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Two new species of *Spinibdella* and *Odontoscirus* (Acari: Prostigmata: Bdellidae) from Western Iran

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ABSTRACT — Two new species of Bdellidae, viz. *Spinibdella pourmirzaei* Eghbalian, Khanjani & Ueckermann **n. sp.** from soil and litter under apricot trees and *Odontoscirus denheyeri* Eghbalian, Khanjani & Ueckermann **n. sp.** (Acariformes: Bdellidae) from soil and litter under weeds are described, illustrated and a key to the adults of all species of *Spinibdella* with longitudinal striations on centre of prodorsum and Iraninan species of adult *Odontoscirus* are presented.

KEYWORDS — Mites; predator; Spinibdellinae; Odontoscrinae; Iran.

ZOOBANK — ACB16C2A-4B7E-4DED-8E4E-AD0B16787393

INTRODUCTION

Bdellidae Dugès are predators of small arthropods such as insects and mites (Gerson *et al*. 2003, Atyeo 1960). Thor (1930) erected *Spinibdella* to accommodate the newly described *S. reducta*, which can be recognized by having 2 pairs of ventral setae on subcapitulum, lateral propodosomal setae (*ve*) present and palp-tibiotarsus truncate in contrast to the closely related *Biscirus* Thor, 1913 in which *ve* is absent and palp-tibiotarsus cylindrical, elongate, both belonging to the subfamily Spinibdellinae (Atyeo 1960, Hernandes *et al.* 2016).

Spinibdella contains 37 species (Hernandes *et al.* 2016, Paktinat-Saeej *et al*. 2015). In this paper *S. pourmirzaei* Eghbalian *et al.* **n. sp.** is described as 38th species.

Thor (1913) erected *Odontoscirus* (as subgenus of *Biscirus*) based on *Bdella virgulata* Canestrini & Fanzago, 1876. Wallace & Mahon (1976) synonymized *Odontoscirus* with *Bdellodes* Oudemans (1937) but unfortunately validated the junior name. However, Hernandes *et al.* (2016) corrected this by recognizing that the name *Odontoscirus* has priority and therefore should be the valid name. *Odontoscirus* can be distinguished by having 6 or 7 pairs of ventral setae on the venter of the subcapitulum and trichobothrium present on tibia II. *Odontoscirus* differs from the other odontoscirine genus, *Neomolgus* Oudemans (1937), in having only 2 pairs of setae on each chelicera instead of more than 2 pairs (at least 4). Currently 93 *Odontoscirus* species (Hernandes 2013, Hernandes *et al*. 2016, Paktinat-Saeij *et al.* 2016) were recorded worldwide of which

nine species were recorded from Iran: *O. meridionalis* (Thor 1931), *O. kazeruni* (Ostovan and Kamali 1995), *O. alpinus* Atyeo, 1960 (Baharloo *et al*. 2006), *O. lapidaria* (Kramer 1881), *O. virgulata* (Canestrini & Fanzago, 1876), *O. iraniensis* (Ueckermann *et al*. 2007), *O. longirostris* (Hermann 1804), *O. petila* (Atyeo 1963)] (Ueckermann *et al*. 2007 and Abbaszadeh Rad *et al*. 2010), and *O. mazandaranensis* Paktinat-Saeij *et al*. 2016; in this paper, a 10th species is described. Also, a key to the adults of all species of *Spinibdella* with longitudinal striations on centre of prodorsum and adult Iranian species of *Odontoscirus* are provided.

Materials and methods

Specimens were extracted from soil and litter under apricot trees, *Prunus armeniaca* L., (Rosaceae), Tamozan village, Famenin vicinity, Hamedan Province, Iran and soil and litter under weeds, Songhor vicinity, Kermanshah Province, Iran, using Tullgren funnels. The specimens were mounted directly on slides in Hoyer's medium. The slides were dried in an oven at 50°C for about one week, covered with industrial car paint and examined under an Olympus BX51 phase contrast microscope. Drawings were made with a *camera lucida*. Notations of the idiosomal and leg setae follow Kethley (1990) and Den Heyer (1981), respectively. All measurements are given in micrometers (μm) and the holotype measurements are followed by the range of the paratypes in parentheses. The body length of all specimens was measured from the apex of hypostome to posterior margin of idiosoma, and body width at the level of setae *c2*. Abbreviations of setae in this study are as follows: Propodosomal setae: internal verticals (*vi*), external verticals (*ve*), internal scapular (*sci*), external scapular (*sce*). Opistosomal setae: internal humeral (*c1*), external humeral (*c2*), internal dorsal (*d1*), internal lumbal (*e1*), internal sacral (*f1*), external sacral (*f2*), internal clunal (*h1*), external clunal (*h2*). Anal region: postanal (*ps1*), genital region: aggenital setae (*ag*), genital setae (*g*). subcapitular setae (*vh1–vh6*). Leg setae: solenidia (ω, ϵ, ϕ and σ), trichobothria (*tr*), Ventral end seta (VES), dorsal end seta (DES).

Family Bdellidae Dugès, 1834

Subfamily Spinibdellinae Grandjean, 1938
Genus *Spinibdella* Thor, 1930

Type species: *Spinibdella reducta* Thor, 1930 (original designation).

