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Article

Eriophyoidea (Acari) on Solanaceous plants from Argentina, with description of a new species of *Rhynacus* (Diptilomiopidae) and a key to species

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Abstract

Rhynacus acerioides Flechtmann sp.n., a slender, elongate mite, resembling eriophyids in the genus *Aceria*, is described from all motile stages, from *Solanum lorentzii* Bitter (Solanaceae) leaves, a weed in tobacco fields in Jujuy, Argentina. A key to the world species of *Rhynacus* is given.

Key words: Acari; Eriophyoidea; Taxonomy; Solanaceae; Argentina

Introduction

The first Argentinian species of mite in the family Eriophyidae from a Solanaceous plant is *Eriophyes bicornis*, described by Trotter (1900), from leaf erineum galls on *Solanum eleagnifolium* Cav., collected by the botanist and mycologist C. Spegazzini, in La Plata.

Rossi (1963) reported *Aculops lycopersici* (Massee, 19387) (then placed in *Vasates*) from tomatoes, *Lycopersicon esculentum* Mill., in Cordoba.

More recently Alonso de Gorustovitch *et al.* (2006) reported an undescribed species of *Paraphytoptus* on tobacco, *Nicotiana tabacum* L. in Salta and which was also collected from a weed in tobacco fields, *Solanum riparium* Pers. in El Carmen, Jujuy (Rodriguez *et al.*, 2012).

In a survey of further alternative hosts for this tobacco eriophyid mite a species of *Rhynacus*, of the family Diptilomiopidae, new to Science, was found on *Solanum lorentzii* Bitter and is herein described from all motile stages.

A key to the species of *Rhynacus* is also presented.

All measurements are given in micrometers (μm) and refer to the length of the structure, unless otherwise stated. Opisthosomal dorsal annuli were counted from center of dorsopropodosomal shield rear margin; ventral annuli from genitalia rear margin. For each species, the holotype female measurement precedes the corresponding range for paratypes (given in parentheses).

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***Rhynacus acerioides* Flechtmann, n.sp.**
(Figs. 1, 2)

DIAGNOSIS—Scapular tubercles absent in larva and adults, but present in the nymph; female idiosoma long, slender, *Aceria*-like.

