

## ***Serratoppia iranica* (Acari: Oppiidae), a new species of oribatid mite from Iran**

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### **Abstract**

A new species of oribatid mite of the family Oppiidae Sellnick, 1937, *Serratoppia iranica* sp. nov., is described from Iran. Also an identification key to all *Serratoppia* species is given.

**Key words:** Acari, Oribatida, Oppiidae, *Serratoppia iranica* sp. nov., Iran

### **Introduction**

The genus *Serratoppia* was established by Subías and Mínguez in 1985, with *Oppia serrata* Mihelčič, 1956 as the type species (Subías 2004). It can be recognized by the presence of two sclerotized apophyses on the anterior margin of the notogaster that run from the dorsosejugal suture to the basal part of the prodorsum, lines that more or less form a median cross on the basal half of the prodorsum and a uni-tridentate rostrum.

Subías (2004) included six species in *Serratoppia*. In the present paper, the seventh species, *S. iranica* sp. nov., is described from Mazandaran province, northern Iran.

### ***Serratoppia iranica* sp. nov. (Figs. 1–3)**

#### *Material examined*

Four specimens (holotype and three paratypes) were collected in Koliak village, Nowshahr city, Mazandaran province, Iran, from soils under deciduous forest trees, 36°7'N, 51°30'E, 1823 m above sea level, 29 September 2000, M.A. Akrami leg. The specimens are deposited in the Department of Plant Protection, Shiraz University, Shiraz, Iran.

#### *Diagnosis*

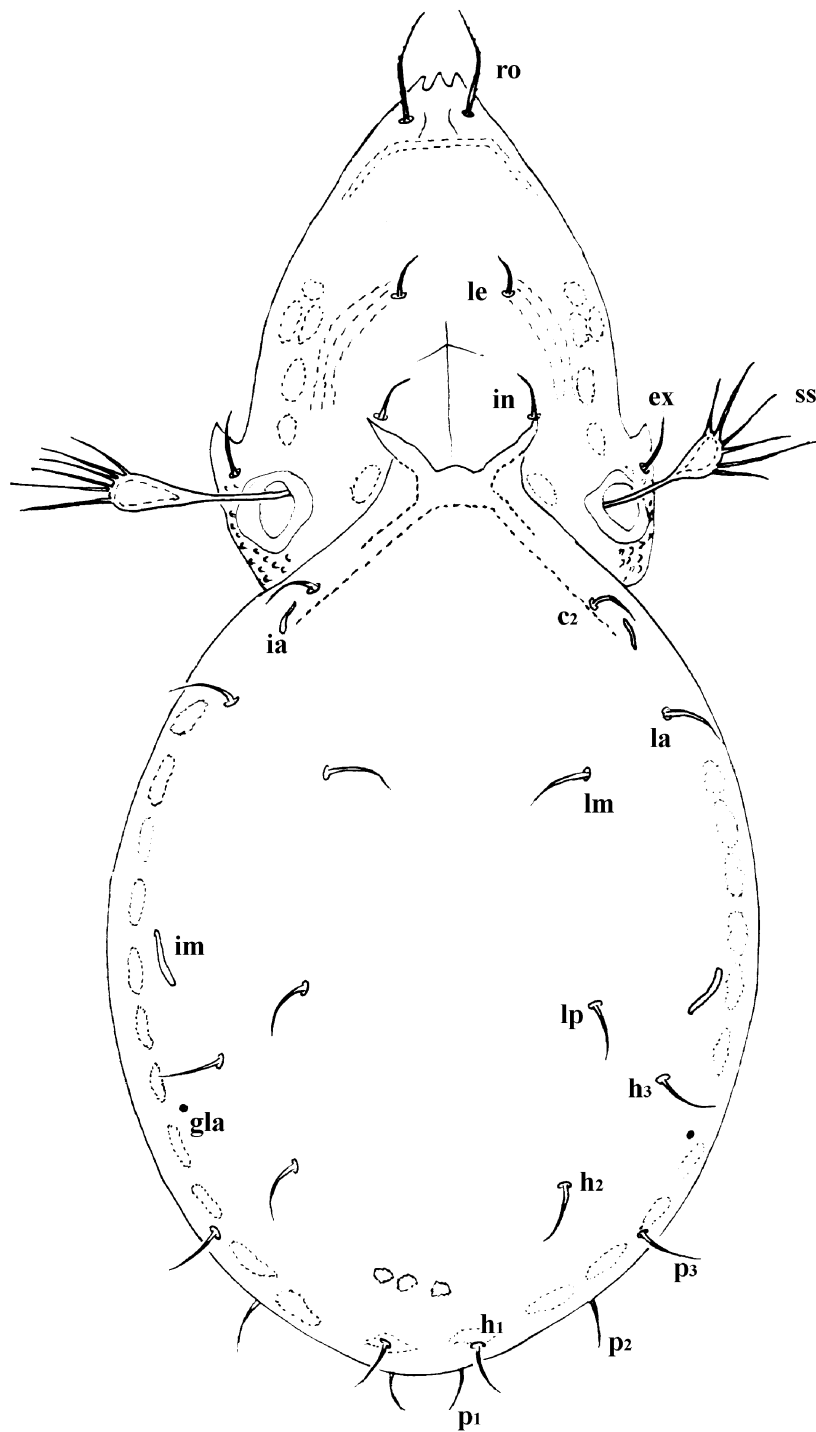
The new species is recognized by the tridentate rostrum, well-developed apophyses on the anterior margin of the notogaster that each have a well-developed lateral border, and clavate sensilli with six long radiating cilia and a long stalk.

