

## NEW SPECIES OF THE GENUS *LAUROPPIA* SUBÍAS & MÍNGUEZ, 1986 (ACARI, ORIBATIDA, OPPIIDAE) FROM IRAN

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### ABSTRACT

Two new species of oribatid mites of the family Oppiidae Sellnick, 1937, *Lauropia iranica* **sp. nov.** and *Lauropia persiangulfia* **sp. nov.**, are described from Mazandaran province, Northern Iran. These two new species are characterized by their long sensillus, with a bipectinate fusiform head and seven medium long barbs in *L. iranica* and a pectinate head and six long barbs in *L. persiangulfia*. Also an identification key to the Iranian species of *Lauropia* is given.

**Key words:** Acari, Oribatida, Oppiidae, *Lauropia*, two new species, Iran.

### RESUMEN

#### Nuevas especies del género *Lauropia* Subías y Mínguez, 1986 (Acari, Oribatida, Oppiidae) de Irán

Dos nuevas especies de ácaros oribátidos de la familia Oppiidae Sellnick, 1937, *Lauropia iranica* **sp. nov.** and *Lauropia persiangulfia* **sp. nov.**, se describen de la provincia de Mazandaran, norte de Irán. Estas dos nuevas especies se caracterizan por su sensilo largo, con una cabeza fusiforme bipectinada y con siete bárbulas de longitud media en *L. iranica* y con una cabeza pectinada y seis bárbulas largas en *L. persiangulfia*.

**Palabras clave:** Acari, Oribatida, Oppiidae, *Lauropia*, dos nuevas especies, Irán.

### Introduction

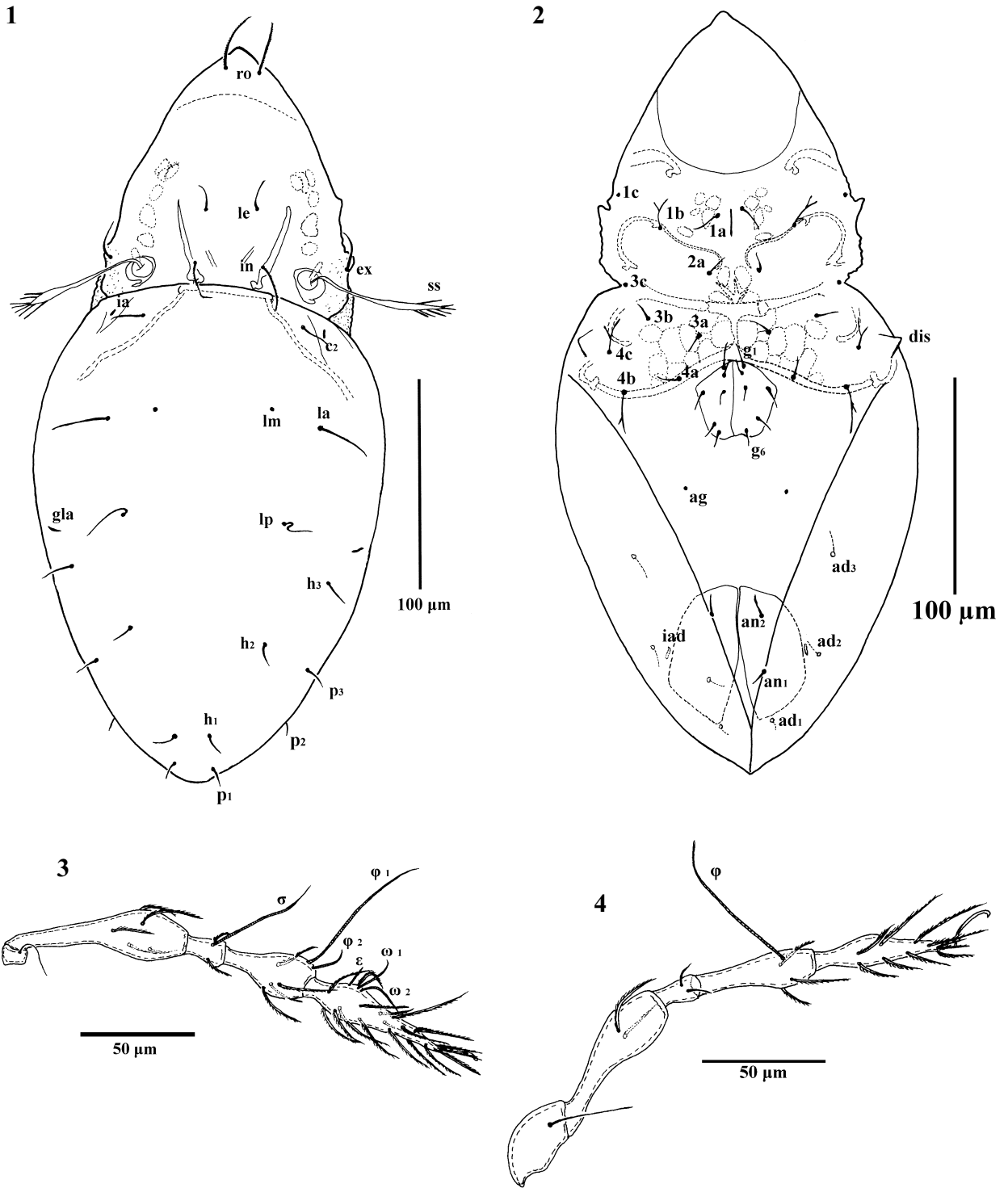
The genus *Lauropia* Subías & Mínguez, 1986, has been represented by twenty-six species (Subías, 2004). This genus is easily distinguished from other genera of the subfamily Oppiellinae Seniczak, 1975 by the

