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Two new species of *Uroleucon* MORDV. (Homoptera: Aphididae) from Iran

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The apterous viviparous females of two new species of *Uroleucon* MORDV. living on *Scorzonera tortuosissima* BOISS. and *Hymenocephalus rigidus* JAUB. & SPACH. are described from specimens collected in Iran.

1. *Uroleucon (Uroleucon) tortuosissimae* sp. n.

Apterous viviparous female (Figs. 1 and 2)

Colour in living specimens: Mat brown, cauda pale, siphunculi dark brown. Macerated specimens: Head and coxae brownish, antennal joints I and II dark brown, basal part of third and whole length of fourth antennal joint pale or brown, medial part of third antennal joint often darker than the rest of the same joint. The last two segments of the rostrum brown, thorax and abdominal segments colourless, without sclerites, postsiphuncular sclerites not developed, cauda colourless, genital plate smoky, siphunculi brown to dark brown. Distal part of femora, second half of tibiae and tarsi dark brown.

Morphological characters: Body oval, rather broad, body length 1.86–2.60 mm. Dorsal and apical hairs slender and acute, longest hair 1.0–1.2 times as long as the basal diameter of antennal segment III. Rostrum reaching to the third pair of coxae, ultimate rostral segment 0.12–0.15 mm, 0.80–1.03 times as long as the hind tarsal joint II, bearing 7–9 secondary hairs. Total length of the antennae 2.57–2.98 mm, antennal segment III 0.66–0.86 mm, IV 0.60–0.74 mm, V 0.43–0.55 mm, VI 0.19–0.22 + 0.45–0.52 mm. Processus terminalis 2.13–2.63 times as long as the basal part of antennal segment VI, with 3–7 smooth hairs. Longest hair on antennal segment III 0.75 times as long as the basal diameter of the same segment, number of secondary rhinaria on it 7–19, rather variable in size and distributed over 40–60% of antennal segment III (see fig. 1 A). Secondary rhinaria in an alatiform specimen 29/30, covering the whole length of the segment. Siphunculi 0.58–0.74 mm, 0.28–0.38 times the body length, reticulated area covering the distal 30–40%. Cauda slender, acuminate, 0.37–0.52 mm, nearly 3 times as long as the width of the base, 60–80% of the length of the siphunculi, bearing 11–18 hairs, longest hair on cauda (whole series) 0.075 mm, 1.7 times as long as basal diameter of antennal segment III. Abdominal segment VIII with 4 and VII with 6 hairs. First tarsal joints bearing 3 : 3 : 3 hairs. Second tarsal joint of hind legs 0.14–0.17 mm, 0.67–0.91 times as long as the basal part of antennal segment VI.

