

Six new heterococtid mites (Acari, Astigmata, Heterococtidae) associated with Cassidinae and Eumolpinae (Coleoptera, Chrysomelidae) from the Indo-Australian Region

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Six new heterococtid mites (Acari, Astigmata, Heterococtidae) associated with Cassidinae and Eumolpinae (Coleoptera, Chrysomelidae) from the Indo-Australian Region. – *Bahrucoptes amaliae* n. sp. obtained from *Aspidomorpha elevata* (Fabricius) from Malaysia; a species with very thick tarsus IV and tibia IV, opisthosoma with four lobes; the new genus *Bahrucoptes* is described for this species. *Uvallicoptes peeteri* n. sp. obtained from *Aspidomorpha adherens salomonina* Spaeth from Solomon Islands, a species with narrow opisthosoma enlarged at its posterior margin and without adanal suckers; for this species the new genus *Uvallicoptes* is described. *Tannuicoptes ulfi* n. sp. obtained from *Aspidomorpha dorcata* (Fabricius) from India, a species with narrow opisthosoma, dorsum partly covered by transverse lines and tarsus IV shorter than the others; for this species the new genus *Tannuicoptes* is described. *T. jeroni* n. sp. obtained from *Corynodes compressicornis* Fabricius from Indonesia. *Heterocoptes ingeri* n. sp. obtained from *Laccoptera tredecimguttata* Wagener from Phillipines, a species with concave posterior margin of opisthosoma and *H. simonettae* n. sp. obtained from *Aspidomorpha punctata* (Fabricius) from Papua New Guinea.

Key words: Acari, Heterococtidae, Indo-Australian Region, New species.

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Introduction

Ten new species belonging to Heterocoptidae were recently described but knowledge of this family is still very scarce. Only 15 other species were known hitherto (FAIN, 1967, 1987; HAITLINGER, 1990, 1996, 1997). These species belong to six genera. According to O'CONNOR (1979, 1982) heterocoptids are associated with hosts from subfamilies Cassidinae and Hispinae (Chrysomelidae) from Old World. FAIN (1987) reported these mites on Erotylidae (Coleoptera) from Africa and HAITLINGER (1990) found interesting species on Passandridae (Coleoptera) from China. It is not known if these beetles are permanent hosts for heterocoptids.

In this paper six new species are described. They were obtained in India (Sikkim), Malaysia, Philippines, Indonesia, Papua New Guinea and Solomon Islands. For four species three new genera are described: *Bahrucoptes* n. gen., *Uvallicoptes* n. gen. and *Tannucoptes* n. gen.

Material and methods

The examined specimens of mites were obtained from private collection of chrysomelids belonging to Prof. Dr. L. Borowiec (MNHUWU). Two specimens of *Bahrucoptes amaliae* n. sp. were collected by R. Haitlinger in Malaysia. All measurements are given in μm . Holotypes are deposited in the Museum of Natural History, Wroclaw University (MNHUWU).

Abbreviations used in the text are: H. Holotype; P. Paratype; L. Length of idiosoma; W. Width of idiosoma; vi. Length of vertical setae of idiosoma; he. Length of most lateral setae of idiosoma; WTal. Width of tarsus I; WTil. Width of tibia I; ϕ l. Length of tibial solenidion; δ . Length of genual solenidion; G. Length of genital apparatus.

Results

Fam. Heterocoptidae Fain, 1967

Gen. *Bahrucoptes* n. gen.

Diagnosis

Males with opisthosoma having caudal lobes

divided by distinct incisions. Adanal suckers placed near posterior margin of opisthosoma. Epimera I Y shaped. Dorsum punctate, also with linear ornamentation. Setae vi minute. Tarsus IV and tibia IV distinctly thicker than the others. Females with small caudal capsule.

Remarks

Bahrucoptes n. gen. differs from all genera by the presence of thick tibia IV and tarsus IV.

Type species, *Bahrucoptes amaliae* n. sp.

Bahrucoptes amaliae n. sp. (figs. 1-8)

Examined material

Holotype: σ , Kota Bahru, Malaysia, 21 IV 1997, from *Aspidomorpha elevata* (Fab.) (Chrysomelidae, Cassidinae), collected under elytra, det. L. Borowiec. Paratypes: 1 σ 1 ϕ , the same data as holotype; leg. R. Haitlinger. Deposited in MNHUWU.