#### *Description*

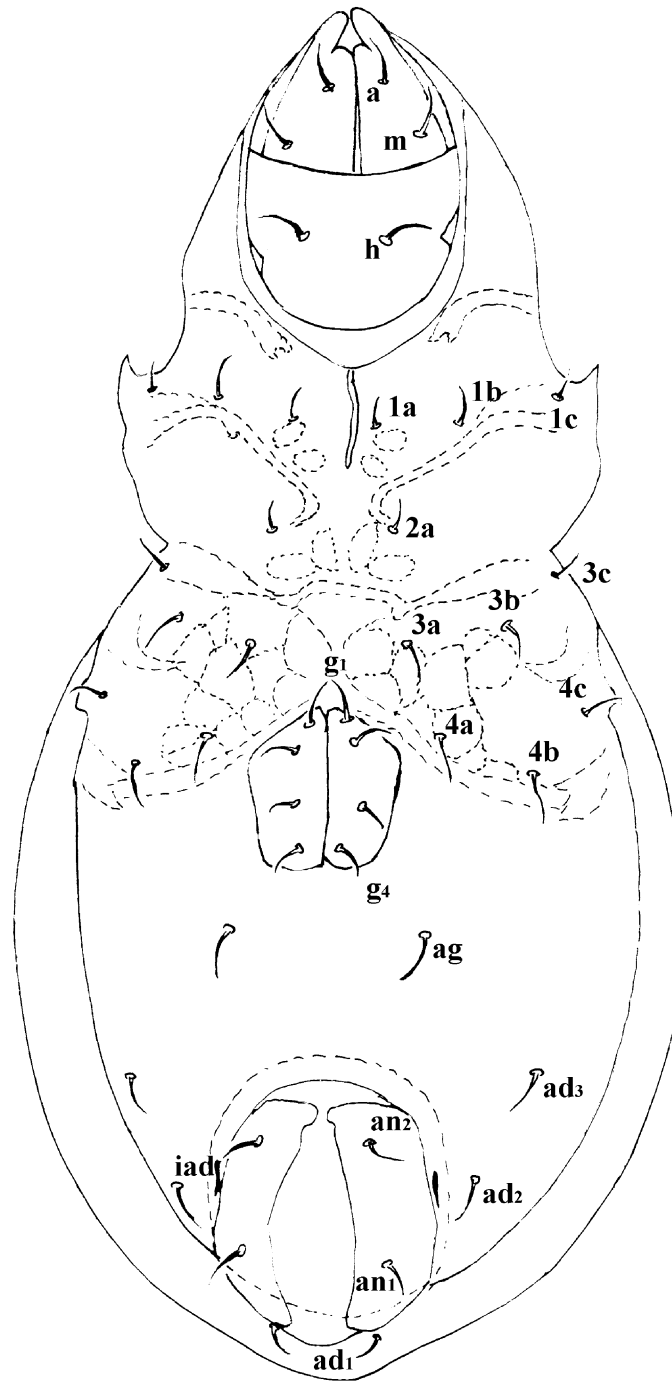
*Measurements.* Body length 217–220 µm, width 103–110 µm (n=4).

