

A NEW SPECIES OF *ERYTHRAEUS* (*ZARACARUS*) (ACARI: PROSTIGMATA: ERYTHRAEIDAE) FROM CYPRUS

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ABSTRACT — *Erythraeus* (*Zaracarus*) *arminouensis* **n. sp.** is described and illustrated from larvae collected from herbaceous plants in Cyprus. It is the first report of the genus *Erythraeus* from Cyprus.

KEYWORDS — Taxonomy; new species; *Erythraeus* (*Zaracarus*) *arminouensis* **n. sp.**; Cyprus

INTRODUCTION

Fauna of terrestrial Parasitengona of Cyprus is very poorly known. To date, only six species were reported from this island: *Smaris pinus* Zhang, 1995, *Leptus* (*Leptus*) *siculus* (Canestrini 1884), *Abrolophus halberti* (Cooreman 1946), based on adults, *Phanolophus oedipodarum* (Frauenfeld 1868) based on adults and larvae and *Eutrombidium feldmanmuh-sammae* Feider, 1977 based on larvae (Feider 1977, Haitlinger 1993, Beron 2008). In this paper we describe the larva of *Erythraeus* (*Zaracarus*) *arminouensis* **n. sp.** from Arminou, Cyprus.

MATERIALS AND METHODS

Larvae were collected from herbaceous plants. They were preserved in 30% ethanol and later mounted on microscopic slides using Berlese medium on a glass slide. Measurements (given in micrometers) were made using microscope NIKON Eclipse 80i. Figures were drawn using the same mi-

croscope. The terminology and abbreviations follow Goldarazena and Zhang (1998) and Haitlinger (2003). The holotype is deposited in Museum of Natural History, Wrocław University (MNHU), Poland.

FAMILY ERYTHRAEIDAE ROBINEAU-DESVOIDY, 1828

Genus *Erythraeus* Latreille, 1806

Erythraeus (*Zaracarus*) *arminouensis* **n. sp.**
Figures 1-2

Diagnosis — The new species belongs to the group species of the subgenus *Zaracarus* with fnBf 2-2-2, Ta I > 114 and Ti III > 240. Larva with the following features: AL 172 – 176 with expanded bases, ISD 58 – 60, 1a 113 – 115 the longest in the subgenus *Zaracarus*, TaI 125 – 128, TiIII 254, fD 36, fn Ta 23, 18.16, fn Ti 14, 14, 15, fPp 5N, 1ω, 1ζ, IP 2512.