Description

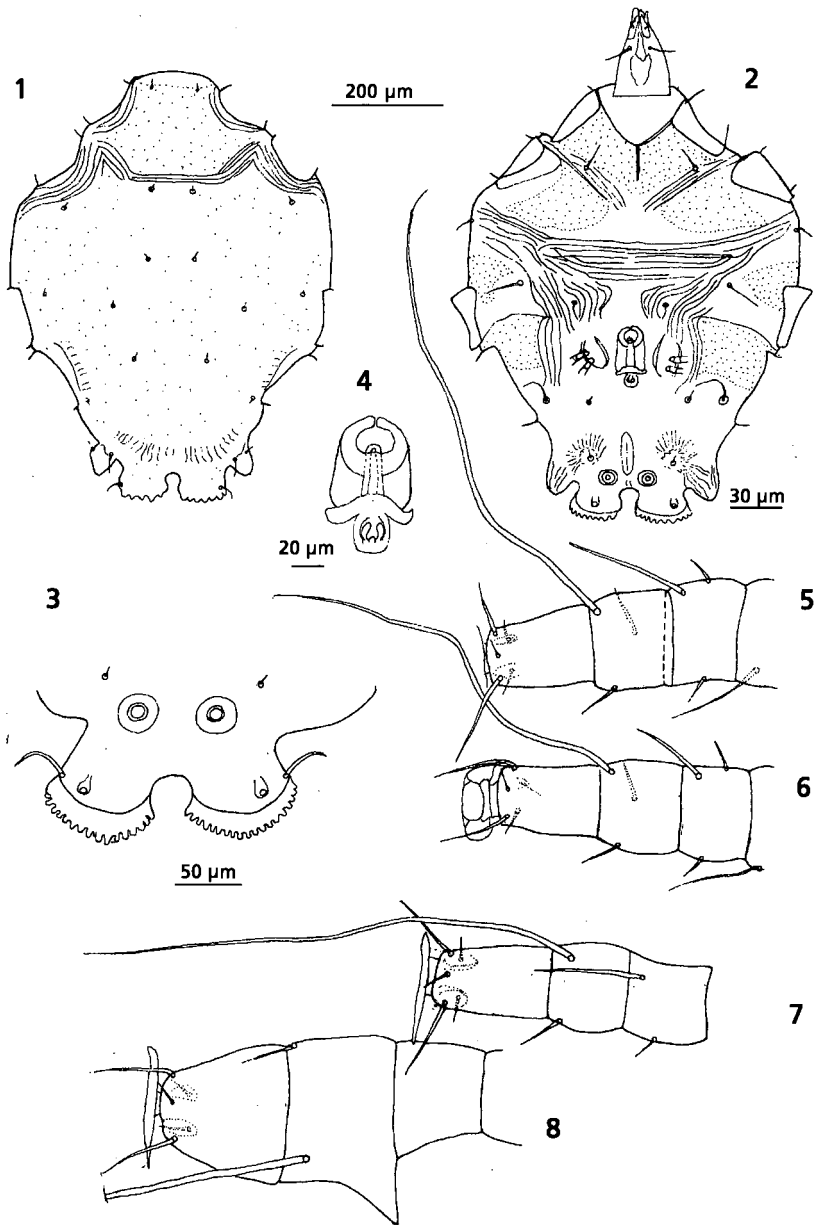
Male

Dorsal surface of idiosoma punctate with fragmentary linear ornamentation. It bears ten pairs of setae; setae I4, I5 are a little longer than the remaining ones. Opisthosoma relatively long with four lobes divided by three distinct incisions (fig. 1). Two middle lobes both bearing dentate borders (figs. 2, 3). Ventral side of idiosoma with epimera I Y shaped. Middle part of idiosoma covered with various arranged lines. Genital apparatus as in fig. 4. Adanal suckers placed below anal opening; setae a1 surrounded by short lines in a "starlike" arrangement. Setae he short.

Tarsi I, II are shorter than tarsi III, IV. Tarsi IV are the longest and distinctly thicker than tarsi I-III. Solenidion δ on Ge I is about four times longer than short dorsal seta cG (fig. 5). Chaetotaxy: Ti I 2-2-1-1, Ge 2-2-1-0, Fe 1-1-0-0.

Female

Dorsal surface of idiosoma with longitudinal and transverse lines only on some places bearing nine pairs of minute setae. Posterior margin of opisthosoma with small caudal capsule. Setae vi minute (fig. 9). Ventral side



Figs. 1-8. *Bahrucoptes amaliae* n. sp., ♂: 1. Idiosoma, dorsal view; 2. Idiosoma and gnathosoma, ventral view; 3. Posterior part of opisthosoma, ventral view; 4. Genital apparatus; 5. Leg I, tarsus-femur; 6. Leg II, tarsus-femur; 7. Leg III, tarsus-genu; 8. Leg IV, tarsus-genu.

Bahrucoptes amaliae sp. n., ♂: 1. Idiosoma, vista dorsal; 2. Idiosoma y gnatosoma, vista ventral; 3. Parte posterior del opisthosoma, vista ventral; 4. Aparato genital; 5. Pata I, tarso-fémur; 6. Pata II, tarso-fémur; 7. Pata III, tarso-genu; 8. Pata IV, tarso-genu.

of idiosoma with epimera Y shaped. Part of area beyond legs II with transverse lines. Two pairs of setae in genital region. A pair of setae beyond genital region. In anal region one pair of setae and one seta and beyond leg IV placed one pair of setae (fig. 10). Setae hi minute. Tarsi III, IV longer than tarsi I, II. Tarsus IV a little thicker than the others (fig. 14). Chaetotaxy as in males.

Remarks

Females bear caudal capsule. This is a common feature with *Nolaecoetes vonettae* Haitlinger, the only species hitherto known with such a capsule in females. It differs from this species by dorsal ornamentation (longitudinal lines) and length of idiosoma (776 to 536). Chaetotaxy partly differs from three genera described by HAITLINGER (1996); in this paper the chaetotaxy is erroneously printed. It should read: *Cassiocoetes* Haitlinger Ti 2-2-1-0, Ge 2-2-1-0, Fe 1-1-1-1, *Nolaecoetes* Haitlinger Ti 2-1-1-0, Ge 2-1-1-0, Fe 1-0-0-0, *Abboticoetes* Haitlinger Ti 1-1-1-1, Ge 2-1-0-0, Fe 1-1-0-0.

Genus *Uvallicoptes* n. gen.

Diagnosis

Idiosoma relatively wide with narrow opisthosoma, enlarged posteriorly. Dorsum punctate; ventral surface of idiosoma punctate with lines between legs II and III. Lack of adanal suckers.

Remarks

Uvallicoptes n. gen. differs from all other genera by lack of adanal suckers and shape of opisthosoma (posterolateral lobes).

Type species, *Uvallicoptes peeteri* n. sp.

Uvallicoptes peeteri n. sp. (figs. 15-21)

Examined material

Holotype: ♂, ?Small Gela, Florida Isl., Solomon Islands, X 1966, from *Aspidomorpha adhaerens salomonina* Spaeth. Deposited in MNHWU.

Description

Idiosoma elongated with narrow opisthosoma.

The posterior part of opisthosoma is wider than its base; posterior margin with two small lobes (fig. 15); whole idiosoma punctate with short linear structures at the base of opisthosoma and in anterior part of idiosoma. Dorsal setae probably minute (only their bases visible). Setae vi and their bases not visible. Ventral surface of idiosoma bears linear structures between II and III legs (fig. 16). Punctate surfaces are at lateral margins of idiosoma, at bases of legs I, II; opisthosoma is also slightly punctate. Setae he not visible (damaged). Adanal suckers absent. Genital apparatus as in fig. 17. One pair of setae in anal region.

Tarsi I and II longer than tarsi III and IV. Solenidion δ on Ge I at least five times longer than seta cG (fig. 18). Chaetotaxy: Ti 1-1-1-1, Ge 1-0-0-0, Fe 1-1-0-0 (figs. 18-21).

Genus *Tannuicoptes* n. gen.

Diagnosis

Idiosoma with narrow opisthosoma; dorsum with transverse lines partly covering its surface. Ventral surface of idiosoma with epimera I free. Opisthosoma narrow at its base and slightly enlarged in posterior part; posterior margin concave in middle portion. Lateral surfaces between legs II, III punctate with longitudinal lines. Adanal suckers placed near posterior margin of opisthosoma. Tarsi IV shorter than the others.

Remarks

Tannuicoptes n. gen. is similar to the genus *Abboticoetes* Haitlinger. It differs by dorsal ornamentation (transverse lines), slightly ventral ornamentation, chaetotaxy on Ge and free epimera I.

Type species: *Tannuicoptes ulfi* n. sp.

