setae, 6 pairs of genital setae, one pair of aggenital, 2 pairs of anal and 3 pairs of adanal setae. Legs monodactyle.

Type species: *Ceratozetes (A.) pusillus* Berlese

#### 50. *Allozetes latus* n. sp.

(Figs. 140-141)

This species appears related to *africanus*. It differs from *africanus* by having the dorsum of hysterosome with granulated rather than round pits, the hysterosoma setae much minute. Also the ventral of hysterosoma with round pits; rather than the avoloes reticulation.

The tip of rostrum is rounded. The rostral setae and the lamellar setae are short, stout and pilose. The lamellae shown in figure which are the same as *africanus*. The interlamellar setae short, indistinctly. The interlamellae region wider than the region of *africanus*. Dorsoseju-gale suture arising from the base of pseudostigmata and absent in median part. Dorsal with granulates and with 5 pairs of minute setae and one pair of split, the latter are locate posterolateral, large and elongated.

Ventral is similar to *africanus*. The epimeric setae formula is 2-2-2-2. Apodemata II converging anterior forming a transverse line. Apodemata sejugale converging anterior forming a transversely line. Opisthosoma with round dots. There are 5 pairs of genital setae, one pair of aggenital setae, 2 pairs of anal setae and 2 pairs of adanal setae. Legs monodactylous.

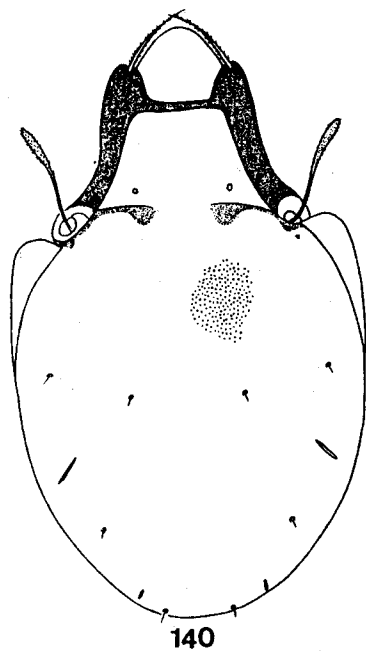
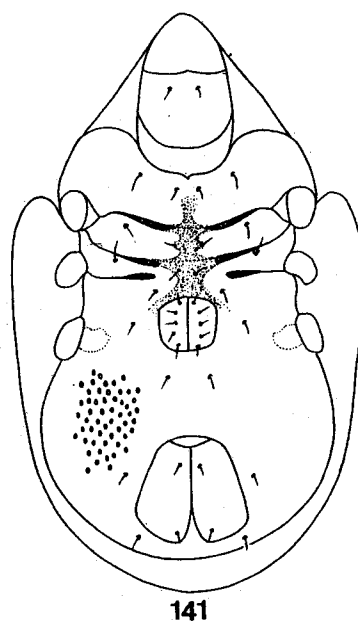
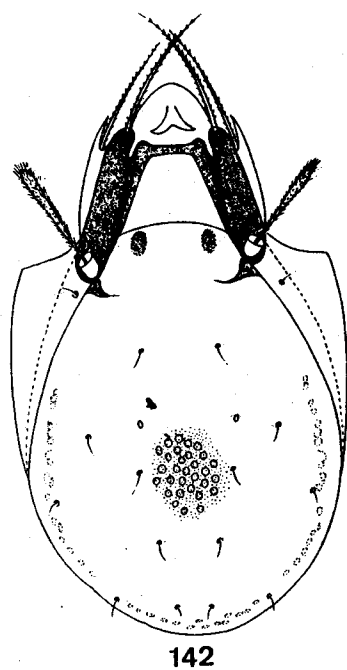
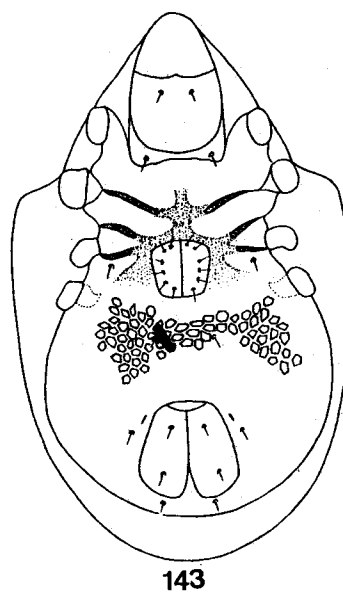
Collection data. Holotype, 1 ♀, Wainchiao, Chiayi Hsien, 26-I-1980, ex soil, L. L. Lai; paratype, 2 ♀♀, the same data as holotype.

#### 51. *Allozetes africanus* Balogh

(Figs. 142-143)

The tip of rostrum is rounded. The lamellae wide, parallel side, strong incision in distally, the lamellar setae, rostral setae are long and strongly barbed. The interlamellar setae absent, pseudostigmata are gradually swollen from base to apex, and with bristles. Dorsosejugal suture absent or very indistinctly. Hysterosoma with 8 pairs of minute setae and with round pits. The epimeric region with indinctly reticulation. apodemata II, apodemata sejugal and apodemata IV are converging anterior to from a thin sternum. there are 6 pairs of genital setae, one pair of aggenital setae, 2 pairs of anal setae and 2 pairs of adanal setae, Opisthosoma with reticulation, Legs monodactylous.

Collection data. 1 ♀, Paintienten, Chiayi Hsien, 12-X-1980, ex humus, Y. H. Tseng.

Fig. 140 Dorsal of *Allozetes latus*Fig. 141. Ventral of *Allozetes latus*Fig. 142. Dorsal of *Allozetes africanus*Fig. 143 Ventral of *Allozetes africanus*

**Humerobates Sellnick**

**Generic diagnosis.** Pseudostigmatic organ with oval head; dorsosejugal suture present, 10 pairs of notogasteral setae. 6 pairs of genital setae, one pair of aggenital setae, 2 pairs of anal setae, 3 pairs of adanal setae, 4 pairs of arae porosae normal, legs tridactylous.

**Type species:** *Notaspis humeralis* Hermann

**52. *Humerobates taiwanensis* n. sp.**  
(Figs. 144-145)

This species is readily differentiated from other known species of genus *Humerobates* by having 5 pairs of area porosae on hysterosoma; by having 8 pairs of hysterosomal setae.

Propodosoma large, triangular. The tip of rostrum is rounded, the rostral hairs situated 3/4 way of lateral of propodosoma from the base, which are straight, thick and barbed. The lamellae are much broad proximally and narrow distally, forming a long triangle-shaped and reach half way to the tip of rostrum. The lamellar hairs long and pilose, which are 1.7 as long as the rostral hairs. The exolateral side of the lamellae, there have a pair of oval-shaped area porosa. The extero-lamellar setae present, thin and minute barbed, which are situated near base of propodosoma and about half as long as lamellar setae. The interlamellar setae which are situated the anterior of dorsosejugal suture, and more or less 2.5 times longer than the rostral setae. The pseudostigmata with head in oval-shaped.

Hysterosoma is rounded, Dorsosejugal suture is rounded convex. There are 5 pairs of area porosae (Aa, A1, A2, A1', A3). Eight pairs of minute, smooth setae and 3 pairs of pori on the hysterosoma, Pteromorphae rather small, and with longitudinal striae.

Apodemata II, IV and apodemata sejugale are subequal in length. The latter 2 apodemata reach to the genital field. The epimeric setae formula is 2-2-1-2. Setae lb longer than the other setae on the epimeric region. There are 4 pairs of genital setae, one pair of aggenital setae, 2 pairs of anal setae and 3 pairs of adanal setae are subequal in length.

**Collection data.** Holotype 1♀, Wainchiao, Chiayi Hsien, 25-VII-1980, ex soil, S. C. Wu; paratype, 2♀♀, the same data as holotype.

**Paralobozetes n. g.**

This new genus is obviously related *Lobozetes* Hammer, but differs by having the 4 pairs of genital setae and translamellae with 2 small rounded anterior lobes.

**Generic diagnosis.** Body pale brown. The rostral, lamellar and interlamellar setae are stout and pilose. The lamellae are narrow in base, and rather broad in distally. The translamellae with 2 small round anterior lobes, 11 pairs of rather long hysterosomal setae present. 4 pairs of genital setae, 2 pairs of anal setae and 3 pairs of adanal setae. Legs tridactylous.

**Type species:** *p. longirostalis*

**53. *Paralobozetes longirostalis* n. sp.**  
(Figs. 146-147)

The rostrum with hyaline tip. The slightly barbed rostral hairs are situated anterior of dorsola-

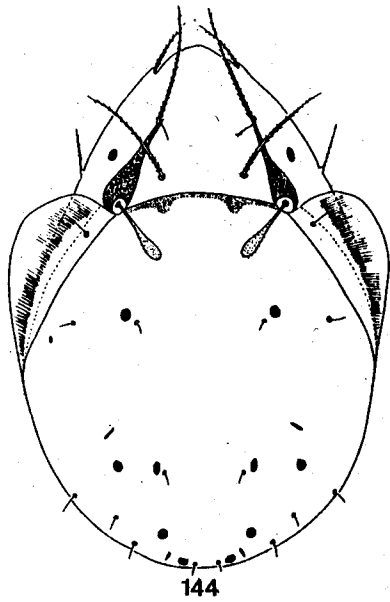


Fig. 144. Dorsal of *Humerobates taiwanensis*

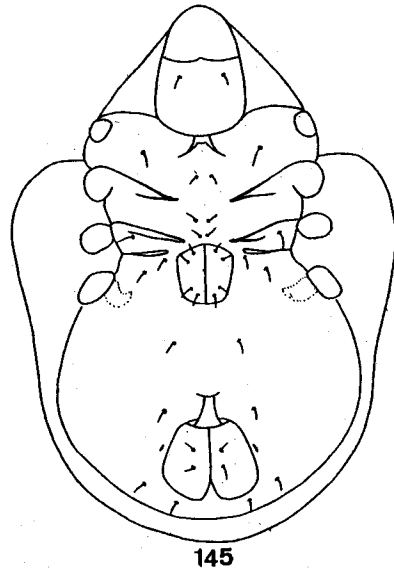


Fig. 145. Ventral of *Humerobates taiwanensis*

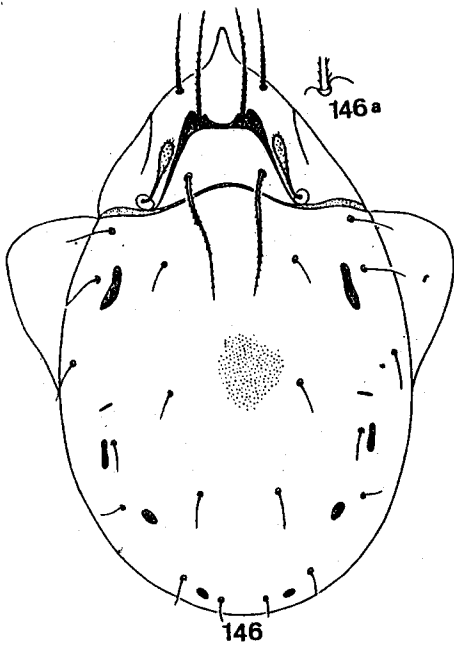


Fig. 146. Dorsal of *Paralobozetes longistrostralis*  
Fig. 146a. chelicera

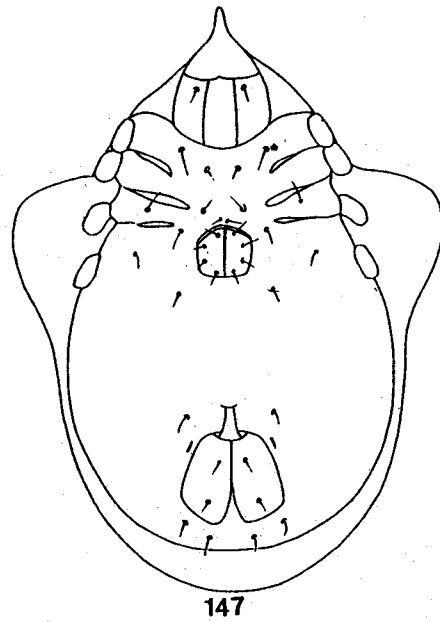


Fig. 147. Ventral of *Paralobozetes longistrostralis*

teral of propodosoma. The lamellae located far distance from lateral side of propodosoma, reach half way to the tip of rostrum, which are broad distally and with 2 round teeth and much narrow in proximately, lamellar setae stout and with minute barbed, which are slightly longer than the rostral hairs. Interlamellar region rectangular, more or less twice as wide as long. The interlamellar setae stout, barbed and 1.5 as long as rostrals, The pseudostigmatic organs are short, thick clubs with short pedicels, the head set with bristles.

