

A new genus and four new species of erythraeid mites from Indonesia, with new records of the family (Acari: Prostigmata: Erythraeidae)

Ryszard Haitlinger

ARTÍCULO:

A new genus and four new species of erythraeid mites from Indonesia, with new records of the family (Acari: Prostigmata: Erythraeidae)

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Abstract:

Erythraeus (Zaracarus) bibadakiensis sp.n., *Grandjeanella londaensis* sp.n., *Marantelophus alaperti* gen. n., sp. n., and *Leptus (Leptus) sulawesicus* sp. n. all from Indonesia are described. New records for *Abrolophus aitapensis*, *Charletonia volzi*, *C. shiroyama* and *Leptus (Leptus) balicus* are given. *Grandjeanella multisetosa*, *G. bella*, *G. haitlingeri*, *G. kamalii*, *G. ainae* and *Hauptmannia ostovani* are included to the genus *Marantelophus* gen. n.

Key words: Acari, Erythraeidae, new genus, new species, new records, Indonesia.

Taxonomy: *Erythraeus (Zaracarus) bibadakiensis* sp. n., *Grandjeanella londaensis* sp. n., *Marantelophus alaperti* gen. n., sp. n., *Leptus (Leptus) sulawesicus* sp. n.

Un nuevo género, cuatro nuevas especies y nuevos registros de ácaros (Acari: Prostigmata: Erythraeidae) de Indonesia

Resumen:

Se describen *Erythraeus (Zaracarus) bibadakiensis* sp. n., *Grandjeanella londaensis* sp. n., *Marantelophus alaperti* gen. n., sp. n. y *Leptus (Leptus) sulawesicus* sp. n., todas ellas de Indonesia. Se citan por primera vez para Indonesia *Abrolophus aitapensis*, *Charletonia volzi*, *C. shiroyama* y *Leptus (Leptus) balicus*, y se transfieren a *Marantelophus* gen. n.: *Grandjeanella multisetosa*, *G. bella*, *G. haitlinger*, *G. kamalii*, *G. ainae* y *Hauptmannia ostovani*.

Palabras clave: Acari, Erythraeidae, nuevo género, nuevas especies, nuevas citas, Indonesia

Taxonomía: *Erythraeus (Zaracarus) bibadakiensis* sp. n., *Grandjeanella londaensis* sp. n., *Marantelophus alaperti* gen. n., sp. n., *Leptus (Leptus) sulawesicus* sp. n.

Introduction

Erythraeid mites are poorly known in Indonesia. Until now only 19 species were known: *Leptus (Leptus) gagrellae* (Oudemans, 1912), *L. (L.) terebrans* Vitzthum, 1926 and *L. (L.) managarus* Haitlinger, 1990 from Java; *L. (L.) admeri* Haitlinger, 1998 from Sumatra, *L. (L.) ubudicus* Haitlinger, 2006, *L. (L.) balicus* Haitlinger, 2006, both from Bali; *Charletonia volzi* (Oudemans, 1910) recorded from Sumatra, Java, Lingga Islands and Bali; *C. shiroyama* Yaita, Kato, Toriyama, 1961 from Lingga Islands, Bali and Lombok, *C. lombokensis* Haitlinger, 2006 from Lombok and finally *Carastrum samurensis* Haitlinger, 2006 from Bali were known (Oudemans, 1912, Vitzthum, 1926, Southcott, 1966, Haitlinger, 1990, 1998, 2006). In this paper, a new genus based on larvae and four new species based on larvae are described and four species represented by larval specimens are newly recorded for Indonesia.

Material and methods

In February 2009 (11.02.2009 – 25.02.2009), larval instars belonging to 8 species of erythraeid mites were collected in Bali, Bibadaki, Java, Kekor, Lombok, Sulawesi, Indonesia. 18 larvae were collected from herbaceous plants; except for four larval specimens collected from wings of undetermined species of Orthoptera. Specimens were preserved in ethanol and mounted later in Berlese's medium. Measurements are expressed in micrometers (μm). The terminology of structures and setal notation are adapted from Southcott (1993) and Haitlinger (2005). Holotypes of the new species are deposited at the Museum of Natural History, Wrocław University (MNHU), Poland.

Taxonomy

Family Erythraeidae Robineau-Desvoidy, 1828

Genus *Charletonia* Oudemans, 1910

Charletonia volzi (Oudemans, 1910)

Material. Sulawesi, Kampangallo (120°48'E, 2°47'S), 17.02.2009, 3 larvae, Kekor island, 4 km west of Labuan Bajo, Flores (119°58'E, 8°10'S), 22.02.2009, 1 larva, Indonesia, from undetermined Orthoptera; leg. R. Haitlinger.

In Indonesia *C. volzi* was known from Bali and Lingga Islands (Haitlinger, 2006b). It is the first record from Kekor and Sulawesi.

Charletonia shiroyama Yaita, Kato & Toryama, 1961

Material. Java, vicinity of Nganjuk (111° 58'E 7°66'S), 11.02.2009, Indonesia, 2 larvae from herbaceous plants' leg. R. Haitlinger.