*Prodorsum* (Fig. 1). Rostrum tridentate; rostral setae (*ro*) long, slightly arched, their apical halves converging, finely barbed; lamellar setae (*le*) short and smooth; interlamellar setae (*in*) as long as lamellar ones, smooth, situated at end of apophyses; exobothridial setae (*ex*) slightly longer

than lamellar and interlamellar ones; sensilli (*ss*) clavate, with a long stalk, the head with six long radiating cilia; bothridia round; one pair of muscle sigillae situated between each apophysis and bothridium, some sigillae between each bothridium and *le*; characteristic median crossed lines present on prodorsum between *in* and *le*; exobothridial area granulated.

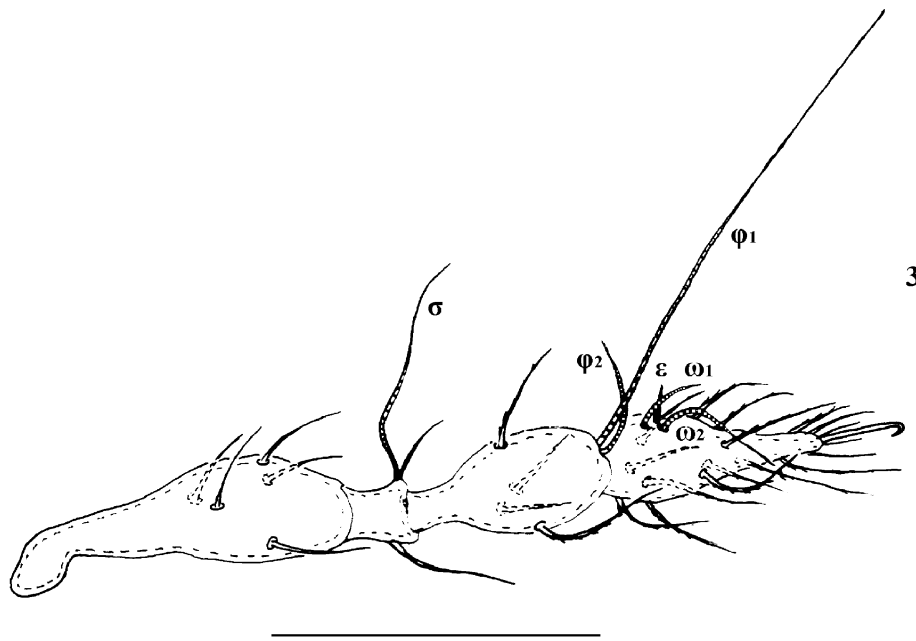


**FIGURE 1.** *Serratoppia iranica* sp. nov., holotype, dorsal view. Scale bar 50  $\mu$ m.

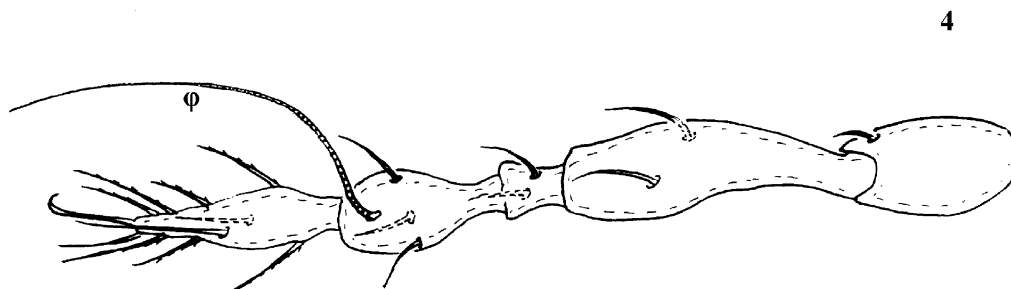


**FIGURE 2.** *Serratoppia iranica* sp. nov., holotype, ventral view.

*Notogaster* (Fig. 1). Notogaster oval, dorsosejugal suture convex, anterior margin of notogaster narrow with two sclerotized apophyses running from dorsosejugal suture to basal part of prodorsum, both have a well-developed outer border; 10 pairs of notogastral setae, short, thin and smooth, seta  $c_2$  developed; lyrifissures *ia*, *im* and latero-opisthosomal gland (*gla*) opening well-developed.