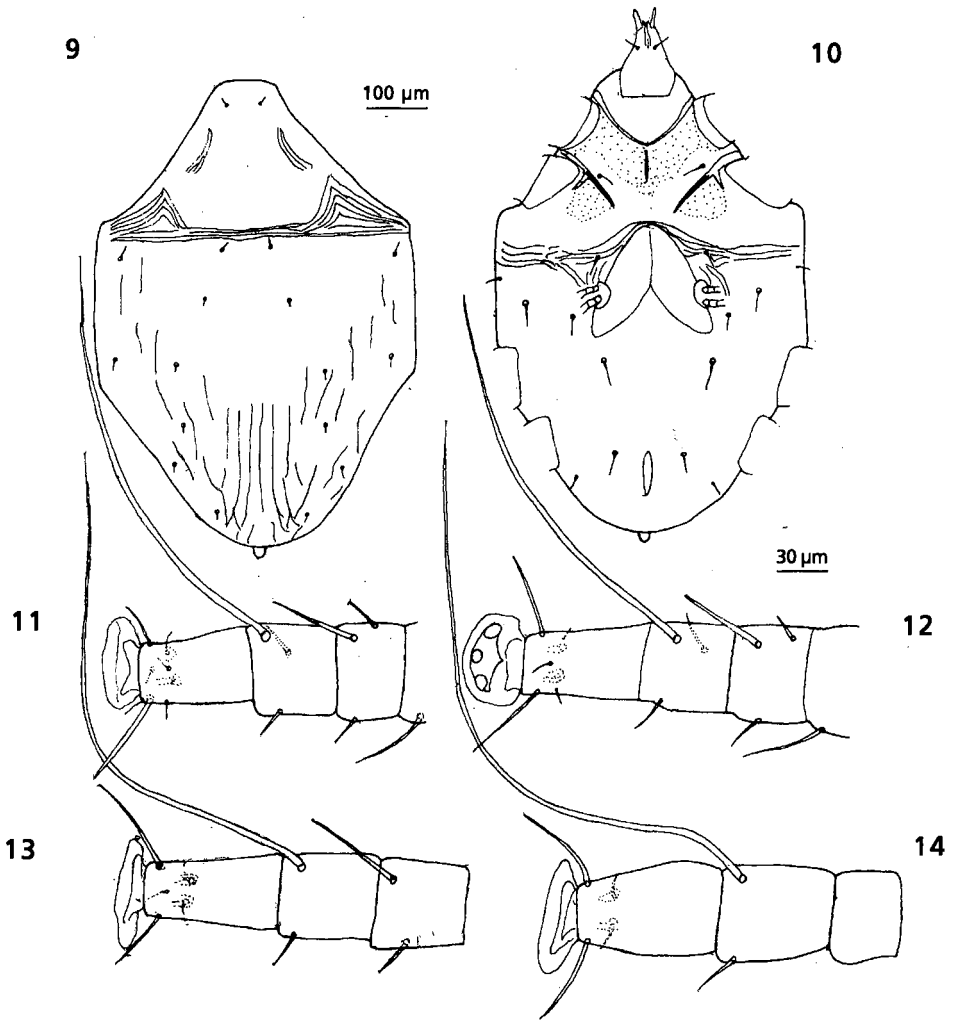
Tannuicoptes ulfi n. sp. (figs. 22-28)

Examined material

Holotype: ♂, Sikkim, India, from *Aspidomorpha dorsata* (Fabricius). Paratype: 1♂, the same as in holotype. Deposited in MNHWU.

Description

Idiosoma with linear ornamentation cover-

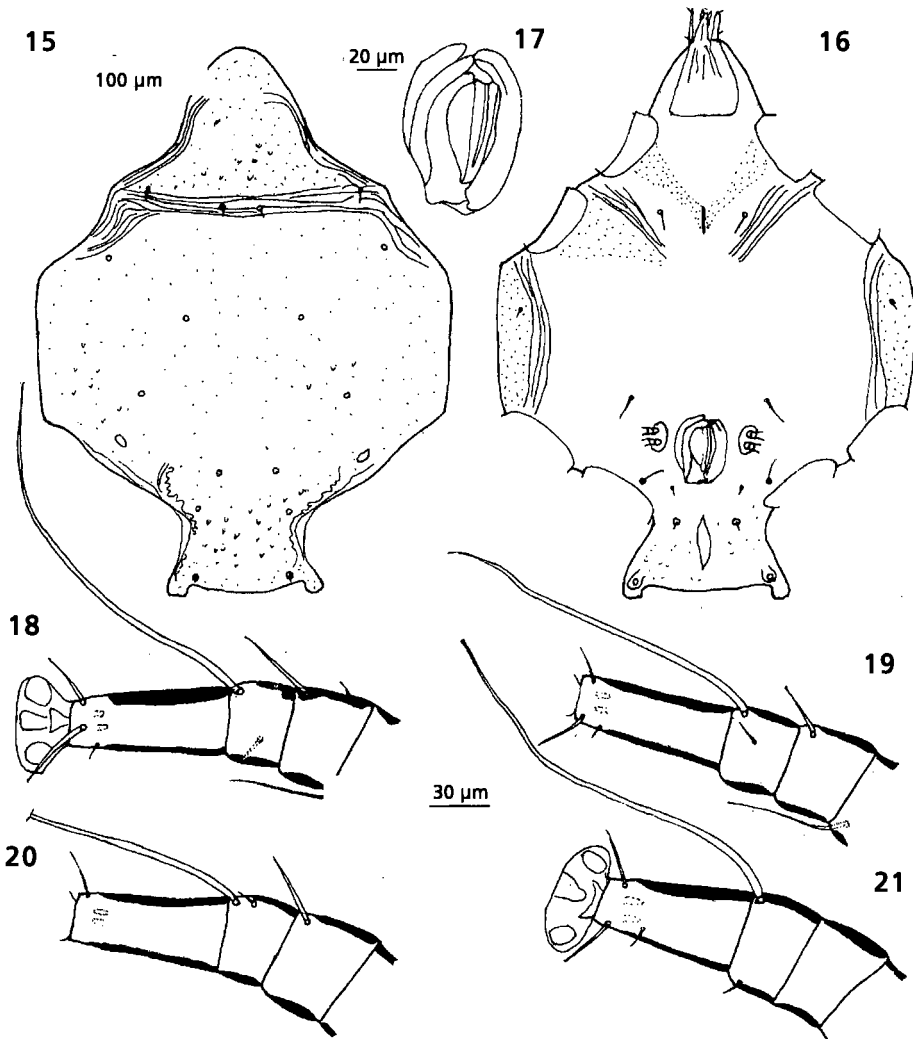


Figs. 9-14. *Bahrucoptes amaliae* n. sp., ♀: 9. Idiosoma, dorsal view; 10. Idiosoma and gnathosoma, ventral view; 11. Leg I, tarsus-femur; 12. Leg II, tarsus-femur; 13. Leg III, tarsus-genu; 14. Leg IV, tarsus-genu.