In Indonesia *C. shiroyama* was known from Bali and Lombok (Haitlinger, 2006b). First record from Java.

Genus *Abrolophus* Berlese, 1891

Abrolophus aitapensis (Southcott, 1948)

Material. Lombok, Gubugbatu (116°08'E, 8°23'S), 16.02.2009, 1 larva, Indonesia, from herbaceous plants; leg. R. Haitlinger.

In Indonesia this species was known only from Bali (Haitlinger, 2006b). It is the first record from Lombok.

Genus *Erythraeus* Latreille, 1806

Erythraeus (Zaracarus) bibadakiensis sp. n.

(Figs 1-11)

Type material. Larva holotype (MNHU), Bibadaki Island n. Labuan Bajo, Flores (119°58'E, 8°10'S), Indonesia, 20.02.2009, from herbaceous plants; leg. R. Haitlinger; larv paratype: ia, Kekor Island, 4 km west of Labuan Bajo, Flores (119°59'E, 8°10'S), 22.02.2009, Indonesia.

Etymology. The new species is named after the Bibadaki Island where the holotype was collected

Diagnosis. fnBf 3-3-3, fD 38, NDV 56, TaI 154-160, TiI 234-244, TiIII 346, IP 3004

Description. Larva – holotype - Measurements in Table I. Idiosoma longer than wide with 38 dorsal weakly barbed setae. Two eyes present on each sides of the anterior idiosoma (Fig. 1). Scutum wider than long. Bases of AM almost on the level of AL, sensillary setae S damaged, their bases placed anterior to posterior margin of scutum. Setae AM very shor with tube-shaped base,t with setules (Fig. 3).

Inter coxal area with 2 pairs of weakly barbed setae (1a and 3a) and 18 barbed setae behind coxae III. Coxalae I-III barbed, coxala 1b more than twice as long as 2b and 3b (Fig. 2). Gnathosoma with nude hypostomalae and galealae. Palpfemur and palpgenu, each with one barbed seta; palpgenua longer than palpfemorala. Palptibia with three setae (1B, 2N) (Fig. 4). Palptarsus with 6 setae (eupathidium and solenidium included) (Fig. 5).

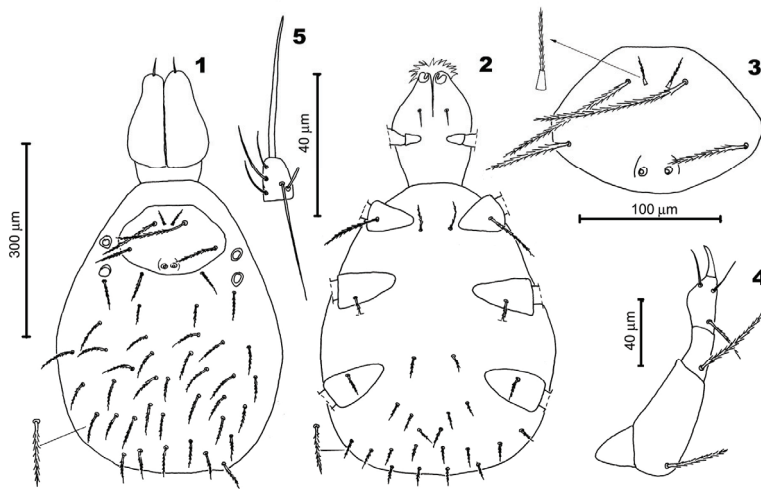
Leg lengths. I 968 holotype, 956 paratype; II 918, 884, III -, 1164. IP= 3004 paratype.

Leg setal formula. Leg I: Ta 1 ω , 1 ζ , 19B; Ti 2 ϕ , 1 κ , 14B; Ge 1 σ , 1 κ , 8B; Tf 5B; Bf 3B; Tr 1B; Cx 1B (Figs 6, 7).

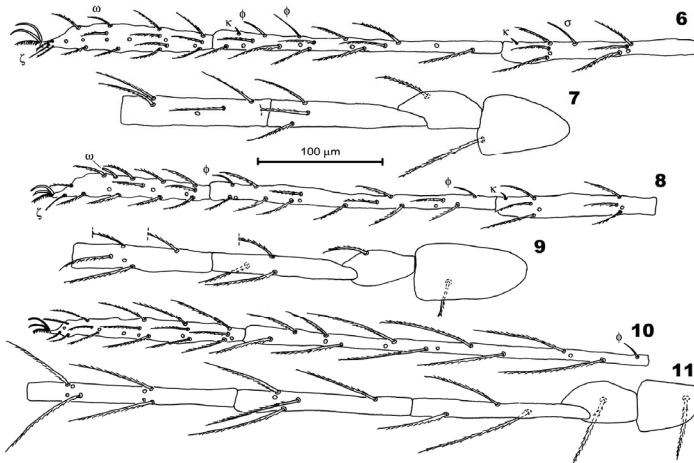
Leg II: Ta 1 ω , 1 ζ , 14B; Ti 2 ϕ , 14B; Ge 1 κ , 8B; Tf 5B; Bf 3B; Tr 1B; Cx 1B (Figs 8, 9).