Hysterosoma with finely granulate. Dorsosejugal suture convex in middle. Hysterosoma with 11 pairs of hysterosomal setae and 4 pairs of area porosae, Aa elongated, more or less 9 times as long as wide, A1 small elongated which about 3 times as long as wide and about 1/3 length to Aa, A2 and A3 are small and ovalshaped. Apodemata II broad, slightly shorter than apodemata sejugale, apodemata sejugale long and broad, It reaches to the field of genital. Apodemata IV thin, it is indistinct in the base. The epimeric hair formula is 2-1-2-1. lb and 3bare slightly longer than others. There are 4 pairs of genital setae, one pair of aggenital setae, 2 pairs of anal setae and 3 pairs of adanal setae.

Collection data. Holotype, ♀, Tainan city, 19-1979, ex straw, Y.H. Tseng; paratype, 2 ♀♀, the same data as holotype.

#### **Baloghobates Hammer**

Generic diagnosis. Pseudostigmatic organ short, small, with oval round head, interlamellar setae setiform, longer than lamellar setae, notogasteral setae absent, 4 pairs of areae porosae, 6 pairs of genital setae, one pair of aggenital setae, 2 pairs of anal setae, 3 pairs of adanal setae, legs tridactylous.

Type species: *Baloghobates nudus* Hammer

#### **54. *Baloghobates nudus* Hammer (Figs. 148 – 149)**

*Baloghobates nudus* Hammer, 1967, Biol. Skr. Dan. Vid. Selsk. 15, No. 4: 31-32

The rostral, the lamellar and the interlamellar setae are long and pilose. The lamellae which are situated rather far laterally, tapering toward the short cusps. The translamella is absent. The tutorium with longitudinal striae. The pseudostigmatid organs with expanded apex broadly oval with tip, the pedical slender short, equal in length to expanded apice diameter.

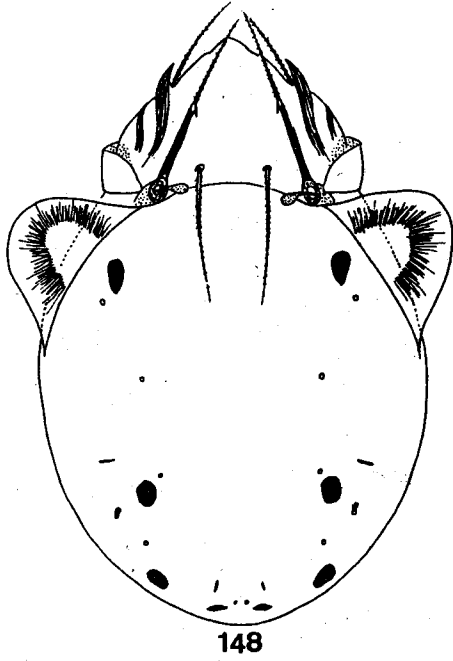
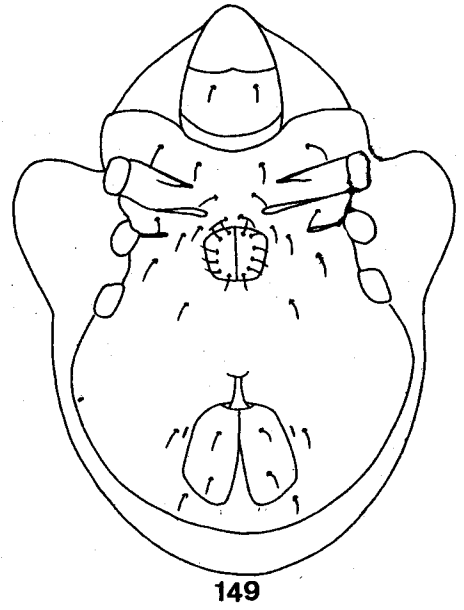
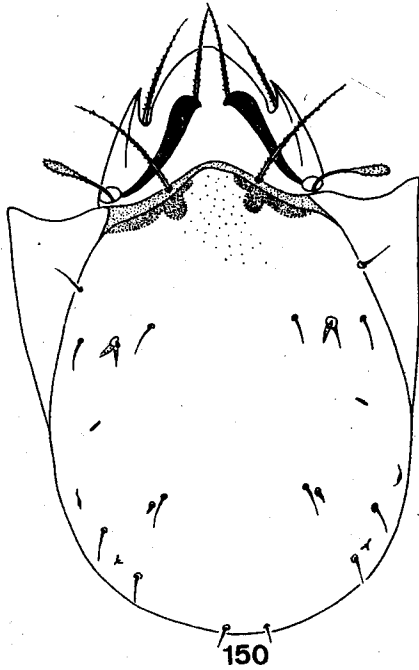
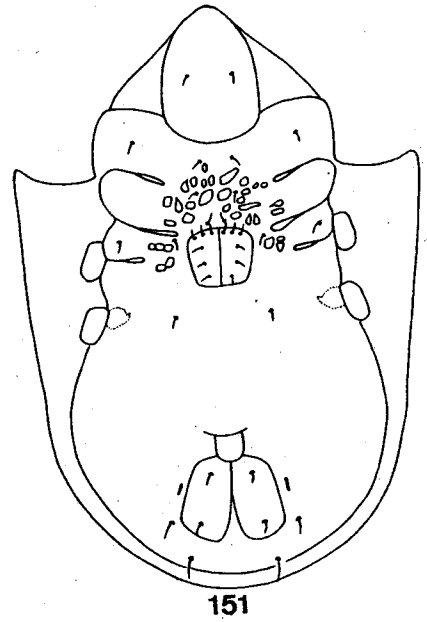
Specimens on hand collected from Taiwan can be found some variaton. It is differented from the specimens of New Zealand, by having no translamella rather than translamella is represented by a short ridge on either side, in its middle by a indistinct line. The pseudostigmatid are not hidden by anterior border of the hysterosoma.

Collection data, 1 ♀, Kuanhu, Hualien Hsien, 12-XII-1980, ex *Cryptomeria japonica*, S. C. Wu.

#### **Ceratozetoidae Balogh**

##### **Hypozetes Balogh**

Generic diagnosis. Lamellae with round swollen apex, cuspides for removed from each other,

Fig. 148. Dorsal of *Baloghobates nudus*Fig. 149. Ventral of *Baloghobates nudus*Fig. 150. Dorsal of *Hypozetes rostralis*Fig. 151. Ventral of *Hypozetes rostralis*

pseudostigmatic organ with long olive-shaped head, notogaster with 10 pairs of setae, 6 pairs of genital setae, one pair of aggenital setae, 2 pairs of anal setae, 3 pairs of adanal setae, 4 pairs of sacculi. Legs tridactylous.

Type species: *Hypozetes imitator* Balogh

**55. *Hypozetes rostralis* n. sp.**

(Figs. 150 – 151)

The species is closely related to *laysanensis* Aoki and is readily differentiated by the shape of lamellae; by having finely granulate on the hysterosoma and a located at the transverse line between ti and ie.

The tip of rostrum is rounded. The rostral setae which are situated lateral margin nearly midway of propodosoma. The lamellae are swollen and rounded apex, much narrow at base. The lamellar setae are pilose, The interlamellar setae are slightly longer than lamellar setae, pilose, which are situated on border of dorsosejugal suture. The pseudostigmatid organ is clavate, set with minute bristles, rather stout pedicel as long as the clavated expanded apex.

Hysterosoma with finely granulates, and with 4 pairs of sacculi or pori; dorsal setae te 1.2 longer than ti. Epimeral region with reticulation. Apodemata II and IV are subequal in length, short, they are about half as long as apodemata sejugale; apodemata sejugale are short not reach to the anterior border of the genital fold. There are 5 pairs of genital setae, one pair of aggenital setae, 2 pairs of anal setae and 3 pairs of adanal setae on the ventral of hysterosoma.

Collection data. Holotype, 1♀, Linnei, Yunlin Hsien, 16-II-1980, ex weeds, Y. H. Tseng; paratype, 2♀♀, the same data as holotype.

***Falsolobozetes* n. g.**

This genus closely resembles *Lobozetes* Hummer from South America but is readily differentiated by having the Lamellar hairs are stout, long and pilose, by having the tip of no long, anterior directed, widely separated lobe.

Generic diagnosis, Rostral is rounded. The rostral hairs are situated in normal position. Lamellar setae and interlamellar setae are long and pilose. The lamellae connected by a translamella. Hysterosoma with 4 pairs of area porosae, 10-12 pairs of hysterosomal setae are tiny and set on strong tubercles. Genital with 5 pairs of genital setae, 2 pairs of adnal setae and 2 pairs of anal setae.

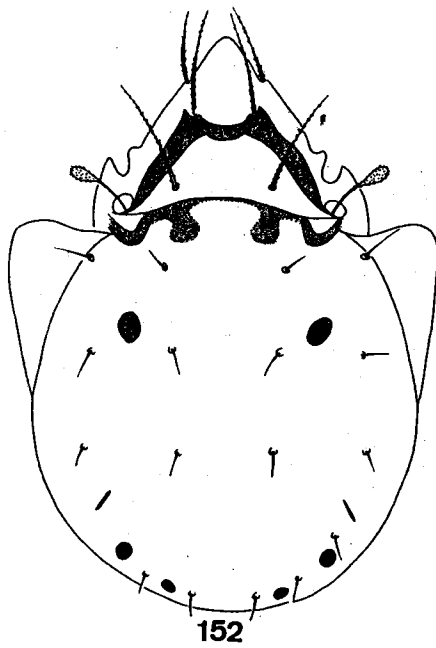
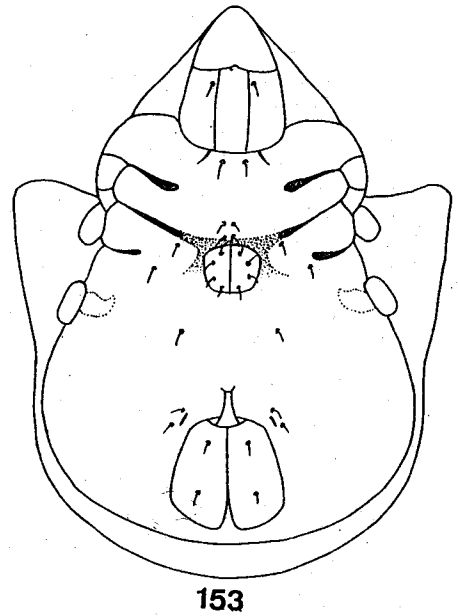
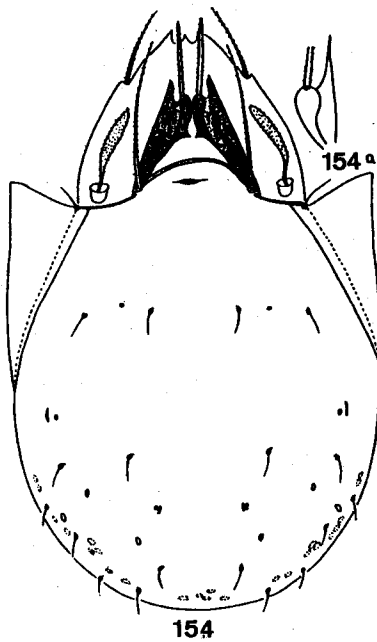
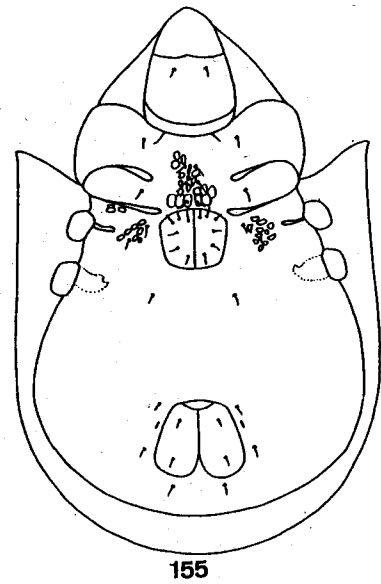
Type species. *Falsolobozetes laneus* n. sp.