Bahrucoptes amaliae sp. n., ♀: 9. Idiosoma, vista dorsal; 10. Idiosoma y gnatosoma, vista ventral; 11. Pata I, tarso-fémur; 12. Pata II, tarso-fémur; 13. Pata III, tarso-genu; 14. Pata IV, tarso-genu.

ing its medial part; opisthosoma narrow, slightly enlarged in posterior part. Posterior margin of opisthosoma in medial part is concave. Setae vi lacking (damaged). Setae I5 (on

posterior margin of opisthosoma) are longer than the remaining ones (fig. 22). Ventral side of idiosoma with epimera I free. Punctate surfaces between legs II and III and at



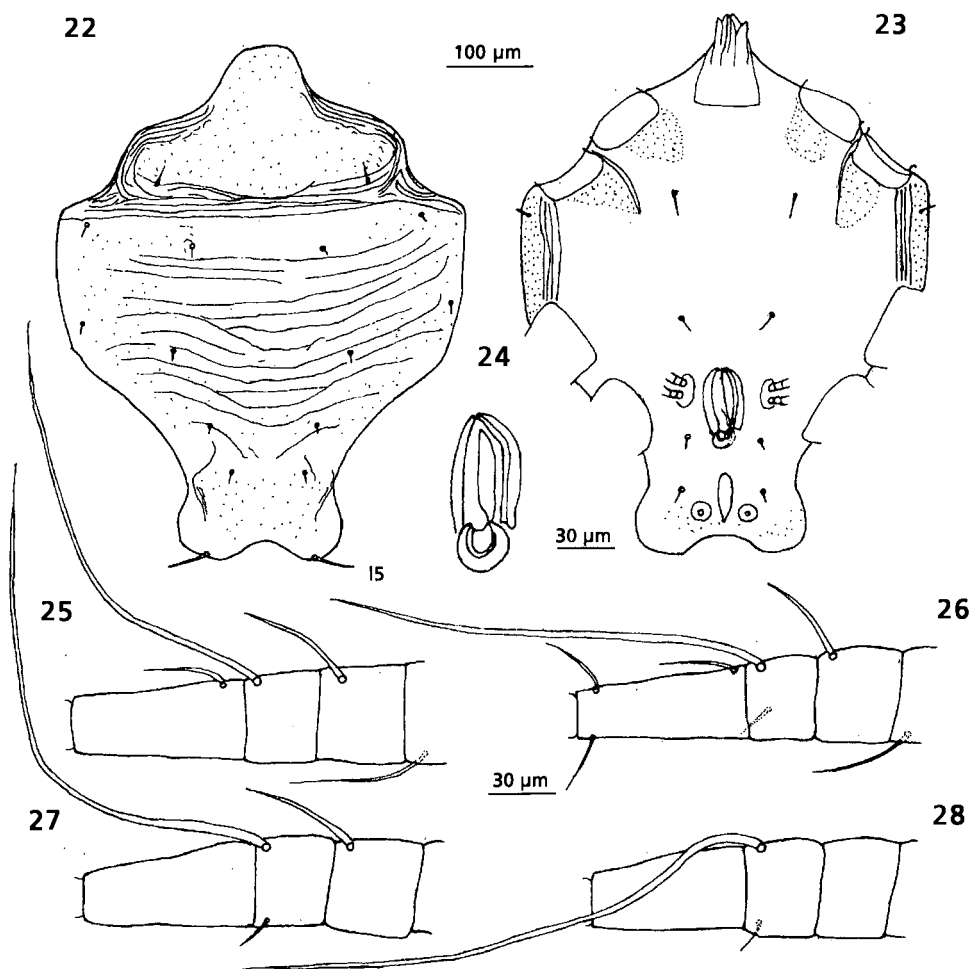
Figs. 15-21. *Uvallicoptes peeteri* n. sp., ♂: 15. Idiosoma, dorsal view; 16. Idiosoma and gnathosoma, ventral view; 17. Genital apparatus; 18. Leg I, tarsus-femur; 19. Leg II, tarsus-genu; 20. Leg III, tarsus-genu; 21. Leg IV, tarsus-genu.

Uvallicoptes peeteri sp. n., ♂: 15. Idiosoma, vista dorsal; 16. Idiosoma y gnatosoma, vista ventral; 17. Aparato genital; 18. Pata I, tarso-fémur; 19. Pata II, tarso-fémur; 20. Pata III, tarso-genu; 21. Pata IV, tarso-genu.

lateral margins. Adanal suckers placed near posterior margin of opisthosoma (fig. 23). Genital apparatus as in fig. 24. Setae he minute. Apir of setae in anal region (fig. 23).

Tarsi I-IV, unequal in length, bear

damaged setae. Tarsi I, II each with solenidion in their proximal part (figs. 25-26). Solenidia on genua I-III relatively long. Chaetotaxy: Ti ?1-1-1-1, Ge 0-0-0-0, Fe 1-1-0-0 (figs. 25-28).



Figs. 22-28. *Tannuicoptes ulfi* n. sp., ♂: 22. Idiosoma, dorsal view; 23. Idiosoma and gnathosoma, ventral view; 24. Genital apparatus; 25. Leg I, tarsus-femur; 26. Leg II, tarsus-femur; 27. Leg III, tarsus-genu; 28. Leg IV, tarsus-genu.

Tannuicoptes ulfi sp. n., ♂: 22. Idiosoma, vista dorsal; 23. Idiosoma y gnathosoma, vista ventral; 24. Aparato genital; 25. Pata I, tarso-fémur; 26. Pata II, tarso-fémur; 27. Pata III, tarso-genu; 28. Pata IV, tarso-genu.