Spinibdella pourmirzaei n. sp. Eghbalian, Khanjani and Ueckermann (Figs. 1–2)

Zoobank: 301C4B97-132D-4BD4-88AD-070CFF0A4D97

Diagnosis — Centre of prodorsum with longitudinal striations, two pairs of eyes present, narrow chelicerae and reduced needle-like chelae, chelicerae striated, well-developed genital tracheae, basifemur III with 4 setae; palp-basifemur with 6 setae.

Male (n= 4). Total body length (incuding gnathosoma from apex of hypostome to posterior margin of idiosoma) 873 (828 – 1005), body length (excluding gnathosoma) 680 (645 – 790); width 267 (225 – 278).

Dorsum (Fig. 1A) — Prodorsum with longitudinal striae posterior to *vi* to anterior to *sci*, but transverse between and anterior to *vi* and between setae *sci* with irregular striae; prodorsum with 2 pairs of eyes, diameters of anterior lateral eye 10 (10 – 13), and posterior lateral eye 8 (8 – 10), two lateral eyes separated by distance approximately 2.5 (1.9 – 2.4) times diameters of anterior lateral eyes, with longitudinal and oblique striae between each pair. Hysterosomal setae not extending to the bases of setae next behind (except seta *h1*). Dorsum of hysterosoma with continuous and transverse striae between setae (*c1*, *d1*, *e1*, *f1*, *h1* and *h2*), but striae obliquely longitudinal between setae *c1–2*; seta *sce* the longest and *f2* the shortest, hysterosomal region with three cupules (ia, im and ip) at level of setae *d1*, *e1* and *f1* (Fig. 1A). Measurements of dorsal setae as follows: *vi* 130 (130 – 158), *ve* 48 (48 – 50), *sci* 63 (58 – 60), *sce* 198 (175 – 218), *c1* 53 (53 – 93), *c2* 58 (45 – 83), *d1* 58 (45 – 83), *e1* 55 (55 – 100), *f1* 60 (58), *f2* 53 (43 – 70), *h1* 60 (55 – 93), *h2* 55 (48 – 90).

Distance between dorsal setae: *vi–vi* 50 (35 – 50); *ve–ve* 103 (90 – 105); *vi–ve* 63 (40 – 63); *ve–sci* 50 (48 – 53); *sce–sce* 98 (98 – 123); *sci–sce* 25 (20 – 30); *sci–sci*