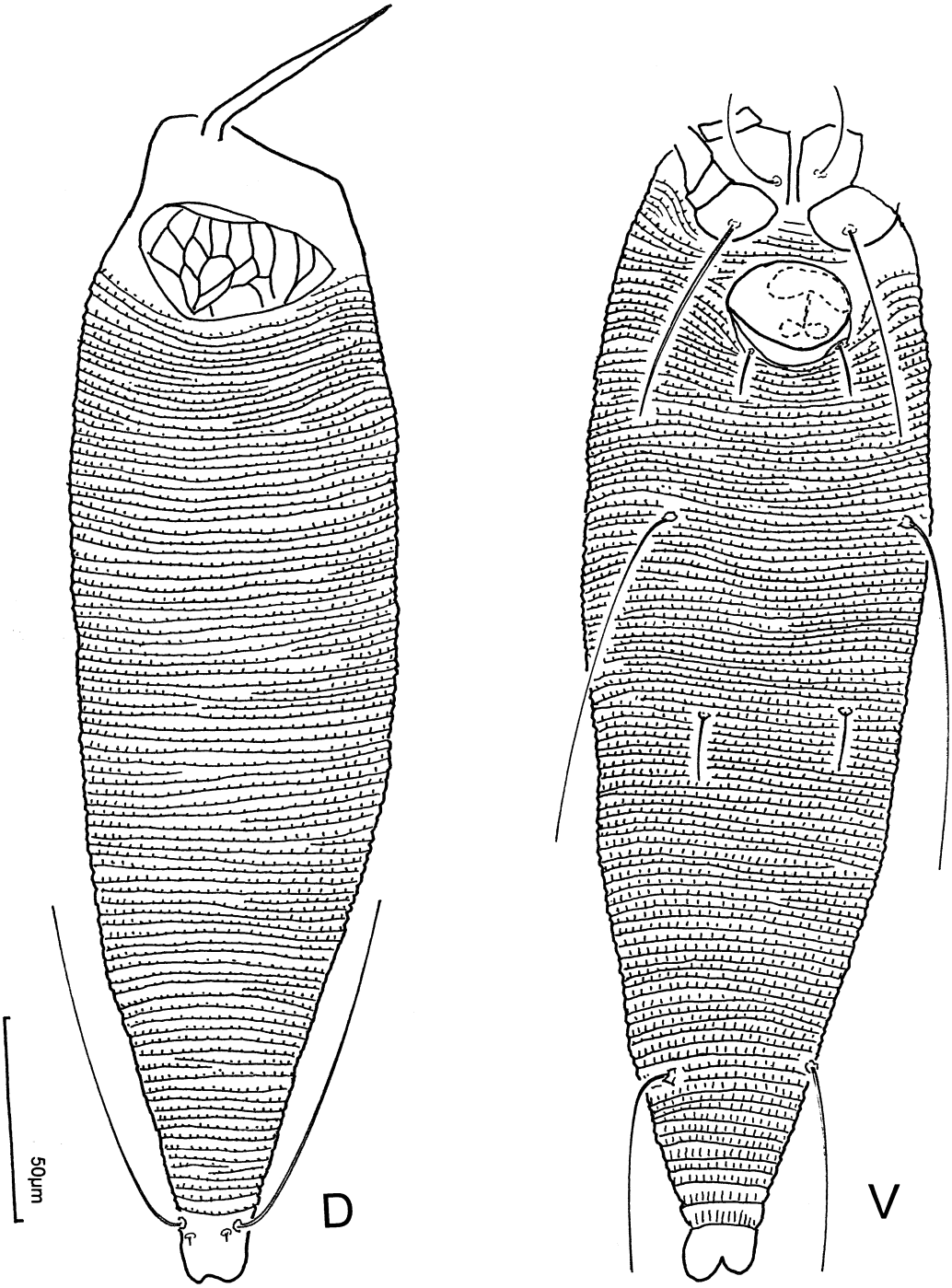


FIGURE 1. *Rhynacus acerioides* Flechtmann, n.sp.. Female. D, dorsal view; V, ventral view.

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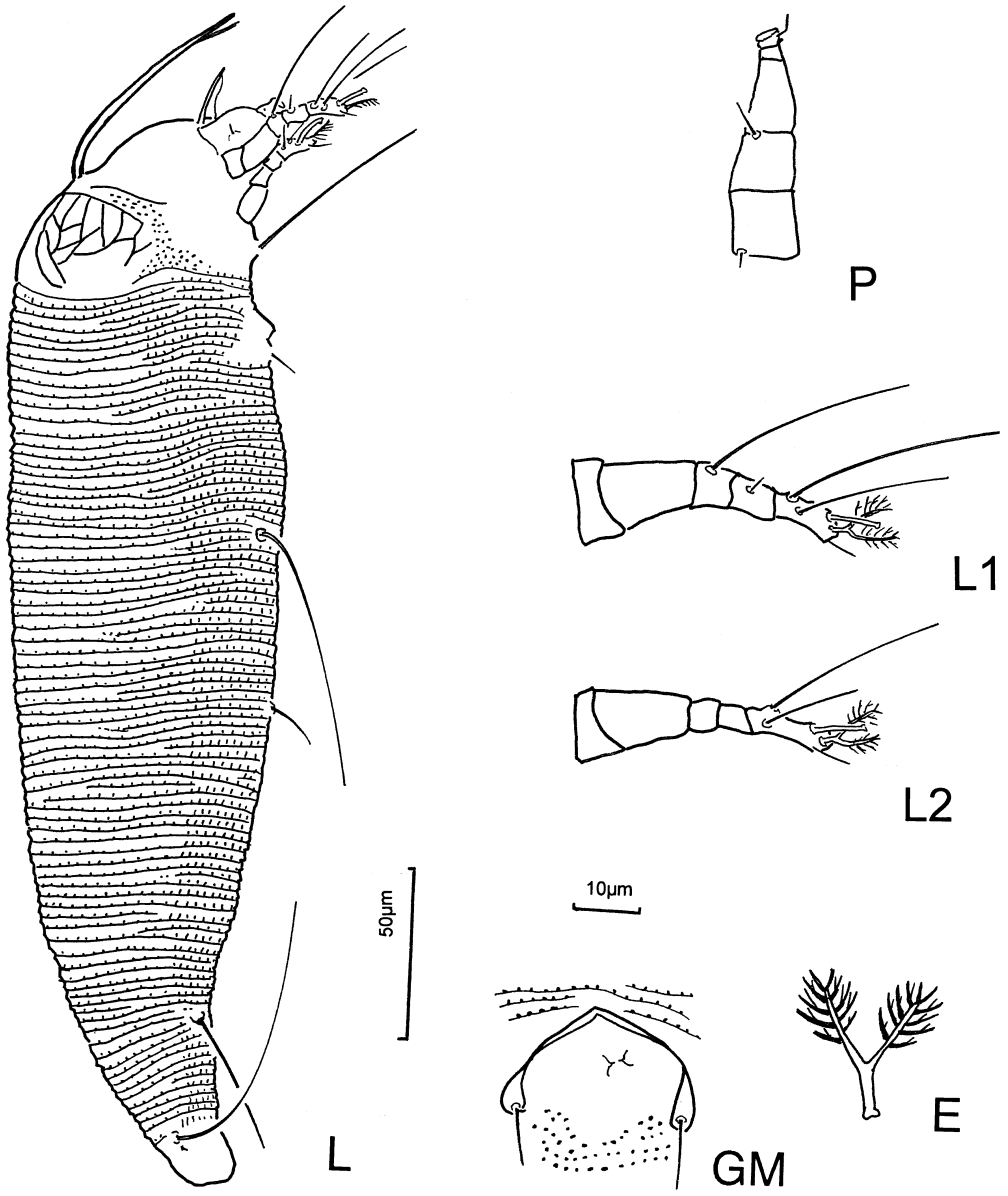