Leg III: Ta 21B; Ti 1 ϕ , 14B; Ge 8B; Tf 5B; Bf 3B; Tr 1B; Cx 1B (Figs 10, 11).

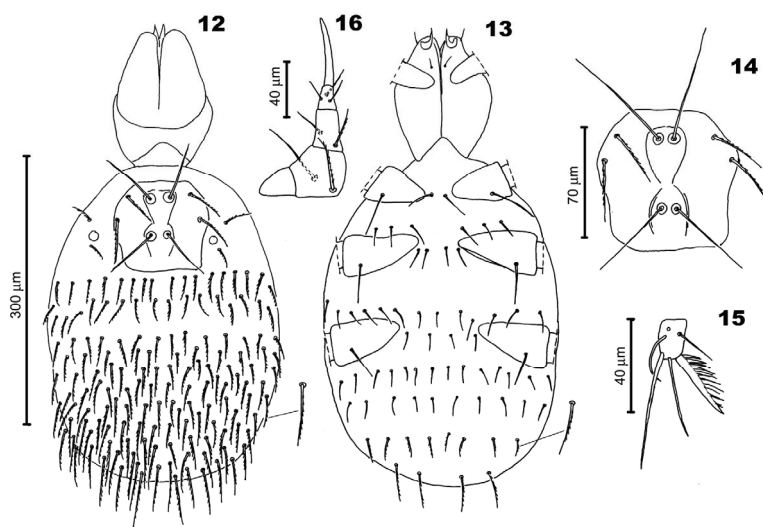
Remarks. *E. (Z.) bibadakiensis* belongs to the species group with Bf 3,3,3. This group includes the following species: *E. (Z.) fabiolae* Haitlinger, 1997, *E. (Z.) longipedus* Saboori & Nowzari, 2001, *E. (Z.) sibuljanicus* Haitlinger, 2004, *E. (Z.) kastaniensis* Haitlinger, 2006, *E. (Z.) passidonicus* Haitlinger, 2006, *E. (Z.) jinkaensis* Haitlinger, 2005, *E. (Z.) lancifer* Southcott, 1995, *E. (Z.) rajabii* Saboori, 2000, *E. (Z.) ruizpertiae* Mayoral & Barranco, 2008 and *E. (Z.) aydinicus* Saboori, Cakmak & Nouri-Gombalani, 2004 (Southcott, 1995, Haitlinger, 1997, 2004, 2005, 2006a, Saboori, 2000, Saboori & Nowzari, 2001, Saboori et al., 2004, Mayoral & Barranco, 2008). It differs from *E. (Z.) fabiolae* in the shorter ISD (62 vs. 72), AL (104-106 vs. 180), PL (54-72 vs. 82), GL (160-164 vs. 180), TaI (154-160 vs. 180) and TiIII (346 vs. 420); from *E. (Z.) longipedus* in the shorter TaI (154-160 vs. 187), TiIII (346 vs. 424), AL (104-106 vs. 199) and PL (54-72 vs. 80); from *E. (Z.) sibuljanicus* in the longer PsGd (70-74 vs. 60), PsFd < PsGd vs. PsFd =PsGd; shorter TiIII (346 vs. 370), GeIII (180 vs. 200) and semioval scutum vs. trapezoidal scutum); from *E. (Z.) kastaniensis* in the shorter ISD (62 vs. 72-78), PDS (54-70 vs. 74-84), PsFd (44-60 vs. 68-78), TaI (154-160 vs. 172-180 and fD (38 vs. 54); from *E. (Z.) passidonicus* in the longer AW (48 vs. 32), GL (160-164 vs. 132) and semioval scutum vs. trapezoidal scutum; from *E. (Z.) jinkaensis* in the longer PW (122 vs. 82-96), AP (48-58 vs. 34-40), GL (160-



Figures 1-5. *Erythraeus (Zaracarus) bibadakiensis* sp. n.: 1. idiosoma and gnathosoma, dorsal view; 2. idiosoma and gnathosoma, ventral view; 3. scutum; 4. palp; 5. palptarsus.



Figures 6-11. *Erythraeus (Zaracarus) bibadakiensis* sp. n.: 6. leg I, tarsus – genu; 7. leg I, telofemur – coxa; 8. leg II, tarsus – genu; 9. leg II, telofemur – coxa; 10. leg III (paratype), tarsus – tibia; 11. leg III (paratype), genu – coxa.



Figures 12-16. *Grandjeanella londaensis* sp. n.: 12. idiosoma and gnathosoma, dorsal view; 13. idiosoma and gnathosoma, ventral view; 14. scutum; 15. palptarsus; 16. palp.