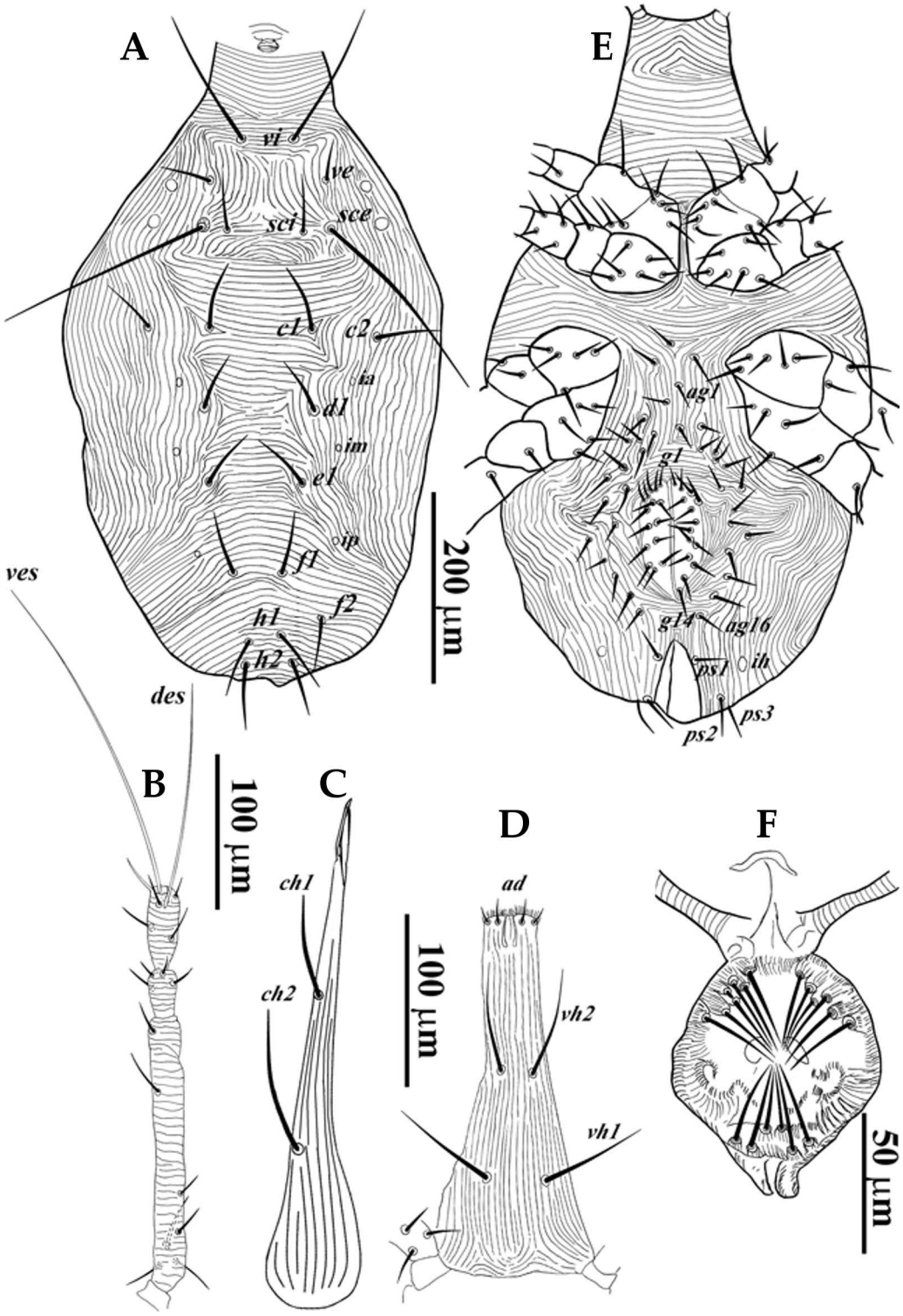

FIGURE 1: *Spinibdella pourmirzaei* Eghbalian, Khanjani & Ueckermann **n. sp.** (Male): A – Dorsum of idiosoma; B – Palp; C – Chelicer; D – Hypostome; E – Venter of idiosoma; F – Amphioid sclerets.

73 (70);); *sce–c1* 68 (68 – 100)); *sce–c2* 80 (80 – 145);); *sce–vi* 100 (90);); *sci–vi* 97 (88); *c1–c1* 95 (68 – 95); *c1–c2* 50 (35 – 50); *c1–d1* 70 (65 – 78); *d1–d1* 100 (65 – 100); *d1–e1* 65 (48 – 70); *e1–e1* 100 (65–100); *e1–f1* 63 (55 – 73); *f1–f1* 55 (28–73); *f1–f2* 50 (30 – 50); *f1–h1* 58 (48 – 63); *h1–h1* 30 (23 – 30); *h1–h2* 23 (23); *h2–h2* 43 (43 – 52). Ratio: *vi/ve* 2.71 (2.7 – 3.2); *vi/sce* 0.66 (0.7 – 0.72); *sci/sci–sci* 0.86 (0.85); *vi/vi–vi* 2.6 (2.6 – 3.2), *c1/c1–c1* 0.56 (0.78 – 0.98), *d1/d1–d1* 0.58 (0.7 – 0.83), *e1/e1–e1* 0.58 (0.8 – 0.95), *f1/f1–f1* 1.1 (0.79 – 2. 1), *h1/h1–h1* 2 (2.4 – 3.1), *h2/h2–h2* 1.3 (1.1–1.7), *h1/h2* 1.1 (1.1 – 1.2), *c1–c1: d1–d1: e1–e1: f1–f1*: 1.72 (1.30 – 2.43): 1.81 (1.37 – 2.32): 1.81 (1.37 – 2.32): 1.00 (1.00).

Gnathosoma — Subcapitulum 193 (183 – 203) long, width at base 75 (83 – 103); gnathosoma with longitudinal striae; palp (Fig. 1B) five–segmented, palp tibiotarsus with three setae + one solenidion + two long end setae, *DES* and *VES* 95 (95 – 120) and 159 (108 – 165) respectively; genu with four setae; telofemur with one seta; basifemur with six setae; trochanter without setae; measurements of palp segments as follows: trochanter 8 (8 – 10), basifemur 100 (100 – 118), telofemur 28 (15 – 23), genu 20 (20 – 23), tibiotarsus 31 (33 – 38). Subcapitulum (Fig. 1D) with two pairs of long ventral subcapitular setae (*vh1–2*), distal pair (*vh2*) 43 (40 – 48) almost one half length of proximal pair (*vh1*) 41 (38 – 46); two pairs of short adoral setae near the tip of hypostome, two pairs of adoral setea 8 (9) and 6 (7) in length. Chelicerae 166 (163 – 178) long, width 35 (36 – 38), longitudinal striae and with two dorsal setae (*ch1–2*), proximal setae 50 (48 – 53), and distal setae 42 (38 – 43). Movable digit straight and slightly longer than fixed digit; distal seta (*ch1*) short not extending to base of chela (Fig. 1C).

Venter (Figs. 1E-F) — Striae between coxae I–II and III–IV longitudinal and between coxae II–III transverse and oblique. Three median, unpaired ventral setae between coxae III (Fig. 1E). Aggenital region with 16 pairs of setae (*ag1–16*), genital valves each with 14 pairs of setae (*g1–14*) (Fig. 1E); anal region surrounded with oblique continuous striae and three pairs of smooth setae (*ps1–3*): *ps1* 27 (25 – 38), *ps2* 30 (43 – 60) and *ps3* 32 (30 – 35) long (Fig. 1E). Amphioid sclerites with 18-19 smooth setae (Fig. 1F).

Legs (Fig. 2) — Measurements of leg segments as follows: I 325 (288–333), II 305 (288–348), III 355 (345–415), IV 438 (405–473). Setal formulae of leg segments as follows: coxae I–IV: 7–6–5–5; trochanters I–IV: 1–1–2–1; basifemora I–IV: 7–7–4–3; telofemora I–IV: 5–5–4–4; genua I–IV: 5ts–5ts–5ts–6ts –5ts,1σ; tibiae I–IV: 11ts, 2ϕ,1tr–9ts, 1bls–12ts,1ϕ–12ts,1tr; tarsi I–IV: 21ts,2ω–18ts,2ω–22ts,1tr–17ts,1tr.

