A NEW LARVAL ERYTHRAEIDAE (ACARI) FROM HUNGARY

Alex Fain[1] and Géza Ripka[2]

1. Institut royal des Sciences naturelles de Belgique, rue Vautier 29, B-1000 Bruxelles, Belgium. 2. Budapest Plant Health and Soil Conservation Station, H-1519 Budapest, POB 340, 1118 Budapest, Budaörsi út 141-145 Hungary.

SUMMARY - A new larval erythraeid, *Erythraeus (Zaracarus) budapestensis* **spec.nov.** (Acari), is described from a Hop-tree, *Ptelea trifoliata* in Hungary.

Key Words - Acari, Erythraeidae, larval erythraeid, Hop-tree, Hungary.

RÉSUMÉ - Une nouvelle espèce d'Erythraeidae, *Erythraeus (Zaracarus) budapestensis* spec.nov. (Acari), représentée seulement par sa forme larvaire, est décrite d'un Orme à trois feuilles en Hongrie.

Mots-clé -Acari,Taxonomie, Erythraeidae, Larva, Plante, Hongrie.

INTRODUCTION

Southcott (1995) described a new species and subgenus *Erythraeus (Zaracarus) lancifer* based on larval specimens collected from "colored plates" and dolichopodid flies in Spain. This new monotypic subgenus was distinguished from the subgenus *Bochartia* by the differenly shaped setae AL which are expanded at their bases and taper distally to a sharp point.

Haitlinger and Saboori (1996) placed two other species viz. *Erythraeus eleonorae* Haitlinger, 1987 and *E. tehranicus* Haitlinger and Saboori, 1996 in subgenus *Zaracarus*. However, only one of these species, *E. eleonorae*, has AL with inflated bases, while the second species has normal, uninflated AL.

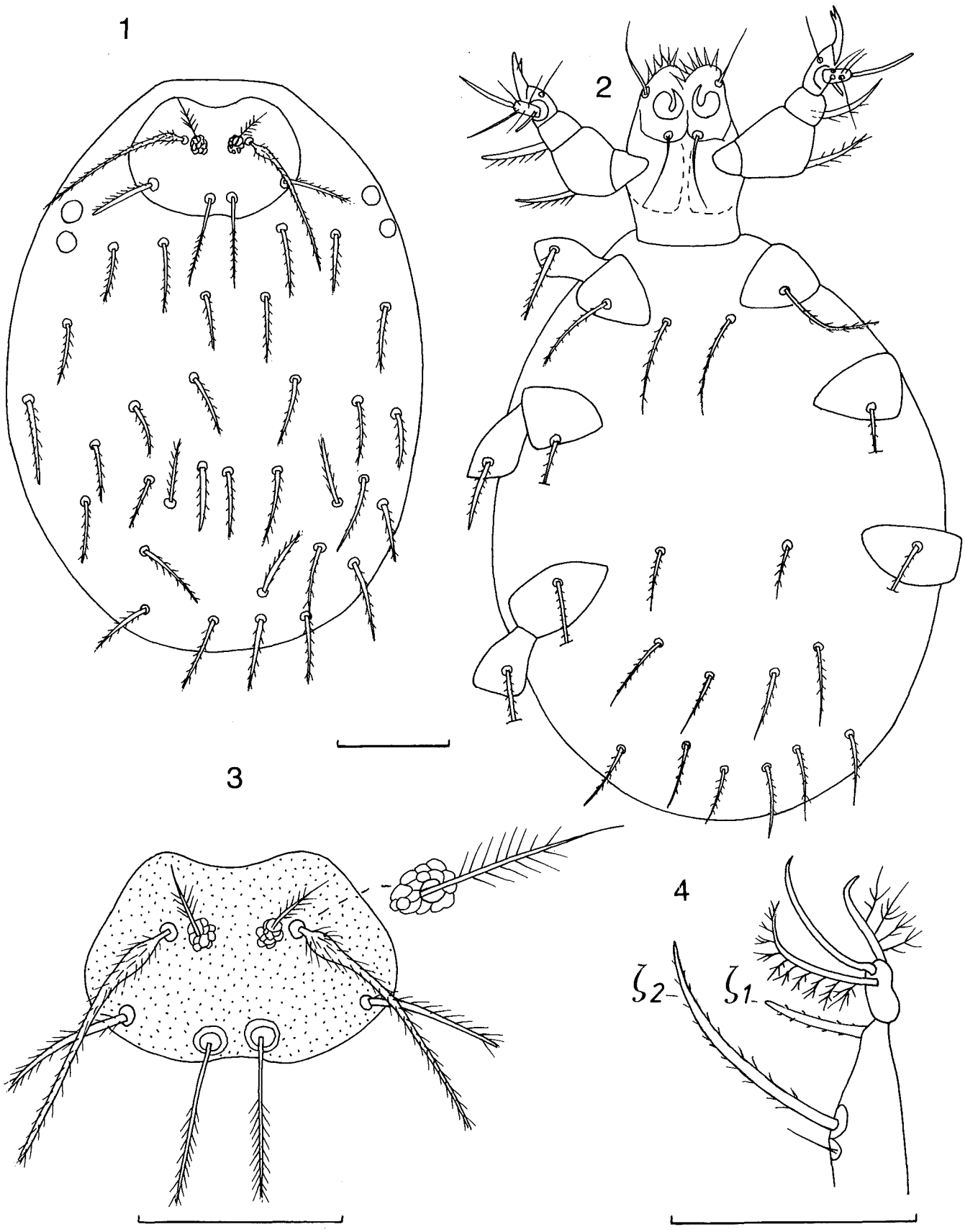
Another character, not mentioned in the original definition of this subgenus but appearing in the descriptions and the figures of Southcott and Haitlinger, is the presence at the bases of the anterior sensillae of a special organ named "obliquely-set sockets" (Southcott, 1995) or "characteristic cuticular structures" (Haitlinger, 1989). These pouch-like structures are also present in *E. tehranicus* but are absent in all the species of *Erythraeus* s.str. Therefore, we propose to broaden the definition of the subgenus *Zaracarus* and to include the new species in this subgenus.