164 vs. 124-148), TaI (154-160 vs. 112-116), TiIII (346 vs. 212-242) and shorter AL (104-106 vs. 122-124); from *E. (Z.) lancifer* in the shorter AL (104-106 vs. 145-279), fD (38 vs. 32) and fV (18 vs. 12); from *E. (Z.) rajabii* in the shorter AL (104-106 vs. 192), fD (38 vs. 26), longer W (160 vs. 127) and GL (160-164 vs. 132); from *E. (Z.) ruizpertiae* in the shorter AL (104-106 vs. 145-150), ISD (62 vs. 75), TaI (154-160 vs. 170-178) and TiIII (346 vs. 375-398) and from *E. (Z.) aydinicus* in the shorter AL (104-106 vs. 165-167), TaI (154-160 vs. 177-179), TiI (234-244 vs. 262-276), TiIII (346 vs. 376-395) and longer PsGd (70-74 vs. 55-62),

Genus *Grandjeanella* Southcott, 1961

Grandjeanella londaensis sp. n.

(Figs 12-19)

Type material. Larva holotype (MNHWU), Sulawesi, Londa n. Rantepao (120°46'E, 2°50'S), 17.02.2009, Indonesia, from herbaceous plants, leg. R. Haitlinger.

Etymology. This species is named after Londa where the holotype was collected

Diagnosis. fD 162, fV 39, NDV 201, AW 72, AL 40, TaI 70, TiI 76, TiIII 100.

Description. Larva – holotype – Measurements in Table I. Idiosoma longer than wide with 162 weakly barbed setae, Eye present on both side of idiosoma (Fig. 12). Anterior and posterior margins of scutum straight, lateral margins concave. AM bases near the level of the AL scutalae bases. PL setal bases well anterior to posterior margin of scutum. AL and PL weakly barbed. AM>S, both nude. At AM and S longitudinal lines present (Fig. 14).

Ventral surface of idiosoma with two nude sternalae 1a, six similar setae between coxae I and II; between coxae II-III 14 nude setae and behind coxae III 39 setae; posterior 11 setae weakly barbed, the remaining ones nude. Coxalae 1,1,1, simple, nude (Fig. 13). Gnathosoma with nude hypostomalae and galealae. Palpfemur with two setae (dorsal B, ventral N); palpgenu with two setae (dorsal B, ventral N). Palptibia with 3 nude setae (Fig. 16). Palptarsus with 6 setae (including eupathidium and solenidion), one of them with long setules (Fig. 15). Odonotus very long.

Leg lengths. I 400, II 392, III 460. IP = 1252.

Leg setal formula. Leg I.: Ta 1 ω , 2 ζ , 18N; Ti 2 ϕ , 1 κ , 14N; Ge 1 σ , 1 κ , 8N; Tf 7N; Bf 4N; Tr 2N; Cx 1N (Fig. 17).

Leg II.: Ta 1 ω , 2 ζ , 15N; Ti 2 ϕ , 14N; Ge 1 σ , 8N; Tf 7N; Bf 4N; Tr 2N; Cx 1N (Fig. 18).

Leg III.: Ta 18N; Ti 1 ϕ , 14N; Ge 1 σ , 8N; Tf 7N; Bf 4N; Tr 2N; Cx 1N (Fig. 19).

Remarks. The genus *Grandjeanella* Southcott, 1961 includes 4 species, all from Australia: *G. westraliensis* (Womersley, 1934), *G. pangela* Southcott, 1996, *G. shephardae* Southcott, 1996 and *G. charadrea* Southcott, 1966 (Womersley, 1934, Southcott, 1996). *G. lon-*

daensis sp. n. differs from *G. westraliensis* in the longer AW (72 vs. 66), PDS (62 vs. 49), TaI (70 vs. 53), TaII (60 vs. 49), TaIII (64 vs. 56), TiIII (100 vs. 88) and AM (80 vs. 28); from *G. pangela* in the longer AW (72 vs. 50), PW (92 vs. 73), W (106 vs. 86), AL (40 vs. 31), PL (46 vs. 29), AM (80 vs. 30), TaI (70 vs. 62), TiIII (100 vs. 91) and fD (162 vs. 81); from *G. shephardae* in the longer AW (72 vs. 66), W (100 vs. 84), PDS (60 vs. 50), TaI (72 vs. 54), TiIII (100 vs. 91) and fD (162 vs. 51) and from *G. charadrea* in the longer AW (72 vs. 61), PW (92 vs. 76), AM (80 vs. 42), TaI (70 vs. 58), TiIII (100 vs. 88) and fD (162 vs. 47).

Marantelophus gen. n.

Type species. *Marantelophus alaperti* gen. n., sp. n.

Etymology. The genus name “*Marantelophus*” refer to the village name “Marante” where the holotype was collected.

Diagnosis. Larva. Scutum usually narrowing in posterior part (excluding *M. bella*). Sensillae S placed at posterior margin of scutum. Palpfemur and palpgenu each with two setae. Palptibia with two setal form setae and one hypertrophied seta. Eye 1+ 1. Coxalae 1, 1, 1, trochanteralae 2, 2, 2.