Female & Immatures — Unknown.

Habitat — soil and litter under apricot trees.

Distribution — Only known from Western Iran.

Remarks — *Spinibdella pourmirzaei* Eghbalian, Khanjani and Ueckermann **n. sp.** is closely related to *S. cronini* (Baker and Balock 1944), redescribed by Atyeo (1960), in having longitudinal striations in centre of prodorsum and two pairs of eyes; palp-tarsus with 7 setae and tibiae II with one blunt sensory seta, but differs from the latter in having: 1) Basifemur III with 4 setae in the former but 5 setae in the latter; 2) Palp-basifemur with 6 setae in the new species whereas 7 setae in *S. cronini* (Baker and Balock); 3) aggenital region with 16 pairs of setae *vs* 21–23 pairs of setae; 4) tibia I-II, IV with: 11ts, 2ϕ,1tr–9ts, 1bls–12ts,1tr *vs* 12(13)ts, 2ϕ,1tr–12(13)ts, 1bls–14ts,1tr; 5) tarsi I, III-IV with: 21ts,2ω–22ts,1tr–17ts,1tr *vs* 20ts,2ω–17(18)ts,1tr–18(21)ts,1tr.

Etymology — This species is named in honor of Prof. Ali Asghar Pourmirza, Professor of Entomology, Department of Plant Protection, College of Agriculture, Urmia university, Iran, for his great contribution to developing Entomology knowledge in Norh west Iran.

Type materials — The holotype and three paratype males were collected from soil and litter under apricot trees, *Prunus armeniaca* L., (Rosaceae), Tamozan village, Famenin vicinity, Hamedan Province, Iran, (35°15′07″N, 49°06′14″E, a.s.l. 1900 m), 17 January 2013, Col. Amir Hossein Eghbalian. The holotype and two paratype males are deposited in the Mite Collection of the Acarology Laboratory, University of Bu–Ali Sina, Hamedan, Iran, and one paratype male slide will be deposited in the National Collection of Arachnida, Plant Protection Research Institute, Pretoria, South Africa.