**56. *Falsolobozetes laneus* n. sp.**

(Figs. 152 – 153)

The tip of the rostrum is slightly round pointed. The rostral setae are situated just behind the end of ridge, which are barbed for most of their length, reach beyond the tip of the rostrum. The proximal part of the lamellae is rather narrow, but broad at apex. The translamella stout. The lamellar setae and the interlamellar setae are stout, strongly pilose and subequal in length, which almost twice as long as the rostral hairs. The cuspis with lateral sharpened tooth, The pseudostigmatic organ sharply has a broad oval head and set with tiny bristles, the pedicel smooth, which is equal length to the head.



Fig. 152. Dorsal of *Falsolobozetes laneus*Fig. 153. Ventral of *Falsolobozetes laneus*Fig. 154. Dorsal of *Lamellobates palustris*  
Fig. 154a. cuspis of lamellaFig. 155. Ventral of *Lamellobates palustris*

**Hysterosoma** ball-shape. The dorsosejugal suture indistinctly in middle, one pair of large area porosae just behind the suture, 4 pairs of area porosae are round and subequal in diameter. 12 pairs of setae are tiny and set on strongly tubercles. The apodemeata II and IV are short, not reaching to the genital field, The sejugal apodemata are long and connecting each other forming a transverse sclerotized. Genital with five pairs of genital setae, one pair of aggenital setae, two pairs of anal and adanal setae.

Collection data. Holotype, 1♂, Paintainyen, Chiayi Hsien, 10-VII-1980, ex root, Y. H. Tseng; paratype 1♀, the same data as holotype.

### Oribatellidae

#### Lamellobates Hammer

Generic diagnosis. Lamellae converging apex, pseudostigmatic organ clavate, 10 pairs of notogastral setae, 6 pairs of genital setae, one pair of aggenital setae, 2 pairs of each belong to anal and adanal setae, 4 pairs of sacculi, legs tridactylous.

Type species: *Lamellobates palustris* Hammer

#### 57. *Lamellobates palustris* Hammer (Figs. 154 – 155)

*Lamellobates palustris* Hammer, 1958, Biol. Skr. Dan. Vid. Selsk. 10 (1): 100.

This species easily distinguished by having the tip of rostrum is 3 triangular lobes; by having the lamellae are broad and with 2 teeth distally The anterior tooth is rounded, from which arising a dagger-shaped and minute barbed lamellar setae, the external tooth is long and sharp point.

Collection data. 2♀♀, Yuiching, Tainan Hsien, 24-II-1980, ex *Juniperus*, sp. S. C. Wu; 1♀, Kuangu, Hualien Hsien, 30-VII-1980, ex litter, S. C. Wu; 3♀♀, Swei, swei, Hualien Hsien, 31-VII-1980, ex humus, S. C. Wu; 1♀, Muitan, Pingtung Hsien, 14-IX-1980, ex litter, Y. H. Tseng.

#### Paralamellobates Bhaduri et Raychaudhuri

Generic diagnosis. This genus resembles lamellobates, but it differs from the latter by having one pair each belong to anal and adanal setae, leg monodactylous.

Type species: *Paralamellobates bengalensis* Bhaduri et R.

#### 58. *Paralamellobates bengalensis* (Bhaduri and Raychaudhuri) (Figs. 156 – 157)

*Lamellobates bengalensis* Bhaduri and Raychaudhuri, 1968, Oriental Ins. 2: 199

Two long and shaped distally teeth lamellae, clavated pseudostigmata, 8 pairs of hysterosomal setae, without porosae or sacculi, 6 pairs of genital setae, one pair of anal setae and one pair of adanal setae are can easily distinguished from other oribatid species.

Collection data, 1♀, Chuchi, Chiayi Hsien, 24-VII-1980, ex lichen, S. C. Wu; 1♀, Chiayi, 17-VIII-1980, ex litter, Y. H. Tseng; 1♀, Wainchiao, Chiayi Hsien, 26-I-1981, ex soil, L. L. Lai.

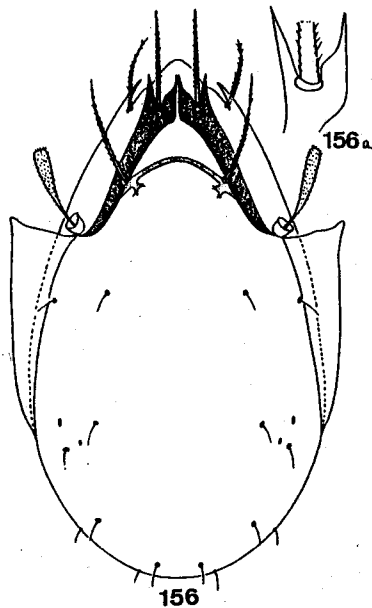


Fig. 156. Dorsal of *Paralamellobates bengalensis*

Fig. 156a. cuspis of lamella

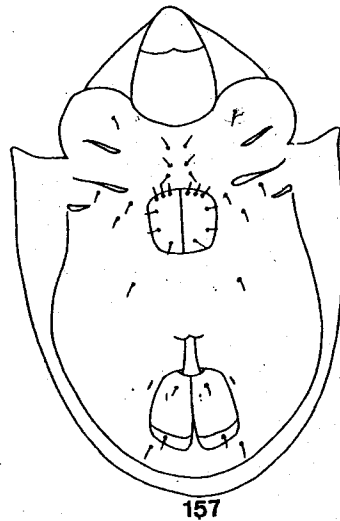


Fig. 157. Ventral of *Paralamellobates bengalensis*

### Schelorbitidae

#### Genus Schelorbites Berlese

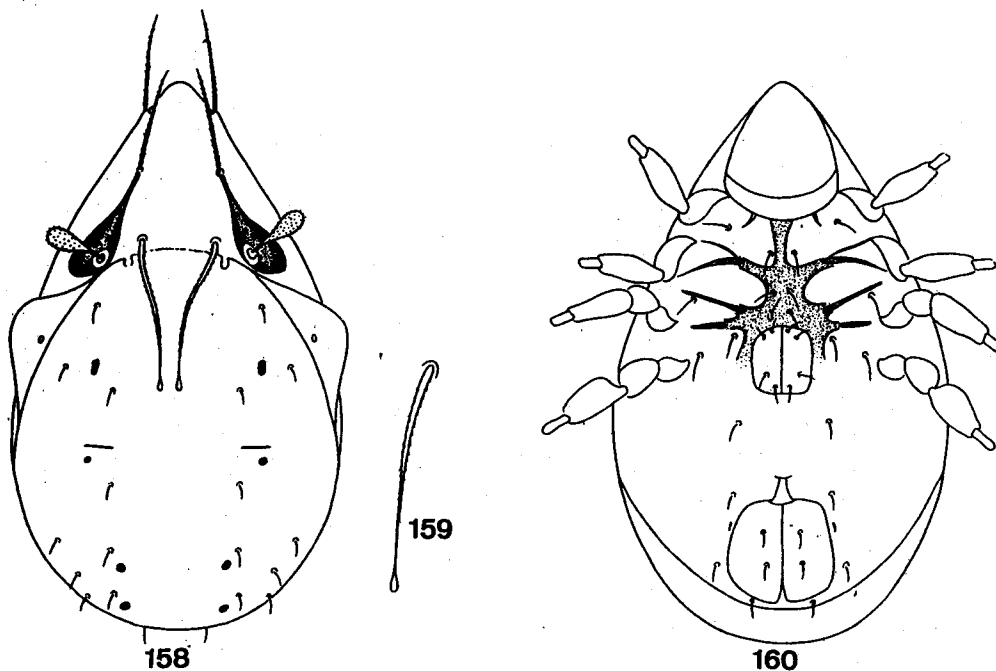
Generic diagnosis. Pteromorphae present but not movable. Lamellae present. Lamellar, rostral, interlamellar and exopseudostigmatic setae present. 10 pairs of notogaster setae. 4 pairs of genital setae, one pair of aggenital. 2 pairs of anal setae and 3 pairs of adanal setae.

Type species. *Zetes latipes* C. L. Koch

#### 59. *Schelorbites papillaris* new species (Figs. 158 – 160)

This species is readily differentiated from other known species of *Schelorbites* by having interlamellar setae with terminal knob, and pteromorphae indistinctly to form nearly hyaline membrane.

Rostrum rounded. Rostral setae situated dorsolaterally at some distance from anterior border of prodorsum, thin and barbed. Proximal lamellae tapering, broadest in base. Lamellar setae slightly longer than rostral setae, rather stout and strongly barbed, almost 1.7 as long as their mutual distance. Interlamellar setae rather stout, barbed and with terminal knob, they are slightly longer than lamellar setae, and almost 2.5 length of their mutual distance. Pseudostigmatic organ



Figs. 158-160. *Schloribates papillaris*  
 158. Dorsal aspect 159. Interlamellar setae 160. Ventral aspect

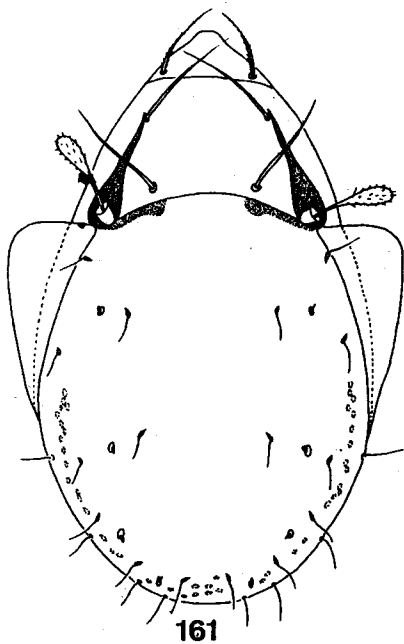
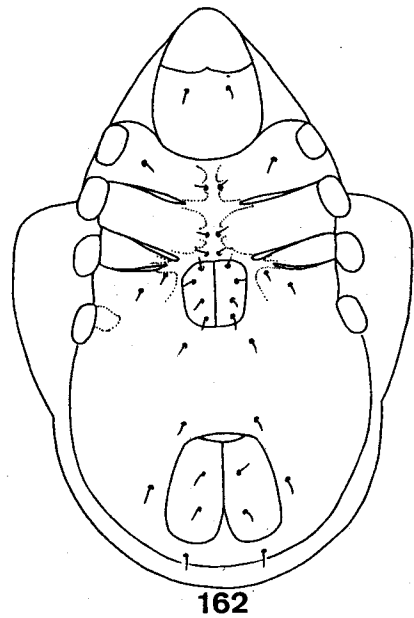
with broad setose head. 10 pairs of notogasteral setae and 4 pairs of sacculi situated in normal position. Apodemata subequal length, apodemata II and sj aligned obliquely, parallel to each other, while anterior apodemata IV nearly converging with sejugal apodemata. Integument between the apodemata pale brown, with scale-shaped reticulation. Epimeral setae formula 2-1-2-3. 4 pairs of genital setae. One pair of aggenital setae. 2 pairs of anal setae and 3 pairs adanal setae, simple and subequal length. Anal fissure is typical in generic character.