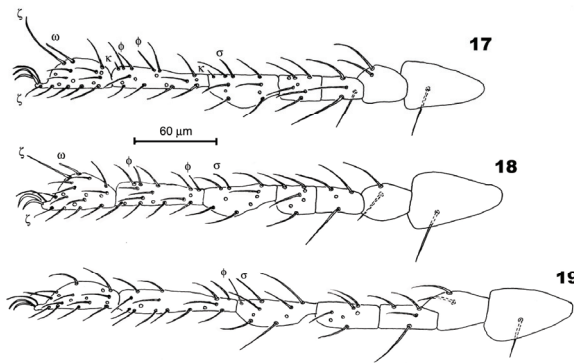
Remarks. Southcott (1961) erected the genus *Grandjeanella*. Later Zhang & Goldarazena (1996), Goldarazena & Zhang (1997), Saboori & Atamehr (2000) and Haitlinger (2002) to accommodate 5 new species. All these species and now described new species differs from *Grandjeanella* in position of sensillary setae S placed at or on the posterior edge of the dorsal scutum. Also shape of the dorsal scutum differs in posterior margin shorter than the anterior margin (excluding *M. bella*) and not concave lateral margins. *Marantelophus* gen. n. differs from *Hauptmannia* (Oudemans, 1910), and *Abrolophus* (Berlese 1891) in 2 palpegualae vs 3 and from *Rudaemannia* Haitlinger, 2000 in TfII 5 vs. 6, TfII 5 vs. 7 and lack on palptarsus setae with long setules. n Based on these differences I propose new genus *Marantelophus*. All species (excluding Australian species) are transferred to new genus: *M. multisetosa* (Zhang & Goldarazena, 1996) comb. n., *M. bella* (Zhang, 1996) comb. n., *M. haitlingeri* (Goldarazena & Zhang, 1997) comb. n., *M. kamalii* (Saboori & Atamehr, 2000) comb. n., *M. ainae* (Haitlinger, 2002) comb. n. and *M. ostovani* comb. n. described as *Hauptmannia ostovani* (Haitlinger & Saboori, 1996)/

Marantelophus alaperti sp. n.

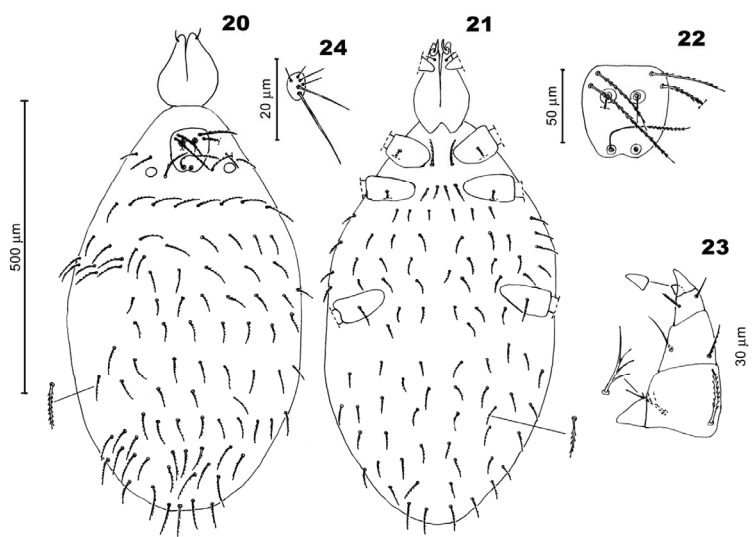
(Figs 20-27)

Type material. Larva – holotype (MNHWU), Sulawesi, Marante n. Rantepao (120°46E, 2°50'S) 17.02.2009, Indonesia, from herbaceous plants; leg. R. Haitlinger.

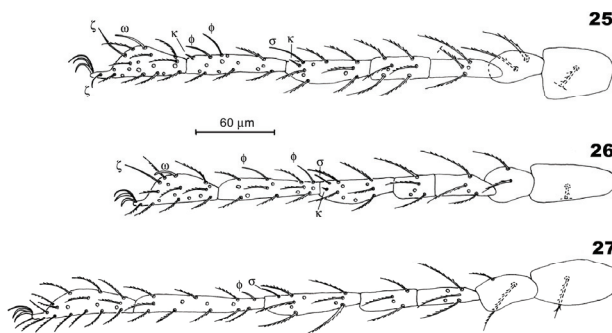
Etymology. The name of the new species is derived from the name Alapert



Figures 17-19. *Grandjeanella londaensis* sp. n.: 17. leg I; 18. leg II; 19. leg III.



Figures 20-24. *Marantelophus alaperti* gen. n., sp. n.: 20. idiosoma and gnathosoma, dorsal view; 21. idiosoma and gnathosoma, ventral view; 22. scutum; 23. palp; 24. palptarsus.