During investigations on parasitic plant-mites in Hungary, the junior author collected a larva representing a new species of the subgenus *Erythraeus (Zaracarus)* Southcott. The latter is described here.

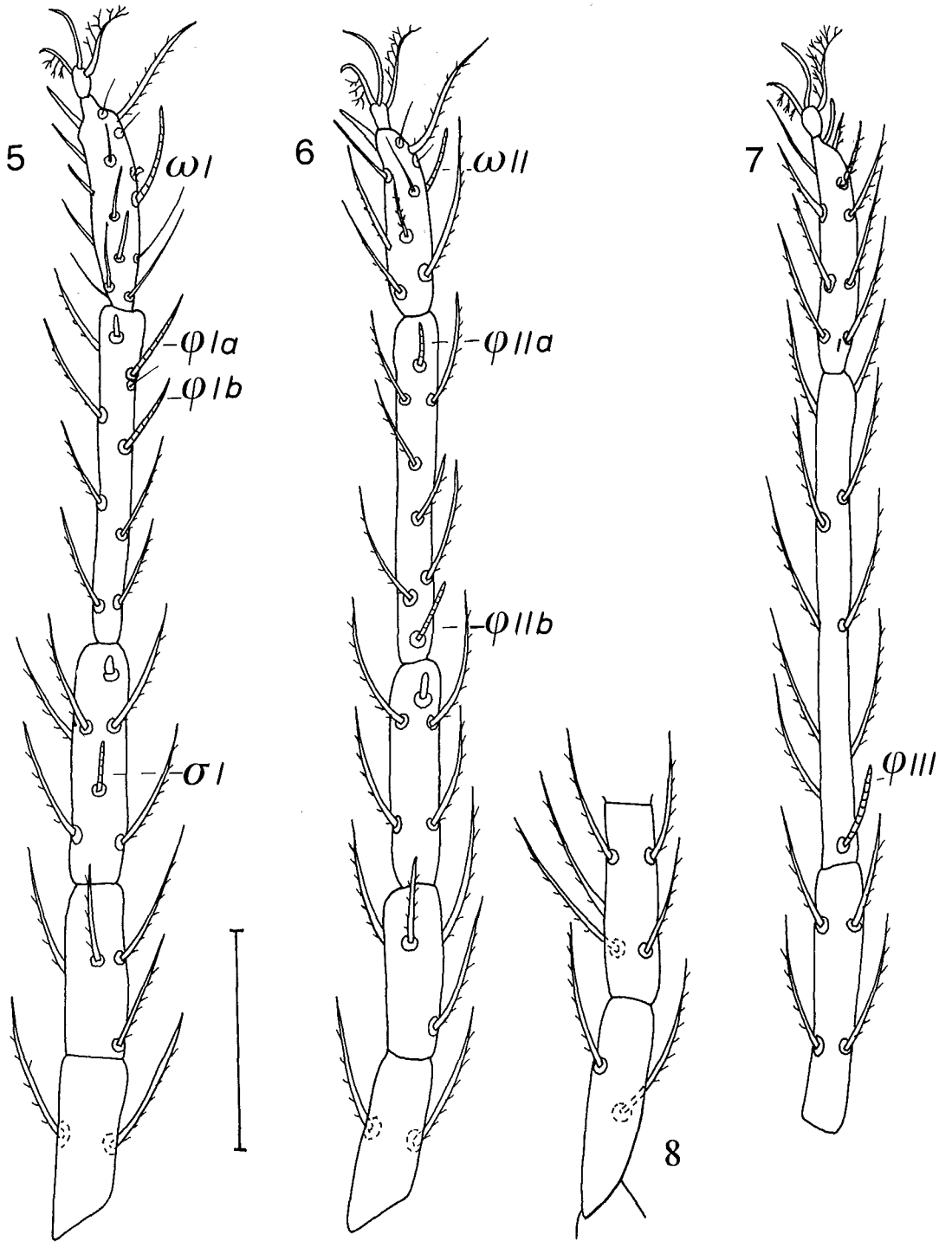
All the measurements are given in micrometers (μm). Measurements and abbreviations are as in Southcott (1992) and solenidia as in Fain and Jocqué (1996).

