Article http://zoobank.org/urn:lsid:zoobank.org:pub:46E22EEB-EC7F-4A3B-ADE4-9015B11CD0F

Three new vagrant eriophyoid species (Acari: Trombidiformes: Eriophyoidea) associated to Rosaceae species from South Khorasan province, East Iran

ARASH HONARMAND¹, HUSSEIN SADEGHI-NAMAGHI^{1*} & ENRICO DE LILLO²

¹Department of Plant Protection, Faculty of Agriculture, Ferdowsi University of Mashhad, Mashhad, Razavi Khorasan, Iran; sadeghin@um.ac.ir; arashhonarmand68@gmail.com

²Department of Soil, Plant and Food Sciences (Di.S.S.P.A.), Entomology and Zoology Section, University of Bari Aldo Moro, Italy; enrico.delillo@uniba.it

* Corresponding author. E-mail: sadeghin@um.ac.ir

Abstract

During the field surveys on eriophyoid mites associated with plant species of the Rosaceae family in semi-arid and arid environments in East Iran (Birjand, South Khorasan, Iran 2016-2017), three new vagrant species (Acari: Eriophyoidea) were found. They are *Epitrimerus vulgarubi* **sp. nov.** on *Rubus vulgaris* Weihe & Nees, *Phyllocoptes trilobos* **sp. nov.** on *Rosa persica* Michx. ex Juss., *Rhyncaphytoptus birrosa* **sp. nov.** on *Rosa canina* L. which are described and illustrated herein. No symptom was observed on their infested host plants.

Key words: Eriophyidae, Diptilomiopidae, geographical survey, faunistic, semi-arid and arid environments

Introduction

Plant species of Rosaceae are widely spread and this family includes approximately 104 genera and 4,828 species around the world (Potter *et al.* 2007; The Plant List, 2013). *Rosa* L. genus consists of nearly 150 accepted species names. They are cultivated as ornamental and food sources in Europe, Asia, Middle East and North America (Ercisli, 2005). *Rosa canina* L., known as dog rose, is a wild, perennial and medicinal species. It is a suitable plant for cultivation in gardens and useful for fevers, liver diseases and stopping diarrhea when consumed as tea (Nojavan *et al.* 2008). *Rosa persica* Michx. ex Juss. originated from steppe and desert areas of Iran, Afghanistan and Central Asia; it is a weed but is also used for grazing and fuel (Basaki *et al.* 2009). *Rubus* L. genus contains approximately 700 deciduous and evergreen species; these plants can grow in various habitats and the fruits of some species are used as a food source (Hummer, 1996).

Until now, nearly 360 species names of eriophyoid mites have been reported on Rosaceae plants around the world, of which 30 species on *Rosa* spp., 46 species on *Rubus* spp. (Amrine and de Lillo, unpublished data). Considering the importance of these plant species, field surveys were carried out in 2016 and 2017 on eriophyoid mites associated with them in East Iran (Birjand, South Khorasan). In this paper, three new eriophyid mite species belonging to *Epitrimerus*, *Phyllocoptes* and *Rhyncaphytoptus* are described and illustrated.

Materials and methods

Plant materials were collected during the summers of 2016 and 2017 from semi-arid environments in the vicinity of Birjand (South Khorasan, East Iran). Mites were recovered from the surface of