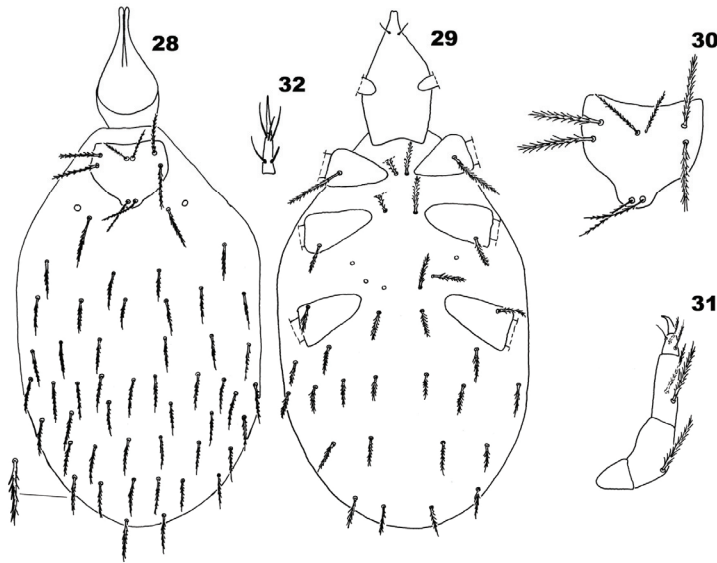
Figures 25-27. *Marantelophus alaperti* gen. n., sp. n.: 25. leg I; 26. leg II; 27. leg III.

Diagnosis. fD 96, fV 46, NDV 142, AL 58, PL 82, TaI 80, TiIII 112.

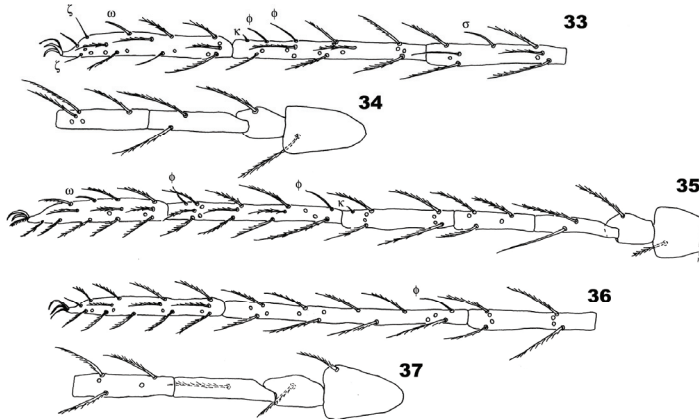
Description. Larva – holotype (MNHU) Measurements in Table I. Idiosoma longer than wide. Dorsum with 96 barbed setae; posterior setae somewhat longer than anterior ones. One eye on each side (Fig. 20). Dorsal scutum longer than wide. Scutulae barbed; AL < PL. Two pairs of sensillary setae, both barbed at anterior part.; AM < S (Fig. 3).

Ventral side of idiosoma with a pair of barbed setae 1a, two pairs of barbed setae placed between coxae II and between coxae II and III 32 barbed setae. Beyond coxae III 46 sbarbed setae (Fig. 21).

Gnathosoma with nude hypostomalae and galealae (Fig. 21). Palpfemur with two setae; dorsal seta with short setules, ventral seta with some long setules. Palpgenu with two nude setae, palptibia with two nude setae and hypertrophied seta (Fig. 23). Palptarsus with 6 nude setae (Fig. 24).



Figures 28-32. *Leptus (Leptus) sulawesicus* sp. n.: 28. idiosoma and gnathosoma, dorsal view; 29. idiosoma and gnathosoma, ventral view; 30. scutum; 31. palp; 32. palptarsus.



Figures 33-37. *Leptus (Leptus) sulawesicus* sp. n.: 33. leg I, tarsus - genu; 34. telofemur - coxa; 35. leg II; 36. leg III tarsus - genu; 37. telofemur - coxa.

Leg lengths. I 430 II 433, III 512. Ip=1375.

Leg setal formula. Leg I: Ta 1 ω , 2 ζ , 17B; Ti 2 ϕ , 1 κ , 12B; Ge 1 σ , 1 κ , 9B; Tf 7B; Bf 4B; Tr 2B; Cx 1B (Fig.256).

Leg II: Ta 1 ω , 1 ζ , 15B; Ti 2 ϕ , 12B; Ge 1 σ , 1 κ , 9B; Tf 5B; Bf 4B; Tr 2B; Cx 1B (Fig. 26).

Leg III: Ta 18B; Ti 1 ϕ , 12B; Ge 1 σ , 9B; Tf 5B; Bf 4B; Tr 2B; Cx 1B (Fig.278).

Remarks. The new genus *Marantelophus* includes *M. bella* (Zhang, 1996), *M. multisetosa*, (Zhang & Goldarazena, 1996), *M. ostovani*, (Haitlinger & Saboori, 1996), *M. haitlingeri* (Goldarazena & Zhang, 1997), *M. kamalii* (Saboori & Atamehr, 2000) and *M. ainae* (Haitlinger, 2002.). (Zhang & Goldarazena, 1996, Haitlinger & Saboori, 1996, Goldarazena & Zhang, 1997, Saboori & Atamehr, 2000, Haitlinger, 2002). *Marantelophus alaperti* sp. n. It differs from *M. bella* in the longer AL (58 vs. 28), PL (82 vs. 45), TaI (80 vs. 71) TaIII (84 vs. 73), shorter ISD (38 vs. 50), fD (96 vs. 42) and shape of scutum; from *M. multisetosa* in the longer L (70 vs. 48-57), AL (58 vs. 24-29), PL (82 vs. 35-43), TaI (80 vs. 65-72), TiIII (112 vs. 76-106) and fD