straight dorsosejugal suture, short crista and usually six pairs of genital setae (Balogh & Balogh, 1992).

Knowledge of the Iranian Oppiidae fauna is very limited and there is little information on oppiid mites of Iran (Bayartogtokh & Akrami, 2000; Akrami & Subías, 2007 a and b).

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Figs. 1-4.— *Lauroppia iranica* sp. nov. 1) Idiosoma, dorsal view; 2) ventral view; 3) leg I, left; 4) Leg IV, right.

Figs. 1-4.— *Lauroppia iranica* sp. nov. Idiosoma, Aspecto dorsal (1) y ventral (2). 3) Pata I, izquierda y 4) pata IV, derecha.

During 2000-2004, in the course of a faunistic survey of oribatid mites of Mazandaran province, Northern Iran, five species of the family Oppiidae belonging to the genus *Lauropia* were collected: *Lauropia falcata marginedentata* (Strenzke, 1951), *Lauropia doris* (Perez-Inigo, 1978), *Lauropia tenuipectinata* Subías & Rodríguez, 1988 (Akrami & Subías, 2007b) and two new species.

In this paper we describe two new species of the genus *Lauropia*, namely *Lauropia iranica* sp. nov. and *Lauropia persiangulfia* sp. nov. from Iran. The specimens are mounted in permanent slides on Hoyer's medium. All measurements are given in micrometers ( $\mu\text{m}$ ).

***Lauropia iranica* sp. nov.**

(Figs. 1-4)

**MATERIAL EXAMINED.** Holotype and one paratype from Koliak village, Nowshahr, Mazandaran province, Iran, soil and litter under forest trees, 36°7'N, 51°30'E, 1823 m. a. s. l., 29- IX-2000, M. A. Akrami leg.

**TYPE DEPOSITORY.** The holotype and paratype are deposited in the Department of Plant Protection, Shiraz University, Iran.

**DIAGNOSIS.** Medium in size, with typical characters of *Lauropia*. Rostrum pointed at tip; sensillus long with a bipectinate fusiform head and a narrow, smooth stalk. Ten pairs of notogastral setae conspicuously thin and smooth. Six pairs of genital, one pair of aggenital, two pairs of anal and three pairs of adanal setae.

**DESCRIPTION.** Measurements: Body length (holotype and paratype) 330  $\mu\text{m}$ , width 170  $\mu\text{m}$ .

**Prodorsum** (fig. 1). Rostrum pointed at tip; rostral setae (*ro*) long, situated far from each other, finely barbed; lamellar setae (*le*) thin, smooth, setiform and shorter than rostral setae; interlamellar setae (*in*) nearly as long as rostral setae, finely barbed; exobothridial setae (*ex*) medium long with some barbs; sensillus (*ss*) long, bipectinate fusiform, its head with seven medium long barbs; bothridia round; some muscle sigillae situated anterior to each bothridium; costulae present between each bothridium and interlamellar seta.

**Notogaster** (fig. 1). Notogaster oval, dorsosejugal suture straight; crista present; ten pairs of notogastral setae thin and smooth (seta *lm* is broken and it is only depicted as insertion point on both sides), seta *c*<sub>2</sub> well developed, *lm* and *la* nearly situated at same level; lyrifissures *ia* and latero-opisthosomal gland (*gla*) openings well developed.