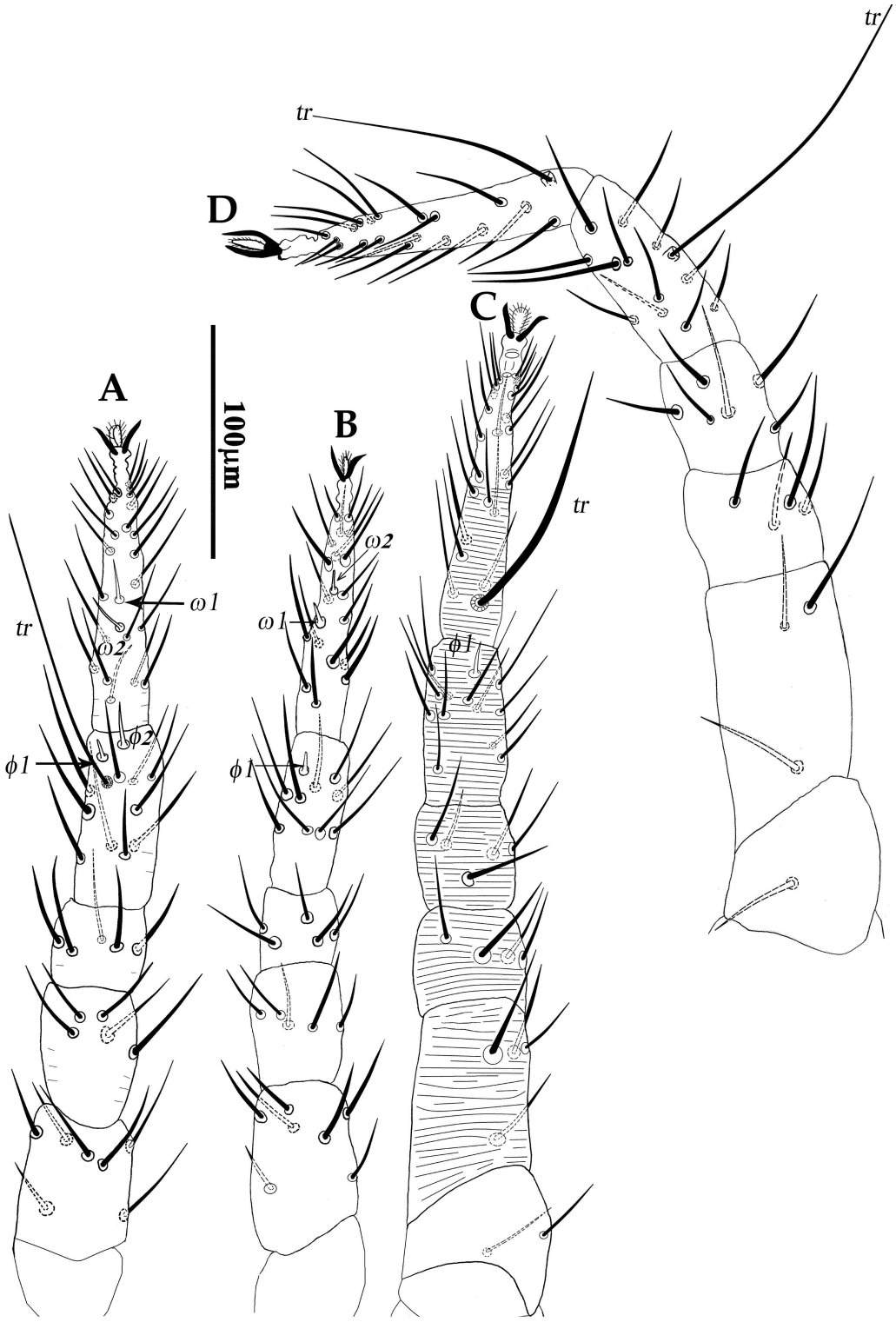

FIGURE 2: *Spinibdella pourmirzaei* Eghbalian, Khanjani & Ueckermann **n. sp.** (Male): A – Leg I; B – Leg II; C – Leg III; D – Leg IV.

Subfamily Odontoscirinae Grandjean, 1938
Genus *Odontoscirus* Thor, 1913

Type species: *Bdella virgulata* Canestrini & Fanzago, 1877, by original designation.

***Odontoscirus denheyeri* n. sp.**
Eghbalian, Khanjani and Ueckermann
(Figs. 3–4)

Zoobank: 9558E6B8-DA7E-4E24-BAB6-956F85382C1F

Diagnosis — Each chelicera with 2 setae, palp basifemur with 6 setae, palp tibiotarsus with 6 setae and each genital plate with 7 setae and aggenital region with 3 pairs of setae, the proximal half of palp tibiotarsus with two setae, movable digit of chelicera with six tooth, base of prodorsal setae *sci* well separated from *sce*.

Female (n= 4). Total body length (incuding gnathosoma from apex of hypostome to posterior margin of idiosoma) 1376 (1151 – 1213), body length (excluding gnathosoma) 1013 (1238 – 1290); width 663 (808 – 855).

Dorsum (Fig. 3A) — Dorsum of idiosoma with irregular broken striae; striae between setae *vi* transverse, external verticals (*ve*) setae absent, prodorsum with 2 pairs of eyes, diameters of anterior lateral eye 28 (23 – 28) and posterior lateral eye 25 (18 – 25), two lateral eyes separated by approximately 3 (3.8-5.6) times diameters of anterior lateral eyes, with transverse and oblique striae between each pair. Striae anterior to internal verticals (*vi*) transverse; dorsal setae (*c1-h2*) smooth; hysterosomal setae not extending to the bases of setae next behind. Area between hysterosomal setae (*c1*, *d1*, *e1*) with fine, longitudinal and transversal broken striae; between setae *f1* with longitudinal and setae *h1-2* with transverse and oblique striae; area between setae *c1–2* with oblique striae; seta *vi* the longest and *f2* and *h2* the shortest, hysterosomal region with three cupules (*ia*, *im* and *ip*) at level of setae *d1*, *e1* and *f1* (Fig. 11). Measurements of dorsal setae as follows: *vi* 140 (133 – 140), *sce* 125 (125 – 140), *sci* 83 (80 – 100), *c1* 65 (65 – 68), *c2* 70 (65 – 80), *d1* 63 (63 – 70), *e1* 60 (63 – 65), *f1* 65 (58 – 65), *f2* 55 (55 – 63), *h1* 63 (65 – 68), *h2* 55 (58 – 68). Distance between dorsal setae: *vi–vi* 58 (53 – 60); *vi–sce* 178 (170 – 175); *sci–sci* 170 (168 – 170); *sce–sci* 38 (33 – 35); *sce–sce* 123 (110 – 113); *sci–vi* 158 (153 – 155); *sce–c1* 148 (160 – 195); *sce–c2* 168 (200 – 263); *c1–c1* 195 (175 – 228); *c1–c2* 78 (83 – 123); *c1–d1* 133 (123 – 190); *d1–d1* 180 (175 – 218); *d1–e1* 103 (98 – 155); *e1–e1* 165 (130 – 213); *e1–f1* 100 (100 – 150); *f1–f1* 65 (45 – 63); *f1–f2* 58 (55 – 110); *f2–f2* 173 (138 – 208); *f1–h1* 88 (85 – 170); *h1–h1* 43 (33 – 63); *h1–h2* 83 (58 – 93); *h2–h2* 90 (78 – 105).

Gnathosoma (Figs. 3B-C) — Subcapitulum 363 (343 – 358) long, width at base 138 (128 – 135); base of subcapitulum with faint broken and transverse striae, hypostome with long broken longitudinal striae; (Fig. 12). Palp five–segmented, palp tibiotarsus with six setae + one solenidion + two long end setae, *DES* and *VES* 170 (153 – 170) and 173 (158 – 178) respectively; genu with four setae; telofemur with one seta; basifemur with six setae; trochanter without setae (Fig. 13); measurements of palp segments as follows: trochanter 15 (15 – 20), basifemur 210 (195–230), telofemur 33 (28 – 35), genu 20 (20 – 23), tibiotarsus 193 (163 – 195). Subcapitulum with six pairs of ventral setae (*vh1–6*), distal pair (*vh6*) 43 (38 – 40) as long as proximal pair (*vh1*) 40 (38 – 43); two pairs of short adoral setae near the tip of hypostome, 29 (28) and 23 (24) in lenght. Chelicerae 335 (288 – 345) long, width 100 (80 – 88), reticulated and with two dorsal setae (*ch1–2*), proximal setae 38 (35 – 40), and distal setae 65 (50 – 73), respectively; movable chelae with six teeth and fixed digit with one subapical tooth; distal seta (*ch1*) normal in length and about less than half distance between seta (*ch1*) and base of chela (Fig. 12).