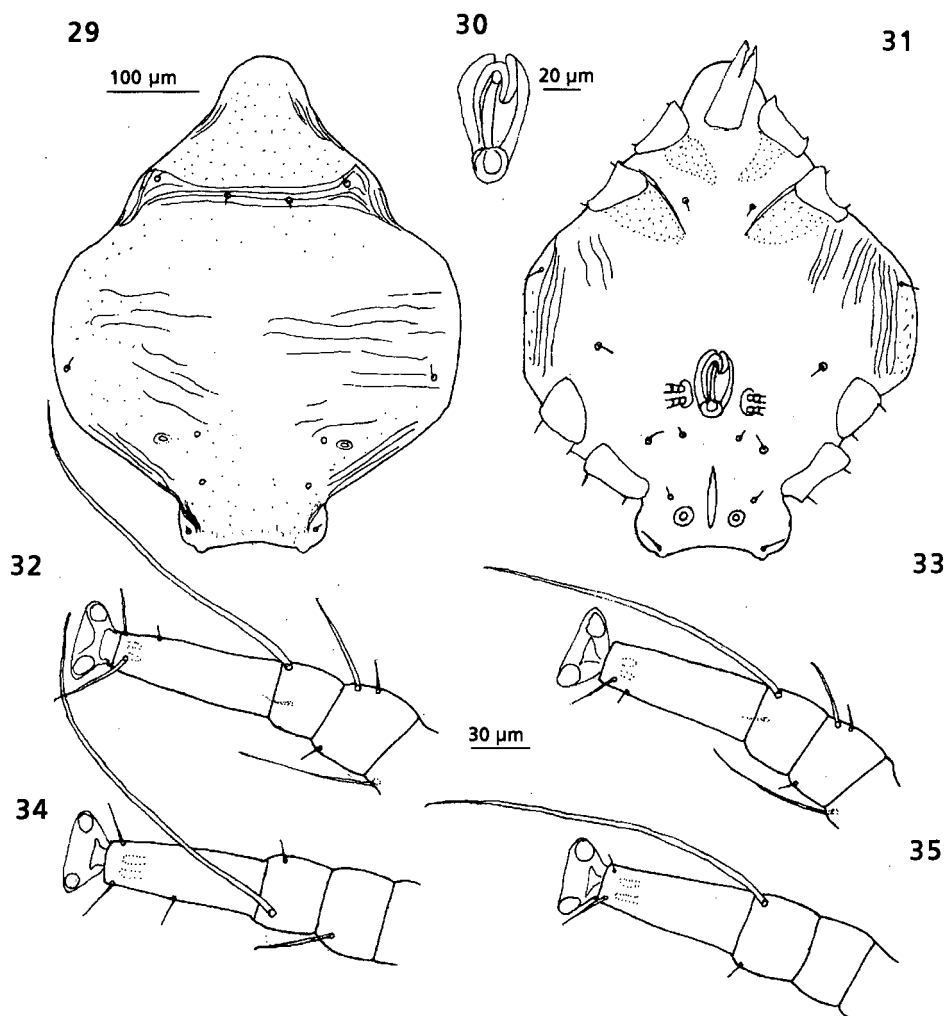
Remarks

T. ulfi n. sp. differs from *T. jeroni* n. sp. by shape of idiosoma, longer opisthosoma and longer tibial solenidia (over 210, in *T. jeroni* below 210).

Tannuicoptes jeroni n. sp. (figs. 29-35)

Examined material

Holotype: ♂, Indonesia, from *Corynodes compressicornis* Fabricius (Chrysomelidae,



Figs. 29-35. *Tannuicoptes jeroni* n. sp., ♂: 29. Idiosoma, dorsal view; 30. Genital apparatus; 31. Idiosoma and gnathosoma, ventral view; 32. Leg I, tarsus-femur; 33. Leg II, tarsus-femur; 34. Leg III, tarsus-femur; 35. Leg IV, tarsus-femur.

Tannuicoptes jeroni sp. n., ♂: 29. Idiosoma, vista dorsal; 30. Aparato genital; 31. Idiosoma y gnatosoma, vista ventral; 32. Pata I, tarso-fémur; 33. Pata II, tarso-fémur; 34. Pata III, tarso-fémur; 35. Pata IV, tarso-fémur.

Eumolpinae). Deposited in MNHWU.

Description

Dorsal surface punctate, with slightly shaped linear ornamentation as in fig. 29. Dorsal setae are minute and poorly visible. Setae vi

absent. Opisthosoma short with concave posterior margin. Ventral side of idiosoma with small punctate surface and longitudinal lines between legs II-III. Adanal suckers near posterior margin of opisthosoma. Two setae (ps1) at this margin are longer than the remaining

Table 1. Metric data for males and females of: 1. *Bahrucoptes amaliae* n. sp.; 2. *Uvallicoptes peeteri* n. sp.; 3. *Tannuicoptes ulfi* n. sp.; 4. *T. jeroni* n. sp. (For abbreviations see Material and methods.) (All measurements are given in μm .)

Medidas de machos y hembras de: 1. *Bahrucoptes amaliae* sp. n.; 2. *Uvallicoptes peeteri* sp. n.; 3. *Tannuicoptes ulfi* sp. n.; 4. *T. jeroni* sp. n. (Para las abreviaturas ver Material y métodos.) (Todas las medidas en μm .)

Measures	1			2		3		4
	♂ H	♂ P	♀ P	♂ H	♂ P	♂ H	♂ P	♂ H
L	784	647	776	448	480	560	504	536
W	528	463	496	352	416	456	416	440
vi	6	8	6	-	-	-	-	-
he	22	18	18	-	-	-	-	8
G	84	74	-	56	60	80	80	70
Ta I	64	70	64	78	84	80	80	80
Ta II	64	70	62	74	84	80	76	82
Ta III	70	70	72	68	72	80	76	82
Ta IV	80	76	76	68	74	74	-	72
ϕ I	~274	~228	~268	~200	224	-	222	192
ϕ II	~244	212	230	174	-	216	220	174
ϕ III	~324	~310	~300	-	~210	~276	250	204
ϕ IV	~370	~360	~360	~202	-	280	~270	200
δ I	66	72	68	40	40	66	68	54
δ II	60	50	56	26	28	60	56	34
WTa I	42	42	42	34	40	-	-	-
WTa IV	84	80	52	42	46	-	-	-
WTi IV	112	106	-	48	54	-	-	-

ones (fig. 31). Genital apparatus as in fig. 30. Tarsus IV shorter than the other ones. Chaetotaxy: Ti 1-1-1-1, Ge 2-2-0-0, Fe 1-1-1-0 (figs. 32-35).

Measurements are given in table 1.