foliage under a dissecting stereomicroscope and also by the modified washing method developed by Monfreda et al. (2007). Some of them were preserved in 70% ethanol and in Oudemans' solution (Krantz & Walter, 2009). Because of the protocols of the laboratories of Ferdowsi University in Mashhad and University Aldo Moro in Bari, two different slide preparation methods were used to prepare the mite specimens for examination, though they are methods used by specialists world-wide (Amrine & Manson, 1996; de Lillo et al., 2010). Rhyncaphytoptus birrosa sp. nov. was cleared in lactic acid at room temperature. Specimens of this species were mounted in Heinze's medium without any kapok fiber between slide and coverslip. Specimens of Eprimiterus vulgarubi sp. nov. and Phyllocoptes trilobos sp. nov. were cleared and mounted using Keifer's media (Amrine & Manson, 1996) and some kapok fibers were added in the mounting medium between slide and coverslip, to avoid pressure by the latter on the mites and allowing mite rotations around their longitudinal axis (de Lillo et al. 2010). The morphological terminology and setal notations follow Lindquist (1996). The generic key by Amrine et al. (2003) was used for the genus identification. A drawing tube mounted on the Olympus BX50 phase contrast microscope was used for the drawings according to de Lillo et al. (2010). Abbreviations used in the drawings follow Amrine et al. (2003). All morphological measurements were taken using a phase contrast microscope Olympus BX50 according to Amrine and Manson (1996) as modified by de Lillo et al. (2010), and are given in micrometers (µm). The holotype measurements are followed by the range of the paratypes in parentheses. Measurements are rounded off to the nearest integer, referring to the length of the morphological characters unless otherwise specified. The host plant names and synonyms are in accordance with The Plant List on-line database (2013).

Most type specimens are deposited in the collection of the Acarology Laboratory, Department of Plant Protection, Faculty of Agriculture, Ferdowsi University of Mashhad, Iran (FUM). Two paratypes of each new species are deposited at the Entomological and Zoological Section, Department of Soil, Plant and Food Sciences (DiSSPA), University of Bari Aldo Moro, Italy (UNIBA), formerly indicated as UBI by Zhang (2018).

Results

Phyllocoptes trilobos sp. nov. (Fig. 1)

Description. FEMALE: (n = 10). Body fusiform, 180 (165–180, including gnathosoma), 52 (50–53) wide, 50 (50–51) thick. Gnathosoma 24 (24–25) projecting downwards, pedipalp coxal setae ep 4 (3-4), dorsal pedipalp genual setae d 9 (8–9), unbranched, palp tarsus setae v not detectable, cheliceral stylets 20 (19–21). Prodorsal shield 41 (40–43), including frontal lobe, 40 (40–43) wide; frontal lobe 6 (6–7) over gnathosomal base; rhomboidal shape in dorsal view; frontal lobe broad and with two indentations assuming a trilobate appearance in dorsal view; short median line connected to complete admedians forming two close cells on posterior quarter of shield; a pair of submedian lines crossed by two transversal lines joining submedian to admedian lines; forming a pair of close cells in the middle of the prodorsal shield; two more pairs of submedian lines, inner pair short and C-shaped on posterior half of prodorsal shield; outer pair arched and joining first submedian line. Tubercles of scapular setae sc 3 (2–3) ahead of rear shield margin, 20 (20–21) apart, scapular setae sc 15 (13–15), convergent forward. Leg I 31 (31–32), femur 10 (9–10), genu 5 (4–5), tibia 7 (6–7), tarsus 6 (5–6), solenidion ω 7 (no range), distally rounded, empodium 6 (5–6), simple, 6-rayed; femoral setae by 14 (14-15), genual setae l'' 24 (23-25), tibial setae l' 7 (7-8), tarsal setae ft' 20 (17-21), setae ft'' 24 (23-25)26). Leg II 29 (28–29), femur 9 (9–10), genu 5 (4–5), tibia 5 (no range), tarsus 7 (5–7), solenidion ω 7 (7–8), distally rounded, empodium 5 (5–6), simple 6-rayed; femoral setae bv 15 (15–17), genual