Venter (Fig. 3D) — Aggenital region with 3 pairs of setae (*ag1–3*), each genital plate with 7 pairs of setae (*g1–7*) (Fig. 13); anal region with two pairs of smooth setae (*ps1–2*): *ps1* 65 and *ps2* 63.

Ovipositor (Fig. 3E) — Ovipositor with 10 smooth setae and laminated gland clearly observed.

Legs (Figs. 4) — Measurements of leg segments as follows: I 820 (763 – 788), II 818 (700 – 785), III 943 (813 – 863), IV 1193 (1105 – 1113). Setal formulae of leg segments as follows: coxae I–IV 4–3–4–2; trochanters I–IV 1–1–1–1; basifemora I–IV 15–15–9–3; telofemora I–IV 7–7–6–6; genua I–IV 5ts, 7σ–5ts, 4σ–6ts, 2σ–4ts, 5σ tibiae I–IV 12ts, 5ϕ,1tr–14ts, 4ϕ 1tr–10ts,1ϕ–13ts,1tr; tarsi I–IV

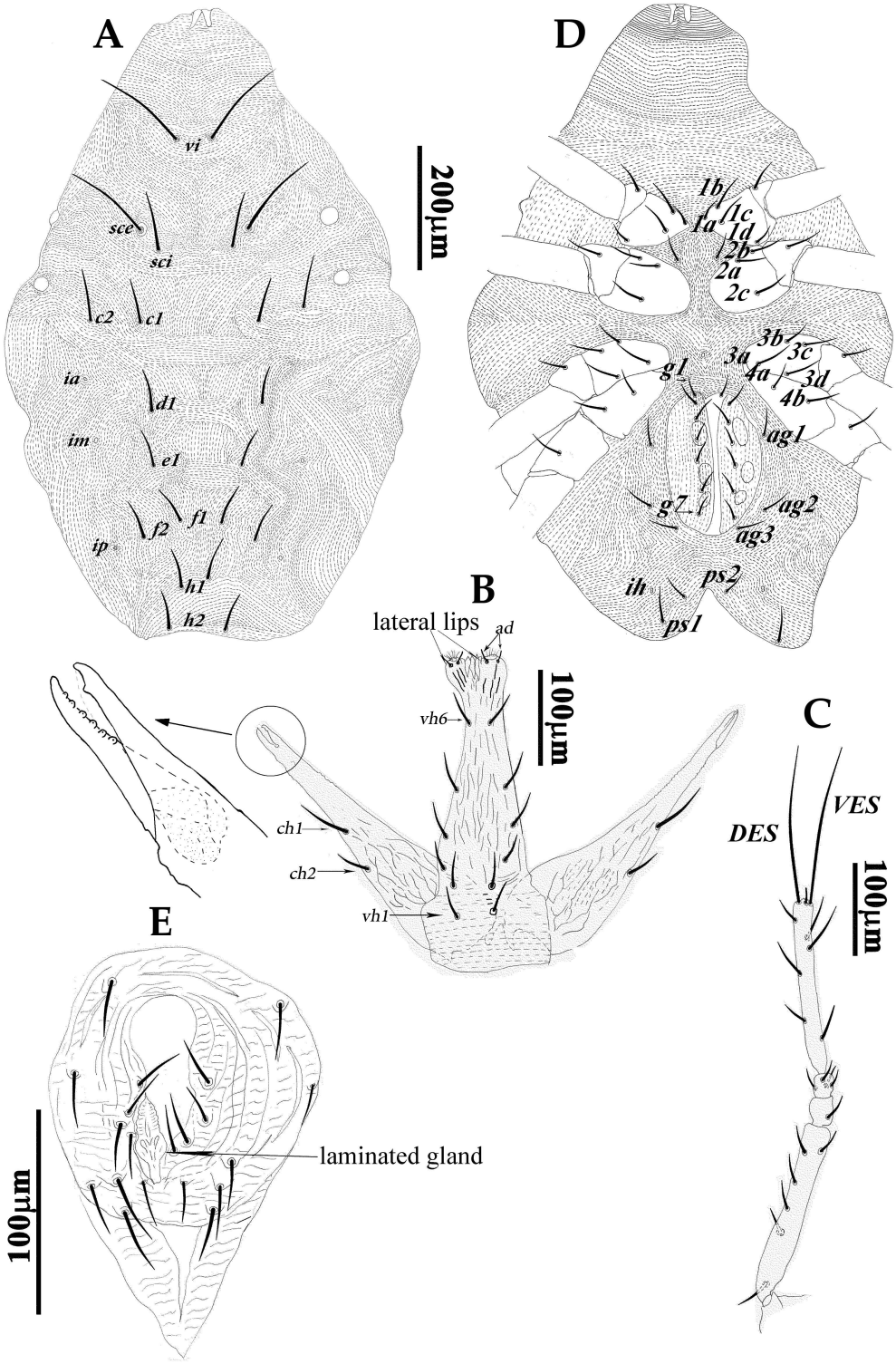

FIGURE 3: *Odontoscirus denheyeri* Eghbalian, Khanjani & Ueckermann **n. sp.** (Female): A – Dorsum of idiosoma; B – Gnathosoma; C – Palp; D – Venter of idiosoma; E – Ovipositor.