(96 vs. > 140; from *M. ostovani* in the shorter ISD (38 vs. 56), DS (38-64 vs. 42-90), longer TaI (80 vs. 62), TiIII (112 vs. 102) and fD (96 vs. 40); from *M. haitlingeri* in the shorter AW (38 vs. 70), PW (48 vs. 82), ISD (38 vs. 45), L (70 vs. 83), TaI (80 vs. 100), TiIII (112 vs. 140), longer PL (82 vs. 67) and fD (96 vs. 119); from *M. kamalii* in the shorter PW (48 vs. 60), longer AL (58 vs. 36), PL (82 vs. 44-49), DS (38-64 vs. 30-44), TiIII (112 vs. 96-102) and fD (96 vs. 120) and from *M. ainae* in the shorter ISD (38 vs. 48-50), longer AL (58 vs. 30-34), PL (82 vs. 32-36), GL (140 vs. 106-110), TaI (80 vs. 50-54) and TiIII (112 vs. 82-84).

Genus *Leptus* Latreille, 1796
***Leptus balicus* Haitlinger, 2006**

Material. Bali, Nusa Dua (115°14'E, 8°48'S), 25.02.2009, Indonesia, 2 larvae from herbaceous plants; leg. R. Haitlinger.

This species is known in Indonesia only from Bali (Haitlinger, 2006b). In Bali it is very common species. New record from Bali.

***Leptus (Leptus) sulawesicus* sp. n.**

(Figs 28-37)

Types. LARVA holotype: (MNHWU), Sulawesi, Kie-tekiesu n. Rantepao (120°46'E, 2°50'S) 17.02.2009, Indonesia, from herbaceous plants, leg. R. Haitlinger.

Etymology. Named after the island where holotype was collected.

Diagnosis. Two palpgenualae, six intercoxalae, fD 48, fV 20, NDV 68, AW 60, AL 52, TaI 138, TiIII 200.

Description. Larva -holotype – Measurements in Table I. Idiosoma longer than wide with 48 barbed setae. One eye on each side (Fig. 28). Scutum with weakly concave anterior border and two pairs of barbed scutalae. Sensillary setae barbed throughout total length (Fig. 30).

Ventral surface of idiosoma with a pair of barbed setae 1a and 2a. Between coxae II and III 6 barbed setae. Behind coxae III 20 barbed setae. Coxalae I-III all barbed (Fig. 29).

Gnathosoma with two nude hypostomalae. Palpfemur with one barbed seta, palpgenu with 2 barbed setae,

Palptibia with 3 setae (B,B,N) (Fig. 31). Palptarsus with 6 nude setae (including ω and ζ) (Fig. 32).

Leg lengths. I 620, II 592, III 712. = 1924.

Leg setal formula. Leg I. Ta 1 ω , 2 ζ , 16B; Ti 2 ϕ , 1 κ , 14B; Ge 1 σ , 8B; Tf 5B; Bf 2B; Tr 1B; Cx 1B (Fig. 33, 34).

Leg II. Ta 1 ω , 13B; Ti 2 ϕ , 14B; Ge 1 κ , 8B; Tf 5B; Bf 2B; Tr 1B; Cx 1B (Fig. 35).

Leg III. 17B; Ti 1 ϕ , 14B; Ge 8B; Tf 5B; Bf 1B; Tr 1B; Cx 1B (Fig. 36, 37).

Remarks. *Leptus (Leptus) sulawesicus* sp. n. belongs to the species group with two palpgenualae, more than 4 intercoxalae, fD < 80 and TiIII 250. This group includes *L. (L.) esmaili* Saboori & Ostovan, 2000 and *L. (L.) korneli* Haitlinger, 2009 (Saboori & Ostovan, 2000, Haitlinger, 2009). *L. (L.) sulawesicus* differs from *L. (L.) esmaili* in the shorter AW (60 vs. 99-104), PW (68 vs. 108-115), TaI (138 vs. 160), TiIII (200 vs. 220), longer AL (52 vs. 44-49), PL (52 vs. 42-44), DS (44-62 vs. 27-39) and fD (48 vs. 66) and from *L. (L.) korneli* in the longer ISD (52 vs. 35-38), AL (62 vs. 34-40), PL (52 vs. 26-34), DS (44-62 vs. 16-24), TaI (138 vs. 100-112), TiIII (200 vs. 126-132) and fD (48 vs. 115).