setae l'' 10 (9–10), tarsal setae ft' 7 (7–8), setae ft'' 24 (23–24). **Coxae I** ornamented with long and short dashes and coxae II with short dashes; setae lb 9 (9–15), tubercles lb 9 (9–10) apart, setae la20 (18–21), tubercles la 8 (8–9) apart, setae 2a 47 (44–49), tubercles 2a 19 (19–20) apart. Prosternal apodeme 5 (4–5) **Opisthosoma** dorsally arched with 60 (59–65) dorsal semiannuli, with rounded microtubercles, and 70 (70–76) ventral semiannuli, with rounded and small microtubercles on rear margin; 10 (no range) coxigenital semiannuli with fine microtubercles between coxae and genital coverflap; last 5 (no range) ventral and dorsal semiannuli with elongated microtubercles. Setae c2 33 (31–36), on ventral semiannulus 10 (10–11); setae d 37 (35–60), on ventral semiannulus 25 (24–26); setae e 47 (45–50), on ventral semiannulus 43 (43–47); setae f 31 (30–32), on ventral semiannulus 65 (65–71), 5 (no range) annuli after setae f. Setae h2 78 (65–83), setae h1 4 (4–5). **Genital coverflap** 11 (11–13), 19 (18–20) wide, coverflap with 10 (9–10) longitudinal striae, setae 3a 50 (50–62), 11 (10–13) apart; with two transversal rows of strong granulated lines at genital coverflap base.

MALE (n = 1). Body fusiform, 160 (including gnathosoma), 40 wide. **Gnathosoma** 20 projecting downwards, chelicerae 18, palp coxal setae ep 3, palp genual setae d 8, unbranched, palp tarsus setae v not detectable. **Prodorsal shield** 38, including frontal lobe, 35 wide, frontal lobe 6. Shield pattern similar to that of female. Tubercles of scapular setae sc 2 ahead of rear shield margin, 19 apart, setae sc 11. **Leg I** 27, femur 9, genu 5, tibia 5, tarsus 5, solenidion ω 7, distally rounded, empodium 5, simple, 6-rayed; femoral setae bv 11, genual setae l'' 18, tibial setae l' 5, tarsal setae ft' 15, setae ft'' 23. **Leg II** 25, femur 9, genu 4, tibia 4, tarsus 6, solenidion ω 7, distally rounded, empodium 5, simple, 6-rayed; femoral setae bv 12, genual setae l'' 9, tarsal setae ft' 7, setae ft'' 20. **Coxae** similar to those of the female; setae lb 8, tubercles lb 8 apart, setae la 18, tubercles la 6 apart, setae 2a 35, tubercles 2a 18 apart. Prosternal apodeme 4. **Opisthosoma** dorsally arched with 55 semiannuli; 66 ventral semiannuli; 10 semiannuli between coxae and genital region. Setae c2 30 on ventral semiannulus 9, setae d 35 on ventral semiannulus 23; setae e 40 on ventral semiannulus 39; setae f 29 on ventral semiannulus 61, 5 annuli after setae f. Setae h2 50; setae h1 4; setae 3a 25, 14 apart.

Type host plant Rosa persica Michx. ex Juss. (Fam. Rosaceae).

Relation to the host plant. Vagrant on the stems and flowers. No symptom was observed on the infested plants.

Type locality. Karimo village, Birjand, Iran. 33°52'4.26"N, 58°32'39.934"E, 1,441 m above sea level; 15 July 2017, coll. Arash Honarmand.

Type material. Holotype: single female on a microscope slide (AH96-6); paratypes: 14 females, 1 male and 1 nymph mounted on separate microscope slides.

Additional material. Mites preserved in 70% ethanol and Oudemans' solution extracted from the same sample as the type specimens.

Etymology. The specific designation refers to the Latin *tres, -ia*, meaning three, and the Greek *lobós*, meaning lobe, and refers to the morphological shape of the frontal lobe in dorsal view.

Differential diagnosis. The new species was compared with all *Phyllocoptes* species known to date on all plant species of the Rosaceae family. It seems to be close to *Phyllocoptes fructiphilus* Keifer, 1940, that was described from *Rosa californica* Cham. & Schltdl. Morphological differences between the two species concern the submedian lines of the prodorsal shield (a pair of submedian lines forming one pair of close cells in *P. trilobos* **sp. nov.** *versus* more submedian lines and two pairs of close cells in *P. fructiphilus*), the frontal lobe shape (two lobes in lateral view and two anterior indentations in dorsal view giving a trilobate appearance in *P. trilobos* **sp. nov.** *versus* a continuous outline of the frontal lobe in *P. fructiphilus*), coxal ornamentation (numerous dashes and long lines in *P. trilobos* **sp. nov.** *versus* few granules in *P. fructiphilus*), number of empodium rays (6 in *P. trilobos* **sp. nov.** *versus* 6–7 in *P. fructiphilus*) and length of the genital setae *3a* (50 µm in *P. trilobos* **sp. nov.** *versus* 32 µm in *P. fructiphilus*).