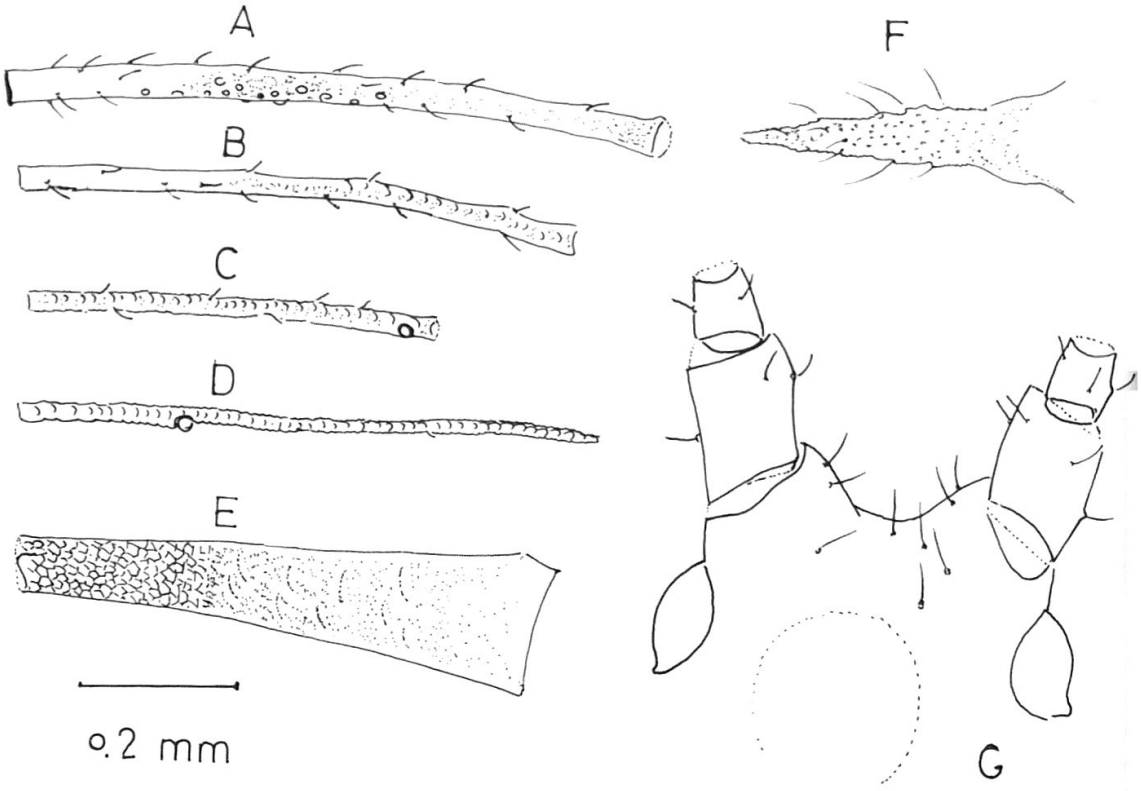

Fig. 1: *Uroleucon tortuosissimae* sp. n., apterous viviparous female. A = antennal segment III, B = antennal segment IV, C = antennal segment V, D = antennal segment VI, E = siphunculus, F = cauda, G = head.

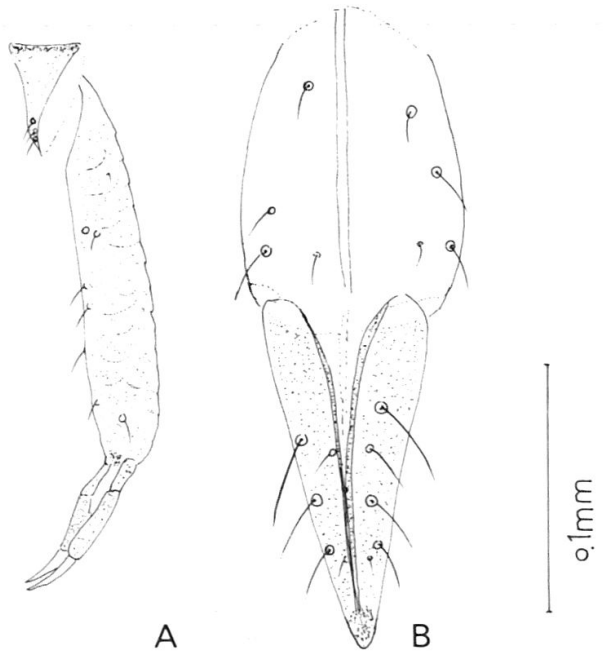

Fig. 2: *Uroleucon tortuosissimae* sp. n., apterous viviparous female. A = hind tarsus, B = ultimate rostral segment.

Tab. 1: *Uroleucon (Uroleucon) tortuosissimae* sp. n., apterous viviparous females. Measurements in mm. Urs. = ultimate rostral segment, H. tars. = hind tarsus, Pt. = processus terminalis, B = basis.