References

- GOLDARAZENA, A. & ZHANG, Z.-Q., 1997. First record of larval *Grandjeanella* (Acari: Erythraeidae) from Heteroptera and description of new species from Spain. *Systematic & Applied Acarology*, **2**: 231-236.
- HAITLINGER, R., 1990. Four new species of *Leptus* Latreille, 1796 (Acari, Prostigmata, Erythraeidae) from insects of Australia, New Guinea and Asia. *Wiadomości Parazytologiczne*, **36**: 47-53.
- HAITLINGER, R., 1997. New larval mites (Acari, Prostigmata: Erythraeidae, Trombidiidae) from Canary Islands. *Zoologica Baetica*, **8**: 123-132.
- HAITLINGER, R., 1998. Five new species of *Leptus* Latreille, 1796 (Acari: Prostigmata, Erythraeidae) from Asia and Africa. *Bonner Zoologische Beiträge*, **48**: 97-110.
- HAITLINGER, R., 2002. Erythraeidae and Trombidiidae (Allothrombiinae) (Acari: Prostigmata) from Mallorca (Balearic Islands), with the description of two new species. *Bolletti de la Societat d'Historia Natural de les Balears*, **13**: 191-197.
- HAITLINGER, R., 2004. New records of mites (Acari: Prostigmata: Erythraeidae, Trombidiidae, Eutrombidiidae) from Croatia, with descriptions of three new species. *Natura Croatica*, **13**: 143-160.
- HAITLINGER, R., 2005. Four new species of Erythraeidae (Acari: Prostigmata) and the first record of *Charletonia braunsi* (Oudemans, 1910) and *C. brunni* (Oudemans, 1910) from Ethiopia. *Revista Ibérica de Aracnologia*, **12**: 79-90/
- HAITLINGER, R., 2006a. New records of mites (Acari: Prostigmata: Erythraeidae, Trombidiidae) from Samos, Greece, with description of six new species. *Systematic & Applied Acarology*, **11**: 107-123.
- HAITLINGER, R., 2006b. New species and new records of mites (Acari: Prostigmata: Erythraeidae) from Bali, Lombok and Lingga Islands, Indonesia. *Systematic & Applied Acarology*, **11**: 219-230.
- HAITLINGER, R., 2009. Three new species of mites (Acari: Prostigmata: Erythraeidae) from the Republic of Cape Verde. *Biologia*, **64**: 1150-1156.
- HAITLINGER, R. & SABOORI, A., 1996. Seven new larval mites (Acari, Prostigmata, Erythraeidae) from Iran. *Miscellanea Zoológica*, **19**: 117-131.
- MAYORAL, J.G. & BARRANCO, P., 2008. A new species of the genus *Erythraeus* Latreille, 1806 (Acari: Erythraeidae) from the Gypsum Karst of Sorbas in the south of Spain. *Revista Ibérica de Aracnologia*, **16**: 113-117.
- OUDEMANS, A.C., 1912. Die bis jetzt bekannten Larven von Trombidiidae und Erythraeidae mit besonderer Berücksichtigung der für den Menschen schädlichen Arten. *Zoologische Jahrbücher, Abteilung I, Supplement* **14**: 1-230.
- SABOORI, A., 2000. Two new larval erythraeinae mites (Acari: Erythraeidae) from Iran. *Systematic & Applied Acarology*, **5**: 125-130.
- SABOORI, A. & ATAMEHR, A., 2000. *Grandjeanella kamalii* sp. nov. (Acari: Erythraeidae) from Iran with a key to world species. *Systematic & Applied Acarology*, Special publication, **5**: 1-8.
- SABOORI, A. & NOWZARI, J., 2001. A new larval erythraeinae mite (Acari: Erythraeidae) from Iran. *International Journal of Acarology*, **27**: 220-233.
- SABOORI, A. & OSTOVAN, H., 2000. A new species of the genus *Leptus* Latreille, 1796 (Acari: Erythraeidae) ectoparasitic on sun pest, *Eurygaster integriceps* Puton (Hemiptera: Scutelleridae) from Iran. *Systematic & Applied Acarology*, **5**: 143-147.
- SABOORI, A., ÇAKMAK, I. & NOURI-GONBALANI, G., 2004. A new species of larval *Erythraeus (Zaracarus)* (Acari: Erythraeidae) from Turkey. *International Journal of Acarology*, **30**: 131-136.

- SOUTHCOTT, R.V., 1966. Revision of the genus *Charletonia* Oudemans (Acarina: Erythraeidae). *Australian Journal of Zoology*, **14**: 687-819.
- SOUTHCOTT, R.V., 1993. Larvae of *Leptus* (Acarina: Erythraeidae) ectoparasitic on higher insects of Australia and New Guinea. *Invertebrate Taxonomy*, **7**: 1473-1550.
- SOUTHCOTT, R.V., 1995. A new larval erythraeinae mite (Acarina: Erythraeidae) from Spain. *Acarologia*, **36**: 223-228.
- SOUTHCOTT, R.V., 1996. On some Australian and other larval Callidosomatinae (Acarina: Erythraeidae). *International Journal of Acarology*, **22**: 253-278.
- VITZTHUM, H., 1926. Malayische Acari. *Treubia*, **8**: 1-198.
- WOMERSLEY, H., 1934. A revision of the trombid and erythraeid mites of Australia with descriptions of new genera and species. *Records of the South Australian Museum*, **5**: 179-254.
- ZHANG, Z.-Q. & GOLDARAZENA, A., 1996. *Abrolophus* and *Grandjeanella* larvae (Acarina: Erythraeidae) ectoparasitic on thrips (Thysanoptera: Thripidae). *Systematic & Applied Acarology*, **1**: 127-144.