FIGURE 1. Line drawings of *Phyllocoptes trilobos* **sp. nov.**: **AD**. Prodorsal shield; **AL**. Lateral view of anterior body region; **CG**. Female coxigenital region; **em**. Empodium; **IG**. Internal female genitalia; **LO**. Lateral view of annuli; **L1**. Leg I; **PM**. Lateral view of posterior opisthosoma. Scale bar: 10 μm for **AD**, **AL**, **CG**, **IG**, **PM**; 5 μm for **LO**, **L1**; 2.5 μm for **em**.

1844

Epitrimerus vulgarubi sp. nov. (Fig. 2)

Description. FEMALE: (n = 9). Body vermiform, 180 (170–195, including gnathosoma), 38 (37– 38) wide, 40 (37–43) thick. Gnathosoma 19 (18–19) projecting downwards, pedipalp coxal setae ep 2 (no range), dorsal pedipalp genual setae $d \neq (3-4)$ unbranched, palp tarsus setae $v \mid 1$ (no range), cheliceral stylets 18 (17–18). Prodorsal shield 35 (32–37), including frontal lobe, 30 (30–33) wide; oval with slightly rounded frontal lobe, frontal lobe 5 (no range) over gnathosomal base; lines of ornamentation granulate, median line very short on posterior margin, admedian lines complete, diverging posteriorly and forming an inverted W-shaped with median line. Two submedian lines complete; two transversal lines join admedians to first pair of submedian lines. Tubercles of scapular setae sc 3 (3-4) ahead of rear shield margin, 14 (no range) apart, scapular setae sc 13 (13-15), directed forward. Leg I 25 (24-25), femur 10 (8-10), genu 4 (4-5), tibia 5 (4-5), tarsus 5 (5-6), solenidion ω 9 (9–10), distally rounded, empodium 5 (no range), simple, 5-rayed; femoral setae bv 9 (8–10), genual setae l'' 16 (16–18), tibial setae l' 6 (5–6), tarsal setae ft' 15 (12–15), setae ft'' 20 (18–20). Leg II 24 (23–25), femur 9 (no range), genu 4 (no range), tibia 4 (4–5), tarsus 6 (no range), solenidion ω 10 (no range), distally rounded, empodium 5 (no range), simple, 5-rayed; femoral setae by 9 (8–9), genual setae l'' 5 (5–6), tarsal setae ft' 6 (5–6), setae ft'' 17 (17–20). Coxae with several short lines and distinct dashes; setae 1b 6 (6-7), tubercles 1b 8 (7-8) apart, setae 1a 19 (17-19), tubercles 1a 5 (4–5) apart, setae 2a 29 (29–40), tubercles 2a 17 (16–17) apart, prosternal apodeme 6 (5-6). Prosternal apodeme 6 (no range). Opisthosoma middorsal ridge fading concurrently with latero-dorsal ridges, areas between ridges with slightly detectable microtubercles; 62 (62-73) dorsal semiannuli; 70 (70-83) ventral semiannuli (counted from first complete annulus after coxae II); 6 (6–7) coxigenital semiannuli with fine microtubercles between coxae and genital coverflap, and two transversal rows of lined granules at the base of the coverflap. Microtubercles rounded, on posterior margin of dorsal and ventral semiannuli. Setae c_2 14 (12–15), on ventral semiannulus 11 (10–14); setae d 39 (30–47), on ventral semiannulus 25 (23–30); setae e 14 (13–15), on ventral semiannulus 44 (42–50); setae f 19 (15–21), on ventral semiannulus 64 (62–77), 6 (5–6) annuli after setae f. Setae h2 45 (33–49); setae h1 3 (no range). Genital coverflap 9 (9–11), 18 (17–18) wide; 10 (10–12) longitudinal ridges on coverflap; setae 3a 22 (18-22), 10 (10-11) apart.