FIGURE 2. *Rhynacus acerioides* Flechtmann, n.sp.. Female: E, empodium, enlarged; L, semilateral aspect; L, leg I; L2, leg II; P, palp. Male: GM, male genitalia.

FEMALE (n = 6)—elongate, near cylindrical, caudally tapering, 264 (264–343), 78 (78–79) wide. **Gnathosoma**: dorsal pedipalp genual (antapical) seta 4 (4–5), pedipalp coxal (basal) seta 3 (3–4); subapical pedipalp tarsal (apicoventral) seta bent. Chelicerae 50 (50–61), oral stylets 19 (18–22). **Prodorsal shield** 27 (27–33), 46 (45–48) wide, design of sinuate lines forming a network; median line complete; admedian lines on anterior two thirds of shield, diverging to rear, connected to median line by three diagonal lines forming three irregular cells on each side of median. Submedian area with three irregular cells and curved lines; lateral area with one elongate cell and a sublateral granular area, seen only in a lateral view. Anterior shield lobe absent. No scapular tubercles. **Coxigenital**

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region: coxal plates (coxae) smooth; anterolateral seta on coxal plate I or coxisternum I (*1b*) absent; proximal seta on coxal plate I (*1a*) 20 (20–33), 10 (10–13) apart; proximal seta on coxal plate II (*2a*) 57 (57–64), 26 (26–28) apart. Coxal plates I separated by a furrow 14 (14) long. Coxisternal area with 4 (4–5) annuli. **Legs**: leg I 38 (37–46); femur 16 (15–16), basiventral femoral seta (*bv*) absent; genu 5 (5–6), antaxial genual seta (*l''*) 41 (36–41); tibia 9 (5–9), paraxial tibial seta (*l'*) 3 (3–4); tarsus 11 (11–12), dorsal tarsal seta (*ft'*) 25 [prob. broken](32–36), lateral tarsal seta (*ft''*) 35 (34–40), paraxial unguinal tarsal seta (*u'*) 6 (6–8), tarsal solenidion 8 (7–8), slightly expanded distally, empodium 9 (9–10), deeply divided, each branch 5-rayed. Leg II 37 (35–40); femur 15 (11–15), *bv* absent; genu 5 (4–5), *l''* absent; tibia 5 (4–6); tarsus 11 (10–11), *ft'* 11 (11–14), *ft''* 26 (26–38), *u'* 8 (7–8), solenidion 9 (7–9), empodium 10 (9–10), as on tarsus I. **Genitalia**: 24 (23–24), 28 (27–28) wide; epigynum smooth; proximal seta on coxisternum III (*3a*) (relocated to lateral margin of genital plate) 12 (12). **Opisthosoma**: with short, faint middorsal anterior ridge; otherwise, elongate, *Aceria*-like. Lateral seta (*c2*) absent. First ventral seta (*d*) 88 (74–90), 50 (46–57) apart, on annulus 24 (18–24); second ventral seta (*e*) 13 (11–18), 33 (31–39) apart, on annulus 48 (35–48); third ventral seta (*f*) 44 (44–49), 32 (28–32) apart, on annulus 85 (67–85) or 14 (13–15)th from rear. Total dorsal annuli 87 (78–88); total ventral annuli 98 (81–98). Caudal seta (*h2*) 88 (88–99); accessory seta (*h1*) minute, spinelike.