Collection data. Holotype, ♀, Chuchi, Chiayi Hsien, 19-III-1980, ex leaf of cassava, S. C. Wu; paratype, ♀, the same data as holotype.

60. *Scheloribates alisanicus* n. sp.  
 (Figs. 161 - 162)

This species somewhat resembles the species *pacificus* by having no transverse ridge between the tips of the lamellae. The pseudostigmata are clavate and hysterosoma with moderate long setae. It differs in setae ti are located in a transverse line with Sa, in front of lamellae, There is a faintly transverse ridge, and the body is lemon-shaped.

The tip of rostrum is truncate. The rostral setae pilose, which are situate on the anterolateral side of propodosoma, and more or less twice as long as its base to the rostrum. The lamellar and the interlamellar setae are subequal in length. The pseudostigmata organ clavate, the head broad middle, the pedicel as long as expanding apice. In front of lamellae, there is a faintly transverse

Fig. 161. Dorsal of *Schelorbates alisanicus*Fig. 162. Ventral of *Schelorbates alisanicus*

ridge. Hysterosoma lemon-shaped. The anterior border is rounded convex. There are 4 pairs of sacculi and 12 pairs of hysterosomal setae. The hairs pores are much bigger than the setae base.

Collection data. Holotype, 1♀, Alisan (2400m), Chiayi Hsien, 31-VIII-1980, ex litter, Y. H. Tseng; paratype, 10♀♀, the same data as holotype.

**61. *Schelorbates praeincisus* (Berlese)  
(Figs. 163 – 164)**

*Protoribates (P.) praeincisus* Berlese, 1910, Redia VI, 384.

*Protoribates (Schelorbates) praeincisus*, Sellnick, 1925, p. 82.

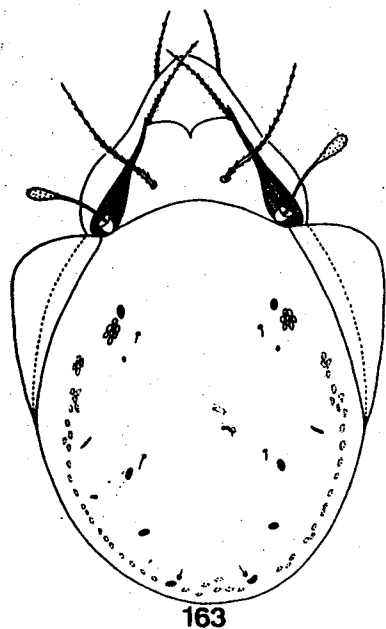
This species easily distinguished by having a transverse ridge between the tip of the lamellae which is V-shaped in the middle.

Collection data. This species is widely distribution throughout this island.

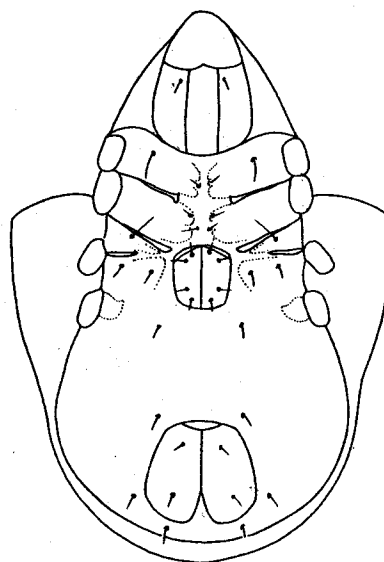
**62. *Schelorbates praeincisus* Var. *interruptus* Berl.  
(Figs. 165 – 166)**

*Schelorbates praeincisus* var. *interruptus* Berl., 1916, Redia XII: 315

This species differs other species *Schelorbates* by having a transverse ridge between tip of



163



164

Fig. 163. Dorsal of *Scheloribates praeincisus*Fig. 164. Ventral of *Scheloribates praeincisus*

lamellae, which is interrupted in middle. Pseudostigmata are longish club. Hysterosomal setae hardly discernible.

This species is widely distribution of Taiwan.

#### Genus *Tuberemaeus* Sellnick

Generic diagnosis. No pteromorphere present. Lamellae present. Lamellar, interlamellar, rostral and exopseudostigmatic setae present. 10-14 pairs of notogasteral setae. 4 pairs of genital setae. Legs tridactylous somewhat monodactylous. Body with roughly punctate.

Type species. *Tuberemaeus singularis* Sellnick

#### 63. *Tuberemaeus formosansus* new species (Figs. 167 - 169)

This species differs from other *Tuberemaeus* by notogaster having oval-shaped reticulation. Notogasteral setae ti and te arranged in a transverse line.

Prodorsum triangle-shaped, almost 1.7 as wide as long, round reticulation on anterior distinctly larger than posterior, anterior of dorsosejugal suture with round dots, rather smaller than other area.

Rostral setae situated anterolateral margins, thin, barbed and curved, reach for more than

half their length beyond to the tip of rostrum. Lamellae tapering proximally and base broadest. Lamellar setae rather stout, barbed and curve, reach for beyond the tip of rostrum. The mutual distance 1s-1s distinctly longer than in-in. Interlamellar setae stout, barbed and blunt tip, almost equal length to their mutual distance, Lateral lamelliform expansion present, extending to the middle of lamellae. Bothridium opening posterior. Pseudostigmatic organ with broad round head.

Notogaster slightly longer than wide. 10 pairs of notogasteral setae, short and barbed, ta located far posterior to shoulder. ti-te arranged in a transverse line, r3 situated slightly posterior ms, Sa situated between ti-te, im large, situated between te and r3, S1 situated between ms-r3, S2 situated anterior of r3, between p1 and p2 with a pair tubercles on posteromargins. Ventral with rather large reticulation except genital and anal aperture with roughly granules. Apodemata II, sj and IV aligned obliquely, parallel to each other Apodemata II converging anterior, sejugal apodemata and IV connected with genital border. Epimeral setae setiform, and with finely barbed, Setal formula 2-1-2-3.  $1a_2$  and  $2a_2$  subequal length, more or less twice as long as  $1a_1$ ,  $1b_1$ ,  $3c_1$  and  $4d_1$  subequal length,  $4c_3$  slightly longer than  $4c_2$  but slightly shorter than  $1a_2$ . Genital aperture bearing 4 pairs of genital setae,  $g_2$ - $g_3$  more or less 3 times as long as  $g_1$ - $g_2$  equal length to  $g_3$ - $g_4$ . One pair of aggenital setae. 2 pairs of anal setae and 3 pairs of adanal setae. Ad1 situated close to the anterior border of anal, short and seta-like, Ad2 equal length to Ad3, marrow lanceolate, very little longer than Ad1. Legs tridactylous, dorsal setae on tarsus setiform, with terminal knob. The distance between genital and anal aperture almost twice length of the former, and 1.2 as long as the latter.

Collection data, Holotype, ♀, Hsiendien, Taipei Hsien, 27-IV-1980, ex *Juniperus Chinensis*, Y. Y. Lee; paratype, 4 ♀♀, the same data as holotype; 1 ♀, Sitou, Nantou Hsien, 24-II-1980, ex *Chamaecypans formosensis*, Y. H. Tseng; 2 ♀♀, Fenchihu, Chiayi Hsien, 31-III-1980, ex *Juniperus chinensis*, Y. H. Tseng; 1 ♀, Fenchihu, Chiayi Hsien, 31-III-1980, ex *Chamaecypans formosensis*, Y. H. Tseng.

3 specimens collected from Fenchihu, Chiayi Hsien, and 1 specimen collected Sitou, Nantou Hsien, there can be doubt that the specimens are identical with type specimens from Hsiendien. Dorsosejugal suture appears distinctly arcuate rather than nearly straight, but this is due to their more or less erect position. The type species collected from plan, while Fenchihu and Sitou situated 1800m and 1500m.

## Haplozetidae

### Vilhenabates Balogh

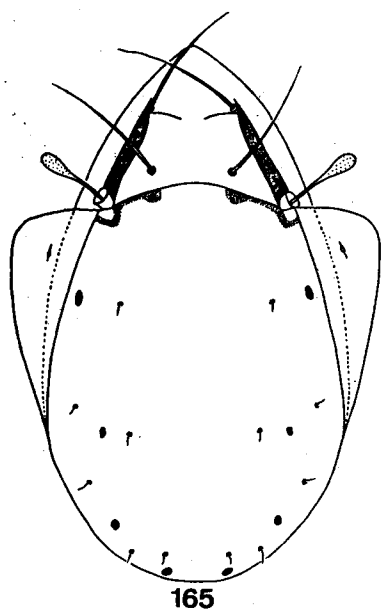
Generic diagnosis. Pseudostigmatic organ with a long and narrow stalk, and swollen apex, notogaster without notogasteral setae, if present, the setae are tiny, inconspicuous; 5 pairs of genital setae, one pair of aggenital setae, 2 pairs of anal setae, 3 pairs of adanal setae, 4 pairs of areae porosae, leg monodactyle.

Type species: *Peloribates minutus* Balogh

#### 64. *Vilhenabates hyalinus* n. sp.

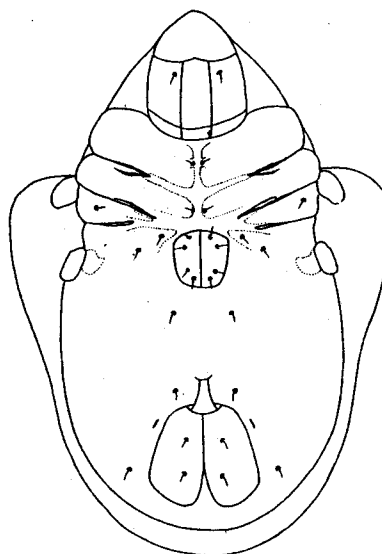
(Figs. 170 - 171)

This new species fits close to *minutus* (Balogh) from Africa and Ceylon, and apparently



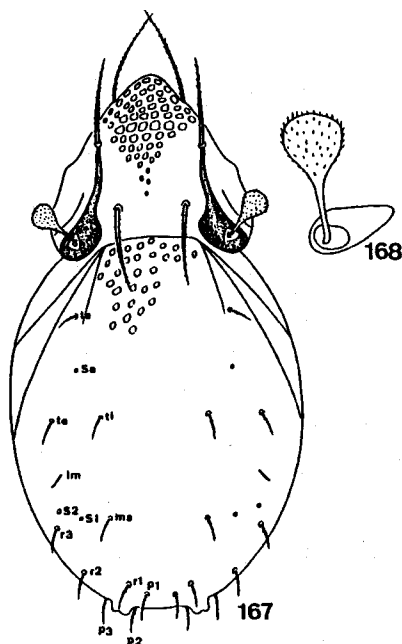
165

Fig. 165. Dorsal of *Schelorbates praeincisus* Var. *interruptus*



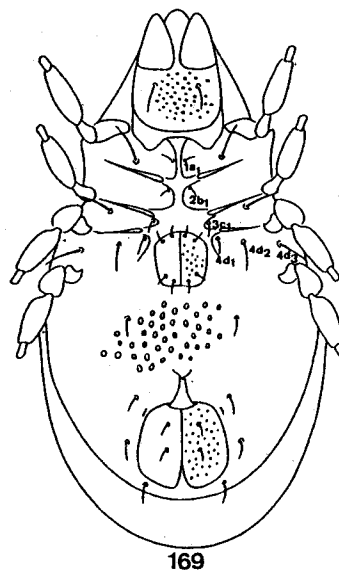
166

Fig. 166. Ventral of *Schelorbates praeincisus* Var. *interruptus*



168

167



169

Figs. 167-169. *Tubermaeus formosanus*

167. Dorsal aspect 168. Pseudostigmatic organ 169. Ventral aspect



differs by having the pteromorphae are smooth, the pseudostigmatid head are narrow-oval and point apex.