No	Body, length	Antennae, tot.leng. l	r	Siphunculi, length l	r	Cauda	Urs.	H.tars.II, length l	r	Antennal segments, length III l	r	IV l	r	V l	r	VI l,Basis+Pt.	r,Basis+Pt.	Rhin. on III l	r	Index Pt./B VI l	r	Index Siph./Body l	r
1	2,60	2,98	2,94	0,732	0,744	0,520	0,148	0,186	0,186	0,863	0,843	0,744	0,719	0,472	0,488	0,205+0,473	0,208+0,482	13	12	2,31	2,32	0,28	0,29
2	2,10	2,85	2,82	0,644	0,644	0,508	0,136	0,167	0,161	0,806	0,768	0,644	0,682	0,501	0,433	0,210+0,498	0,202+0,489	7	8	2,37	2,42	0,31	0,31
3	2,29	2,86	-	0,707	0,719	0,471	0,149	0,149	0,149	0,770	0,769	0,657	0,709	0,508	-	0,198+0,506	-	-	16	15	2,56	-	0,31	0,31
4	1,86	2,77	2,75	0,657	0,649	0,409	0,124	0,153	0,148	0,719	0,682	0,620	0,632	0,496	0,488	0,223+0,508	0,198+0,508	14	15	2,28	2,57	0,35	0,35
5	2,29	-	-	0,682	0,694	0,496	0,131	0,161	0,161	-	0,768	-	0,649	-	-	-	-	-	-	15	-	-	0,30	0,30
6	2,10	2,76	2,80	0,644	0,649	0,422	0,125	0,149	0,149	0,744	0,719	0,620	0,670	0,471	0,508	0,223+0,521	0,211+0,484	10	13	2,34	2,29	0,31	0,31
7	2,17	-	2,74	0,707	0,682	0,434	0,149	0,149	0,144	-	0,769	-	0,682	-	0,446	-	-	0,188+0,471	-	12	-	2,51	0,33	0,31
8	2,48	2,86	-	0,719	0,719	0,434	0,148	-	0,161	0,781	0,794	0,670	0,682	0,520	-	0,210+0,466	-	-	11	12	2,22	-	0,29	0,29
9	1,92	2,60	2,57	0,595	0,582	0,372	0,124	0,153	0,149	0,682	0,657	0,595	0,620	0,471	0,434	0,210+0,471	0,210+0,447	15	14	2,24	2,13	0,31	0,30
10	2,05	2,89	-	0,682	0,683	0,447	0,137	0,149	0,149	0,806	0,769	0,645	-	0,546	-	0,198+0,496	-	-	9	9	2,51	-	0,33	0,33
11	1,92	-	2,88	0,732	0,719	0,459	0,149	0,153	0,161	0,768	0,769	-	0,694	-	0,508	-	-	0,198+0,508	15	13	-	2,57	0,38	0,37
12	2,29	-	-	0,670	0,682	0,471	0,134	0,167	0,161	0,744	0,769	0,670	0,709	-	-	-	-	-	12	13	-	-	0,29	0,30
13	2,17	2,84	2,81	0,744	0,744	0,447	0,137	0,167	0,162	0,770	0,768	0,682	0,620	0,508	0,496	0,198+0,488	0,198+0,484	12	14	2,46	2,44	0,34	0,34
14	1,92	-	-	0,694	0,682	0,496	0,136	0,161	0,160	0,769	0,767	0,683	0,682	-	-	-	-	-	-	18	19	-	-	0,36	0,36
15	1,93	2,68	-	0,632	0,620	0,494	0,136	0,149	0,161	0,806	0,794	0,670	0,657	0,471	0,496	0,223+0,508	0,198+	-	10	12	2,28	-	0,33	0,32
16	1,86	2,96	2,94	0,657	0,670	0,434	0,149	0,144	0,149	0,794	0,781	0,688	0,682	0,520	0,496	0,198+0,520	0,211+0,521	16	14	2,63	2,47	0,35	0,36

Tab. 2: *Uroleucon (Uroleucon) hymenocephali* sp. n., apterous viviparous females. Measurements in mm, abbreviations as in tab. 1.