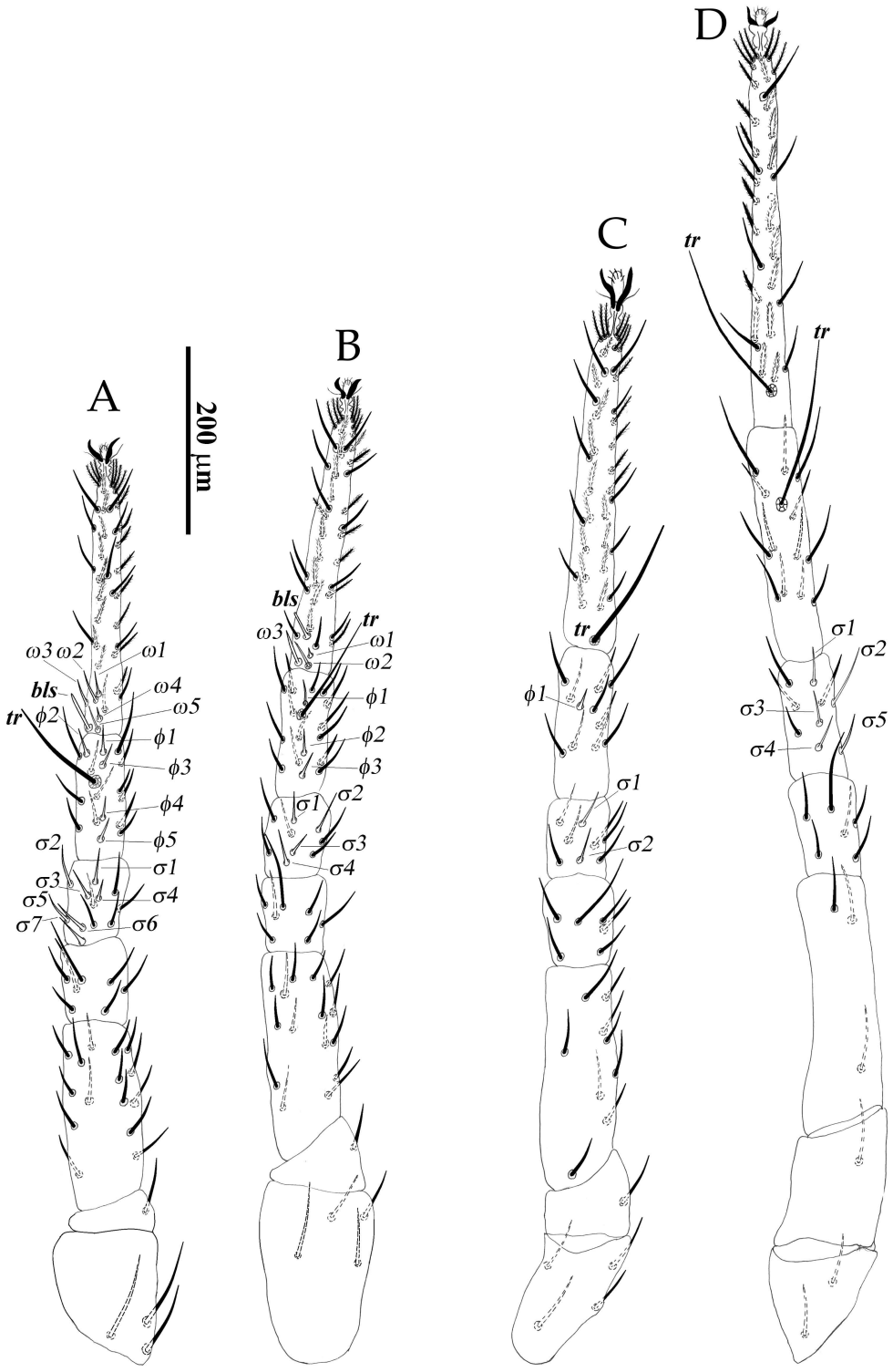

FIGURE 4: *Odontoscirus denheyeri* Eghbalian, Khanjani & Ueckermann **n. sp.** (Female): A – Leg I; B – Leg II; C – Leg III; D – Leg IV.

35ts,5ω, 1bls–36ts,3ω, 1bls–36ts,1tr–32ts,1tr (Figs. 16-19).