Propodosum triangle. The tip of rostrum is narrow, rounded apex. The rostral setae, which are situated in a transverse line with the lamellar setae, smooth and more or less equal in length to the lamellar setae. The lamellar setae long and narrow, which are situated far distance from lateral of the propodosome. The lamellar setae smooth, the interlamellar setae short and minute, about half in length to the lamellar setae. The pseudostigmata organs are situated far distance in front of the anterior border of hysterosome, the organ with narrow expanded apices bearing small spur-like projections on the expanded apices, their pedicels about 3 times as long as expanded apices.

Hysterosoma filling with granulates, dorsosejugal suture is slightly convex. Four pairs of area porosae are round and small, and 10 pairs of setae pori. Surrounding the Aa, with reticulation. Petromorphae are hyalinus. The apodemata II slightly shorter than sejugal apodemata, the sejugal apodemata rather long, which reach to the genital field. Sternum is distinctly pale brown. There are five pairs of genital setae, one pair of aggenital setae, 2 pairs of anal setae and 3 pairs of adanal setae on the ventral of hysterosoma.

Collection data. Holotype. 1♀, Paintienyen, Chiayi Hsien, 10-XII-1980, ex litter, Y.H. Tseng; paratype, 3♀♀, the same data as holotype.

#### **Lauritzenia Hammer**

Generic diagnosis. Rostral, lamellar, interlamellar setae present. Pseudostigmatic organ long, setiform pilose. 10 pairs of notogastral setae. 4 pairs of areae porosae. 4 pairs of genital setae, one pair of aggenital setae, 2 pairs of anal setae. Legs monodactyle.

Type species: *Lauritzenia longipluma* Hammer

#### 65. *Lauritzenia minuta* n. sp. (Figs. 172 – 173)

This species is differentiated from other known *Lauritzenia* by the rostral setae situated anterolateral of propodosoma, they are long and stout; the middle of lateral of propodosoma with a convex propection; the shaped of pseudostigmata and rather short setae on hysterosoma.

Propodosoma hexagonal. The rostrum ends in a broad rounded tip. The rostral setae stout and pilose, which are situated anterolateral margin of propodosoma, and twice as long as its base to the tip of rostrum. The lamellae rather broad and the distal immediately behind the lamellar setae has apparently a pointed tip. The lamellar setae stout, barbed and about 1.5 longer than the rostral setae. The interlamellar setae long, stout and pilose and more or less twice as long as the rostral hairs. The pseudostigmatid organ has a long and flat club, 16 branches on its posterior border.

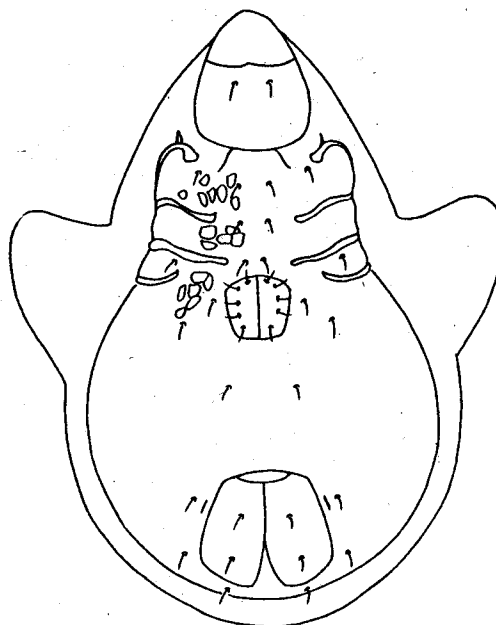
Hysterosoma with finely granulates and with anterolateral reticulation. Hy distinctly and rather large, they are 4 pairs of sacculi, 8 pairs of hysterosoma setae. Pteromorphae rather large, hyaline and with ia pori.

The epimeric region filling with reticulation. Apodemata II narrow and rather long, which are slightly shorter than the apodemata sejugale, apodemata sejugale long, it reaches to genital fold, apodemata IV shorter than apodemata II. The epimeric hair is 3-2-1-2, setae 1b about twice as long as 1a. There are 5 pairs of genital setae, one pair of aggenital setae, 2 pairs of anal setae and



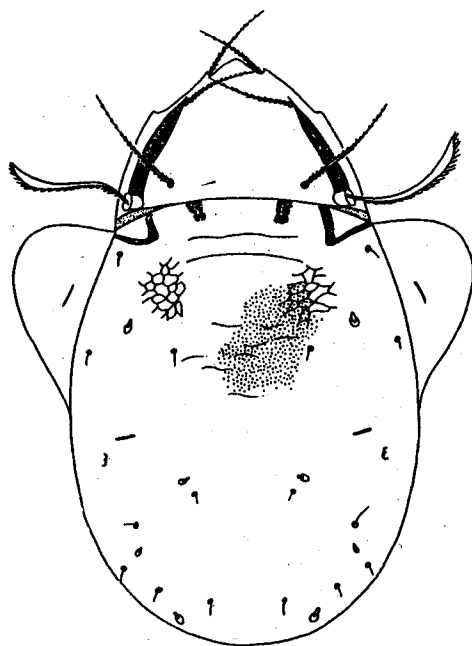
170

Fig. 170 Dorsal of *Vilhenabates hyalinus*



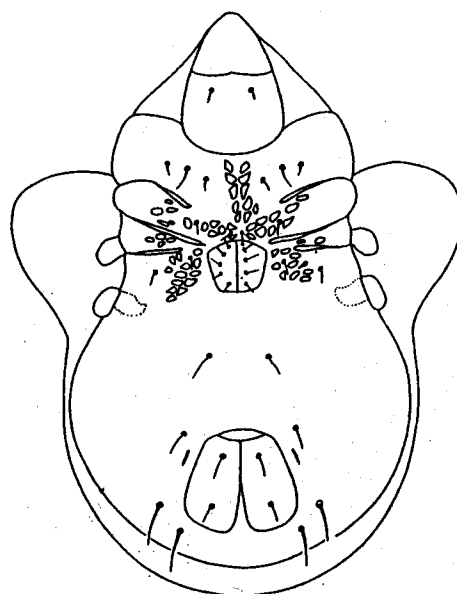
171

Fig. 171 Ventral of *Vilhenabates hyalinus*



172

Fig. 172. Dorsal of *Lauritzenia minuta*



173

Fig. 173. Ventral of *Lauritzenia minuta*

3 pairs of adanal setae on the ventral of hysterosoma, the 2nd and 3rd pair of adanal setae are twice as long as 1st pair, genital, aggenital, anal and 1st adanal setae are subequal in length.

Collection data. Holotype, 1♀, Beelon, Taitung Hsien, 29-VI-1980, ex humus, Y. H. Tseng.

**66. *Lauritzenia carneus* n. sp.**

(Figs. 174 - 175)

The rounded. The rostral hairs are thin, barbed and reach nearly by half their length beyond the tip of rostrum. The lamellae ends in pointed tip and distal half immediately behind the lamellar hair has apparently a broad plate along the medii thickening. The base part of the lamellae is sharp. The lamellar hairs are stout, pectinate and reach beyond the tip of rostrum, which twice as long as rostrals. The interlamellar hairs are pectinate and equal in length to lamellar hairs.

The hysterosoma as long as broad, anterolateral and lateral side of dorsum with rectangular chitinous cell. 3 pairs of notogaster hairs are very than and tiny.

Ventral side. Epimeric hairs 1c about twice as long as 1a. The epimeral region filling with rectangular chitinous plates. Apodemata II long and narrow, which are equal in length to sejugal apodemata, the sejugal apodemata long and stout, which are connected with genital fold, apodemata III rather long and stout, which are 2/3 as long as sejugal apodemata. There is no sternal plate. The genital plate has 5 setae are arranged in a longitudinal line. One pair of anal hairs and 2 pairs of adanal hairs, anal hairs and ad1 are subequal in length, ad2 more or less half as long as ad1.

Collection data. Holotype, 1♀, Beelon, Taitung Hsien, 29-VII-1980, ex humus, S. C. Wu.; paratype, 7♀♀, the same data as holotype.

***Peloribates* Berlese**

Generic diagnosis. Pseudostigmatic organ with oval head, 14 pairs of notogasteral setae, 5 pairs of genital setae, one pair of aggenital setae, 2 pairs of anal setae, 3 pairs of adanal setae, 4 pairs of sacculi, leg tridactylous.

Type species: *Oribata peloptoides* Berlese

**67. *Peloribates longisetosa* n. sp.**

(Figs. 176 - 177)

This species is differentiated from other known species of genus *Peloribates* by having small size (0.26-0.28mm), by having long rather narrow notogaster setae, and without pits on the genital and adan plate.

Body small. Propodosoma without pits. The tip of rostrum is broad, slightly conical. The rostral setae, which are situated the base of tectorium, stout, incurve and strongly pilose. They extend just beyond the tip of rostrum. The lamellae are narrow with the lamellar setae, the latter, which about 1.5 longer than the rostral setae, and pilose. The interlamellar setae stout and pilose, which are equal length to the rostral setae. The pseudostigmata have broad oval head, pedicels thin, which about 2.5 as long as oval apices. Pteromorphae are wing-shaped and hyaline, without pits.

Hysterosoma is widest in posterolateral, filling with round, indistinctly pits, and with 13 pairs