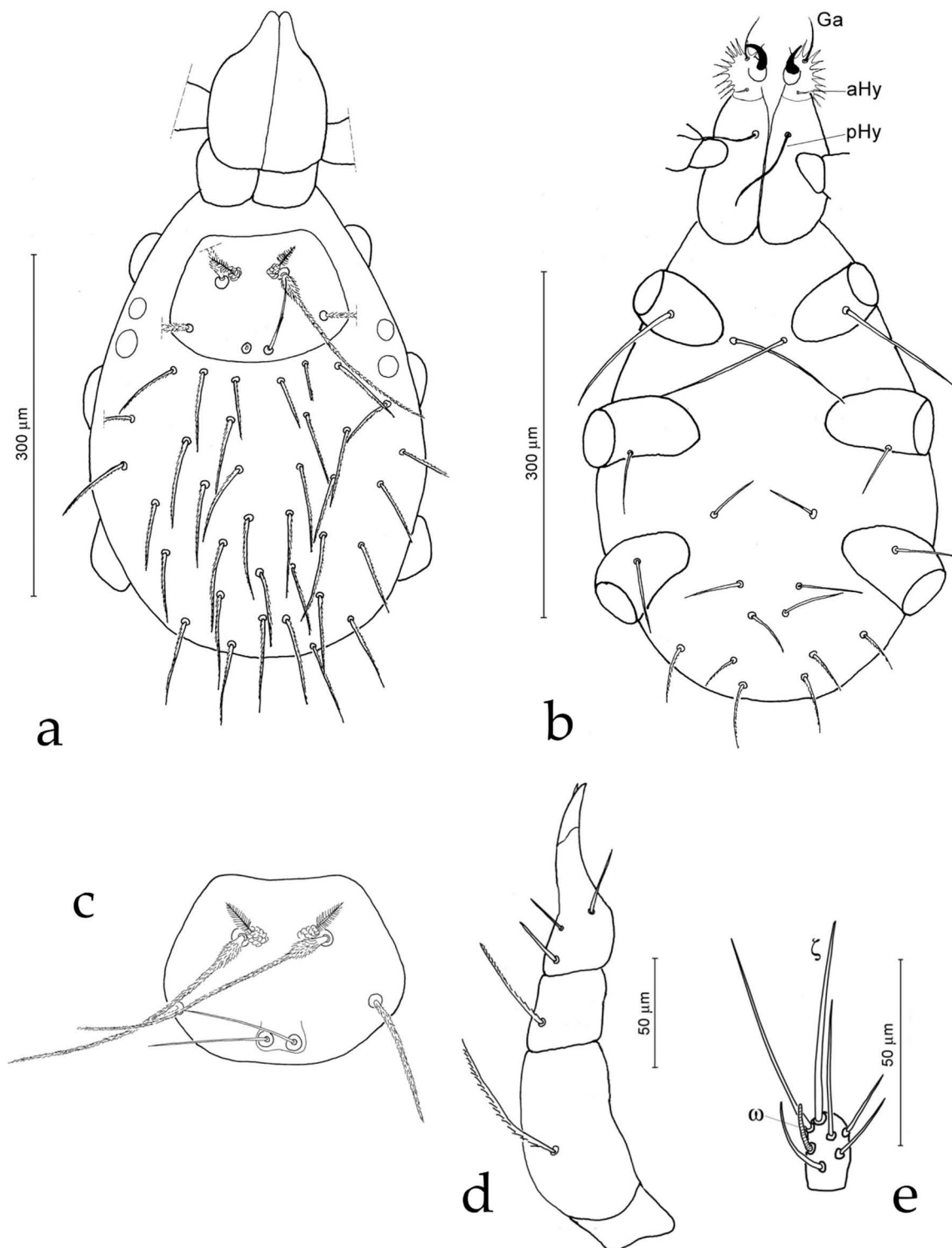


FIGURE 1: *Erythraeus (Zaracarus) arminouensis* n. sp. (larva). a – Dorsal view of idiosoma, b – Ventral view of idiosoma, c – scutum, paratype, d – Palp; e – Palptarsus.