Remarks — *Odontoscirus denheyri* **n. sp.** Eghbalian, Khanjani and Ueckermann is closely related to *O. virgulata* (Canestrini and Fanzago) in having prodorsal setae *sci* and *sce* well separated, each chelicera with two setae but differs from the latter in having: 1) Two palp tibiotarsus setae located on proximal half the segment in the former opposed to all palp tibiotarsus setae located on distal half the segment in the latter; 2) Movable digit of chelicera with one tooth in new species whereas movable digit of chelicera with 4-5 teeth in other species; 3) Distal cheliceral seta (*ch1*) about 1.7 (1.45 – 1.83) times longer than the proximal seta *vs.* subequal in other species; 4) Chelicera reticulated in *O. denheyri* opposed to not reticulated in *O. virgulata*.

Odontoscirus denheyri is also closely related to *O. alpinus* (Atyeo) in having base of prodorsal trichobothria *sci* well separated from *sce*; chelicera reticulated; median propodosomal trichobothria (*sce*) simple and each chelicera with two setae but differs from the latter species in having: 1) Movable digit of chelicera with 6 teeth in the former but 4-5 in the latter; 2) Dorsal hysterosomal setae smooth in new species but finely plumose in the other species; 3) Two palp tibiotarsus setae inserted on the proximal third of the segment in *O. denheyri* but absent in *O. alpinus*; 4) The length of proximal cheliceral seta (*ch2*) less than 1.4 distance of *ch1-ch2 vs*. more than 2.2; 6) Coxae I-II with 3 and 4 setae respectively in the new species but 5 and 4 setae in other species.

Etymology — The species is named in honor of Prof. Jacob den Heyer (Department of Zoology and Entomology, University of the Free State, Bloemfontein, South Africa), for his great efforts promoting Bdelloidea systematics, especially creating many genera and species in the families Bdellidae and Cunaxidae.

Type materials — The holotype and four paratype females were collected from soil and litter under weeds, Songhor vicinity, Kermanshah Province, Iran, (34°47′01″N, 37°37′22″E, a.s.l. 864 m), 14 April 2013, by Amir Hossein Eghbalian. The holotype and three paratype females are deposited in the Mite Collection of the Acarology Laboratory, University of Bu–Ali Sina, Hamedan, Iran, and one paratype female slide will be deposited in the National Collection of Arachnida, Plant Protection Research Institute, Pretoria, South Africa.

Key to the adult species of *Spinibdella* with longitudinal striations on centre of prodorsum and adult Iraninan species of *Odontoscirus*

1. Venter of hypostome with 2 pairs of setae; genital tracheae well developed .... *Spinibdella* Thor.....2
— Venter of hypostome with 6-7 pairs of setae; without well developed genital tracheae.....*Odontoscirus* Thor.....7

2. Basifemura I-II with 7-7 setae 3
— Basifemura I-II with 5-5 setae .. *S. mali* Jorgensen

3. Basifemur III with 5 setae; Palp-basifemur with 7 or 10 setae 4
— Basifemur III with 4 setae; Palp-basifemur with 6 setae .....*S pourmirzaei* **n. sp.**

4. Palp-basifemur with 7 setae, Basifemura IV with 3 setae 5
— Palp-basifemur with 10 setae, Basifemura IV with 4 setae .....*S. longistriata* Tseng

5. Palp tarsus with 6 setae; tarsus II with 1 blunt sensory seta .....*S. subrufa* Rack
— Palp setae with 7 setae; tarsus II with 2 blunt sensory setae .....*S. cronini* (Baker & Balock)

6. Each chelicera with one seta 7
— Each chelicera with two setae 8

7. Area between prodorsal setae (*vi-sci*) with transverse striae, palp basifemur with 14 setae.....*O. longirostris* (Hermann)
— Area between prodorsal setae (*vi-sci*) with longitudinal striae, palp basifemur with 16 setae..... *O. iraniensis* (Ueckermann *et al.*)

8. Median propodosomal trichobothria (*sce*) simple..... 9

— Median propodosomal trichobothria (*sce*) leafl like .....*O. lapidaria* (Kramer)

9- Base of prodorsal trichobothria *sci* closely associated with *sce* 10
— Base of prodorsal trichobothria *sci* well separated from *sce* 12

10. Palp tibiotarsus with 11 or 12 setae (including solenidion, VES and DES) 11
— Palp tibiotarsus with 7 setae (including solenidion, VES and DES .....*O. meridionalis* (Thor)

11. Palp basifemur with 4 setae, proximal cheliceral seta (*ch2*) not extending beyond base of distal seta (*ch1*) .....*O. kazeruni* (Ostovan and Kamali)
— Palp basifemur with 7 setae, proximal cheliceral seta (*ch2*) extending beyond base of distal seta (*ch1*).....*O. petila* (Atyeo)

12. Chelicera reticulated 13
— Chelicera not reticulated 14

13. Movable digit of chelicera with 4-5 teeth, Coxae I-II with 5 and 3 setae.....*O. alpinus* (Atyeo)
— Movable digit of chelicera with 6 teeth, Coxae I-II with 3 and 4 setae ..... *O. denheyeri* **n. sp.**

14. Both cheliceral setae subequal in length, movable digit of chelicera with 4-5 teeth, ovipositoral gland without lateral lobes at base ..... *O. virgulata* (Canestrini & Fanzago)
— Proximal cheliceral seta about 1/3 to 1/2 the length of the distal seta, movable digit of chelicera with 6-8 teeth, ovipositoral gland with lateral lobes at base.....*O. mazandaranensis* (Paktinat-Saeij *et al.*)

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