MALE—(n = 1) Smaller than female, 262 long. **Gnathosoma** downcurved, dorsal pedipalp genual seta 8, pedipalp coxal seta 5, chelicerae 51 long. **Prodorsal shield** 26 long. **Legs**: leg I 40; femur 13, *bv* missing; genu 5, *l''* 31; tibia 6, *l'* 2 ; tarsus 11; *ft'* 27, *ft''* 37, *u'* 6, solenidion 7, empodium 7, divided, each branch 5-rayed. Leg II 31; femur 10, *bv* missing; genu 4, *l''* missing; tibia 4; tarsus 10, *ft'* 10, *ft''* 33, *u'* 6, solenidion 7, empodium 8. **Coxigenital region**: *1b* missing; *1a* 23, 11 apart; *2a* 37, 26 apart. Genitalia 13 long, 20 wide. **Opisthosoma**: *d* 82, 42 apart, on annulus 17; *e* 13, 29 apart, on annulus 35; *f* 44, 22 apart on annulus 71 or 14th from rear. Total ventral annuli 82; total dorsal annuli 81; caudal seta (*h2*) 19; accessory seta (*h1*) minute.

NYMPH—(n = 1). Idiosoma 185 long; gnathosoma downcurved, chelicerae 52 long. Prodorsal shield 30 long; shield design a few lines; scapular tubercles present, ahead of shield rear margin. Opisthosomal annuli about equal dorsoventrally, microtuberculate: 57 dorsal, 56 ventral annuli.

LARVA—(n = 1) Idiosoma 140 long; gnathosoma downcurved, chelicerae 45 long. Prodorsal shield 27 long, with a few lines. Opisthosoma with annuli about equal dorsoventrally. First two ventral annuli narrow, followed by 5 wider annuli, the posterior one with seta *3a*, and 34 narrower posterior annuli. Total dorsal annuli 55.

ETYMOLOGY—the specific designation is derived from *Aceria*, an eriophyid mite genus, and *oides*, Greek, having the form of, and refers to the shape of the adult mite, resembling species in the genus *Aceria*.

TYPE MATERIAL—female holotype and 7 female paratypes, from *Solanum lorentzii* Bitter (Solanaceae) leaves, a weed in tobacco cultures, Finca Experimental La Posta, Perico, Jujuy, Argentina GPS 24^{o} 22' 51" S, 65^{o} 08' 22" W, June 2013, collected by M. C. Ballari, on seven microscopic preparations; 7 female, 1 male, 1 larva and 1 nymph paratypes, same data, collected August 2013, on 8 microscopic preparations, all in the Acari Collection of Departamento de Entomologia e Acarologia, Universidade de São Paulo – ESALQ, Piracicaba, SP, Brazil.

RELATION TO HOST—vagrants on the lower side of leaves; no visible damage.

REMARKS—This is the fourth species assigned to the genus *Rhynacus*, so far known only from the American continent. Adults are elongate and resemble *Aceria*. The nymphal stages, can be distinguished, by the presence of prodorsal shield scapular tubercles, ahead of shield rear margin, which are absent in the larva and in adults.