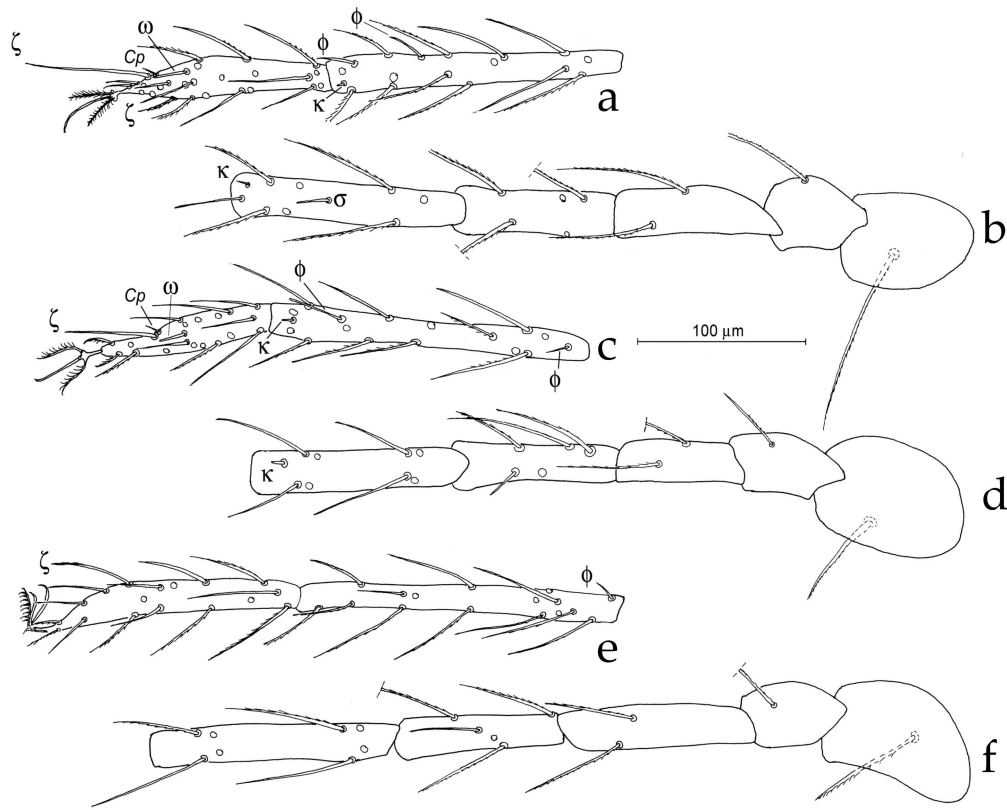


FIGURE 2: *Erythraeus (Zaracarus) arminouensis* n. sp. (larva). a - Leg I, tarsus-tibia; b - Leg I, genu-coxa; c - Leg II, tarsus-tibia; d - Leg II, genu-coxa; e, Leg III, tarsus-tibia; f - Leg III, genu-coxa.

Description based on holotype — Idiosoma longer than wide with 36 weakly barbed setae. Two pairs of anterolateral eyes, not on platelets (Figure 1a). Scutum wider than long (Figure 1a – holotype, Figure 1c – paratype) with two barbed setae AL and PL. Setae AL with expanded bases and sharply pointed; setae PL distinctly shorter than setae AL. Anterior sensillae AM very short, with relatively long setulae, placed among pouch-like structures. Posterior sensillae S nude, about twice longer than sensillae AM (Figure 1a).

Ventral surface of idiosoma bearing two very long setae 1a, short setae 3a and 10 setae behind coxae III. Setae 1b about twice longer than setae 2b and 3b. All setae nude, excluding 6 setae placed at posterior margin of opisthosoma and setae 1b-3b (Figure 1b) NDV = 46.

Gnathosoma with smooth galealae (Ga), short anterior hypostomale (aHy) 12 μm and relatively

long and smooth posterior hypostomale (pHy). Palpfemur and palpgenu, each with one weakly barbed seta. Palptibia with 3 nude setae and bifurcated tibial claw (Figure 1d). Palptarsus with 7 nude setae (including eupathidium and solenidion); among them only eupathidium and one seta are long (Figure 1e).

Leg setal formula: Leg I: Ta – 1ω, 2ζ, 1Cp, 23 (19N, 4B); Ti – 2φ, 1κ, 14 (8B, 6N); Ge – 1σ, 1κ, 8 (6B, 2N); Tf – 5B; Bf – 2B; Tr – 1B; Cx – 1B (Figures 2a-b). Leg II: Ta – 1ω, 1ζ, 1Cp, 18 (10B, 8N); Ti – 1φ, 1κ, 14 (10B, 4N); Ge – 1κ, 8 (4B, 4N); Tf – 5 (3B, 2N); Bf – 2B; Tr – 1B; Cx – 1B (Figures 2c-d). Leg III: Ta – 1ζ, 16 (12B, 4N); Ti – 1φ, 15 (11B, 4N); Ge – 8 (6B, 2N); Tf 5 (3B, 2N); Bf – 2B; Tr – 1B; Cx – 1B (Figures 2e-f). Legs length: I 782, holotype, 774 paratype, II 782, holotype, 753, paratype, III 948 holotype (leg III broken in paratype). IP = 2512 holotype (leg III broken in paratype).