Heterocoptes Fain, 1967

Heterocoptes ingeri n. sp. (figs. 36-42)

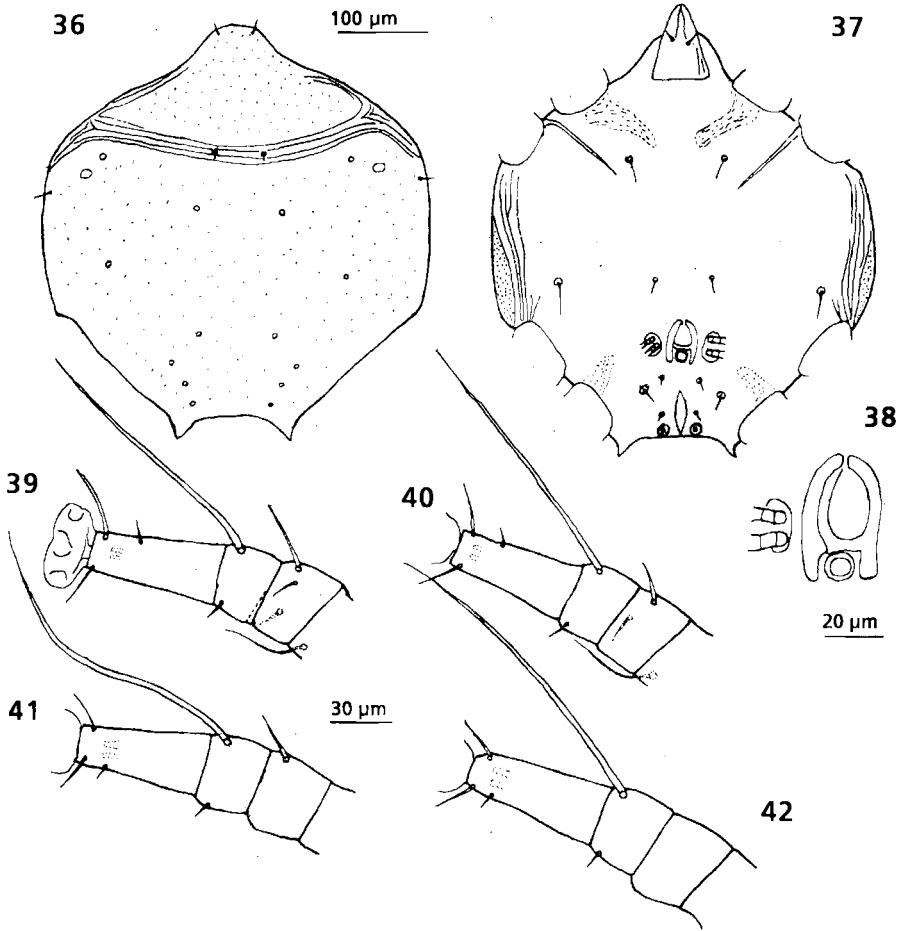
Examined material

Holotype: ♂, Phillippines, South Luzon, from

Laccoptera tredecimguttata Wagener. Paratypes: 2♂, the same data as in holotype. Deposited in MNHWU.

Description

Idiosoma longer than wide. Opisthosoma very short with posterior margin concave (fig. 36). Transverse lines divide propodosoma with hysterosoma. Dorsum punctate with all setae minute. Ventral surface of idiosoma with punctate areas at coxae I, IV and at both lateral margins of

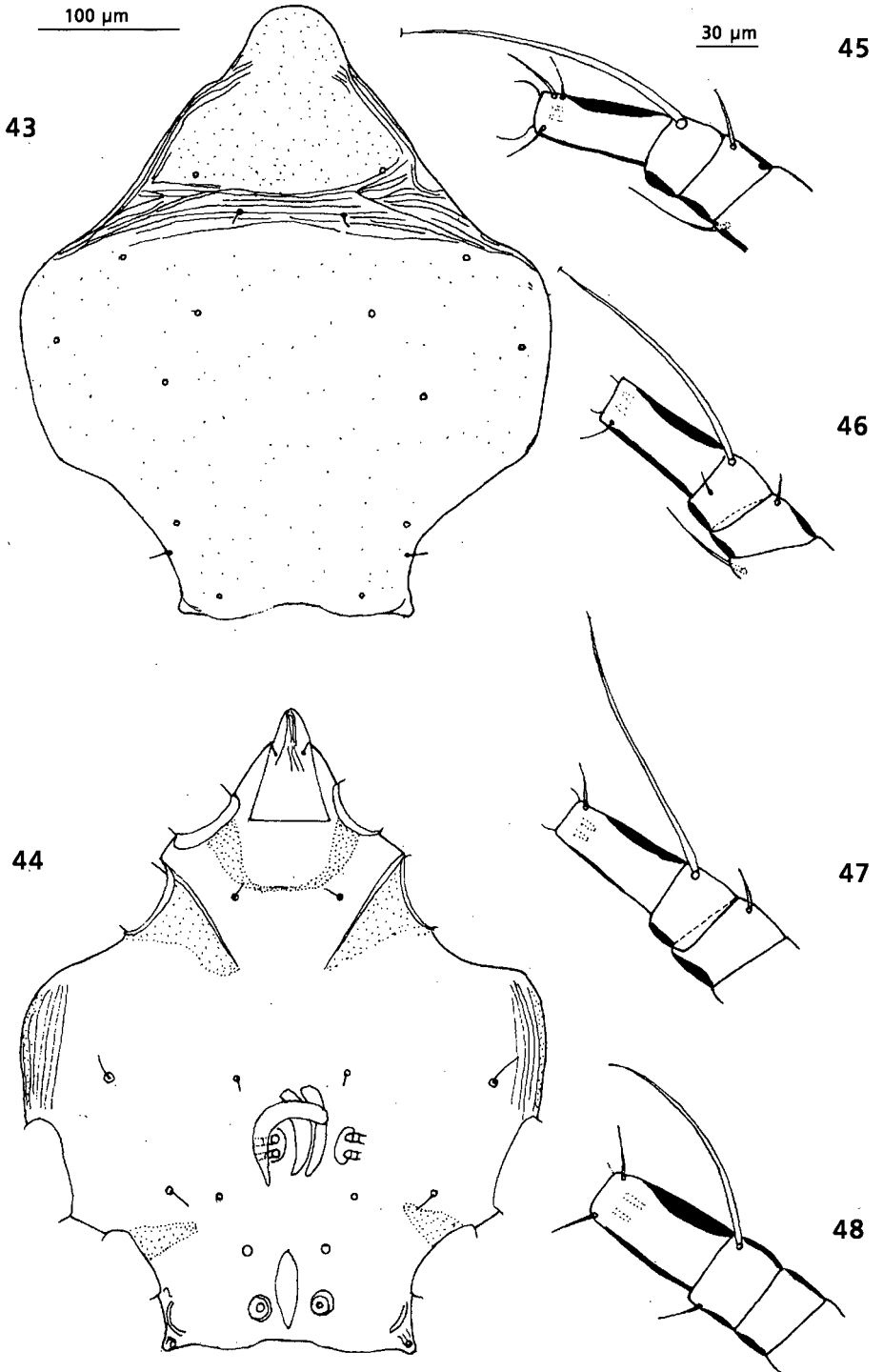


Figs. 36-42. *Heterocoptes ingeri* n. sp., ♂: 36. Idiosoma, dorsal view; 37. Idiosoma and gnathosoma, ventral view; 38. Genital apparatus; 39. Leg I, tarsus-femur; 40. Leg II, tarsus-femur; 41. Leg III, tarsus-genu; 42. Leg IV, tarsus-genu.