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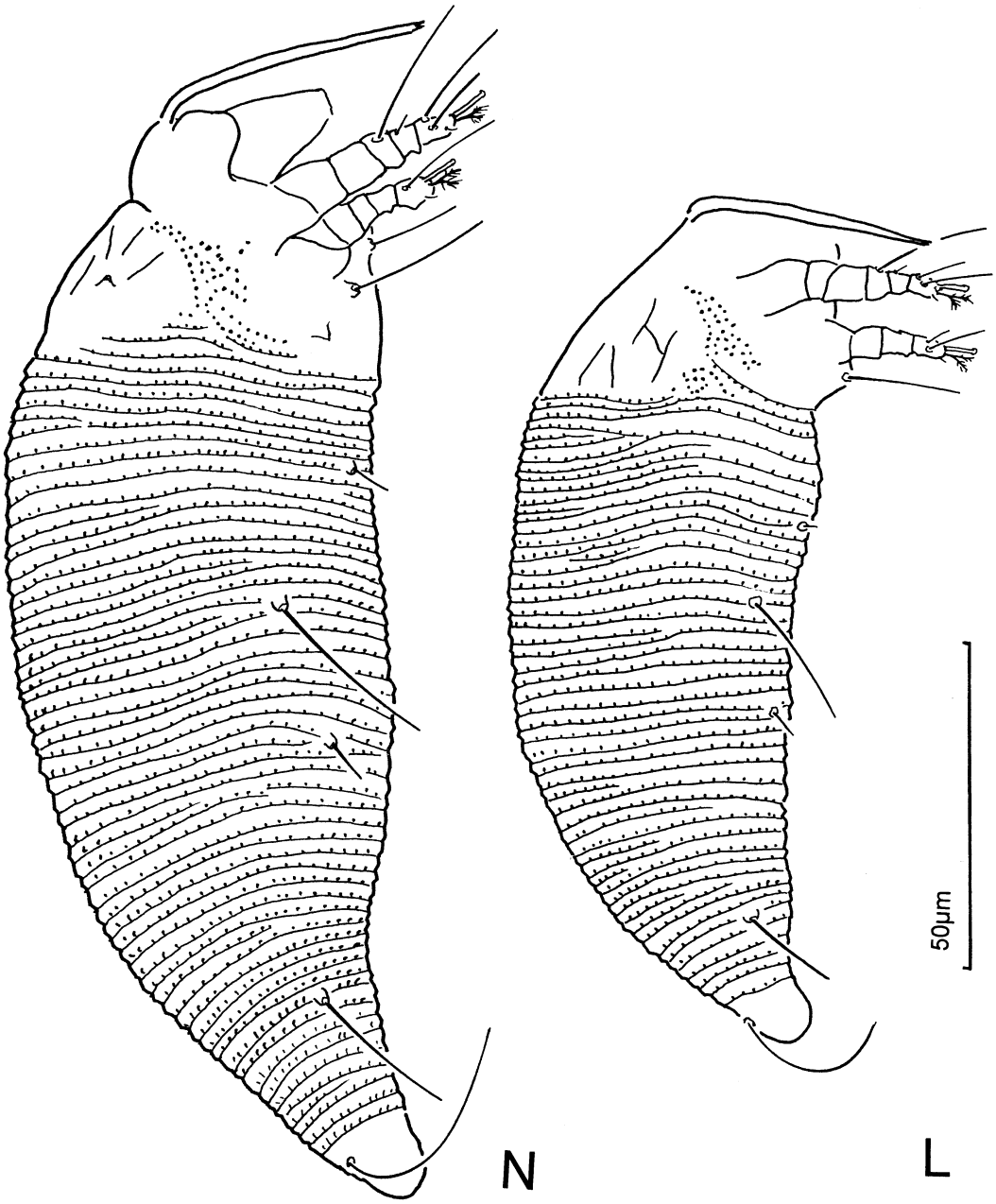


FIGURE 3. *Rhynacus acerioides* Flechtmann, n.sp.. Immatures. L, larva; N, nymph, both in lateral aspect.

Key to species of *Rhynacus* (females)

1. Prodorsal shield without scapular tubercles (but present in nymph); idiosoma slender, elongate, *Aceria*-like; epigynum smooth . . . . . *Rhynacus acerioides* Flechtmann, n.sp.
   Argentina, *Solanum lorentzii* Bitter, Solanaceae
- Prodorsal shield with scapular tubercles; idiosoma elongate-fusiform, epigynum ornate or smooth 2
2. Epigynum smooth. . . . . *R. arctostaphyli* (Keifer, 1938)
   USA, *Arctostaphylos* sp., Ericaceae
- Epigynum ornate (dashes or longitudinal ribs) 3

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3. Epigynum with short dashes. . . . . *R. abronius* (Keifer, 1939)
USA, *Rubus vitifolius* C & S., Rosaceae
- Epigynum with strong longitudinal ribs. . . . . *R. kraussi* Keifer, 1962
Colombia, *Lantana camara* L., Verbenaceae

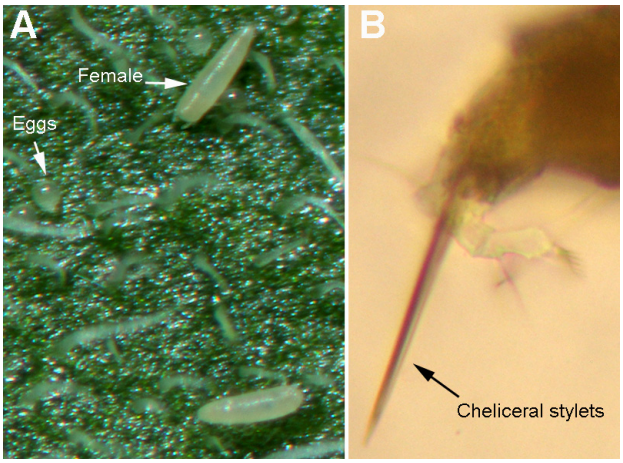


FIGURE 4. *Rhynacus acerioides* Flechtmann, n.sp.. A. females and eggs on leaf; B. lateral view (probably a nymph), exhibiting the long cheliceral stylets.

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