No	Body, length	Antennae, tot.leng. l	r	Siphunculi, length l	r	Cauda	Urs.	H.tars.II, length l	r	Antennal segments, length III l	r	IV l	r	V l	r	VI l,Basis+Pt.	r,Basis+Pt.	Rhin. on III l	r	Index Pt./B VI l	r	Index Siph./Body l	r
1	3,22	3,00	3,09	0,781	0,769	0,620	0,150	0,180	0,174	0,806	0,769	0,637	0,682	0,521	0,608	0,223+0,540	0,236+0,546	29	30	2,42	2,31	0,24	0,24
2	2,98	3,26	3,34	0,769	0,744	0,710	0,172	0,192	0,198	0,942	0,930	0,769	0,781	0,595	0,595	0,235+0,570	0,248+0,533	16	18	2,43	2,15	0,26	0,25
3	2,73	3,40	3,45	0,893	0,9o5	0,682	0,160	0,186	0,180	0,930	0,918	0,776	0,830	0,628	0,657	0,230+0,598	0,233+0,583	29	29	2,60	2,50	0,33	0,33
4	2,60	-	-	0,905	0,908	0,676	0,164	0,186	0,184	0,885	0,866	0,788	-	0,578	-	-	-	-	-	21	23	-	-	0,35	0,35
5	2,67	3,25	3,39	0,918	0,930	0,692	0,170	0,174	0,181	0,893	0,930	0,756	0,802	0,585	0,632	0,211+0,568	0,229+0,556	26	24	2,69	2,43	0,34	0,35

Taxonomic note: The morphological observation of *Uroleucon tortuosissimae* shows that this species resembles *U. scorzonerae* DAN. (DANIELSSON, 1973) collected from *Scorzonera humilis* L., but it differs from it mainly by the following characters: Cauda pale, secondary rhinaria only 7–19, distributed at most over 60% of the antennal segment III, first tarsal joints bearing 3 : 3 : 3 setae, no postsiphuncular sclerites.

Hostplant: Scorzonera tortuosissima BOISS. (Compositae = Asteraceae). This plant is found only in Iran and Afghanistan (RECHINGER, 1977).

Aphids collected from Saveh (Saleh-Abad, 1500 m), 140 km south-west of Tehran, on 25.5.1985. Types in the collection of the first author.

2. *Uroleucon (Uroleucon) hymenocephali* sp. n.

Apterous viviparous female (Figs. 3 and 4)

Colour in living specimens: Greyish brown, mat, cauda pale. Cleared specimens: Thorax and abdomen colourless without sclerites, postsiphuncular scler-