MALE (n = 1). Body vermiform, 140 (including gnathosoma), 38 wide, 36 thick. **Gnathosoma** 14 projecting downwards, chelicerae 13, palp coxal setae ep 2, palp genual setae d 3, unbranched, palp tarsus seta v 1. **Prodorsal shield** 29, including frontal lobe, 23 wide, frontal lobe 3. Shield pattern similar to that of female. Tubercles of scapular setae sc 3 ahead of rear shield margin, 12 apart, setae sc 12. **Leg I** 20, femur 7, genu 4, tibia 4, tarsus 5, solenidion ω 7, distally rounded, empodium 4, simple, 5-rayed; femoral setae bv 6, genual setae l'' 14, tibial setae l' 4, tarsal setae ft' 11, setae ft'' 16. **Leg II** 20, femur 7, genu 3, tibia 3, tarsus 5, solenidion ω 8, distally rounded, empodium 4, simple, 5-rayed; femoral setae bv 6, genual setae l'' 4, tarsal setae ft' 4, setae ft'' 15. **Coxae** similar to those of the female; setae lb 5, tubercles lb 6 apart, setae la 12, tubercles la 4 apart, setae 2a 20, tubercles 2a 14 apart. Prosternal apodeme 4. **Opisthosoma** similar to that of female; with 51 semiannulus 11, setae d 37 on ventral semiannulus 25; setae e 10 on ventral semiannulus 34; setae f 17 on ventral semiannulus 53, 5 annuli after setae f. Setae h2 31; setae h1 2; setae 3a 14, 15 apart.

Type host plant Rubus vulgaris Weihe & Nees (Fam. Rosaceae).

Relation to the host plant. Vagrant on both sides of the leaves. No symptom was observed.

Type locality. Tajnood village, Birjand, Iran. 33°40'36.934"N, 60°1'52.885"E, 788 m above sea level; 21 July 2017, coll. Arash Honarmand.



Type material. Holotype: single female on a microscope slide (AH96-16); paratypes: 14 females and 1 male mounted on separate microscope slides.

FIGURE 2. Line drawings of *Epitrimerus vulgarubi* **sp. nov**.: **D**. Dorsal view; **AL**. Lateral view of anterior body region; **CG**. Female coxigenital region; **em**. Empodium; **IG**. Internal female genitalia; **LO**. Lateral view of annuli; **L1**. Leg I; **PM**. Lateral view of posterior opisthosoma. Scale bar: 10 μm for **AD**, **AL**, **CG**, **IG**, **PM**; 5 μm for **LO**, **L1**; 2.5 μm for **em**.

Additional material. Mites preserved in 70% ethanol and Oudemans' solution extracted from the same plant sample as the type specimens.

Etymology. The specific epithet, *vulgarubi*, is a combination of the genus and species of the host plant in the genitive case.

Differential diagnosis. The new species was compared with all *Epitrimerus* species known to date on all plant species of the Rosaceae family. There are some similarities of the new species with *E. demissae* Keifer, 1959, and *E. virginiana* Keifer, 1959, which were reported on *Prunus* spp.: the prodorsal shield pattern of *E. vulgarubi* **sp. nov.** is made up of granular lines oppose to continuous lines on prodorsal shield of *E. demissae*; prodorsal shield of *E. virginiana* with more lines than those observed in *E. vulgarubi* **sp. nov.**; the middorsal ridge of *E. vulgarubi* **sp. nov.** is apparently narrower than that of the other two species; setae *sc* are longer in *E. vulgarubi* **sp. nov.** (13 µm) than in *E. demissae* (10 µm) and *E. virginiana* (7 µm); the number of dorsal semiannuli are similar in *E. vulgarubi* **sp. nov.** (62) and *E. demissae* (58), but fewer in *E. virginiana* (43); the empodium of *E. vulgarubi* **sp. nov.** is 5-rayed but both of *E. virginiana* (protogyne) and *E. demissae* are 4-rayed.