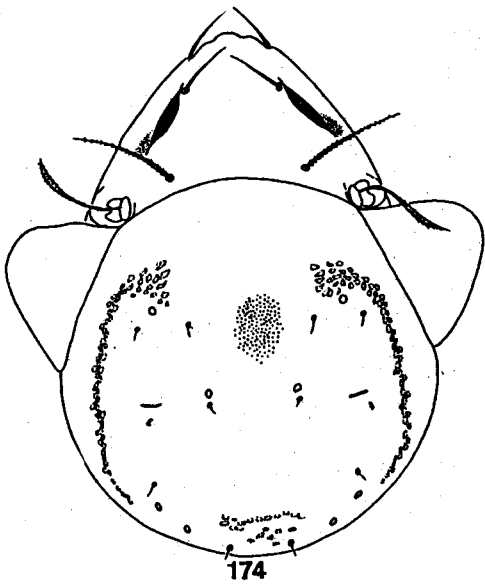


Fig. 174. Dorsal of *Lauritzenia carneus*

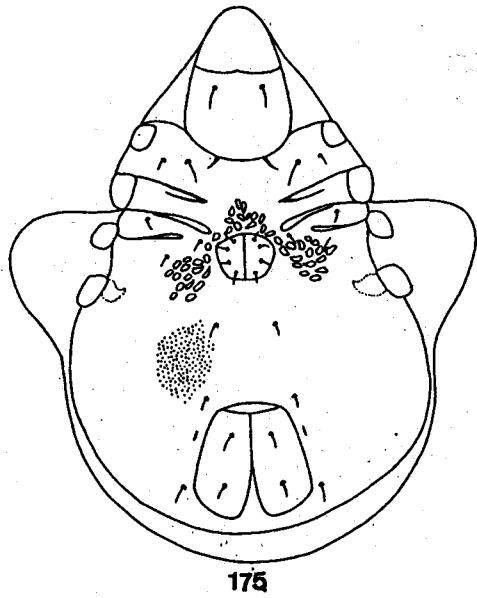


Fig. 175 Ventral of *Lauritzenia carneus*

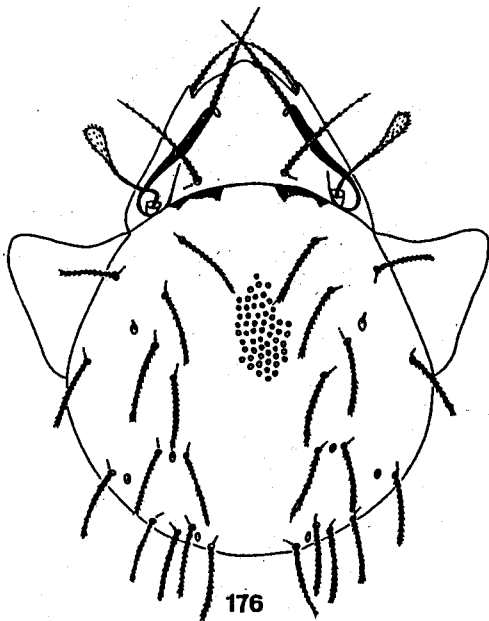


Fig. 176. Dorsal of *Peloribates longisetosa*

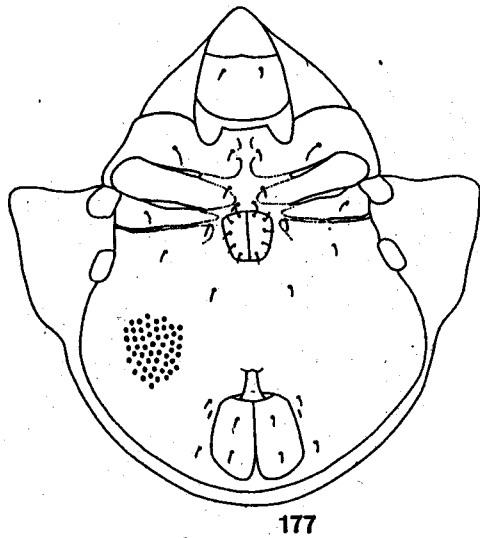


Fig. 177. Ventral of *Peloribates longisetosa*

of long, barbed, hysterosoma setae, base of each seta with 4 small dots.

Ventral with round pits, except genital and anal plates are smooth. The epimeric region with reticulation. Apodemata II and apodemata sejugale are equal in length, long and narrow, apodemata sejugale reach to the field of genital. The epimeric setae formula is 2-2-1-1. There are 5 pairs of genital setae, one pair of aggenital setae, 3 pairs of anal setae and 2 pairs of adanal setae on the ventral of hysterosoma.

Collection data. Holotype, 1♀, Chiayi, 17-VIII-1980, ex roots of weeds, Y. H. Tseng; paratype, 2♀♀, the same data as holotype.

**68. *Peloribates pakistanensis* Hammer**  
(Figs. 178 - 179)

*Peloribates pakistanensis* Hammer, 1977, Biol. Skr. Dan. Vid. Selsk. 21 (4): 48.

This species can be easily distinguished the other known species of genus *Peloribates* by having very regular and distinct pits on propodosoma and hysterosoma, much thicker and with hysterosomal setae, genital and plates are filled with pits.

Specimens on hand collected from Taiwan can be found the pseudostigmata organs are not the same as *pakistanensis*. The pseudostigmata which with head oval-shaped, rounded distinctly, rather than pointed distally.

Collection data. 4♀, Femchihu (1500m), Chiayi Hsien, 31-V-1980, ex *Chamaecypris formosanus*, Y. H. Tseng.

***Glaberoribates* n. g.**

This genus shown a strong resemblance to *Phalacrozetes* Aoki from Thailand, because of the genital with 5 pairs of genital setae, legs tridactylous and 4 pairs of area porosae. It differs by having long interlamellar, lamellar and rostral setae, which are equal in length to propodosoma.

Generic diagnosis. Rostral setae arising from the ventral of anterolateral of propodosoma, which are long and pilose. The lamellar parallel side, distal with a long and pilose lamellar setae. The interlamellar setae long and pilose. Pseudostigmata with head. Hysterosoma with 4 pairs of small area porosae and 7-8 pairs of minute setae. Ventral with 5 of genital setae, 2 pairs of anal setae and 3 pairs of adanal setae, legs tridactylous.

Type species. *Glaberoribates urbanus*

**69. *Glaberoribates urbanus* n. sp.**  
(Figs. 180 - 181)

Body pale brown, filling with sparsely granulates.

The tip of rostrum is broad rounded. Rostral setae are located ventral anterolateral of propodosoma, plumose and more or less twice as long as its base from the tip of rostrum. The lamellae are half as long as lamellae, plumose, extending beyond the tip of rostrum. The interlamellar setae pilose, which are equal in length to propodosoma. The pseudostigmata with head narrow oval, pointed apex and with long branches, the pedicel about 3 times as long as broad

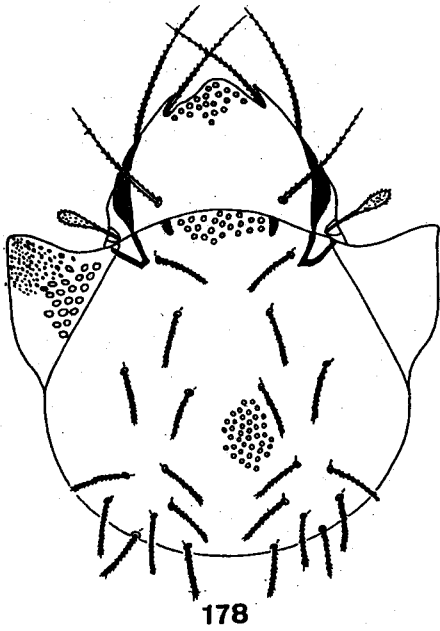


Fig. 178. Dorsal of *Peloribates pakistanensis*

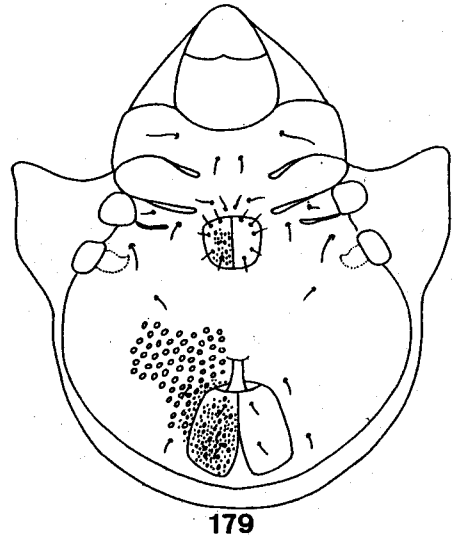


Fig. 179. Ventral of *Peloribates pakistanensis*

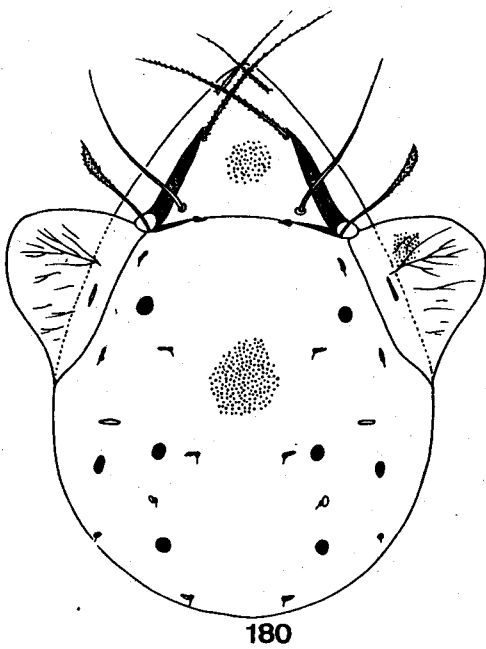


Fig. 180. Dorsal of *Glaberoribates urbanus*

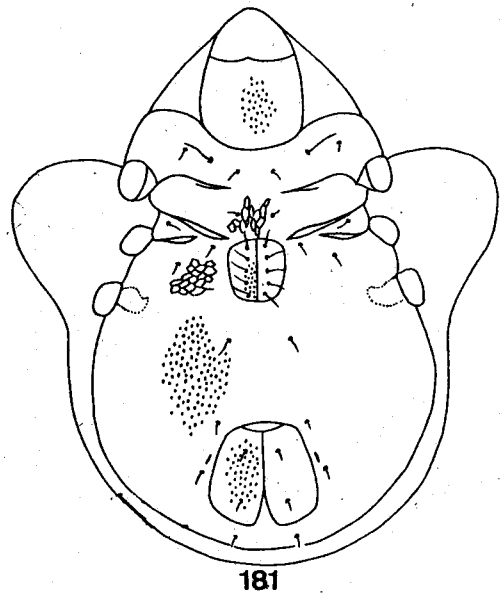


Fig. 181. Ventral of *Glaberoribates urbanus*

head, smooth.

Dorsosejugal suture nearly straight, They are 4 pairs of area porosae and 8 pairs of setae on hysterosoma. Area porosae are round and small, each setae arising on the split. Pteromorphae large, la pori present.

Apodemata are long and thin, apodemata sejugale and apodemata IV converging anterior. Apodemata sejugale reach to the front of genital. The epimeric setae formula is 3-2-1-2. 1b twice as long as the other. The genital with 5 pairs of genital setae arranged are in liner series, one pair of aggenital setae, 2 pairs of anal sete and 3 pairs of adanal setae.

Collection data. Holotype, 1♀, Paintienyen, Chiayi Hsien, 12-IX-1980, ex litter, Y. H. Tseng.

### Haplozetes Willmann

Generic diagnosis. Rostral, lamellar, interlamellar setae present. Pseudostigmatic organ short, with a dilated head. 10 pairs of notogastral setae. 4 pairs of areae porosae. 4 or 5 pairs of genital satae. Legs monodactyle.

Type species: *Haplozetes vindobonensis* Willmann

#### 70. *Haplozetes loongchiensis* n. sp. (Figs. 182 - 183)

This species closely resembles *H. vindobanensis* William, but it is distinguished by having the lamellae are much broad proximally and much narrow distally; by having the tip of rostrum is project rounded.

Body pale brown.

Propodosoma triangular. The tip of rostrum is project rounded, the rostral setae, situated 3/4 way of dorsolateral of propodosoma, which are stout, pilose and more or less twice in length from its base to the tip of rostrum. Behind the rostral setae there is a distinct transverse line. Lamellae are much broad proximally and distally with lamellae setae. The latter reach to the tip of rostral are strongly barbed, very thin at the tip and about 1.5 longer than the rostral setae. Interlamellae setae are thick, strongly barbed and more orless twice as long as the rostral setae. The exterlamellar setae are thin and with minute barbed, Beside the broad part of lamellae there have a pair of oval-shaped spot. The pseudostigmata with head oval-shaped, the pedicel about 2 times longer than the head.

Hysterosoma with 4 pairs of sacculi and 8 pairs of setae pore or pori. Apodemata II triangular-shaped, there are much broad proximally and narrow distally. Apodemata sejugale rather long, they are reach to the genital field, apodemata IV half as long as apodemata sejugale. The epimeral region with faintly reticulation. The epimeric setae formula is 2-1-2-2, 1c longer than others. There are 4 pairs of genital setae, one pairs of aggenital setae, 2 pairs of anal setae and 2 pairs of adanal setae.

Collection data. Holotype, 1♀, Loongchi, Tainan Hsien, 26-VI-1980, ex decaying bamboo leaf, Y. H. Tseng; paratype, 2♀♀, the same data as holotype.