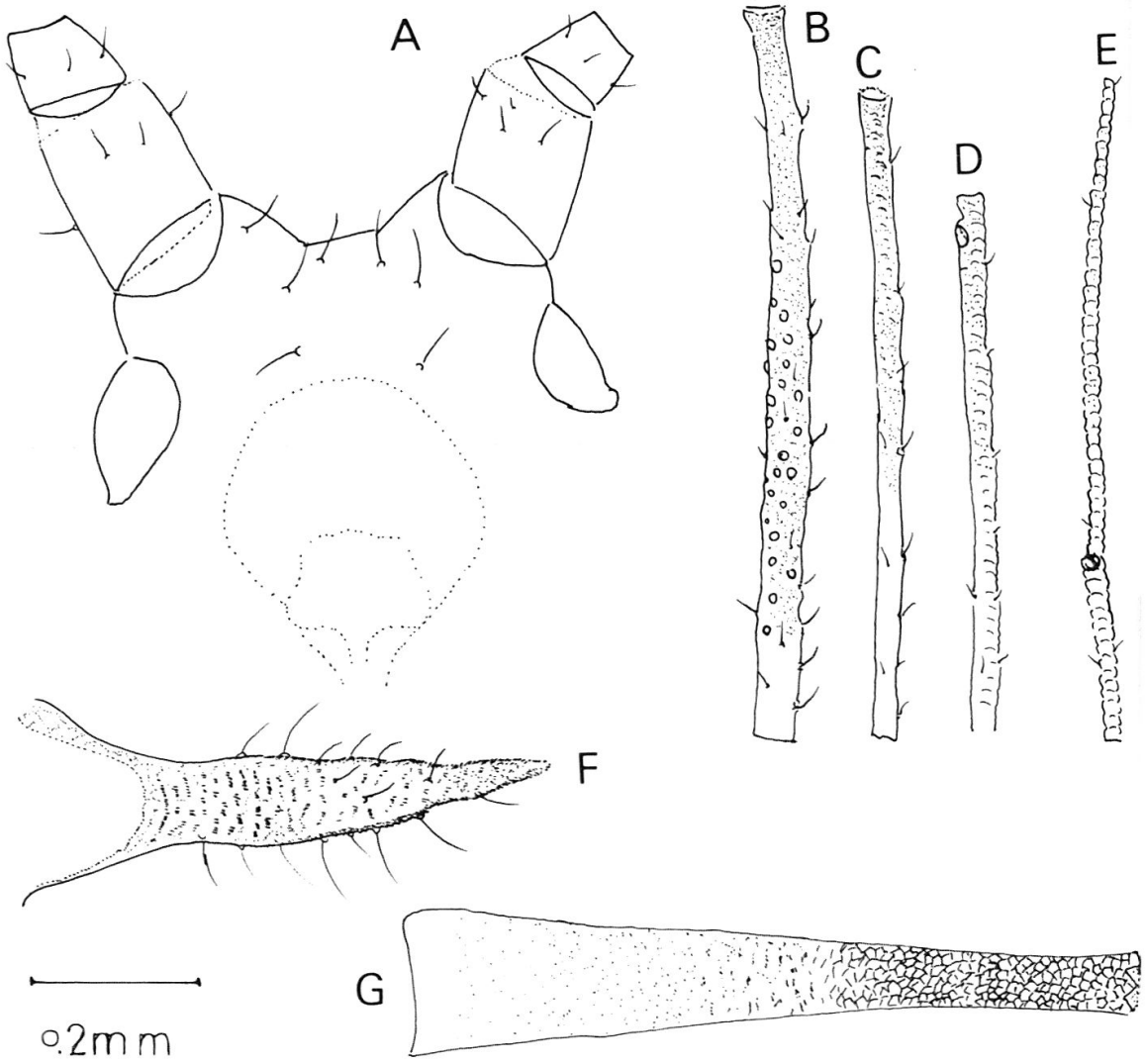

Fig. 3: *Uroleucon hymenocephali* sp. n., apterous viviparous female. A = head, B = antennal segment III, C = antennal segment IV, D = antennal segment V, E = antennal segment VI, F = cauda, G = siphunculus.