Key to the species of the subgenus *Erythraeus (Zaracarus)*

1.Basifemoral setal formula 2-2-2; bases of AL setae either expanded or thin 2
Basifemoral setal formula 3-3-3; bases of the AL setae expanded .....*E. (Z.) lancifer*
2. Setae AL with bases smooth and thin; anterior sensillae short, bipectinate in their distal half.....
.....*E. (Z.) tehranicus*
Setae AL with expanded and setulose bases.....3
3.Scutum very large (length 146, width 214); AL 220; PL 100; ASE 44; PSE smooth, 101; ISD 70; A-P 75; CxI setae 106. Legs relatively long: TaI-III 137-119-141; TiI-III 172-185-269. Length of dorsal setae 90-100; ventral setae 66-81.....*E. (Z.) eleonorae*
Scutum much smaller (length 96, width 150); AL 150; PL 60; ASE 33; PSE setulose in their apical half, 69; CxI setae 80. Legs relatively short: TaI-III 100-93-105,TiI-III 155-160-240. Lengths of dorsal setae 50-70; ventral setae (on opisthogaster) 38-42.....
.....*E. (Z.) budapestensis*



Figs. 1-4. *Erythraeus (Zaracarus) budapestensis* spec.nov. (Larva) - 1. dorsal view, 2. ventral view (scale line 100 μm), 3. dorsal shield, 4. distal part of leg I (scale lines 100 μm, Fig. 3, and 50 μm, Fig. 4).



Figs. 5-8. *Erythraeus (Zaracarus) budapestensis* spec.nov. (Larva) - 5. leg I (dorsal view), 6. leg II (dorsolateral view), 7. leg III - genu,tibia & tarsus (dorsolateral view) (scale line 100 μm), 8. leg III - trochanter & femur (dorsolateral view) (scale line 100 μm).

Table 1. Measurements of the larvae of *Erythraeus (Zaracarus) lancifer* Southcott, *E. (Z.) eleonorae* Haitlinger, *E. (Z.) tehranicus* Haitlinger and *E. (Z.) budapestensis* spec.nov.