**Ventral region** (fig. 2). Epimeral region with a few muscle sigillae; apodemes *I*, *II*, *Sj* and *IV* well

developed; epimeral setal formula (I-IV) 3-1-3-3 (setae *1c* and *3c* are broken and it is only depicted as insertion point on both sides); epimeral setae *1b*, *4b* and *4c* distinctly two branched; discidium (*dis*) well developed; genital plates with six pairs of setae, four arranged on inner margin and another two on outer margin of the plates, *g*<sub>1</sub> about twice as long as the other genital setae, one pair of aggenital (seta *ag* is broken and it is only depicted as insertion point on both sides), two pairs of anal and three pairs of adanal setae present; ano-genital region smooth; *iad* fissures paraanal and adjacent to anal plates.

**Legs.** Formula of leg setation including famulus (trochanter to tarsus): I (1-5-2-4-20); IV (1-2-2-3-10) and the formula of solenidia: I (1-2-2); IV (0-1-0). Structure and setation of legs I and IV as shown in figs. 3-4.

**ETYMOLOGY.** The specific name "*iranica*" refers to the country of the type locality of this species, Iran.

**REMARKS.** Because of the long sensillus and straight lamellar costulae, the new species resembles the next Romanian species: *Lauropia motasi* Vasiliu & Ivan, 1999, but its sensillus is unilaterally ciliate; also: *Lauropia breviseta* Vasiliu & Ivan, 1999, but its rostrum is tridentate and the sensillus also unilaterally ciliate; *Lauropia feideri* Vasiliu & Ivan, 1999, but its sensillus is setiform and unilaterally pectinate; and, *Lauropia getica* (Vasiliu & Calugar, 1981), but its rostrum is tridentate.

***Lauropia persiangulfia* sp. nov.**

(Figs. 5-8)

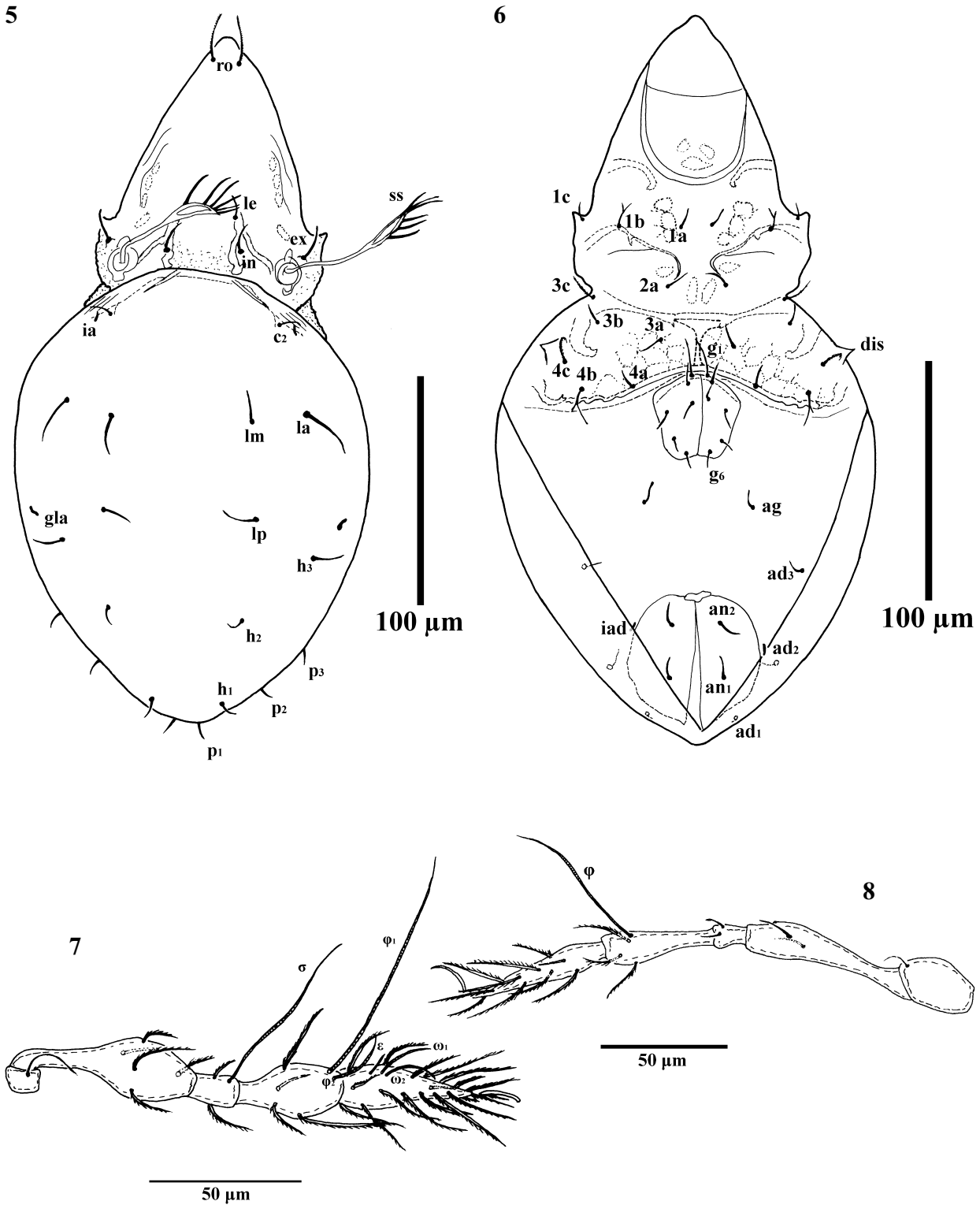
**MATERIAL EXAMINED.** Holotype and two paratypes: Koliak village, Nowshahr, Mazandaran province, Iran, soil and litter of forest trees, 36°7'N, 51°30'E, 1823 m. a. s. l., 29- IX-2000, M. A. Akrami leg.