### Rostrozetes Sellnick

Generic diagnosis. 14 pairs of notogastral setae. 6 pairs of genital setae. one pair of aggenital

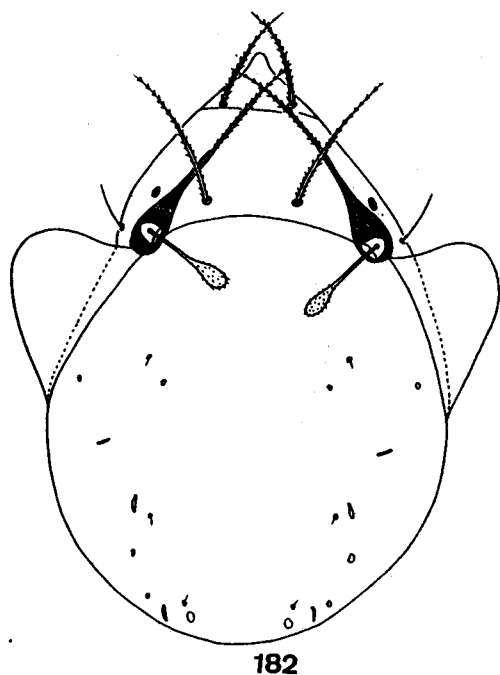


Fig. 182. Dorsal of *Haplozetes loongchiensis*

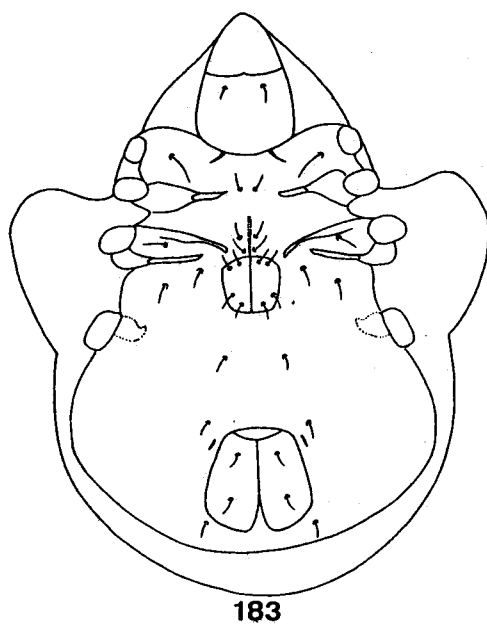


Fig. 183. Ventral of *Haplozetes loongchiensis*

setae. 2 pairs of anal setae. Pseudostigmatic organ setiform, pilose. Dorsosejugal suture with 3 arches. Legs monodactyle.

Type species: *Rostrozetes foveolatus* Sellnick

71. *Rostrozetes foveolatus* Sellnick  
(Figs. 184 – 185)

*Rostrozetes foveolatus* Sellnick, 1925, Tierwelt Mitteleurop, 3: 40pp

This species can be easily distinguished by having the following characters: (1) Propodosoma and hysterosoma with round dots. The dots on propodosoma are larger than on the idiosoma. The dots on anterolateral of hysterosoma are slightly larger than the dots on dorsocentral. Ventral filling with round dots, except on the genital and anal shield are small.

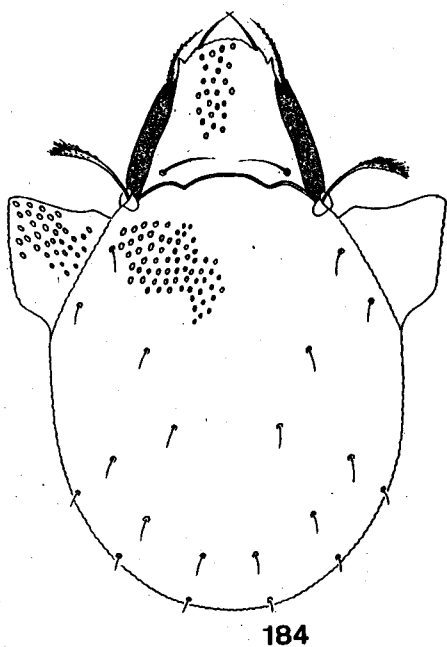
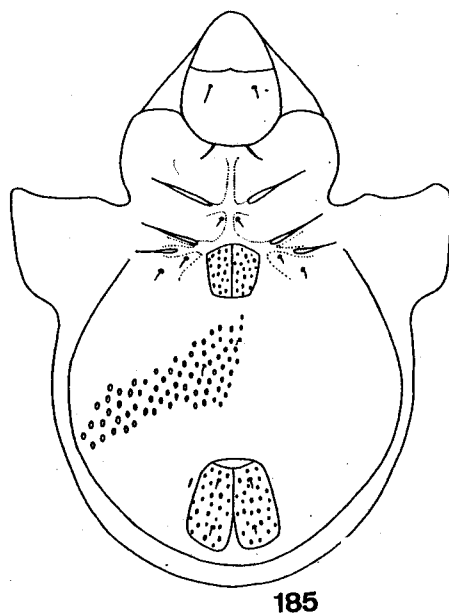
Collection data, 1♀, Loongchi, Tainan Hsien, 26-VI-1980, ex litter, Y. H. Tseng; 5♀♀, Paintienten, Chiayi Hsien, 12-XII-1980, ex root of *Pogonatherum* sp., Y. H. Tseng.

**Galumnidae**

**Pergalumma Grandjean**

**Generic diagnosis.** Propodosoma with lines L and S are paralld, line L arcuate. Pseudostigmatic



Fig. 184. Dorsal of *Rostrozetes foveolatus*Fig. 185. Ventral of *Rostrozetes foveolatus*

organ setiform pilose. Notogastral setae absent, no discernible pteromorph setae present. Dorsosejugal suture invariably whole. Areae porosae present. 6 pairs of genital setae, one pair aggenital setae. Legs tridactylous.

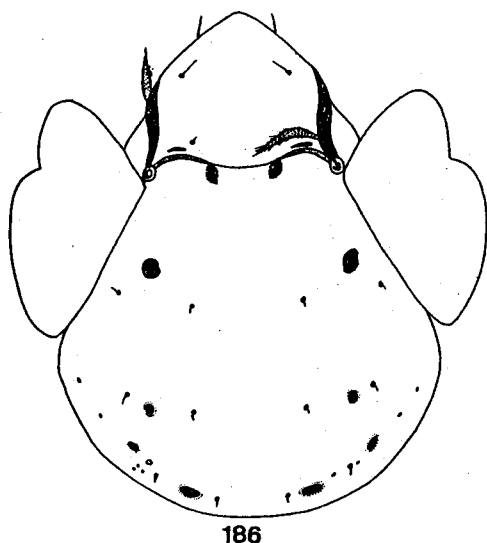
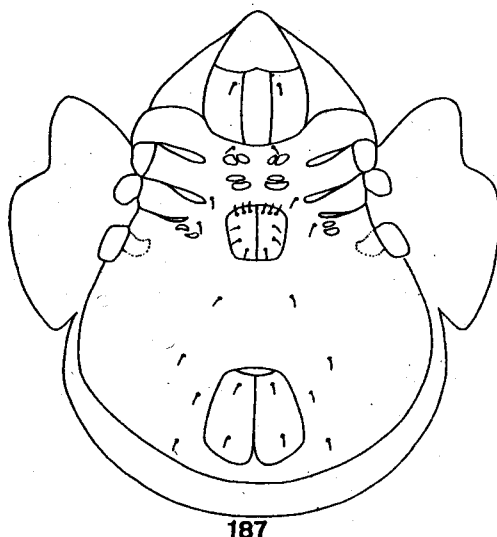
Type species: *Oribates nervosus* Berlese

72. *Pergalumna operata* n. sp.  
(Figs. 186-187)

The rostrum is very broad. The rostral setae which are situated on the midday of lateral margin of prodosum, which are smooth and minute.

The proximally and distally of the lamellae are narrow, and middle part is broad. The lamellar setae, which are situated on the propodosum. The rostral, the lamellar and the interlamellar setae are tiny and subequal in length. The lateroanterior of dorsosejugal suture, they are have transverse area porosae (Ad), which are connected with pseudostigmatid. The pseudostigmatid organ with head incrassate, strongly barbed and with point apice, the pedicel of organ smooth and stout.

Dorsosejugal suture slightly concave. hy large, which are connected with Ad. Aa large, round; Al ball-shaped, small, which are half Aa, A2 and A3 are subequal in large and elliptical. There are 6 pairs of minute setae on the dorsum of hysterosoma. Apodemata II, IV and sejugal apodemata are subequal in length, sejugal apodemata and IV are nearly reach to the genital field. Sternum absent, anterior of genital shield with 2 pairs of genital setae, one pair of aggenital setae, 3 pairs of

Fig. 186. Dorsal of *Pergalumna operata*Fig. 187. Ventral of *Pergalumna operata*

adanal setae and 2 pairs of anal setae.

Collection data. Holotype, 1♀, Dolan, Taitung Hsien, 31-VI-1980, ex litter, S. C. Wu; paratype, 2♀♀, the same data as holotype.

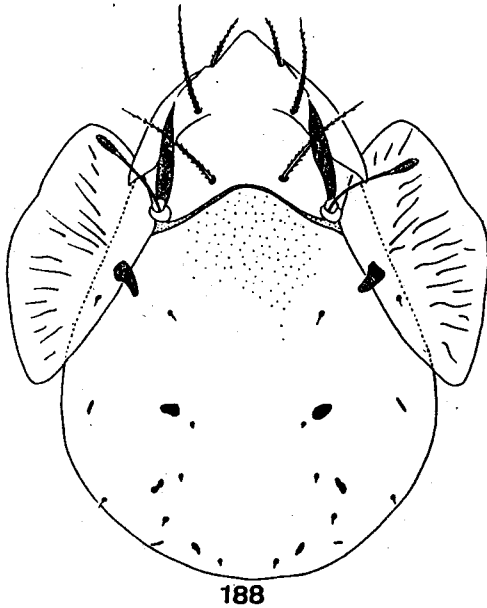
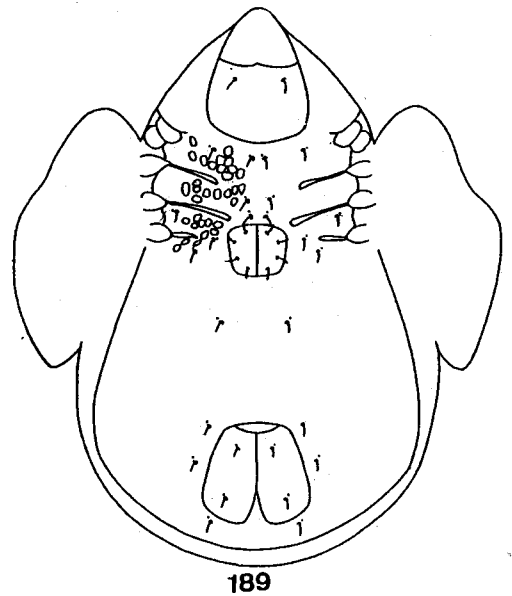
#### Galumna von Heyden

Generic diagnosis. Propodosoma with lines L and S. Pteromorphae with one pair of alveoli. Pseudostigmatic organ with a dilated head. 10 pairs of notogastral setae or alveoli. Areae porosae present. 6 pairs of genital setae. one pair of aggenital setae.

Type species: *Notaspis alatus* Hermann

#### 73. *Galumna pallida* n. sp. (Figs. 188-189)

Body pale yellow brown. Propodosum broader than long. The rostrum is rounded. The rostral setae located dorsally, which are 1.5 longer than distance between the base of rostral setae and the tip of rostrum, 72u. The lamellar setae 1.5 longer than the rostral setae, interlamellar setae as long as lamellar setae. The lamellae narrow apex and broad near base, lateral line which arising from pseudostigmatid organ pit to the base of lamellar setae. Dorsosejugal suture strong convex. Ad and Hy are absent. Aa triangle shaped. 4 pairs of area porosae and 2 pairs of pore. 8

Fig. 188 Dorsal of *Galumna paluda*Fig. 189. Ventral of *Galumna pallida*

pairs of notogaster setae. Pteromorphae large, with many longitudinal striae. 2 pairs of apodemata, thin and long, it more or less equal in length to apodemata sejugal. Apodemata sejugal long and thin, reach to the epimeral region, setae formula is 2-1-3-1.