Remarks. This is the first record of a species of the *Epitrimerus* genus on *Rubus* in Iran.

Rhyncaphytoptus birrosa sp. nov. (Fig. 3)

Description. FEMALE: (n = 10). Spindle-form, 200 (195–210, including gnathosoma), 66 (62–68) wide, 70 (65-70) thick. Gnathosoma 45 (45-46) projecting downwards, pedipalp coxal setae ep 3 (3-4), dorsal pedipalp genual setae d 10 (9-11) unbranched, palp tarsus setae v 1 (1-2), cheliceral stylets 57 (57–79). Prodorsal shield sub-triangular, 37 (35–37), including frontal lobe, 47 (47–48) wide; with a slender acute frontal lobe, 10 (9-11) over gnathosomal base; median line complete, admedian lines complete and slightly divergent posteriorly, first submedian lines reach the anterior margin of prodorsal shield and converge at one-fourth of admedian lines posteriorly; second and third pair of the submedian lines complete and subparallel. Tubercles of scapular setae sc on rear shield margin, 17 (17–18) apart, scapular setae sc 32 (32–34), directed forward. Leg I 39 (38–40), femur 11 (11–12), genu 5 (5–6), tibia 9 (8–9), tarsus 10 (9–10), solenidion ω 10 (10–11), distally tapered, empodium 8 (7-8), simple, 8-rayed; femoral setae by 18 (17-19), genual setae l" 33 (31-33), tibial setae l' 14 (13–15), tarsal setae ft' 27 (27–28), setae ft'' 31 (30–32). Leg II 31 (31–33), femur 10 (10–11), genu 5 (no range), tibia 5 (5–6), tarsus 9 (9–10), solenidion ω 12 (11–12), distally tapered, empodium 8 (7–8), simple, 8-rayed; femoral setae by 20 (20–21), genual setae l'' 14 (14– 15), tarsal setae ft' 12 (10–12), setae ft" 33 (30–33). Coxae smooth; setae 1b 14 (13–15), tubercles *Ib* 10 (9–10) apart, setae *la* 36 (30–36), tubercles *la* 4 (no range) apart, setae *2a* 51 (48–51), tubercles 2a 23 (22–23) apart, prosternal apodeme 7 (no range). Prosternal apodeme 7 (no range) Opisthosoma dorsally arched with 40 (39-41) dorsal semiannuli; 75 (74-76) ventral semiannuli (counted from first complete annulus after coxae II); 13 (12–13) coxigenital semiannuli with fine microtubercles between coxae and genital coverflap. Microtubercles triangular, on posterior margin of dorsal semiannuli, ventral microtubercles small. Setae c2 28 (27-29), on ventral semiannulus 13 (13-14); setae d 60 (50-63), on ventral semiannulus 30 (26-31); setae e 50 (48-51), on ventral semiannulus 45 (43–47); setae f 40 (38–42), on ventral semiannulus 69 (68–71), 6 (5–6) annuli after setae f. Setae h2 80 (65-85); setae h1 3 (3-4). Genital coverflap 15 (14-15), 24 (24-25) wide, with 2 transverse rows of granules at the base of genital coverflap; smooth; setae 3a 26 (24–26), 15 (15– 16) apart.