**TYPE DEPOSITORY.** The holotype and paratypes are deposited in the Department of Plant Protection, Shiraz University, Iran.

**DIAGNOSIS.** Medium in size. Rostrum rounded at tip; sensillus long with a pectinate head and a smooth, narrow stalk. Ten pairs of notogastral setae which are conspicuously thin and smooth. Six pairs of genital, one pair of aggenital, two pairs of anal and three pairs of adanal setae.

**DESCRIPTION.** Measurements: Body length 300-330  $\mu\text{m}$ , width 150-180  $\mu\text{m}$  (n= 3).

**Prodorsum** (fig. 5). Rostrum rounded at tip; rostral setae (*ro*) long, situated far from each other,



Figs. 5-8.— *Lauroppia persiangulfia* sp. nov. 5) Idiosoma, dorsal view, 6) ventral view, 7) leg I, left, 8) Leg IV, left.

Figs. 5-8.— *Lauroppia persiangulfia* sp. nov. 5) Idiosoma, aspecto dorsal y 6) ventral, 7) pata I, izquierda, 8) pata IV, izquierda.

finely barbed; lamellar setae (*le*) thin, smooth, setiform and shorter than rostral and interlamellar setae (*in*), interlamellar setae finely barbed; exobothridial setae (*ex*) medium long with some barbs; sensillus (*ss*) long, pectinate, its head with six long barbs; bothridia round; some muscle sigillae situated anteriorly to each bothridium; costulae present between each bothridium and interlamellar seta.

Notogaster (fig. 5). Notogaster oval, dorsosejugal suture straight; crista present; ten pairs of notogastral setae which are thin and smooth, setae *c*<sub>2</sub> well developed, *lm* and *la* nearly situated at the same level; lyrifissures *ia* and latero-opisthosomal gland (*gla*) openings well developed.

Ventral region (fig. 6). Epimeral region with a few muscle sigillae; apodemes *I*, *II*, *Sj* and *IV* well developed; epimeral setal formula (I-IV) 3-1-3-3; epimeral setae *1b* and *4b* distinctly two branched and epimeral setae *3c* and *4c* finely barbed; discidium (*dis*) well developed; genital plates with six pairs of setae, four arranged on inner margin and another two on outer margin of the plates, *g*<sub>1</sub> about twice as long as other genital setae, one pair of aggenital, two pairs of anal and three pairs of adanal setae present; ano-genital region smooth; *iad* fissures paraanal and adjacent to anal plates.

Legs. Formula of leg setation including famulus (trochanter to tarsus): I (1-5-2-4-20); IV (1-2-2-3-10) and the formula of solenidia: I (1-2-2); IV (0-1-0). Structure and setation of legs I and IV as shown in figs. 7-8.

ETYMOLOGY. The specific name “*persiangulfia*” refers to the Persian Gulf of Iran.

REMARKS. Because of the long sensillus and short lamellar costulae the new species resembles *L. decempectinata* (Fujikawa, 1986), from Japan, but its sensillus is setiform, the notogastral setae longer and falgelliform, and the genital plates have only five pairs of setae.

#### Identification key to the Iranian species of *Lauropia*

1. Sensillus fusiform, ciliate ..... 2
- \* Sensillus with a pectinate or bipectinate fusiform head ..... 4
2. Sensillus with long branches .....  
..... *L. falcata marginedentata*
- \* Sensillus with short branches ..... 3

3. Interlamellar setae very long, longer than lamellar setae ..... *L. doris*
- \* Interlamellar setae of similar length to lamellar setae .....  
..... *L. tenuipectinata*
4. Sensillus with a bipectinate fusiform head and seven medium long barbs ..... *L. iranica* sp. nov.
- \* Sensillus with a pectinate head and six long barbs ..  
..... *L. persiangulfia* sp. nov.

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