Heterocoptes ingeri sp. n., ♂: 36. Idiosoma, vista dorsal; 37. Idiosoma y gnatosoma, vista ventral; 38. Aparato genital; 39. Pata I, tarso-fémur; 40. Pata II, tarso-fémur; 41. Pata III, tarso-genu; 42. Pata IV, tarso-genu.

Figs. 43-48. *Heterocoptes simonettae* n. sp., ♂: 43. Idiosoma, dorsal view; 44. Idiosoma and gnathosoma, ventral view; 45. Leg I, tarsus-femur; 46. Leg II, tarsus-femur; 47. Leg III, tarsus-genu; 48. Leg IV, tarsus-genu.

Heterocoptes simonettae sp. n., ♂: 43. Idiosoma, vista dorsal; 44. Idiosoma y gnatosoma, vista ventral; 45. Pata I, tarso-fémur; 46. Pata II, tarso-fémur; 47. Pata III, tarso-genu; 48. Pata IV, tarso-genu.



idiosoma. Longitudinal lines placed near lateral margins of idiosoma. Two adanal suckers at posterior margin of idiosoma (fig. 37). Genital apparatus as in fig. 38. Ventral setae short; cx III are somewhat longer than the remaining ones.

Tarsi IV somewhat longer than others. Solenidion δ on genu I almost three times longer than solenidion δ on genu II (figs. 39, 40). Chaetotaxy: Ti 1-1-1-1, Ge 2-1-0-0, Fe 1-1-0-0.

Measurements are given in table 2.

Remarks

Five species belong to the genus *Heterocoptes*. *H. ingeri* n. sp. is similar to *H. lottae* Haitlinger known from North Vietnam (Haitlinger, 1996). It can be distinguished by structure of genital apparatus and the presence of one seta on tibia I and II.

Heterocoptes simonettae n. sp. (figs. 43-54)

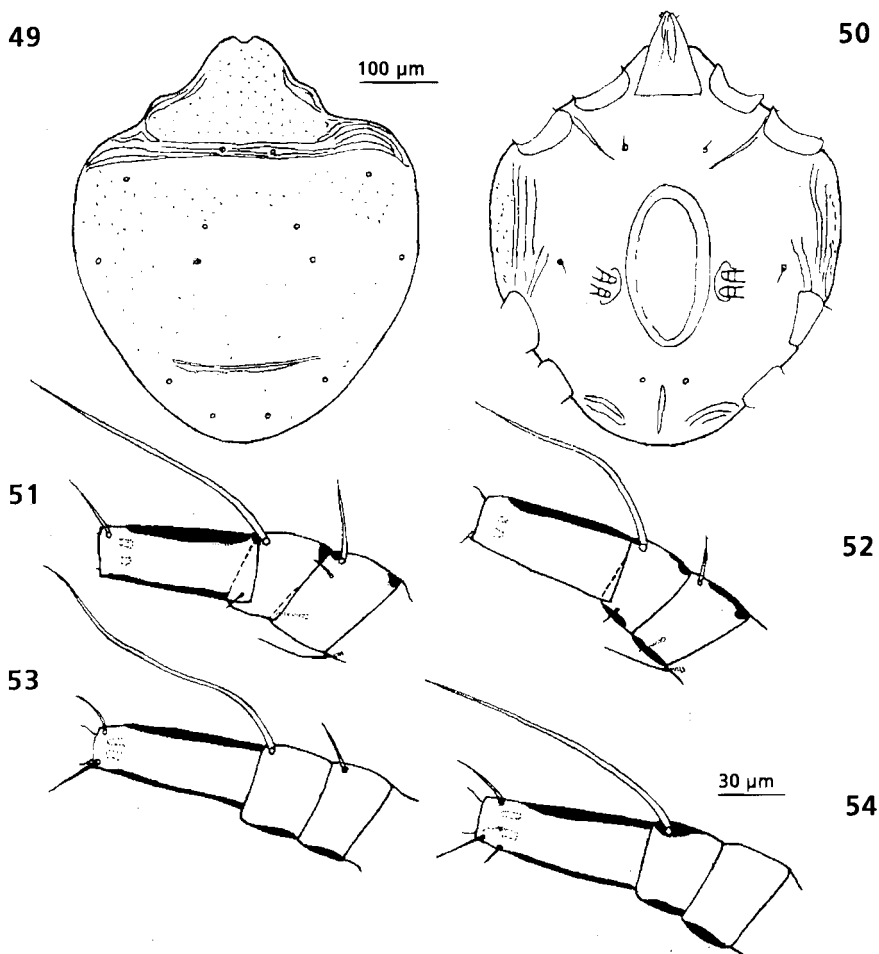
Examined material

Holotype: σ , Papua New Guinea, 5 VIII 1964,

Table 2. Metric data for males and females of: 1. *Heterocoptes ingeri* n. sp.; 2. *Heterocoptes simonettae* n. sp.; 3. *H. lottae* n. sp. (For abbreviations see Material and methods.) (All measurements are given in μm .)

Medidas de machos y hembras de: 1. Heterocoptes ingeri sp. n.; 2. Heterocoptes simonettae sp. n.; 3. H. lottae sp. n. (Para las abreviaturas ver Material y métodos.) (Todas las medidas en μm .)

Measures	1			2			3
	σ H	σ P	σ P	σ H	σ P	σ P	σ
L	464	424	472	424	416	552	329
W	7438	-	326	376	360	472	300
vi	6	-	-	-	-	-	12
he	6	-	-	-	-	-	10
G	42	44	38	752	48	-	52
Ta I	64	64	60	62	-	78	60
Ta II	64	62	-	62	-	76	60
Ta III	62	60	-	64	64	76	62
Ta IV	70	72	-	64	64	84	76
ϕ I	152	142	-	~140	~154	140	~140
ϕ II	136	126	-	126	140	~120	130
ϕ III	156	-	-	~142	160	-	~140
ϕ IV	156	-	~146	122	~154	~140	~150
δ I	38	44	40	30	32	40	-
δ II	16	16	-	12	-	26	16
WTa I	-	-	-	26	-	32	-
WTa IV	-	-	-	36	36	32	-
WTi IV	-	-	-	40	38	-	-



Figs. 49-54. *Heterocoptes simonettae* n. sp., ♀: 49. Idiosoma, dorsal view; 50. Idiosoma and gnathosoma, ventral view; 51. Leg I, tarsus-femur; 52. Leg II, tarsus-femur; 53. Leg III, tarsus-genu; 54. Leg IV, tarsus-genu.