MALE (n = 1). Spindle-form, 190 (including gnathosoma), 60 wide. **Gnathosoma** 39 projecting downwards, chelicerae 45, palp coxal setae 3, palp genual setae d 10, unbranched. Palp tarsus seta v 1. **Prodorsal shield** 33, including frontal lobe, 45 wide, frontal lobe 8. Shield pattern

similar to that of female. Tubercles of scapular setae *sc* on rear shield margin, 15 apart, setae *sc* 30. Leg I 35, femur 11, genu 5, tibia 7, tarsus 8, solenidion ω 9, distally tapered, empodium 6, simple, 8-rayed; femoral setae *bv* 16, genual setae *l''* 27, tibial setae *l'* 10, tarsal setae *ft'* 24, setae *ft''* 28. Leg II 30, femur 10, genu 5, tibia 5, tarsus 9, solenidion ω 11, distally tapered, empodium 6, simple, 8-rayed; femoral setae *bv* 20, genual setae *l''* 14, tarsal setae *ft'* 8, setae *ft''* 30. Coxae similar to those of female; setae *lb* 10, tubercles *lb* 10 apart, setae *la* 21, tubercles *la* 5 apart, setae *2a* 41, tubercles *2a* 20 apart. Prosternal apodeme 6. Opisthosoma dorsally arched with 40 semiannuli; 65 ventral semiannuli; 12 semiannuli between coxae and genital region. Setae *c2* 24 on ventral semiannulus 11, setae *d* 50 on ventral semiannulus 25; setae *f* 40 on ventral semiannulus 39; setae *f* 38 on ventral semiannulus 60, 5 annuli after setae *f*. Setae *h2* (was broken); setae *h1* 3; setae *3a* 20, 18 apart.



FIGURE 3. Line drawings of *Rhyncaphytoptus birrosa* sp. nov.: AD. Prodorsal shield; AL. Lateral view of anterior body region; CG. Female coxigenital region; em. Empodium; IG. Internal female genitalia; LO. Lateral view of annuli; L1. Leg I; PM. Lateral view of posterior opisthosoma. Scale bar: 16 µm for AD, AL, CG, IG, PM; 8 µm for LO, L1; 4 µm for em.

Type host plant. Rosa canina L. (Fam. Rosaceae).

Relation to the host plant. Vagrant on both sides of the leaves. No symptom was observed on the infested plants.

Type locality. Paspateng Village, Birjand, Iran. 32°42'45.09"N, 59°23'57.635"E, 1884 m above sea level;16 June 2016, coll. Arash Honarmand.

Type material. Holotype: single female on a microscope slide (AH95-7); paratypes: 17 females and 1 male mounted on separate microscope slides.

Additional material. Mites preserved in 70% ethanol and Oudemans' solution extracted from the same plant sample as the type specimens.

Etymology. The specific designation is a combination of the name of the type location Birjand and the host plant genus, *Rosa*.

Differential diagnosis. *Rhyncaphytoptus birrosa* **sp. nov.** was compared with all species of *Rhyncaphytoptus*. It shares the same prodorsal shield pattern and shape of microtubercles, with *R. tibetirosae* Song, Xue & Hong, 2009, collected from *Rosa* sp. in Tibet, Autonomous Region, P. R. China. However, the two species differ in: the shape of the frontal lobe (slender in *R. birrosa* **sp. nov.** *versus* rounded in *R. tibetirosae*), the number of dorsal semiannuli (40 in *R. birrosa* **sp. nov.** *versus* 60 in *R. tibetirosae*), the number of empodium rays (8-rayed in *R. birrosa* **sp. nov.** *versus* 9-rayed in *R. tibetirosae*), length of setae *3a* (25 in *R. birrosa* **sp. nov.** *versus* 40 in *R. tibetirosae*); length of setae *e* (50 in *R. birrosa* **sp. nov.** *versus* 30 in *R. tibetirosae*).

Remarks. This is the first record of a species of the *Rhyncaphytoptus* genus on Rosaceae family in Iran.

Acknowledgement

This research was in part supported by Ferdowsi University of Mashhad, Iran (FUM), and University of Bari Aldo Moro, Italy (UNIBA).

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2019 HONARMAND ET AL.: THREE NEW VAGRANT ERIOPHYOID SPECIES FROM EAST IRAN 1849

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Submitted: 15 Jun. 2019; accepted by Eddie Ueckermann: 25 Jul. 2019; published: 7 Oct. 2019