TABLE 1: Metric data of *Erythraeus (Zaracarus) arminouensis* **sp. nov.** larvae; H - holotype, P - paratype

	H	P		H	P
IL	407	539	TaI	125	128
IW	284	402	TiI	175	170
AW	53	53	GeI	138	130
PW	115	125	TfI	98	100
AA	25	23	BfI	100	103
SB	18	18	TrI	63	63
ISD	58	60	CxI	83	80
L	113	120	TaII	113	120
W	155	168	TiII	175	170
AP	48	55	GeII	133	123
AL	173	176	TfII	100	90
PL	-	80	BfII	93	95
AM	35	35	TrII	73	70
S	75	73	CxII	95	85
DS	58-83	58-85	TaIII	150	-
GL	155	167	TiIII	254	-
1a	115	113	GeIII	145	-
1b	108	108	TfIII	113	-
2b	53	-	BfIII	120	-
3b	55	53	TrIII	73	78
PsFd	48	45	CxIII	93	100
PsGd	73	70	Ga	35	
Hy	57	60	IP	2512	

Measurements are given in Table 1.

Etymology — The species was named after the place where the holotype was collected.

Type material — The holotype and paratype larvae were collected by R. Haitlinger from herbaceous plants 6 May 2011 in Arminou n. Salamiou, Cyprus. The holotype is deposited in Museum of Natural History, Wrocław University (MNHU), Poland. Paratype is in senior author's collection.

Remarks — *Erythraeus (Zaracarus) arminouensis* **n. sp.** belongs to the species group with fnBf 2-2-2, TaI > 114 and TiII > 240. This group includes: *E. (Z.)*

eleonora Haitlinger, 1987, *E. (Z.) didonae* Haitlinger, 2000, *E. (Z.) kurdistanensis* Khanjani and Ueckermann, 2005 (Haitlinger, 1987, 2000, Khanjani and Ueckermann, 2005). It differs from *E. (Z.) eleonora* in the shorter AL (173 – 176 vs. 200 – 242), PL (80 vs. 92 – 102), AW (53 vs. 62 – 75), PW (115 – 125 vs. 140 – 167) and ISD (58 – 60 vs. 64 – 80); from *E. (Z.) didonae* in fD (36 vs. 26), the longer AL (173 – 176 vs. 150), 1a (113 – 115 vs. 72), 1b (108 vs. 94), TaI (125 – 128 vs. 116) and TaIII (150 vs. 136) and from *E. (Z.) kurdistanensis* in the shorter AW (53 vs. 60 – 62), PW (115 – 123 vs. 140 – 150), Ti III (254 vs. 290 – 297), longer AL (173 – 176 vs. 138 – 150), 1a (113 –

115 vs. 74 – 90) and PsGd (70 – 73 vs. 50 – 64).

REFERENCES

- Beron P. 2008 — Acarorum Catalogus I. Acariformes: Calyptostomatoidea, (Calyptostomatidae), Erythraeoidea (Smarididae, Erythraeidae) — Ed. Pensoft Publ. Ann. Nat. Mus. Nat. Hist., Sofia, Bulg. Acad. Sci., Sofia-Moscow, pp. 271.
- Feider Z. 1977 — Contribution à la connaissance des larves d'acariens du bassin oriental de la Méditerranée — Isr. J. Zool., 26: 100-113.
- Goldarazena A., Zhang Z. Q. 1998 — New *Erythraeus* larvae (Acari: Erythraeidae), ectoparasitic on Aphidoidea (Homoptera) and Anthocoridae (Heteroptera) — Syst. Appl. Acarol., 3: 149-158.
- Haitlinger R. 1987 — The genus *Erythraeus* Latreille, 1806 (Acari, Prostigmata, Erythraeidae) in Poland (larvae) — Pol. Pismo Entomol., 57: 725-734.
- Haitlinger R. 1993 — Acari (Arachnida) and Anoplura (Insecta) collected on small mammals, reptiles and insects in Greece and Cyprus — Biol. Gallo-hellen., 20: 83-88.
- Haitlinger R. 2000 — New larval mites (Acari: Prostigmata: Erythraeidae, Microtrombidiidae, Trombidiidae) from Turkey, Peru and Poland — Wiad. Parazytol., 46: 379-396.
- Haitlinger R. 2003 — Four new larval Erythraeidae (Acari, Prostigmata) from Rhodes, Greece — Biologia, 58: 133-146.
- Khanjani M., Ueckermann E. 2005 — A new larval species of *Erythraeus*(*Zaracarus*) (Acari: Erythraeidae) from west Iran — Internat. J. Acarol., 31: 123-128.
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