3



4

**FIGURES 3–4.** *Serratoppia iranica* sp. nov., holotype. 3, leg I; 4, leg IV. Scale bar 50  $\mu$ m.

*Ventral region* (Fig. 2). Hypostomal setae *h*, *m* and *a* longer than epimeral setae, thin; epimeral region with numerous muscle sigillae; apodemes *I*, *II*, *Sj* and *IV* well-developed; epimeral setal formula (I–IV) 3-1-3-3; epimeral setae thin and smooth; discidium well-developed; genital plates with four pairs of genital setae, one pair of aggenitals located posterolaterally; anal plates with two pairs of anal setae and three pairs of adanals; ventral shield smooth; *iad* fissures paraanal and adjacent to anal plates.

*Legs.* Structure and setation of legs I and IV as shown in Figures 3–4.

#### *Etymology*

The specific name "*iranica*" refers to the country of origin, Iran.

#### *Remarks*

The new species is similar to *Serratoppia minima* Subías & Rodríguez, 1988, *S. intermedia*

Subías & Rodríguez, 1988 and *S. serrata* (Mihelčič, 1956) in having a tridentate rostrum. Its well-developed apophyses on the anterior margin of the notogaster with clear outer borders and sensilli with a long stalk differentiate it from the former two species. The apophyses are of similar form in *S. serrata*, but *S. iranica* **sp. nov.** has clavate radiate sensilli, whereas in the former they are fusiform ciliate. Also, in the new species, the interlamellar setae are situated at the apex of the apophyses; in most other species each seta is situated between the apophysis and bothridium. The interlamellars are also anterior to the apophyses in *S. mitrofanovi* (Gordeeva & Karppinen, 1988), but *S. iranica* **sp. nov.** differs by its smaller size, shorter notogastral setae and longer sensillar stalk.

*Serratoppia serrata*, *S. minima*, *S. intermedia* and *S. guanicola* were described from Spain. According to Subías (2004), at the moment, *S. serrata* and *S. minima* are Euroatlantic species and *S. intermedia* is a Mediterranean species. *Serratoppia duffyi* is known only from Ireland and *S. mitrofanovi* from Ukraine. So *S. iranica* **sp. nov.** is the first species belonging to the genus *Serratoppia* that is described from Asia.

### Identification key to *Serratoppia* species of the world

- 1 Rostrum without a median tooth (bidentate); five pairs of genital setae *S. duffyi* (Evans, 1954)
- Rostrum with a median tooth; three or four pairs of genital setae . . . . . 2
- 2 Rostrum without lateral teeth; three pairs of genital setae . . . . . *S. guanicola* Subías & Arillo, 1996
- Rostrum with lateral teeth; four pairs of genital setae (exceptionally three) . . . . . 3
- 3 Lateral teeth shorter than median tooth . . . . . *S. mitrofanovi* (Gordeeva & Karppinen, 1988)
- Lateral teeth as long as median tooth . . . . . 4
- 4 Anterior margin of notogaster with poorly developed apophyses; sensillus with short stalk (stalk shorter than the head) . . . . . *S. minima* Subías & Rodríguez, 1988
- Anterior margin of notogaster with well-developed apophyses; sensillus with long stalk (stalk longer than the head) . . . . . 5
- 5 Sensillus clavate radiate with six long cilia . . . . . *S. iranica* **sp. nov.**
- Sensillus fusiform ciliate . . . . . 6
- 6 Notogastral apophyses with a lateral border; sensillus with 6–7 cilia *S. serrata* (Mihelčič, 1956)
- Notogastral apophyses almost without a lateral border; sensillus with 10–12 cilia . . . . .
- . . . . . *S. intermedia* Subías & Rodríguez, 1988

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