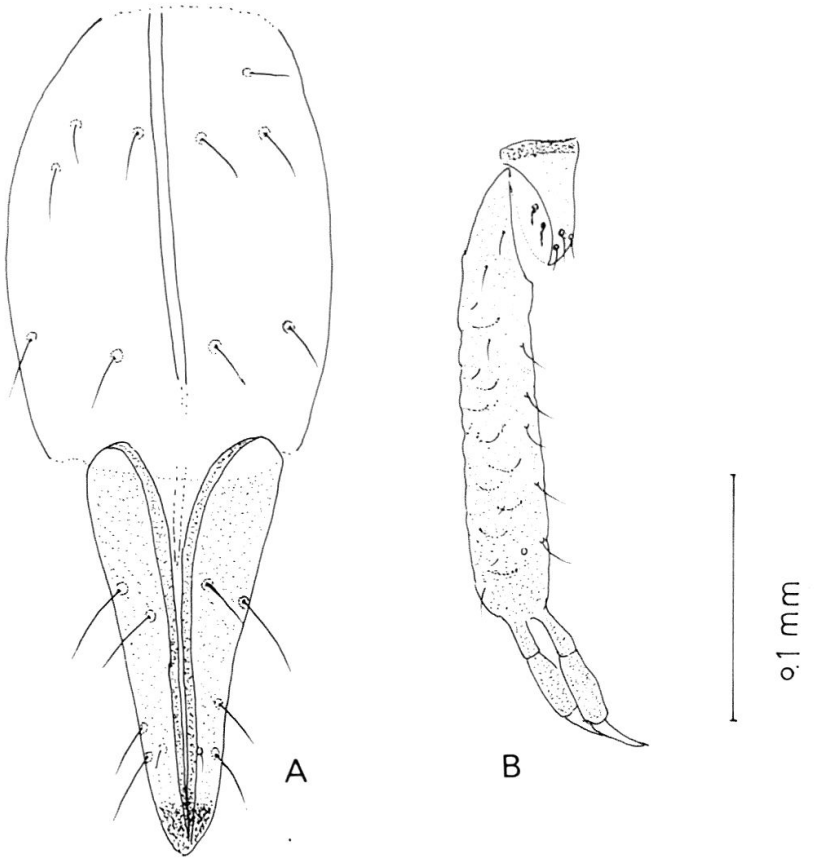

Fig. 4: *Uroleucon hymenocephali* sp. n., apterous viviparous female. A = ultimate rostral segment, B = hind tarsus.

ites not developed, head and coxae brownish. Distal half of femora, whole length of tibiae and tarsi as well as the siphunculi and the last two segments of the rostrum dark brown to blackish. Basal part of third and basal half of fourth antennal segment pale, the remainder parts of the antennae brownish to brown. Cauda pale, genital plate brownish.

Morphological characters: Body oval, total length 2.60–3.22 mm. Dorsal and apical hairs slender and acute, longest hair 1.0–1.2 times as long as basal diameter of antennal segment III. Rostrum reaching to the third pair of coxae, ultimate rostral segment 0.15–0.17 mm, 0.83–0.98 times as long as the hind tarsal segment II, bearing 6–7 secondary hairs. Total length of the antennae 3.00–3.45 mm, 0.93–1.27 times the body length. Antennal segment III 0.77–0.94 mm, IV 0.64–0.83 mm, V 0.52–0.66 mm, basal part of the VI. antennal segment 0.21–0.25 mm, 1.24–1.57 times as long as the ultimate rostral segment and 1.16–1.36 times as long as the hind tarsal segment II. Processus terminalis 0.53–0.60 mm, 2.15–2.69 times as long as the basal part of antennal segment VI, bearing 5–7 hairs. Antennal segment III bearing 16–30 secondary rhinaria, distributed in an irregular manner over nearly the whole length of the segment (see fig. 3 B). Longest antennal hair on segment III 0.75–0.85 times as long as the basal diameter of this segment. Siphunculi straight, 0.74–0.93 mm, 0.24–0.35 times the body length and 1.05–1.34 times as long as the cauda, 0.33–0.45% of the apical part reticulated. Cauda dirkshaped, pale, mostly with

a distinct constriction, 0.62–0.71 mm, 0.19–0.26 times the body length and 0.75–0.95 times as long as the siphunculi, bearing 18–26 hairs. Longest hair on the cauda (whole series) 0.09 mm, about 1.75 times as long as the basal diameter of antennal segment III. Hind tarsal segment II 0.17–0.20 mm, first tarsal segments bearing 5 : 5 : 5, exceptionally 5 : 3 : 3 setae. Abdominal segment VIII with 4 and VII with 6 hairs.

Taxonomic note: This species differs from that mentioned above in having a greater body length and a higher number of secondary rhinaria. In addition the whole length of the tibiae is dark brown to blackish and the first tarsal segments mostly bear 5 : 5 : 5 setae.

Hostplant: Hymenocephalus rigidus JAUB. & SPACH. (Compositae = Asteraceae). This plant is only found in Iran (WAGENITZ, 1980).

Aphids collected from Saveh (Saleh-Abad, 1500 m), 140 km south-west of Tehran, on 25.5.1985. Types in the collection of the first author.

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