Collection data. Holotype, 1♀, Chiayi, 25-VIII-1980, ex humus, Y. H. Tseng; paratype, 2♀♀, the same data as holotype.

#### 74. *Galumna pyramidalis* n. sp.

(Figs. 190 – 191)

Body dark brown. The rostrum is broad rounded. The rostral setae which are pilose, situated lateral side of propodosum from the base. The lamellar setae are thick, long and pilose, which as long as propodosum and more or less twice in length to rostral setae. The interlamellar setae as the lamellae setae. The pseudostigmata with head narrow oval and with pointed apex, the pedicel narrow, which are 3 times in length to the oval apices. The lamellae with a broad mainly project, and with a stout cylinder branch. Notogaster rather narrow in anterior and broad in posterior. Dorsosejugal suture strongly convex. Ad and Hy are present. Aa are short horn-like. A1, A2 and A3 are oval-shaped. Notogaster with 14 pairs of notogaster setae and pores, the epimeral region with reticulation. The pteromorphae are umbrella with at best 7 pairs of pores and a few longitudinal striae. The epimeric hair formula is 2-1-1-2. 4 pairs of genital setae, one pair of aggenital setae, 2 pairs of anal setae and 3 pairs of adanal setae and one pair of anal pores.

Apodemata II shorter than sejugal apodemata (Apj), rather narrow. Sejugal apodemata long, nearly reach to the field of genital., Apodemata IV about half as long as Apj.

Collection data. Holotype, 1♀, Fenchihu, Chiayi Hsien (H: 1800), 14-XII-1980, ex humus, Y. H. Tseng.

### *Neokalumma* n. g.

This new genus is closely related to *Porokalumma* and differentiated by the 5 pairs of area porosae, the shape of lamellae and pseudostigmata are narrow lanceolate.

Generic diagnosis. The lamellae is broad proximally and narrow distally. The interlamellar setae are long and barbed. The pseudostigmata are lanceolate and with short barbed. The 5 pairs of area porosae and 6 pairs of hysterosomal setae. The anterior of pteromorphae are angulation. The epimeric hairs are long and with minute barbed, 5 pairs of genital setae, 2 pairs of anal setae and 2 pairs of adanal setae.

Type species: *Neokalumma laiae*

### 75. *Neokalumma laiae* n. sp.

(Figs. 192 – 193)

The tip of rostrum is conical. The rostral setae strong and pilose, which are twice as long as its base from the tip of rostrum. The lamellae are broad proximally and narrow distally. The lamellar setae 2.5 times longer than the rostral setae. The interlamellar setae 3 times longer than the rostral setae. The pseudostigmata are slightly swollen distally and pointed apex, the organs with short barbed on posterior half.

Hysterosoma broad oval. Dorsosejugal suture narrow in middle. There are 5 pairs of area porosae (Aa, A1, A1', A2, A3) and with 6 pairs of minute setae are on the dorsal of hysterosoma. The pteromorphae are point apex and concave anterior part.

Apodemata II triangular-shaped. Apodemata sejugale are slightly longer than apodemata II, which nearly reach the field of genital. The epimeric setae are long and with minute barbed, the epimeric hair formula is 2-2-2-1. There are 5 pairs of genital setae, one pair of aggenital setae, 2 pairs of anal setae and 2 pairs of adanal setae, legs tridactylous.

Collection data. Holotype, 1♀, Kuanhu, Hualien Hsien, 31-VII-1980, ex humus, Y. H. Tseng.

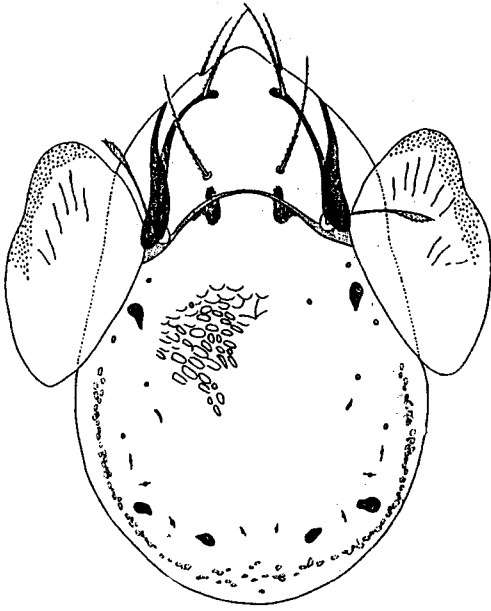
Etymology. This new species is named in honor of Miss L. L. Lai, for her kindly assistance of this work.

## Galumnellidae

### *Galumnella* Berlese

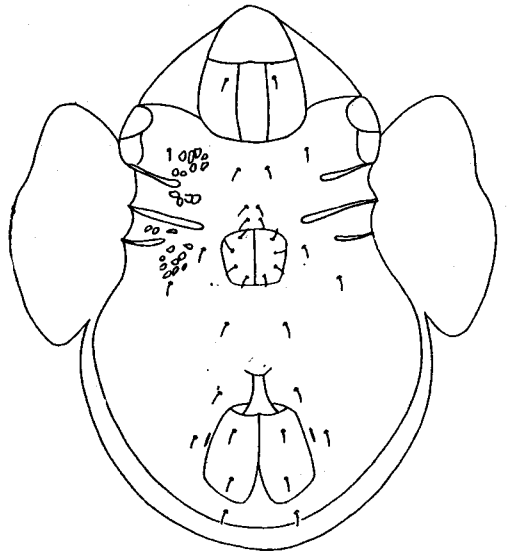
Generic diagnosis. Mandibulae acicularly attenuating apically, with minute chelicerae. Notogaster foveolate, punctate, or with a polygonal sculpture. Areae porosae present.

Type species: *Galumnella paradoxa* Berlese.



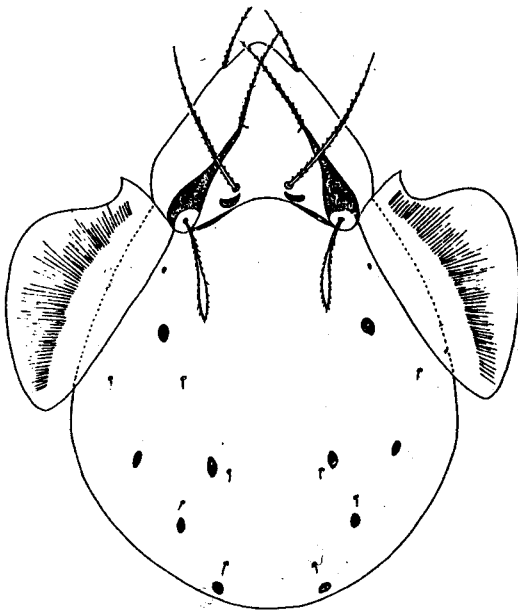
190

Fig. 190. Dorsal of *Galumna pyramidalis*



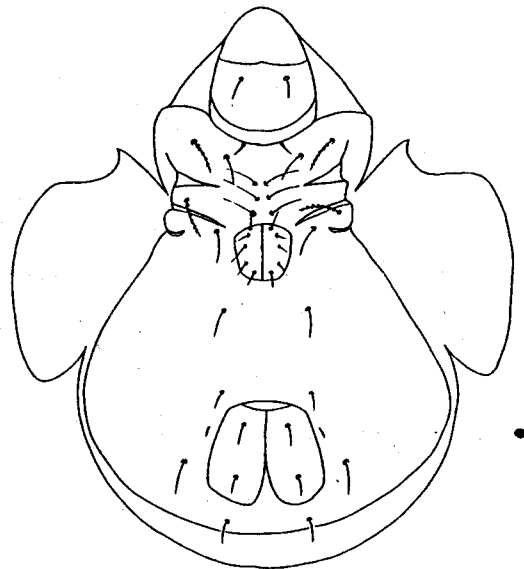
191

Fig. 191. Ventral of *Galumna pyramidalis*



192

Fig. 192. Dorsal of *Neokalumma laiae*



193

Fig. 193. Ventral of *Neokalumma laiae*

76. *Galumnella angustifrons* Aoki  
(Figs. 194 - 195)

*Galumnella angustifrons* Aoki, 1970, Bull. Nat. Sci. Mus. (Japan).  
13 (3): 439.

This species can be distinguished from other species of genus *Galumnella* by lacking in aceolate surface sculpture either on notogaster or on pteromorphae.

Collection data. 1♀, Mutan, Paintung Hsien, 14-X-1980, ex litter, Y. H. Tseng.

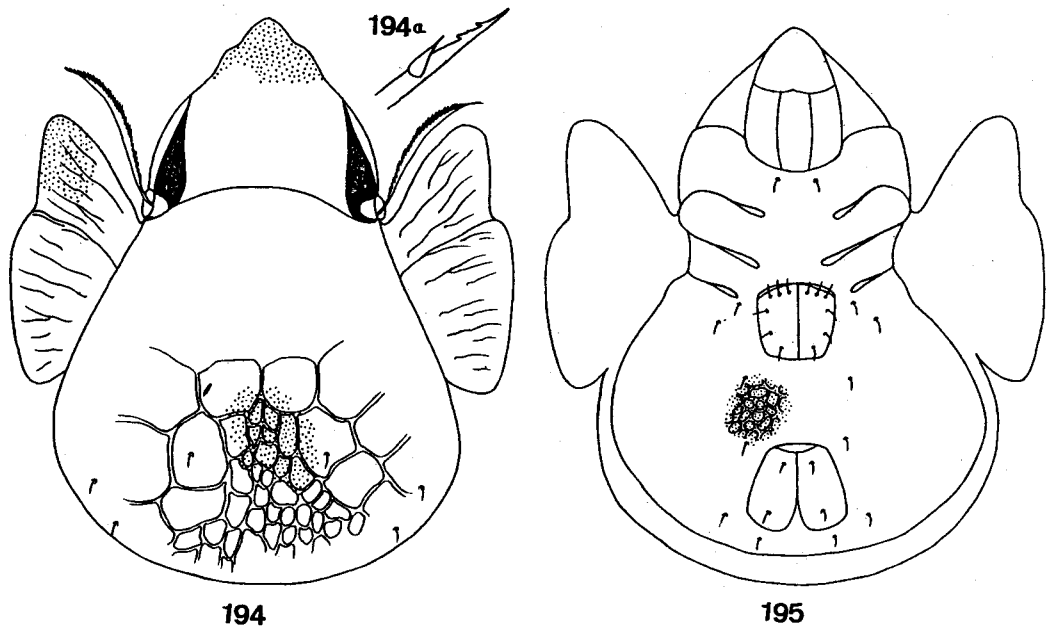


Fig. 194. Dorsal of *Galumnella angustifrons*  
Fig. 194a. chelicera

Fig. 195. Ventral of *Galumnella angustifrons*

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# 臺灣革蠃亞目之分類研究 (蠃蟀亞綱：無氣門目) (I)

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本文是臺灣革蠃亞目分類研究之續刊；前文筆者已概略的提及革蠃亞目之生活習性，經濟重要性及現階段之分類體系並詳述了臺灣發現的缺翼背板團 (Apterogasterina) 之所有種類及翼背板團 (Pterogasterina) 之二種共三十五種。

本報告續敘述臺灣已發現翼背板團之所有種類共四十一種。迄至目前為止，臺灣革蠃亞目共發現有28科，56屬，76種，這些種類中，58種為新種及14新屬。