Heterocoptes simonettae sp. n., ♀: 49. Idiosoma, vista dorsal; 50. Idiosoma y gnathosoma, vista ventral; 51. Pata I, tarso-fémur; 52. Pata II, tarso-fémur; 53. Pata III, tarso-genu; 54. Pata IV, tarso-genu.

from *Aspidomorpha punctata* (Fabricius). Paratypes: 1♂ 1♀, the same data as holotype. Deposited in MNHWU.

Description

Male

Idiosoma longer than wide, opisthosoma very

short; its posterior margin slightly concave in medial part. Transverse lines divide propodosoma with hysterosoma (fig. 43). Dorsum punctate; dorsal setae minute, setae vi and he not visible (damaged). Ventral surface of idiosoma with punctate areas at coxae I, II, IV, and near lateral margins between legs II-III (very narrow band). Two

suckers and anal opening near posterior margin of idiosoma. Genital apparatus as in fig. 44.

Tarsi I-IV equal in length (figs. 45-48). Solenidion δ on genu I short, about twice as long as solenidion δ on genu II. Chaetotaxy: Ti ?-1-?-1, Ge 0-0-0-0, Fe 1-1-0-0.

Measurements in table 2.

Female

Idiosoma totally punctate, longer than wide, with posterior margin rounded. Transverse lines divide propodosoma with hysterosoma. Anterior margin of idiosoma slightly concave. Setae vi and he not visible (damaged) (fig. 49). Ventral side of idiosoma with punctate surface between legs II-III; linear structures also here and

on opisthosoma. Setation of idiosomal surface poorly visible (part of setae is damaged) (fig. 50).

Tarsi IV somewhat longer than the remaining ones (figs. 51-54). Chaetotaxy incomplete (partly damaged, especially on tarsi).

Measurements are given in table 2.

Heterocoptes lottae Haitlinger, 1996

This species was found in North Vietnam, on *Lacoptera hospita* Boh (Haitlinger, 1996). At present the next locality is state in Kota Bahru (Malaysia), 21 IV 1997, 1♂ was obtained from *A. elevata*; leg. R. Haitlinger.

Key to genera of Heterocoptidae (males).

Clave para los géneros Heterocoptidae (machos).

1. Setae he long and thick, length over 60 μm	<i>Honiarrea</i> Haitlinger, 1990
Setae he minute	2
2. Idiosoma without adanal suckers	<i>Uvallicoptes</i> n. gen.
Idiosoma with adanal suckers	3
3. Tibia IV and tarsus IV distinctly thicker than the others	<i>Bahrucoptes</i> n. gen.
Tibia IV and tarsus IV at most a little thicker than the others	4
4. Opisthosoma without lobes and narrowing in its base, setae vi minute	<i>Heterocoptes</i> Fain, 1967
Opisthosoma narrowing in its base, with or without caudal lobes, setae vi minute or distinctly longer than the other dorsal setae	5
5. Opisthosoma elongate with caudal lobe, adanal suckers far from posterior margin of idiosoma	6
Opisthosoma without caudal lobes; adanal suckers near posterior margin of idiosoma	8
6. Caudal lobe with four small lobes at its posterior margin. Tarsi I-IV relatively thin	<i>Erotylocoptes</i> Fain, 1987
Caudal lobe without small lobes at its posterior margin. Tarsi I-IV relatively thick	7
7. Caudal lobe with posterior margin almost straight. Setae vi relatively long	<i>Cassiocoptes</i> Haitlinger, 1996
Caudal lobe rounded. Setae vi minute	<i>Nolaecoptes</i> Haitlinger, 1996
8. Epimera I fused, ventral surface of idiosoma totally ornamented	<i>Abboticoptes</i> Haitlinger, 1996
Epimera I free, ventral surface of idiosoma without ornamentation or only in some places	<i>Tannuicoptes</i> n. gen.

Resumen

Seis nuevos ácaros heterocoptidos (Acari, Astigmata, Heterocoptidae) asociados con los Cassidinae y los Eumolpinae (Coleoptera, Chrysomelidae) de la región Indo-Australiana

Bahrucoptes amaliae sp. n. se ha obtenido en *Aspidomorpha elevata* (Fabricius) de Malasia, presenta el tarso IV y la tibia IV gruesos, opistosoma con cuatro lóbulos; para esta especie se ha descrito un nuevo género *Bahrucoptes*.

Uvallicoptes peeteri sp. n. obtenida en *Aspidomorpha adherens salomonina* Spaeth de las islas Solomon, tiene el opistosoma estrecho, alargado en su margen posterior y sin ventosas adanales; para esta especie se ha descrito el nuevo género *Uvallicoptes*.

Tannuicoptes ulfi sp. n. obtenida en *Aspidomorpha dorcata* (Fabricius) de la India, presenta un opistosoma estrecho, el dorso parcialmente cubierto con líneas transversales y el tarso IV más corto que los otros; para esta especie se ha descrito el nuevo género *Tannuicoptes*. *T. jeroni* sp. n. se ha obtenido en *Corynodes compressicornis* Fabricius de Indonesia.

Heterocoptes ingeri sp. n. obtenida en *Laccoptera tredecimguttata* Wagener de Filipinas, tiene el margen posterior del opistosoma cóncavo. *H. simonettae* sp. n. se ha obtenido en *Aspidomorpha punctata* (Fabricius) de Papua Nueva Guinea.

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References

- FAIN, A., 1967. Un acarien remarquable recolté sur un Tarsier (Heterocoptidae f.n.: Sarcoptiformes). *Zool. Anz.*, 178: 90-94.
- 1987. Nouveaux taxa dans la famille Heterocoptidae Fain, 1967 (Acari, Astigmata). *Bull. Ann. Soc. r. Belge Entomol.*, 123: 243-253.
- HATLINGER, R., 1990. *Honiarrea* gen. nov., a new genus of the family Heterocoptidae (Acari, Astigmata). *Ann. Zool.*, 43: 343-345.
- 1996. New heterocoptid mites (Acari, Astigmata, Heterocoptidae) associated with Cassidinae and Hispinae (Coleoptera, Chrysomelidae) from Africa and Asia. *Linzer biol. Beitr.*, 28: 979-998.
- 1997. Four new species of canestriniid and heterocoptid mites (Acari, Astigmata, Canestriniidae, Heterocoptidae) from China. *Spixiana*, 20: 1-10.
- O'CONNOR, B. M., 1979. A review of the family Heterocoptidae. In: *Proceedings Int. Congr. Acar.* (August 6-12, 1978, East Lansing). Recent Advances of Acarology, II: 429-433.
- 1982. Astigmata. In: *Synopsis and classification of living organisms*, vol. 2: 146-169 (Parker, S. B., Ed.). Mc Graw-Hill, New York.