Characters	*E.(Z.) lancifer*	*E.(Z.) eleonorae*	*E.(Z.) tehrani-cus*	*E.(Z.) budapes-tensis* sp.n.	Characters	*E.(Z.) lancifer*	*E.(Z.) eleonorae*	*E.(Z.) tehrani-cus*	*E.(Z.) budapes-tensis* sp.n.
	Holotype	Holotype	Holotype	Holotype		Holotype	Holotype	Holotype	Holotype
AW	42	70	50	57	St I	38	70	70	70
PW	95	165	108	116	St II	31	-	-	33
SBa	25	31	32	30	Cx I	96	106	62	80
SBp	15	22	22	19	Cx II	36	-	26	-
ISD	60	70	42	45	Cx III	41	-	40	-
L	91	146	100	96	Ta I	144	137	100	100
W	136	214	140	150	Ta II	128	119	88	93
AAS	7	-	-	15	Ta III	140	141	112	105
A-P	44	75	42	52	Ti I	205	172	124	155
AL	145	220	140	150	Ti II	200	185	122	160
PL	69	100	54	60	Ti III	304	269	180	240
ASE	22	44	28	33	Ge I	155	146	96	116
PSE	65	101	72	69	Ge II	129	132	90	108
DS	53-62	-	32-58	50-70	Ge III	157	152	104	128

105,TiI-III 155-160-240. Lengths of dorsal setae 50-70; ventral setae (on opisthogaster) 38-42.....
.....*E. (Z.) budapestensis*

***Erythraeus (Zaracarus) budapestensis* spec.nov. (Figs. 1-8)**

Larva (holotype) (figs 1-8) - Measurements as in Table 1. Idiosoma broadly ovoid, 490 long and 390 wide. *Dorsum* - Scutum with anterior border slightly concave mediall. Setae AL as described above, with very short setules. PL also setulose but much shorter than AL. Anterior sensillae thin, bipectinate medially and set into obliquely directed cuticular sockets. Posterior sensillae thin, setulose on distal half. Diameter of anterior eyes 16-18, posterior ones 15. Soft cuticle of dorsum with 16 pairs of linear setulose setae, with blunt extremities. *Venter* - Setae *St I* 70 long, setulose, attenuated distally; *St II* 32 long, located between coxae III; setae CxI 80, very short setulose; setae *CxII* and *CxIII* incomplete. Opisthogaster with 5 pairs of setae, thinner than dorsal setae and attenuated distally, 38 to 42 long.

Legs -Relatively long and thin, especially the tibiae. Claws of the erythraeus type. Median claw 25 to 28 long. *Number of setae* (excluding the specialized sensory setae such as solenidia and eupathidiae): Trochanter 1-1-1, Basifemur 2-2-2, Telofemur 5-5-5, Genu 8-8-8, Tibia 15-15-16, Tarsus about 20, mostly setulose or some smooth. Solenidial formula as in *Leptus* (see Fain and Jocqué, 1996). Lengths of solenidia: ω *I* 26; ω *II* 17; φ *Ia* 30; φ *Ib* 26; φ IIa 16; φ *IIb* 22; φ *III* 22; σ*I* 19. The ω*I* is closer to the apex of the tarsus (44) than to its base. *Eupathidiae*: Tarsi I and II with 2 unequal eupathidiae bearing very small setules, one is subapical (*dzeta 1*) and 18-23 long, the other preapical (*dzeta 2*) is thicker than all the ordinary leg setae and 45 long. Tarsus III with only *dzeta 1*.

Host and locality - The holotype larva, and only known specimen, collected from a Hop-tree, *Ptelea trifoliata* L. (Fam. Rutaceae). Sampling place n° 902, in a park in Budapest, district II, Hungary (Coll. Geza Ripka, 7 June 1996). This tree was infested with *Aphis fabae*. Holotype is in the collection of the Institut royal des Sciences naturelles de Belgique.

REFERENCES

Fain, A. and R. Jocqué. 1996. A new larva of the genus *Leptus* Latreille, 1796 (Acari: Erythraeidae) parasitic on a spider from Rwanda. Internat. J. Acarol. 22: 101-108.

Haitlinger, R. 1987. The genus *Erythraeus* Latreille, 1806 (Acari, Prostigmata, Erythraeidae) in Poland (larvae). Bull. Entomol. Pologne, 57: 725-734.

Haitlinger, R. and A.S. Saboori. 1996. Seven new larval mites (Acari, Prostigmata, Erythraeidae) from Iran. Miscellanea Zoologica, 19: 117-131.

Southcott, R.V. 1992. Revision of the larvae of *Leptus* Latreille (Acarina : Erythraeidae) of Europe and North America, with description of post larvae instars. Zool. J. Linn. Soc. 105 (1): 1-135.

Southcott, R.V. 1995. A new larval erythraeine mite (Acarina: Erythraeidae) from Spain. Acarologia, 36 (3): 223-228.

*****